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**Expanding the Canadian Pellet Business to International Market  
(The United Kingdom Case Study)  
Adewale, Oluwafemi Adeniyi  
Cape Breton University (Shannon School of Business)**

### Executive Summary

Over the course of the next several pages, we will be analyzing the option of expanding the pellet business to a new international market of the United Kingdom. As per, Canadian Wood pellet Magazine, “In 2018, UK pellet demand increased significantly for the first time in several years with the commissioning of EPH’s 396 MW Lynemouth Power Station conversion and the conversion of a fourth unit at the Drax power station. Moving forward, growth will be primarily driven by a ramp up to full operation at Lynemouth and increased availability at the Drax power station. In 2020, UK demand will increase again with the scheduled commissioning of MGT’s 299 MW Teeside CHP plant, expected to use up to 1.5 million tonnes per year”. This is great news for the wood pellet industry in Canada but is it actually viable option to expand to the UK market?

The wood pellet market has seen growth over the past several years in many countries including Japan, Sweden, Netherlands and the UK. With many countries aiming to meet environmental goals which specifically lessen the reliance of coal, wood pellets are the choice of many countries in this transformation.

Canada has a strong wood product international reputation and relations already with the UK being Canada’s largest market for wood pellets. The opportunity for growth is there for our company but the big looming question with any new opportunities or expansions to the UK is how will BREXIT impact us?

While it shows there is a strong market for us to expand our services to the UK, there are considerable concerns with Brexit and the timing. The UK is one of the most important export destination for Canadian goods and services and the UK is the most important country exporting goods and services to Canada which is integral that Canada maintains trade relations with the UK including CETA. The UK has voted a third time to reject the withdrawal agreement negotiated between the UK and EU and this is a wild card with what will happen on April 12th. Any withdrawal from the UK (hard or soft) requires much more time and resolution with regards to tariffs, services and World Trade Organization law. CETA must also be maintained for Canada and the UK to benefit from trade but by leaving the EU union, it would lose its CETA benefits. Canada wants to keep a seamless transition with the UK but International agreements along with legislative measures are

required and time is extremely limited with a mountain of work to be done.

### Introduction

The United Kingdom (UK) (latitude 54.237933 longitude -2.36967 as per GPS coordinates n.d., United Kingdom Latitude) is an island located off the northwestern coast of Europe comprised of Great Britain (Wales, Scotland and England) along with the Northern Ireland. The UK and Canada have one of the longest and positive relationships in the world. Both countries share a sovereign (Queen Elizabeth II) and share a similar parliamentary democracy.

The UK, as mentioned by the UK government fact sheet, has a population of 66 million people, with a .6+ growth rate (world bank data country profile). International migration has slowed but is till the main conveyer of population growth in the UK. While growth has varied across the UK, the history of fast growth in London is slowing. The current population, approximately 20% (12 million) residents are over the age of 65. The UK enjoys a low unemployment rate (4.4%) and it enjoys a high level of health by residents. Life expectancy is approximately 81 years of age and the UK has a national health service (NHS) which provides universal healthcare to residents. English and Welsh are the official languages of the UK with English being the main language and Welsh rarely spoken outside Wales.

The UK is one of Canada’s most important countries for business. Canada and the UK have a history of working together and both governments have many areas of common agreement in world affairs. In 2017 (OECD), the GDP of the UK per capita per person was \$39,720.44. The import of goods and services (% of GDP) for the UK in 2017 was \$31.993. Our recommendations in this document are based upon research into expanding our current business into the UK market of wood pellet imports. Wood pellets are a compressed form of woody wood pellet used as an eco-friendly, low carbon alternative to traditional fossil fuels. As a source of renewable energy, wood pellets provide the ultimate, sustainable, high quality and price stable fuel.

According to UK Energy Statistics, updated 2018, Canada provides 1.435 thousand tonnes of wood pellets to the UK, second to the US and more than the total European Union which provides 1,136 thousand tonnes. The heavy use of UK seaports would be greatly beneficial to the wood pellet

expansion and transporting the pellets to the UK. This particular market is also identified as currently being strong and projecting a strong market looking forward due to the UK requirements to meet their Europe 2020 goals for climate change and energy. In 2018, pellet demand increased significantly in the UK with the conversion of a number of coal powered power stations to using wood pellets for cleaner power.

Helping with this boom for wood pellet demand in the UK is that the UK and Canada enjoy Comprehensive Economic and Trade Agreement (CETA). CETA has reduced 98% of the tariffs between the UK and Canada and if focused on growing a strong middle class in both countries.

The UK also has many firms with a presence in Canada that help to grow the Canadian economy. Therein lay the building blocks of our future economic relationship that will continue to flourish and the UK is one of Canada’s largest trading partners (Canada and the United Kingdom relations, n.d., para commercial and economic relations).

The UK, similar to Canada, aims to promote global

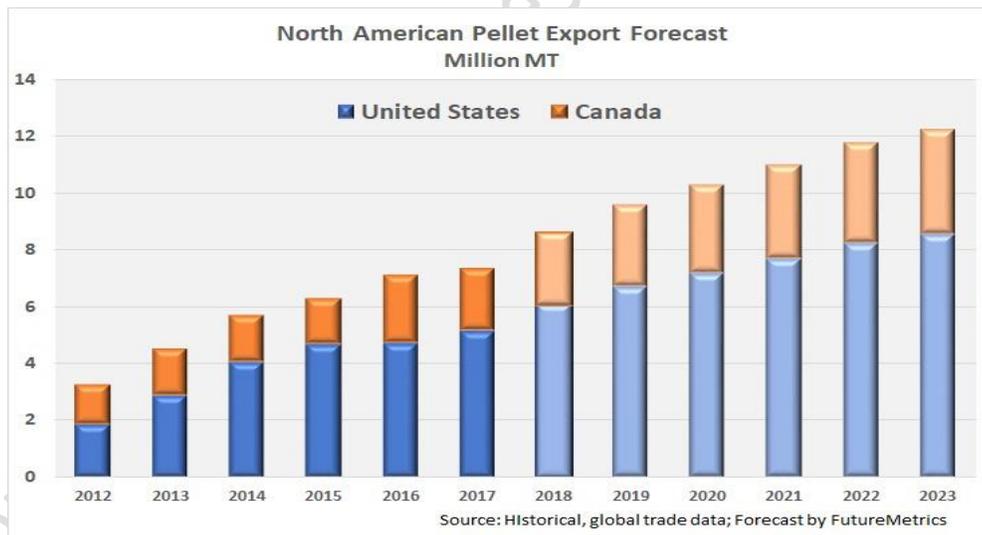
It is important to know more about the two main UK government departments that have oversight and policy

prosperity by promoting and financing international trade and investment, and championing free trade. The office of International trade in the UK is responsible for bringing together policy, promotion and financial expertise to break down barriers to trade and investment, and help businesses succeed. This will deliver a new trade policy framework for the UK promoting British trade and investment across the world and building the global appetite for British goods and services.

**Political Structure**

The UK Department of Business, Energy, and Industrial Strategy (BEIS), and with the UK Committee on Climate Change (CCC) both have vested interest and involvement with Canada in the wood pellet industry. In Canada, along with our federal government, the Canadian Association of Wood Pellets allows Canada and the association for the wood pellets to share and emphasize the importance of Canada’s sustainable forest management program which supports the environment and to continue to develop the importance of the Canada-UK pellet trade.

sustainability requirements. CCC is the UK government’s official advisor on climate change. It is charged with



direction over wood pellet imports. According to Canadian Wood pellet magazine, “BEIS is the key department for wood pellet, covering the entire energy sector. It is responsible for the oversight of the private sector in a general sense and for the energy sector in particular, which includes designing and administering market frameworks and subsidies, with significant interventions from the treasury and No. 10 Downing Street. BEIS’s responsibilities include energy, climate change and clean growth...BEIS manages UK policy and legislation regarding support programs for wood pellet power and wood pellet

analyzing the scientific, technological and policy data and to make recommendations that form five-year carbon budgets, allowing the UK to meet its internationally binding targets on climate emissions”.

The political structure of the United Kingdom is very beneficial for Canada for business. The ease of doing business with the United Kingdom is considered particularly good. As per the World Bank (The World Bank, 2019, Doing Business Measuring Business Regulations), the UK is ranked 9th in the world for ease of doing business. This situates the UK between the United

States (8th) and Macedonia (10th). Comparing the results to last year, the UK has had a slight increase in their rating with a .33 increase overall for ease of doing business.

Most recently, there were several reforms the UK reviewed and changed to help improve ease of doing business. As per The World Bank, 2019, Doing Business Measuring Business Regulations, the UK made the following reforms which could assist with expanding our market to the UK. They include speeding up parts of the bureaucracy to allow businesses faster service for setup including processing of forms, tax registration, setting up an office and getting

**Economic**

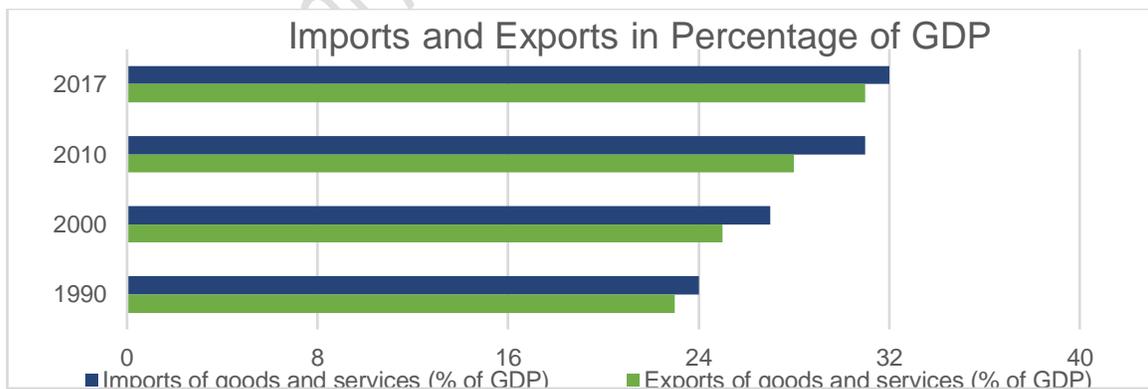
The economy of the United Kingdom is highly developed and market-oriented. It is the fifth-largest national economy in the world measured by nominal gross domestic product, ninth-largest measured by purchasing power parity (PPP), and twenty second-largest measured by GDP per capita, comprising 3.5% of world GDP. In 2016, the UK was the tenth-largest goods exporter in the world and the fifth-largest goods importer. The UK electorate voted against remaining in the European Union on 23<sup>rd</sup> June, 2016. Although Brexit will not be activated until 11pm UK time on the 29 March 2019, the impact of this decision now and An overview of the UK economic data briefly below in Table 1:

**Table 1: UK Macro Economic Data**

Economic Data briefly	1990	2000	2010	2017
GDP (current US\$) (billions)	1,093.17	1,647.95	2,441.17	2,622.43
GDP growth (annual %)	0.7	3.7	1.7	1.8
Inflation, GDP deflator (annual %)	7.9	2.1	1.6	2
Agriculture, forestry, and fishing, value added (% of GDP)	1	1	1	1
Industry (including construction), value added (% of GDP)	28	23	18	19
Exports of goods and services (% of GDP)	23	25	28	31
Imports of goods and services (% of GDP)	24	27	31	32
Gross capital formation (% of GDP)	23	18	16	17
Revenue, excluding grants (% of GDP)	32.6	34.1	34.8	35.4
Net lending (+) / net borrowing (-) (% of GDP)	-0.9	1.8	-9.3	-2.6

Source: The World Bank Data

**Figure 2. UK’s Balance of Trade from 1990 to 2017**



Source: Designed with Excel tools

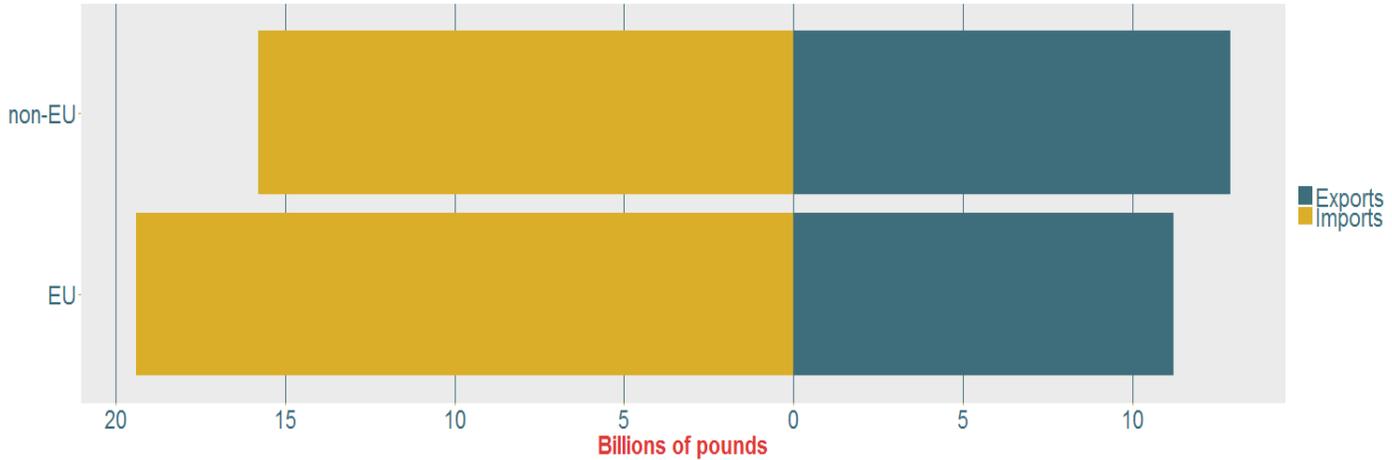
electricity, planning permits and modernizing civil procedures for commercial court. The chart above show the strong market for the imports of wood pellets to the UK from 2012 and projecting the UK needs of wood pellets from US and Canada to 2023. Both the Government of Canada along with the Wood Pellet Association of Canada (a member-driven organization advancing the interests of Canadian wood pellet producers) have been working together to advance the interests of wood pellet producers in Canada to the global market and in particular, the UK market.

in the future is still being understood and the impact it will have between Canada and UK business. 63% of Britain’s goods exports are linked to EU membership, the effect of Brexit on the financial sector is expected to be negative in the short run and positive in the long run. £10 billion per year on its contributions to the EU’s budget, which can be used to upgrade the infrastructure and this will impact positively on economic growth (Ramiah et al. 2017). Brexit is already having short run negative effect on UK’s economy as the GDP and per-capita income are on its lower ebb while the inflation is rising. (Breinlich et al., 2018).

Figure 2. shows that the UK’s balance of trade from 1990 to 2017 is “unfavorable”, it is in deficit (Imports exceed exports consistently for the past 27 year). Trade Balance as at 2017, the United Kingdom had a negative trade

balance of \$203.03 Billion in net imports. As compared to their trade balance in 1995 when they still had a negative trade balance of \$31.6B in net imports.

**Figure 3. UK’s imports are higher in EU countries than the non-EU countries**



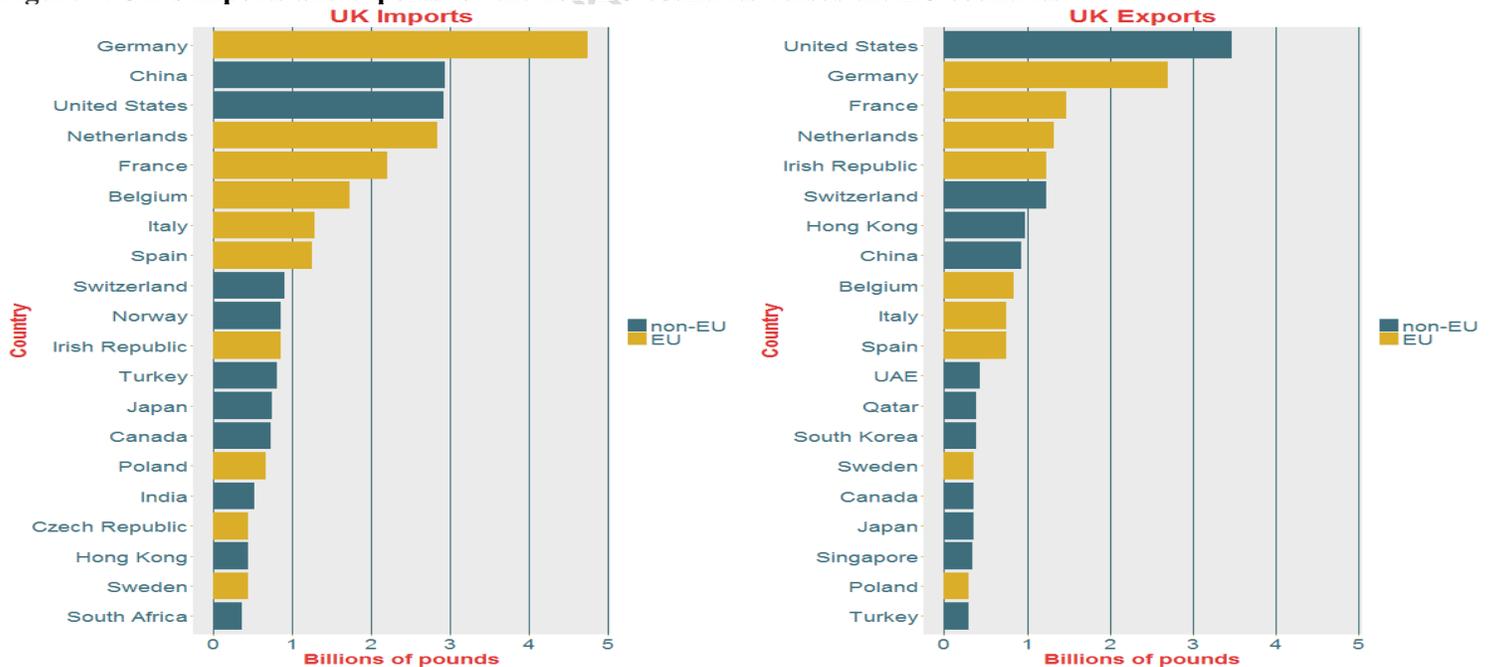
Source: The Select-Statistics

Figure 3. shows that the UK’s imports are higher in EU countries than the non-EU countries. Brexit will cause the economy to further shrink unless Prime Minister, Theresa May can produce a better trade deal with the EU and find See Figure 4 below for details of UK’s imports and exports for the non-EU countries versus the EU countries.

alternative deals with the non-EU countries like Canada. Exports to EU countries are a substantial part of the UK economy and its GDP and exports to the non-EU countries are marginally higher than the EU countries.

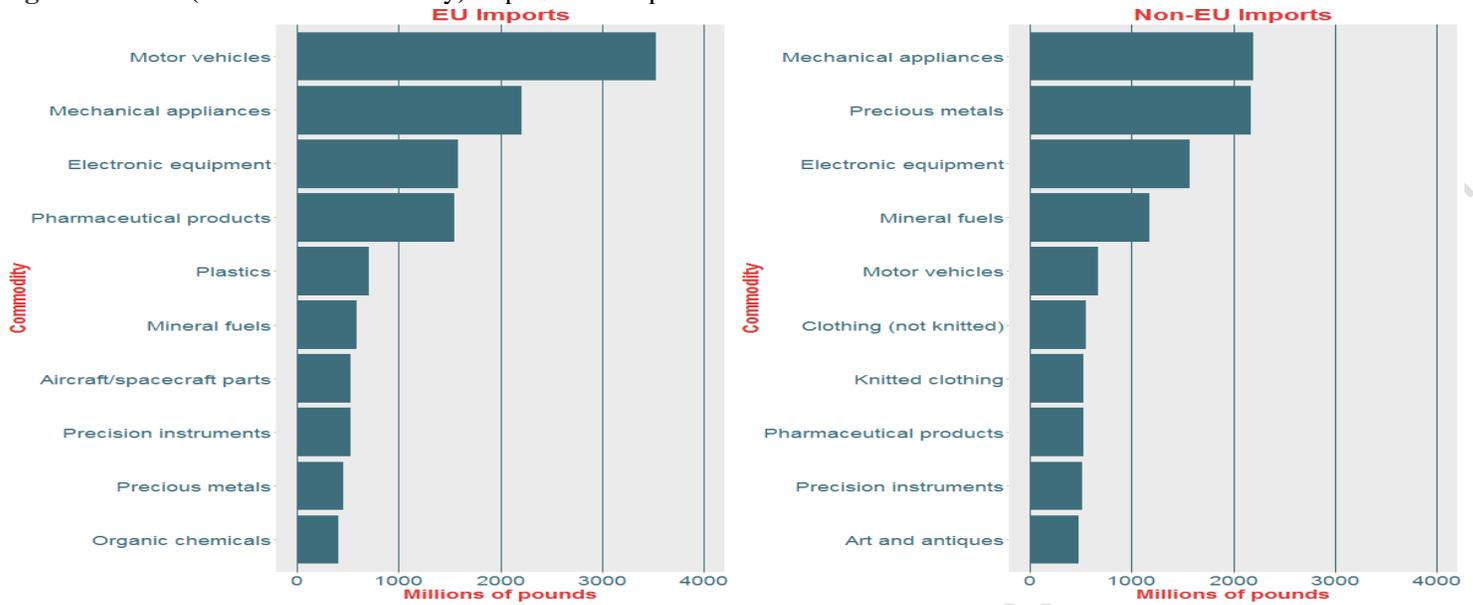
Figure 5. shows the UK’s (volume of commodity) imports and exports for the non-EU countries versus the EU countries.

**Figure 4. UK’s imports and exports for the non-EU countries versus the EU countries**



Source: The Select-Statistics

Figure 5. UK's (volume of commodity) imports and exports for the non-EU countries versus the EU countries



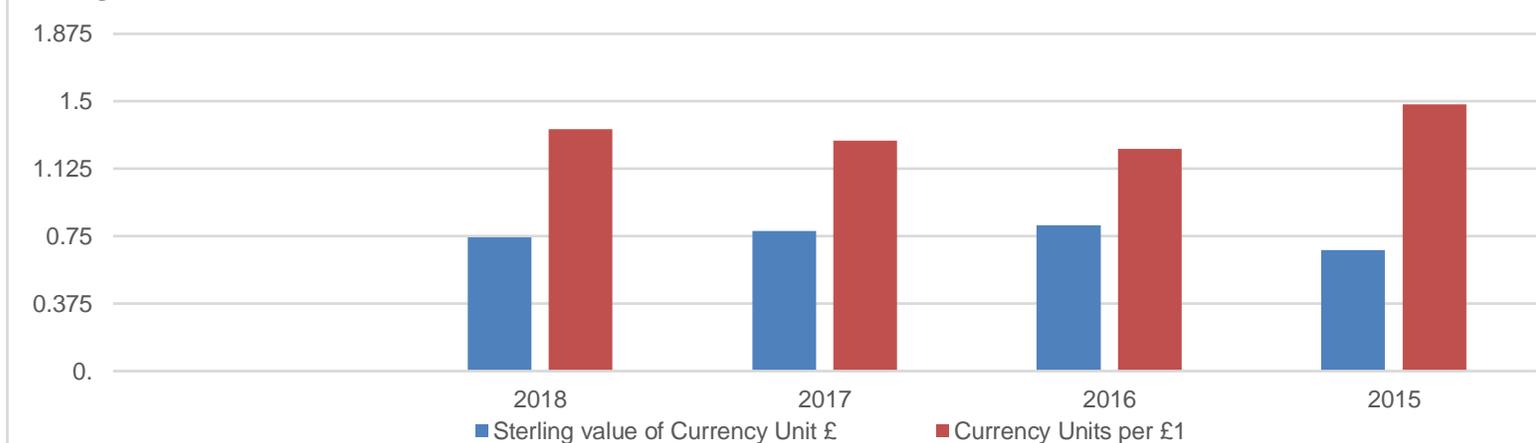
Source: The Select-Statistics

Table 2. The Pound Sterling exchange rates to U.S. Dollar from 2014 to 2018 (Yearly Averages)

Years	Country	Unit of Currency	Sterling value of Currency Unit £	Currency Units per £1
2018	USA	Dollar	0.7443	1.343550
2017	USA	Dollar	0.7796	1.282692
2016	USA	Dollar	0.8093	1.2357
2015	USA	Dollar	0.6742	1.4833
2014	USA	Dollar	0.6413	1.5593

Source: [www.gov.uk/government](http://www.gov.uk/government)

Figure 6: Pound Sterling exchange rates to U.S. Dollar from 2014 to 2018 (Yearly Averages)



Source: Designed with Excel tools

1 Pound sterling was exchanged for 1.5593 US Dollars averagely in 2014; however, in 2016 when UK decided to leave the EU, we see a sharp drop of Pound sterling to

1.2357 US Dollars. Reason could be the response of the market to the Brexit news (Market shock). Although the currency recovered by the year 2018 to 1.3435 US Dollars

Furthermore, Brexit may cause many issues including airlines to lose their automatic right to fly between Britain and EU member states impacting business. PM Theresa May and her government need to reach some sort of an agreement on air travel so that planes could carry on landing

**Cultural Analysis**

The UK and Canada have a long, positive relationship. Many Canadians have English, Scottish and Irish history and many parts of Canada also celebrate traditions from the UK that have been earned, shared, and transferred from one generation to the next. Language, expressions, traditions such as cooking and games, along with common ways of behaving in situations such as an “Irish wake”, come from an extensive line of UK influence. Business with the UK is usually considered a minimal risk country as Canada shares many similarities with the UK. What is important to note is that the UK is a low context culture so that words are extremely important when doing business. Also, the UK is a rule of law country like Canada. As noted by World Business Culture website and Kelly, D, “Cultural Tips for Doing Business in England” there are several important things to know even though Canada and the UK share many similarities. While doing business in the UK, these points are important to know:

Meetings are viewed as an open debate of an issue and various sides and opinions are looked at. People express their views and work towards identifying away forward or solution that can be found together. Having an outcome to the meeting is viewed as having no point to meet as the debate was not allowed to happen.

Agendas are given prior but not a lot of emphasis will be placed on them and instead if issues arise that need to be talked about, it will be talked about. Meeting agendas would be considered more of a suggestion rather than something is adhered to.

Arriving on time is important. In Canada, it may be polite to show up 10-15 prior to a meeting, while in the UK it is more widespread practice to arrive exactly at the start

in other countries and allow “normal” business to continue. “Brexit will be bad with deal and it will be worse with no deal 3.9% economic shrink with deal and 9.3% economic shrink without deal in 15 years”-vox news.

time. It is important to note that when making decisions in business with UK partners that, they will stick and refer to their laws and rules, facts, and data rather than personal experience or feelings. Working in a team is quite common in the UK and the team or people on the team will meet with you to arrive on an agreed upon decision before bringing it to the proper authority for approval. But, in Canada, this process can be slow.

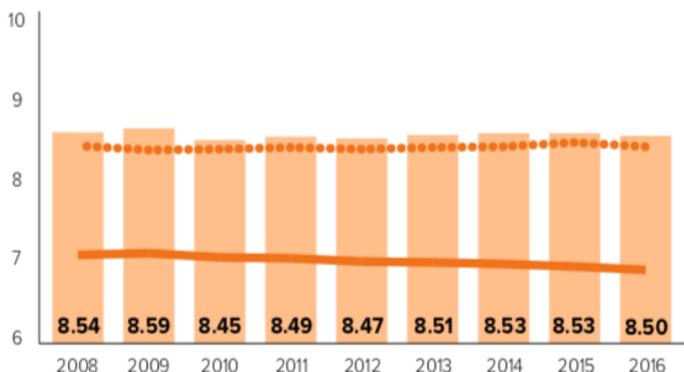
In Canada, women play a key role in management, business and decision making. The only issue for women to be aware of is the cultural comfort in using the terms love, dearie or darling which may be used quite often and that it is not considered rude.

Parts of our Canadian education system have also had roots from the UK education system. As a note, the UK has 82.9 percent of the population with post-secondary education. There is also slight difference between male and female with females with 82.4 and males with 85.2 having post-secondary education. The mean years of schooling in the UK is 12.9, and again extraordinarily slight difference between females 12.8 and males 13.5.

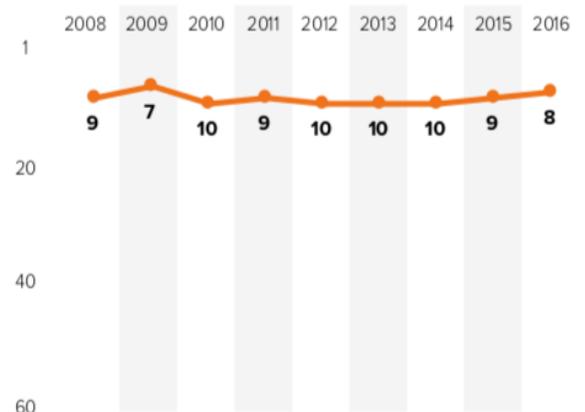
In relation to human rights, the UK scores 8.5 out of 10. 10 being most free, as per the human freedom index 2018. This ranking sits the UK at 8th out of 162 countries. They rank 9 on personal freedoms and 9 on economic freedoms giving the 8.5. Personal freedom includes data on rule of law, security and safety, movement (freedom of domestic, foreign, women movement, religious freedom, civil society, expansion, information, and relationships. Figure 7 below shows the UK human freedom score over time in comparison with the world and their individual ranking over time.

Human Freedom Score over Time

— World Avg.    ●●● Regional Avg.



Human Freedom Ranking over Time



Overall the UK would be an incredibly positive place for our wood pellet business to expand as we share many similarities between Canada and the UK, have historically good, positive relations between countries and there is a market for expansion of wood pellets in the UK.

**Technology and Infrastructure**

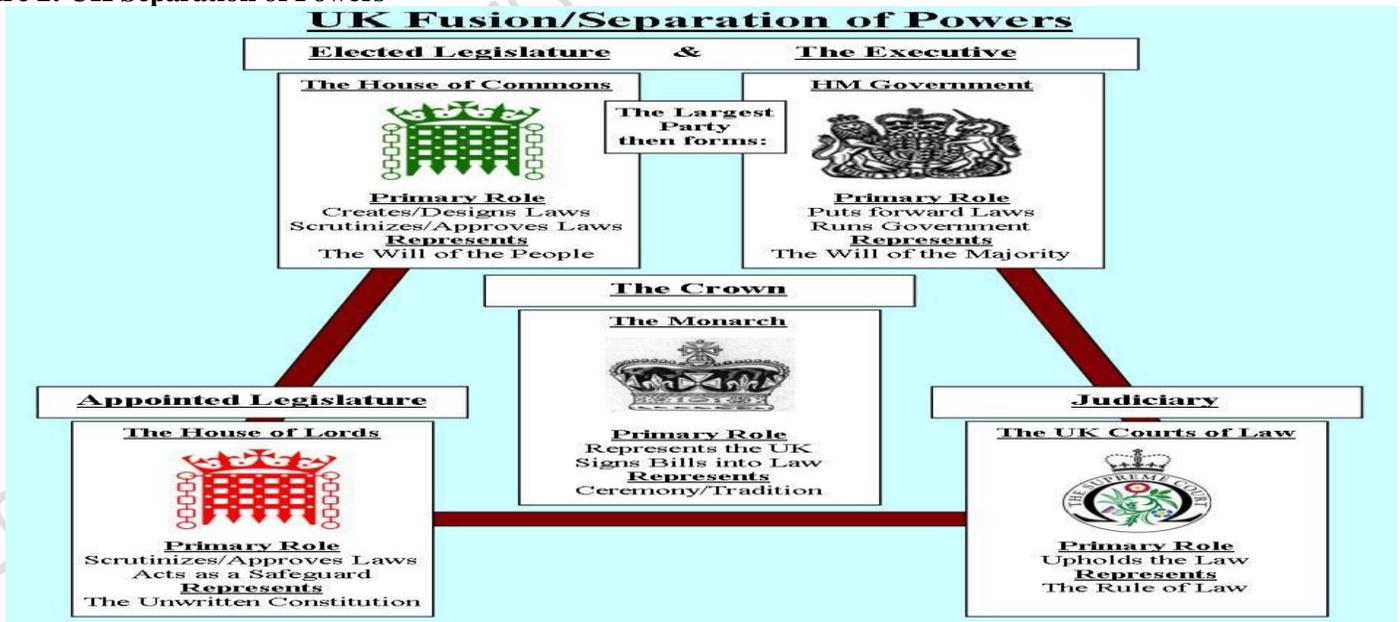
The UK has fantastic transportation infrastructure with airports, ports, and rail. Wood pellets transportation and handling are the highest costs associated with final cost of wood pellets. For Canada as a producer to be successful, it is imperative that logistics be handled efficiently to maximize profits. Pellets have to travel from Canada to the UK, thousands of kilometers away, in another country, different time zones and laws and therefore Canadian companies rely on European Bulk Services (EBS) to coordinate the movement of pellets. According to Wood Pellet Association of Canada, “European Bulk Services (EBS) is a Rotterdam company engaged in the transshipment of wood pellets. It is also a member of the Wood Pellet Association of Canada. “EBS is the dominant multi-purpose bulk terminal operator in the Port of Rotterdam,” says Frank van der Stoep, sales manager at EBS. “With our 220 employees, we engage in the transshipment, loading, discharge, and storage of all kinds of dry bulk products such as coal, minerals, Agri-bulk, scrap metal, and wood pellet products—wood pellets—to and from Europe.”With regards to Intellectual property of Canada exporting to UK, the EU and its member states adhere to all major intellectual-property agreements implemented by the World Intellectual Property Organization (WIPO), and to the WTO TRIPS agreement. Countries in the EU have 2 bodies that focus on intellectual

property. The European Patent Office (EPO) and the Office of Harmonization in the Internal Market (OHIM), the agency responsible for the registration of trademarks and designs. While there was a lot of information on the current situation with the UK property rights in the European Union, there was less information on the impact of BREXIT on intellectual property rights in the UK. With BREXIT deadline fast approaching, there seems to be some agreement that the UK will continue to uphold similar laws and that BREXIT on current UK intellectual property rights and that it will depend on the final withdrawal agreement and that UK legislation may be called on to assist in protecting these rights. It is expected that a phased BREXIT would offer provisions to many businesses that rely on the protection of the EU.

**UK Westminster System | Governing Principles and the Legal System**

The UK legal system is based on the Common law system which is based on a system of rules based on precedent (English law, Welsh law, and Northern Irish law). The UK is known for having an unwritten constitution that has developed over the centuries in which the constitution defines three pillars of governance, the Legislative, the Executive and the Judiciary while the Monarch represent the ceremony and traditional head of government.

Figure 2: UK Separation of Powers



Source: WordPress.com

The rule of law in the UK is one of the fundamental principles of UK's unwritten constitution. As the UK is

regarded as a country that has high respect for the rule of law, it is due to its legal system being firmly grounded on

the principles of equal treatment before the law, procedural fairness, judicial precedent, and the independence of the judiciary. What does this mean for doing business with or in UK? It means that foreign entities should expect equal treatment before the law. The fact that you are a foreign business does not put you at risk of being treated unfairly. The United Kingdom is a constitutional monarchy based on parliamentary democracy. In the absence of a written constitution, the main source of the law in the country is the common law with early Roman and modern continental influences. The UK is quite complex with Scotland having a separate legal system as well. The UK accepts compulsory ICJ (International Court of Justice) jurisdiction but with reservations. Equal Treatment of Nationals and Foreigners is guaranteed under the law.

**Legal Framework of international Business in UK**

- i. Business regulations governing foreign investment in UK
- ii. Technology Collaboration and or Franchise agreements
- iii. Dispute resolution arbitration in relation to UK transaction, concerns of international businesses and arbitration.
- iv. Intellectual Property
- v. Remittance of money to and from UK regulations
- vi. Import and export of goods and services
- vii. Employment laws (UK staff)
- viii. Contracts enforcement law

**The Jurisdictions**

<b>House of Lords</b>	<b>The House of Lords is the final court of appeal in all matters under English law, Welsh law and Northern Irish law.</b>
Court of Appeal	Criminal Division and Civil Division.
High Court	Queen's Bench Division; Administrative Court; Family Division; Divisional Court; Chancery Division; Divisional Court.
Crown Court	Trials of indictable offences, appeals from magistrates' courts, cases for sentences.
Magistrates' Courts	Trials of summary offences, committals to the Crown Court, family proceedings courts and youth courts.
County Courts	Majority of civil litigation subject to nature of the claim.
Tribunals	Hear appeals from decisions on immigration, social security, child support, pensions, tax and lands.

**International Dispute Resolution**

Arbitration Law is based on the Arbitration Act of 1996 which provide a clear and accessible statement of the law which is to limit judicial involvement in the arbitral process and to limit rights of appeal against arbitral awards. It is important for the parties to be aware of the flexibility of the Arbitration Act so that they are best positioned to craft the best arbitration procedure for the contract and subject matter at hand. Conformity to International Commercial Arbitration Rules is based on the New York Convention on the Recognition and Enforcement of Foreign Arbitral Awards, the Geneva Protocol on Arbitration Clauses, and the Geneva Convention of the Execution of Foreign Arbitral Awards.

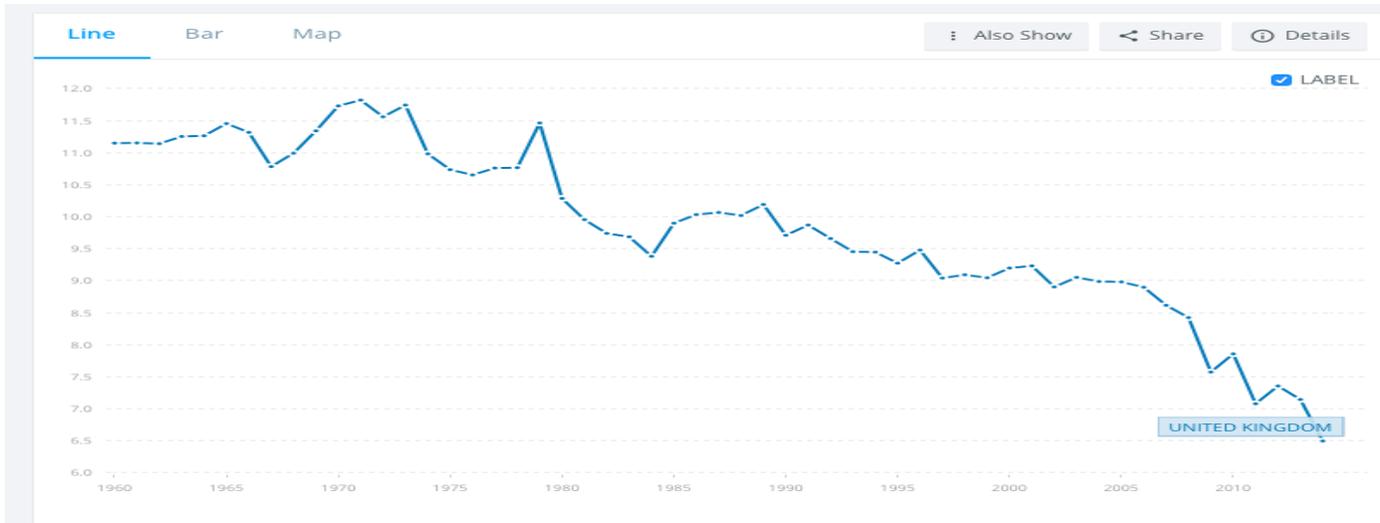
**Environmental**

The UK has developed strategic plans that focuses on the UK being a leader in environmental policy. The UK is looking to improve air, water and to protect plants, trees, and wildlife. The approach taken by the government is to

have this change achievable within a generation. The UK has set some remarkably high targets for the environmental pressures identified and relying on implementation through strong policy. One of the most positive policy actions that has occurred that would help the wood pellets business is that the UK is replacing coal with wood pellets at her power plants to reduce CO2 emissions. According to the Wood Pellet Association of Canada, which stated that, "The Climate Change Act of 2008 (the Act) provides that the UK must reduce its CO2 emissions by at least 80 per cent from 1990 levels by 2050 to limit the global temperature increase to 2°C. To ensure that regular progress is made towards this target, the Act established a system of five-year carbon budgets to serve as achievable steps along the way with the first four set in law."

With BREXIT looming on the horizon, the UK is facing pressure and environmental targets, like other areas, may take a back seat to BREXIT negotiations for a little while.

Figure 3: CO2 emissions per capita for UK (world bank data)



### Opportunities and Challenges

Opportunities and challenges related to wood pellets have to do with greenhouse gas emissions (wood pellets can contribute to reducing carbon emissions, but emissions may not be fully accounted for); resource availability (wood pellets can contribute to energy security, but its sources are finite); environment and human health (increased use of wood pellets for energy can have adverse effects on air quality, soil properties and biodiversity). To address sustainability concerns, different responses have been put forward, including the principle of the cascading use of wood pellet, whereby it is used more than once, with energy conversion typically as the last step. Wood pellets is considered a renewable energy source because it can usually be renewed in a few decades and be used to address the sustainability concerns of UK. Wood pellets can be converted using a variety of conversion routes to produce three types of bioenergy: heat, electricity, and transport fuels. In 2012, Canada exported 1,369,000 tonnes of wood pellets, valued at \$208 million. About 84% of that amount went to countries in the European Union, with the United Kingdom and the Netherlands being the largest importers (using the fuel for electricity generation).

(Natural Resources Canada). Therefore, we feel there are several opportunities for expansion of the business to the UK pellet market with favorable profit margin.

### Challenges

Sustainable supply and proximity to end users and huge investment cost are part of the challenges to commercialization. The prevailing low price of oil in the international market has seriously eroded the financial viability of many renewable systems. The risk of contamination with decay fungi, molds, and wood boring insects (e.g. termites and beetles), therefore, quarantine

treatment (e.g. ISPM 15) may be necessary especially for export and international trade. Thermal conversion of biomass and wood pellets result in the emission of NOx and SOx, these pollutants are relatively small in quantity in comparison with fossil fuel. (Acda, M. N. et al., 2018). Another challenge is the cost of fuel for shipping. Shipping of wood pellets is by far the biggest cost and with the price of oil in the world along with the ramifications associated with BREXIT, this may prove to be a growing cost and would be challenging to the business in Canada to take on additional shipping costs.

### Conclusion

Paris Agreement (PA) signed by countries of the world including UK about publishing greenhouse gas reduction targets and revision Mechanism, Countries will be tasked with preparing, maintaining, and publishing their own greenhouse gas reduction targets. Nations will periodically analyze collective progress toward achieving the goal of the PA. The agreement says these targets should be greater than the current ones and these targets will be reviewed and revised every five years starting in 2023. The agreement also says that each country should strive to drive down their carbon output "as soon as possible (UNFCCC, 2015)." PA establishes a "mechanism to contribute to the mitigation of greenhouse gas emissions and support sustainable development" and paves the way for voluntary cooperation between countries in meeting their pollution goals. The deal sets the goal of a carbon-neutral world sometime after 2050 but before 2100. This means a commitment to limiting the amount of greenhouse gases emitted by human activity to the levels that trees, soil and oceans can absorb, naturally (UNFCCC, 2015). Climate risk screening of national development strategies and policies

aimed at enhancing livelihoods and economic diversification to enhance climate resilience.

Although Canada is one of the richest countries in wood forest, therefore, government of Canada must regulate wood cutting with policy to guide against deforestation and forest degradation (REDD+) activities which are a major source of GHG emissions and it account for around 11 percent of the global GHG emissions (Hosonuma et al., 2012). As trees take carbon out of the atmosphere when growing, wooden buildings contribute to negative emissions by storing the stuff. When a mature tree is cut down, a new one can be planted to replace it, capturing more carbon. (see Class Learning Cell 3, Article 2, the house made of wood).

Immigration is one of four UK ports where Canadian wood pellets are unloaded on their way to Drax. The others are the Ports of Tyne, Hull, and Liverpool. The Immingham wood pellet terminal was designed to handle about six million tonnes pellets per annum with the unloaders in almost constant operation. Canada-UK pellet

trade is to share information about Canadian sustainable forest management (Canadian Government must work on forest management sustainability policy for the pellet industry to continue to thrive). Wood pellet is allowing the UK to meet its internationally binding targets on climate emissions. Recently, Canada expressed significant excitement about the growth of her wood pellet trade with Asia. However, it is important not to lose sight of the incredible importance of the UK market, and especially Drax Power, to Canada's wood pellet industry (Canadian Biomass Magazine). The use of wood pellets could help ease energy independence from high priced fossil fuels, and it will help mitigate effects of GHG emissions. The demand for wood pellets is growing exponentially and its economic return on investments will be very abundant in the long-run for the Canadian wood pellet industries.

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## One Multinational versus Many National Companies.-case study in global Entrepreneurship Olusegun Michael Olaniyan , Capstone Edge Consulting, Calgary, Alberta-Canada

### Introduction

We frequently treat individual MNE as a single entity notwithstanding of in how numerous nations it operates. Nonetheless, from an institution-based standpoint, one can contend that an international innovativeness may be a total narrative that does not exist. This is because, legitimately, integration is only imaginable under nationwide law, and every so-called MNE is fundamentally a bunch of national corporations (affiliates) registered in several nations. A generation ago, such businesses were often described “multi-national corporations” with a hyphen. Although some specialists maintained that globalization is disheartening the authority of national governments, there is minute indication that the contemporary nation-state scheme, in existence since the 1648 Treaty of Westphalia, is retreating.

This consideration is not just theoretical quibbling struggling over a hyphen. It is very pertinent and incentives are high. In 2010, Zhejiang Geely Holding Group (in short, “Geely”) of China bought Volvo Car Corporation (Volvo Personvagnar AB in Swedish—in short, “Volvo Cars” in English) from Ford Motor Company of the United States for \$1.8 billion. Volvo Cars thus became an exclusively owned subsidiary of Geely. Everyone in the world, as well as Geely’s owner Li Shufu, thought Volvo Cars was “Chinese”excluding the Chinese government.

Repudiating to recognize the reality of any international company the Chinese government upheld that Volvo Cars, registered in Sweden and headquartered in Gothenburg, Sweden, was Swedish. Once Li wanted to manufacture Volvo automobiles in Chengdu, Daqing, and Zhangjiakou in China, the government recommended that he set up a different joint venture (JV) between Volvo Cars (a Swedish company) and Geely (a Chinese company). Since Li was chairman of the board for Volvo Cars and chairman of the board for Geely, he concluded with signing both sides of the JV agreement. In other words, one person represented both the Swedish firm and the Chinese company. In 2013, the Chinese government sanctioned this new international JV, in which the Swedish side (Volvo Cars) owned 30% equity. If Li signing his designation twice on a JV agreement is hilarious, a more thoughtful case in point concerns tax avoidance. Officially, Google Ireland is not a division of the US-based Google Establishment. Google Ireland is a distinct, legitimately autonomous establishment registered in Ireland. Though Google Company purposefully lets Google Ireland receive a lot of revenues, the US Internal Revenue Service (IRS) cannot tax a dime Google Ireland makes except it sends back (deports) the proceeds to Google Business. Google Establishment

does not have just one subsidiary. It has lots around the world. Overall, 54% of Google’s returns are parked in foreign nations and are not chargeable by the IRS. Google is not alone. The list of foremost US organizations that have left a majority of their earnings overseas comprises Chevron, Cisco, Citigroup, ExxonMobil, GE, HP, IBM, Johnson & Johnson, Microsoft, P&G, PepsiCo, and Pfizer. These corporations claim that they are prepared to bring the profits back home to capitalize and generate jobs as long as Congress grants them a tax break. Running enormous budget discrepancies, Parliament is comprehensibly doomed by more market-friendly laws and conventions in their new nations of residence. Notwithstanding the Swedish flags in front of its rations, IKEA is now a Dutch company, having registered in the Netherlands and relished minor taxes there.

Furthermore, leaders need to appreciate and be willing to amend the internal procedures of the game overriding MNE organization. Diverse approaches and strategies required diverse internal guidelines. Some simplify and others restrain MNE activities. A company using a local imitation Stratagem should not engage an outsider as its CEO. Yet, as procedures become more universal, an MNE’s decision-making outlook needs to be expanded as well.

Moreover, leaders need to enthusiastically cultivate awareness and improvement competences to influence international existence. An engaging standard is thinking international dwindling to do so may be exorbitant. From 1999 until 2000, Ford Explorer SUVs were complicated in copious deadly rollover mishaps in the United States. Most of these mishaps were accused on faulty tires made by Japan’s Bridgestone and its US subsidiary Firestone.

Nevertheless, before the escalation in US accidents, a shocking number of related mishaps had already taken place in tropical weather nations such as Brazil and Saudi Arabia tires threadbare out quicker in tropical weather. Indigenous Firestone leaders unquestioningly described the mishaps to head office in Japan and the United States. Regrettably, this information was terminated by the higher-up as due to driver negligence or poor road conditions. Bridgestone/Firestone thus became unsuccessful to influence its global existence as strength. It should have gathered from these records and intelligently investigated into the root cause for related mishaps in chiller-weather nations. In the end, many lives were lost superfluously, and knowledgeable car purchasers jettison the Bridgestone/Firestone make.

The activities of international organizations are strappingly sustained by financial free market structure in a globalized intercontinental culture. According to the monetary experimenter perspective entities act in coherent ways to exploit their egocentricity and consequently, when personalities act realistically, marketplaces are formed and they function superlative in free market structure where there is slight bureaucratic snooping. As a result, intercontinental capital is exploited with free exchange of goods and services.

To numerous commercial liberals, transnational companies are the forerunners of the substantial order. They are the personification par brilliance of the profuse ideal of a co-dependent global economy. They have taken the amalgamation of countrywide economies past trade and currency to the internationalization of invention. For the first time in history, invention, advertising, and investment are being systematized on an international dimension rather than in terms of quarantined general economies.

Intercontinental commercial is also a professional field of theoretical exploration. Monetary philosophies of the cosmopolitan establishment comprise internalization school of thought and the eclectic model. The latter is also called the OLI structure.

The other speculative aspect of the role of multinational businesses concerns the connexion between the globalization of pecuniary arrangement and the philosophy of nationwide and indigenous reactions. This has a background of insecure traditional administration going back at least to the 1960s.as a prototype.

### **Conclusion**

Dichter (1966), builder, of Exxon's international promotion, stated that to be fully means to be overpowering conventional confrontation depended on total awareness of the nations in which an establishment functioned. He perceived that syndicates with farsightedness to capitalize on global prospects must identify that traditional anthropology will be a significant instrument of economical promotion. However, the predictable consequence of this was not the incorporation of intercontinental companies into national philosophies, but the establishment of a global clientele. The impression of a international business community occasioned the administration and rebuilding of unsophisticated connections to one's country. It entailed not a repudiation of the unaffectedness of national connections, but an internationalization of the way a country defines itself.

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**Abstract**

The study comparatively analyzes financial performance of privatized oil companies in Nigeria among petroleum companies in Nigeria. Descriptive research design was adopted for the study. The study purposively selected and examined one privatized and non-privatized petroleum companies: OANDO Plc and Total Oil Plc from among the 14 petroleum companies quoted on the Nigerian Stock Exchange. Data were collected for the study from the annual reports and accounts of the companies. Data collected include data on Net Profit, profit before tax (PBIT), profit after tax (PAT), Cost of Sales, Total Assets, Equity, and Non-Current Liabilities which was used in arriving at the financial performance indices of Return on Investment (ROI), Return on Asset (ROA), Return on Capital Employed (ROCE) for the periods (1989-2002 and 2008-2016). Paired t-test statistics was employed as tool for the analysis. The findings show that there is significant difference in the pre and post-performance ratios. (ROA and ROCE) of privatized company. Findings from the comparison of the financial performance of privatized and non-privatized petroleum companies showed mixed result that there is no statistical significant difference for return on investment while there is significant difference for return on asset and return on capital employed in the financial performance of privatized and non-privatized petroleum companies in Nigeria. The findings implied that privatization has achieved the efficiency guaranty as one of its aims. The researcher therefore recommends among others that management of privatized companies should take steps to ensure that return on investment is guaranteed [especially for quoted companies] in order to discourage investors from withdrawing their capital for investment elsewhere.

**Key words:** *Financial Performance, Privatized, Non-Privatized, Nigeria Petroleum Companies*

**Introduction**

Nigeria relied heavily upon public enterprises, up to the mid-1980s, for the development, management and allocation of utilities and social services (Ayodele, 2004). Public enterprises were then seen as major instruments not only for the mobilization and allocation of public investment resources, employment generation and income redistribution, but also for determining government finances and the acceleration of overall economic development. As at 30th November, 1990, the Federal Government investment in each enterprise was over N36 billion and the replacement cost was put at over N500 billion (Amnupitan, 2002). Public enterprises were established to enhance Nigeria's socio economic development. The major concern in this regard had been to accelerate development and economic self-reliance through economic nationalism. Public enterprises thus reflect one of those instruments by which government intervenes in economic development rather than allow market forces to dictate the pace of development. According to Ayodele (2004) Nigeria relied heavily upon public enterprises, up to the mid-1980s, for the development, management and allocation of utilities and social services. They were seen as major instruments not only for the mobilization and allocation of public investment resources, employment generation and income redistribution, but also for determining government

finances and the acceleration of overall economic development (Afeikhena, 2008).

The expansion of government into diverse economic activities was viewed as an important strategy for fostering rapid economic growth and development. This position was re-enforced by massive foreign exchange earnings from crude oil by government and it fuelled unbridled Federal Government of Nigeria (FGN) investment in public enterprises. Unfortunately, most of the enterprises were poorly conceived and thus economically inefficient. They accumulated huge financial losses and absorbed a disproportionate share of domestic credit. By 1985, they had become an unsustainable burden on the budget (Abah, 2009). With the adoption of the structural adjustment programme (SAP) in 1986, privatization of public enterprises came to the forefront as a major component of Nigeria's economic reform process at the behest of the World Bank and other international organizations. The non-performance of the public enterprises prompted series of discussions that resulted in policy recommendations on how best to move them out of the quagmire. Consequently, a Technical Committee on Privatization and Commercialization (TCPC) was set up in 1988 to oversee the programme. Also in 1999, the Democratic regime under the leadership of President Olusegun Obasanjo, initiated sweeping reforms across the various sectors of the Nigerian economy (Alabi, Onimisi, & Enete, 2010). They recognized that national public enterprises have failed to meet public expectation. The public enterprises were perceived to be consuming a large proportion of national resources without discharging the responsibilities imposed upon them hence the government of Nigeria decided to transfer ownership of many public companies to private individuals and entities. In the course of privatization of public enterprise, the TCPC has privatized not less 55 public enterprises.

Concern over the performance of privatized companies has been of great concern to public and financial analyst with general opinions and observations showing that public enterprises are being sold off as compensation to political friends and allies. Example, the privatization of NICON insurance which stood as the leading insurance company in Nigeria and the world at large but could not even compete with smaller insurance companies in Nigeria in recent times. Boyede in Okwe (2016) noted that NICON after privatization was meant to be agile and move at a fast pace expected of a private sector entity, not forgetting that the company was a government corporation for more than forty years before it was privatized. After privatization, there has been a lot of concern on the efficiency of NICON insurance. Presently, NICON insurance cannot be found among the list of trusted insurance companies in Nigeria which include Mansard Insurance; AIICO; FBN insurance; Custodian insurance plc; Leadway Insurance; IGI Insurance Leadway insurance plc; NEM Insurance; Mutual assurance plc; and Zenith Insurance (Extreme loaded, 2016). Report of Re-insurance (2016) also shows that NICON insurance that has been the former No 1 insurance company in Nigeria after its privatization could not be found among the top five insurance companies in Nigeria.

Beside NICON insurance, the privatization of public oil companies needs a thorough investigation especially in period where the Ernest & Young the auditor of OANDO Plc has raised concern and drawn attention to Note 47 to the financial statements of OANDO Plc which indicates that the Group reported comprehensive loss for the year 2015 of N37.8billion (2014: N116.5 billion) and as at that date its current liabilities exceeded current asset by N247.9 billion (2014: N329 billion). The company also incurred comprehensive loss of N56.6 billion for the year ended 31 December 2015 (2014: loss N566.5 billion) as at that date, its current liabilities exceeded current assets by N32.8 billion (2014:N43.7 billion) (Ernest & Young, 2016). With the reported losses recorded in OANDO Plc, sufficient time has elapsed since the commencement of the reforms to allow an initial assessment of the extent to which privatization has realized intended economic and financial benefits to its investors who are entitled to improved financial performance of their enterprise, most especially considering the fact that oil sector is the foremost industry in Nigeria.

In spite of the impetus given to public enterprises especially in Nigeria some criticisms are leveled against them. Their problems are so enormous that it has even left the Nigerian public in a state of great disillusionment. These criticisms vary from lack of profitability and reliance on large government subsidies. Ogundipe (2006) once argued that between 1975 and 1985, government capital investments in public enterprises totaled about N23 billion. In addition to equity investments, government gave subsidies of N11.5 billion to various state enterprises. All these expenditures contributed in no small measure to increased government expenditures and deficits. Similarly, public enterprises suffer from gross mismanagement and consequently resulted to inefficiency in the use of productive capital, triggered by corruption and nepotism, which in turn weaken the ability of government to carry out its functions efficiently (World Bank, 1991). The studies of Xiaoxuan [2001] Fisher, Gutierrez and Serra [2003], Hyde [2005], Chen, Shamsher & Annuar [2008] and Mondal and Imran [2010] have showed that privatization improved financial performance of SOEs. It is on this premise that privatization is being recommended as panacea for ailing enterprises by institutions like IMF, World Bank and other international financial agencies. This option has been used as bail out measures for many 3<sup>rd</sup> world countries. Hence it is virtually axiomatic that privatization guarantees efficient performance of enterprises.

However the studies of Soyebo, Olayiwola and Alayande [2001] and Balsari and Ozkan [2009] portrayed largely ambivalent and negative impact. Therefore the huge losses recorded by OANDO Plc in a period when many smaller petroleum companies are surviving the economic hardship affecting the Nigerian economy are still puzzling to many financial analyst and investors. A lot of questions are being raised about the efficiency of the invested funds and the company's operations. Hence it is the interest of researcher to investigate the financial performance of OANDO as compared to other petroleum companies quoted on NSE so as to ascertain whether privatization had any positive effect on financial performance of the company. Enhancement of financial performance constitutes the major under pinning for the privatization.

The general objective of this research work is to determine the effect of privatization on financial performance of

privatized and non-privatized petroleum companies in Nigeria. **While the research questions** is to what extent is the difference in the pre and post financial performance of privatized petroleum company in Nigeria? The research objective and question produced the following null ( $H_0$ ) hypotheses:

- i. There is no statistically significant difference in the pre and post return on capital employed of privatized petroleum company in Nigeria is not significant.
- ii. There is statistically significant difference in the pre and post return on asset of the privatized petroleum companies in Nigeria is not statistically significant.
- iii. There is no statistically significant difference in the return on investment of the privatized and non-privatized petroleum companies in Nigeria.
- iv. There is no statistically significant difference in the return on asset of the privatized and non-privatized petroleum companies in Nigeria.
- v. There is no statistically significant difference in the return on capital employed of the privatized and non-privatized petroleum companies in Nigeria.

The study will be of great importance to Investors, Management of OANDO Plc, Petroleum Companies in Nigeria, Public Analyst, Government and its Agencies, as well as the academic society. The result of this finding will help investors to ascertain whether they are properly rewarded on their investment in OANDO Plc which will aid the decision on continuous increase of their investment in a more profitable company.

The findings from the study will help management of OANDO Plc to ascertain the financial performance level when compared to petroleum companies in Nigeria so as to take decisive measure that will enhance sustenance/improvement of their performance. The findings of the study will be of great importance to petroleum companies in Nigeria so as to assess the performance level when compared to former public companies that are seen as non-profitable. The findings will help public analyst to assess the privatization exercise embarked upon by government so as to ensure that privatization achieve its targeted goals in Nigeria.

The findings of the study will help government and its agencies in ascertaining how the privatization policy they embarked upon has fared which will help them in proffering measures that will enhance continuous operations of these organizations by not selling the organizations to investors that are only interested in making instant profit of the money used in buying these companies.

More also, it is hoped that the evidence from this research work would serve as important quantitative information to management of petroleum companies in Nigeria as well as add to existing body of empirical literature.

The scope (area coverage) of this research work is OANDO Plc and Total Oil Plc. operating in the Nigeria business environment. The financial performance indices which include; Return on Investment, Return on Asset and Return on Capital Employed. The period covered for the study is 8 years financial operating period which is between the years (1989-2002) and 2008—2016) for pre and post respectively.

This study is not without some limitations. The major limitation encountered in the study is accessibility to data of petroleum companies, since not all the companies have the responsibility of making their financial information public. This

made the researcher to adopt quoted petroleum companies as a

representative of petroleum companies in Nigeria.

owned and maintained by a private firm that is paid with government funds for the services it provides.

## 2. Review of Related Literature

### 2.1 Conceptual Review

#### 2.1.1 Privatization

Privatization is the transfer of a majority of ownership from states to private sectors by the sale of ongoing concerns or assets following liquidation (Kikeri & Burman, 2007). To further the understanding of privatization, Ogunlalu in Asaolu and Oladele (2006) conceives privatization as the transfer of shares ownership or sale of shares owned by government in public enterprises to the private hands. Privatization of shares makes the enterprises to become public companies and this facilitates easy transferability of shares (Asaolu & Oladele, 2006). Hanke (1987) in Jerome (2005) defined privatization as a transfer of assets and services functions from public to private hands. These authors emphasize activities ranging from selling state-owned enterprises to contracting out public services with private contractors. Thus, privatization is the transfer of ownership fully or partially from governments to private sectors through various methods such as direct sales, share issues, leasing, etc.

Some other authors look at privatization as a wider phenomenon comprising of interrelated activities that reduce the government ownership and control of enterprises and that promote private sector participation in the management of state-owned enterprises. Vickers and Wright (1998) in Jerome (2005) view privatization as an umbrella term for a variety of different policy that are loosely linked which mean the strengthening of the market at the expense of the state. Hartley and Parker (2006) define privatization as the introduction of market forces into an economy in order to make enterprises to work on a more commercial basis. They mean that privatization includes denationalization or selling off state-owned assets, deregulation (liberalization) competitive tendering, as well as the introduction of private ownership and market arrangements in the ex-socialist states.

In Nigeria, the Privatization and Commercialization Act of 1988 and the Bureau of Public Enterprises Act of 1993 defined privatization as the relinquishment of part or all of the equity and other interests held by the Federal Government or any of its agencies in enterprises whether wholly or partly owned by the Federal Government. It could also be referred to as changing the status of a business, service or industry from state, government or public to private ownership or control. Occasionally, the term privatization includes the use of private contractors to provide services previously rendered by the public sector. Based on these various definitions of privatization discussed above, this study uses the definition of privatization which is a bit narrow that is Share Issue Privatization (SIP, hereafter). In this definition, privatization includes the full or partial transfers of government ownership to private ownership through the sale of equity in the capital market.

#### 2.1.2 Types of Privatization

Hebdon and Gunn (1995) in Jerome (2005) identify the following four most common types of privatization:

**1) Public/Private Partnerships:** This occurs when public funds are used to stimulate private sector investment. An example would be a public transportation system where the buses are

**2) Cessation of Service/Commercialization:** This occurs when a government ceases to provide a public service altogether, leaving it to the private sector, if they feel they can make profit doing so, to provide the service at a fee charged directly to the public as opposed to a government agency.

**3) Sale of State Owned Enterprises (SOE):** Selling public assets (e.g., golf courses, convention centers, airports, Conrail in 1987) can produce a onetime fiscal windfall to a community, at the expense of a future stream of income. Recently as a result of the Department of Defense Base Realignment and Closure (BRAC) activities, some former military installations were sold to the highest bidder.

**(4) Contracting Out:** contracting out involves the provision of public services literally from A to Z (i.e. administrative support to zoo keeping) through contracts with private firms. While the service is provided by for-profit companies as well as by non-profit making companies (e.g., much social service contracting), the government remains responsible for service quality and delivery.

#### 2.1.3 Privatization of Public Enterprise in Nigeria

The clamoring for privatization policy in Nigeria dates far back to 1965 (Adeyemo, 2005). Rweyemanu and Hyde (2005) justified the poor performance of public enterprises in Nigeria by stating that between 1960 and 1965, the Nigerian railway corporation alone had 13 enquires into its activities and in 1965 it has a deficit of N7 million and the World Bank described its Finances as disastrous. At the international scene, the World Bank in 1981 recommended the dismantling of the African public enterprises system and submitted that African governments should not only examine ways in which public sector can be operated more efficiently but should also examine the possibility of placing greater reliance on the private sector; what is needed is straight forward acceptance of the principle that under certain circumstances, liquidation of public enterprises may be desirable (Probsting, 2007).

The International Monetary Fund (IMF) has often been recommending privatization/commercialization for developing countries including Nigeria, where the industrial sector and occasionally, key element in the commercial sector, are heavily dominated by public enterprises. The fund also argued that loss – making enterprises have, for many years been a drain in government resources in these countries. Such enterprises have required budgetary transfers or have relied on government quarantined borrowing to finance their cash operating losses (Hermmin & Mansor, 2008).

The unprecedented economic problems in Nigeria which led to the accumulation guarantors to borrow and non-acceptance of IMF conditionality and the subsequent refusal of the loan by Nigerian led to the Structural Adjustment Programme (SAP). SAP was aimed at restructuring the economy and making it more competitive and efficient. The restructuring of public enterprises was an integral part of the Structural Adjustment Programme which kick started in 1986. The actual implementation of privatization started in 1988 with inauguration

of technical committee on privatization and commercialization as contained in Decree No 25 of 1988. Thus, in November 1989 the implementation process of full or partial commercialization began. The parastatals and government owned companies were classified into five broad categories. Full or partial privatization, full or partial commercialization or to remain as public institutions (FGN, 1998).

The Technical Committee on Commercialization and Privatization (TCPC) initially served as the secretariat for implementation of privatization reform. Following enactment of the public enterprises Act of 1999, the Bureau of Public Enterprises (BPE) was formed to take over the activities of TCPC. The Act also made provision for the establishment of National council on privatization (NCP). The NCP is the lead policy making body in charge of privatization and commercialization in Nigeria. The Public Enterprises (privatization and the commercialization) Act in 1999 empowered the BPE to change emphases from commercialization to encouraging more investors, and promoting foreign investment in the privatization programme.

The exercise of privatization started with commercialization of some enterprises like the Nigeria Railway Corporation (NRC), National Electric Power Authority (NEPA), Nigerian Telecommunication limited (NITEL) and Nigerian Postal Services (NIPOST). This was inevitable because, it was less cumbersome and easier to achieve. Some government owned enterprises which merely existed without justifying the purpose for their establishment such as Ikoyi Hotel; Federal Palace Hotel; African Petroleum; National oil, etc. were sold to private investors.

Kuye (2000) once asserted that the governments of countries such as United Kingdom, France, Canada, Turkey, Nigeria etc which adopted mixed economy have now accepted the obvious truth that after all, as most of the public enterprises were turned over to the private sector for better management and thus achievement of economic goals. As a result of the new economic direction UK reduced the high level inflation; huge domestic debts; high level of unemployment and low growth rate of the national economy; chronic deficit in the British balance of payments position and the depreciation in the value of pound sterling (Adeyemo, 2005). Thus, the privatization of the British economy charted by the labour party led to greater accountability, better factor allocation, and stoppage of public subventions of industries.

In Nigeria however, the privatization and commercialization programme has become a major policy instrument, which in addition with other instruments, was expected to contribute to the overall attainment of the general macroeconomic goals. Therefore, the privatization and commercialization programs in Nigeria were aimed at achieving the following objectives: To restructure and rationalize the public sectors in order to lessen the dominance and burden of unproductive investments in that sector; to re-orientate the enterprise for privatization and commercialization towards a new horizon of performance improvement, viability and overall efficiency; to ensure positive returns in public sector investment in commercialization enterprises; to check the present absolute reliance of commercially oriented parastatals on the treasury for funding and to encourage their approach to the Nigerian capital market; to initiate the process of gradual cessation to the private sector of the functions of such public enterprise whom by the

nature of their operations and other social economic factors are best performed by the private sector, creating a favorable investment climate for both local and foreign investors, reduction in the level of internal and external debits; and to provide institutional arrangements and operational guidelines that would ensure that the gains of privatization and commercialization are sustained in the future Decree No. 25 of 1988. In a more specified manner, commercialization policy was planned and carried out for the following reasons:

1. Minimization of Government interference: The process of commercialization is much more complex. Unlike the privatized enterprises, in commercialization, government would continue to be the sole owner of the enterprises, they would also continue to have financial stake in the enterprises to be commercialized. However, the Technical Committee on Privatization and Commercialization (CPC) now Bureau of Public Enterprises (BPE) would ensure that all the checks and balances are in place to minimize government interference and to encourage optimum performance by the managers of those enterprises.

2. Commercialized enterprise should adopt commercial orientation and financial self-sufficiency. They are expected to be better managed and to make profit. They are expected to be run like privatized enterprises in future except perhaps in the case of utilities. It should be self-sufficient in both its recurrent and capital expenditure needs. Enterprises to be partially commercialized would be expected to operate like the fully commercialized ones in terms of better management and profit orientation but because of public nature of the goods and services at a price as low as possible to the public. Government was to still provide financial grants for the capital projects of the partially commercialized enterprises. They would be expected to earn enough revenue to cover their operating costs.

3. Operational and management autonomy: They are to enjoy considerable operational autonomy and in accordance with the decree, they will have the power to operate on strict commercial basis and subject to the regulatory power of government: fix rates prices and charges for the goods and services provided, capitalize assets, borrow and issue debenture stocks and sue and be sued in the corporate names.

The Privatization and Commercialization Act 1988 introduced commercialization and privatization as measures for the re-organization of state owned enterprises in Nigeria. According to section 14 of the Act, Privatization means, the relinquishment of part or all of the equity and other interests held by the federal government or its agency in enterprise whether wholly or partly owned by federal government. Nwoye (2010) state that privatization in Nigeria was formally introduced by the privatization and commercialization Act of 1988, which later set up the Technical Committee on Privatization and Commercialization (TCPC), Chaired by Dr. Hamza Zayyad, with mandate to privatize 111 public enterprises and commercialized 34 others. The federal military government promulgated the Bureau of Public Enterprises Act of 1993, which repealed the 1988 Act and set up the Bureau for Public Enterprises (BPE) to implement the privatization program in Nigeria. According to Adesammi (2011) the government, set up the Bureau of Public Enterprise (BPE) to privatized and commercialized, as the case may be, public enterprise with the objective of reducing or

eliminate the drain on public treasury. It also seek to reduce corruption, modernize technology, strengthen domestic capital markets promote efficiency and better management, reduced debt burden and fiscal deficit resolve massive pension funding problems, broaden the base of ownership of business as well as others which include generating funds for the treasury, promoting good governance ,attracting foreign investment and stop capital flight capital. Whether the BPE has met and realized these objectives is a matter opened for debate.

According to Dimgba (2011), privatization is a phenomenon which has been a necessary concomitant to the principle of changing ownership and management from the government to private investors. Privatization encompasses the many ways in which the private sector assumes functions that were previously carried out by the government (Aktan, 2011). According to Pamacheche and Koma (2007), privatization is supposed to be undertaken to re-deploy assets from the public to the private sector, where the assets are expected to be used more efficiently. Pamacheche and Koma (2007) expressed that depending on the form it takes privatization can be defined in several ways. They quoted a definition of privatization by the World Bank (2003) as, a transaction or transactions utilizing one or more of the methods resulting in either the sale to private parties of a controlling interest in the share capital of a public enterprise or of a substantial part of its assets, or the transfer to private parties of operational control of a public enterprise or a substantial part of its assets.

According to International Labour Organization (ILO) (2001), privatization is the transfer from the public to the private sector of assets in terms of ownership, management, finance or control. In its narrowest sense it is the sale of public assets to the private sector, but it has also been linked to a reduced regulatory role of government, linked to policies of liberalization and deregulation.

In Nigeria, this theory has not gone unchallenged as to its relevance to many sub-sahara African countries. From the view point expressed by Aluko, the assumption of the inherent efficiency of the private sector should be questioned. He argued that in Nigeria, much of private sector profits are not always the result of efficient operation and increased productivity but rather often represent money that private contractors make through inflated contracts, patronage and corruption. He argues that most of the richest people in Nigeria's private sector make their money, for the most part, through their public sector connections and influence (Adeyemo, 2005). Operationally, Nigerian commercialization and privatization Decree No 25 of 1988 defines privatization/commercialization as the reorganization of enterprises wholly and partially owned by the government in which such enterprises shall operate as profit making ventures and without subventions from government. The decree also distinguishes between full and partial commercialization / privatization.

The fully commercialized/privatized are expected to operate on commercial basis: raise fund from capital market without any form of government guarantee. The term guided privatization was introduced in the second phase of privatization scheme, at its reactivation in 1999. It conceptualized privatization as the transfer of government owned shareholdings in designated enterprises to private investors, comprising individuals and corporate bodies (Ayodele, 2004).

## 2.1.4 Problems of the Privatization Policy

In the course of the study, some problems which militated against the purposes and objectives of the privatization process were identified. They include but not limited to the following:

### i. Corruption

Ayodele (2011) noted that the senate probe of the activities of the BPE in August 2011 was nothing but "a reality show of monumental fraud and daylight robbery perpetrated in the name of privatization exercise". The senate probe provided Nigerians the platform to hear from the horse's mouth, what had become an open secret-that privatization is more of a brazen pillage of the country's patrimony and the corruption cases exposed were among others. The Nigerian Re-Insurance corporation that was worth ₦50bn was sold for ₦1.5bn. For companies like Ajaokuta steel and Daily Times, the only activities that have been taking place since their sale are the stripping of their assets by the new owners (Ayodele, 2011). Much of the proceeds of privatization have not been officially accounted for by the officials of the BPE. It has been shrouded in accusations and counter accusations (Abubakar, 2011). The entire exercise appears to be characterized by one form of malpractice or the other. Ayodele (2011) pointed out that asset acquisition agreement or share purchase agreements are often lopsided and thus become subject of litigations thereafter. In other cases the selected core investors are unable to pay the bided sum (agreed price) for the privatized firms on excuse that the financial records of the privatized firms are unaudited or incoherent and that due diligence checks were haphazardly carried out. Despite all these, EFCC and ICPC, the nations economic watch dogs have kept mute over the years since 1999.

### ii. Lack of transparency

The Government agency charged with the responsibility of selling off these public companies. Bureau of Public Enterprises (BPE) has so far raked in ₦510 billion after selling some 145 public owned firms, but the BPE is yet to make public the report of the post privatization evaluation exercise it conducted in year 2010. BPE stated that, the report is not for public consumption (Abubakar, 2011).

iii. Lack of co-operation from some government officials: some officials were recalcitrant over the policy of privatization as this would undermine the status quo, especially the supervising ministries.

iv. **Lack of public Accountability:** Since all the controversial decisions are made by government officials in the exercise, the question arises as to who owes the responsibility and accountability to whom in the several privatization scandals that have unfolded in recent years. Can a radiator regulate itself?

v. **Lack of access to Credit:** Many prospective investors did not have enough funds to process their application forms, contrary to the expectation of Government.

vi. **Poor funding of Bureau of public Enterprises:** Adeyemo (2005) revealed that the National Assembly appropriated only ₦406,056,000 to the BPE in the budget as against the ₦ 1.6 billion proposed.

vii. **Geo-Political and Income-Group spread:** The enabling decree laid emphasis on equity in the spread of

shareholding. But contrarily there were marked in balance in equity shareholders distribution among income groups and different segments of the society. Some income groups or geo-political entities tend to have cornered the market.

### 2.1.5 Concept of Financial Performance

Financial performance is the measure of the result of a firm's policy and operations in monetary terms. Financial performance can also be referred to as the level of performance of a business over a specified period of time, expressed in terms of overall profits and losses during that time. In the view of Dallas (2004) financial performance is seen as a subjective measure of how well a firm can use assets from its primary mode of business to generate revenues. It is also used as a general measure of a firm's overall financial health over a given period of time and can be used to compare similar firms across the same industry. Shaw (2009) notes, that performance can be determined through two basic types of measurement. These are:

- i) Assessment that are related to results, output or outcomes such as competitiveness, profit etc.
- ii) Assessment that focuses on the determinants of the result such as price or product.

Shair (2009) also state that assessment of business performance usually embraces the following interlinking fundamental areas.

- a) Output/input relationship or productivity
- b) Money: usually measured as profit or loss
- c) Customer emphasis such as quality
- d) Innovation and adaptation change and
- e) Human resources

Performance links an organizations goals and objectives with government decision of privatization (Abdulkadir, 2007).

#### 2.1.5.1 Financial Performance Indicators (FPIs)

Financial performance exists at different levels of the organization. This page is mostly concerned with measuring the financial performance of the organization as a whole, and of measuring the performance of key projects. Further measures are used as part of the particular problem of divisional performance appraisal. Financial performance measures may be split into the following categories:

- i. Profitability
- ii. Liquidity / working capital
- iii. Gearing
- iv. Investor ratios

#### i. Profitability measures

The researcher will majorly focus on the financial performance indices used in the conduct of the study as reviewed below:

##### a. Gross profit margin

This is the gross profit as a percentage of turnovers. **Gross profit margin** = (gross/turnover) x 100 A high gross profit margin is desirable. It indicates that either sales prices are high or that production costs are being kept well under control.

##### b. Net profit margin

This is the net profit (turnover less all expenses) as a percentage of turnover. **Net profit margin** = (Net profit/turnover) x 100 A high net profit margin is desirable. It indicates that either

sales price are high or that all costs are being kept well under control.

##### c. Asset turnover

This is the turnover divided by the capital employed. The asset turnover shows the turnover that is generated from each \$1 of assets employed. **Asset** = (turnover/Capital employed)

A high asset turnover is desirable. An increase in the asset turnover could be achieved by:

- i. Increasing turnover, e.g. through the launch of new products or a successful advertising campaign.
- ii. Reducing capital employed, e.g. through the repayment of long term debt.

##### d. Return on Investment (ROI)

A performance measure used to evaluate the efficiency of an investment or to compare the efficiency of a number of different investments. ROI measures the amount of return on an investment relative to the investment's cost. To calculate ROI, the benefit (or return) of an investment is divided by the cost of the investment, and the result is expressed as a percentage or a ratio. The return on investment formula: **ROI** = (Gain from investment - Cost of Investment) / Cost of investment.

In the above formula, "Gain from Investment" refers to the proceeds obtained from the sale of the investment of interest. Because ROI is measured as a percentage, it can be easily compared with returns from other investments, allowing one to measure a variety of types of investments against one another.

##### Breaking Down 'Return on Investment (ROI)

Return on investment is a very popular metric because of its versatility and simplicity. Essentially, return on investment can be used as a rudimentary gauge of an investment's profitability. ROI can be very easy to calculate and to interpret and can apply to a wide variety of kinds of investments. That is, if an investment does not have a positive ROI, or if an investor has other opportunities available with a higher ROI, then these ROI values can instruct him or her as to which investments are preferable to others.

##### e. Return on Assets (ROA)

Return on assets (ROA) is an indicator of how profitable a company is relative to its total assets. ROA gives an idea as to how efficient management is at using its assets to generate earnings. Calculated by dividing a company's annual earnings by its total assets, ROA is displayed as a percentage. Sometimes this is referred to as "return on investment". The formula for return on assets is: **ROA** = Net Income/Total Note: Some investors add interest expense back into net income when performing this calculation because they would like to use operating returns before cost of borrowing.

##### Breaking Down Return on Assets (ROA)

ROA tells you what earnings were generated from invested capital (assets). ROA for public companies can vary substantially and will be highly dependent on the industry. This is why when using ROA as a comparative measure, it is best to compare it against a company's previous ROA numbers or the ROA of a similar company. The assets of the company comprise of both debt and equity. Both of these types of financing are used to fund the operations of the company. The ROA figure gives investors an idea of how effectively the company is converting the money it has to invest into net income. The higher the ROA

number, the better, because the company is earning more money on less investment.

#### f. Return on Capital Employed (ROCE)

ROCE is a key measure of profitability. It shows the net profit that is generated from every naira of assets employed.  $ROCE = (\text{Net profit} / \text{Capital employed}) \times 100$

- i. ROCE is sometimes calculated using PBIT instead of net profit. Use whichever figure is given in the exam.
- ii. Capital employed = total assets less current liabilities or total equity plus long-term debt.
- iii. Capital employed may be based on net book value (NBV), gross book value or replacement cost.

An increase in ROCE could be achieved by:

- i. Increasing net profit, e.g. through an increase in sales price or through better control of costs.
- ii. Reducing capital employed, e.g. through the repayment of long term debt.

The ROCE can be understood further by calculating the net profit margin and the asset turnover:

$$ROCE = \text{net profit margin} \times \text{asset turnover}$$

## 2.2 Theoretical Framework

### 2.2.1 Free-Market Economic Theory

The concept of privatization is based on the modern free market economic theory as propounded by Adam Smith in 1776 in one of his books named "Wealth of Nations". It centers on the doctrine of competition and profit motive founded on free-market pricing and freedom from the interfering hands of state regulation (Schermerhorn, 1993). Privatization according to this theory could reap the advantages of the market system and competition namely; effectiveness, productivity and efficient service. Privatization would thus, strengthen market forces with some degree of deregulation, economic liberalization, relaxation of wage and price controls (Ugorji, 1995). Privatization and in some cases commercialization has grown in popularity and acceptability globally. It has also become an important instrument that government can use to promote economic development, improve the production and distribution of goods and services, streamline government structure and reinvigorate the industries control or management by the State (Adeyemo, 2005). It is derived from the international capitalist imposition especially the World Bank/IMF, which stipulated economic liberalization/ privatization as preconditions for providing development loans to the less developed countries (LDCs). With the need to enhance the efficiency of public enterprise, the study is adopted to examine how the removing of government bottlenecks and the liberalization of the OANDO Plc into the free market competitive economic forces have affected its financial performance.

### 2.3 Review of Empirical Literature

There are vast empirical literatures on privatization which evaluated firms financial performance in developed and developing economies but there are scanty empirical evidence on comparative studies that examined financial performance of privatized vis-a-vis existing private companies most especially as it pertains to Nigeria. For instance the study conducted by Megginson, Nash, and Randenborgh, (1994) compared pre and

post privatization financial and operating performance of 61 firms that experienced full or partial privatization through public share offerings from 32 industries in 18 countries (6 developing and 12 developed) between 1961 and 1990. Descriptive research design was adopted for the study were financial indicators such as profitability, sales, operating efficiency, capital investment, leverage ratios and dividend pay-out figures. The study documents strong performance improvements achieved without sacrificing employment security. Specifically, after being privatized, firms increase real sales, become more profitable, increase their capital investment spending, improve their operating efficiency and increase their work forces.

Furthermore, these companies significantly lowered their debt capital and increase dividend payout. Finally, they document significant changes in the size and composition of corporate boards of directors after privatization. The study relates to the study because it focuses on privatization. This study focuses on comparison of pre and post privatization performance.

In another single industry study, D'Souza and Megginson (1998), examine performance changes following the privatization by share offering of 17 national telecommunication companies for the period from 1981 through 1994. Ex-post facto research design was adopted in conduct of the study. Data collected was analyzed using regression analysis. They find persuasive evidence that profitability, output, operating efficiency, and capital investment spending, the number of access line (a proxy for units of physical output), and average salary per employee all increased significantly after privatization; Leverage declines significantly, and employment declines significantly. The study relates to the study because it focuses on performance of privatized company.

Dewenter and Malatesta (1998) used regression and time series methods to compare the pre- versus post privatization performance of 63 large, high-information companies divested during the period 1981 to 1993. These authors examined performance changes over both short time frame around privatization, comparing events (-3 to -1) with (+1 to +3), as well as examining a longer period, comparing events years (-10 to -1) with (+1 to +5). They document significant post privatization increases in profitability (using net income) and significant decreases in leverage and labor intensity (employees/sales) over the period immediately after privatization. However they also found that operating profits increase prior to divestiture and may actually decrease somewhat afterward. The study relates to the study because they both focused on privatization to enhance efficiency of government organizations. The study examined the evaluate the pre and post privatization performance of information companies.

An empirical study by LaPorta and Lopez (1999), tests whether the performance of a sample of 218 Mexican SOEs privatized in June 1992 improved after divestiture. The authors compare the profitability, employment, and efficiency levels of the privatized firms to an industry matched control group, and find that the former SOEs rapidly closed the yawning performance gap that had existed prior to divestment. Descriptive research design was adopted for the study. Output increases by 54.3 percent, (in spite of a reduced level of investment spending), sales per employee almost doubled, and privatized firms reduced blue- and white-collar employment by half. The study relates to

the study because they both evaluate the performance of privatized company with existing private companies.

D'Souza and Megginson (1999) study compared the pre- and post-privatization financial and operating performance of 85 companies from 28 countries (15 industrialized and 13 non-industrialized) that experience full or partial privatization through public share offerings for the period from 1990 through 1996 using descriptive research design. The study documents significant increases in profitability, output, operating efficiency, and dividend payments – and significant decreases in leverage ratios- for all the sampled firms after privatization and for most sub- samples examined. Capital expenditures increase significantly in absolute terms, but not relative to sales. Employment declines but insignificantly. By and large, findings from this study strongly suggest that privatization yields significant performance improvements. The study relates to the study because they both focused on privatization to enhance efficiency of government organizations. Again the study evaluates the pre and post privatization performance of privatized companies.

Zuobao and Varela (2003) examined the pre- and post-privatization financial and operating performance of 208 firms privatized in China during the period 1990-1997 using descriptive research design. The full sample results show significant improvements in real output, and sales efficiency, and significant declines in leverage following privatization, but surprisingly, no significant change in profitability. The authors carried out further analysis and posited that privatized firms experienced significant improvements in profitability compared to fully state-owned enterprises during the same period. Firms in which more than 50% voting control is conveyed to private investors via privatization experience significantly greater improvements in profitability, employment and sales efficiency compared to those that remain under the state's control. The authors conclude that, privatization works in China, especially when control is passed to private investors. The study relates to the study because they both focused on privatization to enhance efficiency of government organizations. Furthermore, the study evaluates the pre and post privatization performance of China companies.

In a study on partial privatization and firm performance in India, Gupta (2004) used data from Indian state-owned enterprises and found that partial privatization has a positive impact on profitability, labor productivity and investment spending. On the other hand, he found no evidence that firms are chosen for privatization because of unusually bad performance in the previous year. His analysis confirms the argument that the most profitable enterprises are usually the first to be privatized as with the case in Indian oil and gas companies. He also documents that privatization and competition are not substitutes in their impacts on firm performance. His results supports the hypothesis that partial privatization address managerial rather than the political view of inefficiency in state-owned enterprises. The study relates to this study because they both focused on privatization to enhance efficiency of government organizations.

Boubakri, Cossetand Guedhami (2004) examined the post-privatization performance of newly privatized insurance firms in Asia and showed how the private ownership structure evolves overtime. The authors show that privatization leads to increase in profitability, efficiency, and output in former state-owned firms from Asia. Employment increases but

insignificantly. Compared to the related literature on the effects of privatization in developing countries, results from this study indicate that performance improvements in Asia where most firms are partially privatized are less significant than those documented in other studies. This study finds that higher improvements are associated with certain aspects of corporate governance and the economic environment: For example, a friendly institutional environment, lower political risk, more developed stock markets and involvement of foreign investors, are important determinants of performance improvements after privatization. Finally, the study shows that governments generally do not relinquish control and private ownership concentrates overtime, but by far less than what is observed elsewhere in developing countries. The study relates to the study because they both focused on privatization to enhance efficiency of government organizations. While the study examined the post privatization performance of insurance companies, the present study comparatively analyze performance of privatized company (OANDO Plc) and private oil companies operating in Nigeria.

Salawu and Akinlo (2005) examined the efficiency of privatization through the evaluation of financial performance of a privatized manufacturing company between the periods 1978 to 2001 using ex-post facto research design. This period cover the pre-privatization and post-privatization period of the company under consideration. Privatization has been recognized as a key element to promote efficiency, reduce fiscal burden and help in developing capital market. In order to achieve the objective of the study, secondary data on the performance indicators were collected from the annual reports of the organization. The food manufacturing industry is considered as a sample design of the study among 10 groups of privatized economic strata. The result showed that there have been upward trends and steady growth in post-privatization era based on ROA, ROCE and ROE but with slight fluctuation in the growth rate in some of the years under study. The same trend as stated above applied to EPS, GPM and Turnover for the years under study. However, the findings showed that the privatization programme has a significant mixed impact on the operation of the company under study. The programme also indicated a positive impact in the operating financial performance of the company as reflected in its consistent growth rate of returns of the years under study, especially in post-privatization era of the company. In spite of the general positive impact of privatization on the financial performance of the company, the post-privatization period was beset with escalating operational cost resulting from high rate of inflation, which was seriously obstructing investment and industrial growth. Thus, policies to tame inflation should have inbuilt ability to increase the productive capacity of the company. The study relates to the study because they both focused on privatization to enhance efficiency of government organizations.

Afeikhena (2008) appraises the post-privatization performance of some privatized enterprises in Nigeria using descriptive design. The specific indicators examined are profitability, productive efficiency, employment, capital investment, output, prices and taxes. The study measured the change in any given indicator of performance by comparing its average value five years before and five years after privatization. Data Envelopment Analysis (DEA) is also deployed to assess changes in the level of technical efficiency in the selected enterprises. The results, albeit mixed, show significant increases

in these indicators. Privatization is also associated with increase in technical efficiency in the affected enterprises. Reduction of politically motivated resource allocation has unquestionably been the principal benefit of privatization in Nigeria. The study relates to the study because they both focused on privatization to enhance efficiency of government organizations in Nigeria. While the study examined the overall performance of the government investment, the present study comparatively analyzed the performance of privatized oil company (OANDO Plc) and private oil companies operating in Nigeria.

Abdullahi, Abadullahi and Mohammed (2012) examined privatization and firm performance in Nigeria. The period of analysis covers 5 years before, and 5 years after privatization. The study determined post privatization performance changes of insurance firms. Results obtained from the study are mixed. Whereas some companies in our sample show improvements in some indicators, other companies have shown decline in some indicators after privatization. However, in spite the mixed results, the overall picture shows improvement in profitability for at least half of the firms in our sample. Overall, we may conclude that our results provide little evidence that privatization has caused significant improvement by all indicators.

Gilaninia Ganjinia and Asadian (2013) investigated the impact of privatization in insurance industry on insurance efficiency in Iran. Overall the results indicated that becoming government insurance entities is the caused of reduction the premium share in GDP. Also since becoming governmental of insurance industry has negative impact on premiums per capita and insurance penetration rate. On the other hand, war reduced premium share in GDP. So, it can be said that with privatization of country insurance, increases efficiency of insurance industry and since insurance is from important tools of capital market, helps growth and economic development of the country. Privatization is better done in two stages. First to be created is the release of favorable conditions for governmental insurance activity and private insurance together and the next step is step ownership transmission. Also central insurance has evaluated financial ability of insurers continually and obtained confidence that the companies are able to play their obligations. The study relates to the study because they both focused on privatization to enhance efficiency of government organizations.

Muogbo (2013) examined the impact of privatization on corporate performance in some selected industries in Nigeria and found that corporate governance has significant positive relationship with privatization in terms of setting up sound corporate objectives and in maximizing shareholders wealth. This indicates that investment in privatized firms will be more profitable than investment in firms with government presence. The study relates to the study because they both focused on privatization to enhance efficiency of government organizations. The study examined corporate governance performance in privatized government organization.

Xiaoxuan (2001) examined the effects of privatization on industrial performance in Chinese economic transition using the 2001 National Industrial Census data. The study which adopted the current enterprise registration classification stipulated by the State Statistical Bureau as the ownership type; based upon that, the researchers got enterprises with different types of ownership, and constructed an empirical model on Chinese economy, then tested the different effects of ownership on efficiency. The study

found that the essential force to determine the enterprise performance is the share control rights. It is the different kinds of share control rights that result in different effects on efficiency. The more the individual share control rights, the higher is the efficiency. It demonstrates that individual capital has a positive effect on efficiency enhancement. On the contrary, the more the state shares control rights, the lower is the efficiency. It means that state capital has a negative effect on efficiency enhancement. Therefore, the positive effect of stock company on efficiency can be attributed institutionally to the role of individual capital entrance or privatization. Therefore, the ownership structure of stock company still has a lot of room for improving efficiency. The study relates to the study because they both focused on privatization to enhance efficiency of government organizations. The study examined efficiency of privatized companies in adding value to Chinese economy.

Based on a study by Soyebo, Olayiwola, and Alayande (2001), which analyses the impact of privatisation on private sector development using the efficiency, financial and distributional impacts of privatisation in Nigeria, with sampled firms selected from the manufacturing and services sectors using the period of five years prior to, and five years after privatisation of each of the firm as basis of analysis, the result has been largely ambivalent and, to a large measure, unsupportive of the expectations at the start of the privatization programme. The study measured profitability using both the returns on sales (ROS) and returns on assets (ROA) ratios, the researchers found out that two of the companies, Aba Textile and Royal Insurance, recorded positive improvements on the three ratios (sic). The return on sales (ROS) recorded a negative change after privatisation of four companies. For instance, ROS fell from 14 % before privatisation to 7 % after privatisation in UNIC. Okomu Oil and Flour Mills from 19 %, 4.8% before privatisation to 17.6 % and 3.6 % respectively, using the returns on sales. NIYAMCO also recorded a negative change of about 2.8% using ROS, while NASCON recorded positive changes in ROS, its ROA fell from 45.8% to 6.5%. UNIC recorded negative changes in profitability, using the three ratios (sic). Only Royal Insurance recorded significant improvement in ROS and ROA at 5% and 10% level respectively, while ROS shows a significant change in Okomu oil and NASCON at 5%. The study relates to the study because they both focused on privatization to enhance efficiency of government organizations.

Fisher, Gutierrez and Serra (2003) explored the effects of privatization on firms and on social welfare: The Chilean case using descriptive survey research design. The study found that privatized firms enjoyed significant improvements in efficiency, but that these gains were no different than those experienced by other private firms in their respective economic sectors. This allows their study to conclude that Chilean SOEs were efficient before privatization. In terms of profitability, privatized firms in the regulated sector enjoyed particularly sizeable gains. In fact, employment in those firms increased after privatization, suggesting that they were not overstaffed under government control. They also showed that the profitability in the regulated sector is due to the more efficient use of physical capital and to the fact that the regulators were unable to transfer increased profits to consumers. Furthermore, the study examined the effects of the privatization of social services. Nevertheless, regulated firms are fairly efficient, implying that incentive regulation has

been successful. Another dimension of the privatization process involves infrastructure; successfully franchising the main highways and ports. The resultant benefits in terms of reduced transportation costs will increase the efficiency of the economy as a whole. The privatization of the health insurance system has faced challenges due to the information asymmetries that plague the industry, but it has had the beneficial effect of exposing inefficiencies in the public system and thus creating demand for improvement. Similarly, though the introduction of school vouchers has not been shown unequivocally to have led to a better education system (though there is some evidence that this is so), it has put pressure on the public system to improve. Vouchers would be more effective if parents were informed of the results of their children on standardized tests and if public schools were able to dismiss bad teachers. Finally, increased competition in higher education has led to improvements in the quality of the traditional state-financed institutions and to a large increase in the coverage of higher education. The study relates to the study because they both focused on privatization to enhance efficiency of government organizations.

Sathye (2005) investigated privatization, performance and efficiency in Indian Banks. The data of the study were obtained from Performance Highlights of Banks, a publication of the Indian Banks' Association for five years: 1998-2002. The financial performance of the banks was measured using the standard financial performance measures such as return on assets. The efficiency of banks was measured using accounting ratios, e.g., deposits per employee. Two main approaches are generally used to evaluate the impact of privatization on firm performance: 'Synchronic' approach in which the performance of state-owned firms is compared with the firms that were privatized or with the firms that were already in private ownership. 'Historical' approach, in which ex-ante and ex-post privatization performance of the same enterprise is compared. The study revealed that financial performance of partially privatized banks (measured by return on assets) and their efficiency (measured by three different ratios) were significantly higher than that of the fully public banks. In the matter of quality of advances (measured by the ratio of non-performing assets to net advances), significant difference was not found in these two groups. Of course, there is no quick fix for this problem. Partially privatized banks also seem to be catching up fast with fully private banks as no significant difference was found in financial performance and efficiency between them. On comparing the strategies of privatization in India with the other countries, India was found to adopt the strategy of initial public offerings like Poland. This strategy failed in Poland but seems to have succeeded in India. Gradual privatization and well-developed financial markets seem to have contributed to Indian success. The study relates to the study because they both focused on privatization to enhance efficiency of government organizations.

Odukoya (2007) descriptively undertook a comparative critique of two privatization programmes: Britain and Nigeria. The study argued that privatisation entails the appropriation and expropriation of the national surplus created by labour, and represented in the social wealth of the public enterprises being put up for sale. Consequently, central to the problematic of privatization; the paper posits the issues of power, the authoritative allocation of resources, and the decentralization of the role of the state in development. The study avers that

privatisation goes beyond the "transfer" or "change of ownership" of SOEs; it entails the redefinition of class boundaries, sharpens class contradictions and antagonism by skewing resources and power in favour of private capitalist claimants, as well as the ascendancy of neo-liberal ideology. The study further opines that market based corporate governance which privatization enforces has the propensity to weaken both the trade and labour unions, as well as impoverish the citizenry. Since they constitute the leading lights of the civil society, then, the civil society in turn stands the risk of being emasculated, and democracy threatened. The study relates to the study because they both focused on privatization to enhance efficiency of government organizations. The study determines privatization effect on Britain and Nigeria economy.

Odeh (2011) examined the dilemma of privatization of public enterprise and productivity in Nigeria. The study assessed the productivity of the privatized public entities in Nigeria using certain indices for analysis, such as profitability, output and employment. The regression statistical technique was employed and the analysis showed that certain factors such as corruption, lack of transparency, etc, have led to low level of productivity in the goal attainment of the policy. The study concluded that if privatization must of necessity bring forth the desired benefits, it has to be viewed not as an end itself, but as a means to getting government interested in fostering a new division of labour between the public and private sectors in order to increase the efficiency and contribution to the development of both sectors. The study relates to the study because they both focused on privatization to enhance efficiency of government organizations. The study examined the synergy of privatization to enhance performance of all public companies in line with private sector practices.

Cheng, Shamsher and Annur (2008) investigated the impact of privatization on insurance companies in Malaysia using regression statistical analysis. The results showed that privatization of insurance firms in Malaysia have significantly improved insurance companies such that their level of profitability and other related issues to their operation were positively enhanced. The study relates to the study because they both focused on privatization to enhance efficiency of government organizations. While the study examined the privatization effect on performance of insurance companies in Malaysia, the present study comparatively analyzes performance of privatized oil company and private oil companies operating in Nigeria.

Balsari and Ozkan (2009) examined the influence of privatization and commercialization of insurance firms in Turkey for the years from 1992 to 2007. The study used independent sample t-test and their results showed that privatization and commercialization of insurance firms has negative impact on insurance companies' performances as compared to when they were not privatized. The implication of their study is such that privatization of insurance firms has not favoured Turkey insurance firms. The study relates to the study because they both focused on privatization to enhance efficiency of government organizations. While the study examined the privatization effect on performance of Turkish insurance companies, the present study examined the performance of privatized oil company and private oil companies operating in Nigeria.

Similarly, Abuzayed, Molyneux and Al-Fayumi (2009) also investigated whether privatization is a useful instrument in improving the performance of insurance firms in 15 insurance

companies in Jordan between 1993 and 2004. Based on their regression results, it was found that privatization is not a useful instrument in improving the performance of insurance firms such that privatization does not favour insurance firms in Jordan. The study relates to the study because they both focused on privatization to enhance efficiency of government organizations. While the study evaluate privatization on performance of Jordanian insurance companies, the present study comparatively analyse performance of privatized company and private oil companies operating in Nigeria.

Mondal and Imran (2010) investigated the role of privatization and commercialization of banks and insurance firms in Dhaka. The study also analyzes the influence of liquidity, leverage, profitability, growth, size of the firm and dividend rate of the banks and insurance firms. The study found a significant relationship between recapitalization of insurance and banks with regards to the influence it has on liquidity, leverage, profitability, growth, size of the firm and dividend rate after the privatization of these institutions. The study relates to the study because they both focused on privatization to enhance efficiency of government organizations. While the study evaluate the privatization effect on performance of Banks in Dhaka, the present study comparatively analyse performance of privatized oil company and private oil companies operating in Nigeria.

Zayyad (2012) examined privatization and commercialization in Nigeria using a descriptive approach. The study found that programme of privatization and commercialization is a major opportunity for the reform of Nigeria's ailing public enterprises and to prepare them to serve the needs of the Nigerian economy in the 21st century. Enterprise will be made more efficient, more accountable and more responsible to the needs of the clientele it is meant to be serving – the Nigerian public. Furthermore, the study revealed that the Nigerian private sector will also benefit tremendously in the creation of new investment opportunities and a better investment climate. A lot of new shareholders have been created and now have a say in the affairs of the organized private sector. The performance of the Nigerian Capital Market will be enhanced greatly, as well the growth potential of the Nigerian economy. The study relates to the study because they both focused on privatization to enhance efficiency of government organizations. The study evaluate privatization effect on performance of Nigerian capital market.

Nwoye (2010) investigated the effect of privatization of public enterprises in Nigeria by appraising views and counterviews. The study suggests that if privatization is carried out with sincerity of purpose, almost every group will come out ahead as a result of divestiture. Workers will be shareholders. Consumers will be better off because of better services. New graduates and the unemployed will get jobs because of expansion. Government will be relieved of the burden of subsidies. Investors will gain investment opportunities. Ultimately, the public (both foreigners and nationals) will be free to pursue any private economic interest. The study relates to the study because they both focused on privatization to enhance efficiency of government organizations. The study evaluated the privatization performance using views and counterinterview of workers and consumers.

Javad Shahraki (2011) studied the relationship between privatization and economic growth in Iran, using Auto Regressive Distributed Lag method to characterize relationship between GDP and independent variables. The result showed that there is a

positive relationship between privatization and economic growth in Iran, but competitive or openness situation of the economy have not helped in the growth of the economy and no significant relationship between privatization and economic growth was found. The study relates to the study because they both focused on privatization to enhance efficiency of government organizations. The study examined relationship between privatization and economic growth.

Al-Otaibi (2006) in his study investigated the effect of privatization on economic growth in fifteen (15) countries with developing economies, using a cross-section model (OLS estimation) and a cross section-time series model using panel data analyses including four panel types, namely; None, Common, Fixed effect and Random effect. The results of the OLS regression revealed that, in case of Saudi Arabia, Kuwait, Bahrain, Jordan, Iran, Morocco, Pakistan, India, Indonesia, Malaysia, Venezuela, Mexico, and Argentina, privatization had a significant impact on the GDP level which reflected on the economic growth at 5% significance level. In case of Egypt and Turkey, the results revealed that there is a negative relationship between privatization indicators and economic growth at 5% significance level. The result of the four-panel tests revealed that privatization has a positive and a significant impact at 5% significance level. This is consistent with study hypothesis that privatization has an impact on the productivity of all factors in the economy and it leads to improving the investment climate in the developing countries. Hence, foreign direct investment (FDI) will increase and economic growth will improve. The study relates to the study because they both focused on privatization to enhance efficiency of government organizations.

Katsoulakos and Likoyanni (2002) investigated the relationship between privatization and macroeconomic variables using country-level panel data of twenty three (23) OECD countries for the period 1990 to 2000. The authors examined the link between privatization receipts, budget deficit, public debt, output growth and unemployment rate. The estimation results indicate that there is no statistically significant relation between GDP growth rates and the privatization proceeds of the previous period. This conclusion is drawn from a model where the dependent variable is the GDP growth rate and the only explanatory variable is the privatization receipts (as a percentage of GDP of the previous period). One concern with this specification is that it suffers from omitted variables bias. Barnett, (2000) used country-level panel data of eighteen (18) countries which included ten (10) developing countries, the rest being transition economies. This study explored the impact of privatization on fiscal variables, growth, unemployment and investment. The empirical evidence indicated that privatization is positively correlated with real GDP growth rates. The estimate, suggested that privatization of 1% of GDP would be associated with an increase on the real GDP growth rate of 0.5% in the year of privatization and 0.4% in the following year. For the non-transition sample, the effect would be a 1.1% increase in real GDP growth rate in the year of privatization and 0.8% in the following year. However, as acknowledged by the author himself, the results of this study are based on a select sample of countries and for a limited period for which data was available. The study relates to the study because they both focused on privatization to enhance efficiency of government organizations. The study examined the

relationship between privatization and economic growth of 18 countries.

Ifionu and Ogbuagu (2013) evaluate theoretically and empirically the impact of privatization on economic growth in Nigeria. Using error correlation model (ECM), it was discovered that privatization has not impacted positively on economic growth in Nigeria, and this was blamed on a lot of factors like political instability and inadequacy of the past policies to achieve good result. The study relates to the study because they both focused on privatization to enhance efficiency of government organizations. The study reviewed the relationship between privatization and economic growth, the present study comparatively analyze performance of privatized oil company and private oil companies operating in Nigeria.

Arowolo and Ologunowa (2012) studies present the two sides of the arguments on the viability of privatization in Nigeria. The study adopted content analysis in driving home it points. The study found that privatization on its own cannot solve the problems of inefficiency and corruption facing public enterprises. This is because the private sector is not free from the evils associated with the public sector. It is also infested with the problems of corruption, inefficiency and lack of direction. As a matter of fact, it is the public sector that sets the parameter for direction in the private sector and if the public sector is incapacitated, it is naturally expected that there will be a carryover effect on the private sector. Although there are gains in privatizing public enterprises, such exercise would remain futile if certain measures are not put in place before privatization. It has been discovered that privatized public corporations in Nigeria are not performing better than the way they were, prior to their privatization.

Adesina (2012) examined the political economy of privatization and its attendant features in Nigeria as well as the challenges of the 21<sup>st</sup> century. The study used simple percentages in analyzing the attendant features of privatization in the Nigerian economy and found that privatization of public enterprises has brought significant progress most especially in the demonopolization of the communication sector amongst other advantages. The study relates to the study because they both focused on privatization to enhance efficiency of government organizations. While the study examined the political economy of privatization on Nigerian economy, the present study comparatively analyse performance of privatized oil company (OANDO Plc) and private oil companies operating in Nigeria.

Shahram, Hosein and Azadeh (2013) explored privatization in the insurance industry in Iran using a descriptive statistical method. The study revealed that privatization activities mainly is due to factors such as continuing the general trend to reduce the role of government in the economics, budget constraints, need to attract investment, technological change that can be have importance dimensions political, social and economic. In this regard, for that to be able achieved to sustainable development and comprehensive should be considered all dimensions of privatizations economic, social, cultural and political on the development process. The study relates to the study because they both focused on privatization to enhance efficiency of government organizations. The study examined privatization of insurance business in Iran.

Sinha (2002) tested the effect of privatization of the insurance market in India. The study also provides useful insights

on the institution of insurance in India and found that over the past century, Indian insurance industry has gone through big changes. It started as a fully private system with no restriction on foreign participation. After the independence, the industry went to the other extreme. It became a state-owned monopoly. In addition, the study showed that in 1991, when rapid changes took place in many parts of the Indian economy, nothing happened to the institutional structure of insurance: it remained a monopoly. Only in 1999, a new legislation came into effect signaling a change in the insurance industry structure. The study examined what might happen in the future when the domestic private insurance companies are allowed to compete with some foreign participation. Because of the time dependence of insurance contracts, it is highly unlikely that these erstwhile monopolies are going to disappear. The study relates to this study because they both focused on privatization to enhance efficiency of government organizations.

Ganesh (2014) descriptively examined the growth of insurance industry in India after privatization of life insurance sector. Using some statistical measures, the study found that during the first decade of insurance sector liberation, the sector reported a consistent increase in insurance penetration from 2.71 per cent in 2001 to 5.20 per cent in 2009. However, since then, the level of penetration has been declining and reached to 3.96 per cent in 2012 which is much below the global average of 6.5 per cent of GDP. The density of insurance business has gradually increased from 11.50 in 2001 to 64.40 in 2010. Since then, the density has shown falling trend and recorded at 53.20 in 2012-13. The predominant reasons for the fall in the life insurance business is declining premium collections and the regulator tightening the rules governing this sector followed by decline in the household financial savings ratio. The study relates to the study because they both focused on privatization to enhance efficiency of government organizations. The study examined privatization on growth of insurance companies in India.

Ahmed(2014) set a study to found the result of privatization on the financial performance of the Kenyan aviation industry, particularly to the Kenya Airways Limited. The financial performance of Kenya Airways before and after its privatization was analyzed by financial statements throughout this phase. The sample of 37 staff was used in the study. The result of the study proved that there were positive developments in the performance of Kenya Airways afterward denationalization in terms of liquidity and liability ratios compared to its performance earlier privatization. This performance indicator showed also a boost in financial efficiency. It was found that profitability and financial efficiency increase after privatization. The study relates to the study because they both focused on privatization to enhance efficiency of government organizations. The study examined privatization on performance of Kenyan Airways.

Backman, Johansson and Persson (2007) examined private equity and the privatization of public companies. Using a deep qualitative research approach combined with statistical data, common factors for buyout activity was identified. Factors such as hidden values, capital structure, strategy and efficiency improvements, and more focus on long term performance by replacing the management and board, seemed to be important when selecting buyout targets. The study relates to the study because it focuses on performance of privatized company.

## 2.4 Summary of Literatures

The summary of the reviewed literature focused on three main sections: Conceptual framework, Theoretical framework and Empirical review. The conceptual framework dealt with the meaning, types, reasons, problems of privatization and other related issues. The theoretical framework concentrated on the theory guiding the study which is the theory of free market economy. Based on the foregoing no study has focused on the comparative of privatized viz-a-viz then on-privatized entities. This is the gap this study attempted to fill.

The final section of the literatures reviewed for the study is the empirical literatures which gives an overview of studies that have been carried out related to the study, from all the study, many of the studies have focused on how effective privatization had been. From the above empirical studies, it is observed that the studies on privatization have produced mixed results, but most of the research conducted revealed strong performance improvements as a result of privatization. Only a few studies have indicated dismal performance after privatization. However, it is important to note that some of these successes are not achieved entirely as a result of privatization. As Dewenter and Malatesta (2001) have shown, governments efficiently restructure at least some firms before selling them. To the best of my knowledge, based on the extensive reviews carried out no research has been focused on the comparative analysis of privatized petroleum company vis-à-vis its non-privatized counterparts quoted on the Nigerian Stock Exchange. This study will therefore help to add a new vista to the study of privatization especially not only in the oil industry but to privatization in general.

## 3. METHODOLOGY

### 3.1 Research Design

The research design adopted was descriptive method. This method is concerned with collection, presentation, analysis and interpretation of data for the purpose of describing vividly existing conditions, prevailing practical beliefs, attitudes, on-going processes and so on. The design was adopted because it

## 4. Data Presentation, Analysis and Interpretation

### 4.1 Presentation of Data

**Table 4.1.1: Financial Performance Indicators of Privatized and Non-Privatized Petroleum Companies in Nigeria (2008 - 2016).**

Years	OANDO Plc (Privatized Companies)			Data for Total Oil Plc (Non-Privatized Companies)		
	ROI	ROA	ROCE	ROI	ROA	ROCE
2008	-0.12363	-0.01395	-0.04316	0.022153	0.048379	0.205396
2009	-1.88742	-0.10493	-0.25334	0.020797	0.046316	0.233951
2010	0.003577	0.002386	0.007333	0.025466	0.067177	0.328377
2011	0.018576	0.020942	0.081278	0.024374	0.061405	0.330902
2012	0.006651	0.008598	0.017874	0.025165	0.064939	0.190162
2013	0.044258	0.044364	0.077221	0.038951	0.09957	0.304431
2014	0.033513	0.044623	0.113768	0.025343	0.079837	0.383123
2015	0.027829	0.043595	0.086554	0.027757	0.105169	0.433406
2016	-	0.02988	0.03850	-	0.07159	0.301219

**Source:** Researcher's computation via Micro-soft Excel 2011

Table 4.1.1 contains the performance indicators of OANDO Plc and Total Oil Plc. Indicators of two sampled quoted companies on Nigerian Stock Exchange adopted by the researcher in determining the impact of privatization on financial

assisted the researcher to get detailed and factual information to describe the financial performance of OANDO plc among petroleum companies in Nigeria.

### 3.2 Population of the Study

This refers to the totality of all the elements, subjects or numbers which possess common and specific characteristics within a given geographical location. The population of the study comprises all the 14 petroleum companies quoted on the Nigerian Stock Exchange out of which 1 privatized and 1 non-privatized petroleum companies were respectively selected.

### 3.3 Sample and Sampling Technique

Purposive sampling technique was used in selecting the one most capitalized from among the 13 non-privatized companies: Total Oil Plc, to be compared with the privatized company represented by OANDO Plc.

### 3.4 Source of Data

The researcher obtained data from the annual reports and accounts on the selected companies. Data on Net Profit, Cost of Sales, Total Assets, Equity, and Non-Current Liabilities were obtained from the annual reports and accounts of the companies for the period 2008-2015. This data is valid and reliable since it has undergone an independent audit examination before adopted for the study.

### 3.5 Method of Data Analysis

The mean, standard deviation and t-test statistics were employed to test the relevant hypotheses of the study via the Statistical Package for Social Sciences (SPSS). A t-test is used to compare two population means where you have two samples in which observations in one sample can be paired with observations in the other sample. For the study, the financial performance indices which include; return on investment, return on asset and return on capital employed of privatized petroleum company will be paired against that of non-privatized petroleum companies.

### Decision Rule

The null hypothesis is rejected if the p-value is less than 5% level of significance (i.e. t-calculated is greater than the t-value tabulated) and if otherwise we accept the null hypotheses.

performance of privatized and non-privatized petroleum companies in Nigeria.

### 4.1.2 Answer to Research Questions

i. *To what extent is the difference in the pre and post return on capital employed of the privatized petroleum company in Nigeria?*

**Table 4.1.2: Sample Mean and Standard Deviation of privatized petroleum company's return on capital employed(ROCE) (1989-2016).**

Variables	$\bar{X}$ (N =12)	SD ( $\sigma$ )	Remarks
Pre-Return on Capital Employed	0.46875	0.240939	Mean Difference = -0.43025
Post-Return on Capital Employed	0.03850	0.105146	

**Source:** Researcher's computation using SPSS version23.

Table 4.1.2 shows the average of return on capital employed (ROCE) of Nigerian privatized petroleum company. ROCE in Table 4.1.2 shown negative mean difference in the value for the periods under study, this can be attributed to the difference in asset composition and capital component; the pre and post-ROCE petroleum companies had the mean values of 0.46875 and company in Nigeria is not significant.

0.03850 respectively; while the mean difference is -0.43025; Can we conclude that there is significant difference in pre and post financial performance of OANDO Plc. (formerly UNIPETROL)? This prompted us to test of hypothesis.  $H_0$ : The difference in the pre and post return on capital employed of the privatized petroleum

**Table 4.2.1: T-Test Comparison of pre and post return on capital employed for Privatized Petroleum Company in Nigeria (1989-2002).**

t-test for Equality of Means	$\bar{X}$ (N =8)	SD ( $\sigma$ )	t(22)	Sig.	Decision
Return on Capital Employed	.430248	.056323	5.670	.000	<b>Accept <math>H_a</math></b>

**Source:** Researcher's computation using SPSS version23.

Table 4.2.1 showed that a paired-samples t-test was conducted to compare privatized and non-privatized return on investment (ROI) of petroleum companies in Nigeria. There was significant difference in the mean values: (M=-.430248, SD=.056323);  $t(22) = 5.670$ ,  $p = .000$ . The result implies that style of ownership does have significant effect on return on capital employed (ROCE). Specifically, our result suggests that pre and post return on capital employed of petroleum company in

Nigeria is not the same. We therefore accept the alternate hypothesis ( $H_a$ ) and reject the null hypothesis ( $H_0$ ) and concluded that there is significant difference between the pre and post return on capital employed (ROCE) of privatized petroleum company (OANDO Plc.) in Nigeria.

ii. *What is the difference in the pre and post return on asset of the privatized petroleum company in Nigeria?*

**Table 4.1.3: Sample Mean and Standard Deviation of privatized petroleum company's return on asset (ROA)(1989-2016).**

Variables	$\bar{X}$ (N =12)	SD ( $\sigma$ )	Remarks
Pre -Return on Assets	0.28617	.186780	Mean Difference = -0.25629
Post-Return on Assets	0.02988	.056395	

**Source:** Researcher's computation using SPSS version23.

Table 4.1.3 shows the average of return on asset (ROA) of Nigerian privatized petroleum company. ROA in Table 4.1.3 shown negative mean difference in the value for the periods under study, this can be attributed to the difference in asset composition and capital component; the pre and post return on asset of

$H_0$ : The difference in the pre and post return on asset of the privatized petroleum companies in Nigeria is not statistically significant.

**Table 4.2.2: T-Test Comparison of pre and post Return on asset for Privatized Petroleum Companies in Nigeria (1989-2002).**

t-test for Equality of Means	$\bar{X}$ (N =8)	SD ( $\sigma$ )	t(14)	Sig.	Decision
Return on Investment	.256291	.056323	4.550	.000	<b>Accept <math>H_a</math></b>

**Source:** Researcher's computation using SPSS version23.

Table 4.2.2 showed that a samples t-test was conducted to compare pre and post return on asset (ROA) of petroleum company in Nigeria. There was significant difference in the mean values: (M=-.256291, SD=.056323);  $t(22) = 4.550$ ,  $p = .000$ . The result implies that style of ownership does not have significant effect on return on asset (ROA). Specifically, our result suggests

petroleum company had the mean values of 0.28617 and 0.02988 respectively; while the mean difference is -0.25629; Can we conclude that there is significant difference in OANDO Plc. profitability performance? This prompted us to test of hypothesis.

that pre and post return on asset of petroleum company in Nigeria is not the same. We therefore accept the alternate hypothesis ( $H_a$ ) and reject the null hypothesis ( $H_0$ ) and concluded that there is significant difference between the value of return on asset (ROA) in pre and post petroleum company profitability in Nigeria.

iii. *To what extent does the return on investment of the privatized company in the petroleum industry differ from the non-privatized company in Nigeria?*

**Table 4.1.4: Sample Mean and Standard Deviation of privatized and Non-privatized return on investment (ROI) of petroleum companies (2008-2015).**

Variables	$\bar{X}$ (N=8)	SD ( $\sigma$ )	Remarks
Privatized-OANDO Plc	-.2345808	.66993305	Mean Difference = -.26083150
Non-Privatized-TOTAL OIL PLC	.0262508	.00555802	

**Source:** Researcher's computation using SPSS version23.

Table 4.1.4 shows the average of return on investment (ROI) of Nigerian privatized and non-privatized petroleum companies. ROI in Table 4.1.4 shown negative mean difference in the value for the periods under study, this can be attributed to the difference in asset composition and capital component; the privatized and non-privatized petroleum companies had the mean

values of -.2345808 and .0262508 respectively; while the mean difference is -.26083150; Can we conclude that there is significant difference in profitability performance? This prompted us to test of hypothesis.  $H_0$ : There is no statistically significant difference in the return on investment of the privatized and non-privatized petroleum companies in Nigeria.

**Table 4.2.3: T-Test Comparison of Return on Investment for Privatized and Non-Privatized Petroleum Companies in Nigeria (2008-2016).**

Paired Samples Test/ Paired Differences	$\bar{X}$ (N=8)	SD ( $\sigma$ )	t(14)	Sig.	Decision
Return on Investment	-.26083150	.23686525	-1.101	.289	Accept $H_0$

**Source:** Researcher's computation using SPSS version23.

Table 4.2.3 showed that a paired-samples t-test was conducted to compare privatized and non-privatized return on investment (ROI) of petroleum companies in Nigeria. There was no significant difference in the mean values: (M= -.26083150, SD=.23686525); t (14) = -1.101, p = .289). The result implies that style of ownership does not have significant effect on return on investment (ROI). Specifically, our result suggests that when

privatized and non-privatized return on investment of petroleum companies in Nigeria are the same. We therefore accept the null hypothesis ( $H_0$ ) and reject the alternative hypothesis ( $H_a$ ) and concluded that there is no significant difference between the value of return on investment (ROI) of privatized and non-privatized petroleum companies in Nigeria.

*iv. How does the return on asset of the privatized company in the petroleum industry differ from the non-privatized company in Nigeria?*

**Table 4.1.5: Sample Mean and Standard Deviation of privatized and Non-privatized return on Asset (ROA) of petroleum companies (2008-2015).**

Variables	$\bar{x}$ (N=8)	SD ( $\sigma$ )	Remarks
OANDO Plc-Privatized	.0057035	.04974615	Mean Difference = -.06589550
TOTAL OIL PLC-Non-Privatized	.0715990	.02178929	

**Source:** Researcher's computation using SPSS version23.

Table 4.1.5 showed the average of return on asset (ROA) of Nigerian privatized and non-privatized petroleum companies. ROA in Table 4.1.5 shown negative mean difference in the value for the periods under study, this can be attributed to the difference in asset composition and capital component; the privatized and non-privatized petroleum companies had positive mean values of

.0057035 and .0715990 respectively; while the mean difference is -.06589550; Can we infer that there is no significant difference in return on asset performance ratios. This prompted us to test of hypothesis.  $H_0$ : There is no statistically significant difference in the return on asset of the privatized and non-privatized petroleum companies in Nigeria.

**Table 4.2.4: T-Test Comparison of Return on Asset means for privatized and non-privatized petroleum companies in Nigeria (2008-2016).**

Paired Samples Test/ Paired Differences	$\bar{X}$ (N=8)	SD ( $\sigma$ )	t(14)	Sig.	Decision
Return on Asset-ROA	-.06589550	.01920108	-3.432	.004	Accept $H_a$

**Source:** Researcher's computation using SPSS version23.

Table 4.2.4 presented a paired-samples t-test conducted to compare privatized and non-privatized return on asset (ROA) of petroleum companies in Nigeria. There was significant difference in the mean values: (M= -.06589550, SD=.01920108); t (14) = -3.432, p = .004). This result put forward that style of ownership do have significant effect on return on asset (ROA). Precisely, our

results suggest that privatized and non-privatized return on asset (ROA) of petroleum companies in Nigeria are not the same. We therefore reject the null hypothesis ( $H_0$ ) and accept the alternative hypothesis ( $H_a$ ) and concluded that there is significant difference between the value of return on asset (ROA) of privatized and non-privatized petroleum companies in Nigeria.

*v. To what extent does the return on capital employed of the privatized company in the petroleum industry differ from the non-privatized company in Nigeria?*

**Table 4.1.6: Sample Mean and Standard Deviation of privatized and Non-privatized return on capital employed (ROCE) of petroleum companies (2008-2015).**

Variables	$\bar{x}$ (N=8)	SD ( $\sigma$ )	Remarks
OANDO Plc-Privatized	8934.42	.11860107	Mean Difference = - .29027750
TOTAL OIL PLC-Non-Privatized	10315.58	.08606585	

Source: Researcher's computation using SPSS version23.

Table 4.1.6 presented the mean values of return on capital employed (ROCE) of Nigerian privatized and non-privatised petroleum companies. ROCE in Table 4.1.6 showed negative mean difference in the value for the periods under study, this can be attributed to the difference in asset composition and capital component; the privatized and non-privatized petroleum companies had positive mean values of 8934.42 and

10315.58 respectively; while the mean difference is -.29027750; Can we surmise that there is significant difference in return on capital employed performance ratios. This impelled us to test of hypothesis.  $H_0$ : There is no statistically significant difference in the return on capital employed of the privatized and non-privatized petroleum companies in Nigeria.

**Table 4.2.5: T-Test Comparison of return on capital employed (ROCE) means of Nigerian Petroleum companies (2008-2016).**

Paired Samples Test/ Paired Differences	$\bar{X}$ (N=8)	SD ( $\sigma$ )	t(14)	Sig.	Decision
Return on Capital Employed	-.29027750	.05180920	-5.603	.000	Accept $H_a$

Source: Researcher's computation using SPSS version23.

Table 4.2.5 presented a paired-samples t-test conducted to compare privatized and non-privatized return on capital employed (ROCE) of petroleum companies in Nigeria. There was significant difference in the mean values: (M=-.29027750, SD=.05180920); t (14) =-5.603, p =.000). This result put forward that style of ownership do have significant effect on return on capital employed (ROCE). Indeed, our analysis suggests that

privatized and non-privatised return on capital employed (ROCE) of petroleum companies in Nigeria are not the same. We therefore reject the null hypothesis ( $H_0$ ) and accept the alternative hypothesis ( $H_a$ ) and concluded that there is significant difference between the value of return on asset (ROA) of privatized and non-privatized petroleum companies in Nigeria.

#### 4.3 Discussion of Findings

The findings from the study show that there is statistically significant difference in the pre and post return on asset (ROA) and return on capital employed (ROCE) of privatized petroleum company quoted on the Nigerian stock exchange. This finding is supported by studies of D'souza and Megginson (1999), Soyeb Olayiwola and Alayande (2001), and Adebaju and Olokoyo (2008). Ahmed (2014) conducted a similar study on Kenyan Airway and 3 found that privatization have a positive impact on the company in terms of the liquidity and liability ratios. This study equally examined the post-performance of privatized petroleum company and that of non-privatized petroleum company quoted on the Nigeria stock exchange. The findings from the study show mixed results: that there is no statistically significant difference in terms of return on investment (ROI) while there is significant difference for return on asset (ROA) and return on capital employed (ROCE). This finding is in line with Xiakuan (2001) who examined the effect of privatization on industrial performance of Chinese. Companies and found that ownerships structure of stock company still have impact on efficiency. Salawu and Akinlo (2005) and Abdullahi, Abadullahi and Mohammed (2012) shared the same view.

### 5. Summary of Findings, Conclusions and Recommendations

#### 5.1 Summary of Findings

Based on the analysis of the study, the followings major findings were drawn;

1. There is statistically significant difference in the pre and post return on capital employed of privatized petroleum companies in Nigeria.
2. There is statistically significant difference in the pre and post return on assets of privatized petroleum companies in Nigeria.
3. There is no statistically significant difference in the return on investment of the privatized and non-privatized petroleum companies in Nigeria.

4. There is statistically significant difference in the return on asset of the privatized and non-privatized petroleum companies in Nigeria.
5. There is statistically significant difference in the return on capital employed of the privatized and non-privatized petroleum companies in Nigeria.

#### 5.2 Conclusion

The study therefore concludes in line with the findings of the research work that privatization has enhance the performance of OANDO Plc to compete among fellow petroleum companies since it privatization. The return on investment, return on asset and return on capital employed performance of OANDO Plc when compared with other petroleum companies in Nigeria which are being run as full private business enterprise is not statistically different. This therefore implies that privatization has helped to guaranty operational financial performance and operations of privatized petroleum company in Nigeria.

#### 5.3 Implication of Findings

The implication of the findings of the study is that privatization of petroleum companies in Nigeria has enhanced the financial performance of the entities. Hence such exercise should be encouraged in future.

#### 5.4 Recommendations

The researcher recommends based from the findings drawn from the study that:

1. Management of privatized public agencies should also ensure to enhance that investors return is guaranteed by buyers of public companies [most especially quoted companies] in order to discourage investors from withdrawing their capital for investment elsewhere and thus obviate the collapse of emerging entity.
2. Public enterprises in Nigeria should not be totally handed over to private investors without supervision and monitoring

of its operational efficiency in terms of return on investment for a reasonable performance period so as to discourage sales of public entities to individuals (especially cronies of public officials and/or politicians) who are not interested in the operational efficiency of these entities.

3. Buyers of public enterprises should be encouraged to ensure the continuous maintenance and replacement of major capital assets acquired to facilitate efficient operations and effective service delivery. This is one way privatization can enhance growth and survival of the national economy.
4. Privatization enhances financial performance of the entities concerned and as such it should encourage. Government is advised to divest from running business enterprises.

### 5.5 Contribution to Knowledge

The study has been able to empirically ascertain that privatization has significantly enhanced the financial performance of OANDO plc when compared to the performance of Total oil petroleum companies in Nigeria business environment.

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## APPENDIX I

## List Of 14 Petroleum Companies Quoted on Nigeria Stock Exchange Showing Their Total Assets And Total Equity As At 2014

S/N	Name	Total Assets (N)	Total Equity	Ratio TA/TE
1	Beco Petroleum Plc	1717724196	816524935	2.10
2	ConoilPlc	87526687000	16096047000	5.44
3	Capital oil Plc	1699707593	822211656	2.07
4	Anino Int'l Plc	198224234	166593937	1.19
5	Japaul Oil Plc	38188346000	14043684000	2.72
6	Rak Unity Petroleum Plc	1185833000	380218000	3.12
7	Seplat Petroleum Development Cooperation Plc	2278104000	1346088000	1.69
8	Caverton	10033119000	8625825000	1.16
9	MRS Oil Plc	65694626000	19629147000	3.35
10	Forte Oil Plc	18566895000	8420172000	2.21
11	Eternal Oil Plc	139288298000	44334669000	3.14
12	<b>Total Oil Plc</b>	<b>95512428000</b>	<b>15930170000</b>	<b>6.00</b>
13	<b>OandoPlc</b>	<b>892353671000</b>	<b>43610771000</b>	<b>20.46</b>
14	Mobil Oil Plc	49226575000	13549450000	3.63

Source: [http://www.africanfinancials.com/Report.aspx?afr\\_year](http://www.africanfinancials.com/Report.aspx?afr_year)

OANDO Plc-1							
YEARS	Equity SHARE (₦'000)	NON-Current LIABILITIES (₦'000)	TOTAL ASSET (₦'000)	TURNOVER (₦'000)	COST OF SALES (₦'000)	PROFIT (₦'000)	CAPITAL EMPLOYED(₦'000)
2016							
2015	50893926	254892832	946321309	161489950	106752639	-13197703	305786758
2014	43610771	326002160	892353671	92912344	49610781	-93636502	369612931
2013	162368077	28138686	585429217	449873466	390584435	1396926	190506763
2012	105354528	27353664	515063788	650565603	580664507	10786317	132708192
2011	92427781	100399597	400864761	586619034	518178147	3446643	192827378
2010	93049534	93102911	324022700	378925430	324797391	14374966	186152445
2009	52811724	35939060	226272417	336859678	301282506	10096979	88750784

## TOTAL OIL PLC-2

YEARS	EQUITY SHARE (₦'000)	NON-CURRENT LIABILITIES (₦'000)	TOTAL ASSET (₦'000)	TURNOVER (₦'000)	COST OF SALES (₦'000)	PROFIT (₦'000)	CAPITAL EMPLOYED (₦'000)
2016							
2015	16242481	3461135	83653377	208027688	182682250	4047051	19703616
2014	15930170	2978663	95512428	240618693	212714398	4423733	18908833
2013	13240785	3003042	79403587	238163160	209461533	5334094	16243827
2012	11301914	2813776	76067065	217843731	191632334	4670914	14115690
2011	10026215	10026215	58719810	173948954	151529623	3813202	20052430
2010	8929188	8929188	54601360	160604104	139576922	5436638	17858376
2009	6983000	3374000	49701000	178570000	156571000	3968000	10357000
2008	7269000	2867000	41771000	177412000	158265000	4393000	10136000

**Financial Performance Data of Selected Privatized And Non-Privatized Petroleum Company Quoted On The Nigeria Stock Exchange**

**Source:** culled from Annual reports and accounts of respective companies retrieved from <http://www.africanfinancials.com/report.aspx?afri> year on 5<sup>th</sup> feb. 2017.

**Financial Performance Data Of Selected ( Oado Plc) Privatized Petroleum Company Quoted On The Nigeria Stock Exchange (Oando Plc1989-2002).**

Years	Total Assets#*000	Capital employed #*000	Equity #*000	PBIT#*000	PAT#*000
1989	124375	124375	40000	30161	21909
1990	162867	162867	40000	37453	33762
1991	199229	199229	40000	54734	40093
1992	199613	199613	50000	108758	89317
1993	258960	258960	50000	150451	119913
1994	545524	545524	159074	490248	315990
1995	1355071	1355071	159074	972150	750666
1998	1598393	1051825	174699	432042	318949
1999	1809260	1378144	174699	725881	560694
2000	2223665	1577978	174699	1199127	528147
2001	6759604	4722983	174699	1385406	375444
2002	23405375	14282769	1417681	2049806	59960

**Source:** Nigerian Stock Exchange Fact Book 1989-2002.

**FINANCIAL PERFORMANCE INDICATORS OF PETROLEUM COMPANY QUOTED ON THE NIGERIA STOCK EXCHANGE**

OANDO Plc			
YEARS	ROI	ROA	ROCE
2016		0.02988	0.03850
2015	-0.12363	-0.01395	-0.04316
2014	-1.88742	-0.10493	-0.25334
2013	0.003577	0.002386	0.007333
2012	0.018576	0.020942	0.081278
2011	0.006651	0.008598	0.017874
2010	0.044258	0.044364	0.077221

2009	0.033513	0.044623	0.113768
2008	0.027829	0.043595	0.086554
2007		0.085	0.101
2006		0.113	0.136
2005		0.085	0.099

## TOTAL OIL PLC

YEARS	ROI	ROA	ROCE
2015	0.022153	0.048379	0.205396
2014	0.020797	0.046316	0.233951
2013	0.025466	0.067177	0.328377
2012	0.024374	0.061405	0.330902
2011	0.025165	0.064939	0.190162
2010	0.038951	0.09957	0.304431
2009	0.025343	0.079837	0.383123
2008	0.027757	0.105169	0.433406

Source: Computed from the data gathered in the course of field work

## Appendix-II cont'd

## OANDO Plc 1989-2002

Years	ROA	ROCE	ROE
1989	0.176	0.243	0.548
1990	0.207	0.230	0.844
1991	0.201	0.275	1.002
1992	0.447	0.545	1.786
1993	0.463	0.581	2.398
1994	0.579	0.899	1.986
1995	0.554	0.717	4.719
1998	0.200	0.411	1.826
1999	0.310	0.527	3.209
2000	0.238	0.760	3.023
2001	0.056	0.293	2.149
2002	0.003	0.144	0.042

Source: Computed by research from the data gathered in course of fieldwork

## Data Analysis Output from Statistical Package for Social Science Students (SPSS) Version-23.

## T-Test

Notes		
Output Created	19-JUL-2017 09:14:01	
Comments		
Input	Data	C:\Users\NWOKOCHA\Downloads\ACCOUNTANCY DEPT\MSC & PHD THESIS\Untitled SanniProject.sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	16
Missing Value Handling	Definition of Missing	User defined missing values are treated as missing.
	Cases Used	Statistics for each analysis are based on the cases with no missing or out-of-range data for any variable in the analysis.

Syntax		T-TEST GROUPS=Types(1 2) /MISSING=ANALYSIS /VARIABLES=CAMR ROI ROA ROCE /CRITERIA=CI(.95).
Resources	Processor Time	00:00:00.03
	Elapsed Time	00:00:00.09

[DataSet1] C:\Users\NWKOKCHA\Downloads\ACCOUNTANCY DEPT\MSC & PHD THESIS\Untitled SanniProject.sa

Group Statistics					
	Types of Organisation	N	Mean	Std. Deviation	Std. Error Mean
Return on Assets	Pre-Privatisation	12	.28617	.186780	.053919
	Post-Privatisation	12	.02988	.056395	.016280
Return on Capital Employed	Pre-Privatisation	12	.46875	.240939	.069553
	Post-Privatisation	12	.03850	.105146	.030353

Pre and Post		Independent Samples Test				
		t-test for Equality of Means				
	Name of Petroleum Companies	N	Mean	Std. Deviation	Std. Error Difference	Std. Error Mean Difference
ROI	OANDO Plc	8	-.2345808	.66993305	.23685716	.071169
	TOTAL OIL PLC	8	.0262508	.00555802	.00196506	.000616
ROA	OANDO Plc	8	.0057035	.04974615	.01758792	.0056323
	TOTAL OIL PLC	8	-.0715990	.02178929	.00770368	.0024287
ROCE	OANDO Plc	8	.0109400	.11860107	.04193187	.015888
	TOTAL OIL PLC	8	-.3012185	.08606585	.03042887	.009888

Independent Samples Test		Levene's Test for Equality of Variances		t-test for Equality of Means	
		F	Sig.	t	df
ROI	Equal variances assumed	5.292	.037	-1.101	14
	Equal variances not assumed			-1.101	7.001
ROA	Equal variances assumed	1.535	.236	-3.432	14
	Equal variances not assumed			-3.432	9.591
ROCE	Equal variances assumed	.132	.722	-5.603	14
	Equal variances not assumed			-5.603	12.772

t-test for Equality of Means		Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference
					Lower
ROI	Equal variances assumed	.289	-.26083150	.23686525	-.76885694
	Equal variances not assumed	.307	-.26083150	.23686525	-.82091319
ROA	Equal variances assumed	.004	-.06589550	.01920108	-.10707773
	Equal variances not assumed	.007	-.06589550	.01920108	-.10892704
ROCE	Equal variances assumed	.000	-.29027750	.05180920	-.40139718
	Equal variances not assumed	.000	-.29027750	.05180920	-.40240805

Independent Samples Test		t-test for Equality of Means	
		95% Confidence Interval of the Difference	
		Upper	
CAMR	Equal variances assumed	.10245640	
	Equal variances not assumed	.10891364	
ROI	Equal variances assumed	.24719394	
	Equal variances not assumed	.29925019	
ROA	Equal variances assumed	-.02471327	
	Equal variances not assumed	-.02286396	
ROCE	Equal variances assumed	-.17915782	
	Equal variances not assumed	-.17814695	



OANDO PLC is one of Africa's largest integrated energy solutions providers with a proud heritage. It has a primary listing on the Nigerian Stock Exchange and a secondary listing on the Johannesburg Stock Exchange. It all started in 1956 when ESSO commenced business operations in Nigeria as a petroleum marketing company. 1976 saw The government of Nigeria buying ESSO and renaming it UNIPETROL. By 1991 UNIPETROL went public with 60% of the shares going to investors. 1994 saw Ocean And Oil Holdings being founded to supply and trade petroleum products in Nigeria and worldwide. In 2002, Ocean and Oil Holdings acquired 60% shares of AGIPNIGERIA PLC and by 2003 UNIPETROL NIGERIA PLC merged with AGIP NIGERIA PLC to give birth to OANDO. Over the years, Oando Plc has made a significant impact in the oil and gas industry especially in the down stream sector and has grown from one entity to seven that are now leaders in their different markets namely Oando Marketing, Oando Supply and Trading, Oando Gas and Power, Oando Energy Services, Oando Exploration and Production and Oando Terminalling.

Oando now sells and distributes one in every five litres of petroleum in Nigeria via over 500 retail outlets, and has operations across West Africa – Ghana, Togo, and the Republic of Benin. In a bid to improve the overall efficiency of the industry and to lower product cost for the consumer, Oando is poised to construct the largest products terminal in sub-Saharan Africa in the Lekki free zone and an offshore sub-marine pipeline delivery system in Apapa. Oando is regarded as Africa's largest independent and privately-owned oil trading company involved in the large scale export and import of a broad range of refined petroleum products and crude oil throughout Africa, Europe, Asia and the Americas, with a track record of 100% delivery on its supply contracts. Oando Gas & Power is a pioneer in fields of private sector pipeline network construction and the distribution of natural gas to industrial and commercial consumers. With 100km of pipeline already built in Lagos and another 128km in progress in Akwa Ibom/Cross River States. The Company is building sub-Saharan Africa's largest gas pipeline network. With its foray into power business, the company is poised to contribute several captive power plants to the Nigerian and sub-regional markets. Oando is also Nigeria's foremost indigenous oilfield services company providing products and services to major upstream companies operating in Nigeria. As the largest swamp rig fleet operator, Oando Energy Services has been natural partner to national and multinational oil companies. The company is also a leader in exploration and production with 11 oil and gas assets, It is the first indigenous company with a participating interest in a deep offshore oil producing asset.

A Greenfield Refinery development in Lagos completes the imprints of OANDO across the energy value chain in Nigeria. The head office is located at 2, Ajose Adeogun Street, Victoria Island Lagos. <http://www.projectlightupnigeria.com/corporate-nigeria/oando.html>

## Introduction

Consolidated Products a running case company, this is a medium-sized company of user merchandises with non-unionized manufacturing employees. Ben Samuels was a plant leader for Consolidated Products for 10 years, and he was well adored by the workers. They were appreciative for the wellness center he constructed for workers, and they relished the community events supported by the plant numerous periods in a year, comprising business picnics and holiday bashes. He recognised many of the employees by name, and he spent part of everyday walking around the plant to chat with them and ask about their families or interests.

Ben understood that it was imperative to treat workers suitably so they would have a sense of commitment to the establishment. He tried to circumvent any dismissals when production demand was drooping, presuming that the corporation could not give to lose experienced personnel who are so challenging to substitute. The workers knew that if they had a special difficulties Ben would try to help them. For example, when someone was incapacitated but wanted to continue working, Ben found alternative job in the plant that the person could do notwithstanding having a frailty. Ben supposed that if you treat people correct, they will do a good job for you without close direction or prodding. Ben used the same standard to his managers, and he mostly left them alone to run their sections as they saw fit. He did not set goals and criteria for the plant, and he never asked the managers to come up with plans for improving productivity and product value.

**Thesis Statement:** To examine the leadership styles and their outcomes in Consolidated Product work settings as exemplified by Ben and Phil in managing their subordinates in view of performance determinants.

**Purpose of Paper:** To look into the multiplier effects and implications of task oriented leadership and people-centered leadership styles on the performance of the Organizations.

**Overview of Paper:** Under Ben, the plant had the smallest turnover among the business's five plants, but the second poorest record for costs and production levels. When the company was bought over by another company, Ben was asked to take premature retirement, and Phil Jones was brought in to take over from him.

Ben Samuel and Phil Jones, who have very, divergence dispositions and leadership styles, it is clearly pronounced that Ben Samuels is a relations-oriented manager, while Phil Jones is a task-oriented manager. With reference to Ohio State leadership study, it can also proposed that Ben Samuels is a thoughtful type of leader, while Phil Jones is an Originating Structure one. Both leadership performances' effectiveness was described by stating their softness and power indirectly. Ben Samuels is a relations-oriented manager who is very understanding and

very concern for the needs and feelings of his subordinates. He also tried to grow his subordinates' abilities by holding training platforms, which later was discontinued by his successor, Phil Jones. He also acknowledged his subordinates by remembering their names and often communicates or dialogues with them. He treated individuals equally.

Aside from the different leadership style as source of influence on team's performance, there are other determinants of team Performance

- i. Commitment to task objectives and strategies
- ii. Member skills and role clarity
- iii. Internal organization and coordination
- iv. External coordination
- v. Resources and political support
- vi. Mutual trust, cohesiveness, and cooperation
- vii. Collective efficacy and potency
- viii. Accurate, shared mental models
- ix. Collective learning
- x. Member Diversity

### Commitment to Task Objectives and Strategies

Member commitment to task purposes and performance policies for attaining them facilitates collaboration, improvement, and extra effort to complete difficult tasks (Hulsheger et al., 2009; Mathieu & Rapp, 2009). Leadership behaviors that are particularly relevant for growing member commitment to shared goals include: (1) expressing an attractive revelation that links the task objectives to member values and principles; (2) elucidating why a project or new enterprise is significant; (3) setting task objectives that are flawless and inspiring; (4) organizing appropriate performance policies for accomplishing the objectives; and (5) allowing members to contribute in the development of the activities and formulating creative solutions to difficulties.

In overall, there is a constructive connection between member empowerment and group performance (Burke et al., 2006). Nevertheless, empowerment is not constantly effective, and many circumstances facilitate or prevent the effects of empowerment in groups (Cox, Pearce, & Perry, 2003). Instances include team size, diversity of members, the interpersonal skills and maturity of members, the nature of the task or undertaking, and opposing allegiances of members to outside components.

**Member Skills and Role Clarity** Team performance will be greater when members have the information and skills needed to do the work, and they comprehend what to do, how to do it, and when it must be done (Morgeson, Reider, & Campion, 2005). Member skills and clear role prospects are more significant when the task is multifaceted and challenging to learn. A leader can do numerous things to progress member skills. When the group is being formed, or alternates are needed for leaving

members, the leader can influence the choice of new members and confirm a suitable mix of harmonising skills (Klimoski & Jones, 1995). In a recently made group or when the team has a different kind of task to implement, the leader can clearly enlighten member accountabilities and relevant processes for accomplishing specific categories of activities. At suitable periods in the performance progression, leaders can measure the skills of existing members to recognize any deficiencies, provide productive criticism and coaching, and organize for members to receive required instruction in other ways (e.g., from more experienced members, or in workshops and courses).

**Internal Organization and Coordination** The performance of a team depends not only on the motivation and skills of members, but also on how members are planned to use their skills. The intention of work roles and the duty of people to them determine how competently the team carries out its work. Performance will suffer if a team has talented individuals but they are given tasks for which their skills are inappropriate, or if the team uses a performance approach that are not aligning with member skills. Team performance also depends on the extent to which the interdependent activities of different members are commonly consistent and coordinated.

A high level of organisation is especially important when the team performs a multifaceted task under briskly changing circumstances. Harmonization is determined by decisions made during the preparation stage prior to the start of a new task, and a team will typically perform a new task better if members design an explicit approach that takes into account potential difficulties and problems that could limit performance (Hackman & Morris, 1975). Organization is also expedited by modifications in member behavior during the team's performance of the task.

**External Coordination** The performance of a team also depends upon adjusting their undertakings to be dependable with the activities in other parts of the organization, and the significance of this external management increases as interdependence increases. It is important for leaders to enable communication and synchronization not only with other parts of the same organization, but also with foreigners whose decisions and actions affect the group.

**Resources and Political Support:** A central leadership responsibility is to obtain necessary resources, assistance, and backing from outside sources. Examples of relevant leadership behaviors comprise: (1) scheduling the resources required for a special assignment or activity; (2) promoting with superiors or outsiders to provide supplementary resources; (3) persuading superiors to approve use of unusual equipment, supplies, or provisions; (4) encouraging and defending the character of the team with superiors; (5) inaugurating cooperative associations with outsiders who are a prospective source of essential resources and assistance; and (6) discussing favorable

arrangements with suppliers and vendors.

**Cooperation and Mutual Trust:** Cooperation and mutual trust are important determinants of performance in groups where member roles are highly interdependent. A high level of cooperation and mutual trust is more likely when members identify with the team or work unit, value their membership, and are very cohesive (Barrick, Stewart, Neubert, & Mount, 1998; Watson, Kumar, & Michaelsen, 1993; Van der Vegt & Bunderson, 2005). It is more difficult to have a high level of cohesiveness and group identification in newly formed teams, in teams with frequent changes in membership, in teams with members who represent competing subunits of the organization, in teams with members who are culturally diverse, in teams with emotionally immature members, and in teams with members who must work in close proximity for long periods of time under stressful conditions (e.g., crew of a submarine).

**Collective Efficacy and Potency:** A leader can impact collective effectiveness in numerous ways (Bass, Avolio, Jung, & Berson, 2003). Behaviors that impact collective effectiveness comprise: (1) communicating confidence and self-assurance in the team; (2) setting convincing goals or objectives that will provide prospect to experience early success; (3) facilitating the team find ways to overcome hindrances; and (4) revelling improvement and significant accomplishments.

**Accurate, Shared Mental Models:** Leaders can support members recognise their expectations about cause-effect relationships, define ways to assess the precision of these assumptions, and jointly grow a more accurate mental ideal. Ways to advance understanding and arrangement about causes of problems and respectable resolutions include the following: (1) hold consultation to discuss member assumptions and opinions and identify any supporting suggestion; (2) scrutinize relevant periodicals on the subject; (3) implement more precise measures of team procedures and performance factors; (4) conduct measured experiments to evaluate cause-effect relationships; and (5) conduct after- activity reviews to advance learning from practice.

**Member Diversity:** The significance of diversity for group performance differs somewhat for different types of teams and different situations (Horwitz & Horwitz, 2007). It is easier to change diversity into helpful problem solving when members are exceedingly interdependent for achievement of imperative common objectives, but making it happen is a foremost leadership challenge. A leader with ability to select members can try to select members who are varied in terms of their training and relevant understanding.

**Group Process Dichotomies:** Some scholars have projected a comprehensive two-factor grouping of team procedures that can affect the prominence of the performance determinants and the relevance of different leadership functions (Bales, 1950). The two dichotomies

defined in this section can be used together to help understand operative leadership in a group or team. One difference is between changeover phase and performance phase of group activities. The transition stage involves defining who will be members of the group and making initial conclusions about performance policies, work projects, and member parts in the group. If the mission, objectives, and formal leadership characters for the group are not already determined by the parent business, then these decisions must be made as well. The change stage is very vital in a newly formed team, or when a current group is given accountability for a new type of assignment. The performance stage involves executing and implementing performance plans, maintaining member commitment and collaboration, monitoring and measuring performance, and resolving any problems in the work. Groups typically alternate between the two phases, and the phases can overlay when unexpected problems require amendment of earlier strategies and decisions.

### Conclusion

Leader's confidence and optimism are crucial to influence others to support the leader's dream, but extreme optimism makes it more problematic for the leader to identify flaws in the vision or policy. Identifying too meticulously with a vision weakens the capacity of people to appraise it accurately. If other managers believe the leader has outstanding capability, they will be inhibited from pointing out faults or suggesting enhancements in the leader's policies and plans earlier achievements and adulation by many subordinates may cause the leader to become arrogant about his or her conclusion. In a persistent pursuit to attain the vision, a charismatic leader may disregard or reject early signs that it is impractical.

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## Corporate Governance and Fraud Management in Nigerian Deposit Money Banks

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### Abstract

The Nigerian banking industry has experienced several fraudulent and unethical practices over the years. This problem persists despite the consolidation exercise initiated in 2004. It is in the light of this that this research examined the relationships that exist between governance mechanisms and fraud management in deposit money banks in Nigeria. The total numbers of DMBs in Nigerian are 22. The convenience sampling techniques (non-probability sampling) was used to arrive at the sixteen that exist in Benue and Nassarawa States. 195 copies of questionnaire, padded up, were distributed to the respondents on the basis of board size. The answered questionnaires were analyzed using descriptive statistics and inferential statistical analysis. At the end it was found that: the effect of board professionalism in reducing incidence of fraud is significant; protection of shareholders rights significantly enhances fraud management; high level of transparency and disclosure has not significantly affected fraud management. The recommendations curbed financial statement fraud; and that strong legal and enforcement framework have significantly made are in the areas of banks reviewing the fit and proper person's regime for creditability and professional character of their ranks and files.

**Key words:** *Governance, Fraud management, Nigeria Banks*

### 1.1 Introduction

The success and failure of any businesses globally is determined by the principles, rules and regulations that control them. These rules, principles and regulations are either by decree, acts or standards by which the performance of the company can be measured. Businesses thrive in an environment that is friendly, politically stable, economically viable and where transparency and accountability are promoted to encourage both local and foreign investment.

The issues of corporate governance continue to attract considerable national and international attention and have again appeared at the top of the agenda with current global financial meltdown. Corporate governance is about effective, transparent and accountable governance of affairs of an organization by its management and board. It is about a decision-making process that holds individuals accountable, encourages stakeholder participation and facilitates the flow of information. The ongoing financial crisis has further reinforced the message that governance of firms, especially of financial institutions, should always aim at protecting the interests of all stakeholders, which include shareholders, depositors, creditors, regulators and the public.

Throughout history there have always been thieves and deceivers. There have always been those who seek to profit at the expense of others. At one level then, auditors and managers are on the same side as they seek to protect the organization's assets or to catch the offenders and, hopefully, see them punished. Where auditors and managers part company is where it is the managers who seek to enrich

themselves at the organization's expense in a way that the auditor would expose as illegal or immoral because, in that case, it is depriving the owners of the business of what is rightfully theirs.

When managers distort the financial statements so that their share options sell out at a good price, where they create fictitious assets to hide their own depredations, where they stick their noses so far into the trough that their feet leave the ground-this is where the external auditor steps in to expose this bad behavior, this immorality, this betrayed of trust (Taylor, 2011).

Corporate governance has recently assumed considerable significance around the world due to the high profile scandals in companies such as Adelphia, Enron and World Com (Brown & Caylor, 2004). The collapse of banks in Nigeria in the early 1990s was also as a result of corporate governance failure which was characterized by insider-related credit abuses unmitigated exposure to risks, failings in internal control system and pervasive conflict of interest (NDIC, 2008).

Corporate governance initiatives whether enforced by state or as part of semi-voluntary code have prevented fraud and corruption. Fraud and criminal acts by managers and employees of companies are on the increase. This led to a renewed interest in corporate governance practices globally and its clamor has become even stronger given series of failed public and private enterprises. In 2001, the US federal government passed the Sarbanes-Oxley Act with the aim of restoring public confidence in corporate governance by requiring public liability companies to adopt and report on compliance to the act.

Corporate governance is a new concept in Nigeria, traced to the change from military to civilian government in 1999. This brought about a new feeling about the political environment. Expectations were high as the whole world focused on Nigeria. This calls for reformation in Nigeria socio-political environment, improvement on human rights of Nigerians, judicial system and the socio-economic environment as a whole, championed by the Obasanjo led civilian administration.

The problem is that fraud flourishes where corporate morality breaks down, either at the organization or individual level. Corporate abnormality is when owners are in the management of their business entity. While corporate governance is when owners of the business are separated from its management.

Ogbechie and Kuofopoulos (2010) have reported that the corporate governance of financial service sector, and more specifically of banks in developing economies has been almost ignored by researchers. Even in developed economies, the corporate governance of this sector has only recently been discussed in the literature. The corporate governance of banks in developing economies is important for several reasons. First, banks have an overwhelmingly dominant position in the financial systems of developing

economies, and are extremely important engines of economic growth. Second, banks in these developing economies are typically one of the most important sources of finance for the majority of the firms. Third, banks in developing countries are the main depository for the economy's savings and provide the means for payment (Ogbechie and Kuofopoulos, 2010).

Corporate governance is particularly important in the Nigerian banking industry because a number of recent financial failures, frauds and questionable business practices have adversely affected investors' confidence. In 1995 several CEOs and directors of banks in Nigeria were arrested for non-performing loans that were given to themselves, relations and friends.

Some of the banks that could not meet the Central Bank of Nigeria (CBN) recapitalization requirement in 2006 were found to be saddled with non-performing loans that were given to directors and their friends. As a result, the Central Bank of Nigeria had decided to reform the industry in order to achieve global competitiveness.

The corporate governance landscape in Nigeria has been dynamic and has generated interest from within and outside the country. In 2003 the Nigerian Securities and Exchange Commission (SEC) adopted a Code of Best Practices on Corporate Governance for publicly quoted companies in Nigeria and this code has been reviewed. At the end of the consolidation exercise in the banking industry, the CBN, in March 2006, released the Code of Corporate Governance for Banks in Nigeria, to complement and enhance the effectiveness of the SEC Code, which was implemented at the end of 2006. The three major governance issues that attracted the attention of the regulators are directors' dealings, conflict of interest and creative accounting.

So many mechanisms are used in measuring corporate governance. Some of these include: Independence of audit Committees (Klein, 2002), auditor independence (Frankel, Johnson, and Nelson, 2002), CEO duality role (Adeyemi and Fagbemi, 2010) and board size (Yemack, 1996). These corporate governance mechanisms have often been examined in relation to firm performance and earnings management which is a form of creative accounting (Fagbemi, Abogun and Salam 2013).

## 1.2 Statement of the Problem

The financial Reporting Council utilized four elements of Corporate Governance identified by the World Bank in its Report on observance of Standards and Codes (ROSC). These are: Strong and Professional board; strong shareholders rights; high level of transparency and disclosure; strong legal and enforcement framework. This rational Code of Corporate Governance anchored on international best practices is no doubt required to facilitate growth and development of the Nigeria economy. At the micro level, it is meant to instill in the management of

private and public organizations such corporate governance values as accountability, efficiency, integrity and transparency. At the macro level, the code is expected to attract investment from local and foreign investors, strengthen and sanitize the private and public sectors. According to Soludo (2004) a good corporate governance practice in the banking industry is imperative if the industry is to effectively play a key role in the overall development of Nigeria. One needs to examine the extent to which this has been achieved. Effective corporate governance is supreme in the management of fraud.

Despite these standard codes there has been much report on bank fraud. This throws one into wondering whether these codes on paper are actually being implemented. According to Chiegina (2009) as cited in Ikpefan and Ojeka (2013) the executive of banks had abandoned the key elements of good corporate principles of honesty, trust and integrity, openness, performance orientation, responsibility and accountability, mutual respect and commitment to the organization for selfish reasons. Could this mean that there are no strong and professional boards in existence. It seems that the relationship between board and management which should be based on supervision and monitoring with high level of collaboration is not in existence or are the boards not well composed in line with the financial reporting council stipulation. In the finding of Ikpefan and Ojeka, (2013), they noted that because board ignored their oversight function the executive management obtained for themselves unsecured loans at the expense of the depositors. Afolabi and Dara (2015) reported that the series of widely published cases of accounting improprieties recorded in the Nigerian banking industry were related to the lack of vigilant oversight function by the board of directors. The board relinquishes control to corporate managers who pursue their own selfish interest and the board being remiss in its accountability to stakeholders.

Again one seems to wonder if the provisions made for the protection of shareholders right is highly protected, as this is viewed by the World Bank as a key element of corporate governance which has the effect of reducing fraud. The international reporting standard which is well projected by the financial reporting council, well puts financial operational structures down to aid high level of transparency of disclosure which again is a key factor of corporate governance. The extent to which this has curbed financial statement fraud needs a proper examination. Until these issues are properly addressed the issue of fraud management which several codes of corporate governance have come to strengthen will remain a mirage.

The main objective of this study is to examine the effect of corporate governance on fraud management in deposit money banks in Nigeria. The specific objectives are:

- i. To examine the extent to which strong professional board has reduced incidence of fraud.

- ii. To examine the extent to which protection of shareholders rights has reduced manipulation of records.
- iii. To examine the extent to which high level of transparency and disclosure has curbed financial fraud.
- iv. To examine the extent strong legal and enforcement framework significantly affect organizational compliance with relevant procedures.

The following research questions emerging from the research problem will be addressed in the course of this study.

- i. Has strong and professional board reduced incidence of fraud?
- ii. To what extent has protection of shareholders rights reduced records manipulations?
- iii. To what extent has high level of transparency and disclosure curbed financial fraud?
- iv. To what extent does strong legal and enforcement framework affect organizational compliance with relevant procedures?

The study has the following hypotheses which are expressed in their null ( $H_0$ ) forms and to be tested at 5% level of confidence to encapsulate the essence of the study.

- i.  $H_0$ : Strong and professional board have not significantly reduced incidence of fraud.
- ii.  $H_0$ : Protection of shareholder's rights has not significantly reduced records manipulations.
- iii.  $H_0$ : High level of transparency and disclosure has not significantly curbed financial fraud.
- iv.  $H_0$ : Strong legal and enforcement framework does not significantly affect organizational compliance with relevant procedures.

This research work is of great value to the following, among others:

**Banks:** This study will enable the banks to know their stance in relation to the codes and principles of corporate governance introduced by the Central Bank of Nigeria. The board of directors will find this information useful in benchmarking the management of fraud in their banks.

**Bank Regulators:** This research will provide an insight into a better understanding of the degree to which the banks that are reporting on their corporate governance have been compliant with different sections of the codes of best practices and where they are experiencing difficulties.

**Investors:** Investors are well informed of the corporate governance mechanisms and banks compliance with the codes of best practices. This will help the investors in their investment decisions.

**Academia:** This work is also beneficial to lecturers and students who will teach or learn about corporate governance.

**Researchers:** The result of this study will service as a reference material for further research in this field of study.

The choice of this study on the effect of corporate governance on fraud management in deposit money banks in Nigeria is based on the fact that this sector's stability has a large positive effect on the growth of the economy. More so, deposit money banks are the key institutions facilitating the payment system of an economy, and the stability of the financial sector in turn has profound effect on the economy as a whole. To this end, the study basically covers all the 22 deposit money banks operating in Nigeria. The study covered deposit money banks licensed by Central Bank of Nigeria. The study covered 5 years period (from year 2012 to 2016).

Furthermore, we focused only on banking industry because corporate governance and transparency issues are extremely important in the deposit money banking subsector due to the crucial role it plays in the economy: providing loans to the other sectors of the economy, transmitting the effect of monetary policy and maintaining stability in the economy as a whole. This study covers four key governance variables identified by World Bank in its Report on Observance of Standards and Codes (ROSC). These are strong and professional board; strong shareholders rights; high level of transparency and disclosure; strong legal and enforcement framework.

## 2. Review of Related Literature

### 2.1 Conceptual Review

#### 2.1.1 Corporate Governance

The business world had described the term corporate governance in different ways and people have viewed it from different perspectives. Some authors define corporate governance from a regulatory perspective as "the system of laws, and factors that control operations of a company (Uwigbe, Fagbemi and Anusiem (2012). Others define it from the point of view of corporate governance participants and the related constraints. According to Rezaree (2007), corporate governance is a legal concept used to describe corporate oversight accountability and the balance of power that exists among shareholders, management and directors. Cadbury Committee (1992) also defined corporate governance as the system by which companies are directed and controlled. According to Shleifer and Vishny (1998) cited in Olatunji (2010), corporate governance deals with the ways in which suppliers of finance to corporations assure themselves of getting a return on their investment.

Corporate governance can also be defined in the context of the agency theory as a process designed to align interests of management (agent) with those of shareholders (Principals), and to hold management accountable to the company's equity owners (Rezaee, 2007). According to Unegbu (2004), "corporate governance refers to the processes and structures by which the business and affairs of an institution are directed and managed, in order to improve longterm shareholder value by enhancing corporate

performance and accountability, while taking into account interest of other stakeholders". Furthermore, Sanda, Mikailu and Garba (2005) pointed out that "corporate governance implies that a company would manage its affairs with diligence, transparency, responsibility and accountability and would maximize shareholders' wealth".

Rezaee (2007) also defined corporate governance as "a process through which shareholders induce or persuade management to act in their own interest, providing a degree of confidence that is necessary for capital market to function effectively".

Corporate governance has also been defined as a system of law and sound approaches by which corporations are directed and controlled, focusing on the internal and external corporate structures with the intention of monitoring the actions of management and directors and thereby mitigating agency risks which many stem from the misdeeds of corporate officers (Agarwal and Medury, 2013).

From the above definitions, we can see that corporate governance is about effective, transparent and accountable governance of affairs of an organization by its management and board. It is about a decision making process that holds individuals accountable, encourages stakeholders participation and facilitates the flow of information. Governance of firms should always aim at protecting the interest of all stakeholders, regulators and the public.

Corporate governance is divided into external and internal corporate governance. Internal corporate governance covers public's interest, employees' interest, and owners' interest. External corporate governance is defined as a mechanism through which governments' responsibility to control the operations of banks are exercised based on the prevailing bank regulations Adewoyina(2012) and Gbadebo (2014). In Nigeria Central Bank provides prudential financial guidelines to evaluate banks' financial health.

The corporate governance framework is there to encourage the efficient use of resources and equally to require accountability for the stewardship of those resources. Corporate governance generally refers to the process or mechanism by which the affairs of businesses and institutions are directed or managed, with a view to improving longterm value of shareholders while taking into account interests of other stakeholders interested in the well-being of an entity (Sanda, Mikailu, and Garba (2005). As opined by Ikpefan and Ojeka (2013), corporate governance provides the structure through which the objectives of the company are set, and the means of attaining those objectives and monitoring performance are determined. Good corporate governance should provide proper incentives for the board and management to pursue objectives that are in the interests of the company, and stakeholders and should facilitate effective monitoring,

thereby encouraging firms to use resources more effectively. Corporate governance is simply the government of corporation, entity or an organization (Adedeji, 2012).

### 2.1.2 Fraud Management

Fraud management involves detecting, preventing and mitigating fraudulent activities. Actions required include:

Setting the tone and the standards, including demonstrating the highest standards of ethical conduct by the leadership of the organization. The upper management should project its integrity into the entities organization because when it is perceived as ethical it tends to filter down into the rest of the organization. Consequently, when upper management is viewed as immoral, this many have a negative effect on the ethical environment of the organization.

Effective corporate governance, the overall import being to monitor corporate performance and oversee the conducts of management on behalf of shareholders and/or other stakeholders;

Knowledge of characteristics of white-collar crimes, motivations for fraud, and the organizational conditions that promote frauds;

Establishment of efficient and effective accounting, auditing and internal controls;

Setting out management, administrative and organizational policies, procedures and practices that are in line with defined corporate objectives;

Ensuring that all applicable legislation, standards and other requirements are put in place and strictly adhered to; and

Fraud deterrence, which is the pro-active identification and removal of casual and enabling factors (motive or pressure, nationalization and opportunity) of fraud.

### 2.1.3 Shareholder Rights

Rights, according to the Chambers 21<sup>st</sup> Century Dictionary simply refer to a just or legal clam to something. The rights any shareholder has in a company generally depend on the provisions of the companies and Allied Matters Act 2004, the company's articles of association, the terms of issue of the shares (which are usually in the articles, but sometimes in a resolution).

The rationale is that in return for investing in a company a shareholder gets a bundle of rights in the company which may vary according to the type of shares acquired. What rights are attached to the different classes of shares is essentially a matter for the company to determine. The main rights which usually attach to shareholding according to Horton, M. (2015), include:

Voting power on major issues, including electing directors and proposals for fundamental changes affecting

the company, such as mergers or liquidation. This right is exercised in person or via proxy.

**Ownership in a portion of the company:** Shareholders have a claim on a portion of the assets owned by the company. (This is expressed by the accounting equation  $A=E+L$ ) As the assets generate profits, and as the profits are reinvested in additional assets, shareholders see a return in the form of increased share value as stock prices rise.

**The Right to Transfer Ownership:** This means that shareholders are allowed to trade their stock on an exchange, and the liquidity provided by the stock exchanges is extremely important.

**An Entitlement to Dividends:** Along with a claim on assets, you also receive a claim on any profits a company pays out in the form of dividend.

**Opportunity to Inspect Corporate Books and Records:** This opportunity is provided through a company's public filings, including its annual report. This is particularly important for private companies, as public companies are required to make their financials public.

**The right to Sue for Wrongful Acts:** Suing a company usually takes the form of a shareholder class-action law suit. This is to ensure that the company in run lawfully in accordance with the Companies Act, the general law and the company's constitution. A good example of this type of suit occurred in the wake of the accounting scandal that rocked WorldCom in 2002, after it was discovered that the company had grossly overstated earnings, giving shareholders and investors an erroneous view of its financial health. The telecom giant faced a firestorm of shareholder class-action suits as a result. Common shareholder rights can also be enforced through a single shareholder complaint. If the company issues new shares to the public, current shareholders have the right to buy a specific number of shares before the stock is issued to the new potential shareholders. Pre-emptive rights can be valuable to common shareholders, as they are often provided at a subscribed price on a per-value basis.

**Shareholder Rights Plan:** Shareholder rights plans outline the rights of a shareholder in a specific corporation. In most cases, these plans are designed to give the company's board of directors the power to protect shareholder interests in the event of an attempt by an outsider to acquire the company. To prevent a hostile takeover, the company will have a shareholder rights plan that can be exercised when another person or firm acquires a certain percentage of outstanding shares.

**To a final distribution on Winding Up:** If the company is wound up and all the creditors are paid, the remaining assets are available for division among the members. This may be in two stages - a return of capital and distribution of surplus capital. Some share may be given a priority as to one or both of these, from participation in any surplus.

To receive a copy of the Company's Annual Accounts.

#### 2.1.4 Strong and Professional Board

Strong board refers to a board that is characterized by ability, stamina, good technique. A professional board in the one characterized by specialist academic and practical training of the members; the body of people engaged in a particular paid occupation members earn their living in the performance of membership duties; competence, expertise or conscientiousness of their calling, expectation relationship and duty of care. This is so as profession in simply a calling, an occupation, vocation or career where specialized knowledge of a subject (here, governance), field or science is applied (Ejembi, 2013).

A strong and professional board is one that hinges on the principle of:

Appropriate composition, board external dominance, independence, competence, availability, objectivity, diversity and integrity (no room whatsoever for compatibility;

The relationship between Board and management is on supervision and monitoring with high level of collaboration (not connivance);

Independent non-executive directors that constitute the "conscience of corporate boards in their dealings with minorities and external stakeholders-limited executive presence.

Executive directors can serve on rotation on a corporate board, apart from the CEO and the Finance Director, two of whom could have a permanent sit on board subject to board policy;

Initial directional induction for new, and continued directional training for the old directors-international practice;

Mandatory standing committees in some form: audit, remuneration, and nomination committees all exclusively made-up of independent non-executive directors, or a majority there of (with exception of audit). (Fodio, 2016).

#### 2.1.5 Transparency and Disclosure

Corporate transparency describes the extent to which a corporation's actions are observable by outsiders (Fung, 2014). Transparency is one of the key steps to corporate governance and ensures that management will not engage in improper or unlawful behavior since their conduct can be and will be scrutinized. To achieve transparency, a company should adopt accurate accounting methods, make full and prompt disclosure of company information and make disclosure of conflict of interests of the directors or controlling shareholders, etc. A key element of "good" governance is transparency", which incorporates a system of checks and balances among the board of directors, management, auditors and other shareholders. An organization should clarify and make publicly known the roles and responsibilities of board and management to provide stakeholders with a level of accountability, which

ensures that managers utilize the company's resources in the most efficient and desirable manner as well as for most appropriate goals without improper regard for personal interest. Management is accountable to the board, which in turn is accountable to the board.

In the abstract to his paper, Fung, 2014, stated that transparency and disclosure (T&D) are essential elements of a robust corporate governance framework as they provide the base for informed decision making by shareholders, stakeholders and potential investors in relation to capital allocation, corporate transactions and financial performance monitoring.

In the paper cited above the five pillars of T&D were highlighted. These are:

**Truthfulness:** Information disclosed must provide accurate description of circumstances.

**Completeness:** Information disclosed must be sufficient to enable investors to make informed decisions. Information must include both financial and non-financial matters like ownership structure, related parties and related party transactions, times in fines on firms partners, directors, companies and consultants remuneration policy and nomination process.

**Materiality of Information:** Information disclosed must be material to influence investment decisions.

**Timeliness:** Information disclosed must be timely to enable investors to react as quickly as possible.

**Accessibility:** Information disclosed must be easily accessible and available to investors at low cost. The above attributes are attainable through strengthened internal and external audit functions and audit committees.

#### 2.1.6 Strong Legal and Enforcement Framework

As opined by OESG (2006), in Nigeria, as even in most developed countries, observance of the principles of corporate governance has been secured through a combination of voluntary and mandatory mechanisms. In 2003 the Aledo Peterside committee set up by the securities and Exchange Commission (SEC), develop a Code of Best Practice for Public Companies in Nigeria. The code is voluntary and is designed to entrench good business practices and standards for boards and directors, CEOs, auditors, etc, of listed companies, including banks.

Mandatory corporate governance provisions relating to banks are contained in the Companies and Allied Matters Act (CAMA) 1990, the Banks and other Financial Institutions Act (BOFIA) 1991, the Investment and Securities Act 1999, the Securities and Exchange Commission Act (SECA) 1988 (and its accompanying Rules and Regulations) etc, and only recently the CBN.

As contended by Wilson (2006), the various corporate governance mechanisms maybe unable to accomplish sound corporate operation in Nigeria if the underlying legal, institutional and regulatory framework for corporate governance are weak, inefficient, and inadequate.

The inherent hindrances to ensuring effective corporate governance outputs, in Nigeria include:

In reality, the members hardly ever exercise their powers as they should because of a combination of many factors such as the cost of attending meetings, ignorance of the powers available to them, lack of understanding of reports given at these meetings and the lack of any willingness of even the majority shareholders, to press the Board of Directors on issues, etc. The general result in many cases is that the general meeting becomes merely an approval or confirmatory body of the board.

**Limitation of Regulatory oversight by SEC:** Good corporate governance will be best guaranteed by external institutions having regulatory oversight over the corporations. Many countries have recognized that the abuse of corporate power cannot be adequately constrained by leaving it to the company members to ensure that the controllers behave and to take action in the courts if they do not. There is some evidence that in countries with weak judicial systems a regulatory approach to enforcement laws is by an independent and motivated securities commission.

Accordingly, agencies such as the US SEC, the Secretary of State in UK, and in Nigeria, the SEC, CAC, CBN exercise supervisory role. The Limitation of Judicial System: The key avenue prescribed by CAMA for enforcing the shareholders right is the courts. Nigerian courts remain stow expensive and not effective in resolving commercial disputes. As the courts remain slow, inefficient and expensive, shareholders are hesitant to use the courts and as a result the directors continue to rule with impunity. The factors, identified by Wilson (2006) are:

- i. Corruption,
- ii. Inadequate judicial personal
- iii. Weak rules of procedure
- iv. Poor facilities
- v. Undue regard for technicalities
- vi. Ineffective use of ADR processes
- vii. Poor case flow management.

“Effectiveness of legal and enforcement” framework refers to a set of criteria that seeks to ensure that an action or situation that is lawful or required by law takes effect (Muhammed, 2004).

#### 2.1.7 Fraud

The incidence and scale of fraud in various organizations, banks inclusive, have been on a dramatic increase in recent time. As an act of deliberate deception, with the intention of gaining some benefit, or a cheat, fraud can be noticed in almost all places of human existence. Children cheat their parents, by overstating school financial obligations, or pretending to be studying in the school when not; spouses cheat each other, overstating costs of consumable items, none disclosure of external relationships or transactions; friends cheating their friends, by covering themselves up through lying, making empty or unfulfilled

promises; employees cheating their employers, by ascribing to themselves undue advantages in terms of unwarranted higher pay, getting paid for no work done, over-invoicing and other means of getting into their pockets what belong to their employers; employers cheating their employees, through non-commensurate pay and/or owing them many months' salaries, overworking them, disregard for employee health and welfare; market women and traders cheating their customers, and the customers cheating traders at the market ,et cetera. Even in church activities, people cheat one another and cheat God. What a fraudulent world we live in! No wonder then that our Lord Jesus Christ retorted, "But to what will I compare this generation?... (Mathew 11:16). And as observed by Ejembi (2011), this fact, together with the sophistication of fraudsters, creates difficult problems for management and auditors.

As defined by Agboye (2004), fraud is an act of deception which is aimed at arrogating to oneself what does not belong to one; such acts concern theft, forgery, pilferage, falsification of records or accounts, defalcation, embezzlement and misappropriation. Fraud can also be described as a financial scandal perpetrated by a fraudster.

Adeniyi (2010) also described fraud as referring to an intentional act by one or more individuals among management, employees or third parties, which results in a misrepresentation of financial statements. Fraud has also been defined as an intentional wrongful act with the purpose of deceiving or causing harm to another party. It is an intentional deception for personal gain or to damage individual or party. Fraud is an act of deliberate deception, with the intention of gaining some benefit. It simply means a cheat. Fraud refers to intentional distortions of financial statements for whatever purpose, and misappropriation of assets involving the use of criminal deception. Fraud is perpetrated to obtain an unjust or illegal advantage. Fraud is an intentional deception that results or could result in the loss or devaluation of an asset or something of value to the owner.

Adewumi (1992) as cited in Ejembi (2009) described fraud as a conscious, premediated action of a person or group of persons with the intention of altering the truth and/or fact for selfish, personal, monetary gain. It involves the use of deceit and trick and, sometimes, highly intelligent, cunning and know-how. Defrauding people or entities of money or valuables is a common purpose of fraud.

An important characteristic of fraud is the intent of the wrongdoer. An example in auditing is for the auditor to give a standard, unqualified audit opinion on financial statements that will be used to obtain a loan when the auditor knows they are materially misstated. Ezello (2008) has characterized fraud by the following elements: Intent to commit a wrongful act or to achieve a purpose inconsistent with law or public policy. It is not a mistake or error on the part of the offender; it is not accidental.

Disguise (of purpose): falsifications and misrepresentations employed to accomplish the purpose.

Reliance by the offender on the ignorance or carelessness of the victim(s).

Concealment of the violation. Fraud is not only a theft of assets but also an attempt to conceal it. Misappropriation of assets without an attempt to conceal is merely a theft, which is usually uncovered quickly through normal checks and balances procedures. To conceal is to deceive the victim that all is well. The linkage between corporate governance and fraud/corruption lies in the fact that the improvement in corporate governance can be a catalyst to break the vicious cycle of bribery and corruption. Shareholders and investors in countries that are experiencing a high level of corruption may receive double dividends from the improvement in corporate governance. Companies with better corporate governance have better prospects of growth and command higher valuation in the market. The Mckinsey study, as reported in...., shows that global investors are willing to pay more for better-governed companies.

## 2.2 Theoretical Framework

### 2.2.1 The Agency Theory

The ultimate theories in corporate governance started with the agency perspective, extended into the stewardship and then to the stakeholders and ethical perspectives or theories. Basically this study is anchored on the agency theory. Although political and even cultural influences have a bearing, it is arguable that the legal styles of the entity through which business is conducted is perhaps the biggest influence on the need for strong corporate governance.

History shows that the need for funding business expansion, and consequent rise of the publicly owned joint stock company, had the effect of slowly separating the ownership of the business from its day-to-day control. There was, inevitably, a large element of trust in their dealings. The introduction of limited liability and the consequent opening up of share ownership to the wider public dramatically widened this gap between ownership and control. The managers or directors of the business (defined here as "agents") were given the freedom to run the business without the day-to-day involvement of the owners, the providers of the capital (defined here as "principals"). They were entrusted with the principals' money and their role, it was hoped was:

To use that investment to create profits which the principals could receive by way of dividend, and

To expand that initial capital on behalf of owners so increasing the value of their investment.

Their primary role as agents was, and still is, the preservation of the assets of the business and to act always in the best interests of their principals, the shareholders. In return the agents should receive suitable remuneration,

concomitant with their status and their level of success in making money for their principals. Thus everybody should get something out of the arrangement or so it seems. In fact things do not always work out quite well as might be expected because, as usual, human nature gets in the way. It is this that lies behind the concept known as agency theory. Agency theory holds that agents do not, necessary,

take decisions in the best interests of their principals. It states that the objectives or goals of principals and agents mostly conflict and, where they do, agents will, naturally, make the choice which benefits themselves the most, choices which may not be the most beneficial decision for the principals. This is summarized quite simply in table 2.1.

**Table 2.1: Agency Theory**

Party	Objectives
Principal	Safe investment Regular dividends Long-term capital growth Maintenance of value
Agent	Salary and benefits Maximum bonus Share options Personal success of successful business measured by share price.

**Source: Taylor, John 2011:15**

On the conflict of interest between principals and agents, institute of chartered Accounts in England and Wales, in November, 2006 put it this way:

*In principle the agency model assumes that no agents are trustworthy and if they can make themselves richer at the expense of their principals they will. The poor principal, so the argument goes, has no alternative, but to compensate the agents well for their endeavours so that they will not be tempted to go into business for themselves using the principals' assets to do so.*

The agency theory suggests that dispersed ownership plays an important role in controlling of the firm. Since the early work of Berle and Means in 1932, corporate governance has focused upon the separation of ownership from management, which results in principal-agent problems arising from the dispersed ownership in the modern corporation. Corporate governance is regarded as a mechanism where a board of directors is seen as a crucial monitoring device to minimize the problems brought about by the principal agent relationship. Wan & Idris, (2012) Shleifer and Vishny (1997) suggest that the concentrated level of ownership is a significant factor attracting shareholders to control managers and to perform corporate governance mechanism. The concentrated shareholders have more power to control the firm than the dispersed shareholders. Hence, they will attempt to govern the directors to manage the firm as expected.

The agency problem however depends on the ownership characteristics of a country. In countries where ownership structures are dispersed, if the investors disagree with the management, or are disappointed with the

performance of the company, they use the exit options, which will be signaled through reduction in share prices. Whereas countries with concentrated ownership structures and large dominant shareholders, tend to control the managers and expropriate minority shareholders in order to gain private control benefits (Spanos, 2005).

The assumption of agency model that no agents are trustworthy is not universally true, but the extent to which principals do not trust their agents will tend to govern the level of the monitoring mechanisms principals need to create for the overview of their agents' activities and also to decide the extent to which agents' compensation levels are considered to be acceptable by the agents even if they are considered to be excessive by the principal.

One of the differences between principals and agents tends to arise because of the different views of the time horizon each party holds. Generally, principals-individual investors (as opposed to speculators)-tend to view their investment as relatively long-term. They require their money to be secure, first of all, and then they will look for steady growth and, possibly a regular dividend. Investors generally are more influenced by the prospect of capital growth than a regular income. Dividend returns on capital invested tend to be fairly low. Many investors could receive a greater level of income from investment in bonds or some other forms of investment such as property, however they would not achieve the same levels (hopefully) of capital growth. Agents and managers, on the other hand, tend to want short-term gains such as bonuses, perks or share options which can be cashed in relatively quickly to make a low taxed profit. This encourages short-term decision making or decision making designed to protect or increase the share price rather than the more long-term strategic approach required by investors. It is for this reason, of course, that managers can be tempted to "improve" results when

reporting through accounts that is either gently cooked or completely roasted” (Bosch, 1990).

According to Taylor, (2011), another factor which has increased the power and control of managers and which, it has been argued is also capable in fostering short-term decision making, is the investment community itself, which is often looking to gain short-term profits from portfolio management investment rather than for strategic approaches centered on strategies which stress the need for:

Survival, and  
Long-term growth

## 2.3 Theoretical Studies

### 2.3.1 The Rationale for Corporate Governance in Bank

Since banks raise money from the public to function and operate, they assume an obligation of public trust to act in a manner that protects the public interest and make full and fair public disclosure of public information, including financial results. This is the basis for corporate governance (Elebute, 2000; Inyang, 2009). Banks are different from other corporate organizations in important respects, and that makes corporate governance of banks not only different but also more critical. Banks lubricate the wheels of the real economy, are the conduits of economy’s payments and settlement (Subbarao, 2011). By the very nature of their business, banks are highly leveraged. They accept large amount of uncollateralized public funds and deposits in a fiduciary capacity and further leverage those funds through credit creation. The presence of a large and dispersed base of depositors in the stakeholders group sets banks apart from other corporations. Banks are interconnected in diverse, complex and oftentimes opaque ways underscoring their “contagion” potential. If corporation fails, the fall out can be restricted to the stakeholders. If a bank fails, the impact can be spread rapidly through to other banks with potentially serious consequences for the entire financial system and macro-economy.

According to Levine (2003), research finds that banks are critically important for industrial expansion, the corporate governance of firms, and capital allocation. When banks efficiently mobilize and allocate funds, this lowers the cost of capital to firms, boosts capital formation, and stimulates productivity growth. Thus, the functioning of banks has ramifications for the operations of firms and the prosperity of nations. Given the importance of banks, the governance of banks assumes a central role. If bank managers enjoy enormous discretion to act in their own interests rather than in the interests of shareholders and debt holders, then banks will be correspondingly less likely to allocate society’s savings efficiently and exert sound governance over firms (Levine, 2003).

The corporate governance of banks in developing economics is important for several reasons. First, banks have an overwhelmingly dominant position in developing

economy financial system and are extremely important engines of economic growth (Arun and Turner, 2003). Second, as financial markets are usually underdeveloped, banks in developing economies are typically the most important source of finance for the majority of firms. Third, as well as providing a generally accepted means of payment, banks in developing countries are equally the depository for the economy’s savings. Fourth, many developing economies have recently liberalized their banking systems through privatization or disinvestments and reducing the role of economic regulation. Consequently, managers of banks in these economies have obtained greater freedom in how they run their banks. There are several possible reasons for the higher degree of government oversight in the banking sector:

Bank depositors (particularly retail depositors) cannot effectively protect themselves because they do not have adequate information, nor are they in a position to coordinate each other.

Banks assets are usually opaque, and lacking in transparency as well as liquidity.

Bank instability will lead to contagion effect, which would affect a class of banks or even the entire financial system and the economy.

Banks have a dominant position in developing economy’s financial systems, and are important engine of economic growth (King and Levine, 1993; Levine, 2003., TundeLilian, Kaaro, Mahandwartha & Supriyatria, 2007).

### 2.3.2 Corporate Governance Mechanisms

Corporate governance mechanisms and controls are designed to reduce the inefficiencies that arise from moral hazard and adverse selection. According to Afolabi and Dare (2015), there are both internal monitoring systems and external monitoring systems. Internal monitoring can be done, for example, by one (or a few large shareholder(s) in the case of privately held companies or a firm belonging to a business group. Furthermore, the various board mechanisms provide for internal monitoring. External monitoring of managers’ behavior occurs when an independent third party (e.g. the external auditor) attests the accuracy of information provided by management to investors. Stock analysts and debt holders may also conduct such external monitoring. An ideal monitoring and control system should regulate both motivation and ability, while providing incentive alignment toward corporate goals and objectives. Care should be taken that incentives are not so strong that some individuals are tempted to cross lines of ethical behavior for example by manipulating revenue and profit figures to drive the share price of the company up ([www.wikipedia.org](http://www.wikipedia.org)) as cited in Apolabe and Dare (2015).

According to Julie (2014), effective corporate governance is essential if a business wants to set and meet its strategic goals. A corporate governance structure combines controls, policies and guidelines that drive the

organization toward its objectives while also satisfying shareholders' needs. A corporate governance structure is often a combination of various mechanisms, as stated below:

### **Internal Mechanism**

The foremost sets of controls for a corporation come from its internal mechanisms. Here corporate governance does not only rely on external influence or pressure (external corporate governance) to force the management discipline, but also on the intention of bank managers and owners to inform the market about their intentions to implement the good corporate governance measures. Internal corporate governance is about mechanism for the accountability, monitoring, and control of a firm's management with respect to the use of resources and risk taking (Liewellyn & Sing, 2000) as cited in Adeaga (2015).

These controls monitor the progress and activities of the organization and take corrective actions when the business goes off track. Maintaining the corporation's larger internal control fabric, they serve the internal objectives of the corporation and its internal stakeholders, including employees, managers and owners. These objectives include smooth operations, clearly defined reporting lines, and performance measurement systems. Internal mechanisms include oversight of management, independent internal audits, structure of the board of directors into levels of responsibility, segregation of control and policy development.

### **External Mechanism**

External control mechanisms are controlled by those outside an organization and serve the objectives of entities such as regulators, governments, trade unions and financial institutions. These objectives include adequate debt management and legal compliance. External mechanisms are often imposed on organizations by external stakeholders in the forms of union contracts or regulatory guidelines. External organizations, such as industry associations, may suggest guidelines for best practices, and businesses can choose to follow these guidelines or ignore them. Typically, companies report governance mechanisms to external stakeholders.

In the conventional literature on corporate governance, the market is the only external governance force with the power to discipline the agent. The existence of regulation means there is an additional external force with the power to discipline the agent. Banks regulation represents the existence of interests different from the private interests of the firm. As a governance force, regulation aims to serve the public interests, particularly the interest of the customers of the banking services. As agent of the public interests, the regulator also enforces regulation itself. This agent does not have a contractual relationship

either with the firm's principal or with the banking organizations.

In common practices, depositors rely on the government role in protecting their bank deposits from expropriation by management, and are encouraged to deposit their funds into banks as a substantial part of the moral hazard cost is guaranteed, or can be restored through the use of economic regulations such as asset restrictions, interest rate ceilings, reserve requirements and separation of commercial banking from insurance and investment banking. The effects of regulation limit the ability of bank managers to over issue liabilities or divert assets into high risk ventures. The regulations bind both managers and owners. The capsule summary of the two governance mechanisms above is supervision and regulation as elements of corporate governance in banks. In Nigeria, the regulatory functions which is directed at the objective of promoting and maintaining the monetary and price stability in the economy is controlled by the CBN while the supervisory bodies include the Nigeria Deposit Insurance Corporation and the CBN (CBN, 2009).

### **Independent Audit**

An independent external audit of a corporation's financial statements is part of the overall corporate governance structure (Afolabi & Dare, 2015). An audit of the company's financial statements serves internal and external stakeholders at the same time. An audited financial statement and the accompanying auditor's report help investors, employees, shareholders and regulators determine the financial performance of the corporation. This exercise gives a broad, but limited, view of the organization's internal working mechanisms and future outlook.

### **2.3.3 Elements of Good Corporate Governance in Banks**

Uwigbe (2011) pointed out that corporate governance requires laid down procedures, processes, systems and codes of regulation and ethics that ensure its implementation in organizations. Banks generally are expected to set strategies which have been commonly referred to as corporate strategies for their operations and establish accountability for executing these strategies. According to Uwigbe (2011), corporate strategy is a deliberate search for a plan of action that will develop the corporate competitive advantage and compounds it. The concept of good governance in banking industry empirically implies total quality management, which includes six performance areas (Klapper and Love, 2002) in the work of Uwigbe (2011). These performance areas include capital adequacy, assets quality, management, earnings, liquidity, and sensitivity to risk. Klapper and Love argued that the degree of adherence to these parameters determines the quality rating of an organization. Akinsulire (2011) position is in tandem with this view.

The Basel Committee on Banking Supervision (1999) enumerates basic components of good corporate governance to include:

The corporate values, codes of conduct and other standards of appropriate behavior and the system used to ensure compliance with them;

A well-articulated corporate strategy against which the success of the overall enterprise and the contribution of individuals can be measured;

The clear assignment of responsibilities and decision making authorities, incorporating hierarchy of required approvals from individuals to the board of directors;

Establishment of mechanism for the interaction and cooperation among the board of directors, senior management and auditors; strong internal control system, including internal and external audit functions, risk management functions, independence of business lines and other checks and balances;

Special monitoring of risk exposures where conflicts of interests are likely to be particularly great, including business relationships with borrowers affiliated with the bank, large shareholders, senior management or key decision makers within the firm (e.g. traders);

The financial and management incentives to act in an appropriate manner, offered to senior management, business line management and employees in the form of compensation, promotion and other recognition;

Appropriate information flows internally and to the public.

### 2.3.4 Effect of Corporate Governance on Fraud Management

Before the advent of the code of best practice on corporate governance, establishment of a sound system of internal control by management had been the major means of achieving the company's goals and objectives. Where you have a sound system of internal control the organization is most likely to achieve its goals and objectives, but this has not been realizable in the Nigeria banking industry, where severe crisis has been the experience in most banks (Adedeji, 2012).

The management of fraud in the banks rests with the board of directors in identifying that good corporate governance hinges on competence and integrity of the board. It is also important that standards of probity and fiduciary responsibility in the wider business environment is equally critical. All these help to promote sound corporate governance that will prevent or reduce fraudulent activities in the banking sector. Others are:

Mandatory presentation of annual reports contained in circular number BS/P/DIR/GEW/CIR/VOL. 2/04 of June 2009.

Control of directors remuneration and expenses.

Frequent review of the codes on corporate governance for banks and other financial institutions in Nigeria is necessary.

Transparency in reporting operational and financial activities.

Proper disclosure of compliance to the codes of corporate governance and other relevant laws in the post consolidation era should be enforced.

Trials and prosecution of management staff involved in fraudulent activities.

Establishment of strong capital base with the Central Bank of Nigeria (CBN).

The tribunals set up for the purpose of debt recovery should not relent in their efforts.

Workshop to discuss changes in economic issues that affect the banking industry positively or negatively so that bank fraud in Nigeria will be curtailed to a large extent without causing havoc in the nation's economy has been constituted. It is now mandatory for any financial statement to be duly signed by an external auditor.

### 2.3.5 Challenges of Corporate Governance on Fraud Management

According to Ikpefan and Ojeka (2013), the challenges and failure of corporate governance in Nigeria stems from the culture of corruption and lack of institutional capacity to implement the codes of conduct governing corporate governance. Company executives enjoy an atmosphere of lack of checks and balances in the system to engage in gross misconducts since investors are not included in the governing structure. Policy and procedures required to ensure efficient internal controls are disregarded, and total lack of thorough selection process (of CEO and board members-round pegs in square holes) remain a challenge in Nigeria. The businesses cum shareholders' interests are secondary to the self-interests of the board members and the management. Limited opportunities for institutional investors, and near zero interest incorporate social investments to demonstrate companies' sense of belongingness, as evidenced in environmental pollutions, are clear indications of failure of corporate governance. Lack of managerial training and capacity development among Nigerian executives to manage business risks has resulted in huge avoidable agency costs to shareholders.

Failure of corporate governance in Nigeria has also been traced to lack of effective yardsticks to evaluate board and management processes and performance, since the board sub-committees required to be fully independent, especially the audit and remuneration committees, are compromised. The auditors/the audit committee of the board have been singled out as instrument of fraudulent practices given their readiness to cover-up corrupt practices for executives in a desperate bid for kick-back, and, to retain the audit engagement(s) of big clients (Habeeb, 2010). According to the code of corporate governance

issued by CBN (2006), the following are challenges that are faced by banks in respect to adherence to the code.

**Technical incompetence of board and management:** in view of the greatly enhanced resources of the consolidated entities, board members may lack the requisite skills and competences to effectively redefine, re-strategize, restructure, expand and refocus the enlarged entities in the areas of change of corporate identities, new business acquisitions, expansion and product development.

**Relationship among Directors:** Board squadables could be an issue due to different business culture and high ownership concentration, especially in banks that were formally “one-man” entities. The dominance of a “key man” could also emerge with the attendant problems.

**Increased level of risks:** Currently, very few banks have a robust risk management system in place. With the huge amount of funds that will be available to them and the significantly increased legal lending limits, banks will be financing more long term mega projects in the real sectors of the economy as opposed to the existing working capital/trade financing. Given the expected significant increase in the level of operation, the banks will be facing various kinds of risks which, if not well managed, will result in significant losses.

**Resurgence of high level malpractices:** To boost income as a result of intense competition and lack of enough viable projects, malpractices may resurface post consolidation. Such sharp practices could include round tripping of forex, excessive customer charges, falsification of records (creative accounting), etc, and adoption of unethical methods to poach customers.

Other corporate governance challenges identified with regards to fraud management in Nigeria banks include:

Ineffective board oversight function.

Fraudulent and self-serving practices among members of the board, management and staff.

Weak internal controls.

Non-compliance with laid down internal control and operational procedures.

Sit-tight directors who have failed to make meaningful contributions to the growth and development of the bank.

Ignorance of non-compliance with rules, laws and regulations guiding banking business.

Differences in business culture: management of bank especially those with high ownership concentration (family or one-man entities) could also dominate.

These challenges still persist among consolidated Nigerian banks despite all measures, thereby increasing the level of fraud. Akpan (2007) disclosed that data from the National Deposit Insurance Commission report (2006) shows 741 cases of attempted fraud and forgery involving N5.4 billion. Soludo (2004) also opined that a good

corporate governance practice in the banking industry is imperative if the industry is to effectively play a key role in the overall development of Nigeria. As reported by Afolabi and Dara (2015), the series of widely published cases of accounting improprieties recorded in the Nigerian banking industry in 2009 (for example, Oceanic Bank, Intercontinental Bank, Union Bank, Afri Bank, Fin Bank and Spring Bank) were related to the lack of vigilant oversight functions by the board of directors, the board relinquishing control to corporate managers who pursue their own self-interests and the board being remiss in its accountability to stakeholders.

It is in view of the fore-going challenges that there exists a renewed interest in the need for good corporate governance and a resultant effective management of fraud in Nigerian banks. This disposition aims:

To restore hope after the collapse of several banks in the financial sector;

To constantly monitor the activities of management staff;

To attract local and foreign investment;

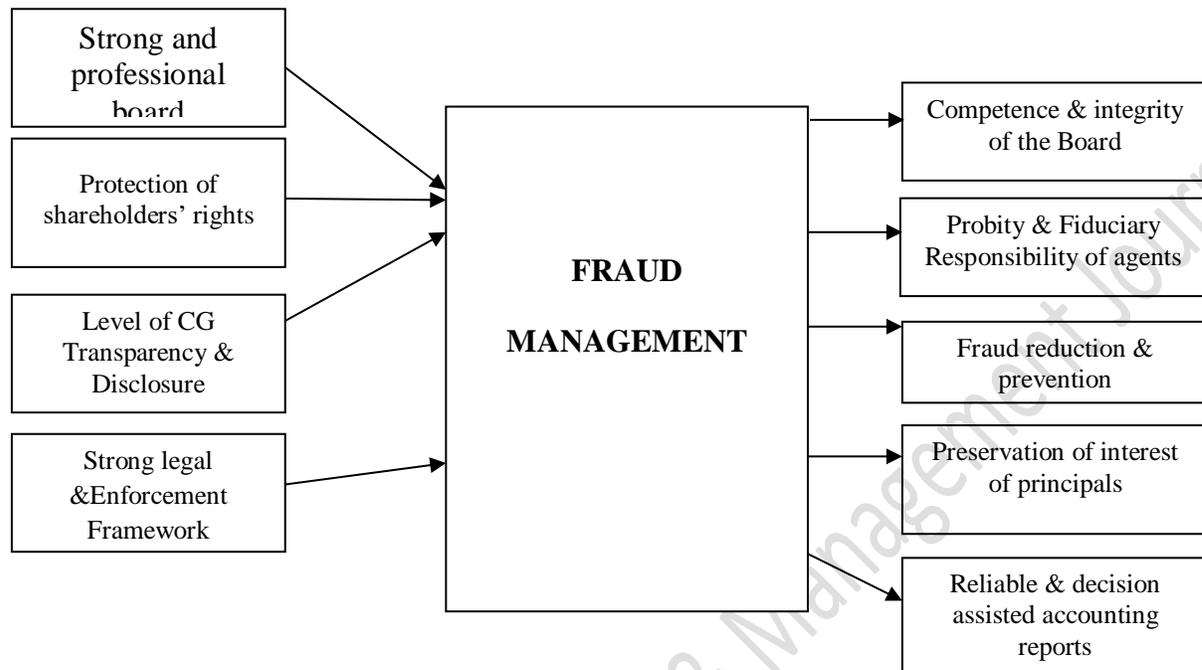
To encourage compliance with codes, rules, principles and regulations.

### 2.3.6 Description of the Conceptual Model of the Study

Using the aforementioned theoretical perspectives (2.2) the study proposed the model in Figure 2.3, a sample balance of normal information processing: input, processing and output. Based on the agency theory which deals with the conceptual relationship between the principal and the agent, by which the agent performs duty on behalf of another called his principal and the ethical theory, the four hypotheses in 1.5 were raised. The agents which according to Jensen and Mekling (1976) are referred to as custodians within the organization are expected to discharge their responsibilities towards good governance practices so as to avoid fraudulent practices or their misrepresentation, or even falsification of figures (creative accounting) that will affect the principal (Stakeholders, shareholders) and users of financial statements. The studies of Osisioma and Enahoro (2006) Amat, Blake and Dowds (2003) revealed that stakeholders, shareholders and other users of accounting information rely heavily on the yearly financial statements of a company as they can use this information to make informed decision about investment.

Using the ethical theory, the study proposed that the availability and effectiveness of legal and enforcement frame work that will ensure adherence to internal and external corporate governance mechanisms will significantly affect fraud and its management in organizations. An dependent audit function is a sure measure.

**Figure 2.1:** Conceptual model of the Effect of Corporate Governance on Fraud Management in Deposit Money Banks in Nigeria.



**Source:** Researcher’s conceptual framework

**2.4 Review of Related Empirical Studies**

Findings of reputable researchers on corporate governance and how it affects management of fraud were critically

reviewed in this section of the research work. Their views, location methodology used, results of findings and recommendations were discussed. These are presented in a tabular form below for analysis and comparison.

**Table2.2: Related Empirical Studies Reviewed**

S/N	Name	Topic and location	Methodology	Variable(s)	Findings & Recommendation	Comment
1	In’airat, M. (2015)	Role of CG in fraud reduction (Saudi Arabia)	Survey design questionnaire-convenience sampling of 40 organizations simple& multiple regressions	<u>Independent</u> Int. audit Int. check Ext. audit <u>Dependent</u> Level of fraud	Mere existence & implementation of CG are not enough to reduce the perceived level of fraud. Their effective set up could. Internal audit played the major role in reducing the level of fraud.	The study adopted sufficient processes. The outcome is reliable.
2	Adeleji, D.B. (2012)	Influence of CG on internal control system (Nigeria)	Survey design Questionnaire Purposive sampling of 5 out of 24 banks Mean score and Pearson product coefficient correlation	<u>Independent</u> Board and management efficiency Transparency Accountability <u>Dependent</u> Operational Effectiveness Bank distresses Bank failures	Ineffectiveness in operation was caused by weaknesses in int. control system. Management do override int. control systems. Distresses and failures in banks was due to weaknesses in directors and mgt governance activities. Satisfactory int. control system that	

3	Mc Neal (2011)	Role of the Board in fraud risk management notes to Director (USA)	Ex-post facto research, using secondary data and interview of ACFC members.	<p><b><u>Independent</u></b> Anti fraud controls Internal and indept audits, Surprise visits Rewards for whistle blowers. Job rotation management review of fin. Stat. etc</p> <p><b><u>Dependent</u></b> Financial loss Duration and amount of fraud Effectiveness of controls in place No of fraud cases etc.</p>	cannot be overridden should be ensured. Regular performance evaluation of directors and management, for productivity effectiveness accountability. Adequate monitoring and effective supervision to ensure compliance. Board to get adequate feedback from mgt for effective control. The presence or absence of antifraud controls affect losses due to and duration of fraud. Organizations without fraud controls fall prey to losses and longer fraud schemes than those with the controls in place. Technological advancements have increased the no of opportunities to commit fraud and the innovative ways to operate it. Business competitiveness is also a contributory factor- potential anonymity, access to unsuspecting victims etc.	As in (1) above
4	Agarwal, G.K & Medury Y. (2013)	Good governance: A tool to prevent corporate frauds (India)	Secondary data collected through manual, C.G literature guidelines by regulatory bodies, guidance notes by institutes, legal provision in legislations & past research findings; primary data was collected through interview of experienced corporate professional.	<p><b><u>Independent</u></b> Effective board Independent auditors Role of professionals Effective legislation</p> <p><b><u>Dependent</u></b> Instances of fraud Size of fraud Strength of int. control systems Fraud reduction and prevention</p>	Well composed board Independence of auditors Craving of professionals to embrace ethical consciousness. Effective implementation of regulation on corporate governance. Need for rating on good corporate governance for information and encouragement.	As in (3) above
5	Ikpefan, O.A & Ojeka, S.A. (2013)	Corporate governance: A tool for curbing	Primary date was collected through questionnaire and	<p><b><u>Independent</u></b> Good C.G and its practice</p>	CG has no significant improvement of bank distress but has	Finding & recommendation are useful guides

		bank distress in DBMs (Nigeria)	the survey technique was used. A sample of 120 was picked by the convenience method. Secondary sources of information was also used to supplement the study. Use of correlation analysis			significantly improved performance of banks. Banks to have policies to handle conflict of interest and zero tolerance posture against unsound CG practices	As (1) & (2) above
6	Donato, F. and Tiscini, R.	The Relation between accounting fraud & CG systems: an analysis of recent scandals (Luiss Guido carli university India)	Ex-post factor research; using 20 of record international scandals chosen randomly from different countries			<p><b>Dependent</b> Prevention of bank distress Better performance of banks</p> <p><b>Independent</b> Vigilant CG A corporate code of conduct An adequate &amp; effective int. control system Int. audit function External audit services</p> <p><b>Dependent</b> Conditions (economic pressure) Corporate structure (or standard operating procedure) Choice (or ethical disposition of managers)</p>	This is a good source of information, but not for judgment and decision
7	CIMA 2008	Fraud Risk management: A guide to Good Practice	-			<p><b>Independent</b> Fraud risk management</p> <p><b>Dependent</b> Good practice</p> <p>Organizations lose up 7% of their annual turnover to fraud Corruption cost the global economy about &amp;\$1.5 trillion yearly A high percentage of frauds are committed by senior mgt and executives. Greed is a fraud motivator. Fraudsters often work in the finance function etc. Set appropriate CG- "tone at the top". Assess fraud risk-weak points. Implement fraud prevention techniques. Enlist fraud detection techniques. Create a reporting &amp; investigation process. Know the company's vision. Seek the right skills. Develop role &amp;</p>	As for (6) above
8	Research online	CG for fraud prevention (online self study)	-				Good for information only
9	Sonnenfeld, A.J. (2009)	CG; what makes great boards great Harvard Business	-				



attitude. In all panel surveys, effort should be made to account for the changes and trends observed. As much as possible, all the factors in the intervening period that could be responsible for the observed trends and changes should be well explained. The greatest value of the panel technique perhaps lies in being able to account for the observed trends and changes in terms of some intervening variables. The study is based on primary sources of information. The primary source constitutes the use of questionnaire and interview of corporate professionals.

### 3.2 Area of Study

This study was carried out in Benue and Anambra States of Nigeria. Nigeria is located in the south western part of West Africa. The Country is sandwiched by Latitudes 5° 45' and 8° 15' North and Longitudes 4° 45' and 6° 00' East. It is bordered in the north-west by Republic of Benin, north by Niger, north-east by Chad and Cameroun, and Atlantic Ocean in the south. It has an estimated land area of about 15,000 sq. km. In 2006 National Population Commission (NPC), the Country had a population of about 140 million people. The administrative headquarters of the Country is FCT and there are thirty-six States in Nigeria (Adewoyin, 2012). While Benue State and Anambra State are located in North-Central and South-Eastern parts of Nigeria respectively.

### 3.3 Population of the Study

The population of the study refers to the totality of all the elements or variables under study (Nworgu, 2012). The population of this study consist of shareholders, customers and employees of selected Deposit Money Banks in Benue and Nassarawa States. The population of 138 had been infinitely determine using the Topman's sampling technique formula developed by Cochran (1963) and adopted from Osisioma, Egbunike and Jesuwunmi (2015):  

$$N = [Z^2 (P) (Q)] / E^2 = [(1.96)^2 (0.90) (0.1)] / (0.05)^2 = 0.345744 / 0.0025 = 138.2976 \sim 138$$

But we increased the population 195 in order to enhance the power of the test result.  $N =$  population size,  $P =$  estimated proportion of an attribute that is present in the populations

$Z^2 =$  the desired level of confidence level, obtain from the Norman Curve table e.g. 95%, 90%

$Z = 95\% \div 2 = 0.4750$ ; check for '0.475' under Area against  $Z = "1.96"$  from Normal Curve table.

$E^2 =$  desire level of precision or significance level.  $5\% = 0.05$

$Q = 1 - P = 1 - 0.90 = 0.10$

### 3.4 Sample Size and Sampling Techniques

The convenience sampling technique (non-probability sampling) was used to select the banks. Table 3.1 shows the number of questionnaires allocated based on board size to each Deposit Money Banks and allocate the one hundred questionnaires among the DMBs in Nigeria after adopting the Topman's formula to determine the sample size of one hundred participants or respondents. These were shared based on board size of each banks and classified into international, national and regional banks with their respective percentage allocations. International, national and regional banks had fifty-two percent (52%), thirty percent (30%) and eighteen percent (18%) respectively. Table 3.2 showed the proper details.

Since divergent stakeholders' interests are represented in the corporate governance and the shareholders developed mechanism to control the activities and decision of the management in order to maximize the long term firm's value. Therefore, the sample size was made up of DMBs' shareholders, customers and employees; the shareholders and customers were involved in order to minimize conformity bias. The questionnaires were distributed based on the board size of the banks this is to ensure fair representation; see Table 3.1 and Appendix for more details.

**Table 3.1: Deposit Money Banks in Nigeria as at 31st December 2013.**

S/N	Name of Banks	Board size	Questionnaires Allocated
1	Access Bank Plc	14	12
2	Diamond Bank Plc	16	13
3	Ecobank Nigeria Plc	15	12
4	Enterprise Bank	15	12
5	Fidelity Bank Plc	17	14
6	First Bank of Nigeria Plc	19	16
7	First City Monument Bank Plc	13	11
8	Guaranty Trust Bank Plc	14	11
9	Key Stone Bank	14	11
10	MainStreet Bank	14	11
11	Skye Bank Plc	17	14
12	Stanbic IBTC Bank Ltd.	14	12
13	Sterling Bank Plc	10	8
14	Union Bank of Nigeria Plc	16	13
15	United Bank For Africa Plc	19	16
16	Zenith Bank Plc	11	9
<b>Total</b>		<b>238</b>	<b>195</b>

Source: NDIC Annual Report and Statement of Account 2016.

### 3.5 Instrument for data collection

A questionnaire was used to generate relevant data for this study. The instrument was designed by the researcher with insight from literature reviewed. The instrument is titled: Effect of Corporate Governance on Fraud Management of Deposit Money Banks. The questionnaire was divided into two sections A and B. Section-A contained three items on personal data of the respondents covering status of respondents, educational

qualification and years of experience/relationship. Section-B contained 40 items in four clusters B1 to B4 covering the research questions with 10 items respectively. The instrument is a modified 4-point Resin Likert scale ranging from strongly agree (4) to strongly disagree (1) was used. Table 3.2 gives the details as follow:

**Table 3.2: Scales for questionnaire responses**

Codes	Description	Point
SA	Strongly agree	4
A	Agree	3
D	Disagree	2
SD	Strongly disagree	1

Source: Researcher

### 3.6 Validation of the Instrument

The face and content validity of the questionnaire were determined by an expert. The researcher presented the research topic, purpose, research questions and hypotheses with the draft instrument to the expert and requested to consider the length of the entire instrument, suitability of the items, and clarity of instructions, and freely restructure instrument adding and deleting items as they deem fit to ensure that the instrument serves its purpose effectively. The expert agreed with the response options (i.e. strongly agreed...). All these were incorporated in the final copy of the instrument which was approved by the supervisor for the study.

### 3.7 Reliability of Instrument

The instrument was administered on ten (10) respondents made up of microfinance banks' staff who were not part of the study population. Their responses were subjected to reliability analysis, using Cronbach Alpha to determine the reliability co-efficient. Cronbach Alpha is the current widely used procedures for estimating the internal reliability of survey instrument. According to Osisioma, Egbunike and Jesuwunmi (2015) Cronbach's Alpha estimates (0.6) of an instrument with an alternative form which is composed of the same number of items is reliable. Reliability estimates of 0.962, 0.971, 0.655 and 0.757 were obtained for section B1, B2, B3, and B4 respectively while

overall reliability co-efficient of 0.911 was obtained, hence, the instrument was adjudged reliable for the study.

### 3.8 Method of Data Collection

One hundred and ninety-five (195) copies of the questionnaire were administered directly to the respondents by the researcher and research assistants. Copies of questionnaire that were completed on the spot were collected immediately, while copies from those who could not respond on the spot were collected later on appointment within space of two weeks. Repeated visits were made in order to achieve a high response rate.

### 3.9 Method of Data Analysis

We use the descriptive statistics to analyse the means and standard deviations of the variables. While we employed inferential statistical analysis to test the hypotheses. In order to understand the effect of corporate governance on fraud management in banks. The test was performed using univariate statistical technique (factorial design-ANOVA) to test and ascertain whether there exists the effect of corporate governance variables on fraud management in Nigerian banks.

### 3.10 Boundary Limits

The descriptive statistics was used to answer the research question, while the F-test and t-test was used to test the null hypotheses at 0.05 level of significance. The boundary limits of number were used as shown below to facilitate decision making:

**Table 3.3: Boundary Limits**

Response Options	Codes	Rating Point	Boundary Limits
Strongly agree	(SA)	4	3.50 – 4.00
Agree	(A)	3	2.50 - 3.49
Disagree	(D)	2	1.50 – 2.49
Strongly Disagree	(SD)	1	1.00 – 1.49

Source: Researcher

The decision rule was based on the mean rating which was calculated as follows:

$(4+3+2+1)/4 = 10/4 = 2.50$  Therefore, an item with a mean rating of 2.50 and above shows that the respondents agreed that corporate governance affect or influence fraud management where the mean rating is below 2.50 it means that the respondents disagreed that corporate governance

affect or influence fraud management. A null hypothesis was accepted if the p-value is equals to or greater than the level of significance (5%= 0.05) or otherwise reject and accept the alternate hypothesis ( $H_a$ ) if p-value or sig is less than 5% (0.05).

### 3.11 Decision Rule

We accept the null hypothesis (Ho) probability value ( p value) calculated is equal to or greater than 5%

level of significance (d) otherwise, we reject it and accept the alternate hypothesis (Ha).

#### 4. Data Presentation and Analysis

##### 4.1 Descriptive Statistics

**Table 4.1.1: Frequency table of respondents' status**

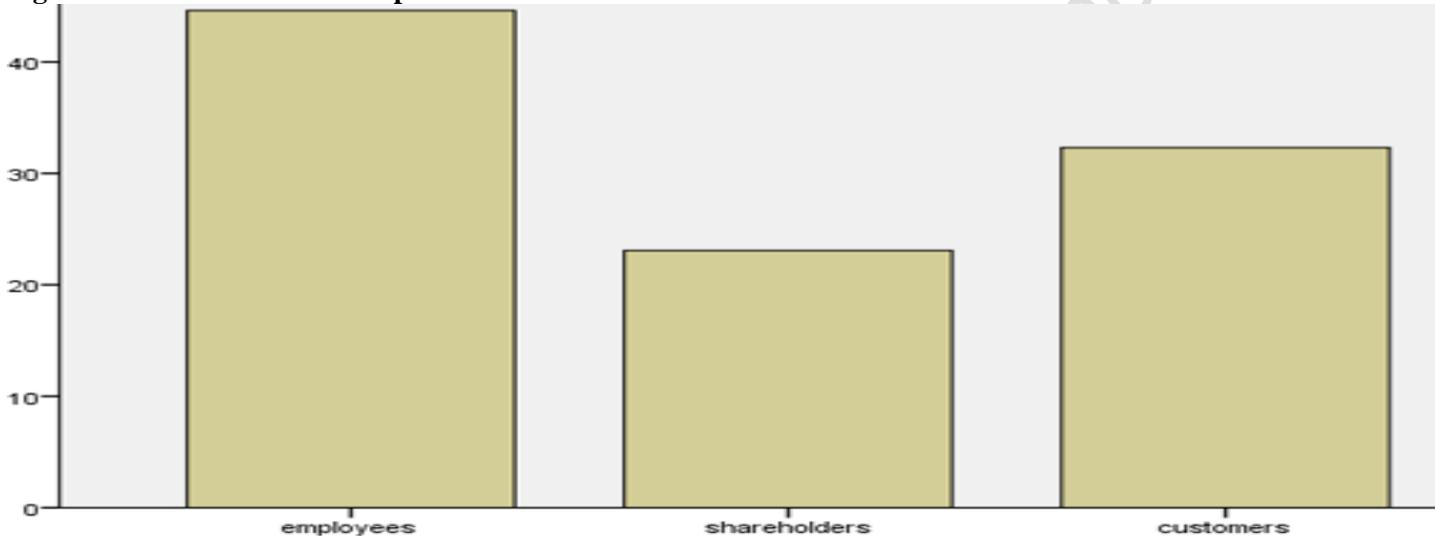
Respondents' Status	Frequency	Percent (%)
employees	87	44.6
shareholders	45	23.1
customers	63	32.3
<b>Total</b>	<b>195</b>	<b>100</b>

**Source:** Researcher's computation via SPSS version-23

Table 4.1.1 and figure 4.1.1 give a picture of respondents' status from Anambra and Benue states, that is, employees, shareholders and customers; employees had the highest rectangular bar-charts followed by customers while shareholders had the smallest rectangular bar-charts; with

their corresponding frequencies and percentages; that is, 87 (44.6%), 45 (23.1%) and 63 (32.3%). This symbolizes that the population is fairly represented and knowledgeable enough to understand the subject matter.

**Figure 4.1.1: Distribution of respondents' status**



**Source:** Researcher's design via SPSS version-23

**Table 4.1.2: Frequency table of respondents' years of experience/relationship**

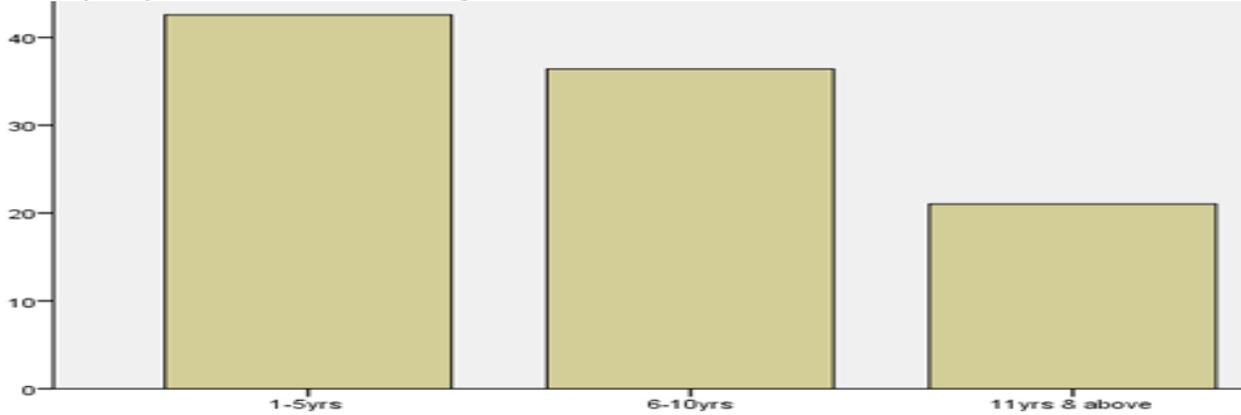
Respondents' years of experience/relationship	Frequency	Percent (%)
1-5yrs	83	42.6
6-10yrs	71	36.4
11yrs & above	41	21.0
<b>Total</b>	<b>195</b>	<b>100.0</b>

**Source:** Researcher's computation via SPSS version-23

Table 4.1.2 and figure 4.1.2 shown the description of years of working experience and relationship of the respondents with the banks; from the figure 4.1.2 (i.e. bar-chart) it was revealed that respondents that had one to five years (1-5years) working experience or relationship had the highest bar-charts followed by six years to ten (6-10years) while eleven years and above (11years and above) had the

shortest bar-chart with their corresponding frequencies and percentages, that is, 83 (42.6%), 71(36.4%), and 41(21%). This implies that the opinions of the respondents can be relied upon to draw valid inferences, since 6-10years working experience respondents had above average percentage

**Figure 4.1.2: Distribution of respondents' years of experience/relationship**



Source: Researcher's design via SPSS version-23

Table 4.1.3: Frequency Table of respondents' educational qualification

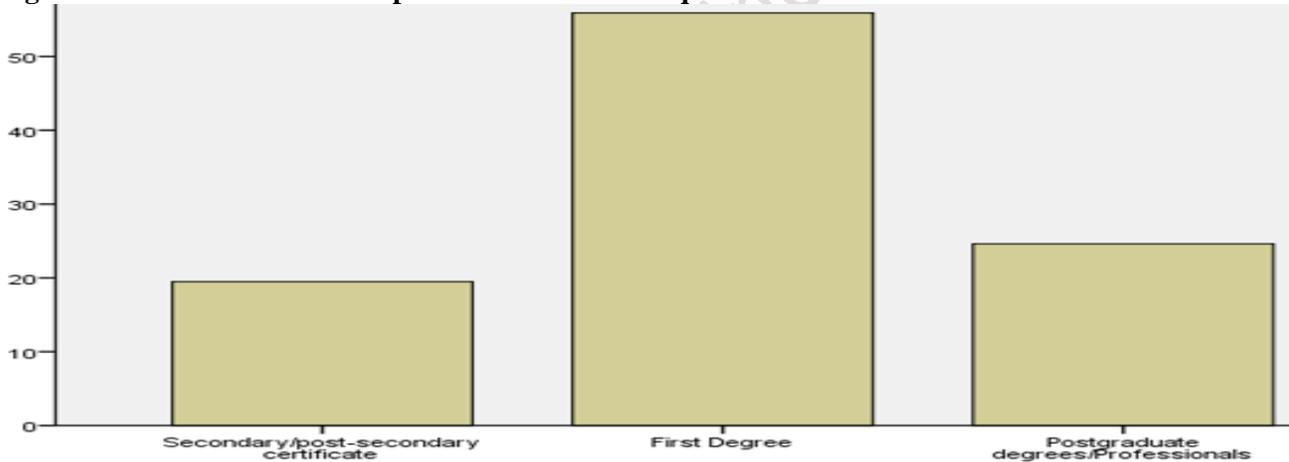
Respondents' Educational Qualification	Frequency	Percent (%)
Secondary/post-secondary certificate	38	19.5
First Degree	109	55.9
Postgraduate degrees/Professionals	48	24.6
<b>Total</b>	<b>195</b>	<b>100.0</b>

Source: Researcher's computation via SPSS version-23

Table 4.1.3 and figure 4.1.3 give a picture of respondents' educational qualification from Anambra and Benue states, that is, first degrees(BED/ BSC /HND) had the highest rectangular bar-charts followed by Postgraduate degrees /Professionals (PGD/ MBA/MED/MSC/PHD) while Secondary/post-secondary

certificate(WAEC/ND/NCE/) had the smallest rectangular bar-charts; with their corresponding frequencies and percentages; that is,109 (55.9%), 48 (24.6%) and 38 (19.5%). This symbolizes that the population is fairly distributed and knowledgeable enough to understand the subject matter.

Figure 4.1.3: Distribution of respondents' educational qualification



Source: Researcher's design via SPSS version-23

4.2 Analysis of Research Questions

Research Questions

i. Has strong and professional board reduced incidence of fraud?

Table4.2.1: Respondents' rating of cluster B1 presented in individual Means.

S/N	Cluster B1: Board professionalism helped in reducing incidence of fraud.	$\bar{x}$ N=195	SD ( $\sigma$ )	Remarks
S1	Independent directors, independent members of the supervisory board are under obligation to inform the company and its shareholders of all changes which may affect their status in terms of independence.	3.42	.590	Agree
S2	All members of the Board of Directors are obligated to attend general meetings of the board and they do so.	3.48	.595	Agree
S3	Any member of the Board of Directors can be appointed into any committee, provided he/she is qualified and competent.	3.45	.618	Agree
S4	The Directors/Managers are chosen from diverse disciplines and the different departments and units are headed by knowledgeable experts	3.45	.651	Agree

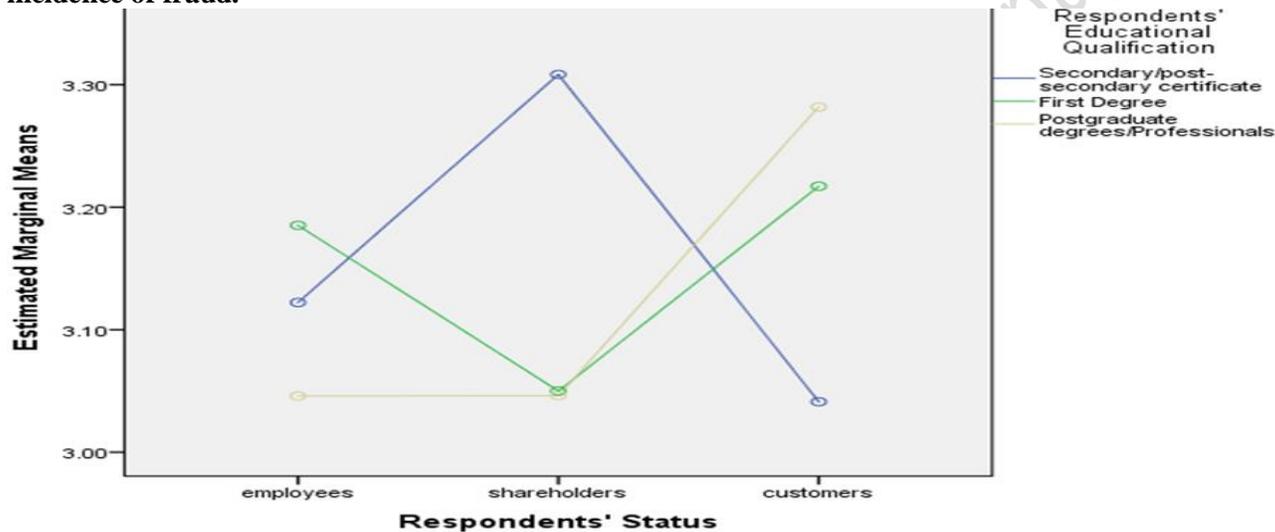
S5	A minority shareholder can contest for a director's slot on the board of this company.	2.64	.864	Agree
S6	The same individual can hold the posts of chairman, and Chief Executive of the Organization.	2.46	.991	Agree
S7	Directors do disagree among themselves and with the managers on issues of policy implementation and propriety of operations.	3.02	.773	Agree
S8	There is a separate Management Consultant in place to advise on matters other than audit.	3.05	.755	Agree
S9	The Board adequately supervises and monitors the management of the organization.	3.23	.748	Agree
S10	The Chairman of Board of Directors can be elected from the Executive Directors.	3.29	.774	Agree
<b>Grand mean (<math>\bar{X}</math>)</b>		<b>3.15</b>	<b>.361</b>	<b>Agree</b>

Source: Researcher's computation via SPSS version-23

Table 4.1.2 shows the rating of board professionalism helped in reducing incidence of fraud.(Cluster B1- from statement 1 to 10); the respondents (i.e. shareholders, customers and employees)had rated agreed. Statement two (S2) has the highest mean score (3.48) followed by statement three and four (S3 and S4) that is, mean of 3.45. While statement six (S6) - had the least

mean score, which is below the bench-march (i.e. Mean score 2.5) among the variables rated by the respondents in cluster B1, this implied that respondents disagreed with statement-2.With a **Grand Mean** of 3.15. Can we conclude that board professionalism helped in reducing incidence of fraud? This led us to test of hypothesis.

**Figure 4.2.1: Line graph of estimated marginal respondents' mean scores of board professionalism helped in reducing incidence of fraud.**



Source: Researcher's design via SPSS version-23

Figure 4.2.1 shows the graphical illustration of the mean interaction effect of the respondents' in regards to effect of board professionalism helped in reducing incidence of fraud based on respondents' status and educational qualification;

ii. *To what extent has protection of shareholders rights reduced manipulation of records?*

**Table 4.2.2: Respondents' rating of cluster B2 presented in individual Means.**

S/N	Cluster B2: Protection of shareholders rights enhanced fraud management.	$\bar{x}$ N=195	SD ( $\sigma$ )	Remarks
S11	Shareholders are properly invited to their annual general meeting, giving them all prescribed elements and information, the agenda.	3.31	.772	Agree
S12	The shareholders are enabled to exercise their rights to unrestricted participation in the shareholders Assembly/Annual General Meeting (AGM) activities and decision-making.	3.16	.704	Agree
S13	The company publishes adopted decisions and minutes of the meeting, immediately; ie within prescribed deadlines, after the meeting.	3.13	.752	Agree
S14	Shareholders are allowed to trade their stock on an exchange.	3.04	.735	Agree
S15	Along with a claim on assets, the shareholders also receive a claim on any profits a company pays out in the form of dividend.	3.34	.618	Agree
S16	The shareholders can sue the company for wrongful acts, either as a shareholder class-action law suit or a single shareholder complaint.	3.03	.840	Agree
S17	If the company issues new shares to the public, current shareholders have pre-emptive rights, to buy a specific number of the share, before the stock	3.10	.673	Agree

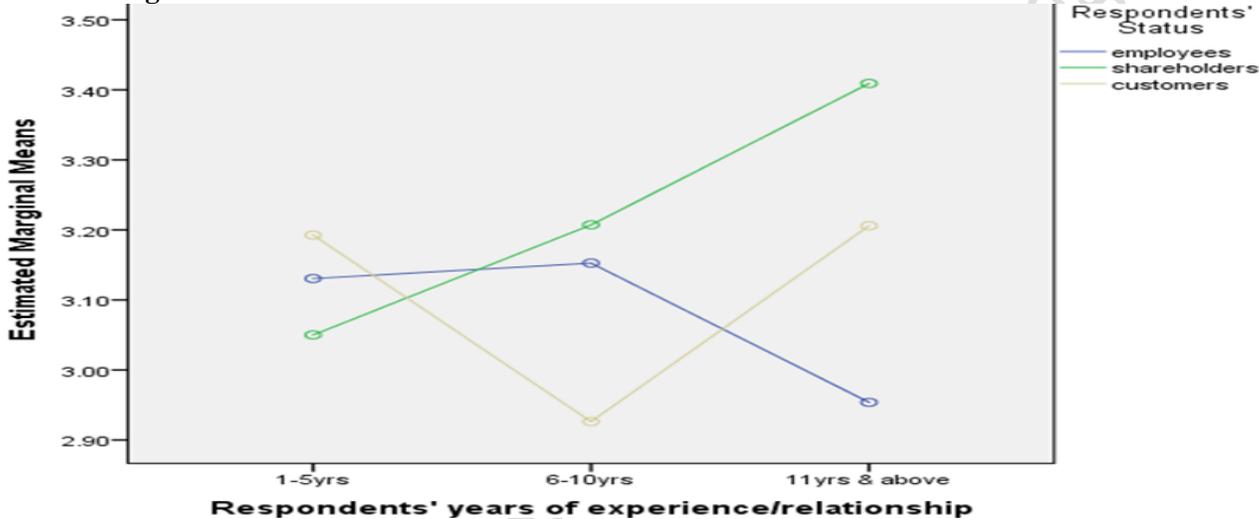
	is issued to the new potential shareholders.			
S18	There is minority interest representation on Boards-as a major determinant of the robustness of the company's corporate governance system.	3.01	.670	Agree
S19	Annual accounts are circulated to shareholders prior to the shareholders Assembly.	3.05	.788	Agree
S20	There is a designed shareholder rights plan, giving the company's Board of Directors the power to protect shareholder interest and prevent hostile takeover.	3.16	.681	Agree
<b>Grand mean (<math>\bar{X}</math>)</b>		<b>3.13</b>	<b>.373</b>	<b>Agree</b>

Source: Researcher's computation via SPSS version-23

Table 4.2.2 shows the rating of Protection of shareholders rights enhanced fraud management (Cluster B2- from statement 11 to20); the respondents (i.e. shareholders, customers and employees)had rated agreed. Statement fifteen (S15) has the highest mean score (3.34) followed by statement eleven (S11) that is, mean of 3.31. While statement eighteen (S18)- had the least mean score

(3.01), which is above the bench-march (i.e. Mean score 2.5) among the variables rated by the respondents in cluster B2;with a **Grand Mean** of 3.13, this implied that respondents agreed with all the statements .Can we deduce that protection of shareholders rights enhanced fraud management? This prods us to test of hypothesis.

Figure 4.2.2: Line graph of estimated marginal respondents' mean scores of shareholders' protection rights enhanced fraud management.



Source: Researcher's design via SPSS version-23

Figure 4.2.2 showed the graphical illustration of the mean interaction effect of the respondents' in regards to effect of shareholders' protection rights enhanced fraud management; based on respondents' status and years of

experience/relationship; the lines which signify the connecting points between the various respondents' status and years of experience/relationship are crossing each other that indicate mean interaction effect.

iii. To what extent has high level of transparency and disclosure curbed financial statement fraud?

Table4.2.3: Respondents' rating of cluster B3 presented in individual Means.

S/N	Cluster B3: Transparency and disclosure curbed financial statement fraud.	$\bar{x}$ N=195	SD ( $\sigma$ )	Remarks
S21	The company clearly defines its dividend policy and the procedures and deadlines for its distribution.	3.31	.664	Agree
S22	The company publishes its business reports, including the report of the external authors in compliance with the laws, by-laws and regulations of the stock-Exchange.	3.33	.699	Agree
S23	The updated data on the company's insiders are publicly accessible, including data on the number of company shares/ratio of shares owned by them.	2.91	.785	Agree
S24	The company reports to the public on individually paid remunerations and other financial and non-financial rules and benefits gained by the holders of management and supervisory functions in the company, as well as by the company's board committee members	2.78	.929	Agree
S25	All relevant investment information are publish publicly and accessible.	2.96	.890	Agree
S26	External auditors who hold any shares in the company before their appointment do have those shares divested.	2.87	.873	Agree
S27	An Executive Director is Chairman of the Audit Committee of your company.	2.58	1.054	Agree

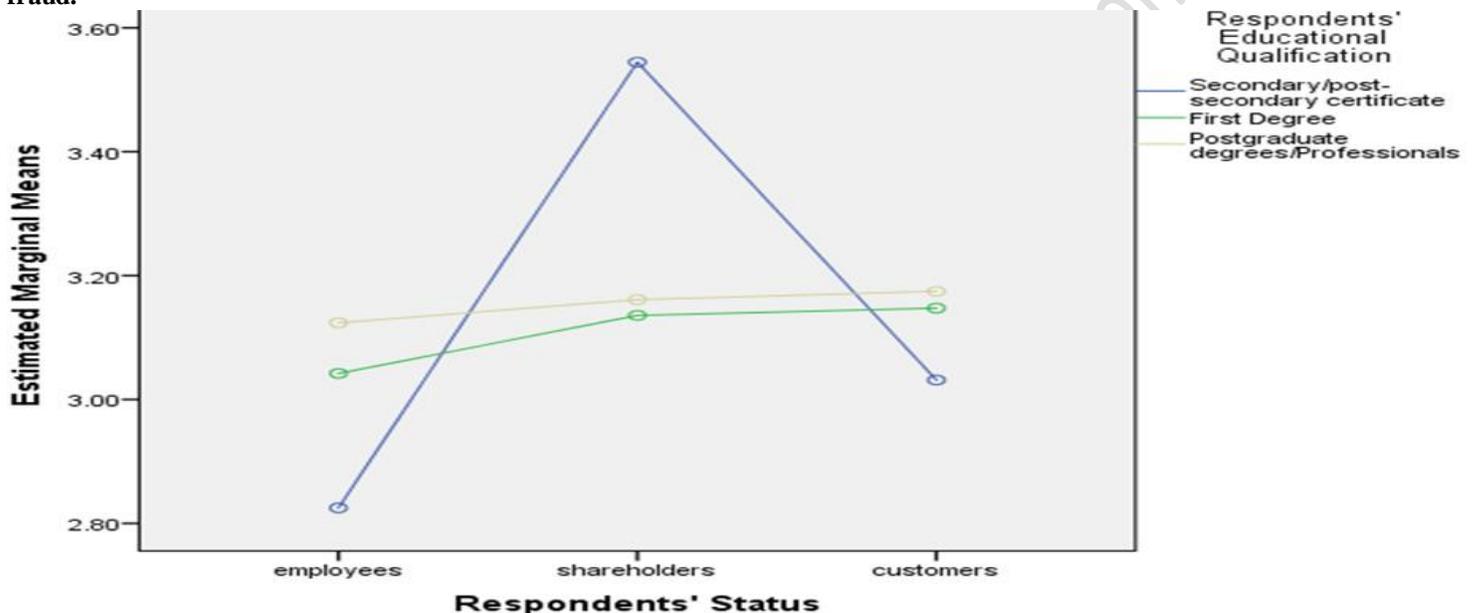
S28	External auditors attend Annual General Meeting when the Accounts are discussed.	3.02	.809	Agree
S29	The Head of Internal Audit has direct access to the chairman Audit Committee and their reports provided to the External Auditors.	3.18	.699	Agree
S30	Management letter emanating from annual audit have been provided and discussed at the Audit committee/board of directors and response sent to the Auditors.	3.16	.637	Agree
<b>Grand mean (<math>\bar{X}</math>)</b>		<b>3.01</b>	<b>.421</b>	<b>Agree</b>

Source: Researcher’s computation via SPSS version-23

Table 4.2.3 shows the rating of Transparency and disclosure curbed financial statement fraud (Cluster B3- from statement 21 to 30); the respondents (i.e. shareholders, customers and employees) had rated agreed. Statement twenty-two (S22) has the highest mean score (3.33) followed by statement twenty-one (S21) that is, mean of 3.31. While statement eighteen (S27)- had the least mean

score (2.58), which is above the bench-march (i.e. Mean score 2.5) among the variables rated by the respondents in cluster B3; With a **Grand Mean** of 3.01 this implied that respondents agreed with all the statements. Can we infer that transparency and disclosure curbed financial statement fraud? This stimulates us to test of hypothesis.

Figure 4.2.3: Line graph of estimated marginal respondents’ mean scores of transparency and disclosure effect on financial statement fraud.



Source: Researcher’s design via SPSS version-23

Figure 4.2.3 displayed the graphical illustration of the mean interaction outcome of the respondents’ in regards to effect of transparency and disclosure on financial statement fraud based on respondents’ status and educational qualification;

the lines which represent the connecting points between the various respondents’ status and educational qualification are non-parallel (i.e. crossing each other) lines that show mean interaction effect.

iv. To what extent does strong legal and enforcement framework affect organizational compliance with relevant procedures?

Table 4.2.4: Respondents’ rating of cluster B4 presented in individual Means.

S/N	Cluster B4: Legal and enforcement framework affect fraud management.	$\bar{x}$ N=195	SD ( $\sigma$ )	Remarks
S31	The company’s acts clearly define criteria for required expert and professional knowledge and experience for appointment of Board members and these are observed.	3.27	.787	Agree
S32	Companies and Allied Matters Act 1990 contains provisions relating to operational requirements of your company and they are observed in practice.	3.18	.730	Agree
S33	The Banks and Other Financial Institutions Act 1991 contain provisions relating to operational requirements of your company and these are observed in practices.	3.23	.734	Agree
S34	The investment and securities Act 1999 contains provisions relating to operational requirements of your company and these are observed in practice.	3.14	.730	Agree
S35	The Securities and Exchange Commission Act 1998 and its accompanying Rules and Regulations contain provisions relating to the operational requirements of your company and these are observed in practice.	3.23	.666	Agree
S36	The Central Bank of Nigeria Code of Corporate Governance for Banks in	3.28	.672	Agree

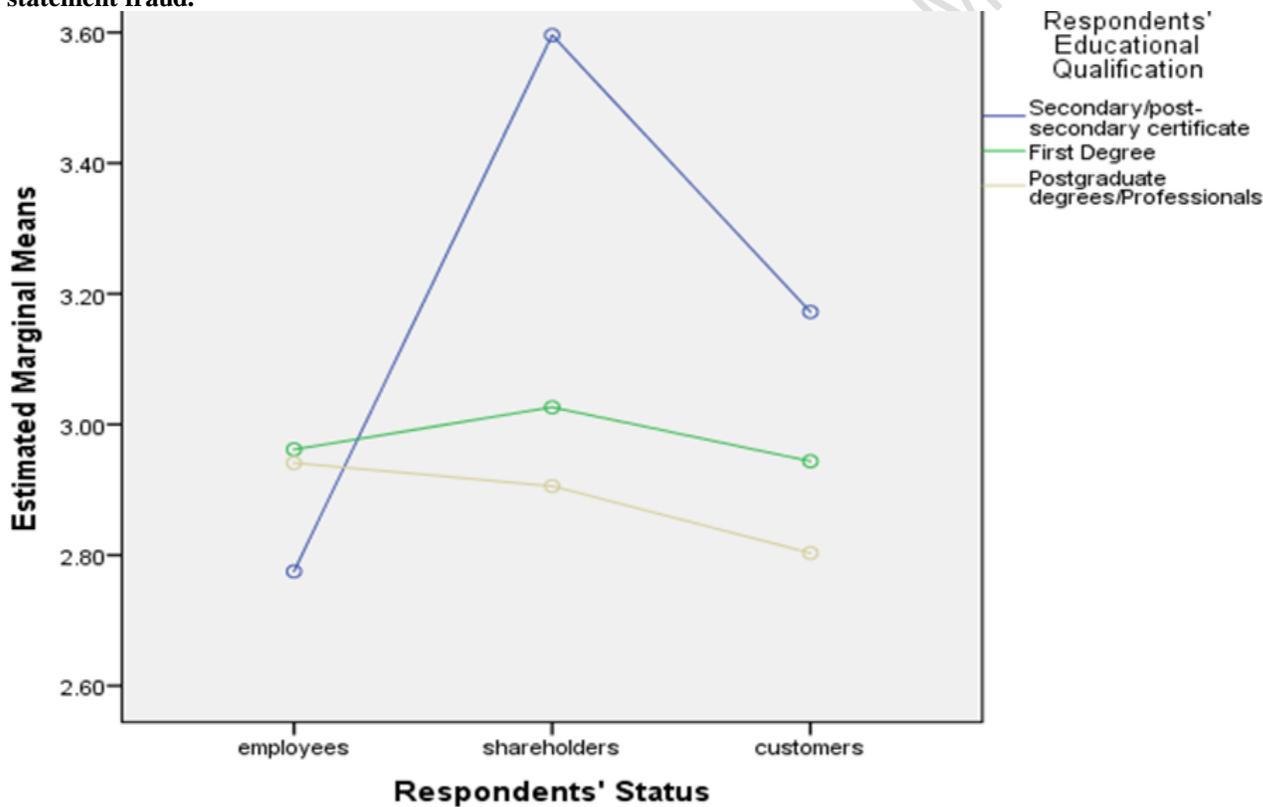
	Nigeria (2006) contains provisions relating to the operational requirements of your company and sees to their observance in practice.			
S37	Your company publishes and circulates a statement, along with the annual reports, to set out the status of their compliance with the best practices of corporate governance.	3.29	.712	Agree
S38	Shareholders do exercise their powers, especially to sue for wrongful acts and to buy a specified proportion of new issues before stock is issued to the new potential shareholders.	3.03	.815	Agree
S39	The implementation of the Code of Corporate Governance has greatly contributed to improvement in operational and organization efficiency and effectiveness.	3.29	.689	Agree
S40	There are stipulated sanctions for noncompliance with related legal provisions and such sanctions are imposed upon violation.	3.33	.639	Agree
<b>Grand mean (<math>\bar{X}</math>)</b>		<b>3.23</b>	<b>.486</b>	<b>Agree</b>

Source: Researcher’s computation via SPSS version-23

Table 4.2.4 shows the rating of Legal and enforcement framework affect fraud management (Cluster B4- from statement 31 to40); the respondents (i.e. shareholders, customers and employees)had rated agreed. Statement twenty-two (S40) has the highest mean score (3.33) followed by statement thirty-seven and thirty-nine (S37 and S39) that is, mean of 3.29. While statement thirty-

eight(S38)- had the least mean score (3.03), which is above the bench-march (i.e. Mean score 2.5) among the variables rated by the respondents in cluster B4;With a **Grand Mean** of 3.23 this implied that respondents agreed with all the statements .Can we infer that Legal and enforcement framework affect fraud management? This motivates us to test of hypothesis.

Figure 4.2.4: Line graph of estimated marginal respondents’ mean scores of legal and enforcement framework effect on financial statement fraud.



Source: Researcher’s design via SPSS version-23

Figure 4.2.4 shown the graphical illustration of the mean interaction effect of the respondents’ in regards to effect of legal and enforcement framework on financial statement fraud. Based on respondents’ status and

educational qualification; the lines which represent the connecting points between the various respondents’ status and educational qualification are non-parallel (i.e. crossing each other) lines that confirm mean interaction effect.

4.3 Test of Hypotheses

i.  $H_{01}$ : Strong and professional board have not significantly reduced fraud incidence.

Table 4.3.1: Tests of Between-Subjects effects of respondents' status and educational qualification

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	1.525 <sup>a</sup>	8	.191	1.497	.161
Intercept	1430.311	1	1430.31	11233.75	.000
<b>RespondentStatus</b>	<b>.105</b>	<b>2</b>	<b>.053</b>	<b>.414</b>	<b>.662</b>
<b>Eduqualification</b>	<b>.026</b>	<b>2</b>	<b>.013</b>	<b>.103</b>	<b>.902</b>
<b>RespondentStatus * Eduqualification</b>	<b>1.266</b>	<b>4</b>	<b>.317</b>	<b>2.486</b>	<b>.045</b>
Error	23.682	186	.127		
<b>Total</b>	<b>1957.890</b>	<b>195</b>			
Corrected Total	25.207	194			

a. R Squared = .060 (Adjusted R Squared = .020)

Source: Researcher's computation via SPSS version-23

Table 4.3.1 shown the main and interaction mean effect of respondents' status and educational qualification (i.e. between subjects); we can see from table 4.3.1 that there is no statistically significant difference in respondents' mean rating of respondents' status ( $p=.662$ ); and there was no statistically significant difference in respondents' mean rating based on educational qualification levels ( $p = .902$ ). A two-way ANOVA was conducted that examined the effect of respondents' status and educational qualification

levels on effect of Board professionalism in reducing incidence of fraud. There was statistically significant interaction between the effects of status and education qualification levels on respondents' perception [ $F(4, 186) = 2.468, p = .045$ ]. Based on the analysis above we reject the null hypothesis ( $H_0$ ) and accept the alternate hypothesis ( $H_a$ ) and conclude that the effect of Board professionalism in reducing incidence of fraud is significant.

ii.  $H_{02}$ : Protection of shareholder's rights has not significantly reduced records manipulation.

Table 4.3.2: Tests of Between-Subjects effects of respondents' status and years of experience/relationship

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	2.483 <sup>a</sup>	8	.310	2.360	.019
Intercept	1620.065	1	1620.07	12321.10	.000
<b>Yrsexp</b>	<b>.215</b>	<b>2</b>	<b>.108</b>	<b>.818</b>	<b>.443</b>
<b>RespondentStatus</b>	<b>.562</b>	<b>2</b>	<b>.281</b>	<b>2.136</b>	<b>.121</b>
<b>Yrsexp * RespondentStatus</b>	<b>2.164</b>	<b>4</b>	<b>.541</b>	<b>4.114</b>	<b>.003</b>
Error	24.457	186	.131		
<b>Total</b>	<b>1938.900</b>	<b>195</b>			
Corrected Total	26.939	194			

a. R Squared = .092 (Adjusted R Squared = .053)

Source: Researcher's computation via SPSS version-23

Table 4.3.2 shown the main and interaction mean effect of respondents' status and years of experience/relationship (i.e. between subjects); we can see from table 4.3.2 that there is no statistically significant difference in respondents' mean rating of shareholders' protection rights in enhancing fraud management ( $p=.443$ ); and there was no statistically significant difference in respondents' mean rating based on status ( $p = .121$ ). A two-way ANOVA was conducted that examined the effect of respondents' status and years of

experience/relationship on effect of shareholders' protection rights enhancing fraud management. There was statistically significant mean interaction effects between respondents' status and years of experience/relationship [ $F(4, 186) = 4.114, p = .003$ ]. Based on the analysis above we reject the null hypothesis ( $H_0$ ) and accept the alternate hypothesis ( $H_a$ ) and conclude that the effect of protection of shareholders' rights enhanced fraud management significantly.

iii.  $H_{03}$ : High level of transparency and disclosure has not significantly curbed financial fraud.

**Table4.3.3: Tests of Between-Subjects effects of respondents' status, education qualification and years of experience/relationship**

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	5.873 <sup>a</sup>	26	.226	1.801	.015
Intercept	954.188	1	954.188	7609.506	.000
<b>RespondentStatus</b>	<b>1.324</b>	<b>2</b>	<b>.662</b>	<b>5.278</b>	<b>.006</b>
<b>Eduqualification</b>	<b>.046</b>	<b>2</b>	<b>.023</b>	<b>.182</b>	<b>.834</b>
<b>Yrsexp</b>	<b>.062</b>	<b>2</b>	<b>.031</b>	<b>.246</b>	<b>.782</b>
RespondentStatus * Eduqualification	1.313	4	.328	2.617	.037
RespondentStatus * Yrsexp	2.441	4	.610	4.867	.001
Eduqualification * Yrsexp	.307	4	.077	.613	.654
<b>RespondentStatus * Eduqualification * Yrsexp</b>	<b>1.453</b>	<b>8</b>	<b>.182</b>	<b>1.448</b>	<b>.180</b>
Error	21.066	168	.125		
<b>Total</b>	<b>1938.90</b>	<b>195</b>			
Corrected Total	26.939	194			

a. R Squared = .218 (Adjusted R Squared = .097)

**Source:** Researcher's computation via SPSS version-23

Table 4.3.3 shown the main and interaction mean effect of respondents' status, education qualification and years of experience/relationship (i.e. between subjects); we can see from table 4.3.3 that there were no statistically significant difference in respondents' education qualification and respondents' years of experience/relationship mean rating of transparency and disclosure in curbing financial statement fraud (p=.834) and (p=.782) respectively; but there was statistically significant difference in respondents' status mean rating (p = .006). A three-way ANOVA was conducted that examined the effect of respondents' status,

iv. *H<sub>0</sub>: Strong legal and enforcement framework does not significantly affect organizational compliance with relevant procedures.*

education qualification and years of experience/relationship on effect of transparency and disclosure in curbing financial statement fraud. There was no statistically significant mean interaction effects between respondents' status, education qualification and years of experience/relationship [ $F(8, 168) = 1.448, p = .180$ ]. Based on the analysis above we accept the null hypothesis ( $H_0$ ) and reject the alternate hypothesis ( $H_a$ ) and conclude that the effect of transparency and disclosure has not significantly curbed financial statement fraud.

**Table4.3.4: Tests of Between-Subjects effects of respondents' status, education qualification and years of experience/relationship**

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	6.458 <sup>a</sup>	26	.248	1.498	.068
Intercept	883.698	1	883.70	5330.02	.000
<b>RespondentStatus</b>	<b>1.368</b>	<b>2</b>	<b>.684</b>	<b>4.126</b>	<b>.018</b>
<b>Eduqualification</b>	<b>1.157</b>	<b>2</b>	<b>.578</b>	<b>3.489</b>	<b>.033</b>
<b>Yrsexp</b>	<b>.200</b>	<b>2</b>	<b>.100</b>	<b>.602</b>	<b>.549</b>
RespondentStatus * Eduqualification	1.766	4	.441	2.662	.034
RespondentStatus * Yrsexp	1.210	4	.303	1.825	.126
Eduqualification * Yrsexp	.990	4	.247	1.492	.207
<b>RespondentStatus * Eduqualification * Yrsexp</b>	<b>1.806</b>	<b>8</b>	<b>.226</b>	<b>1.361</b>	<b>.217</b>
Error	27.854	168	.166		
<b>Total</b>	<b>1800.730</b>	<b>195</b>			
Corrected Total	34.311	194			

a. R Squared = .188 (Adjusted R Squared = .063)

**Source:** Researcher's computation via SPSS version-23.

Table 4.3.4 shown the main and interaction mean effect of respondents' status, education qualification and years of experience/relationship (i.e. between subjects); we can see from table 4.3.4 that there were statistically significant difference in respondents' education qualification and respondents' status mean rating of strong legal and enforcement framework in enhancing fraud management (p=.018) and (p=.033) respectively; but there was no statistically significant difference in respondents' years of experience/relationship mean rating (p = .549). A three-way ANOVA was conducted that examined the effect of respondents' status, education qualification and years of experience/relationship on effect of strong legal and enforcement framework in enhancing fraud management. There was no statistically significant mean interaction effects between respondents' status, education qualification and years of experience/relationship [ $F(8, 168) = 1.361, p = .217$ ]. Based on the

analysis above we accept the null hypothesis ( $H_0$ ) and reject the alternate hypothesis ( $H_a$ ) and conclude that the effect of strong legal and enforcement framework in enhancing fraud management is insignificant.

### Discussion of findings

The outcome of the model shows a positive impact of strong and professional board on fraud reduction in deposit money banks in Nigeria. This result is in accord with that of Inairat, (2015) who found that it is the effective set up of CG that could reduce the perceived level of fraud, not their mere existence and implementation. Agarwal and Medury (2013) also agreed that well-composed board and independence of reporting accountants have positive impacts on corporate fraud prevention. This will produce the good fruits of competence and integrity of the board. That protection of shareholders rights enhances fraud management in organizations is supported by the result of this study (see table 2.2.2 and figure 2.2.2). The likely result of this situation is preservation of interest of principals as well as probating and fiduciary responsibility of the agents.

The study results have all shown that the other corporate governance variable, transparency and disclosure have not significantly curbed financial statement fraud. This, according to Adedoyi (2012) is due to ineffectiveness in operation caused by weaknesses in internal control system.

Strong legal and enforcement framework have significantly enhanced fraud management in the studied banks. This is due to their effective setup, not mere existence and implementation (In'airat, 2015). The results of test of the hypotheses have shown that:

Hoi: Strong and professional board have not helped in reducing the incidence of fraud was proved wrong, and so rejected, and we accept the alternate hypothesis ( $H_{o1}$ ) that the effect of board professionalism in reducing incidence of fraud is significant.

In the same vein, the other null hypothesis that protection of shareholders rights has not significantly enhanced fraud management is rejected and its alternate is accepted of the four hypotheses of this study it is only the third null hypothesis that high level of transparency and disclosure have not significantly curbed financial statement fraud that is accepted. The fourth hypothesis that strong legal and enforcement framework does not significantly affect fraud management is accepted and is alternate is thus rejected. For this position, stipulated legal actions for compliance and imposition of fines upon violation, and defined criteria for required expertise, knowledge and expertise for appointment of board members have contributed most.

## 5. Findings, Conclusion and Recommendation

### 5.1 Summary of Findings

This study investigates the effect of corporate governance on fraud management in Deposit Money Banks in Nigeria. Stated below are the main findings.

1. Strong and professional board significantly help in reducing incidence of fraud in Deposit money banks in Nigeria.
2. Protection of shareholders rights significantly enhances fraud management in DMBs in Nigeria.
3. High level of transparency and disclosure has not significantly curbed (financial statement in deposit money banks in Nigeria.
4. Strong legal and enforcement framework have significantly enhanced fraud management in DMBs in Nigeria.

### 5.2 Conclusion

In this study the research has examined the impact of four corporate governance variables on fraud management in Deposit Money Banks in Nigeria, as perceived by divergent stakeholders-shareholders, customers and employees. Based on the findings of this study, it can be concluded that:

1. Strong and professional board significantly help in reducing incidence of fraud in Deposit Money Banks in Nigeria.
2. Protection of shareholders rights significantly enhances fraud management in deposit money banks in Nigeria.
3. High level of transparency and disclosure has not significantly curbed financial statement fraud in Deposit Money Banks in Nigeria.
4. Strong legal and enforcement framework have significantly enhanced fraud management in Deposit money banks in Nigeria.

### 5.3 Recommendation

Based on the theoretical and empirical findings in the study the following recommendations are made:

1. The study shows that corporate governance has significantly helped in reducing incidence of fraud in Deposit money banks. Therefore, in addressing the role of corporate governance in fraud control the central bank should review the fit and proper person's regime in order to ensure that only credible persons of impeccable financial, personal and professional character are allowed as major shareholders, directors and managers of banks.
2. Since corporate governance has significantly enhanced fraud management in Deposit money Banks in Nigeria, the banks should be able to demonstrate that rigorous internal policies were in place and that procedures existed for identifying and managing conflicts of interest to avoid its adverse consequences on their stakeholders, particularly shareholders.

3. Since level of transparency and disclosure have not significantly curbed financial statement fraud in Deposit money Banks in Nigeria, this pointed at the crises of insider abuse, conflict of interest and widespread manipulations. This crises usually connived at or orchestrated by management or board, should be captured by internal and external auditors and regulators so as not to reach serious proportions.
4. The study showed that corporate governance significantly enhanced fraud management in Deposit Money Banks in Nigeria. Therefore, regulatory authorities and other stakeholders in the Nigerian financial sector need to adopt a zero tolerance posture against cases of unsound corporate governance practices. This will ensure that the banks are well run and administered. Though the suggested measures would definitely take care to enhance the chances of good corporate governance and thereby strengthen fraud management measures, good governance process would further require restructuring at political, bureaucracy, and corporate levels because corruption and malpractices are deeprooted in the governance process and their eradication needs spiritual surgery (Agarwal, 2013).

#### 5.4 Contribution to Knowledge

This study investigated the impact of four corporate governance variables-strong and professional board; protection of shareholders' rights; level of corporate governance transparency and disclosure, and strong legal and enforcement framework. The exceptionality of this study includes:

1. This research develops a conceptual model on the effect of corporate governance on fraud management in deposit money banks in Nigeria, so that the relationship (impact and effect) between the independent and dependent variables can be better appreciated.
2. The study focused on the agency theory which is the ultimate in corporate governance as the legal styles of the entity through which the business is conducted is perhaps, the biggest influence on the need for strong corporate governance. Other surrogates like stewardship and ethical theories had been employed by researchers to proxy, corporate governance, but have no direct impact on fraud management.
3. This study extends the existing literature on corporate governance theoretical framework in developing nations and introduces significant insight from the professional ethics and standards, so that the concept of corporate governance can be properly understood.
4. The study set out measures of effective impact of corporate governance on fraud management in Deposit Money Banks as competence and integrity of the board, probity and fiduciary responsibility of agents, fraud reduction and prevention, preservation of interest

of principals, and reliable and decision assisted accounting reports.

#### 5.5 Suggestions for Further Studies

Further work can focus on:

- i. Comparative assessment of the impact of corporate governance on fraud management in public and private companies in Nigeria.
- ii. Effect of corporate governance on organizational performance: An assessment of the applicable governance variables in the public and private sector organizations.
- iii. A comparative assessment of the effect of internal and external governance mechanisms in deposit money banks in Nigeria.

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## Descriptive Statistics

MEANS TABLES=x1

S/N	Variable	Mean	Std. Deviation
S1	Independent directors, in independent members of the supervisory board are under obligation to inform the company and its shareholders of all changes which may affect their status in terms of independence.	3.42	.590
S2	All members of the Board of Directors are obligated to attend general meetings of the board and they do so.	3.48	.595
S3	Any member of the Board of Directors can be appointed into any committee, provided he/she is qualified and competent.	3.45	.61838
S4	The Directors/Managers are chosen from diverse disciplines and the different departments and units are headed by knowledgeable experts	3.45	.651
S5	A minority shareholder can contest for a director's slot on the board of this company.	2.64	.864
S6	The same individual can hold the posts of chairman, and Chief Executive of the Organization.	2.46	.991

S7	Directors do disagree among themselves and with the managers on issues of policy implementation and propriety of operations.	3.02	.773
S8	There is a separate Management Consultant in place to advise on matters other than audit.	3.05	.755
S9	The Board adequately supervises and monitors the management of the organization.	3.23	.748
S10	The Chairman of Board of Directors can be elected from the Executive Directors.	3.29	.774

## MEANS TABLES=x2

S/N	Variable	Mean	Std. Deviation
S11	Shareholders are properly invited to their annual general meeting, giving them all prescribed elements and information, the agenda.	3.308	.772
S12	The shareholders are enabled to exercise their rights to unrestricted participation in the shareholders Assembly/Annual General Meeting (AGM) activities and decision-making.	3.16	.704
S13	The company publishes adopted decisions and minutes of the meeting, immediately; ie within prescribed deadlines, after the meeting.	3.13	.752
S14	Shareholders are allowed to trade their stock on an exchange.	3.04	.735
S15	Along with a claim on assets, the shareholders also receive a claim on any profits a company pays out in the form of dividend.	3.34	.618
S16	The shareholders can sue the company for wrongful acts, either as a shareholder class-action law suit or a single shareholder complaint.	3.03	.840
S17	If the company issues new shares to the public, current shareholders have pre-emptive rights, to buy a specific number of the share, before the stock is issued to the new potential shareholders.	3.10	.673
S18	There is minority interest representation on Boards-as a major determinant of the robustness of the company's corporate governance system.	3.01	.670
S19	Annual accounts are circulated to shareholders prior to the shareholders Assembly.	3.05	.788
S20	There is a designed shareholder rights plan, giving the company's Board of Directors the power to protect shareholder interest and prevent hostile takeover.	3.16	.681

## MEANS TABLES=x3

S21	The company clearly defines its dividend policy and the procedures and deadlines for its distribution.	3.31	.664
S22	The company publishes its business reports, including the report of the external authors in compliance with the laws, by-laws and regulations of the stock-Exchange.	3.33	.699
S23	The updated data on the company's insiders are publicly accessible, including data on the number of company shares/ratio of shares owned by them.	2.91	.785
S24	The company reports to the public on individually paid remunerations and other financial and non-financial rules and benefits gained by the holders of management and supervisory functions in the company, as well as by the company's board committee members	2.78	.929
S25	All relevant investment information are publish publicly and accessible.	2.96	.890
S26	External auditors who hold any shares in the company before their appointment do have those shares divested.	2.87	.873
S27	An Executive Director is Chairman of the Audit Committee of your company.	2.58	1.054
S28	External auditors attend Annual General Meeting when the Accountants are discussed.	3.02	.809
S29	The Head of Internal Audit has direct access to the chairman Audit Committee and their reports provided to the External Auditors.	3.18	.699
S30	Management letter emanating from annual audit have been provided and discussed at the Audit committee/board of directors and response sent to the Auditors.	3.16	.637

## MEANS TABLES=x4

S31	The company's acts clearly define criteria for required expert and professional knowledge and experience for appointment of Board members and these are observed.	3.27	.787
S32	Companies and Allied Matters Act 1990 contains provisions relating to operational requirements of your company and they are observed in practice.	3.18	.730
S33	The Banks and Other Financial Institutions Act 1991 contains provisions relating to operational requirements of your company and these are observed in practices.	3.23	.734
S34	The investment and securities Act 1999 contains provisions relating to operational requirements of your company and these are observed in practice.	3.14	.730
S35	The Securities and Exchange Commission Act 1998 and its accompanying Rules and Regulations contains provisions relating to the operational requirements of your company and these are observed in practice.	3.23	.666
S36	The Central Bank of Nigeria Code of Corporate Governance for Banks in Nigeria	3.28	.672

	(2006) contains provisions relating to the operational requirements of your company and sees to their observance in practice.		
S37	Your company publishes and circulates a statement, along with the annual reports, to set out the status of their compliance with the best practices of corporate governance.	3.29	.712
S38	Shareholders do exercise their powers, especially to sue for wrongful acts and to buy a specified proportion of new issues before stock is issued to the new potential shareholders.	3.03	.815
S39	The implementation of the Code of Corporate Governance has greatly contributed to improvement in operational and organization efficiency and effectiveness.	3.29	.689
S40	There are stipulated sanctions for noncompliance with related legal provisions and such sanctions are imposed upon violation.	3.33	.639

#### Allotment of Questionnaires to Selected Deposit Money Banks.

S/N	Name of Banks	Allotment based on Board size	No. of Questionnaires Allocated to Banks
1	Access Bank Plc	14*195/238 =11.471	12
2	Diamond Bank Plc	16*195/238 =13.109	13
3	Ecobank Nigeria Plc	15*195/238 =12.289	12
4	Enterprise Bank	15*195/238 =12.289	12
5	Fidelity Bank Plc	17*195/238 =13.929	14
6	First Bank of Nigeria Plc	19*195/238 =15.567	16
7	First City Monument Bank Plc	13*195/238 =10.651	11
8	Guaranty Trust Bank Plc	14*195/238 =11.471	11
9	Key Stone Bank	14*195/238 =11.471	11
10	MainStreet Bank	14*195/238 =11.471	11
11	Skye Bank Plc	17*195/238 =13.929	14
12	Stanbic IBTC Bank Ltd.	14*195/238 =11.471	12
13	Sterling Bank Plc	10*195/238=8.193	8
14	Union Bank of Nigeria Plc	16*195/238 =13.109	13
15	United Bank For Africa Plc	19*195/238 =15.567	16
16	Zenith Bank Plc	11*195/238 =9.013	9
<b>Total</b>		<b>238</b>	<b>195</b>

Source: Field Survey 2017

**Strategic Marketing – Call for Progress**  
**Olusegun Michael Olaniyan,**  
**Capstone Edge Consulting, Calgary, Alberta**

**Introduction**

A Call for Progress defines the necessity and significance of telecommunication in today's market. It supports many societies in discovering diverse prospects. Regrettably, this sector of the economy is in the hands of state-run controls that are incompetent in this industry with a control which is poorly driven.

Nonetheless, the introduction of mobile phone has assisted the customers to circumvent the misery of landline service. As there has been a growth in the means to interconnect. Call for Progress" describes the prerequisite and significance of telecommunication in today's world. It supports many individuals in discovering diverse opportunities, the economic development has increased due to a number of causes such as dropping charges, decreasing excess etc. The case offers a couple of instances of the Indian agriculturalists and fisherman about how mobile phone has improved their way of appraising and products.

Mobile phone companies are also considering prospects for more invention and how to get more customers using diverse methods and inexpensive deals. The objective of the industry is to sell additional of their units. In the western nations, it is not a striking market since there are already other cell phone accounts than there are persons. There is a variance in the markets if USA and China are paralleled where only 1.2 million different accounts are created in the USA in divergence to 6.8 million per month in China.

**Thesis Statement:** To examine the various strategic approaches adopted in the global market by different cell phones providers in realising their corporate goals vis-a-vis meeting the consumer's needs around the globe.

**Purpose of Paper:** Investigating mobile phones Companies' continued success in international business story with means of tactical planning, acquisitions and joint ventures.

**Overview of Paper:** Some enterprises such as Millicom amended their advertising and pricing policies according to where they were operating. In African and Latin American nations, they had to use small pricing approaches so that they could attract more individuals to purchase their deals. The pricing was fixed according to the seconds called by the clients

and not by the minute. Also, some balance or minutes could be reassigned amongst families and associates. There has been a development in the revolution industry because there is a necessity for reducing cost. The masts alone are very expensive for a company. In India, masts need AC and standby generators due to power outages. Some firms are trying to make their equipment's much smaller to lower their expenditures. Even though, new generation in those regions requires the new, modern phones.

The roles of product, pricing, campaign and delivery contribute a vital part in the advertising of merchandise. In this case, there is the real product, i.e. the mobile phones, and the service, i.e. the mobile phone service providers. Foremost, analyzing the product strategy, mobile phones required to be much more than garb used for communication. The markets in the advanced nations required hi-tech phones with which they can do additional task more than just communication. Majority of the innovative phones have internet access which means that the product needs to have better displays, touch possibilities, better storage so that the customers can use the phone with ease and at a quicker promptness.

Consequently, the phone firms need to manufacture products which are required by the customers having their identified features. If we take into consideration the service suppliers, the services in the industrialized economy such as USA or Western nations entail the promptness and the class of the service. The service suppliers must take into consideration the simplicity of use, the consumers' service and the general feature of their services. In established nations, they should take into account whether the service they offer be custom-made or homogenous. This is because the clientele in the advanced nations have the financial plan to meet their own requests, the customization of the service or the product should be their principal objective.

Price is one of the utmost vibrant mechanisms of the advertising blend. The mobile phones in this situation has very stumpy price and is vexing very stiff to decrease their prices in direction to get more consumers and cover as less expenditures as thinkable. The phone sector has reduced costs so considerably

since there are sundry alternatives the clients can select from and it is also made accessible for everyone.

One of the driving forces of industrialization is hi-tech change in communications, which has made it convenient for industrialists and establishments to recognize buoyant prospects in international markets. Equally, poor communication services can be a significant factor restraining economic growth in developing nations. In several of these nations, delivery of telephone package was often left in the hands of undercapitalized, disorganized state-run cartels, operated by incompetently trained and poorly inspired administrators. The introduction of the mobile phone, nevertheless, it has endorsed many nations overwhelmed by poor land-line service to circumvent these challenges. Some researches show that growing the cell phone perception level (the proportion of the populace with cell phone delivery) by 10 percentage points will increase per capita GDP by 0.59 percent.

Improved access to communication services helps economic development in many ways, some apparent, some understated. Enriched communications make it easier for financiers to absorb about emerging market openings; but they also make markets more resourceful, dropping prices and reducing the waste of funds. For illustration, one insignificant Indian farmer decided to lease his tractor to other indigenous farmers when he didn't need it for his own produces. Before he owned a cell phone, he often had to leave his own plantation for an entire day to handle a monotonous tractor rental, a matter that now takes but a few minutes on the cell phone.

Cell phone producers and equipment merchants are enthusiastically tracking openings in evolving markets. The industry's goal is to sell more than a billion units yearly. But in most advanced nations, mobile phone saturation is great. Nearly Western European nations have more mobile telephone accounts than people, proposing very inadequate development scenarios there. In the United States, 80 percent of the populace have a cell phone account, and only 1.2 million fresh accounts are opened every other month. China, meanwhile, has the greatest cell users of any nation in the world at 900 million (as of mid-2011). India, nonetheless, claims the designation of the fastest-growing market with 791 million consumers, but 35 percent of the nation's population still does not have a cell phone (as of mid-2011).

Of course, developing markets offer the cell phone business new experiments. Since their poor per

capita incomes, customers in these markets are more price thoughtful than their European or Japanese equals. Millicom International Cellular discovers it needed to familiarize its advertising and pricing plans accordingly. Its typical client in Africa and Latin American spends less than \$10 a month on his or her phone bill, and often lacks a credit account. Millicom's initial method was to depend on prepaid calling cards rather than monthly payments, which removed the requirement to check its consumers' credit histories, as no credit was being extended. But Millicom discovers that prepaid calling cards were somewhat costly to service. The firm then established e-PIN, which eradicates the need to rely on the prepaid calling cards. Clients of the Millicom can go to a company-authorized orifice—such as a indigenous bodega or other shop and buy extra credit time often as little as 30 cents value from the dealer. The salesperson collects the moneys and sends a text-message to Millicom, along with the telephone number of the customer, requesting that more air time credit be added to the client's account. Instead, a friend or relation can text Millicom, requesting that some of their prepaid minutes be reassigned to the friend's phone. To make its service even more cheaply, Millicom's calling charges are calculated per second, rather than per minute

The need to reduce costs and the distinctive effective atmospheres in evolving markets has motivated much improvement in the sector. A major part of the costs of providing cell service are the costs of the cell towers. In India, masts need air-conditioning and backup electricity generators due to the country's recurrent power outages. Unique principal Indian cell corporation, Bharti, encouraged its dealers to make their equipment smaller, in order to cost its cost and power consumption. Bharti was able to reduce the cost of each of its towers by 40 percent to \$75,000 per tower. Another Indian cell establishment contracted with Chinese factories to manufacture easily assembled towers, thereby reducing installation costs. Nokia Siemens Networks has established a small, cheap aerial that can be placed on the peak of building in a community, forestalling the need for a expensive cell tower. Ericsson has teamed up with an Indian cell supplier to develop a generator powered by used cooking oil, having formerly abandoned an test using methane produced by cow dung.

**Conclusion::** There are other wonders facing cell service providers in developing markets. Phone

manufacturers had initially presumed that basic vanilla; cheap phones would be the most common, given the level of per capita income in these nations. Among young urban customers in China, though, a cell phone is a status symbol: Many enthusiastically upgrade their telephones to make sure they contain the newest features. Nokia projected that 60 percent of its sales in emergent markets in 2007 were additional sales; two years earlier, replacement sales constituted only 43 percent of developing market sales. As the

iPhone and other supposed “smart phones” have cut into Nokia’s market share, though, the same facts seemed to hold true users want a phone with several functions. India’s Bharti Airtel Ltd. considers a typical urban cell phone user swaps his or her phone every 8 to 12 months. Grameen Phone of Bangladesh accounts a related phenomenon. Even in that poor nation, new clients in Dacca and other metropolises want sophisticated, classy phones with the modern bells and whistles.

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World Economic Forum, 2011 who is the wander woman.

**ABSTRACT**

This study empirically investigates contribution of financial soundness indicators, that is, capital adequacy, liquid asset and leverage ratios on Nigeria deposit money banks' financial performance. The aim of the study is to determine difference in the prediction of financial soundness surrogates on Nigerian deposit money banks' return on asset, asset quality, expense-revenue and return on equity. The study adopted ex-post facto research design; the population of the study consists of 22 Nigeria deposit money banks (DMB) licensed by Central Bank of Nigeria (CBN) out of which 16 DMBs were selected. The study involved time series and cross-sectional data, that is, secondary data that spanned from 2010 to 2017, 128 pooled balanced panel observations/data were obtained from the audited annual accounts and reports of the selected DMBs and analysed using standardized multiple linear regression model (OLS), Karl Pearson Product Moment Correlation Coefficient (PPMC) and Chow-test. We discovered that capital adequacy, leverage and liquid asset ratios are significant predictors of Nigeria DMBs' return on asset, asset quality, expense-revenue and return on equity. There is no significant difference in the financial soundness proxy's prediction of international and national deposit money banks' financial performance surrogates; except in asset quality where there is significant difference. Also capital adequacy ratio had negative impact on all the financial performance surrogates but had an insignificant positive impact on return on asset while leverage and liquid asset ratio had positive impact on all the financial performance proxies. In addition capital adequacy ratio had insignificant positive and negative relationship with return on asset and asset quality respectively. We concluded that financial soundness surrogates had significantly predicted Nigeria deposit money banks' financial performance. We therefore recommend amongst others that Central Bank of Nigeria should relentlessly monitor capital adequacy ratio and established liquidity and leverage ratio ceiling that will restrain the quest for management's profit maximization and incentives for banks to game the regulatory framework.

**Key words:** Financial Soundness Indicators and Banks' Performance.

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**1. Introduction**

Nigeria banking system exhibits fluctuating and unimpressive financial performance as a result of high figures of non-performing loans and leading to dissipation of profit, capital erosion and impairment of liquidity, and consequently poor asset quality has necessitated reforms in order to address the problem of poor financial soundness in the banking sector (Bebeji, 2013). By intuition, it will not be wrong if one asserted that the environment for Nigerian banks to make profits is unstable and taking the footsteps of Tomola (2013) that Nigerian banks are yet to realizing financial optimal capital structure and sound liquidity based. In addition, financial crises experienced by Nigeria banking sector in 2008/2009 brought about a need for the regulation of financial institutions which had become increasingly reckless in the way business is being conducted. Their business patterns had become vulnerable and this is what led banks such as Oceanic bank, Intercontinental bank, Afrik bank etcetera to demise (Gbadebo, 2014; Imad, & Khaled, 2015). The free-for-all manner in which banks did their business was reported to be the single defining outcome which leads to crisis in (2008/2009) in the banking sector locally and internationally.

Furthermore, this makes roles of banks not to be overlooked; banks as financial institution have the main role of lubricating the mechanisms facilitating the economic activities of a nation by mobilizing financial resources or funds from surplus units through their intermediation role for productive investment or to make funds available to deficit units (Athanasoglou, Brissimis, & Delis, 2006; Obamuyi, 2011; Olaoye & Olarewaju, 2015). As financial intermediaries, in financial crises, credit activities of banks decline, and this has an impact on the availability of resources for financing the economy (Živko & Kandžija, 2013). This is particularly true in the case of Nigeria where all other sectors have to relate with banks to carry out their operations effectively either as a borrowers or lenders. While, the thriving of an economy is contingent to a large extent on the degree of operations in the real sector, but the crucial roles of the

financial system in supporting a flourishing economy cannot be over-emphasized.

The soundness and elasticity of the financial system have received considerable attention in the recent time due to the continuous integration of the system which leads to increase in cross-border listing. It brought about the systematic wearing a way of countries' financial boundaries while expanding the possibilities of the influence of global financial shocks, as evidenced from the various financial crisis witnessed in the past, particularly the global financial crisis which began from the United States as a result of crisis in the sub-prime mortgage market in August 2007 (Essien & Doguwa, 2014).

Scholars are of the opinion that, extreme risk-taking together with non-adherence to prudential financial control as well as impaired financial policy was the major contributor to the financial crunch. Although, it is usually assumed that banks survived and flourished on risks, but the risks must be well managed to avoid liquidation. Central Bank of Nigeria (CBN) and Nigeria Deposit Insurance Corporation (NDIC) have a fundamental role to play in ensuring financial stability by monitoring the activities and performance of banks, but their mutual efforts were clearly not suffice to prevent the financial crunch (Enyioko, 2012; Essien & Doguwa, 2014; Olaoye & Olarewaju, 2015). In an ideal situation the duty of central bank is to maintain and manage inflationary pressures that arise as a result of economic activities, but under financial stress its role as a regulator becomes too important in providing safeguard to financial system and liquidity management (Muhammad, Syed, & Muhammad, 2015). The economy crunch, has indisputably stressed the importance of a prudential financial method to regulate so as to evaluate the soundness of financial systems as well as individual financial institution.

This escalates bank's susceptibility which points an upturn in the provisions and demands higher level of capital as increase in risk weighted capital curtailed lending, high liquidity and necessitates reforms in banks' capital requirements making it

more risk sensitive as well. Thus, a financial crisis in the economy is shifted into banking system and making it too vulnerable and consequently wanes its financial performance. It strongly covers that one cannot neglect the microeconomics and macroeconomics environment while tracing the deterioration of profitability and efficiency in the banking sector (Muhammad, Syed, & Muhammad, 2015). Nigeria is an emerging economy and its markets capital and banking sector show virtually parallel physiognomies as other emerging economics. Specifically, Nigerian banking is connected to both national and global economy and had adopted recommendations of Basel Committee on Banking Supervision (BCBS).

The Central Bank of Nigeria (CBN) as a regulatory government agency as at 2009 had already initiated reforms in the banking sector such as increasing the paid up capital, issuance of corporate governance codes, injection of bailout funds, removal of banks' officials, stipulation of prudential financial guidelines for banks and ensuring creating greater inflow of foreign capital. Despite all this initiatives from the regulatory government agency, today banks in Nigeria are experiencing financial instability issues which are likely to impact on banks' financial performance (Adewoyin, 2012; Akpan, 2007; CBN, 2004; Gbadebo, 2014; Osisioma, Egbunike & Jesuwunmi, 2015). This was to make Nigerian banks strong in term of capital base and more competitive in order to play an effective intermediation role in the local and global market. In spite of all these measures, the discrepancies of financial stability still remains un-resolved between national and international Nigerian deposit money banks.

More so, at the beginning of the 2008 financial crisis, former governor of the Central Bank of Nigeria (CBN) Charles Soludo was consistent in stating that because Nigeria moved ahead of the world to recapitalize and consolidate its banking system, "Nigerian banks are robust and strong enough to take losses" and that they are protected from the full effects of the global financial system. Interpretations of Soludo's statement by analysts took different dimensions at that time. This prompted the apex bank to come up with a statement to the effect that at no time did Soludo say that the Nigerian economy was "immune" to or "insulated" from the global crisis. By the time the banks passed through a stress test under a new governor of CBN in 2009, 'a lot of dead bodies were exhumed from the books of the banks' as some critics would put it. By the end of 2009, it became clear that the banks were not strong enough as Soludo had made the world to believe (Fidelity Bank, 2017). This also advances a question of what policy suggestion could be drawn to help banking industry and strengthen the financial sector with a minimum restriction against internal and external financial crunch.

In addition, given the continued poor performance experienced in the banking sector as indicated by high levels of credit risk, poor liquidity, high financial leverage and impairment of capital based by high incidence of non-performing loans, in spite of the frequent reforms that various governments in Nigeria

have embarked upon, there is the need to constantly examine and analyse the factors that could affect bank performance with the aim of providing empirical evidence based on which solutions can be offered. Also, it is in the realization of the consequence of deteriorating corporate financial structure, efficiency and profitability of the financial system at larger; it is on this basis that the study will seek to empirically establish the difference in the contributions of financial soundness capital, liquidity and leverage based indicators on Nigeria international and national deposit money banks' financial performance.

Finally, banks are the sole dealer of funds, and their stability is of great importance to the financial system. As such, an in depth understanding of contributions of their financial soundness capital-liquidity based indicators to national and international Nigeria deposit money banks' financial performance is necessary and vital to the ability of an economy to resist financial crunch and safeguard stakeholders' interest. The following research questions were developed from earlier stated above research objectives. What is the difference in the joint prediction of capital adequacy ratio (CAR), leverage ratio (LEV) and Liquid asset ratio (LR) on international and national Nigeria deposit money banks' return on asset (ROA), asset quality (AQ), expenses-revenue ratio (ExpeR) and return on equity (ROE)? And what is the magnitude and direction of correlation between capital adequacy ratio (CAR) and Nigeria deposit money banks' return on asset (ROA) and asset quality (AQ)? The following null hypotheses ( $H_0$ ) will be tested at 5% level of significance ( $\alpha$ ):

- i. The difference in the joint prediction of capital adequacy ratio (CAR), leverage ratio (LEV) and Liquid asset ratio (LR) on international and national Nigeria deposit money banks' return on asset (ROA), asset quality (AQ), expenses-revenue ratio (ExpeR) and return on equity (ROE) is not significant.
- ii. The magnitude and direction of correlation between capital adequacy ratio (CAR) and Nigeria deposit money banks' return on asset (ROA) and asset quality (AQ) is not significant.

The study will be of importance to the management, employee, government, shareholders, creditors, customers and academia. The study will adopt parametric and non-parametric statistical techniques for analyzing the data. The study is confined to eight years data only, i.e. from 2010–2017, therefore, a detailed analysis covering a lengthy period, which may give slightly different results has not been made. Therefore, the accuracy of results is purely based on the data of studied units. The generalization of the study will be limited to the selected international and national deposit money banks licensed by Central Bank of Nigeria (CBN). The rest of the paper had been divided into review of related literature, methodology, data presentation and analysis, summary of findings, conclusions and recommendations.

guidelines and macro-economic factors play a significant role in determining banks' financial stability or soundness. The International Monetary Fund (IMF) and Bank for International Settlement (BIS) had issued series of metrics to determine the financial health or financial soundness of specific financial institution and financial systems as a whole; these lists of financial metrics are referred to as

## 2. Review of Related Literature

### 2.1 Conceptual Review

#### 2.1.1 Financial Soundness Indicators

There are increasing scholarly debates on the direction of policy to effectively improve the financial stability or soundness of banks. In recent times, the direction of literature has shown that both micro-prudential

financial soundness indicators (FSI) (Berger, Rosen, & Udell, 2007; IMF, 2012).

Financial soundness can be defined in the narrow sense to connote financial stability of financial institutions. While financial stability can also be extended to cover the functioning of financial markets, asset price volatility, risk management practices of institutions, etc., financial soundness of banks is still at the center of stability concerns. Financial soundness has been crucial issues for regulatory agency during the past decades both in developed and emerging economies. During this period, financial soundness of financial institutions has been used generally as a definition for financial system stability. Conversely, scholars suggest that financial soundness is multi-dimensional phenomenon which cannot be measured only with soundness of financial institutions (Münür, Alper & Mahmut, 2008). In spite of the fact that there is still no universally recognized definition of financial soundness, there are essential ingredients in various financial soundness definitions. Price stability (monetary stability), infrastructure of the financial markets, functioning of financial markets, soundness of financial institutions, sustainable capital flows, reliable risk management practices of financial institutions, and the interaction between these variables are emphasized mostly together with the concept of financial stability— usually understood as the financial soundness—Among them, the stability of the banking sector is perhaps the most crucial element of financial stability (CBN, 2010; IMF, 2006; Münür, Alper & Mahmut, 2008).

While the definition of financial stability needs to be further explored, there is a growing interest in measuring financial stability in order to take proactive measures to avoid any sources of instability. Similar to the multi-definition nature of financial stability, there are various ways of measuring it. The methods of measuring stability vary from a range of basic approaches to complex modeling techniques. Accounting and financial ratio analyses are used to examine the financial soundness of financial institutions. Statistical and econometric methods are more robust and advanced approaches and have the advantage of doing in depth analysis or examination over a time period (Münür, Alper & Mahmut, 2008).

More so, several methods have been developed to measure financial institutions' stability in terms of a common metric; as noted by IMF and Basel Committee that the new Basel III regulatory framework, which represents a substantial change from the current framework, will be fully implemented in 2019, with a phase-in period starting in 2013. Adoption of the Basel III Accord will have an impact on the compilation of the current FSIs measuring capital adequacy, leverage, and liquidity. Under Basel III, the existing definition of-total regulatory capital has been tightened, in particular for Tier 1 capital. A new Capital Conservation Buffer has been established above the

regulatory minimum capital requirement, which will be introduced in 2016 and will increase annually until 2019. A new leverage ratio will supplement risk-based capital requirements. Two new internationally harmonized global liquidity standards have been introduced, as a complement to capital requirements: a Liquidity Coverage Ratio and a Net Stable Funding Ratio (IMF, 2012, 2006).

We can analyze the stability of the Nigerian banking sector by applying CBN financial soundness metric which is in consonant with Bank for International Settlement (BIS) financial soundness metrics. This can be classified into three components, that is, financial soundness Asset-based indicators, financial soundness capital-based indicators and financial soundness income-expense based indicators; this taxonomy is based on CBN nomenclature. The study will considered financial soundness capital, liquidity and leverage based indicators since it has been adopted as the latent or hidden variables. The financial soundness liquidity and leverage based are the new financial metrics been added by Bank for International Settlement (BIS) under Basel III accord to test the banks' financial health condition or financial stress. Financial soundness indicators can be divided into capital adequacy ratio, liquidity ratio and leverage ratio.

#### **a. Financial soundness Capital adequacy indicators**

Capital adequacy is vital to the robustness of financial sector to withstand shocks to their statement of financial position. Deterioration in the ratio signifies increased risk exposure and possible capital adequacy problems while an increase in the ratio means the reverse. There are three core indicators of capital adequacy and they are all compiled for banks. The indicators are: regulatory capital to risk-weighted assets, regulatory Tier 1 capital to risk-weighted assets and nonperforming loans net of provision to capital. Regulatory capital is as defined by the Basel Committee on Banking Supervision (BCBS) and comprises three tiers of capital (i.e. Tier 1, Tier 2 and Tier 3). It is important to note that Tier 3 is yet to be operational in Nigeria.

Regulatory capital to risk-weighted assets ratio measures the capital adequacy of the banking sector in Nigeria. The numerator represents the industry position of the regulatory capital of all DMBs in the country, while the denominator is their Risk Weighted Assets (RWA) within the given period. In 1988 Basel capital accord propounded the definition of capital and distinguished it between core elements (Tier 1) capital and supplementary elements (Tier 2) capital. Basel Committee introduced capital adequacy regulation in 1988, which required globally active banks to maintain a minimum capital equal to 8% of risk adjusted assets, with capital consisting of Tier I capital (equity capital and disclosed reserves) and Tier II capital (long term debt, undisclosed reserves and hybrid instruments) that has been adopted by more than 100 countries (Jacobson, Linde,

& Roszbach, 2002). Financial institutions must maintain a capital adequacy at specific minimum level in order to avoid risks and bankruptcy. The regulators of capital requirements seek to guarantee that risk exposure on financial institutions and banks are supported by an adequate amount of capital which bears unexpected losses arising in the future. This ensures banks further promote their cushion of assets that can be utilized for liquidation claims.

Nonperforming loans net of Provision to Capital can be represented as  $(NPL-PR)/CA$ . That is, NPL is nonperforming loans, PR is specific loan provisions and CA denotes capital. Capital implies total capital and reserves as reported in the sectoral statement of financial position for cross border consolidated data. It can also be proxied by total regulatory capital. This indicator is intended to compare the potential impact on nonperforming loans net of provision on capital. In other words, it displays the capacity of the banking sector to withstand losses from NPLs. Loan is treated in Nigeria as nonperforming when payments of principal and interest are overdue by three months or more. Specific provisions are deducted from the capital which is measured as capital and reserves reported in the sectoral statement of financial position, that is, to show the component that is fully at risk. In the alternative, however, regulatory capital can also be used (Essien & Doguwa, 2014; Olaoye & Olarewaju, 2015).

The international convention is that regulatory capital should not be less than 8.0 per cent of banks' risk weighted assets, while the required minimum ratio in Nigeria is 10 per cent for Regional and National banks and 15 per cent for International banks. Regulatory Tier 1 capital to risk-weighted assets ratio measures the capital adequacy of the banking sector in Nigeria. The numerator represents the industry position of the Tier 1 capital of all DMBs in the country, while the denominator is their risk weighted assets (RWA) within the given period. Tier1 capital comprises of paid-up capital, common stock and disclosed reserves such as retained earnings, share premiums, general reserves and legal reserves. Capital adequacy ratio was measured as the ratio of the sum of Tier-One and Tier-Two to risk weighted assets (CBN, 2014).

#### **b. Financial soundness Liquidity-based indicators**

There are two core indicators for liquidity; namely: liquid assets to total assets (also known as liquid assets ratio) and liquid assets to short-term liabilities. Liquid assets ratio measured the ratio of liquid assets to totality of assets (that is liquid asset divided by total asset) this indicator aims to provide indication of the liquidity available in the system to meet both expected and unexpected demands for cash. Liquid asset could take the form of either core or broad liquid assets. Core liquid assets comprise of currency and deposits and other financial assets that are available either on demand or within three months or less. Broad

liquid asset equals the core assets plus securities that are traded in liquid markets and can be easily converted into cash with no or minimal change in value. While liquid asset to short-term liability is the ratio of total specified liquid assets to total current liabilities. The indicator aims to identify the extent of liquidity mismatch between assets and liabilities so as to provide insight into the possibility of deposit takers satisfying short-term withdrawal of funds without facing liquidity problems. Short-term liabilities are the short-term elements of debt liabilities plus the net short-term market value of financial derivatives position (BCBS in IMF, 2006).

Customer Deposits to Total (Non-interbank) Gross Loans is one of the indicators derived by IMF to determine the banks or deposit takers liquidity, this can be measured as total deposit liabilities of the DMBs excluding interbank takings divided by total loan portfolio. Lower stable deposits in relation to loans imply a greater reliance on more volatile funds to cover the illiquid assets. The risk in using volatile funds to fund loans is relatively higher than that of using a stable deposit base. This can also be term deposit structure which is defined as total deposit divided by total asset-(loan and advances); tries to establish the percentage of total deposit used in financing total asset. In Nigeria this term as Loan-to-Deposit ratio is the ratio of total loans and advances to total deposit liabilities. Loan is represented by total loan in the statement of financial position, whilst the deposits include demand deposits, time deposits, certificate of deposits, savings, issued securities, prime capital, loan capital, and borrowing. This ratio shows the proportion of public contribution as a source of capital or liquidity to finance the banks' loans. Smaller LDR number indicates that public provides smaller proportion to support the banks' loans. The ratio represents liquidity mechanism. Eighty percent (80%) is the maximum prescribed by CBN (CBN, 2014).

#### **c. Financial soundness Leverage-based indicators**

This is one of the capital based indicators formulated by IMF which is defined as capital to assets in section (I013=  $CA/TA$  (12)) of IMF publication. Where I013 is the IMF code for the indicator, CA and TA are as defined tier-1 capital and total assets. However, Tier 1 can also be used to proxy CA. This indicator aims to show the leverage of the deposit takers. It reveals the extent to which assets are funded by funds other than those of the owners of the deposit takers (DTs) or it shows the proportions of debt and equity in financing the bank's assets. It is also called the leverage ratio (IMF, 2006).

Leverage ratios can be measured through debt ratio (that is, total debt divided capital employed or net asset), total debt will include short and long-term borrowings from financial institutions, debenture/bonds, deferred payment arrangements for buying capital equipment, bank borrowings, public deposits and any other interest-bearing

loan. Capital employed will include total debt and net worth. Supplier of long-term debt concentrates on the long-term and short-term solvency. They evaluate the firm's profitability over time, its ability to generate cash to be able to pay interest and repay principal and the relationship between various sources of funds (capital structure), (Osisioma, Egbunike, & Jesuwunmi, 2015).

Note leverage ratios may be determined from statement of financial position or statement of comprehensive income elements, that is, calculate the proportion of debt in total financing or the degree to which operating profits are sufficient to cover the fixed charges; that is, coverage ratios or interest coverage = EBITDA divided by interest or  $(EBITDA \div [\text{interest} + [\text{loan repayment}(1 - \text{tax rate})]])$ . But the study will adopt Basel III leverage ratio. This is a non-risk based leverage ratio and is calculated by dividing Tier-1 capital by the bank's average total consolidated assets (sum of the exposures of all assets and non-balance sheet items). The banks are expected to maintain a leverage ratio in excess of 3% (i.e.  $LEV \geq 3\%$ ) under Basel III accord. Many variations of these ratios exist; but all these ratios symbolize the same thing- the extent to which the bank has relied on debt in financing assets.

### 2.1.2 Financial Performance

Performance has been defined by numerous scholars as record of outcomes achieved, efforts extended to achieve the targets, that is; performance is regarded as accomplishments or process of performing a task. Another view is that performance is about doing the work which is behavioral in nature or is a general term applied to a part or to all of the conduct of activities of an organization over a period of time (Armstrong, 2004 as cited in Akintonde, 2013; Hornby, et al., 2010; Kohler, 1978; Nnabuife, 2009; Osisioma, Egbunike, & Jesuwunmi, 2015; Robert, 1961). Performance assessment helps to determine what an employee had accomplished, which approaches provided the best results and the degree to which you are reaching your career goals.

Organisational performance is scientific evaluation or appraisal that can be viewed from both financial and non-financial; this study is concerned with banks' financial performance. The crucial point to note is that the overall financial performance of banks or organizations in this context is limited to financial accounting ratios; this factor is relevant and paramount to the banks' financial analysis in this study. Stakeholders measure or evaluate the overall financial performance of a bank through its financial statements which shows the results of the banks' operating cycle within a year and to identify bank's strengths and weaknesses in order to proffer remedial solution. The management of the bank would be interested in all areas of the financial analysis; it is their duties to make the effective and efficient use of the bank's resources in their quest for

optimization attainment. Shareholders (investors), who have invested their resources in the bank, are most concerned about the organization's profitability. They have assurance in those companies that indicate stable growths in earnings. Seeing that, they focus on the analysis of the bank's current and potential earnings. The government is interested in profitability to assess tax liabilities, survival and to ensure economic development. Employees are interested in stability and survival of the banks, on which their jobs, wages depend; while customers focused on the company's continued existence to maintain supplies possibly at reduce cost without compromising standards (Adeniyi, 2011; Pandey, 2010). All these can be ascertained through banks' financial ratios (Adeniyi, 2011; Kennedy & Macmillan, 1986; Pandey, 2010). These are used in determining how the management had use the fund or resource committed to their trust. Bank's performance constitutes the primary objective of shareholders' and other stakeholders' interest. This study employs a five proxy for bank financial performance defined as the return on asset (ROA), asset turnover (ATO), asset quality (AQ), admin expenses-revenue (ADER) and return on equity (ROE).

### 2.2 Theoretical framework

The study is anchored on capital adequacy-risk theory, portfolio regulation theory and managerial discretion/expense theory; these three theories were adopted as a result of link or connection they have with the latent exogenous factors and latent endogenous variables used in building or formulating the linear multiple econometric models specified in chapter three. Capital adequacy-risk theory stated negative externalities resulting from bank default are not reflected in market requirements. In this framework, an unregulated bank will take excessive portfolio and leverage risks in order to maximize its shareholder value at the expense of the deposit insurance (Benson, Eisenbeis, Horvitz, Kane, & Kaufman, 1986; Furlong & Keeley 1989; Keeley & Furlong, 1990). Capital requirements can reduce these moral hazard incentives by forcing bank shareholders to absorb a larger part of the losses, thereby reducing the value of the deposit insurance put option. With more capital and less risk taking, the effect is clearly a decrease in the bank's default financial performance, that is, efficiency and probability indicators.

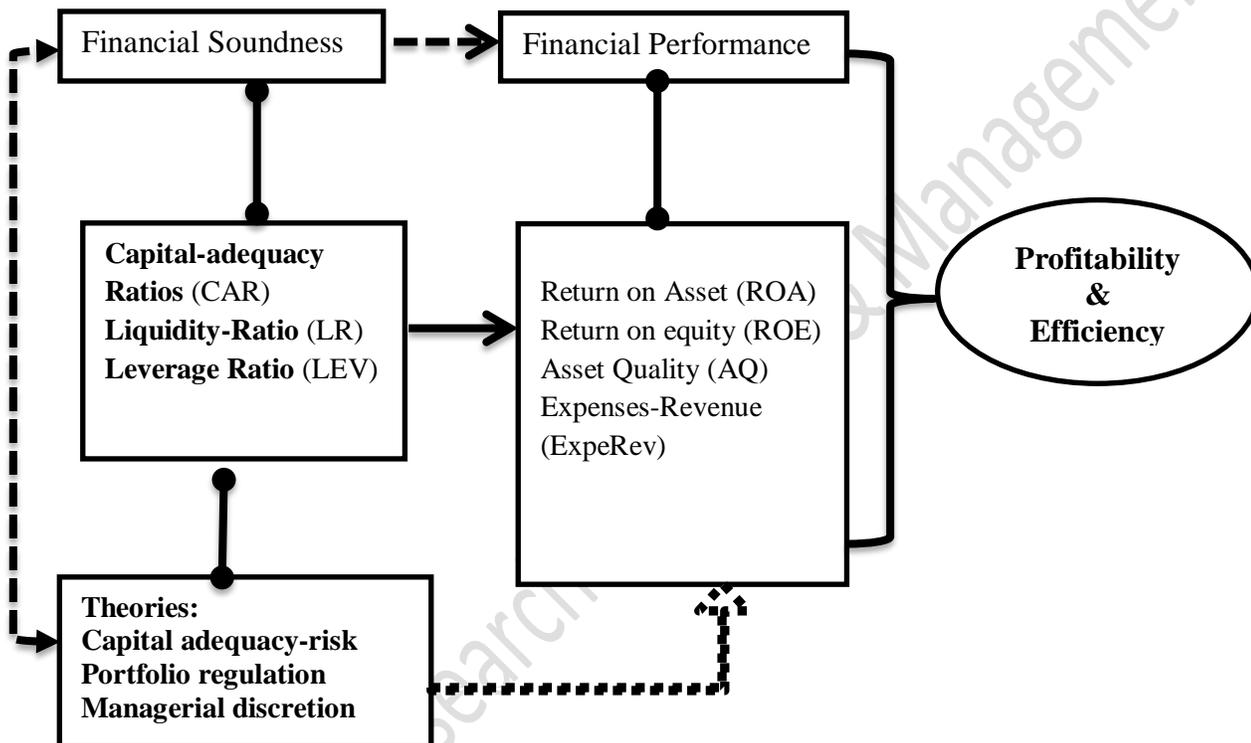
Portfolio regulation theory opined that the controls of financial institutions are necessary to sustain safety and soundness of the banking system, to the extent, which put them in a position to meet its liabilities without difficulty (Ikpefan, 2013). It makes necessary for the CBN and NDIC to compel greater solvency and liquidity on Nigeria deposit money banks than making it discretionary. The higher this ratio, the better liquidity and solvency of the individual banks; if the asset portfolio is considered excessively risky or inadequate capital, the concerned regulatory body(ies)

will attempt to compel an amendment in the bank's statement of financial position (Peltzman, 1970).

Managerial discretion theory was propounded by Williamson; this theory is also known as theory of expense; Williamson asserted that managers have the preference in pursuing policies, which maximize their own utility rather than magnifying the shareholders' returns (profit maximization for shareholders); such utility comprise the satisfaction which managers obtained from certain types of expenditure. Managers' reputation is to some degree reflected in the amount of allowances they receive in the

### 2.3 Conceptual Framework

**Figure 2.3.1:** Conceptual Model of Nigeria Deposit Money Banks' Financial soundness capital-liquidity based and Financial Performance metrics.



**Source:** Researcher's conceptual model

Figure 2.3.1 shows the links between the studied variables and the theories is that it considers the contributions of financial soundness indicators on financial performance, that is, profitability and efficiency of Nigeria deposit money banks. It is obvious from the conceptual model that the basis of this study is established on capital-liquidity based indicators, efficiency and profitability of Nigerian deposit money banks, specifically financial soundness and optimal capital-liquidity management. It is the base which makes us interested in the study of the prediction and relationship between financial soundness and optimal financial performance of the national and international Nigeria deposit money banks. And more specifically, we want to find the prediction of capital-liquidity on efficiency and profitability. The study need to quantify financial soundness capital-liquidity based as well

as efficiency and profitability to reveal the prediction and relationship in an objective and linear econometric pattern. To achieve this, we actually investigate the difference in prediction among the national and international banks; three indicators chosen to represent or measure financial soundness capital-liquidity based indicators and four indicators chosen to represent efficiency and profitability. Financial soundness capital-liquidity based metrics can be disclosed from three angles: capital adequacy ratio, leverage ratios and liquidity ratio, which is the bed-rock in the conceptual model design. And profitability and efficiency of Nigeria deposit money banks can be represented into return on asset, return on equity, asset quality and expenses-revenue which lies upon the indicators of profitability and efficiency.

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In conclusion, the variables of financial soundness capital-liquidity based metrics can be viewed as the

foundation of this enquiry and they are derived from the International Monetary Fund (IMF) and Basel Committee for Banks Supervision (BCBS) taxonomy or nomenclature. Seven indicators (capital adequacy ratio-CAR, Liquidity ratio-LR, Leverage ratio-LEV, ROA, ROE, asset quality-AQ, and expenses-revenue) form the foundation of this research. The mixture of ratios representing financial soundness-capital-liquidity based indicators and ratios disclosing efficiency and profitability which will be measured in the study is the main body of the model. The utmost level of the model after testing all indicators' prediction is linked to efficiency and profitability of Nigerian deposit money banks.

#### 2.4 Review of Related Empirical Studies

The following empirical literature reviews were carried out from previous studies conducted by different scholars so that insight can be drawn from them and gap establishes:

Recent banking reforms in different nations of the world fostered the entry of foreign banks to increase competition and improve the financial stability of banks. There is, however, no comprehensive econometric study which has analyzed the profitability of national and international banks on a standalone and comparative basis. Adekunle (2018) studied internal factors affecting profitability of deposit money banks (DMBs) in Nigeria for the period of 2008-2016 using panel data of 14 listed banks drawn from the Nigerian Stock Exchange. Secondary data obtained from the listed deposit money banks' financial statements were analyzed. The independent variables were proxied by capital adequacy, credit risk, and inflation while profitability was proxied by return on assets (ROA). The study adopts correlational research design to investigate the determinants of profitability of the deposit money banks. Panel data techniques (fixed and random effects model) were employed to examine the effect of internal factors on profitability of the sampled listed deposit money banks. The study found that internal factors had significantly influenced on deposit money banks' profitability over the study period. The capital adequacy had a positive and significant relationship with bank ROA while credit risk had a negative and significant relationship with banks' profitability during the study period.

Ahmad, Ahmad and Adeel (2018) appraise the trade-off between liquidity and profitability in the banking sector. The research was applied to all listed banks of Pakistan Stock Exchange during the time period of 2010-2015. Document investigation was the key research method adopted to gather secondary data for the research. Six research models were stated and estimated via Ordinary Least Squares (OLS) method. The observed outcomes exposed significant connection among bank liquidity ratios and return on assets, return on equity, net profit margin, and

Tobin-q. However, return on investment and earning per share relationship with liquidity is insignificant.

Tuffour, Owusu, and Boateng, (2018) appraise factors internal to the firm as well as those external to the control of the firms' management. The study examined internal and external determinants of bank profitability in Ghanaian banking industry. A panel data of 6 banks listed on the Ghana Stock Exchange was analyzed over the period 2010-2015, using pooled regression models. The statistical results revealed that major determinants of bank profitability in Ghana include the bank capital adequacy, liquidity, total assets and real interest rate. Bank liquidity has significant negative effect on both return on assets and return on equity, while bank operating efficiency has negative and significant influence on only return on equity. On the other hand, while bank capital adequacy was positive and significant for determining both return on assets and return on equity, that of bank total assets has positive and significant influence on only return on assets. In another dimension, Onyekwelu, Chukwuani, and Onyeka (2018) appraised effect of liquidity on financial performance of deposit money banks in Nigeria. Ex-post facto research design was adopted and sample of five (5) banks was used for the study. Secondary data were collected from the firms for ten years period, 2007-2016. The data were analyzed using multiple regression analysis. Results show that Liquidity has positive and significant effect on banks' profitability, that is, return on capital employed (ROCE).

Saheed (2018) studied the effect of capital adequacy and operational efficiency on profitability of deposit money banks (DMBs) in Nigeria for the period of 2008-2016 using panel data of 15 listed banks drawn from the Nigerian stock exchange. The study adopts correlational research design to examine the effect of the bank specific factors on bank profitability. Panel data techniques were employed to examine the effect of capital adequacy and credit risk on profitability of the sampled DMBs. Although Hausman specification test suggested that random effect model is more appropriate, the study utilized feasible generalized least square (FGLS) to underpin the outcome of the Hausman specification. The capital adequacy has a positive and significant relationship with bank profitability while operational efficiency has a negative and significant relationship with bank profitability during the study period.

Abdulazeez, Asish and Rohani (2017) assessed the profitability of Saudi banks using the parameters of the capital adequacy, asset quality, management quality, earning ability and liquidity framework over the period 2000-2014 using pooled ordinary least square and fixed effect model. Their results shown that domestic banks are more profitable than foreign banks; and foreign banks carry more credit risk in their portfolio. In contrast to domestic banks, operating expenses to total income for foreign banks is significant but negatively related to profitability,

indicating that cost management inefficiency adversely affect the profitability of this group. Their results also indicated that banks with larger size are less profitable. The study failed to identify the effect of banks' capital adequacy, liquidity, and asset risk portfolio on their asset quality, efficiency and profitability on a stand lone basis between foreign and domestic banks rather focusing on earnings' ability of the studied banks. Another flaw is inappropriate statistical tool adopted for models comparison.

Majority of the institutions especially financial institutions tend to focus only on profit maximization at the expense of liquidity management. This creates a spur for Akenga (2017) to examine the effect of current ratio, cash reserves and debt ratio on financial performance of firms listed at the Nairobi Securities Exchange (NSE). Causal research design was adopted. Purposive sampling technique was used to select 30 firms. The data was analyzed using descriptive and inferential statistics it was found that current ratio and cash reserves have a significant effect on ROA. The debt ratio was found to have no significant effect on ROA. The banks should keep to appropriate level of leverage that will maximize shareholders' wealth and safe guard of depositors' deposit.

Almazari and Alamri (2017) assessed the effect of capital adequacy on profitability between two banks Samba and Saab. Data for analysis were collected from secondary sources. A descriptive analysis was used in testing the hypotheses. Results indicated that, Model 1 Saab bank shows a low positive correlation relationship between the ROA and ROE and a high positive relationship between ROA and core capital adequacy ratio, equity capital adequacy, total capital adequacy and debt-equity. The ROE has a positive relationship with core capital adequacy, equity capital adequacy and total capital adequacy. Furthermore, Model 2 Samba bank shows a high positive correlation relationship between ROA and ROE and a positive relationship between ROA and debt-equity ratio. A negative relationship between ROA and core capital adequacy, equity capital adequacy, and total capital adequacy. A positive relationship between ROE and cost income ratio, debt-equity ratio, and a negative relationship with core capital adequacy, equity capital adequacy and total capital adequacy. Appropriate capital adequacy must be maintained in order to achieve optimum return and enhanced financial performance.

Amahalu, Okoye and Nweze, (2017) ascertained the effect of capital adequacy on financial performance with a focus on selected quoted deposit money banks in Nigeria from 2010-2015. They made use of secondary data obtained from annual reports and account of the deposit money banks under study. The data were subjected to statistical analysis using Pearson coefficient of correlation, multiple regression analysis, variance inflation factors, multicollinearity, heteroskedasticity test and hausman test. The result of this

study revealed that there is a positive and significant relationship between capital adequacy and financial performance. It was also empirically verified that capital adequacy has a statistically significant effect on financial performance of deposit money banks. The Central Bank of Nigeria should monitor, review and control the capital adequacy level of Nigeria deposit money banks.

From a different perspective Asima, Mahmood, Raheel and Muhammad (2017) endeavored to find out the effect of financial variables on bank performance pre and post financial crisis of 2008 in Pakistan. Using regression analysis the study revealed that financial crises of 2008 posed a significant influence on the performance of conventional and Islamic banks in Pakistan and pronounced a negative relationship between financial crises and bank performance. The capital adequacy, assets quality, management quality, liquidity, earning quality and bank size posed a negative influence on bank performance. The major flaw of this study is that, it failed to adopt appropriate methodology that can cross examined research data; difference in prediction does connote significant influence for different periods.

Similarly, Irwan (2017) analyzed the effect of capital adequacy ratio (CAR), non-performing financing (NPF), operating costs to operating income ratio and financing to deposit ratio (FDR) toward return on assets (ROA), either jointly or partially and also looking for the most dominant influencing factor. As for the object of the research are 47 Islamic rural banks in Indonesia with total assets of IDR3.908 billion or 50.5% of total assets of Islamic rural banks in Indonesia that is IDR7.739 billion. The analysis was done by regression with the result of independent variable of non-performing financing (NPF) and operating cost to operating income ratio, partially, have a significant and negative effect toward return on assets. However, capital adequacy ratio (CAR) and financing to deposit ratio (FDR) are slightly influential and have insignificant effect toward return on assets (ROA) of Islamic rural banks in Indonesia partially, while jointly, have positive and significant influence toward return on assets. The study failed to examine how capital requirement, that is, capital adequacy ratio had affected credit quality.

Capital adequacy is sufficiency of the amount of equity to absorb any unexpected shocks that a bank may face. According to the capital adequacy standard set by the Bank for International Settlements (BIS), banks must have a primary capital base equal at least to 8% of their assets. Since bank-specific characteristics differ in Nigeria, the Central Bank of Nigeria (CBN) set an arbitrary ₦ 25 billion minimum capital base after considering all capital adequacy variables to forestall all future financial downturns. This created a momentum in Jalloh (2017) to examine the impact of capital adequacy on banks' performance in Nigeria. Data was collected using the cross panel methodology from nine deposit money banks with significant foreign operations.

The results of the ordinary least square (OLS) regression show that 76% ( $R^2$ ) of the variations in profit after tax (PAT) were caused by capital adequacy ratio. Constant monitoring and reviewing of capital adequacy based of banks by Central Bank of Nigeria and banks' management.

Kipruto, Wepukhulu and Owino (2017) studied how capital adequacy ratio influences financial performance of commercial banks in Kenya. Correlation and descriptive research designs were used. The study was conducted in 14 second tier commercial banks in Kenya. It collected financial data from 2013 to 2016, considering that the regulations came into effect in 2013 from CBK and commercial banks websites. Multiple regression analysis was performed. Findings revealed that there is significant positive relationship between capital adequacy ratio and financial performance of mid-tier commercial banks. In conclusion, it was found that capital adequacy ratio is among the main predictors of mid-tier commercial banks' financial performance.

Musyoka (2017) examines the effect of capital adequacy on the financial performance of commercial banks in Kenya. Capital adequacy is among the most regulated aspects in the banking industry across the world. All the three sets of Basel accords are anchored on Capital adequacy. Descriptive research design was adopted and the population was 42 commercial banks hence census survey was undertaken and secondary data was collected from financial statements of the target population. Linear regression analysis was adopted. The results established that the relationship between capital adequacy ratio of commercial banks and return on assets is negative and significant. Also, the relation between asset quality and ROA of the commercial banks is negative and insignificant while the relation between liquidity and ROA is positive and insignificant. The study concluded that capital adequacy significantly affects commercial banks financial performance.

Financial leverage is the use of fixed charge sources of funds to finance the firms' operations. A levered firm is a firm that employs debt in its capital structure. Excessive use of debt is likely to expose the firm to financial risk hence insolvency. Therefore, a firm should maintain an optimal capital structure that will minimise the overall cost of capital. This motivated Olang (2017) assessed the effect of financial leverage on the profitability of firms listed on the Nairobi Stock Exchange. Causal research design was employed on the target population of 66 listed firms. Purposive sampling technique was used to select a sample size of 30 listed firms. Data was analysed using descriptive and inferential statistics. Descriptive statistics was used to test for normality of data. Inferential statistics on the data were done using regression model. The study established that, firm size has a statistically significant effect on the profitability. Liquidity and growth opportunity on the other hand were insignificant. This means they have no

significant effect on the profitability of listed firms on the Nairobi Stock Exchange. Banks should avoid the excessive use of debt in financing the operations and in order to maximize profitability.

Radhe and Pratikshya (2017) examined the effect of capital adequacy and cost income ratio on the performance of Nepalese commercial banks. Data were extracted from annual reports of selected 20 Nepalese commercial banks and bank supervision reports published by Nepal Rastra Bank, covered the period of 2009 to 2015 leading to a total of 120 observations. The linear regression model was adopted. Results showed that there is positive relationship of bank size with return on assets. It was observed that the higher the equity capital to total assets, the lower would be the return on assets. Similarly, the study observed that there is a negative relationship of cost income ratio and liquidity ratio with return on equity. This indicates that the higher the liquidity ratio, the lower would be the return on equity. Also, study reveals that capital adequacy ratio, liquidity ratio, cost income ratio, and equity capital to total assets has negative impact on return on assets. Banks should maintained appropriate expenses and adequate capital base.

Apere (2016) empirically investigated the relationship between capital adequacy of banks and return on assets of banks in Nigeria over the period 2001 to 2014. Using secondary data obtained from the Central Bank of Nigeria (CBN) statistical bulletin (2014) and World Bank (2015). Descriptive statistic test and correlation tests were conducted to ascertain the strength of relationship and it was observed that all the variables were stationary at their first differences, using the Phillip-Perron unit root test, and having determined the stationarity of the variables we further employ the Johansen Co-integration test, the error correction model (ECM). The study revealed that there is a long-run significant positive relationship between capital adequacy and return on assets of banks in Nigeria over the period under review. Appropriate capital adequacy should be maintained in order to enhance banks' profitability.

Noman, Syeda, and Shahlal (2016) investigates the collision of leverage and liquidity on banks' profitability of the conventional banking sector of Pakistan. The major indicators of the financial performance of corporate entities are liquidity, leverage and profitability. Two independent variables i.e. leverage and liquidity was taken into consideration to find out the impact on dependent variable, i.e. bank's profitability. The sample chosen for this certain study is the three famous Pakistani conventional banks. The 10 years data was collected from annual reports and accounts of the 3 banks, i.e. Faysal Bank, Alfalah and MCB. Regression, correlation and t-statistics were used to analyse the data. The research results indicated that liquidity is insignificantly positively related with profitability and leverage is significantly negatively correlated with profitability. Focusing on liquidity and profitability will help banks to enhance their stability.

Rudin, Djayani and Vita (2016) analyzed the effect of leverage and liquidity simultaneously on profitability of public real estate and property firms in Indonesian stock exchange within the period of 2005 until 2010. Based on purposive sampling technique, 43 companies were used as research population, since 16 companies provide a comprehensive and complete financial report within the period of research. The data was analyzed using SPSS version 16 with multiple linear regression test. The result showed that leverage and liquidity simultaneously have significant effect on profitability, while individual effect of liquidity on profitability was not significant but leverage had a significant effect on profitability. Leverage and liquidity should be maintained at level to increase profitability.

Umoru and Osemwegie (2016) carried out a research titled "Capital adequacy and financial Performance of Banks in Nigeria: Empirical Evidence Based on the FGLS Estimator" They examined the degree of significance of the capital adequacy ratio in influencing the financial performances of Nigerian banks by applying the feasible GLS estimator technique on the pooled panel model for the period of 2007 to 2015. Data were obtained from CBN statistical bulletin and annual reports and accounts of eight selected Nigerian deposit money banks. Empirical evidence supports the overriding impact of capital adequacy in enhancing the financial performances of Nigerian banks. Nevertheless, the impact of the estimated capital adequacy is below 30%. The policy stance of the empirics holds thus that depositor's money in the banking sector has not been absolutely assured. Hence, the deposit money banks might not be able to fulfill their liabilities and risk. Their study did not extend to 2017 and is not focus on model comparison prediction.

The capital base of ₦2 billion has become grossly inadequate to meet domestic and global realities in the financial system and has been upwardly reviewed to ₦25 billion. This prompted Agbeja, Adelokun, and Olufemi (2015) to examine whether or not capital adequacy ratio affects bank profitability, they analyzed the effect of loans and advances on bank profitability as well as the impact of capital adequacy ratio on banks' exposure to credit risk. They utilized secondary data covering five years financial statement taking case studies of five selected commercial banks. The positive and significant relationship between capital adequacy and bank's profitability suggested that banks with more equity capital are perceived to have more safety and such advantage can be translated into higher profitability. The higher the capital ratio, the more profitable a bank will be. The studied sample was not robust enough to provide empirical evidence and relationship was measured instead of impact by implication their findings was not in line with their title.

Akani and Anyike (2015) examined the econometrics analysis of capital adequacy ratios and the

impact on the profitability of commercial banks in Nigeria from 1980 – 2013. Time series data were sourced from Stock Exchange fact book and financial statement of quoted commercial banks and the Johansen co-integration techniques in vector error correction model setting (VECM) as well as the granger causality test were employed. The study has Return on Asset (ROA), Return on Investment (ROI) and Return on Equity (ROE) as the dependent variables and the independent variables are Adjusted Capital to Risk Asset Ratio (ACRR). The empirical result demonstrated vividly in the models that there is a positive long run dynamic and significant relationship between return on asset and capital to risk asset ratio and capital to deposit ratio while others are negatively correlated.

Eyo and Offiong (2015), carried out a study titled "effect of capital adequacy on the performance of Access Bank Plc. from 1999 to 2012" The study focused more on the influence of capital adequacy on the bank's profitability. Data sourced from annual report of Access Bank Plc. for the years under scope, CBN statistical bulletin was analyzed using the desk survey. Analytical technique employed is the multiple regression method. Empirical analysis indicates that there is no significant relationship between core capital and the profitability of Access Bank Plc. and also that there is a significant relationship between supplementary capital and the profitability of Access Bank Plc.

Kunga (2015) sought to establish the relationship between financial leverage and profitability of firms listed at the Nairobi Securities Exchange (NSE). Descriptive research design and 47 listed firms on the NSE for the past five years were used; secondary data were obtained for the period 2010-2015. Data was analyzed using descriptive statistics, correlation analysis and regression analysis. The results indicated that liquidity and financial leverage depicted a negative relationship with return on asset. From the results obtained it is evident that financial leverage does not contribute to profitability of the firm. This is because when a firm borrows more from its creditors then the firm has to pay more amount of cost of debt to the creditor which is the interest rate. This leads to less net income for the firm and hence lower profitability.

Bogdan and Iulian (2014) assessed the main determinants of banks' profitability in five selected Central Europeans East (CEE) countries over the period from 2004 to 2011. The sample contains 143 commercial banks from Romania, Hungary, Poland, Czech Republic and Bulgaria. They used return on average assets, the return on average equity and net interest margin as proxy for banks profitability. The results showed that the empirical findings are consistent with the expected results. Management efficiency and capital adequacy growth influence the bank profitability for all performance proxies, while credit risk and inflation determine only the ROA and ROE. They noticed that banks with higher capital adequacy are more profitable. Higher capital adequacy should be maintained.

Adeyinka (2013) examined the effect of capital adequacy on profitability of deposit-taking banks in Nigeria. It sought to assess the effect of capital adequacy of both foreign and domestic banks in Nigeria and their profitability. The study presented primary data collected by questionnaires involving a sample of five hundred and eighteen (518) distributed to staff of banks with a response rate of 76%. Also, published financial statements of banks were used from 2006 to 2010. The finding from the primary data analysis revealed a non-significant relationship but the secondary data analysis showed a positive and significant relationship between liquidity, capital adequacy and profitability of bank. This implies that for deposit-taking banks in Nigeria, liquidity and capital adequacy play key role in the determination of profitability. It was discovered that liquidity and profitability are indicators of bank risk management efficiency and cushion against losses not covered by current earnings. The study would have adopted only quantitative data instead of employing primary and secondary data; this is a wrong instrumentation in research procedure.

The influence of liquid asset holdings on Iranian banks profitability is presented by Shahchera, (2012) study by using the Generalized Method of Moment (GMM), this study analyzed the profitability of listed banks using unbalanced panel data for the period 2002-2009, and used the liquid asset and liquidity asset- square for estimating liquid asset and profitability relationship. The estimated relationship between liquid assets and bank profitability is as predictable. Coefficients for the liquid assets ratio, its square, business cycle, regulation and its product of interaction business cycle and regulation are all statistically significant. The study found evidence of a non-linear relationship between profitability and liquid asset holdings. A substantial result of this study is that the business cycle significantly influences bank profits. The coefficient of regulation is negative and significant. It was recommended that regulators minimize the constraints imposed on banks' obtain profit.

The relationship between liquidity and profitability is presented by Saleem and Rehman (2011); secondary data and correlational studies was adopted The results revealed that there is a significant impact of liquid ratio on ROA while insignificant on ROE and ROI; the results also revealed that ROE is no significant affected by three ratios current ratio, quick ratio and liquid ratio while ROI is greatly affected by current ratios, quick ratios and liquid ratio. It suggested that banks should focus also on profitability ratios; it plays an important role in the financial positions of enterprises.

Okafor, Ikechukwu and Adebimpe (2010) estimated the effect of capital adequacy on bank earnings and profitability in Nigeria. Panel data were provided for a sample of 10 strong banks and 10 weak banks in the period 2000-2003 with the strong banks selected on the basis of the

first 20 companies listed with the highest market capitalization. With the aid of a least square dummy variable (LSDV) model, the study found that bank earnings is invariants to factors such as bank assets and bank size but highly driven by liquidity and capital adequacy. The fixed effect model showed the distinction between strong and weak bank does not hold as differential intercept dummy shows that the effect of capital adequacy on bank performance is stronger for weak banks than for strong banks.

Mathuva (2009) assessed the relationship between capital adequacy and profitability. Using the return on assets and the return on equity as proxies for bank profitability for the period 1998 to 2007, the study finds that bank profitability is positively related to the core capital ratio and the tier 1 risk-based capital ratio. This implies that an increase in capital may raise expected earnings by reducing the expected costs of financial distress, including bankruptcy. The study also establishes that there exists negative relationship between the equity capital ratio and profitability. The study also finds out that Kenyan banks are not competitive enough globally in terms of their efficiency as measured by the cost-income ratio (CIR). The study reveals that the CIR is inversely related to both bank profitability measures. The study also reveals that the CIRs of Kenyan banks are higher than those of developed countries.

Several studies on the relationship or influence of financial soundness indicators or capital requirements on financial performance of banks have been conducted locally and internationally by different scholars with divergent views. Majorities of these empirical studies are with diverse findings and conclusions, that is, some discovered a positive impact or relationship, a few others discovered a negative impact or relationship; others discovered no impact or relationship at all. Again the techniques applied in the analysis are also varied and the extent of work done is without consensus, while the methodologies adopted are not sufficient to cross-examine research data. Based on empirical literatures reviewed no studies in Nigeria had considered or looked at the contributions of financial soundness capital, leverage, liquidity based indicators on Nigeria deposit money banks' financial performance on a stand-alone comparison or evaluation among regional, national and international banks.

Hence, this study tries to fill the gap by investigating the contributions of financial soundness capital, leverage and liquidity based indicators on Nigeria deposit money banks' financial performance. This research work also gives attention to IMF financial soundness indicators framework, Basel Committee for Banking Supervision (BCBS) framework, CBN prudential guidelines, relevant theories, variables and methodology in order to have good external validity.

### 3. Methodology

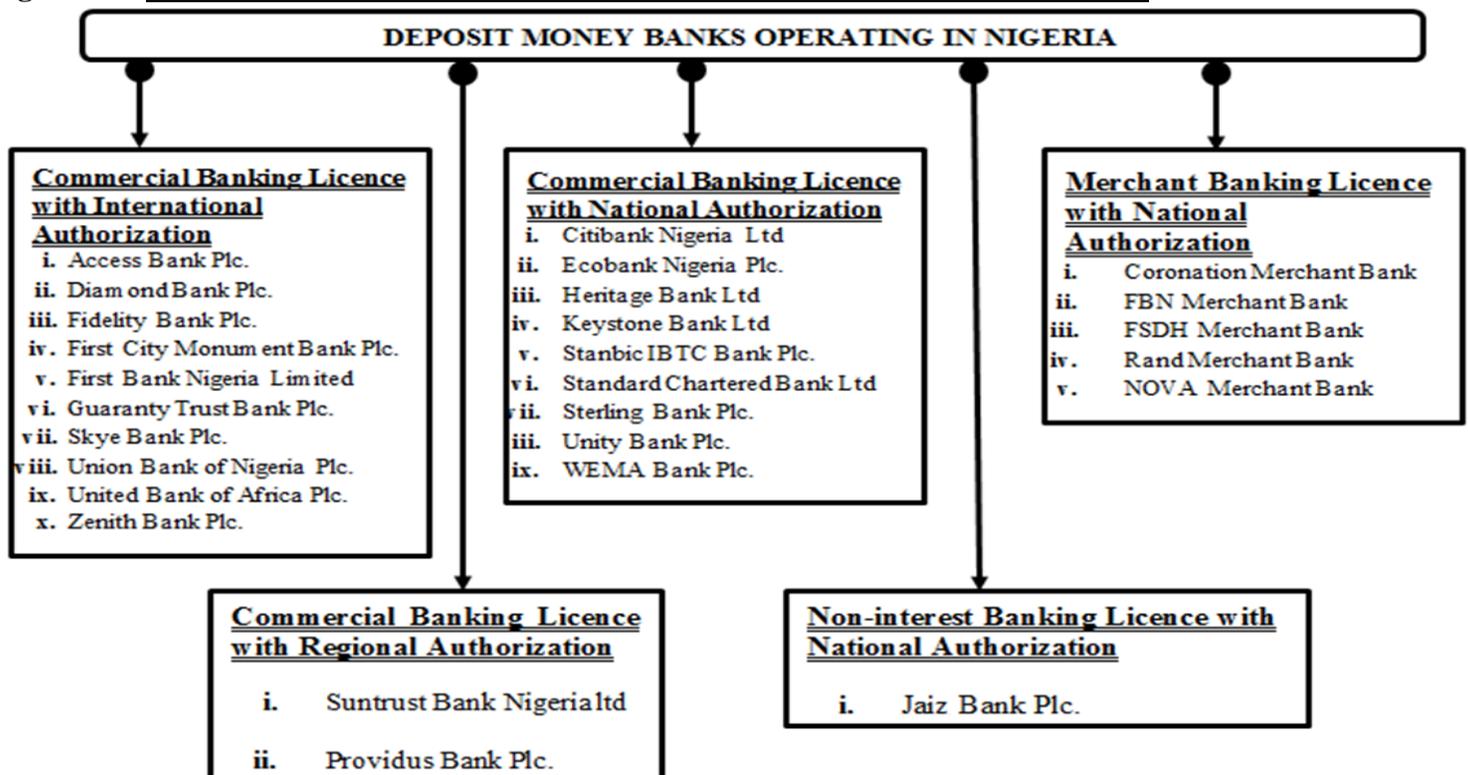
#### 3.1 Research Design

This research work adopted an ex-post facto (causal-comparative) research design. This design is very appropriate where it is not possible for the researcher to directly manipulate the independent variable, (Onyeizugbe, 2013). This study was carried out in Nigeria. The population of this study consist of all the twenty-seven (27) Nigeria Deposit Money Banks licensed by Central Bank of Nigeria (CBN) and insured by Nigerian Deposit Insurance Corporation (NDIC). This sector is selected because they serve as the engine room of Nigeria economy and make funds available from surplus units of the economy to deficits units and any financial shock or crises that affect this sector will lead to systemic collapse of the entire economic system. The non-probability method of sampling technique was adopted, that is, convenience sampling method. The rationale for choosing the deposit money banks is the fact that the selected banks have survived the global economic meltdown, banking sector reforms; CBN financial stress test and availability of financial statements for the period (i.e. 2010-2017) under investigation were yardsticks or benchmarks.

We also adopted the sampling method of Tabachnick and Fidell (2007) in determining our pooled sample size (n), that is, number of observations, that is,  $n \geq 50 + 8m = 50 + 8(3) = 74$ , that is, our sample size (that is, pooled regression observations) should not be less than 74. In order to have a good regression analysis result or good fit. M represents number of explanatory variables in the model. The instrument is valid and reliable since they have been signed by the management of the firms, approved by the security and exchange commission, and other scholars have used the annual audited financial statements to carry out related study, therefore the instrument is deemed to be valid.

The sector was categorized into international, national and regional Nigeria deposit money banks (DMBs); this nomenclature was adopted because of capital adequacy ratio requirements of 15% and 10% for international and other Nigeria deposit money banks which is contingent on the level of operations and financial stability or ability to withstand financial stress or shock. See Figure 3.1 for more details:

**Figure 3.1: Organogram of Twenty-seven Deposit Money Banks Operating in Nigeria**



Source: Researcher's concept (Central Bank of Nigeria, 2018).

**Table 3.2.: Selected Nigeria Deposit Money Banks Licensed by Central Bank of Nigeria**

S/N	Names of Bank	Categorisation
1	Access Bank Plc.	International
2	Diamond Bank Plc.	International
3	Fidelity Bank Plc.	International
4	First Bank Nigeria Limited	International
5	First City Monument Bank Plc.	International
6	Guaranty Trust Bank Plc.	International
7	Union Bank Of Nigeria Plc.	International
8	United Bank For Africa Plc.	International
9	Zenith Bank Plc.	International
10	Citibank Nigeria Limited	National
11	Ecobank Nigeria Plc.	National
12	Stanbic IBTC Bank Ltd.	National
13	Standard Chartered Bank Nigeria Ltd.	National
14	Sterling Bank Plc.	National
15	Unity Bank Plc.	National
16	Wema Bank Plc.	National

**Source:** Central Bank of Nigeria (2018).

### 3.3 Method of Data Analysis

The study adopted standardized multiple linear regression (Ordinary Least Square-OLS), Chow-test and Karl Pearson Product Moment Correlation Coefficient-(PPMCC) to analyse data via SPSS version 23. The study involved time series and cross-sectional data (that is, eight time series and sixteen banks which is one hundred and twenty-eight (128) observational pooled data). Our theoretical expectation (*Aprior*) that is,  $\beta_1, \beta_7, \beta_{10}, \beta_{13}, \leq 0$ , while  $\beta_2, \beta_3, \beta_4, \beta_5, \beta_6, \beta_8, \beta_9, \beta_{11}, \beta_{12}, \beta_{14}$  to  $\beta_{30} \geq 0$  and the data conformed to the standardized multiple linear regression assumptions that is, linearity, homoscedasticity, normality and independence of data. All plotted graphs are within the acceptable limits; that is, tolerance value is not less than 0.10 (10%), variance inflationary factor (VIF) is less than 10, otherwise possible multicollinearity;

Durbin Watson statistics is within the range of 1-3, (Gujarati, Porter & Gunasekar, 2012; Kothari, & Gaurav, 2014; Tabachnick & Fidell, 2007). The decision was based on 5% level of significant. Accept null hypothesis ( $H_0$ ) if probability value (i.e. P-value or Sig.) is greater than or equals to ( $\geq$ ) stated 5% level of significance ( $\alpha$ ); otherwise, reject and accept alternate hypothesis ( $H_a$ ), if p-value or sig calculated is less than 5% level of significance (Osisioma, Egbunike & Jesuwunmi, 2015).

### 3.4 Model specification and Variables Measurement

*Financial Performance (FP) = f (Financial Soundness Capital-based Indicators-FSCI)*

*Financial Performance* is a function of Financial Soundness Capital-based Indicators-FSCI

Introduce the surrogates (i.e. proxy variables).

$$FP-(ROA_{it}, ATO_{it}, AQ_{it}, ADER_{it}, ROE_{it}) = f(FSIV-CAR_{it}, LEV_{it}, LAR_{it}) \dots \text{eqn 3.4.1.}$$

Financial performance is proxy by ROA, AQ, ExpeR, ROE, while financial soundness capital-liquidity based indicator is proxy by CAR, LAR, LEV

$$ROA_{it} = \alpha_0 + \beta_1 CAR_{it} + \beta_2 LEV_{it} + \beta_3 LAR_{it} \dots \text{eqn. 3.4.2}$$

$$AQ_{it} = \alpha_1 + \beta_7 CAR_{it} + \beta_8 LEV_{it} + \beta_9 LAR_{it} \dots \text{eqn. 3.4.3}$$

$$ExpeR_{it} = \alpha_2 + \beta_{10} CAR_{it} + \beta_{11} LEV_{it} + \beta_{12} LAR_{it} \dots \text{eqn. 3.4.4}$$

$$ROE_{it} = \alpha_3 + \beta_{13} CAR_{it} + \beta_{14} LEV_{it} + \beta_{15} LAR_{it} \dots \text{eqn. 3.4.5}$$

**Note:** Equations 3.9.2 to 3.9.5 are pooled deterministic or mathematical models;

**Introduce the stochastic random variable (error term) into the model.**

$$\text{Log}ROA_{it} = \alpha_0 + \beta_1 \text{log}CAR_{it} + \beta_2 \text{log}LEV_{it} + \beta_3 \text{log}LAR_{it} + \epsilon_{it} \dots \text{eqn. 3.4.6}$$

$$\text{LogAQ}_{it} = \alpha_2 + \beta_4 \log \text{CAR}_{it} + \beta_5 \log \text{LEV}_{it} + \beta_6 \log \text{LAR}_{it} + \epsilon_{it} \dots \text{eqn. 3.4.7}$$

$$\text{LogExpeR}_{it} = \alpha_3 + \beta_7 \log \text{CAR}_{it} + \beta_8 \log \text{LEV}_{it} + \beta_9 \log \text{LAR}_{it} + \epsilon_{it} \dots \text{eqn. 3.4.8}$$

$$\text{LogROE}_{it} = \alpha_4 + \beta_{10} \log \text{CAR}_{it} + \beta_{11} \log \text{LEV}_{it} + \beta_{12} \log \text{LAR}_{it} + \epsilon_{it} \dots \text{eqn. 3.4.9}$$

**Note:** equation 3.9.6 to 3.9.9 are pooled log-log multiple linear regression or econometric models.

$$\text{ROA}_{it} = \alpha_5 + \beta_{13} \text{ICAR}_{it} + \beta_{14} \text{ILEV}_{it} + \beta_{15} \text{ILAR}_{it} + \epsilon_{it} \dots \text{eqn. 3.4.10}$$

$$\text{AQ}_{it} = \alpha_6 + \beta_{16} \text{ICAR}_{it} + \beta_{17} \text{ILEV}_{it} + \beta_{18} \text{ILAR}_{it} + \epsilon_{it} \dots \text{eqn. 3.4.11}$$

$$\text{ExpeR}_{it} = \alpha_7 + \beta_{19} \text{ICAR}_{it} + \beta_{20} \text{ILEV}_{it} + \beta_{21} \text{ILAR}_{it} + \epsilon_{it} \dots \text{eqn. 3.4.12}$$

$$\text{ROE}_{it} = \alpha_8 + \beta_{22} \text{ICAR}_{it} + \beta_{23} \text{ILEV}_{it} + \beta_{24} \text{ILAR}_{it} + \epsilon_{it} \dots \text{eqn. 3.4.13}$$

**Note:** Eqn.3.9.10 to 3.9.13 are multiple linear regression for international Nigeria deposit money banks.

$$\text{ROA}_{it} = \alpha_9 + \beta_{16} \text{NCAR}_{it} + \beta_{17} \text{NLEV}_{it} + \beta_{18} \text{NLR}_{it} + \epsilon_{it} \dots \text{eqn. 3.4.14}$$

$$\text{AQ}_{it} = \alpha_{10} + \beta_{22} \text{NCAR}_{it} + \beta_{23} \text{NLEV}_{it} + \beta_{24} \text{NLR}_{it} + \epsilon_{it} \dots \text{eqn. 3.4.15}$$

$$\text{ExpeR}_{it} = \alpha_{11} + \beta_{25} \text{NCAR}_{it} + \beta_{26} \text{NLEV}_{it} + \beta_{27} \text{NLR}_{it} + \epsilon_{it} \dots \text{eqn. 3.4.16}$$

$$\text{ROE}_{it} = \alpha_{12} + \beta_{28} \text{NCAR}_{it} + \beta_{29} \text{NLEV}_{it} + \beta_{30} \text{NLR}_{it} + \epsilon_{it} \dots \text{eqn. 3.4.17}$$

**Note:** models 3.4.14 to 3.4.17 are multiple linear regression or econometric models for national Nigeria deposit money banks.

**Table3.4: Variables measurement and nomenclature**

S/N	Names & Codes	Measurement	Variable type
1	Financial Performance-FP	FP=ROI, ATO, AQ, ADER, ROE	Latent-Endogenous
2	Return on Asset –ROA	ROA= Earnings before Interest Tax Depreciation Amortization(EBITDA) ÷ [Total Assets – current liability OR share capital + long-term liability ]	Observed/measured endogenous
3	Asset Quality-AQ	AQ= Non-performing loan/total loan	Observed/ explained
4	Expense-revenue	ExpeR= Amin expenses/gross income	Observed/ explained
5	Return on equity-ROE	ROE=Profit after tax/ No. outstanding ordinary share	Observed/ explained
6	Financial Soundness Capital-based indicators-FSCI	FSCI= CAR, LEV, LAR	Latent/hidden exogenous
7	Capital Adequacy Ratio-CAR	CAR= Total regulatory equity capital/risk weighted asset	Observed/measured exogenous
8	Leverage ratio (LEV)	LEV= debt/capital employed (net asset)	Observed exogenous
9	Liquidity asset ratio (LAR)	LAR=liquid asset/ total asset	Observed exogenous
10	$\beta_{1-24}$	Regression coefficient	Parameter
11	$\alpha_{0-12}$ (Gandia)	Intercept /constant term	Parameter
12	F	Functional notation	
13	I	Individual firms	
14	T	Time/ year	
15	N	Nigeria national deposit money banks	Added to variables
16	I	Nigeria international deposit money banks	Added to variables

**Source:** Researcher's literature review, 2017.

### 3.5 Justification for Model Estimation Technique

The panel data methodology was adopted because the study combined time series and cross-sectional data that is sixteen cross-sectional observations for each year and eight time series for each deposit money banks on regressor and explained variables, a

total of one hundred and twenty-eight pooled observations. A panel data set has multiple entities each of which has repeated measurements at different time periods. Panel data give more informative data, more degrees of freedom and more efficiency. They also provide ways of dealing with diverse data and examine

fixed and random effects on the longitudinal data (Gujarati, Porter, & Gunasekar, 2012).

The data for the research analysis is presented in a descriptive form for Nigerian deposit money banks (DMBs) for the period of eight years (i.e. 2010-2017) thus:

#### 4. Data Presentation and Analysis

**Table 4.1.1: Descriptive Statistics of Nigeria Deposit Money Banks Financial Ratios From 2010-2017.**

Variables	Minimum	Maximum	Mean (N=128)	Std. Deviation (N=128)
Capital Adequacy Ratio	.0202	.4383	.190146	.0598582
Liquid Asset Ratio	.8676	.9976	.953308	.0210423
Leverage Ratio	.4284	1.1339	.859591	.1089503
Return on Assets	.4742	.8820	.775028	.0697344
Return on Equity	.2537	.8680	.718063	.1058120
Asset Quality	.6437	.9731	.800141	.0704797
Expense-revenue	.5942	.9974	.937074	.0479278

**Source:** Researcher's Computation via SPSS version-23.

Table 4.1.1 shows the mean, minimum, maximum and standard deviation of the Nigerian deposit money banks' financial ratios for the period of eight years (i.e. 2010-2017). Capital adequacy ratio (CAR) ranges within 0.0202 to 0.4383 with the mean of 0.190146 and standard deviation of 0.0598582, liquid asset ratio (LAR), leverage ratio (LEV), return on assets (ROA), return on equity (ROE), asset quality (AQ) and Expense-revenue (Exper), had the mean of 0.953308, 0.859591, 0.775028, 0.718063, 0.800141 and 0.937074 respectively. Capital adequacy ratio had the least mean or average while liquid asset ratio had the highest value among the variables followed by expense-revenue

ratio; leverage, asset quality, return on assets and return on equity ratios ranked third, fourth, fifth and sixth respectively.

The CAR average is within the regulatory acceptable limit while the maximum and minimum CAR is above and below the Central Bank of Nigeria (CBN) stipulated limit. Leverage ratio is within the acceptable limit of Basel-III accord framework which stipulated at excess of 3% (i.e.  $LEV \geq 3\%$ ). However, liquidity ratio represented by liquid asset ratio (LAR) is greater than 80% stipulated by Central Bank of Nigeria this implies that there is need for optimum liquidity measure to prevent banks from excessive borrowing and risk exposure.

#### 4.2 Data Analysis

##### 4.2.1 Answer to Research Questions

- i. *What is the difference in the joint prediction of capital adequacy ratio (CAR), leverage ratio (LEV) and Liquid asset ratio (LR) on international and national Nigeria deposit money banks' return on asset (ROA)?*

**Table-4.2.1: Multiple regression analysis model summary of financial soundness surrogates' prediction on return on asset (ROA) of Nigeria deposit money banks (DMBs) from 2010-2017.**

Models	R	R <sup>2</sup>	Adj. R <sup>2</sup>	Std. Error of the Estimate
Pooled/Joint	.470	.221	.202	.0622840
International	.262	.069	.028	.0579930
National	.487	.237	.193	.0671047

**Source:** Researcher's computation using SPSS version-23

The multiple regression result of the study is presented in table 4.2.1. The regression result in Table 4.2.1 is run by taking ROA as explained variable and financial soundness surrogates (i.e. capital adequacy, liquid asset and leverage ratios) as regressors. The regression output reveals that the variation in the regressand is well explained by the predictors in the pooled model with R<sup>2</sup> and Adj.R<sup>2</sup> of .221 (22.1%) and .202 (20.2%) respectively. The unexplained variation in the pooled or joint

model, that is, error term or stochastic random variable ( $\epsilon$ ) had captured .798 or 79.8% variations. While the international and national models had explained the variations in explained variable (i.e. ROA) to the tune of 2.8% and 19.3% respectively; can we conclude that there is no significant difference in the model prediction? This prompts us to test for difference in model prediction.

- ii. *To what extent is the difference in the joint prediction of capital adequacy ratio (CAR), leverage ratio (LEV) and Liquid asset ratio (LR) on international and national Nigeria deposit money banks' asset quality (AQ)?*

**Table-4.2.2: Multiple regression analysis model summary of financial soundness surrogates' prediction on asset quality (AQ) of Nigeria deposit money banks (DMBs) from 2010-2017.**

Models	R	R <sup>2</sup>	Adj. R <sup>2</sup>	Std. Error of the Estimate
Pooled/Joint	.488	.238	.219	.0622676
International	.533	.284	.252	.0550208
National	.585	.342	.304	.0658159

**Source:** Researcher's computation using SPSS version-23

The multiple regression analysis is shown in table4.2.2. The regression result in Table4.2.2 is performed by taking AQ as regressand and capital adequacy, liquid asset and leverage ratios as regressors. The regression output reveals that the variation in the explained variable is well explained by the regressors in the pooled model with  $R^2$  and  $Adj.R^2$  of .238 (23.8%) and .219 (21.9%) individually. The unexplained variation in the pooled or

joint model, that is, error term or stochastic random variable ( $\epsilon$ ) had accounted for .781 or 78.1% variations. While the international and national models had explained the variations in explained variable (i.e. ROA) to the tune of 25.2% and 30.4% respectively; can we infer that the difference in model prediction is significant? This serves as stimuli for test of difference in model prediction.

- iii. *What is the difference in the joint prediction of capital adequacy ratio (CAR), leverage ratio (LEV) and Liquid asset ratio (LR) on international and national Nigeria deposit money banks' expenses-revenue ratio (ExpeR)?*

**Table-4.2.3: Multiple regression summary of financial soundness surrogates' prediction on expense-revenue (ExpeR) of Nigeria deposit money banks (DMBs) from 2010-2017.**

Models	R	R <sup>2</sup>	Adj. R <sup>2</sup>	Std. Error of the Estimate
Pooled/Joint	.263	.069	.047	.0467952
International	.395	.156	.119	.0219820
National	.247	.061	.007	.0671267

**Source:** Researcher's computation using SPSS version-23

The multiple regression result in Table4.2.3 is derived by taking Expenses-revenue as explained variable and financial soundness indicators as explanatory variable. The regression output shows that the variation in the explained variable is well explained by the regressors in the pooled model with  $R^2$  and  $Adj.R^2$  of .069 (6.9%) and .047 (4.7%) correspondingly. The unexplained variation in the pooled or joint model, that is, error

term or stochastic random variable ( $\epsilon$ ) had explained .953 or 95.3% variations. However the international and national models had explained the variations in regressand (i.e. ExpeR) to the tune of 11.9% and 0.07% separately; can we deduce that there is no difference in model prediction? This serves as spurs for test of difference in model prediction.

- iv. *To what extent is the difference in the joint prediction of capital adequacy ratio (CAR), leverage ratio (LEV) and Liquid asset ratio (LR) on international and national Nigeria deposit money banks' return on equity (ROE)?*

**Table-4.2.4: Multiple regression summary of financial soundness surrogates' prediction on return on equity (ROE) of Nigeria deposit money banks (DMBs) from 2010-2017.**

Models	R	R <sup>2</sup>	Adj. R <sup>2</sup>	Std. Error of the Estimate
Pooled/Joint	.542	.294	.276	.0900055
International	.357	.127	.089	.0769581
National	.548	.300	.260	.1041109

**Source:** Researcher's computation using SPSS version-23

The multiple regression result shown in Table4.2.4 is derived by taking return on equity (ROE) as regressand and financial soundness indicators as regressor. The regression result indicates that the variant in the regressand is well explained by the regressors in the pooled model with  $R^2$  and  $Adj.R^2$  of .294 (29.4%) and .276 (27.6%) respectively. The unexplained variation in the pooled or joint model, that is, error term or stochastic

random variable ( $\epsilon$ ) had accounted for .724 or 72.4% variations. Though the international and national models had explained the variations in explained variable (i.e. ROE) to the tune of 8.9% and 26% independently; can we assume that the difference in model prediction is not significant? This stimulates test for difference in model prediction.

- v. *What is the magnitude and direction of correlation between capital adequacy ratio (CAR) and Nigeria deposit money banks' return on asset (ROA)?*

**Table-4.2.5: Karl Pearson Product Moment Correlation Coefficient Statistics between capital adequacy ratio (CAR) and Nigeria deposit money banks' return on asset (ROA).**

	Return on assets (ROA)
Pearson Correlation-CAR	.123

**Source:** Researcher's computation using SPSS version-23

Table4.2.5 had shown the magnitude and direction of relationship or association between capital adequacy ratio-CAR and return on asset (ROA) of Nigeria deposit money banks. It was showed that there is positive relationship ( $R = .123$ ), that is

12.3%; this shown that there is relationship between the aforementioned variables. Can we conclude that there is insignificant relationship between the variables? This led us to test of hypothesis.

- vi. To what extent is the degree and direction of correlation between capital adequacy ratio (CAR) and Nigeria deposit money banks' asset quality (AQ)?

**Table-4.2.6: Karl Pearson Product Moment Correlation Coefficient Statistics between capital adequacy ratio (CAR) and Nigeria deposit money banks' asset quality (AQ).**

Pearson Correlation-CAR	Assets Quality(AQ)
	-.069

**Source:** Researcher's computation using SPSS version-23

Table4.2.6 had shown the magnitude and direction of relationship or association between capital adequacy ratio and asset quality (AQ) of Nigeria deposit money banks. It was showed that there is inverse or negative relationship ( $R = -.069$ ), that is -

6.9%; this shown that there is inverse or negative relationship between the aforementioned variables. Can we conclude that there is insignificant relationship between the variables? This led us to test of hypothesis.

### 4.3 Test of Hypotheses

- i. The difference in the joint prediction of capital adequacy ratio (CAR), leverage ratio (LEV) and Liquid asset ratio (LR) on international and national Nigeria deposit money banks' return on asset (ROA) is not significant.

**Table-4.3.1: The relative contributions of financial soundness' coefficients to return on asset (ROA) of Nigerian deposit money banks from 2010-2017.**

	Standardized Coefficients Beta			Pooled	T Internati onal	National	Pooled	Sig. Intern ational	Natio nal.
	Pooled	Internat ional	Natio nal						
(Constant)	.252	.246	-.041	-.368	.589	-.116	.714	.558	.908
Capital Adequacy Ratio	.037	-.036	.019	.459	-.302	.157	.647	.763	.876
Liquid Asset Ratio	.203	.090	.213	2.533	.735	1.753	.013	.465	.085
Leverage Ratio	.399	.221	.450	4.960	1.803	3.686	.000	.076	.001

**Source:** Researcher's computation using SPSS version-23

The result in Table4.3.1 showed the beta ( $\beta$ ) weights of estimates of the strengths of the causation. The entire financial soundness proxy variables shown to contribute differentially to return on asset (ROA) among Nigerian deposit money banks; for the pooled model prediction capital adequacy, liquid asset and leverage ratios had contributed to the variation in return on asset (ROA) thus,  $CAR-\beta = .037$  ( $t = .459, p = .647$ ), and  $LAR-\beta = .203$  ( $t = 2.053, p = .013$ ) and  $LEV-\beta = .399$  ( $t = 4.96, p = .000$ ), the contribution of CAR is positively insignificant whereas the independent contributions of LAR and LEV were positively significant to the prediction of Nigeria deposit money banks'

financial performance proxy by ROA. For international and national Nigeria deposit money banks coefficients' predictions only national deposit money banks' leverage ratio was positively significant [ $CAR-\beta = .019$  ( $t = .157, p = .876$ );  $LAR-\beta = .213$  ( $t = 1.753, p = .085$ ) and  $LEV-\beta = .450$  ( $t = 3.686, p = .001$ )] in the prediction of ROA. While the individual contribution of international deposit money banks coefficients' prediction were not significant [ $CAR-\beta = -.036$  ( $t = -.302, p = .763$ ), and  $LAR-\beta = .09$  ( $t = .735, p = .465$ ) and  $LEV-\beta = .221$  ( $t = 1.803, p = .076$ )] ROA's prediction.

**Table-4.3.2: ANOVA multiple regression model summary of financial soundness surrogates' prediction on return on asset of Nigeria deposit money banks (DMBs) from 2010-2017.**

Models	Adj. R <sup>2</sup>	Sum of square			df	Mean <sup>2</sup>		F	Sig.
		Reg.	Res.	Total		Reg.	Res.		
Pooled	.202	.137	.481	.618	(3, 124);127	.046	.004	11.734	.000
International	.028	.017	.229	.246	(3, 68);71	.006	.003	1.673	.181
National	.193	.073	.234	.307	(3, 52);55	.024	.005	5.382	.003

**Note:** Reg. = Regression; Res. = Residual;

**Source:** Researcher's computation using SPSS version-23

Table4.3.2 showed that the three explanatory variables (i.e. capital adequacy ratio, liquidity asset ratio and leverage ratio) pooled model jointly contributed significantly to the prediction of Return on Asset (ROA), [ $F(3, 124) = 11.734$ ,  $Adj.R^2 = .202$ ;  $P = .000$ ]. However, the remaining variation not explained by the joint contribution of the financial soundness surrogates might be accounted for by the effects of extraneous or stochastic random

variables. Therefore, the financial soundness proxy variables were significantly joint contributors to the prediction of Nigeria deposit money banks' financial performance as proxy by return on asset (ROA). Furthermore, the national and international deposit money banks' models jointly contributed significantly and insignificantly to the prediction of Return on Asset (ROA), [ $F(3, 52) = 5.382$ ,

Adj.R<sup>2</sup> = .193; P =.003] and [F (3, 68) = 1.673, Adj.R<sup>2</sup> = .028; P

=.181]; correspondingly.

**Table-4.3.3: Regression stability test of multiple regression contrast coefficients of Nigeria deposit money banks' financial soundness indicators and return on asset from 2010-2017.**

Source	Sum of Squares	df	Mean Square	F	Sig.
Contrast	.018	4	.005	1.178	.324
Error	.463	120	.004		

**Source:** Researcher's computation using SPSS version-23

We used regression stability test to determine the prediction or stability of coefficients of regressors after ordinary least square (OLS) is performed. Chow test using F-test estimation technique indicates that there is stability or no structural break for the variables under investigation. The Chow test results on the regressions of the national and international Nigeria deposit money banks financial soundness indicators and ROA are displayed in Tables4.3.3. The estimated statistics [F (4, 120) =1.178; p=.324] at 5% significance level. This implies that

the p-value is greater than 5%; we therefore accept the null hypothesis (H<sub>0</sub>) of no significant difference in the models' prediction of financial soundness surrogates on Nigeria national and international deposit money banks' return on asset-ROA. It was concluded that there is regression stability or financial soundness surrogates' coefficients are stable or no difference in the prediction of Nigeria deposit money banks' profitability and efficiency for eight years, that is, 2010-2017.

ii. *There is no significant difference in the joint prediction of capital adequacy ratio (CAR), leverage ratio (LEV) and Liquid asset ratio (LR) on international and national Nigeria deposit money banks' asset quality (AQ).*

**Table-4.3.4: The relative contributions of financial soundness' coefficients to asset quality of Nigerian deposit money banks from 2010-2017.**

	Standardized Coefficients Beta			Pooled	T		Pooled	Sig.	
	Pooled	Internatio nal	Nation al		Internati onal	Nationa l		Intern ational	National.
(Constant)	-.242	.278	-.644	-.963	.702	-1.878	.338	.485	.066
Capital Adequacy Ratio	-.162	-.266	.011	-2.03	-2.58	.094	.044	.012	.926
Liquid Asset Ratio	.270	.014	.419	3.42	.126	3.72	.001	.900	.000
Leverage Ratio	.389	.467	.436	4.89	4.35	3.85	.000	.000	.000

**Source:** Researcher's computation using SPSS version-23

The result in Table4.3.4 showed the beta (β) weights of estimates of the strengths of the causation. The entire financial soundness proxy variables shown to contribute differentially to asset quality-AQ among Nigerian deposit money banks; for the pooled model capital adequacy ratio, liquid asset and leverage ratios had contributed to the variation in asset quality thus, CAR-β = -.162 (t = -2.03, p = .044); LAR-β = .270 (t = 3.42, p = .001) and LEV-β = .389 (t = 4.89, p = .000), the contribution of CAR is negatively significant whereas the independent contributions of LAR and LEV were positively significant to the prediction of Nigeria deposit money banks'

financial performance proxy by asset quality. For international and national Nigeria deposit money banks coefficients' predictions were significant and insignificant, thus; [CAR-β = -.266 (t = -2.58, p = .012); LAR-β = .014 (t = .126, p = .900) and LEV-β = .467 (t = 4.35, p = .000)] in the prediction of AQ. While the individual contribution of national deposit money banks coefficients' prediction were significant [CAR-β = -.011 (t = .094, p = .926), and LAR-β = .419 (t = 3.72, p = .000) and LEV-β = .436 (t = 3.85, p = .000)] ROA's prediction.

**Table-4.3.5: ANOVA multiple regression model summary of financial soundness surrogates' prediction on asset quality (AQ) of Nigeria deposit money banks (DMBs) from 2010-2017.**

Models	Adj. R <sup>2</sup>	Sum of square			Df	Mean <sup>2</sup>		F	Sig.
		Reg.	Res.	Total		Reg.	Res.		
Pooled	.219	.150	.481	.631	(3, 124);127	.050	.004	12.903	.000
International	.252	.082	.206	.288	(3, 68);71	.027	.003	8.990	.000
National	.304	.117	.225	.343	(3, 52);55	.039	.004	9.024	.000

**Note:** Reg. = Regression; Res. = Residual;

**Source:** Researcher's computation using SPSS version-23

Table4.3.5 presented that the explanatory variables (i.e. capital adequacy ratio, liquidity asset ratio and leverage ratio) for pooled model jointly contributed significantly to the prediction of asset quality, [F (3, 124) = 12.90, Adj.R<sup>2</sup> = .219; P < .05]. However, the remaining variation not explained by the joint contribution of the financial soundness surrogates might be

accounted for by the effects of extraneous or stochastic random variables. Therefore, the financial soundness proxy variables were significantly joint contributors to the prediction of Nigeria deposit money banks' financial performance as proxy by asset quality (AQ). Furthermore, the national and international deposit money banks' models jointly contributed significantly to the prediction of

asset quality (AQ) thus, [F (3, 52) = 9.024, Adj.R<sup>2</sup> = .304; P < .05]

and [F (3, 68) = 8.99, Adj.R<sup>2</sup> = .252; P < .05]; respectively.

**Table-4.3.6: Chow test of multiple regression contrast coefficients of Nigeria deposit money banks' financial soundness indicators and asset quality from 2010-2017.**

Source	Sum of Squares	df	Mean Square	F	Sig.
Contrast	.050	4	.012	3.457	.010
Error	.431	120	.004		

**Source:** Researcher's computation using SPSS version-23.

Table 4.3.6 presents regression stability test in determining the prediction or stability of coefficients of explanatory variables after multiple linear regression analysis was performed. Chow test using F-test estimation technique indicates that there is structural break or no stability for the variables under investigation. The Chow test results on the regressions of the national and international Nigeria deposit money banks financial soundness indicators and asset quality are displayed in Tables4.3.6. The estimated statistics [F (4, 120) = 3.457; p = .010] at 5% significance

level. This implies that the p-value is less than 5%; we therefore accept the alternate hypothesis (H<sub>a</sub>) of significant difference in the models' prediction of financial soundness surrogates on Nigeria national and international deposit money banks' asset quality-AQ. It was concluded that there is no regression stability or financial soundness surrogates' coefficients are not stable or difference in the prediction of Nigeria deposit money banks' credit risk management and efficiency for eight years, that is, 2010-2017.

iii. **The difference in the joint prediction of capital adequacy ratio (CAR), leverage ratio (LEV) and Liquid asset ratio (LR) on international and national Nigeria deposit money banks' expenses-revenue ratio (ExpeRev) is not significant.**

**Table-4.3.7: The relative contributions of financial soundness' coefficients to expense-revenue of Nigerian deposit money banks from 2010-2017.**

	Standardized Coefficients			Pooled	T	National	Pooled	Internati onal	Sig.
	Pooled	Beta Internati onal	Nation al						
(Constant)	.579	.797	.551	3.06	5.035	1.577	.003	.000	.121
Capital Adequacy Ratio	-.157	-.208	-.167	-1.78	-1.86	-1.239	.077	.068	.221
Liquid Asset Ratio	.144	.014	.140	1.65	.118	1.040	.102	.906	.303
Leverage Ratio	.184	.340	.146	2.09	2.917	1.080	.039	.005	.285

**Source:** Researcher's computation using SPSS version-23

The result in Table4.3.7 showed the beta ( $\beta$ ) weights of estimates of the strengths of the causation. The entire financial soundness proxy variables shown to contribute differentially to expenses-revenue (Exper) among Nigerian deposit money banks; for the pooled model prediction capital adequacy, liquid asset and leverage ratios had contributed to the variation in expenses-revenue (Exper) thus, CAR- $\beta$  = -.157 ( $t$  = -1.78,  $p$  = .077), and LAR- $\beta$  = .144 ( $t$  = 1.65,  $p$  = .102) and LEV- $\beta$  = .184 ( $t$  = 2.09,  $p$  = .039), the contribution of CAR is negatively insignificant whereas the independent contributions of LAR and LEV were positively insignificant and significant to the prediction of Nigeria deposit money banks' financial performance proxy by

expenses-revenue respectively. For international and national Nigeria deposit money banks coefficients' predictions only international deposit money banks' leverage ratio was positively significant [CAR- $\beta$  = -2.08 ( $t$  = -1.86,  $p$  = .068); LAR- $\beta$  = .140 ( $t$  = 1.18,  $p$  = .906) and LEV- $\beta$  = .340 ( $t$  = 2.917,  $p$  = .005)] in the prediction of expenses-revenue. While the individual contribution of national deposit money banks coefficients' prediction were not significant [CAR- $\beta$  = -.167 ( $t$  = -1.239,  $p$  = .221), and LAR- $\beta$  = .140 ( $t$  = 1.040,  $p$  = .303) and LEV- $\beta$  = .146 ( $t$  = 1.080,  $p$  = .285)] in expenses-revenue's prediction.

**Table-4.3.8: ANOVA multiple regression summary of financial soundness surrogates' prediction on expense-revenue (Exper) of Nigeria deposit money banks from 2010-2017.**

Models	Adj. R <sup>2</sup>	Sum of square			Df	Mean <sup>2</sup>		F	Sig.
		Reg.	Res.	Total		Reg.	Res.		
Pooled	.047	.020	.272	.292	(3, 124);127	.007	.002	3.074	.030
International	.119	.006	.033	.039	(3, 68);71	.002	.000	4.203	.009
National	.007	.015	.234	.250	(3, 52);55	.005	.005	1.127	.347

**Note:** Reg. = Regression; Res. = Residual;

**Source:** Researcher's computation using SPSS version-23

Table4.3.8 showed the explanatory variables (i.e. capital adequacy ratio, liquidity asset ratio and leverage ratio) pooled model jointly contributed significantly to the prediction of expenses-revenue (Exper), [F (3, 124) = 3.074, Adj.R<sup>2</sup> = .047; P = .030]. However, the remaining variation not explained by the joint contribution of the financial soundness surrogates might be accounted for by the effects of extraneous or stochastic random

variables. Therefore, the financial soundness proxy variables were significantly joint contributors to the prediction of Nigeria deposit money banks' financial performance as proxy by expenses-revenue (Exper). Furthermore, the international and national deposit money banks' models jointly contributed significantly and insignificantly to the prediction of expenses-revenue (Exper), [F

**Table-4.3.9: Chow test of multiple regression contrast coefficients of Nigeria deposit money banks' financial soundness indicators and expense-revenue (Exper) from 2010-2017.**

Source	Sum of Squares	df	Mean Square	F	Sig.
Contrast	.004	4	.001	.490	.743
Error	.267	120	.002		

**Source:** Researcher's computation using SPSS version-23

We present regression stability test in Table 4.3.9 in order to determine the prediction or stability of coefficients of regressors after ordinary least square (OLS) is performed. The Chow test results on the regressions of the national and international Nigeria deposit money banks' financial soundness indicators on expense-revenue. The estimated statistics [F (4, 120) =.490; p=.743] at 5% significance level. This implies that the p-value is greater than 5%; we therefore accept the null hypothesis

(H<sub>0</sub>) of no significant difference in the models' prediction of financial soundness surrogates on Nigeria national and international deposit money banks' expense-revenue-Exper. It was concluded that there is regression stability or financial soundness surrogates' coefficients are stable or no difference in the prediction of Nigeria deposit money banks' efficiency for eight years, that is, 2010-2017.

iv. *There is no significant difference in the joint prediction of capital adequacy ratio (CAR), leverage ratio (LEV) and Liquid asset ratio (LR) on international and national Nigeria deposit money banks' return on equity (ROE).*

**Table-4.3.10: The relative contributions of financial soundness' coefficients to return equity (ROE) of Nigerian deposit money banks from 2010-2017.**

	Standardized Coefficients			T	Sig.
	Beta	Pooled	National		
(Constant)	-.481	-.278	-.236	-1.322	.665
Capital Adequacy Ratio	-.007	-.060	-.046	-.085	.693
Liquid Asset Ratio	.163	.125	.124	2.137	.293
Leverage Ratio	.505	.298	.545	6.591	.000

**Source:** Researcher's computation using SPSS version-23

The result in Table4.3.10 showed the beta ( $\beta$ ) weights of estimates of the strengths of the causality. The entire financial soundness proxy variables shown to contribute differentially to return on equity (ROE) among Nigerian deposit money banks; for the pooled model prediction capital adequacy, liquid asset and leverage ratios had contributed to the variation in return on equity (ROE) thus, CAR- $\beta$  = -.007 ( $t$  = -.085,  $p$  = .933), and LAR- $\beta$  = .163( $t$  = 1.049,  $p$  = .035) and LEV- $\beta$  = .505 ( $t$  = 6.591,  $p$  < .05), the contribution of CAR is negatively insignificant whereas the independent contributions of LAR and

LEV were positively significant to the prediction of Nigeria deposit money banks' financial performance proxy by ROE. For international and national Nigeria deposit money banks coefficients' predictions only leverage ratios was positively significant [CAR- $\beta$  = -.060 ( $t$  = -.524,  $p$  = .602; LAR- $\beta$  = .125( $t$  = 1.049,  $p$  = .298) and LEV- $\beta$  = .298 ( $t$  = 2.517,  $p$  = .014)] and [CAR- $\beta$  = -.046 ( $t$  = .397,  $p$  = .693), and LAR- $\beta$  = .124( $t$  = 1.063,  $p$  = .293) and LEV- $\beta$  = .545 ( $t$  = 4.665,  $p$  < .05)] in the prediction of ROE respectively.

**Table-4.3.11: ANOVA multiple regression of financial soundness surrogates' prediction on return on equity (ROE) of Nigeria deposit money banks (DMBs) from 2010-2017.**

Models	Adj. R <sup>2</sup>	Sum of square			Df	Mean <sup>2</sup>		F	Sig.
	Reg.	Reg.	Res.	Total		Reg.	Res.		
Pooled	.219	.150	.481	.631	(3, 124);127	.050	.004	12.903	.000
International	.089	.059	.403	.462	(3, 68);71	.020	.006	3.311	.025
National	.260	.242	.564	.806	(3, 52);55	.081	.011	7.442	.000

**Note:** Reg. = Regression; Res. = Residual;

**Source:** Researcher's computation using SPSS version-23

Table4.3.11 showed that the three explanatory variables (i.e. capital adequacy ratio, liquidity asset ratio and leverage ratio) pooled model jointly contributed significantly to the prediction of return on equity (ROA), [F (3, 124) = 11.734, Adj.R<sup>2</sup> = .202; P =.000]. However, the remaining variation not explained by the joint contribution of the financial soundness surrogates might be accounted for by the effects of extraneous or stochastic random variables. Therefore, the financial soundness proxy variables were

significantly joint contributors to the prediction of Nigeria deposit money banks' financial performance as proxy by return on asset (ROA). Furthermore, the national and international deposit money banks' models jointly contributed significantly and insignificantly to the prediction of Return on Asset (ROA), [F (3, 52) = 5.382, Adj.R<sup>2</sup> = .193; P =.003] and [F (3, 68) = 1.673, Adj.R<sup>2</sup> = .028; P =.181]; respectively.

**Table-4.3.12: Regression stability test (Chow test) of multiple regression contrast coefficients of Nigeria deposit money banks' financial soundness indicators and ROE from 2010-2017.**

Source	Sum of Squares	df	Mean Square	F	Sig.
Contrast	.038	4	.010	1.185	.321
Error	.966	120	.008		

**Source:** Researcher's computation using SPSS version-23

Table 4.3.12 presents Chow test using F-test estimation technique indicates that there is stability or no structural break for the variables under investigation. The Chow test results on the regressions of the national and international Nigeria deposit money banks financial soundness indicators on return on equity (ROE) are displayed in Tables 4.3.12. The estimated statistics [F (4, 120) = 1.185; p = .321] at 5% significance level. This implies that the p-value is greater than 5%; we therefore accept the null

hypothesis ( $H_0$ ) of no significant difference in the models' prediction of financial soundness surrogates of Nigeria national and international deposit money banks' return on equity-ROE. It was concluded that there is regression stability or financial soundness surrogates' coefficients are stable or no difference in the prediction of Nigeria deposit money banks' profitability and efficiency for eight years, that is, 2010-2017.

- v. *The magnitude and direction of correlation between capital adequacy ratio (CAR) and Nigeria deposit money banks' return on asset (ROA) is not significant.*

**Table-4.3.13: Karl Pearson Product Moment Correlation Coefficient Statistics between capital adequacy ratio (CAR) and Nigeria deposit money banks' return on asset (ROA).**

	Return on assets (ROA)
Pearson Correlation-CAR	.123
Sig. (2-tailed)	.165
N	128

**Source:** Researcher's computation using SPSS version-23

Table 4.3.13 had shown the magnitude and direction of relationship or association between capital adequacy ratio-CAR and return on asset-ROA of Nigeria deposit money banks. It was showed that there is insignificant statistical positive relationship ( $R = .284$ ;  $p = .165$ ), that is 28.4%; between capital adequacy ratio-CAR and return on asset. We therefore, accept the null

hypothesis ( $H_0$ ) and reject the alternate hypothesis ( $H_a$ ) and conclude that the degree and direction of relationship or association between return on asset (ROA) and capital adequacy ratio (CAR) among the Nigeria deposit money banks is statistically insignificant.

- vi. *The degree and direction of correlation between capital adequacy ratio (CAR) and Nigeria deposit money banks' asset quality (AQ) is not significant.*

**Table-4.3.14: Karl Pearson Product Moment Correlation Coefficient Statistics between capital adequacy ratio (CAR) and Nigeria deposit money banks' asset quality (AQ).**

	Assets Quality(AQ)
Pearson Correlation-CAR	-.069
Sig. (2-tailed)	.436
N	128

**Source:** Researcher's computation using SPSS version-23

Table 4.3.14 had shown the magnitude and direction of relationship or association between capital adequacy ratio-CAR and asset quality-AQ of Nigeria deposit money banks. It was showed that there is insignificant statistical inverse or negative relationship ( $R = -.069$ ;  $p = .436$ ), that is, -6.9%; between capital adequacy ratio and asset quality. We therefore, accept the null hypothesis ( $H_0$ ) and reject the alternate hypothesis ( $H_a$ ) and conclude that the degree and direction of relationship between asset quality (AQ) and capital adequacy ratio among the Nigeria deposit money banks is not statistically significant.

#### 4.4 Discussion of Findings

The outcomes of study shown that there is positive and negative impact or connection of financial soundness surrogates (capital adequacy ratio, liquid asset ratio and leverage ratio) and Nigeria international and national deposit money banks' profitability and efficiency proxies (return on asset, asset quality, expenses-revenue and return on equity) this was supported by the findings of (Claudiu, 2015; Godwin & Effiong, 2015; Kunga, 2015; Mathuva, 2009; Mhanna & Al-Ammar, 2017; Molefe & Muzindutsi, 2015; Vong & Anna, 2009). In overall there is no significant difference in models prediction between international

and national deposit money banks in Nigeria; except asset quality model prediction which showed significant difference in financial soundness prediction between Nigeria international and national deposit money banks.

Capital adequacy ratio had a negative influence on Nigeria deposit money banks' profitability surrogates; that is, asset quality ratio, expense-revenue and return on equity only the negative impact of CAR on asset quality is statistically significant this signifies that as capital requirement increases profitability decreases this result is consistent with the findings of (Asima, Mahmood, Raheel & Muhammad, 2017; Buehler, Samandari & Mazingo, 2009; Claudiu, 2015; Ikpefan, 2013; Mbella & Magloire, 2017; Soyemi, Akinpelu & Ogunleye, 2013) who established that capital adequacy measures and incremental capital raised lead to a reduction in banks' financial performance this result is not aligning with the findings of (Aruwa & Naburgi, 2014; Bogdan & Iulian, 2014; Ejoh & Iwara, 2014; Isanzu, 2017; Umoru & Osemwegie, 2016) their results revealed that capital adequacy ratio had exerted positive effect on banks' financial performance. But CAR had a positive insignificant impact on return on asset this finding was corroborated with the finding of

(Ejoh & Iwara, 2014; Fan & Yijun, 2014; Irwan, 2017; Isanzu, 2017) they concurred that empirical evidence supports the overriding positive impact of capital adequacy in enhancing the financial performances of banks.

Furthermore, leverage and liquidity (i.e. liquid asset ratios) were significantly joint contributors to the positive prediction of return on asset, asset quality, return on equity and expense-revenue, this results was supported by findings of (Adabenege & Lamidi, 2015; Adeyinka, 2013; Ahmad et al., 2018; Al-Khoury, 2011; Alshatti, 2015; Barus et al., 2017; Onyekwelu et al., 2018; Saleem & Rehman, 2011) they discovered that leverage and liquid asset ratios substantially influenced banks' financial performance but this deviate from the results of (Agbeja et al., 2015; Akinlo & Asaolu, 2012; Gweyi et al., 2018; Kan, 2016; Mucheru & Shukla, 2017; Olang, 2017; Rudin et al., 2016; Srinivasan & Britto, 2017; Tuffour et al., 2018; Valipour-Pasha & Arshadi, 2016) who reported that leverage and liquid asset ratios have no significant positive impact on banks' profitability. In addition, but the positive impact of liquid asset ratio was not significant on expense-revenue of Nigerian banks.

The relationship between capital adequacy ratio and return on asset is positive connoting that they move in the same direction; that is, has one increase or decreases the other respond in the same manner. This finding is substantiated by the results of (Adekunle, 2018; Agbeja, Adedokun, & Olufemi, 2015; Amahalu et al., 2017; Apere, 2016; Ejoh & Iwara, 2014; Kamande, 2017; Kipruto, Wepukhulu & Owino, 2017; Moussa & Mohamed, 2013; Odunayo & Oluwafeyisayo, 2015; Saheed, 2018; Torbira & Zaagha, 2016) they all reported that there is a positive relationship between capital adequacy ratio and banks' profitability. But this result did not aligned with the findings of (Aspal & Nazneen, 2014; Eyo & Offiong, 2015; Ijaz, Syed, & Khurram, 2013; Lemara, 2017; Musyoka, 2017) they reported that there is no correlation between capital adequacy and banks' profitability. There is inverse relationship between capital adequacy ratio and asset quality. That is the two variables move in opposite direction.

Finally our empirical results show that the prediction of financial soundness surrogates had moderately predicted the Nigerian deposit money banks' financial performance variables.

## 5. Summary of Findings, conclusion and recommendations

### 5.1 Summary of findings

Based on the analysis of data collected, the following findings were drawn:

- i. There is regression stability or financial soundness surrogates' coefficients are stable or no difference in the prediction of international and national Nigeria deposit money banks' return on asset (ROA) for eight years, that is, 2010-2017.
- ii. There is no regression stability of explanatory variables' coefficients or difference in the prediction of international and national Nigeria deposit money banks' coefficients on asset quality (AQ) for eight years, that is, 2010-2017.
- iii. There is regression stability of explanatory variables' coefficients or no difference in the prediction of international and national Nigeria deposit money banks' expense-revenue (ExpeR) for eight years, that is, 2010-2017.
- iv. There is no difference in the prediction of financial soundness indicators for international and national Nigeria deposit

money banks' return on equity (ROE) for eight years, that is, 2010-2017.

- v. The degree and direction of relationship or association between return on asset (ROA) and capital adequacy ratio (CAR) among the Nigeria deposit money banks is positively insignificant.
- vi. The degree and direction of relationship between asset quality (AQ) and capital adequacy ratio among the Nigeria deposit money banks is negatively insignificant.

### 5.2 Implications of Findings

From the empirical study we are able to gather that financial soundness surrogates have both positive and negative impact or relationship on Nigeria deposit money banks' financial performance proxies. Holding all other factors constant, marginal increase or decrease in capital adequacy, liquid asset and leverage ratios will lead to proportional increase or decrease in return on asset, asset quality, expenses-revenue and return on equity to the tune of (3.7%), (39.9%), (20.3%) for return on asset (ROA); (-16.2%), (38.9%), (27%) for asset quality (AQ); (-15.7%), (18.4%), (14.4%) for expense-revenue (ExpeR) and (-0.7%), (50.5%), (16.3%) for return on equity(ROE) which are specified in the pooled models respectively:

$$ROA_{it} = .252 + .037CAR_{it} + .399LEV_{it} + .203LAR_{it} + \epsilon_{it} \dots \text{eqn. 3.4.6}$$

this shows that CAR had insignificantly contributed positively to return on asset; the contributions of leverage and liquid asset ratios are significant and positive to variation in return on assets of Nigeria deposit money banks; this connotes that management of Nigeria deposit money banks may be using legitimate means to enhance their financial performance through relaxed credit policy and excessive asset portfolio risk thereby improving their overall profitability and efficiency. The pooled model-6 also represents the profitability trend prediction among Nigeria deposit money banks when used as a basis for comparison between international and national deposit money banks it indicates that there is no significant difference in the international and national model prediction; this implies there is stability or regression coefficients are stable over the period under investigation by extension the banks had been adopting the same pattern in the management of their leverage and liquid ratios.

$$AQ_{it} = -.242 - .162CAR_{it} + .389LEV_{it} + .270LAR_{it} + \epsilon_{it} \dots \text{eqn. 3.4.7}$$

the positive and significant contributions of leverage and liquid asset ratios to asset quality variation in the model symbolizes the management appetite for more risk taking, that is, the more core liquid assets and other forms of financing are available, the more management will be eager to be risk-seekers by giving out more loan but the significant negative effect of the capital adequacy ratio on asset quality will reduce the management appetite for taking more risk as the market capital requirement will limit and control the management to align with regulatory requirements or prudential financial guideline, this is in consonant with our theoretical framework adopted, that is, capital adequacy-risk theory and portfolio regulation theory. The pooled model-7 represents the trend in asset quality management practices among the Nigeria deposit money banks, there is a significant difference in model prediction between international and national Nigeria deposit money banks for the period of 2010-2017; this connotes that the stability in model coefficients' prediction had not been stable between the two classes of banks, this implies that some of

Nigeria deposit money banks had not been complying fully with the regulatory requirements.

$\text{Exp}R_{it} = .579 - .157\text{CAR}_{it} + .184\text{LEV}_{it} + .144\text{LAR}_{it} + \epsilon_{it}$ ...eqn.3.4.8 the expenses-revenue model-8 had shown that the capital adequacy ratio had an insignificant negative effect on expenses-revenue while the impact or effect of leverage and liquid asset ratios are positive only the leverage ratio was statistically significant. This implies that management have the preference in pursuing policies which maximize their utility rather than magnifying the shareholders returns; such utility entails satisfaction which management obtained from certain types of expenditure (expense account and other perquisites of office). So, management can borrow fund in order to pay salaries and allowances. By extension the pooled model-8 shown that there is no significant difference in models prediction indicating that the Nigeria deposit money had been employing the same pattern in management of administrative and personnel expenses. This aligned with our managerial discretion or theory of expense.

$\text{ROE}_{it} = -.481 + -.007\text{CAR}_{it} + .505\text{LEV}_{it} + .163\text{LAR}_{it} + \epsilon_{it}$ ...eqn.3.4.9 leverage and liquid asset ratios have positive impact on return on equity; only the impact of leverage ratio is statistically significant. The implication of significant contribution of leverage ratio to return on equity is that the management had been taking excessive assets portfolio risk or trading on equity in order to enhance or magnify shareholders returns on investment. The negative impact of capital adequacy ratio is not significant; but this implies that when firms' assets or funds are tie down it will not generate income for the organization, therefore, there is a need for efficient management of the banks' leverage and liquidity position from time to time (i.e. trade-off between capital adequacy ratio, liquidity, leverage and banks' profitability). Furthermore, this has been the common practice among the Nigeria deposit money banks since there is no significant difference in the international and national deposit money banks' model prediction.

Finally, the correlation or relationship between capital adequacy and return on assets is positive and insignificant compare to the association between capital adequacy ratio and asset quality which is inverse or negatively insignificant. These imply that ROA and CAR move in the same direction compare to AQ and CAR that move in opposite direction. By implication CAR enhances banks' profitability and control asset portfolio risk.

### 5.3 Conclusion

The stakeholders require guarantee that the bank will be run to their best interest and management will not pursue or maximize their utility at the expense of other stakeholders; this form the rationale why the capital requirement will check-make excessive leverage that can jeopardise the financial system. This would aid the development of banks in the long run. The theories used to a great extent explain the complexity and uniqueness of the study. Financial soundness indicators may vary from nation to nation due to diverse cultural backgrounds, socio-economic and political system and historical development. Therefore it is vital that a rounded recognition be given to financial soundness surrogates across banks in Nigeria that would bring about good financial performance.

Moreover, the Nigeria deposit money banks have undergone series of development since the introduction of Basel-III accord in 2005 the gradual implementation of which has led to

improved soundness and stability of Nigeria financial system. This is due to the enforcement of CAR (10% and 15%) and continuous reviews of banking capital base by CBN and NDIC. In addition, in terms of performance the adoption of financial soundness indicators have impacted positively and negatively on Nigeria deposit money banks' financial performance proxy by return on assets, asset quality, expense-revenue and return on equity. Leverage ratio and liquid ratio had positive and significant contribution to banks' financial performance. In addition, capital adequacy ratio, leverage ratio and liquidity asset ratio jointly affect the prediction of Nigeria deposit money banks' financial performance. Therefore this study concludes that apart from asset quality prediction; there is no significance difference or regression coefficients are stable in predicting Nigeria international and national deposit money banks' financial performance; by extension this connotes that the financial stability of Nigeria deposit money banks do not differ significantly within the period (2010-2017) under study.

### 5.4 Recommendations

Based on the empirical findings of the study, the following recommendations were submitted:

- i. Central Bank of Nigeria should relentlessly monitor capital adequacy ratio and established liquidity and leverage ratio ceiling that will restrain the quest for management's profit maximization and incentives for banks to game the regulatory framework.
- ii. Central Bank of Nigeria should constantly review and monitors the asset portfolio management of Nigeria deposit money banks, so that, excessive asset risk portfolio can be avoided, so that, depositors' funds will be safeguarded and the entire financial system will not experience another financial crunch.
- iii. Central Bank of Nigeria should develop a mechanism for personnel remuneration determination, control administrative expenses and management's excessive use of borrowed fund to settle recurrent expenditure.
- iv. Central Bank of Nigeria should establish a trade-off among liquidity, leverage and capital adequacy ratios; so that, fund will not be tied down or idle, shareholders' wealth will be maximize moderately and banks' asset will not largely depend on debt.
- v. Central Bank of Nigeria should create an optimum capital adequacy ratio that will guarantee efficient use of assets and reduce credit risk that will enhance Nigeria deposit money banks' financial performance.

### 5.5 Contribution to Knowledge

This study investigated the contribution of financial soundness surrogates on Nigerian deposit money banks' financial performance surrogates. The exceptionality of this study is that:

- i. The study revealed that a financial soundness or stability indicator as a concept cannot be explained with a single theory rather is the combination of theories (i.e. Capital adequacy-risk, portfolio regulation and managerial discretion) that can assist in explaining and comprehending the concept.
- ii. This research develops a conceptual model on financial stability theoretical framework in order to introduce significant insight from different fields, so that, the concept of financial soundness indicators can be properly understood.

iii. The study estimates the Nigeria deposit money banks' profitability and efficiency model which is proxy by return on asset, asset quality, expense-revenue and return on equity in order to establish the difference in prediction and validity of estimated model through F-test, t-test, Durbin Watson and Variance Inflationary Factor (VIF) statistics.

## 5.6 Suggestions for further study

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- The following suggestions were reached for further studies:
- i. Path analysis of financial soundness metrics on Nigeria deposit money banks' risk-return.
  - ii. Co-movement between capital-liquidity base indicators and Nigerian deposit money banks' credit risk management.
  - iii. Impact of Liquidity- Risk on Profitability of Nigerian Deposit Money Banks-DMBs.
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## International and National Deposit Money Banks (DMBs) Regression Results

### INTERNATIONAL Nigeria Deposit Money Banks DMBs-RETURN ON ASSET

Model Summary <sup>a</sup>				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.262 <sup>b</sup>	.069	.028	.0579930
a. Nigeria Deposit Money Banks = international DMBs				
b. Predictors: (Constant), Leverage Ratio, Capital Adequacy Ratio, Liquid Asset Ratio				

ANOVA <sup>a,b</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.017	3	.006	1.673	.181 <sup>c</sup>
	Residual	.229	68	.003		
	Total	.246	71			
a. Nigeria Deposit Money Banks = international DMBs						
b. Dependent Variable: Return on Assets						
c. Predictors: (Constant), Leverage Ratio, Capital Adequacy Ratio, Liquid Asset Ratio						

Coefficients <sup>a,b</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.246	.418		.589	.558
	Capital Adequacy Ratio	-.040	.132	-.036	-.302	.763
	Liquid Asset Ratio	.336	.457	.090	.735	.465
	Leverage Ratio	.265	.147	.221	1.803	.076

a. Nigeria Deposit Money Banks = international DMBs
b. Dependent Variable: Return on Assets

**National Nigeria Deposit Money Banks RETURN ON ASSET**

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.487 <sup>b</sup>	.237	.193	.0671047
a. Nigeria Deposit Money Banks = national DMBs				
b. Predictors: (Constant), Leverage Ratio, Liquid Asset Ratio, Capital Adequacy Ratio				

ANOVA <sup>a,b</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.073	3	.024	5.382	.003 <sup>a</sup>
	Residual	.234	52	.005		
	Total	.307	55			
a. Nigeria Deposit Money Banks = national DMBs						
b. Dependent Variable: Return on Assets						
c. Predictors: (Constant), Leverage Ratio, Liquid Asset Ratio, Capital Adequacy Ratio						

Coefficients <sup>a,b</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.041	.349		-.116	.908
	Capital Adequacy Ratio	.023	.144	.019	.157	.876
	Liquid Asset Ratio	.633	.361	.213	1.753	.085
	Leverage Ratio	.226	.061	.450	3.686	.001
a. Nigeria Deposit Money Banks = national DMBs						
b. Dependent Variable: Return on Assets						

SPLIT FILE OFF.

Chow Test Results for Return on Asset

UNIANOVA ROA BY g WITH CAR LAR LEV

/METHOD=SSTYPE(3)

/INTERCEPT=INCLUDE

/CRITERIA=ALPHA(0.05)

/DESIGN=G CAR LAR LEV G\*CAR G\*LAR G\*LEV

/LMATRIX'Chow Test' G 1-1; CAR\*G 1-1; LAR\*G 1-1; LEV\*G 1-1.

Univariate Analysis of Variance-Return on Asset

Between-Subjects Factors			
	Value	Label	N
Nigeria Deposit Money Banks	1	International DMBs	72
	2	National DMBs	56

Tests of Between-Subjects Effects					
Dependent Variable: Return on Assets					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	.155 <sup>a</sup>	7	.022	5.731	.000
Intercept	.001	1	.001	.138	.711
g	.001	1	.001	.269	.605
CAR	3.045E-5	1	3.045E-5	.008	.929
LAR	.010	1	.010	2.673	.105
LEV	.033	1	.033	8.610	.004
g * CAR	.000	1	.000	.104	.748
g * LAR	.001	1	.001	.250	.618
g * LEV	.000	1	.000	.054	.816
Error	.463	120	.004		
Total	77.503	128			

Corrected Total	.618	127		
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a. R Squared = .251 (Adjusted R Squared = .207)

## Custom Hypothesis Tests-ROA

Contrast Results (K Matrix) <sup>a</sup>			Dependent Variable
Contrast			Return on Assets
L1	Contrast Estimate		.286
	Hypothesized Value		0
	Difference (Estimate - Hypothesized)		.286
	Std. Error		.552
	Sig.		.605
	95% Confidence Interval for Difference		
	Lower Bound	-.806	
	Upper Bound	1.379	
L2	Contrast Estimate		-.063
	Hypothesized Value		0
	Difference (Estimate - Hypothesized)		-.063
	Std. Error		.195
	Sig.		.748
	95% Confidence Interval for Difference		
	Lower Bound	-.448	
	Upper Bound	.323	
L3	Contrast Estimate		-.297
	Hypothesized Value		0
	Difference (Estimate - Hypothesized)		-.297
	Std. Error		.593
	Sig.		.618
	95% Confidence Interval for Difference		
	Lower Bound	-1.471	
	Upper Bound	.877	
L4	Contrast Estimate		.039
	Hypothesized Value		0
	Difference (Estimate - Hypothesized)		.039
	Std. Error		.167
	Sig.		.816
	95% Confidence Interval for Difference		
	Lower Bound	-.292	
	Upper Bound	.370	

### a. Based on the user-specified contrast coefficients (L') matrix: Chow Test

## Final Chow Test Results for Return on Asset

Test Results					
Dependent Variable: Return on Assets					
Source	Sum of Squares	df	Mean Square	F	Sig.
Contrast	.018	4	.005	1.178	.324
Error	.463	120	.004		

## International Nigeria Deposit Money Banks DMBs- Return on Equity

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.357 <sup>b</sup>	.127	.089	.0769581

a. Nigeria Deposit Money Banks = INT'L DMBs
b. Predictors: (Constant), Leverage Ratio, Capital Adequacy Ratio, Liquid Asset Ratio

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.059	3	.020	3.311	.025 <sup>c</sup>
	Residual	.403	68	.006		
	Total	.462	71			
a. Nigeria Deposit Money Banks = INT'L DMBs						
b. Dependent Variable: Return on Equity						
c. Predictors: (Constant), Leverage Ratio, Capital Adequacy Ratio, Liquid Asset Ratio						

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.278	.554		-.502	.618
	Capital Adequacy Ratio	-.092	.175	-.060	-.524	.602
	Liquid Asset Ratio	.637	.607	.125	1.049	.298
	Leverage Ratio	.491	.195	.298	2.517	.014
a. Nigeria Deposit Money Banks = INT'L DMBs						
b. Dependent Variable: Return on Equity						

### National Nigeria Deposit Money Banks DMBs- Return on Equity

Model Summary <sup>a</sup>				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.548 <sup>b</sup>	.300	.260	.1041109
a. Nigeria Deposit Money Banks = national DMBs				
b. Predictors: (Constant), Leverage Ratio, Liquid Asset Ratio, Capital Adequacy Ratio				

ANOVA <sup>a,b</sup>						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.242	3	.081	7.442	.000 <sup>c</sup>
	Residual	.564	52	.011		
	Total	.806	55			
a. Nigeria Deposit Money Banks =national DMBs						
b. Dependent Variable: Return on Equity						
c. Predictors: (Constant), Leverage Ratio, Liquid Asset Ratio, Capital Adequacy Ratio						

Coefficients <sup>a,b</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.236	.542		-.436	.665
	Capital Adequacy Ratio	-.089	.224	-.046	-.397	.693
	Liquid Asset Ratio	.596	.560	.124	1.063	.293
	Leverage Ratio	.444	.095	.545	4.665	.000
a. Nigeria Deposit Money Banks = International DMBs						
b. Dependent Variable: Return on Equity						

SPLIT FILE OFF.

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/INTERCEPT=INCLUDE

/CRITERIA=ALPHA(0.05)  
 /DESIGN=G CAR LAR LEV G\*CAR G\*LAR G\*LEV  
 /LMATRIX'Chow Test' G 1-1; CAR\*G 1-1; LAR\*G 1-1; LEV\*G 1-1.

**Univariate Analysis of Variance-Return on Equity**

Tests of Between-Subjects Effects					
Dependent Variable: Return on Equity					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	.456 <sup>a</sup>	7	.065	8.081	.000
Intercept	.003	1	.003	.416	.520
g	2.203E-5	1	2.203E-5	.003	.958
CAR	.003	1	.003	.413	.521
LAR	.017	1	.017	2.068	.153
LEV	.120	1	.120	14.949	.000
g * CAR	8.535E-7	1	8.535E-7	.000	.992
g * LAR	1.875E-5	1	1.875E-5	.002	.962
g * LEV	.000	1	.000	.038	.845
Error	.966	120	.008		
Total	67.421	128			
Corrected Total	1.422	127			

a. R Squared = .320 (Adjusted R Squared = .281)

**Custom Hypothesis Tests for Return on Equity**

Contrast Results (K Matrix) <sup>a</sup>			
Contrast		Dependent Variable Return on Equity	
L1	Contrast Estimate	-.042	
	Hypothesized Value	0	
	Difference (Estimate - Hypothesized)	-.042	
	Std. Error	.797	
	Sig.	.958	
	95% Confidence Interval for Difference	Lower Bound	-1.621
		Upper Bound	1.537
L2	Contrast Estimate	-.003	
	Hypothesized Value	0	
	Difference (Estimate - Hypothesized)	-.003	
	Std. Error	.281	
	Sig.	.992	
	95% Confidence Interval for Difference	Lower Bound	-.560
		Upper Bound	.554
L3	Contrast Estimate	.041	
	Hypothesized Value	0	
	Difference (Estimate - Hypothesized)	.041	
	Std. Error	.857	
	Sig.	.962	
	95% Confidence Interval for Difference	Lower Bound	-1.655
		Upper Bound	1.738
L4	Contrast Estimate	.047	
	Hypothesized Value	0	
	Difference (Estimate - Hypothesized)	.047	
	Std. Error	.242	
	Sig.	.845	
	95% Confidence Interval for Difference	Lower Bound	-.431
		Upper Bound	.526

a. Based on the user-specified contrast coefficients (L') matrix: Chow Test

**Final Chow Test Results for Return on Equity**

Test Results					
Dependent Variable: Return on Equity					
Source	Sum of Squares	df	Mean Square	F	Sig.
Contrast	.038	4	.010	1.185	.321
Error	.966	120	.008		

**International Nigeria Deposit Money Banks DMBs- Asset Quality**

Model Summary <sup>a</sup>				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.533 <sup>b</sup>	.284	.252	.0550208
a. Nigeria Deposit Money Banks = INT'L DMBs				
b. Predictors: (Constant), Leverage Ratio, Capital Adequacy Ratio, Liquid Asset Ratio				

ANOVA <sup>a,b</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.082	3	.027	8.990	.000 <sup>c</sup>
	Residual	.206	68	.003		
	Total	.288	71			
a. Nigeria Deposit Money Banks = INT'L DMBs						
b. Dependent Variable: Asset Quality						
c. Predictors: (Constant), Leverage Ratio, Capital Adequacy Ratio, Liquid Asset Ratio						

Coefficients <sup>a,b</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.278	.396		.702	.485
	Capital Adequacy Ratio	-.323	.125	-.266	-2.577	.012
	Liquid Asset Ratio	.055	.434	.014	.126	.900
	Leverage Ratio	.607	.139	.467	4.354	.000

a. Nigeria Deposit Money Banks = INT'L DMBs					
b. Dependent Variable: Asset Quality					

**National Nigeria Deposit Money Banks DMBs- Asset Quality**

Model Summary <sup>a</sup>				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.585 <sup>b</sup>	.342	.304	.0658159

a. Nigeria Deposit Money Banks = national DMBs				
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b. Predictors: (Constant), Leverage Ratio, Liquid Asset Ratio, Capital Adequacy Ratio

ANOVA <sup>a,b</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.117	3	.039	9.024	.000 <sup>c</sup>
	Residual	.225	52	.004		
	Total	.343	55			
a. Nigeria Deposit Money Banks = national DMBs						
b. Dependent Variable: Asset Quality						
c. Predictors: (Constant), Leverage Ratio, Liquid Asset Ratio, Capital Adequacy Ratio						

Coefficients <sup>a,b</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.644	.343		-1.878	.066
	Capital Adequacy Ratio	.013	.142	.011	.094	.926
	Liquid Asset Ratio	1.317	.354	.419	3.719	.000
	Leverage Ratio	.231	.060	.436	3.849	.000
a. Nigeria Deposit Money Banks = International DMBs						
b. Dependent Variable: Asset Quality						

SPLIT FILE OFF.

UNIANOVA AQ BY g WITH CAR LAR LEV

/METHOD=SSTYPE(3)

/INTERCEPT=INCLUDE

/CRITERIA=ALPHA(0.05)

/DESIGN=G CAR LAR LEV G\*CAR G\*LAR G\*LEV

/LMATRIX'Chow Test' G 1-1; CAR\*G 1-1; LAR\*G 1-1; LEV\*G 1-1.

**Univariate Analysis of Variance**

Tests of Between-Subjects Effects						
Dependent Variable: Asset Quality						
Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	
Corrected Model	.200 <sup>a</sup>	7	.029	7.943	.000	
Intercept	.002	1	.002	.470	.494	
g	.011	1	.011	2.995	.086	
CAR	.010	1	.010	2.721	.102	
LAR	.021	1	.021	5.746	.018	
LEV	.097	1	.097	26.970	.000	
g * CAR	.012	1	.012	3.207	.076	
g * LAR	.017	1	.017	4.866	.029	
g * LEV	.019	1	.019	5.414	.022	
Error	.431	120	.004			
Total	82.580	128				
Corrected Total	.631	127				

a. R Squared = .317 (Adjusted R Squared = .277)

**Custom Hypothesis Tests**

Contrast Results (K Matrix) <sup>a</sup>		
Contrast		Dependent Variable
		Asset Quality
L1	Contrast Estimate	.922
	Hypothesized Value	0

	Difference (Estimate - Hypothesized)		.922
	Std. Error		.533
	Sig.		.086
	95% Confidence Interval for Difference	Lower Bound	-.133
		Upper Bound	1.976
L2	Contrast Estimate		-.336
	Hypothesized Value		0
	Difference (Estimate - Hypothesized)		-.336
	Std. Error		.188
	Sig.		.076
	95% Confidence Interval for Difference	Lower Bound	-.708
		Upper Bound	.036
L3	Contrast Estimate		-1.263
	Hypothesized Value		0
	Difference (Estimate - Hypothesized)		-1.263
	Std. Error		.572
	Sig.		.029
	95% Confidence Interval for Difference	Lower Bound	-2.396
		Upper Bound	-.129
L4	Contrast Estimate		.376
	Hypothesized Value		0
	Difference (Estimate - Hypothesized)		.376
	Std. Error		.161
	Sig.		.022
	95% Confidence Interval for Difference	Lower Bound	.056
		Upper Bound	.696

**a. Based on the user-specified contrast coefficients (L') matrix: Chow Test Asset Quality**

Test Results					
Dependent Variable: Asset Quality					
Source	Sum of Squares	df	Mean Square	F	Sig.
Contrast	.050	4	.012	3.457	.010
Error	.431	120	.004		

**Regression Expense-revenue**

**Nigeria Deposit Money Banks = international DMBs**

Model Summary <sup>a</sup>				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.395 <sup>b</sup>	.156		.0219820

a. Nigeria Deposit Money Banks =international DMBs

b. Predictors: (Constant), Leverage Ratio, Capital Adequacy Ratio, Liquid Asset Ratio

ANOVA <sup>a,b</sup>						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.006	3	.002	4.203	.009 <sup>c</sup>
	Residual	.033	68	.000		
	Total	.039	71			

a. Nigeria Deposit Money Banks = international DMBs

b. Dependent Variable: Expense-revenue

c. Predictors: (Constant), Leverage Ratio, Capital Adequacy Ratio, Liquid Asset Ratio

Coefficients <sup>a,b</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.797	.158		5.035	.000
	Capital Adequacy Ratio	-.093	.050	-.208	-1.857	.068
	Liquid Asset Ratio	.020	.173	.014	.118	.906
	Leverage Ratio	.163	.056	.340	2.917	.005

a. Nigeria Deposit Money Banks = internaational DMBs

b. Dependent Variable: Expense-revenue

## Nigeria Deposit Money Banks = National DMBs

Model Summary <sup>a</sup>				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.247 <sup>b</sup>	.061	.007	.0671267

a. Nigeria Deposit Money Banks = national DMBs

b. Predictors: (Constant), Leverage Ratio, Liquid Asset Ratio, Capital Adequacy Ratio

ANOVA <sup>a,b</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.015	3	.005	1.127	.347 <sup>c</sup>
	Residual	.234	52	.005		
	Total	.250	55			

a. Nigeria Deposit Money Banks = national DMBs

b. Dependent Variable: Expense-revenue

c. Predictors: (Constant), Leverage Ratio, Liquid Asset Ratio, Capital Adequacy Ratio

Coefficients <sup>a,b</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.551	.350		1.577	.121
	Capital Adequacy Ratio	-.179	.144	-.167	-1.239	.221
	Liquid Asset Ratio	.376	.361	.140	1.040	.303
	Leverage Ratio	.066	.061	.146	1.080	.285

a. Nigeria Deposit Money Banks = national DMBs

b. Dependent Variable: Expense-revenue

UNIANOVA Experev BY g WITH CAR LAR LEV  
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/INTERCEPT=INCLUDE  
 /CRITERIA=ALPHA(0.05)  
 /DESIGN=G CAR LAR LEV G\*CAR G\*LAR G\*LEV  
 /LMATRIX'Chow Test' G 1-1; CAR\*G 1-1; LAR\*G 1-1; LEV\*G 1-1.

**Univariate Analysis of Variance**

Between-Subjects Factors			
		Value Label	N
Nigeria Deposit Money Banks	1	National DMBs	72
	2	International DMBs	56

Tests of Between-Subjects Effects					
Dependent Variable: Expense-revenue					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	.025 <sup>a</sup>	7	.004	1.576	.149
Intercept	.023	1	.023	10.338	.002
g	.001	1	.001	.343	.559
CAR	.008	1	.008	3.383	.068
LAR	.002	1	.002	.773	.381
LEV	.007	1	.007	3.238	.074
g * CAR	.001	1	.001	.337	.562
g * LAR	.001	1	.001	.621	.432
g * LEV	.001	1	.001	.573	.450
Error	.267	120	.002		
Total	112.690	128			
Corrected Total	.292	127			

a. R Squared = .084 (Adjusted R Squared = .031)

**Custom Hypothesis Tests**

Contrast Results (K Matrix) <sup>a</sup>			
Contrast		Dependent Variable	
		Expense-revenue	
L1	Contrast Estimate		.246
	Hypothesized Value		0
	Difference (Estimate - Hypothesized)		.246
	Std. Error		.419
	Sig.		.559
	95% Confidence Interval for Difference	Lower Bound	-.585
		Upper Bound	1.076
L2	Contrast Estimate		.086
	Hypothesized Value		0
	Difference (Estimate - Hypothesized)		.086
	Std. Error		.148
	Sig.		.562
	95% Confidence Interval for Difference	Lower Bound	-.207
		Upper Bound	.379
L3	Contrast Estimate		-.355
	Hypothesized Value		0
	Difference (Estimate - Hypothesized)		-.355
	Std. Error		.451
	Sig.		.432
	95% Confidence Interval for Difference	Lower Bound	-1.247
		Upper Bound	.537
L4	Contrast Estimate		.096

Hypothesized Value		0
Difference (Estimate - Hypothesized)		.096
Std. Error		.127
Sig.		.450
95% Confidence Interval for Difference	Lower Bound	-.155
	Upper Bound	.348

a. Based on the user-specified contrast coefficients (L') matrix: Chow Test

Test Results					
Dependent Variable: Expense-revenue					
Source	Sum of Squares	Df	Mean Square	F	Sig.
Contrast	.004	4	.001	.490	.743
Error	.267	120	.002		

## Foreign Direct Investment and Nigerian Stock Exchange Market Capitalisation Indices

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### ABSTRACT

This study assessed the extent at which Foreign Direct Investment had contributed to the Nigerian Stock Exchange Market for the period of sixteen years (2000-2015). The problem is the mixed results or findings of previous studies on the effect of foreign direct investment on Nigerian Stock Exchange Market. Four hypotheses were formulated in line with the objectives of the study. Ex-post facto research design and time series data were adopted and data for the study were obtained from Central Bank of Nigerian Statistical Bulletin. Simple linear regression model analysis was applied to test hypotheses formulated with the aid of Statistical Package for Social Sciences (SPSS) version 23. Findings showed that Foreign Direct Investment contributes to the development of stock market in Nigeria and impacted on the total domestic savings. The study also revealed that Foreign Direct Investment has affected positively on securities indices in Nigerian Stock Market. Based on this, the study recommends among others that Nigerian government must ensure the protection of foreign investor's interest and assets from changing government policies.

**Key words:** Foreign Direct Investment & Market Capitalisation Indices.

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## 1. Introduction

The Nigerian capital market is a veritable instrument for promoting limitless wealth accumulation through investments (Adepetun, 2008; Alfaro, 2003; Al-Faki, 2006). However, in efficient capital markets, information is expected to be accurate because security prices react instantaneously to new information such that there are no opportunities for market participants to achieve abnormal returns consistently (Adelegan, 2003; Hadi, 2006). Stock exchange is an organized and regulated financial market where securities, bonds, notes, shares are bought and sold at prices governed by the forces of demand and supply. Stock exchanges basically serve as primary markets where corporations, governments, municipalities, and other incorporated bodies can raise capital by channeling savings of the investors into productive ventures; and secondary markets where investors can sell their securities to other investors for cash, thus reducing the risk of investment and maintaining liquidity in the system. Stock exchanges impose stringent rules, listing requirements, and statutory requirements that are binding on all listed and trading parties. Stock market on its side plays a significant role in the development of every economy's financial system and serves as an avenue for financing projects and investments capable of providing job opportunities, reducing poverty, and accelerating

economic growth. Stock markets are the best indicators to estimate future economic activity and stock exchange market health is also a measure of economic strength of a country (Raza, Iqbal, Ahmed, Ahmed & Ahmed, 2012).

Financial market and capital market are constituted whenever participants, with the aid of infrastructures, technology and other devices to facilitate the mobilization and channeling of funds into productive investment. Cosh, Hughes and Singh, (1992) asserted that the drive towards the establishment of stock markets in African countries during the last few decades may be linked to other important developments in the global economy. The financial markets of many advanced countries have undergone tremendous changes and become increasingly integrated. These changes have resulted from the operation of a number of interrelated factors. Such as; the progressive deregulation of financial markets both internally and externally in leading economies; the internationalization of these markets; the introduction of a number of financial products allowing riskier and bigger financial investments; and the emergence and the increasing role of new actors in the financial markets particularly, institutional investors.

However, Foreign Direct Investment (FDI) is that investment which gives foreign owners control over the behaviour of firms in which the investment is

made. One of the key motives for FDI is to globalize production and competition. A second reason is to move some production to more profitable locations. Firms in advanced countries have moved much of their labor-intensive production to developing nations where wages are lower. It is doubtful that many of today's poor countries could achieve sustained, rapid growth paths without a substantial amount of FDI brought in by transnational companies. Without FDI the transfer of technology, cross-border listing and foreign networking would be difficult to achieve (Isiaq & Oluwafemi, 2011).

According to Alfaro (2003), FDI has a negative effect on primary sector market capitalization but has positive effect on manufacturing sector market capitalization of the economy. However, FDI contributes positively to Nigerian securities market but its overall significant impact on economic may not have been fully ascertained (Ayanwale, 2007). In developed economies, FDI inflows can have a positive impact on the economy. Countries that have well established financial markets can achieve a lot more from FDI (Alfaro, Chanda, Ozcan & Sayek, 2004; Johnson, 2005). Capital markets in developing countries until the mid-1980s generally suffered from the classical defects of bank dominated economies that are shortage of equity capital, lack of liquidity, absence of foreign institutional investors, and lack of investor's confidence in the stock market.

It is a paradox however, that despite the hype of foreign public and private investments in Nigeria, the country has not witnessed a reasonable growth and development traceable to its capital market or securities market (Olugbenga & Obisesan, 2015). In Nigeria, largest share of the FDI goes to the oil sector. In fact, more than 60% of the FDI inflows into Nigeria are directed towards the extractive industry (i.e. primary sector) and Nigeria has been losing international market shares even in its traditional (agricultural) exports since the 1970s (Ogunmuyiwa, Onabanjo & Ogunleye, 2011). Also, the macroeconomic variables have not been always impressive. Example, the composite price index has increased from 117.9 in 2003 to 216 in 2009 (45% increase), the value of the Naira to the Dollar (the most traded foreign currency in Nigeria) has been depreciating from 128 Naira to 1 US dollar and 149 Naira to 1 US dollar in 2003 and 2009, respectively. Continuing, in this recent time, 2015-2016, Nigerian

currency has been depreciating from 150 – 400 Naira to 1 US Dollar (Central Bank of Nigeria, 2016, 2009).

In Nigerian experience, the FDI and financial development can make an impact over the economy; the liquidity of financial market can be a source for economic boom. Also, empirical evidence confirmed the positive impact of foreign direct investment on stock market in Nigeria and foreign countries (Beck & Levine, 2004; Capasso, 2006; Chee, Keon, Zulkornian, Siong & Venus, 2003; Donwa & Odi, 2010; Ibrahim, 2011; Ologude, Elumilade, & Asaolu, 2006; Olugbenga, & Obisesan, 2015). Their results show positive effect of foreign direct investment on stock market capitalization. However, some studies show that FDI does not have a direct significant positive influence over Nigerian securities market (Alfaro, 2003; Alfaro, Chanda, Ozcan & Sayek, 2004; Carkovic & Levine, 2002; Ugochuckwu, Okore & Onoh, 2013; Uremadu, 2010). As a matter of fact, the role of capital market as a veritable channel for foreign direct investment is yet to be fully ascertained. Although, studies on the effects of FDI on stock market development have been done extensively in most of the developed nations, this study stand as a result of the global financial crisis in 2007, which led to a rapid change in the world stock market, this however has led to series of challenges to the flow of FDI to developing countries from other highly developed countries.

Majority of the previous studies focused on foreign investment portfolio, private investment and stock market development; while few others focus on foreign direct investment, and Nigerian capital market development; the period they covered did not extend beyond 2010 (see, Baghebo & Edoumiekumo, 2012; Eniekezimene, 2013; Ezeoha, Ebele, & Ndi-Okereke, 2009; Haruna & Danja, 2012; Lawal & Okunola, 2012; Nyong, 1997; Osinubi, 2010; Ugochuckwu, Okore & Onoh, 2013; Uremadu, 2010). Olugbenga and Obisesan (2015) adopted market capitalisation for Nigerian capital market development did not consider other components of Nigerian Stock Exchange market capitalisation in their study, while the period they covered spanned from 1980 to 2010.

This indicates that the period covered by these studies did not extend to current economy and democratic era; the studies did not adopt securities (REIT), debt/bond, equities and total domestic saving as studied variables. From the researchers' best of knowledge, no study has worked on the effect of

foreign direct investment on Nigerian Stock Exchange market capitalisation indices which entails securities (other), equities, debt, bond, and domestic savings; this form the back drop upon which the study is set out to ascertain the extent foreign direct investment has contributed to stock market capitalization in Nigeria. The question is how has foreign direct investment affected Nigeria stock exchange capital market indices- that is, securities (real estate investment trust-REIT), debt/bond, equities and total domestic savings? This form the bases upon which the study intends to test the null ( $H_0$ ) hypotheses at 5% level of significant, thus:

- i.  **$H_0$ :** Foreign Direct Investment does not contribute significantly to the securities capitalisation in Nigeria stock exchange capital market.
- ii.  **$H_0$ :** Foreign Direct Investment does not contribute significantly to the debt/bond capitalisation in Nigeria stock exchange capital market.
- iii.  **$H_0$ :** Foreign Direct Investment does not contribute significantly to the equities capitalisation in Nigeria stock exchange capital market.
- iv.  **$H_0$ :** The effect of Foreign Direct Investment on total domestic saving in Nigeria is not significant.

The study would serve as a guide to the Federal and State government on the need to attract more foreign direct investment and sustaining the present

capital market in the country. Importantly, the study would help the Central Bank of Nigeria (CBN) and Nigerian Stock Exchange (NSE) to identify the strength and weakness of each capital market and hence adopt the policy that suits the economy best. This study will definitely enhance in identifying the criteria's to achieve growth and development of the economy, and will also serve as a guide to future researchers in terms of materials.

The scope of this study covered the effect of foreign direct investment (FDI) on Nigerian Stock Exchange market capitalization; for the periods of sixteen years, that is, 2000-2015 using Nigerian stock exchange market capitalization, indicators or indices (i.e. equities, debt/bonds, stock/securities, and total domestic savings, as the variables of the study).

The limitation of this study was that it focused only on capital market indices excluding gross domestic product. This might hinder the generalization of the findings on the whole Nigeria economy. This is because the gross domestic product focused on production capacity of Nigeria economy. Despite the limitation, the researchers were able to cover the objective of this study. Also in the view of the researcher, the gains of this study far overshadow the limitations. The rest of the study is divided into review of related literature, methodology, data presentation and analysis, summary of findings, conclusion, and recommendation.

## 2. Review of Related Literature

### 2.1 Conceptual Review

#### 2.1.1 Foreign Direct Investment (FDI)

FDI is an important source of stock market Development (SMD).It can also play its role in raising domestic savings in the country through creation of job and enhancement of technology transfer (Singh, 1997). Without FDI, it would be difficult to obtain such a large capital through the country's own domestic savings. Claessens, Djankor and Klingebiel, (2001), Kalim and Shahbaz (2009) found positive and statistically strong relationship between FDI and Stock Market Development (SMD). International Monetary Fund (IMF) (1985) stated that foreign Direct Investment is an investment made to acquire a lasting interest in a foreign enterprise with the purpose of

having effective voice in management. While Dunning (1993) describe it as an investment made by an investor based in a country to acquire assets in another country with the intention to manage the assets. Mwillima (2003) describe foreign direct investment as investment made so as to acquire a lasting management interest (for instance 10% of voting stocks) and at least 10% of equity shares in an enterprise operating in another country other than that of the investor's country. This investment involves not only the transfer of fund but also the transfer of physical capital, technique of production, managerial and marketing expertise, product advertising and business practice with the aim to make profit (Ehimare, 2011). The World Bank (1996) conceptualized foreign direct investment (FDI) as investment that is made to acquire a lasting management interest (usually 10% of

voting stock) in an enterprise and operating in a country other than that of the investors define according to residency of the investors purpose being an effective voice in the management of earning either long term capital or short term capital as shown in the nations balance of payments account statement.

Similarly, Odozi (2003) re-affirm that this foreign direct investment is divided into long-term and short-term capital. He further divided long-term capital into direct and indirect (portfolio) investment. However, Aremu (2003) sees foreign direct investment as investment in capital stock or asset of a country by another country or firm. An investment made by a company or entity based in one country, into a company or entity based in another country. Foreign direct investments differ substantially from indirect investments such as portfolio flows, wherein overseas institutions invest in equities listed on a nation's stock exchange. Entities making direct investments typically have a significant degree of influence and control over the company into which the investment is made. Open economies with skilled workforces and good growth prospects tend to attract larger amounts of foreign direct investment than closed, highly regulated economies.

### 2.1.2 Market Capitalization Indices

Market capitalization is the market value at a point in time of the shares outstanding of a publicly traded company, being equal to the share price at that point of times the number of shares outstanding. As outstanding stock is bought and sold in public markets, capitalization could be used as an indicator of public opinion of a company's net worth and is a determining factor in some forms of stock valuation. Market capitalization represents the aggregate value of stock or other securities such as; equities, debts, bonds, etc. it serves as key or indicates the directions of the stock exchange or capital market performances. It is obtained by multiplying the number of shares outstanding by their current price per share. For example, if XYZ company has 15,000,000 shares outstanding and a share price of \$20 per share then the market capitalization is  $15,000,000 \times \$20 = \$300,000,000$ .

Market capitalization is used by the investment community in ranking the size of companies, as opposed to sales or total asset figures. It is also used in ranking the relative size of stock exchanges, being a

measure of the sum of the market capitalizations of all companies listed on each stock exchange. In performing such rankings, the market capitalizations are calculated at some significant date, such as 30 June or 31 December. The stock market has helped government and corporate entities to raise long term capital for financing new projects, and expanding and modernizing industrial/commercial concerns (Nwankwo, 1991).

Empirical investigations on the possible relationship between stock market development and economic growth have been relatively limited, particularly regarding developing economies. Also, empirical research into this relationship for developing countries until recently has been dominated by cross-country studies, owing to the insufficient length of the available time series data (Adjasi & Biekpe 2006; Yartey & Adjasi 2007). This presumed relationship has generated its fair share of controversy within economic literature and there is need for further investigation to improve understanding of this link, owing to the importance of the stock market to investors (Jidefo, 2007).

### 2.1.3. Equities Market Capitalisation

A measure of the total market value of an equity market. The measure is calculated by taking the market capitalization of all companies in the equity market and adding them together to arrive at the capitalization for the market as a whole. The measure is used to compare the increase or decrease in the size of the market as a whole. The measure is also used to compare the value of the equity market to other segments of the economy, such as the value of the real estate market.

Market value of equity is the total Naira market value of all of a company's outstanding shares. For instance, market value of equity is calculated by multiplying the company's current stock price by its number of outstanding shares. A company's market value of equity is therefore always changing as these two input variables change. A company's market value of equity differs from its book value of equity, because the market value of equity does not consider the company's growth potential. Market value of equity is a synonym for market capitalization. It is used to measure a company's size and helps investors diversify their investments across companies of different sizes and different levels of risk.

### 2.1.4. Debt/Bond Market Capitalisation

The total market value of a debt/bond market. A bond (debt) in which a percentage of coupon payments is converted into capital (principal). In other words, the capital amount outstanding is increased over the bond's life. Eventually, the issuer (borrower) will repay the capitalized value of the debt/bond at maturity date. In this sense, the capitalized percentages constitute a form of debt owed by the issuer. Actually, such percentages entitle bondholders to receive compound interest in addition to the straightforward interest. Debt/bond market is a financial market where participants can issue new debt, known as the primary market, or buy and sell debt securities (i.e. existing or old ones), known as the secondary market. This is usually in the form of bonds, but it may include notes, bills, and so on. Its primary goal is to provide long-term funding for public and private expenditures. The bond market has largely been dominated by the United States, which accounts for about 44% of the market. As of 2009, the size of the worldwide bond market (total debt outstanding) is an estimated at \$82.2 trillion, of which the size of the outstanding U.S. bond market debt was \$31.2 trillion according to Bank for International Settlements (BIS), or alternatively \$35.2 trillion as of second quarter in 2011 according to Securities Industry and Financial Markets Association (SIFMA).

The bond market is part of the credit market, with bank loans forming the other main component. The global credit market in aggregate is about 3 times the size of the global equity market. Bank loans are not securities under the Securities and Exchange Act, but bonds typically are and are therefore more highly regulated. Bonds are typically not secured by collateral (although they can be), and are sold in relatively small denominations of around #1,000 to #10,000. Unlike bank loans, bonds may be held by retail investors. Bonds are more frequently traded than loans, although not as often as equity.

Government bonds are often used to compare other bonds to measure credit risk. Because of the inverse relationship between bond valuation and interest rates (or yields), the bond market is often used to indicate changes in interest rates or the shape of the yield curve, the measure of "cost of funding". The yield on government bonds in low risk countries such as the United States or Germany is thought to indicate a risk-free rate of default. Other bonds denominated in

the same currencies (U.S. Dollars or Euros) will typically have higher yields, in large part because other borrowers are more likely than the U.S. or German Central Governments to default, and the losses to investors in the case of default are expected to be higher. The primary way to default is to not pay in full or not pay on time.

### 2.1.5. Total/Gross Domestic savings

Total domestic saving is gross domestic product (GDP) minus final consumption expenditure. It is expressed as a percentage of GDP. Gross Domestic Saving consists of savings of household sector, private corporate sector and public sector. Gross domestic savings had followed a downward trajectory after 2008. The more concerning issue is the perceptible shift of investors' preference towards physical assets as compared to financial assets. This can be attributable to a rise in inflationary pressures. Gross capital formation is a function gross domestic savings. It also increases quantity of investment and improves that investment (Yartey, 2008). Liu and Garcia (1999) argued that the larger the domestic savings in the country results in higher amount of capital inflows through the stock markets. Kalim and Shahbaz (2009), Yartey (2008), Liu and Garcia (1999) found a positive significant relationship between domestic savings and stock market development. Naceur, Ghazouani, and Omran (2007) argue that economic growth is accelerated by financial development and financial development will ultimately increase savings rate. They conduct an empirical study by using a panel of 12 North African and Middle East countries and show that saving rate is a determinant of stock market development. Liu and Garcia (1999) argue that the low or smaller stock markets in Latin American countries are the result of low saving rate in those countries. Whereas the East Asian countries have better position of their stock markets due to usual high savings rate. Kalim and Shahbaz (2009) found statistically positive strong relationship between savings rate and stock market development.

## 2.2 Theoretical Framework

### 2.2.1 The Internalization Theory

This theory tries to explain the growth of transnational companies and their motivations for achieving foreign direct investment. The theory was developed by Buckley and Casson, in 1976 and then

by Hennart, in 1982 and Casson, in 1983. Initially, the theory was launched by Coase in 1937 in a national context and Hymer in 1976 in an international context. In his doctoral dissertation, Hymer identified two major determinants of FDI. One was the removal of competition. The other was the advantages which some firms possess in a particular activity (Hymer, 1976).

Buckley and Casson, who founded the theory demonstrates that transnational companies are organizing their internal activities so as to develop specific advantages, which then to be exploited. Internalization theory is considered very important also by Dunning (1973) who uses it in the eclectic theory, but also argues that this explains only part of FDI flows. Hennart (1982) develops the idea of internalization by developing models between the two types of integration: vertical and horizontal. Hymer is the author of the concept of firm-specific advantages and demonstrates that FDI take place only if the benefits of exploiting firm-specific advantages outweigh the relative costs of the operations abroad. According to Hymer (1976) the MNE appears due to the market imperfections that led to a divergence from perfect competition in the final product market. Hymer has discussed the problem of information costs for foreign firms respected to local firms, different treatment of governments, currency risk (Eden and Miller, 2004). The result meant the same conclusion: transnational companies face some adjustment costs when the investments are made abroad. Hymer recognized that FDI is a firm-level strategy decision rather than a capital-market financial decision.

This study anchored on Internalization Theory. This theory highlights two major determinants of FDI. One was the removal of competition and the other was the advantages which some firms possess in a particular activity (Hymer, 1976). The theory demonstrates that transnational companies are organizing their internal activities so as to develop specific advantages, which then to be exploited. The theory also focus on the concept of firm-specific advantages and demonstrates that FDI take place only if the benefits of exploiting firm-specific advantages outweigh the relative costs of the operations abroad and the same time discussed the problem of information costs for foreign firms respected to local firms, different treatment of governments, currency risk.

The study adopted this theory in the sense that it highlighted some of the issues that have been rolling around the FDI in Nigeria that can either favour the county or not, such as the costs and benefits associated with the FDI in a county.

### **2.3 Empirical Review**

Olugbenga and Obisesan (2015) examined the impact of foreign direct investment on Nigerian capital market development in Nigerian economy covering the period of forty years (1970-2010). The study adopted ADF unit root test and Johansen co-integration test to analyze the secondary data obtained from Central Bank of Nigeria statistical bulletin. The result shows that foreign direct investment impact positively and significantly on market capitalization and foreign direct investment is a significant determinant. However, the drawback in the study is the lack of co-integration and low beta weight suggest that emphasis on foreign direct investment as a way of stimulating long run growth in the developing country like Nigeria does not worthwhile. Another short fall of their study is that the statistical tools adopted was inappropriate and there is a lag of eight years in the period covered; variable used only focused on market capitalization not considering the individual difference of other components of Nigeria stock exchange market capitalisation.

Baghebo and Edoumiekumo (2012) used group unit root and Johansen co-integration test to examine the relationship between Foreign Private Capital Accumulation and Economic Development in Nigeria from 1970 to 2010. It was discovered that current and lagged FPI have positive impact on economic development. However, while the latter is statistically significant, the former is not. The study recommends among others that formulating policies that encourage such investment would be a way forward. Equally, Uremadu (2010) examined the impact of Foreign Private Investment on Capital Formation in Nigeria from 1980 to 2004 using Ordinary Least Square method. The result showed a negative influence of foreign exchange rate, gross national savings, inflation rate, debt service ratio, lending rate, exchange rate all discourage gross capital formation in Nigeria. However cumulative foreign private investment, index of energy consumption and banking system credit to domestic economy showed a positive influence.

Ugochuckwu, Okore and Onoh (2013), investigating the impact of foreign direct investment on the Nigerian economy from 1981 to 2009 employed Ordinary Least Square method in order to derive the relationship between them. The study found a positive but insignificant relationship between foreign direct investment and growth of Nigerian economy for the period studied and the same hold for interest rate while domestic investment is positive and significant. There exists a long run relationship between capital market and economic growth and bidirectional causation between gross domestic product and value of transactions while only market capitalization causes economic growth. In essence, capital market plays a significant positive role in economic development of less developed countries. However, Kolapo and Adaramola (2012) submitted that continuous flow of foreign investment to developing economies has not been able to solve problems confronting these countries. Osinubi (2010), used secondary data from 1970-2005 to assess the effect of foreign private investment on Nigerian economic growth. Empirical results show that foreign private investment, domestic investment growth and net export growth have significant positive impact on Nigerian economic growth. Haruna and Danja (2012) studied about Foreign Direct Investment and the Nigerian Economy using Ordinary Least Square method of data analysis. The result therefore revealed a positive relationship between FDI and those variables but FDI has not contributed much to the growth and development of the Nigerian economy.

Eniekezimene (2013) examined the impact of foreign portfolio investment on capital market growth: evidence from Nigeria. Ordinary Least Square method was used to analyze the data collected. It was revealed that foreign portfolio investment has a positive impact on capital market growth.

Oluwatoyin and Ocheja (2009) examine the impact of stock market earnings on income of the average Nigerian using time series data covering the period 1980-2007. Applying co-integration and error correction modeling to stock market performance and per capita income time series data, the findings indicated the separate roles played by the primary capital market and the secondary capital in market in the growth of stock market earnings that has impacted positively on Nigerian per capita income. By and large, the evidence from this study revealed that while

activities in the secondary capital market tend to grow the stock market earnings through its wealth effect that of the primary market ironically did not. Ezeoha, Ebele, and Ndi-Okereke (2009) investigated the nature of the relationship that exists between stock market development and the level of investment (domestic private investment and foreign private investment) flows in Nigeria. The authors discovered that stock market development promotes domestic private investment flows, thus suggesting the enhancement of the economy's production capacity as well as promotion of the growth of national output. However, the results show that stock development has not been able to encourage the flow of foreign private investment in Nigeria.

The theoretical work shows both negative and positive impact of foreign direct investment on stock market performance and economic growth (Nieuwerburgh, Buelens & Cuyvers, 2005); the studies reviewed gives us very strong positive evidence that the stock market development produce economic growth in a country. All studies have a concession that FDI is attracted more to countries that are less risky for investment and countries with good institutions and fuels the development of the stock market through different channels.

However, Raza, e tal., (2012) work revealed that there is positive significant impact of FDI on Stock market development in Pakistan. With one percent increase in FDI, this will result in approx. 70% increase in stock market development. While discussing other variables, domestic savings can have a positive significant impact, exchange rate can have a negative significant impact and while inflation can have an insignificant impact over stock market development. The study of Haruna and Danja (2012) revealed a positive relationship between FDI and those variables but FDI has not contributed much to the growth and development of the Nigerian economy. Based on the above, FDI and the stock market are complementary not substitute.

In a contrary view, Fernandez-Arias (1996) emphasized that FDI tends to be larger in countries that are riskier, financially underdeveloped and institutionally weak. Although, research on the effects of FDI on stock market development and economic growth have been done extensively in most of the developing nations, it is of great privilege to state that no study has worked extensively on the effect of

foreign direct investment on Nigerian Stock Exchange Market Capitalisation Index in Nigeria after the global financial crisis which is the aim of this study. The review of the above literature suggest us the role of FDI in developing stock markets of different countries in different areas of the world. Our study seeks to fill any gap in literature because in past ten to fifteen years major political and economic changes occurred in Nigeria so these changes have a very significant effect on its economy measures.

The majorities of the empirical studies reviewed covered stock market development and are with diverse conclusions. Again the methodologies applied in the analysis are also diverse. The time frames for most of the studies are not current. Also the period studied did not include the economic reform period of such countries. Even the extent of work done is without consensus, while the methodologies adopted are not appropriate to cross-examine time series data and most of research studies do not have theoretical framework. Hence, this study tries to fill the gap in research by assessing the impact of FDI on Nigerian stock exchange market capitalisation. This research work also gives attention to relevant theory; methodology and extension of studied population to cover all the firms listed on Nigerian stock exchange market using aggregate data in order to have good generalisation.

**3. Methodology**

**3.1 Research Design**

This research relied heavily on secondary data. Basically, data were obtained from the CBN Statistical Bulletin. Therefore, the research or the study adopts ex post-facto (causal-comparative)

**3.2 Econometric Model for Foreign Direct Investment:**

Market-Capitalisation-MKD=f(FDI).....eqn. 3.2.1

**Equation-3.2.1** is a functional notation of foreign direct investment effect on Market Capitalisation index (market capitalization indicators).

Introduce the Market Capitalisation index (market capitalization indicators) proxy variables (i.e. equities-Eq, stock/securities-SS, total domestic saving-TDS, and debt/bond-DB)

$Eq_t = \beta_0 + \beta_1 FDI_t$ .....eqn. 3.2.2

$SS_t = \gamma_1 + \beta_2 FDI_t$  .....eqn 3.2.3

research design. The population of this study involves one hundred and eighty-six (186) firms that are listed on Nigerian Stock exchange. The element of the population consists of the indicators on the variables that measured Nigerian Foreign Direct Investment and stock market capitalisation. Since the aggregate data will be obtained from Central Bank of Nigeria Statistical bulletin the study will adopt all the firms or companies listed on the Nigerian Stock Exchange. Therefore, there will be no need for sample size and sampling technique.

The time series data collected were analyzed, using descriptive and inferential statistics, the descriptive statistic adopted was mean and standard deviation while the inferential statistics was simple linear regression analysis (ordinary least square method-OLS) to determine the significant effect among the variables. This was done with aid of the Statistical Package for Social Sciences (SPSS) version-23. There is no violation of data assumption and diagnostic test, that is, histogram for normality, linearity, independence, and homoscedastic of data. The decision for the hypotheses is to accept the alternative hypotheses (H<sub>a</sub>) if the probability value (P-value) calculated is less than 5% level of significance or reject and accept the null hypothesis(H<sub>0</sub>) if probability value calculated is equals to or greater than 5% level of significance (Egbunike, Onoja, Jesuwunmi & Utojoba, 2017).

$TDS_t = \gamma_2 + \beta_3 FDI_t$ .....eqn 3.2.4

$DB_t = \gamma_3 + \beta_4 FDI_t$ .....eqn 3.2.5

**Eqn. 3.2.2 to 3.2.5** are called mathematical models or deterministic models

Introduce the error term into the models

$Eq_t = \beta_0 + \beta_1 FDI_t + \epsilon_t$ .....eqn.3.2.6

$SS_t = \gamma_1 + \beta_2 FDI_t + \epsilon_t$ .....eqn. 3.2.7

$TDS_t = \gamma_2 + \beta_3 FDI_t + \epsilon_t$ .....eqn. 3.2.8

$DB_t = \gamma_3 + \beta_4 FDI_t + \epsilon_t$ .....eqn. 3.2.9

**Eqn. 3.2.6 to 3.2.9** are called simple linear regression models; using time series data.

Introduce the log form:

$$\ln \mathbf{Eq}_t = \beta_0 + \beta_1 \ln(\mathbf{FDI})_t + \epsilon_t \dots \dots \dots \text{eqn. 3.2.10}$$

$$\ln \mathbf{SS}_t = \gamma_1 + \beta_2 \ln(\mathbf{FDI})_t + \epsilon_t \dots \dots \dots \text{eqn. 3.2.11}$$

$$\ln \mathbf{TDS}_t = \gamma_2 + \beta_3 \ln(\mathbf{FDI})_t + \epsilon_t \dots \dots \dots \text{eqn. 3.2.12}$$

$$\ln \mathbf{DB}_t = \gamma_3 + \beta_4 \ln(\mathbf{FDI})_t + \epsilon_t \dots \dots \dots \text{eqn. 3.2.13}$$

Eqn. 3.2.10 to 3.2.17 are called log-log linear simple regression models; using time series data.

Or

$$\text{Log} \mathbf{Eq}_t = \beta_0 + \beta_1 \text{Log}(\mathbf{FDI})_t + \epsilon_t \dots \text{eqn. 3.2.14}$$

**Table 3.2: Variables measurement and nomenclature**

S/N	Names & Codes	Measurement	Variable type
1	Foreign Direct Investment- <b>FDI</b>	Foreign direct investment is the total investment in a reporting economy by foreigners	Observed/measured endogenous/independent variable
2	Market capitalization & Development- <b>MKD</b>	Equity capitalization, debt/bond capitalization, stock/securities capitalization, and total domestic saving	Observed/measured endogenous/dependent variable
3	Equity- <b>Eq</b> capitalisation	From Central bank statistical bulletin already computed	Explained/ dependent variable
4	stock/securities- <b>SS</b> capitalization	From Central bank statistical bulletin already computed	dependent variable
5	debt/bond- <b>DB</b> capitalization,	From Central bank statistical bulletin already computed	dependent variable
6	total domestic saving- <b>TDS</b>	From Central bank statistical bulletin already computed	dependent variable
7	$\beta_{1-4}$	Regression coefficient	Parameter
8	$\beta_0, \gamma_{1-3}$	Intercept /constant term	Parameter
9	F	Functional notation	
10	Log (ln)	Log form	
11	T	Time/ year	
12	$\epsilon$	Error term or stochastic random variable	Parameter

Source: Researcher’s literature review, 2016.

**4.1 Data Presentation and Analysis**

The data for the research analysis is presented in a descriptive form for Nigerian Stock Exchange Market Capitalisation for the period of sixteen years (i.e. 2000-2015) thus:

**Table 4.1.1: Descriptive statistics of Selected Nigerian Stock Exchange Market Capitalisation Indicators 2000-2015.**

	Minimum	Maximum	Mean	Std. Deviation
FDI	14,635,080	3,473,702,300	798,384,115	882,945,331.14
Total Dom. Savings-TDS	385.19	12,008.21	4,448.89	3,999.58
Stocks/Securities	2.10	6,942.90	2,154.62	2,174.85
Debt/Bonds	3.50	1,400.40	289.34	543.54
Equities	466.10	13,226	5,748.01	4,232.80

Source: Researcher’s Computation via SPSS version-23.

Table 4.1.1 shows the mean, minimum, maximum and standard deviation of the Nigerian Stock Exchange Market Capitalisation indicators of the study over the period of sixteen years (i.e.2000-2015). The

foreign direct investment ranges within 3,473,702,300 to 14,635,080 with the mean of 798,384,115 and standard deviation of 882,945,331.14; equity, stocks, debt/bond, and total domestic savings, had the mean of

**4.2 Research Questions**

i. *What is the contribution of Foreign Direct Investment to securities in Nigeria stock exchange capital market?*

**Table-4.2.1: Simple regression model summary result of FDI effect on stocks/securities in Nigeria stock exchange market capitalisation.**

R	R <sup>2</sup>	Std. Error of the Estimate
.608	.369	.94355

**Source:** Researcher’s computation using SPSS version-23.

The simple regression model summary analysis is performed by taking stock/securities as dependent variable. It was regressed on independent or explanatory variable, that is, foreign direct investment. Table 4.2.1 shown that the explanatory variable had explained the change or variation in the explained

variable to the tune of 36.9% ( $R^2 = .369$ ). While the unexplained or accounted variation (i.e. 63.1%) in market capitalisation indicator (i.e. stock/securities) had been explained by other factor not captured in the simple regression model, that is, error term or stochastic random variable ( $\epsilon$ ).

ii. *What is the contribution of Foreign Direct Investment on debt/bond in Nigeria stock exchange capital market?*

**Table-4.2.2: Simple regression model summary result of FDI effect on debt/bond in Nigeria stock exchange market capitalisation.**

R	R <sup>2</sup>	Std. Error of the Estimate
.712	.507	.69534

**Source:** Researcher’s computation using SPSS version-23.

The simple regression model summary analysis is performed by taking debt/bond as explained variable. It was regressed on independent or explanatory variable, that is, foreign direct investment. Table 4.2.2 shown that the explanatory variable had explained the change or variation in the explained variable to the tune of 50.7% ( $R^2 = .507$ ). While the unexplained or accounted variation (i.e. 49.3%) in market capitalisation indicator (i.e. debt/bond) had been explained by other factor not captured in the simple regression model, that is, error term or stochastic random variable ( $\epsilon$ ). Can we conclude that

the effect is significant? This will lead us to test of hypothesis.

iii. *What is the level of Foreign Direct Investment contribution to equities in Nigeria stock exchange capital market?*

**Table-4.2.3: Simple regression model summary result of FDI effect on equities in Nigeria stock exchange capital market.**

R	R <sup>2</sup>	Std. Error of the Estimate
.629	.396	.38883

**Source:** Researcher’s computation using SPSS version-23.

The simple regression model summary analysis is performed by taking equities as explained variable. It was regressed on independent or explanatory variable, that is, foreign direct investment. Table 4.2.3 revealed that the explanatory variable had explained the change or variation in the explained variable to the tune of 39.6% ( $R^2 = .396$ ). While the unexplained or

accounted variation (i.e. 60.4%) in market capitalisation indicator (i.e. equities) had been explained by other factor not captured in the simple regression model, that is, error term or stochastic random variable ( $\epsilon$ ). Can we deduce that the effect is significant? This will lead us to test of hypothesis.

iv. *To what extent is the effect of Foreign Direct Investment on total domestic saving in Nigeria?*

**Table-4.2.4: Simple regression model summary result of FDI effect on total domestic saving in Nigeria stock exchange capital market.**

R	R <sup>2</sup>	Std. Error of the Estimate
.770	.593	.34894

**Source:** Researcher's computation using SPSS version-23.

The simple regression model summary analysis is performed by taking total domestic saving as explained variable. It was regressed on explanatory variable, that is, foreign direct investment. Table 4.2.4 showed that the explanatory variable had accounted for the change or variation in the explained variable to the tune of 59.3% ( $R^2 = .593$ ). While the unexplained or

accounted variation (i.e. 40.7%) in total domestic saving had been explained or accounted for by other factor not captured in the simple regression model, that is, error term or stochastic random variable ( $\epsilon$ ). Can we conclude that the effect is significant? This will lead us to test of hypothesis.

### 4.3 Test of Hypotheses

i. *Foreign Direct Investment does not contribute significantly to the stocks/securities capitalisation in Nigeria stock exchange capital market.*

**Table4.3.1: ANOVA of simple regression model summary result of FDI effect on Stocks/securities capitalisation in Nigeria.**

	R <sup>2</sup>	Sum of Squares	Df	Mean Square	F	Sig.	Decision
Regression	.369	7.301	1	7.301	8.201	.013	Accept H <sub>a</sub>
Residual		12.464	14	.890			
Total		19.766	15				

**Source:** Researcher's computation using SPSS version-23.

The simple regression model summary analysis is performed by taking stock/securities as dependent variable. It was regressed on independent or explanatory variable, that is, foreign direct investment. Table 4.3.1 shown that the explanatory variable had explained the change or variation in the explained variable to the tune of 36.9% ( $R^2 = .369$ ). Table 4.3.1 shown that the explanatory variable had explained the

change or variation in the explained variable significantly  $F(1, 15) = 8.201$ ; ( $R^2 = .369$ ;  $p = .013$ ). Based on the decision rule earlier stated and the analysis performed we accept the alternate hypothesis ( $H_a$ ) and reject the null hypothesis ( $H_0$ ) and conclude that Foreign Direct Investment does contribute significantly to the stocks/securities capitalisation in Nigeria stock exchange capital market.

**Table 4.3.2: Coefficient of Stocks/Securities Market Capitalisation.**

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Remarks
	B	Std. Error				
(Constant)	-7.350	3.518		-2.089	.055	
Log of FDI	1.167	.407	.608	2.864	.013	Positive significant effect

**Source:** Researcher's computation via SPSS version-23.

The beta value shows the level of FDI (explanatory variable) contribution on the stocks/securities (explained variable). From Table 4.3.2, the co-efficient of the model is  $.608FDI_t$ , the simple linear regression model of the study is thus;  $SS_t$

$= -7.35 + 0.608FDI_t + \epsilon_t, \dots$  (xiii) This implies that for every one percentage change in FDI will lead to 60.8 % increase in stock/securities which has a positive influence on stocks/securities.

ii. *Foreign Direct Investment does not contribute significantly to the debt/bond capitalisation in Nigeria stock exchange capital market.*

**Table 4.3.3: ANOVA of simple regression model summary result of FDI effect on debt/bond capitalisation in Nigeria.**

	R <sup>2</sup>	Sum of Squares	Df	Mean Square	F	Sig.	Decision
Regression	.507	6.959	1	6.959	14.392	.002	Accept H <sub>a</sub>
Residual		6.769	14	.484			
Total		13.728	15				

**Source:** Researcher's computation using SPSS version-23.

The simple regression model summary analysis is performed by taking debt/bond as dependent variable. It was regressed on independent or explanatory variable, that is, foreign direct investment. Table 4.3.3 shown that the explanatory variable had explained the change or variation in the explained variable to the tune of 50.7% ( $R^2 = .507$ ). Table 4.3.3 shown that the explanatory variable had explained the

change or variation in the explained variable significantly  $F(1, 15) = 14.392$ ; ( $R^2 = .507$ ;  $p = .002$ ). Based on the decision rule earlier stated and the analysis performed we accept the alternate hypothesis ( $H_a$ ) and reject the null hypothesis ( $H_o$ ) and conclude that Foreign Direct Investment does contribute significantly to the debt/bond capitalisation in Nigeria stock exchange capital market.

**Table 4.3.4: Coefficient of Debt/Bonds Market Capitalisation**

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Remarks
	B	Std. Error				
(Constant)	-8.290	2.592		-3.198	.006	
Log of FDI	1.139	.300	.712	3.794	.002	Positive significant effect

**Source:** Researcher's computation via SPSS version-23.

The beta value shows the level of FDI (explanatory variable) contribution on the debt/bonds (explained variable). From Table 4.3.4, the co-efficient of the model is .712FDI, the simple linear regression model of the study is thus;  $DB_t = -8.29 + 0.712FDI_t +$

$\epsilon_t$ ..... (xiii) This implies that for every one percentage change in FDI will lead to 71.2 % increase in debt/bonds which is positive influence.

**iii. Foreign Direct Investment does not contribute significantly to the equities capitalisation in Nigeria stock exchange capital market.**

**Table 4.3.5: ANOVA of simple regression model summary result of FDI effect on equities capitalisation in Nigeria.**

	R <sup>2</sup>	Sum of Squares	Df	Mean Square	F	Sig.	Decision
Regression	.396	1.388	1	1.388	9.182	.009	Accept H <sub>a</sub>
Residual		2.117	14	.151			
Total		3.505	15				

**Source:** Researcher's computation using SPSS version-23.

The simple regression model summary analysis is performed by taking equities as explained variable. It was regressed on explanatory variable, that is, foreign direct investment. Table 4.3.5 revealed that the explanatory variable had explained the change or variation in the explained variable to the tune of 39.6% ( $R^2 = .396$ ). Table 4.3.5 shown that the explanatory variable had explained the change or variation in the

explained variable significantly  $F(1, 15) = 9.182$ ; ( $R^2 = .396$ ;  $p = .009$ ). Based on the decision rule earlier stated and the analysis performed we accept the alternate hypothesis ( $H_a$ ) and reject the null hypothesis ( $H_o$ ) and conclude that Foreign Direct Investment does contribute significantly to the equities capitalisation in Nigeria stock exchange capital market.

**Table 4.3.6: Coefficient of Equities Market Capitalisation.**

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Remarks
	B	Std. Error				
(Constant)	-.809	1.450		-.558	.586	
Log of FDI	.509	.168	.629	3.030	.009	Positive significant effect

Source: researcher's computation via SPSS version-23. The beta value shows the level of FDI (explanatory variable) contribution on the equities (explained variable). From Table 4.3.6, the co-efficient of the model is 0.629FDI, the simple linear regression model

of the study is thus;  $E_{qt} = -.809 + 0.629FDI_t + \epsilon_t \dots$   
(xii) This implies that for every one percentage change in FDI will lead to 62.9 % increase in equities which has a positive influence on equities.

iv. *The impact of Foreign Direct Investment on total domestic saving in Nigeria is not significant.*

**Table 4.3.7: ANOVA of simple regression model summary result of FDI effect on total domestic saving in Nigeria.**

	R <sup>2</sup>	Sum of Squares	Df	Mean Square	F	Sig.	Decision
Regression	.593	2.479	1	2.479	20.362	.000	Accept H <sub>a</sub>
Residual		1.705	14	.122			
Total		4.184	15				

Source: Researcher's computation using SPSS version-23.

The simple regression model summary analysis is performed by taking total domestic saving as explained variable. It was regressed on explanatory variable, that is, foreign direct investment. Table 4.3.7 showed that the explanatory variable had explained the change or variation in the explained variable to the tune of 59.3% ( $R^2 = .593$ ). Table 4.3.7 shown that the explanatory variable had explained the change or

variation in the explained variable significantly  $F(1, 15) = 20.362$ ; ( $R^2 = .593$ ;  $p = .000$ ). Based on the decision rule earlier stated and the analysis performed we accept the alternate hypothesis ( $H_a$ ) and reject the null hypothesis ( $H_0$ ) and conclude that Foreign Direct Investment does contribute significantly to the total domestic saving in Nigeria.

**Table 4.3.8: Coefficient of Total Domestic Savings Market Capitalisation.**

	Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.	Remarks
	B	Std. Error				
(Constant)	-2.451	1.301		-1.884	.081	
Log of FDI	.680	.151	.770	4.512	.000	Positive significant effect

Source: Researcher's computation via SPSS version-23.

The results of the co-efficient establish the nature of the effect of FDI on total domestic savings. The beta value shows the level of FDI (explanatory variable) contribution on the total domestic savings (explained variable). From Table 4.3.8, the co-efficient of the model is .770FDI, the simple linear regression

model of the study is thus;  $TDS_t = -2.451 + 0.77FDI_t + \epsilon_t \dots$  (xiv) This implies that for every one percentage change in FDI will lead to 77 % increase in total domestic savings which has a positive effect on total domestic saving.

#### 4.4 Discussion of findings

The result from data analysis shows that there is a significant effect between FDI and stock market capitalization and domestic savings. With increase in FDI, this will result in % increase in stock market development. FDI have a positive significant impact on domestic savings this finding corroborated with the findings of Kalim & Shahbaz (2009); Raza et al. (2012).

The result of the analysis indicated that foreign direct investment has significantly and positively contributes to stock/securities in Nigeria stock exchange market capitalisation. This result is in line with Raza, Iqbal, Ahmed, Ahmed and Ahmed (2012)

who work revealed that there is positive significant impact of FDI on Stock market development in Pakistan. With one percent increase in FDI, this will result in approx. 70% increase in stock market development. While discussing other variables, domestic savings can have a positive significant impact, exchange rate can have a negative significant impact and while inflation can have an insignificant impact over stock market development. The study of Haruna and Danja (2012) also confirm this as their result therefore revealed a positive relationship between FDI and those variables but FDI has not contributed much to the growth and development of the Nigerian economy.

Foreign direct investment has significantly and positively contributed to equities in Nigeria stock exchange market capitalisation. And also foreign direct investment has positively impacted on the growth of total domestic saving of Nigerian capital market. These findings supported the findings of Olugbenga and Grace (2015), whose findings revealed that foreign direct investment impact positively and significantly on market capitalization and foreign direct investments are significant determinant of stock market capitalization. Foreign direct investment has positively impacted on the equities, growth of total domestic saving and stocks of Nigerian capital market. This is result is mixed with Okwu and Obiakor (2011); they found that market capitalization, gross capital formations of foreign private investment are significant determinant of Nigerian economic growth while the volume of share traded relate positively but insignificantly.

## 5. Summary of Findings, Conclusion and Recommendations

### 5.1 Summary of findings

Based on the analysis of data collected, the following findings were drawn;

- i. Foreign direct investment has significantly and positively contributed to stock/securities in Nigeria stock exchange market capitalisation.
- ii. Foreign direct investment has significantly and positively contributed to debt/bond in Nigeria stock exchange market capitalisation.
- iii. Foreign direct investment has significantly and positively contributed to equities in Nigeria stock exchange market capitalisation.
- iv. Also that foreign direct investment has positively impacted on the growth of total domestic saving of Nigerian capital market.

### 5.2 Conclusion

This study uses time series data collected from CBN statistical bulletin to determine the extent foreign direct investment (FDI) has contributed to the capital market performance of the nation. However, the result shows that there is a significant effect of FDI on stock market capitalization, equities, debt/bond and domestic savings.

With marginal change or 1% increase in FDI, this will result in 60.8%, 71.2%, 62.9% and 77% increase in securities/stock market capitalisation, debt/bond market capitalisation, equities market capitalization and total domestic saving; this shows

that there is overall positive effect of FDI on market capitalization and development. These results are according to our expectations; this means that even though there is an improvement in capital market, more is needed from both government and private sectors to improve the activities of capital market in order to actualize economic growth of the nation.

### 5.3 Recommendations

Based on the findings, the study suggest thus:

- i. Nigerian stock exchange must ensure the protections of foreign investor's interest and assets from Nigerian government fluctuating investment policies.
- ii. There should be a maximum debt/bond ceiling that listed firms on Nigerian Stock Exchange can issue per time so that, it will not lead to misuse of debt in organizational financing.
- iii. FDI and stock prices should be monitored as to prevent volatility in the return on investment which could significantly influences the investment decision of investors in the Nigeria stock exchange market
- iv. The Central Bank of Nigeria (CBN) should design and use policy instruments that will maintain investment or deposit rate at a reasonably low level so that it will not wear away the real value of stock returns.

### 5.4 Contribution to Knowledge

The study has contributed to knowledge in the following ways:

This study investigated the effect of foreign direct investment on Nigerian Stock Exchange Market Capitalisation index proxy by equity capitalization, stock/securities capitalization, debt/bond capitalization, and total domestic saving. The uniqueness of this study is that:

The study revealed that foreign direct investment as a mechanism for development to Nigerian Stock exchange market capitalization cannot single handedly explained the change in the market capitalization index. Different surrogates had been employed by researchers to proxy market capitalisation which have no direct link. But the study adopted variables that are listed or recognized on Nigerian Stock Exchange Market.

This research extends the existing literature on foreign direct investment theoretical framework in

developing nations and introduces significant insight from different standing points so that the concept of foreign direct investment can be properly understood. The study extends or covers period beyond two different democratic setting, so that a good fit or prediction can be obtained.

### 5.5 Suggestions for further study

The following suggestions were reached for further studies:

- iv. Effect of Foreign Direct Investment on Profitability of Nigerian listed firms.
- v. Relationship between Foreign Direct Investment and listed firms' Profitability.

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This study empirically investigates the contribution of human resources valuation proxy variables, that is, human resource cost and human capital efficiency on financial performance of Nigeria listed companies. The study adopted ex-post facto research design method. The population of the study consists of 186 listed companies on Nigerian Stock Exchange, secondary data that spanned from 2011 to 2016, were obtained from the audited annual accounts and reports of 24 selected listed companies (i.e. 6 time series and 24 cross-sectional data making 144 pooled observational balanced panel data) and analysed using multiple linear regression model (OLS) and Karl Pearson Product Moment Correlation Co-efficient (PPMC) via Statistical Package for Social Science Students (SPSS) version-23. We discovered that human resources cost (HRC) and human capital efficiency are significant predictors of Nigerian listed companies' return on investment, gross profit margin, asset turnover and return on asset but insignificant predictors of net profit margin. The implication of the model prediction is that captains of industries or managers need to ascertain the level of human resources cost/ asset that will yield maximum human capital efficiency and effective utilisation of employee. We therefore recommend amongst others that Nigerian listed companies should minimize their human resource cost or human investment in order to create optimality by increase their human capital efficiency and financial performance. Also there should be accounting standard for human resource accounting measurement as it would ensure uniformity in disclosures and a reliable estimation and comparison of human resource value among Nigerian listed companies.

**Key words:** human resource cost, human capital efficiency, financial performance, Nigeria.

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## INTRODUCTION

Human resources can be referred to as human assets or capital; these refer to the set of individuals, who make up the workforce of an organization or a business entity (Edom, Inah, Adanma, & Eyisi, 2015; Syed, 2009). Human resource accounting (HRA) is the process of identifying and measuring data about human assets (resources) and communicating this information to interested parties. This will enable organizations make relevant decisions regarding internal and external matters. Like other physical assets, human assets also have the ability to create expenditure and income. Therefore, it is necessary to value human forces just as other assets, that is, to consider the costs and benefits of human resources (American Accounting Association, 2014). Economists refer to human resource as human capital; this being seen as a production factor, and they explore different ways of measuring its investment in education, health, and other areas. These resources are as implicit knowledge in employees and are one of the operational factors on an organization performance

(Hajkarimi, 2009). Perhaps human resources or assets is the most essential sources of an organization processes, because it is employees' or workers' ideas that influence financial and physical resources of a company to create financial return, that is, return on investment, return on equity, net profit margin, gross profit margin, etc. (Charles, 2001).

Ishikawa and Ryan (2002) suggest that it is the stock of human capital that predominantly determines the earnings of firms and individuals. As noted by Graham, former president of the institute of chartered Accountants for England and Wales (ICAEW) stated on June 2000, firms that ignore human capital will go the way of dinosaurs (Beattie & Smith 2010). Universally, companies or organisations need to develop a competitive advantage, it is important that firms truly leverage on the employees as a competitive tool. A scheme for enhancing organisational profitability (that is, return on investment, return on equity, net profit margin etc.) to drive greater net present value for the firms has become an important focus.

Organisations pursue to develop their workforce

through comprehensive human capital development activities not only to optimise organisational objectives but most important is for a long term survival and sustainability (Marimuthu, Arokiasamy, & Ismail, 2009). Organizational success greatly hinge on the aptitude of the human assets to resourcefully optimize other assets such as land, equipment and money. Therefore human resources have come to be regarded as the paramount assets at the disposal of organisations. Enofe, Sunday and Ovie, (2015) acknowledged that "our greatest assets are our people" is declared in most organisations' annual accounts and reports at all stages and areas of organisations, if human resources are adequately remunerated and recognized at all stages of firms will lead to human capital efficiency; which is required with machine efficiency for enhanced performance. Valuation of this resource is necessary and information about valuation must be given to all stakeholders of an organization in the financial statement.

The paradigm shift in global economies from manufacturing to service based economies prompted a transformed interest in human resource accounting valuation that came in several forms during the 1980s and 1990s. Now the survival, stability and growth of organizations is to be based more on human resources (assets) and their proficiencies as compared to preceding periods that relied more on physical assets (resources) (Flamholtz, 1999). It has been observed that until recently, the "value of an enterprise as measured within traditional statement of financial position, (for example buildings, production plant, fixtures and fittings, vehicles), was viewed as a sufficient reflection of the enterprise's assets. Traditional financial statements of companies do not reflect true disclosure of human asset. In few instance, traditional intangible assets (for example research and development, goodwill and other internally developed assets) are recognised in annual account of companies, but these assets are defined narrowly (Gallego & Rodriguez 2005).

Studies have shown that human assets are the leading indicator for firms' value creation and there is no standard proposed by any accounting standard committee for this regard. On the other hand, by this process a firm has the chance of manipulating the financial statement. The increasing gap observed between market value and book value of many companies has drawn attention towards investigating the value missing from financial statements. However, with the growing emergence of the knowledge economy, this traditional valuation has been called into question due to the recognition that human asset

is an increasingly important part of an enterprise's total value observed that the succession of the human intellect over machines and equipment in the contribution to industrial value makes a financial statement that relegates human asset expenditure to expenses inadequate if not obsolete (see, Chen & Lin 2003; Kaplan & Norton, 2004; Kieso & Weygandt; Westphalen & Nychas, 1998).

The concept of human resource accounting (HRA) is in the early stage of development in developing countries and conventional accounting technique are use in reporting the cost incurred on human asset as an expense in their statement of comprehensive income, while some of the services rendered by the human asset or resource span more than one accounting period are against the current revenue (Ifurueze, Odesa & Ifurueze, 2015; Remya, 2015). The total cost incurred on human resource are treated as expense in the statement of comprehensive income, while the benefit of some of the cost element (acquisition, development, training) last more than one year. Charging the investment in human asset as expenses in statement of comprehensive income is traceable to the inability of organization to separate the expense element (salaries, wages, commission, bonus, maintenance, allowances) from the capital expenditure element (acquisition, recruitment, training, development and retraining).

The success of any organization depends on the quality of its human assets or resources whether it belongs to manufacturing, service or a retail outlet. The development of employees or workers is work activity that can make a tremendous contribution to organisational efficiency, financial performance and growth of listed companies (see, Adeniyi, 1995; Oribabor, 2000; Sharma, 2012) the total worth of an organization depends mainly on the skills of its employees and the services they render.

Evaluating organizational performance may be inconclusive without consideration of the value of human asset and efficiency. Divergent scholars have conducted studies on the connection between various human resource cost valuation technique and organisational performance (Afiouni, 2007; Johansson, 2007). A few number of studies have focused on the valuation or measurement of human resource accounting (Carrell, 2007; Catusus & Grojer, 2006), others addressed the issues of regulations, standards or reporting of human resource accounting. Nevertheless numerous studies

have emphasized on the significance of valuing the cost of human asset in corporate settings, with a focus on varying areas of performance (that is, non-financial performance), conversely studies are inconclusive on the significance in augmenting organisational profitability. However some scholars reported positive effect or relationship, others indicate a negative effect or relationship and yet others report no effect at all (see, Bassey & Tarpang, 2012; Nabil, 1972; Okpala & Chidi, 2010; Rehman, Rehman, Rehman & Zaliad, 2011; Sharma, 2012).

Based on the divergent views and inconclusive findings of scholars and the previous studies reviewed focused on human resource cost measurement and disclosures, none of the studies considered human resources cost efficiency or optimization, this form the rationale to investigate the contributions of human resource cost and efficiency towards the Nigerian listed firms' financial performance. The general purpose of the study is to determine the contribution of Human resource valuation to Nigerian listed companies' financial performance. In order to achieve earlier stated broad objectives the following research questions and null hypotheses were raised:

To what extent is the joint impact of human resource valuation surrogates (HRV) on return on investment (ROI), gross profit margin (GPM), Asset Turnover (ATO), return on equity (ROE) and net profit margin (NPM) of Nigeria listed firms?

What is the magnitude and directions of associations between human resources cost (HRC) and return on investment (ROI) of Nigeria listed firms?

What is the correlation between human resource efficiency (HCE) and return on equity (ROE) of Nigeria listed firms?

The following null hypotheses (H<sub>0</sub>) will be tested at 5% level of significance ( $\alpha$ ):

The combined prediction of human resource valuation surrogates on return on investment (ROI), gross profit margin (GPM), Asset Turnover (ATO), return on equity (ROE) and net profit margin of Nigeria listed firms is not significant.

The magnitude and directions of associations between human resources cost (HRC) and return on investment (ROI) of Nigeria listed firms is not significant.

The correlation between human resource efficiency (HCE) and return on equity (ROE) of Nigeria

listed firms is not significant.

The rest of the paper had been divided into literature review, methodology, data analysis, conclusion and recommendation respectively.

## **2. Review of Related Literature**

### **2.1 Conceptual Review**

#### **2.1.1 Human Resource Valuation**

There is need to consider the definition of human resources accounting advanced by Flamholtz before looking at the concept of Human resource valuation. Flamholtz (1985) gave more specific definition of HRA, which refers HRA as the process of measuring the cost incurred by business firms and other organizations to recruit, select, hire, train and develop human asset. Friedman and Lev (1974); Lau and Lau (1978) consider HRA as a method for systematically measuring both the asset value of labour and the amount of asset creation that can be attributed to personnel activities. Newman (1999) defined, HRA as the measurement of the abilities of all employees of a company, at every level – management, supervisory and ordinary employees – to produce value from their knowledge and the capabilities of their minds. Jasrotia (2004), in her definition, also views HRA as a measurement and reporting of the cost and value of people as organizational resources. In his view, Gupta (1991) defines the HRA as basically an information system that tells management what changes are occurring overtime to the human resources of the business. It involves accounting for investment in people and their replacement costs, and also the economic value of people in an organization. These definitions give a view as to what expenditure on the human resources should be recognized for valuation and reporting purposes. In other words, Flamholtz (1985) regards HRA as involving the measurement of economic value of people to organizations.

Therefore, HRA provides a comprehensive look at one method of using human resource cost and value information in the decision-making process and considering the contribution aspect of human resources in incorporates the economic benefit attributable from the human resources in addition to recognizing their cost implication. Human resource valuation in any organizations is very much important from accounting point of view. Valuation of human

resources, recording the valuation in accounts and fair disclosure of such information in financial statements are the demand of the stakeholders in the context of enhancing managerial performance and employees' productivity. Investment in developing human resources is not revenue expenditure. Its impact on developing the capability of employees provides benefits for a long period. There is a genuine need for reliable and complete information that can be used in improving and valuing human assets.

This valuation of human asset involved the determination of investment in human resources and the benefits received from human asset inform of human capital or employees' efficiency (that is, valued added or created). Value-added or created in business, is the difference between the sale price and the production cost of a product is the unit profit. In economics, the sum of unit profit, unit depreciation cost, and unit labor cost is the unit value added. Summing value added per unit over all units sold is total value added. Total value added is equivalent to revenue less intermediate consumption. In national accounts used in macroeconomics, it refers to the contribution of the factors of production, i.e., capital (e.g., land and capital goods) and labor, to raising the value of a product and corresponds to the incomes received by the owners of these factors. The national value added is shared between capital and labor (as the factors of production), and this sharing gives rise to issues of distribution (Deardorff, 1994; Samuelson, & William, 2009). Human resource efficiency is an integral part of business, as it tells how efficient system is, over time. It is also a key performance indicator (KPI) which defines how much of the employee or human resource's time is spent working productively.

There are numerous factors that can influence the efficiency of employees. Such as; Training and Skill – an employee or human resource with good technical knowledge and experience will be more efficient compared to an employee or human resource with no experience. Wages and Benefits – If an employee has competitive wages, bonuses and benefits, it is more likely that they will be motivated to work harder, therefore increasing their efficiency. Working Hours – Efficiency will be higher if working hours are reasonable. Asking employee to work longer hours for no extra pay is likely to cause a decrease in efficiency due to a lack of motivation and tiredness. Environment – A pleasant and stimulating working environment makes for a more efficient employee or human resource. Efficiency in

the workplace is the time it takes to do something. Efficient employees and managers complete tasks in the least amount of time possible with the least amount of resources possible by utilizing certain time-saving strategies. Inefficient employees and managers take the long road. For example, suppose a manager is attempting to communicate more efficiently. She can accomplish her goal by using email rather than sending letters to each employee. Efficiency and effectiveness are mutually exclusive. Well managed companies that address important business issues through the implementation of human resource strategies often seek to measure performance of the human resource function in terms of both effectiveness and efficiency. Effectiveness relates the results of activities to the achievement of objectives (i.e., "are we doing the right things?"). Efficiency relates the yield of outputs to the energy, time, or resources applied as inputs (i.e., "are we doing things right?") (Drucker, 1973). Efficiency increases productivity and saves both time and money.

Value-added or created can be referred to as productivity. Productivity is simply the amount of units of a product or service that an employee handles in a defined time frame. An employee who makes widgets might make 20 widgets per hour, or an employee at a coffee shop might service 15 customers per hour. Simple productivity is neither good nor bad, and in service industries, it might vary according to factors beyond the employee's control, like the number of customers who present for service. Productivity is the basic measure of employee work output which can also be represented with total revenue or income. Employee productivity (sometimes referred to as workforce productivity) is an assessment of the efficiency of a worker or group of workers.

Productivity may be evaluated in terms of the output of an employee in a specific period of time. Typically, the productivity of a given worker will be assessed relative to an average for employees doing similar work. Because much of the success of any organization relies upon the productivity of its workforce, employee productivity is an important consideration for businesses efficiency. For many businesses, including most small businesses, the most significant cost is human resource cost. Salaries and wages comprise the major line-item expense for most retail and small-scale manufacturing companies, but human resource also tends to be

responsive to productivity improvements. To reduce human resource costs, entrepreneurs should consider measuring employee efficiency and setting aggressive performance targets to get the most report or bang for their employee buck.

Efficiency in business relates to how much of a product or service is produced in a given timeframe while effectiveness is a measurement of quality. Efficiency can be derived as comparing the cost incurred in production against the revenue realised. Companies often talk about employee effectiveness and efficiency when brainstorming ways to improve business. While they sound similar, effectiveness means something entirely different than efficiency. An effective employee produces at a high level, while an efficient employee produces quickly and intelligently. By combining effectiveness and efficiency, a company produces better products faster and with fewer resources. Effectiveness is the level of results from the actions of employees and managers. Employees and managers who demonstrate effectiveness in the workplace help produce high-quality results. Companies measure effectiveness often by conducting performance reviews. The effectiveness of a workforce has an enormous impact on the quality of a company's product or service, which often dictates a company's total revenue (income), reputation and customer satisfaction.

In economics we find the major factors of production are the land, labour, capital and entrepreneur. Every organization reports on and includes land and capital in its financial statements, but labour and entrepreneur are not given much attention, they are the two factors of production which they only represent a charge against the profit made by the organization (Abubakar, 2006; Glautier, 1974). Human Resource Accounting (HRA) is the process of identifying, recording and reporting the Investments made in the Human Resources of an Organization that are presently not accounted for in the conventional accounting practices.

In other words, it is an extension of the existing "Expense recognition principle" or "Matching Principles" that requires revenue to be matched with expenses incurred to earn that amount of revenue and of organizing data to communicate relevant information. This effort to quantify the value of Human Resources helps the management to cope up with the changes in its quantum and quality so that equilibrium can be achieved in between the required

resources and the benefit derived from such resources.

Human capital is the generic term for the competences, skills, trainings and motivation of the employees or is the skills, knowledge, and experience possessed by an individual or group of individuals, viewed in terms of their value or cost to an organization or country. The human capital of the organisation comprises of all the qualities and professional skills the worker brings into the organisation. HC is owned by the worker and leaves along with him whenever he leaves the organisation (Anuonye, 2015). Human asset or capital is one of the most important resources that can positively impact on a firm's profitability and efficiency. Capitalizing human resource costs is conceptually more valid than the expensing approach. The information concerning human assets is more relevant to a great variety of decisions made by external and internal users. Accounting for human asset constitutes an explicit recognition of the premise that people are valuable organizational resources and an integral part of a mix of resources (Islam, Kamruzzaman, & Redwanuzzaman, 2013).

There are two concepts that human resources valuation can be split into human resource cost and human capital efficiency (employee/labour efficiency).

Cost of human resources represents sacrifice that will have to be incurred today to acquire and develop people in future. The cost of human resource otherwise called Historical cost of human resources is the investment in human resources which has both Revenue (expense) and Capital (asset) components. Cost valuation is the estimation of the worth of something. There are two broad classifications of human resource cost that is, acquisition cost and development cost.

Human resource acquisition cost (HRAC) refers to the costs incurred in acquiring the right man for the right job at the right time and in right quantity. This includes cost of hiring employees, cost of selecting employees, cost of interviewing employees, cost of recruiting employees, and cost of placement of employees. The entire cost is taken into consideration including those who are not selected.

Recruitment cost is the cost incurred to identify sources of human resources both from within and outside the organization. For example, cost of recruiting materials, administrative expenses, advertising costs, agency fees, recruiter's salary and

travel and outstation costs.

Selection cost depends on several factors such as the type of personnel being recruited and the method of recruitment. The cost of selection depends on the position for which a person is being selected. The higher the position, the greater is the selection cost. It includes cost of application blanks, administrative cost of processing applications, conducting tests, interview, medical examination and the Salaries, materials and consulting fees of theselectors.

Placement cost, in deciding upon the placement, the individual's ability, attitude, interest, temperament and aspirations are taken into consideration with reference to the job requirements. The cost of placement can be collected for the purpose of human resource accounting.

Human resource development cost (HRDC) refers to the sacrifice that must be made to train a person either to provide the expected level of performanceor to enrich the individual's skill. Training improves the productivity potential of both the individual and the organization. This includes formal training cost of employees, cost of re-training employees, cost of employees' seminars, and cost of orientation. The training cost includes the following:

Formal training cost refers to the cost incurred in conventional training for the orientation of an individual so that he can operate the work. The remuneration to the training staff and the fixed cost of the training schools are essentially HumanResource Investment items.

On the job training cost: Once the employee is placed on the job, he must be trained to do the job efficiently and effectively and in this regard the employee learns while he is on his job. In the process, the costs of mishandling the job, the payments to the employee more than what he actually contributes are on the job training cost. Thus it is anInvestment in Human Resource.

Special training cost, to achieve the performance standards sometimes specific training programmes may be devised. Such training gets a distinct humanresource to the organization. The costs of such training are called special training costs fall under the human resource investment of the organization.

Development programmes cost; employees may be allowed to participate in a variety of development programmes to enrich their faculties. These programmes may range from ordinary lectures to international conferences and seminars. The participants have an opportunity to interact with other executives on national and international level. Such association involves cost

such as delegate fees, the travel cost, loss of output during the development programme etc. which are to be accounted for as a human resource investment.

Human capital/resource efficiency is the aggregate aptitudes or other assets of individuals that can be used to create economic values for the organisations or community. This is the valueof all the workers in the organisation with all the attendant rewards attached to their utilisation (Verguwen & Alem 2005). These proficiencies are unique to the employees even though the company invests in the workers; they go away with them whenever they leave the firm (Roos & Roos 1997). Besides showing the firm sizes, High human capital reflects higher employee skill that would add more value compared to employeeswith lower salary and wages. Pablos (2003) and Bontis (2004) argued that a company will gain a competitive advantage if human asset is effectively harnessed in the organisation. The drivers of this human capital advantage (Pulic 2004) may be found in all employees as well as the organisationsability to create value under a market assessment. In other words, human capital is represented by the company's stock such as skilled employees, knowledge and management philosophy (Nielsen, Bukh, Mouritsen, Johanseu & Gormsen, 2006). Human capital efficiency (HCE) shows the efficiency of human asset/capital usage in creating value added. If the human resources cost is low while value added is high, then the firm uses its human capital efficiently, that is, optimally. Human capital efficiency can be defined as value added by human capital ( $HCE = \text{Value Added} \div \text{Human Capital}$ ) (Pulic 2004).

## **2.1.2 Measurements in Human ResourceAccounting**

The major challenge in Human Resource Accounting is that of assigning monetary values to different dimension of human resource costs/investment and the worth of employees. There are various model suggested for the measurements ofhuman assets, they are classified into cost based approach and economic based model. The cost based approach is categorised into historical cost model, replacement cost model, opportunity cost model and standard cost model. While the economic based approach is the value of asset inthe present value of the service that it is expected to render in future. Similarly, the economic value of human resource is the present

worth of the service that they are likely to render in the future; the economic based model of calculating the value of individual may be classified into monetary and non-monetary methods. Cost is a sacrifice incurred to obtain some anticipated benefit or service. Costs have two elements vis-a-vis the expense (human resource cost) and the asset element (human capital efficiency). The expense element is that which provides benefits during the current accounting period, whereas the asset portion is that which is expected to give rise to benefit in the future. The historical background of human resource accounting can be traced to the medieval European practice of calculating the cost of keeping a prisoner versus the expected future earning from him. The prisoners were seen to be the general property of the capturing side, consequently, after the victory a quick decision regarding whether to capture a prisoner or to kill him had to be taken based on the cost involved in keeping him and the benefit accruing from killing him (Sveiby, 1997). However, the development of human resource accounting as a systematic and detailed academic activity began in the sixties (Flamholtz, 1972). The development can be divided into five stages they are:

First stage (1960-66): This marks the beginning of academic interest in the arena. However, the focus was primarily on deriving human resource accounting concept from other studies like economic theory of capital, psychological theories of leadership effectiveness as well as the measurement of corporate goodwill.

Second stage (1966-71): At this stage, the focus was to develop and validate various models/tools that help organization manage their Human Resources. One of the earliest studies was carried out by Hermanson (1964) on problem of measuring the value of human assets as an element of goodwill.

Third stage (1971-76): This period was marked by a widespread interest in the field of human resource accounting leading to rapid growth of research in the area. The focus in this stage was on the application of human resource accounting in business organization, the development of measurement and reporting model. Experiment was carried out in R.G Barry, the findings contributed substantially during this stage (R.G Barry Corporation, 1973).

Fourth stage (1976-1980): This period witness a decline in the arena of human resource accounting due to lack of sponsorship in the area of research.

The complex issue that needed to be explored which required much deeper empirical research then was needed for the earlier simple models and the lack of sponsorship in area of research.

Fifth stage (1980-till date): This period witness a sudden renewal of interest in the field due to the shift from manufacturing to service economic occasioned by globalization. Since the survival growth and profitability of organization were dependent more on intellectual assets than physical assets. The outcome of this renewal interest was the adoption of various models to suit organization requirement. Today, human and intellectual capital are perceived to be the strategic resources and therefore clear estimation of their value has gained significant importance. The increased pressures for corporate governance and corporate code of conduct demanding transparency in accounting have further supported the need for developing methods of measuring human value. In Nigeria human resource valuation and reporting has not yet been institutionalized.

### **2.1.4 Financial Performance**

Organizational performance evaluation or appraisal can be viewed from both financial and non-financial; this study is concerned with organizational financial performance. The crucial point to note is that the overall financial performance of a firm or organization in this context is limited to financial accounting ratios; this factor is relevant and paramount to the organizational financial analysis in this study. Stakeholders measure or evaluate the overall financial performance of a firm through its financial statements which shows the results of the firm's business operating cycle within a year and to identify firm's strengths and weaknesses in order to proffer remedial solution. Furthermore, firm's future plan should be in line with the firm's financial strengths and weaknesses; consequently, financial analysis is the starting point for making plans, before adopting any advanced forecasting and planning techniques. Understanding the past is a prerequisite for anticipating the future (Adeniyi, 2011; Pandey, 2010). The study will be interested in activity ratio and profitability ratios, that is, return on investment (ROI),

gross profit margin (GPM), return on equity (ROE), asset turnover (ATO) and net profitmargin (NPM).

## 2.2 Theoretical framework

The study is anchored on human resource investment optimization theory (HRIOT) which has its basis from human capital, resource-based and stakeholder theories in order to understand the concept of optimality (i.e. cost and efficiency) as it relates to human resources valuation. The theories form the basis upon which the conceptual model was developed. The theories are explained thus:

Human capital theory was propounded by Schultz (1993), and lengthily developed by Becker (1964). The theory emanated from branch of economics (i.e. labour economics) that focuses on general workforce in quantitative term. The theory contends that education or training augments productivity of an employee by imparting useful knowledge and skills, thus raising employees' future revenue through increase in their lifetime earnings. The theory suggests that expenditure on education or training and development is costly, and should be considered as investment since it is undertaken with a view to increasing incomes. General purpose human capital is knowledge gained through education and training in areas of value to a variety of firms such as generic skills in human resource development; while specific skills provide value only to a particular firm and such skills are of no value to competing firms (Becker, 1993). The resource based theory of the firm blends concepts from organizational economics and strategic management (Barney, 1991).

A fundamental assumption of this view is that organizations can be successful if they gain and maintain competitive advantage (Porter, 1985). Competitive advantage is gained by implementing a value-creating strategy that competitors cannot easily copy and sustain (Barney, 1991) and for which there are no ready substitutes. For competitive advantage to be gained, two conditions are needed. First, the resources available to competing firm must be variable among competitors, and second, these resources must be immobile (i.e. not easily obtained). The resource based theory indicates that human resource provides a source of sustained competitive advantage which consist of four basic requirements; value, rare, imitable

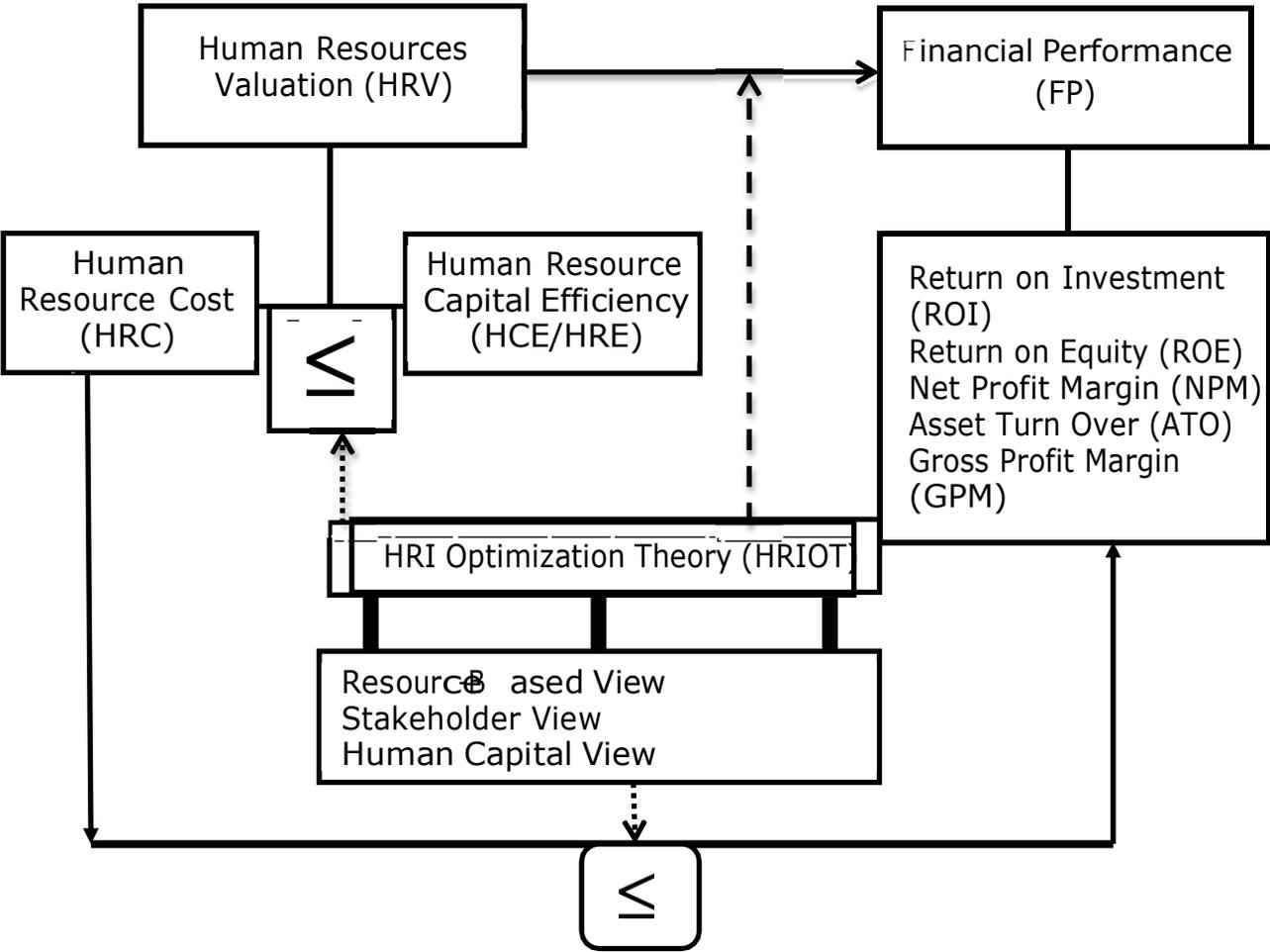
and organization (VRIO) that must be present within of organisation's human resource at all times. Three types of resources associated with organizations are; Physical (plant; technology and equipment; geographical location), Human (employees' experience and knowledge); and Organizational (structure; systems for planning, monitoring, and controlling activities; social relations within the organization and between the organization and external constituencies). Stakeholder theory was proposed by Edward Freeman, a business owes responsibility to stakeholders as well, not just the shareholders. A stakeholder could be any person or a group who will be affected by the actions of the business. These include customers, employees, suppliers, and the community as well (Osisioma, Egbunike, & Jesuwunmi, 2015).

This theory is an important element of the concept of corporate social responsibility (CSR). In light of this theory, companies have to take not only the legal and economic aspects of their business but also the ethical aspects into consideration. This theory centers on the issues concerning the stakeholders in an institution. It stipulates that a corporate entity invariably seeks to provide a balance between the interests of its diverse stakeholders in order to ensure that each interest constituency receives some degree of satisfaction. The firm has a fiduciary duty to maximize their returns and put their needs first. In more recent business models, the institution converts the inputs of investors, employees, and suppliers into forms that are saleable to customers, hence returns back to its shareholders (Wan, & Idris, 2012). This model addresses the needs of investors, employers, suppliers and customers. In summary, theory tries to consider others groups of people that have diverse interest in the business in order to improve business efficiency in the market place. Rajan and Zingales (1998) opined that the company has to safeguard the interests of all who contribute to the general value creation, that is, make specific investments to a firm. These firm-specific investments can be diverse and include physical, human and social capital. Human resources investment optimization theory (HRIOT) believes that set of processes and methods is to be matched with the available resources (human, machinery, financial) with the needs of the organization in order to achieve established goals. Optimization consists in achieving desired results within a set timeframe and budget with minimum usage of the resources themselves. The need to optimize resources is particularly evident when the organization's demands

tend to saturate and/or exceed the resources currently available. In summary, theory opines that managers should lesser resources to achieve greater outputs.

2.3 Conceptual Framework

Figure 2.3.1: Conceptual Model of Human Resource Valuation and Nigerian Listed Companies' Financial Performance.



Source: Researcher's conceptual model

Figure 2.3.1 shows the links between the study and the theories is that it considers the cost of education, training and development as investment towards enhance productivity of an employee, the managers' aptitudes to create abalance between diverse stakeholders' interestsin the organization and also considers the human resources characteristics of value, imitable, rareness and organization imbedded in the theories directly or indirectly affect employee productivity and firm's performance, creates a sort of competitive advantage which ultimately leads to optimal firm financial performance.

Figure 2.3.1shown that human resource valuation is a predictor proxy by human resource cost and human capital efficiency; it further illustrated that investment in human resource (cost) should be less than human capital efficiency and financial performance surrogated by profitability and activity ratios. Consequently such investment on human capital must be shown in the financial statement. The management will be able to attain this through reduction in inputs and increment in outputs which reflect optimality in human resources investment.

## **2.4 Review of Related Empirical Studies**

Agbiogwu, Ihendinihu, and Azubike (2016) investigated the effects of human resources cost on the profitability of banks in Nigeria from 2010 – 2014 using First Bank Nigeria, Plc and Zenith bank Nig. Plc. The study adopted content method of analysis and linear regression model to test the stated hypotheses. Findings revealed that staff cost significantly affects Earnings per share, Net profit margin, and Return on capital employed of banks. The study recommends, among other things, that there should be a uniformed standard for identification and measurement of human capital assets.

Kwarbai and Akinpelu (2016) examined the impact of human capital efficiency on corporate performance of industrial goods companies listed in the Nigerian stock exchange market. For a period of 6 years (2009-2014,) the effect of human capital efficiency on performance was examined by applying the human capital component of the value added intellectual coefficient (VAIC) methodology. Multiple linear regression models were used for analyzing the relationship between the variables of interest; employees' growth (EG), earnings per Share (EPS), return on assets (ROA), human capital efficiency (HCE), lagged human capital efficiency and size of the firms. The finding survived a number of robustness check and the result indicates that there is positive

significant relationship between human capital efficiency on ROA and EPS, and an insignificant negative relationship between human capital efficiency on size, lagged human capital efficiency and number of employee growth. This study contributes to the existing human capital theories by revealing the HCE of Industrial goods companies and its impact on corporate performance. They suggested that organizations should be committed to regular training and development of employees and ensuring the working environment is conducive for them in order to ensure improvement in employees' productivity and performance.

Olowolaju, and Oluwasesin, (2016) examined the effect of human capital on the profitability of quoted manufacturing companies in Nigeria. The study aimed at determining if expenditure on human has influence on the profitability of listed manufacturing companies on the Nigeria Stock Exchange. A sample of 10 listed manufacturing companies on the Nigeria Stock Exchange was used for the study. This study used data mainly from secondary sources and the analysis of data collected was done using descriptive and inferential statistics. The descriptive statistics include mean, standard deviation, kurtosis, skewness while inferential statistics that was used in testing the hypotheses include panel regression and correlation. The study revealed that all the explanatory variables have positive relationship with profitability; however, expenditure on health contributed more to the profitability of the firms. The study concluded that human capital expenditure significantly influenced profitability of manufacturing companies quoted on the Nigerian Stock Exchange and companies that place more emphasis on human capital, maintaining it and treating it as a pure asset will have motivated work force.

Omodero, Alpheaus, and Ihendinihu, (2016) in their study titled "Human resource costs and financial performance: Evidence from selected listed firms in Nigeria" observed that there is general lack of quantification and disclosure of human assets in domestic and international financial reports, and this appears to depress public assessment of the financial performance and value of firms. The study aimed to determine the extent to which investments in human

resources influence profit after tax and turnover of firms in Nigeria. Secondary data on relevant financial variables were extracted from published financial statements of ten selected listed firms in Nigeria. The OLS technique was employed in analyzing the data and the results indicate that personnel benefit costs have positive and significant effect on profitability, explaining about 73.9% of the variations in profit after tax of firms in Nigeria. The results however reveal no significant effect of personnel benefit costs on firm turnover. The study therefore concludes that investments in human resources have positive trade-off effects on profitability and growth of firms and recommends greater commitment to manpower development and training, while providing proper infrastructures and conducive working environment to enhance the capacity of employees to drive positive improvements in corporate financial performance.

Adebawojo, Enyi, and Adebawo (2015) in their work titled "Human Asset Accounting and Corporate Performance", conducted their research on all eighteen publicly quoted banks in Nigerian capital market, using an ex-post facto research design, questionnaire as their instrument of data collection and hypotheses was tested using simple regression model. The result confirmed that human asset accounting significantly affects banks' performance. It concluded that capitalizing human asset would positively impact on performance of organizations and recommends its disclosure as intangible asset in the statement of financial position.

Ifurueze et al. (2015), in their work, "Impact of Aggregated Cost of Human Resource on Profitability", examined the effect of aggregated and disaggregated cost of human resources on organisations' profitability. Data was extracted from internal source using a structured information card and annual financial report, while regression analysis was used for hypothesis testing. The findings showed that there is a positive relationship between profitability and human resource cost. The study recommends that companies should imbibe the culture of capitalising and reporting all investment on human resource that improve quality and productivity.

Edom, Inah, Adanma, Eyisi, (2015) studied the impact of human resource accounting on the profitability of Access Bank of Nigeria Plc, from 2003 to 2012. Using the

ordinary least square analytical technique, secondary data from audited annual accounts and reports of Access Bank of Nigeria Plc were obtained. Findings revealed that there is a significant positive relationship between the indicators of human resource cost (training cost, development cost and number of staff) and the profit of the organization (Access Bank Plc). However, the number of staff does not have a significant effect on profit of the bank. Nonetheless, organizational performance is dependent upon the performance of the individuals that make up the organization. That is, organization does not exist in a vacuum; there are people (employees) who may work together towards achieving its goal. It was therefore recommended inter alia that; organization should enhance the retention of education and training on staff so as to avert wastage of knowledgeable investment. Also, accounting standard board should incorporate their accounting standard for the valuation and disclosure of human resource accounting.

Parham and Heling, (2015) investigated impact of human capital efficiency on financial performance of Dutch production companies. Using data from 33 Dutch production companies for a period of 6 years (2007-2012) and applying the human capital component of the VAIC methodology the monetary value created by the companies' knowledge workers is measured. Multiple linear regression models are used for analyzing the relationship between the performance of Human Capital and organizational performance measures including ROTA, ROE and EP. The study results revealed that there is positive relationship between HCE and all three corporate performance measures, amongst which it should be referred to the strongly statistically significant relationship between HCE and Employee Productivity (EP). Furthermore, it is significant in the sense that it will provide the companies' managers with vital information required for making decisions on proper deployment of their human capital and investment in this strategic asset.

Prosvirkina (2014) analysed human resources effectiveness in the Russian banking industry and its influence on organizational performance of banks. The sample of the research consists of one hundred ninety seven banks both local and international operated in Russia. Based on the data available in financial statements of banks, published by the Central Bank of the Russian Federation, several

indicators were calculated, including return on investment in human capital (HCROI), return on assets (ROA), return on equity (ROE) and productivity. Their findings reveal that there is statistically significant correlation between HCROI and all selected organizational performance indicators of banks in Russia. Their findings demonstrate that HR effectiveness influences the performance of banks in Russia.

Ahmadu (2013) in his study investigated the association between human capital efficiency and financial performance of quoted Nigerian banks. Data were obtained from audited annual accounts and reports of the studied banks. The study adopted linear regression method of statistical analysis. The finding reveals that human capital efficiency has no significant impact on the EPS of Nigerian banks and Human capital efficiency has no significant impact on the ROE of Nigerian banks. The study found that efficient utilisation of human capital does not have any significant impact on the return of equity of banks. Also the size of a bank has no significant impact on its return on equity, while the return on equity of banks cannot be predicted by human capital efficiency and size of the banks.

Edirin,(2013) examined human capital accounting as it affects financial statement analysis and decision making, since human capital is the major driver of the competitive advantage of companies globally and Nigeria in particular. A total of 145 respondents comprising of investors in the Nigerian capital market, practicing accountants and academics in tertiary institutions in Nigeria were used for the study. A validated self-structured questionnaire was the instrument used in gathering primary data for the study. Frequency counts, simple percentages and the chi-square ( $\chi^2$ ) were the statistical tools employed in the study. The finding reveals that there is a significant relationship between human capital accounting and the comparability of financial statements in Nigeria. The study recommended that appropriate steps must be taken by regulatory bodies to develop uniform acceptable standards and models for the computation of the value of human capital such that same can be reflected in the financial statements of entities in Nigeria. Also, the accountancy curriculum at both professional and academic level should be reviewed and updated to meet the present demands of HCA.

Zohreh and Safar (2013), in their work titled, "An Empirical Study of the Relationships among Human

Capital Value and Profitability and Market Value," conducted on eight industries in Tehra stock exchange from 2005-2009 and a sample including sixty companies was selected by systematic filtering sampling method; while multivariate regression model and panel least square method with fixed effects were used to test hypotheses. The result showed that there is a significant relationship between human capital value and market value of a company; but no correlation between human capital value and profitability. The study recommended that further study should be conducted between human capital value and profitability.

Ahesha, and Sujani (2012) investigated the impact of investment in human capital on financial performances of the companies in Sri Lanka. In order to achieve the objective of the study, financial information in financial statements of listed companies under Colombo Stock Exchange for the period of 2 years from 2009 to 2010 was used. Sample of the study was selected as 40 companies listed under Colombo Stock Exchange. Data analysis was carried out with aid of SPSS (Statistical Package of Social Sciences). Findings revealed that there is a significant relationship between investment in human capital and firm financial performances. They recommended that investment in HC should include all the expenses incurred on enhancing knowledge, education, expertise and skills of employees. This may involve salaries and wages, training and development, payments for conventions and conferences, dues and subscriptions etc.

Bassey and Tarpang (2012), in their work, "Capitalized Human Resources Cost and its influence on Corporate Productivity", conducted on ten companies listed on the Nigerian stock exchange with the aid of a questionnaire using an ex-post facto design. The study revealed that acquisition and development cost are important determinants of human resources cost and does significantly influence corporate productivity. The study recommended the companies should use career management programs to assist their employees in career planning.

Effiok, Arzizeh, and Okon (2012) conducted a study titled "The impact of human capital cost on gross domestic product (GDP) in Nigeria" the

study aimed at determining the extent to which human capital cost influences gross domestic product in Nigeria. Until now, human resource was treated as expenses and written off in profit and loss account. The research adopted a survey design for the study. The data collected were tabulated and analyzed using the Ordinary Least Square (OLS). The study revealed that human capital costs mirrored by acquisition, development, remuneration and protection costs do affect significantly gross domestic product in Nigeria. The study recommended that there is urgent need for the installation and maintenance of total quality management in Nigeria to enable it remains competitive in the global market. This is because employee's education, training and development are the key vehicle for building the economy and employee's capabilities. Finally, government should try to understand and appreciate the value of human capital as it is the most important determinant of its success.

Perera and Thrikawala, (2012) investigated the influence of human capital investment on financial performances of companies in Sri Lanka. In order to achieve the objective of the study, financial information was obtained from the listed companies' audited annual accounts and reports under Colombo Stock Exchange for the period of 2 years from 2009 to 2010 was used. Sample of the study was selected as 40 companies listed under Colombo Stock Exchange. Correlation coefficient was used as a method of data analysis. Findings revealed that there is a significant relationship between investment in human capital and firm financial performances.

Zohreh and Safar (2011) conducted a study on effect of human capital on profitability and market value in a sample of Iranian firms. Eight industries in Tehran Stock Exchange from 2005 to 2009 were selected. Then a sample including 60 companies was selected by systematic filtering sampling method. The Multivariate Regression Model and Panel Least Square method (with Fixed Effects) were used. The results showed that there is a significant relation between human capital values with market values of companies. But there is no correlation between human capital value and profitability. In other words, although human capital value is not manifested in financial performance index (profitability), but market considers values for these assets.

Yusuf (2011) assessed the impact of human capital investment on the performance of Nigeria banks. The study covers banks quoted on the Nigerian stock exchange as at 2005. A sample size of 6 banks was obtained; 2 from the old generation and 4 from the new generation bank. Secondary source of data was used for the data collection, salaries and allowances were used as the proxy for human capital investment while Market price per share, Earning per share and Book Value per share were used as the proxies of performance. Regression was used to test the hypotheses. The study found that there is significant relationship between MPS and human capital investment; there is a significant relationship between BVS and human while there is no significant relation between EPS and human capital. The study also found that human capital investment has positive impact on the efficiency of banks' employees. The study recommends, among others, that banks should increase human capital investment in order to increase their MPS and BVS. In addition, there is need for Nigerian banks to ascertain the level of human capital that can be seen to be optimal so that redundancy and under utilisation would not be encouraged.

Numerous scholars have conducted researches on the relationship or influence of human resources accounting on companies' financial performance. Human resource investment, measurement, disclosures and profitability were used as variables none of the studies considered human resources cost efficiency or optimization, majority of the studies adopted questionnaires for data collection to measure influence of human resources accounting on firms' financial performance.

Again the methodologies or techniques adopted are not sufficient to cross-examine research data. And more importantly, based on empirical literature reviewed no study has examined the combined contribution of human resources cost and human resources efficiency on quoted Nigerian firms' financial performance.

Hence, this study tries to fill the gap by investigating the contributions of human resource valuation on financial performance of selected listed companies in Nigeria. This research work also gives attention to relevant theories, variables and methodology in order to have good external validity.

### 3. METHODOLOGY

This research work adopts an ex-post facto or causal-comparative research design. This design is very appropriate where it is not possible for the researcher to directly manipulate the independent variable, (Onyeizugbe, 2013). This study was carried out in Nigeria. Nigeria is located in the south western part of West Africa; it shares borders with the Republic of Benin in the West, Chad and Cameroon in the East, and Niger in the North. Its coast lies on the Gulf of Guinea in the South and it borders Lake Chad to the North East. It has an estimated land area of about 15, 000 sq.km. The total population in Nigeria was estimated at 142 million people according to the latest census figure (Nigeria Population Census, 2006). The administrative headquarters of the country is the Federal Capital Territory (FCT), and there are thirty-six states in Nigeria ([www.population.gov.ng](http://www.population.gov.ng)).

The population of the study refers to the totality of all the elements or variables under study (Nworgu, 2012). The population of this study consist of 186

companies listed on the 12 sectors of Nigerian Stock Exchange (NSE). The non-probability convenience sampling technique was adopted for convenience and to determine the number of firms that will be selected for the study; this selection will be based on availability of firm's financial statements. The sample size consists of twenty-four listed companies drawn out of 186 listed companies. Convenience sampling technique was adopted for relative ease of access and availability of data needed for the study (Wiederman, 1999). These firms were selected because of availability and ease of getting their financial information; and they consist of companies that deal on production of goods and services, see Table 3.1.1 for details.

We also adopted the sampling method of Tabachnick and Fidell (2007) in determining our observations, that is,  $n \geq 50 + 8m = 50 + 8(3) = 74$ , that is, our sample size (that is, pooled regression observations) should not be less than 74. In order to have a good regression analysis result or good fit.  $M$  represents number of regressors in the model.

**Table 3.1.1: Manufacturing companies selected from three sectors as the sample size.**

S/N	Names Of Companies	Sector	Sub-Sector
1	Flour mills Plc.	Consumer goods	Food product (diversified)
2	Unilever Nigeria Plc.	Consumer goods	Food product (diversified)
3	Northern Nigeria flour mills Plc.	Consumer goods	Food product (diversified)
4	Nascon allied industries Plc.	Consumer goods	Food product (diversified)
5	Cadbury Nigeria Plc.	Consumer goods	Beverages (non-alcoholic)
6	Dangote sugar refinery Plc.	Consumer goods	Beverages (non-alcoholic)
7	Nestle Nigeria Plc.	Consumer goods	Beverages (non-alcoholic)
8	International breweries Plc.	Consumer goods	Beverages (alcoholic)
9	Nigerian breweries Plc.	Consumer goods	Beverages (alcoholic)
10	Champion breweries Plc.	Consumer goods	Beverages (alcoholic)
11	Paints and coatings manufactures Plc.	Industrial goods	Building materials
12	Ashaka cement Plc.	Industrial goods	Building materials
13	Berger paints plc.	Industrial goods	Building materials
14	Beta glass plc.	Industrial goods	Building materials
15	Okomu oil palm plc.	Agriculture	Crop production
16	Livestock feeds plc.	Agriculture	Livestock specialists
17	Courtville business solution plc-2015	ICT	Computer Systems & software
18	OMATEK ventures plc.	ICT	ICT Products and Services
19	Computer warehouse group plc.	ICT	Computers and peripherals
20	NCR Nigeria plc.	ICT	Other ICT Products and Services
21	Tripple gee and company plc.	ICT	Other ICT Products and Services
22	Champ plc. ICT	Diversified Com. Services	
23	e-Tranzact international Plc.	ICT	Processing Systems
24	Mass telecommunication plc.	ICT	Telecommunications Services

Source: Nigerian Stock Exchange, (2016)

### Model specification and Variables Measurement

The study adopts a secondary technique of data collection. Data were collected from the audited annual accounts and reports of the selected quoted companies, the annual accounts and reports selected will cover the period of seven years, that is, from 2011 to 2016. The instrument is valid and reliable since they have been signed by the management of the firms, approved by the security and exchange commission, and other scholars have used the annual audited financial statements to carry out related study, therefore the instrument is deemed to be valid.

The study adopts standardized multiple linear regression (Ordinary Least Square-OLS) and Karl Pearson Product Moment Correlation Coefficient-(PPMCC) to analyse data via SPSS version 23. The study involved time series and cross-sectional data (that is, six time series and twenty-four listed companies which is one hundred and forty-four (144) observational pooled data). Our theoretical expectation (Aprior) that is,  $\beta_1$  to  $\beta_{10} \geq 0$  and the data conform to the standardized multiple linear regression assumptions that is, linearity, homoscedasticity, normality and independence of data. The graphs is within the acceptable limits; tolerance value should not be less than 0.10 (10%), variance inflationary factor (VIF) should not be greater than 10, otherwise possible multicollinearity; Durbin Watson statistics should be within the range of 1-3, (Gujarati, Porter & Gunasekar, 2012; Kothari, & Gaurav, 2014; Tabachnick & Fidell, 2007) see Appendix-I for more details. The decision is based on 5% level of significant. Accept null hypothesis (H0) if probability value (i.e. P-value or Sig.) calculated is greater than or equals to ( $\geq$ ) stated 5% level of significance ( $\alpha$ ); otherwise, reject and accept alternate hypothesis (Ha), if p-value or sig calculated is less than 5% level of significance (Osisioma, Egbunike & Jesuwunmi, 2015).

Financial Performance (FP) = f (Human resourcevaluation-HRV)

Financial Performance is a function of Human resource valuation-HV

Introduce the surrogates (i.e. proxy variables)

$$FP-(ROI_{it}, GPM_{it}, ATO_{it}, ROE_{it}, NPM_{it}) = f (HRV-HRC_{it}, HCE_{it}) \dots \text{eqn. 1}$$

Financial performance is proxy by ROI, GPM, ATO, ROE, NPM, while human resource valuation is proxy by HRC, HCE

$$ROI_{it} = F_0 + \beta_1 HRC_{it} + \beta_2 HCE_{it} \dots \text{eqn. 2}$$

$$GPM_{it} = F_1 + \beta_3 HRC_{it} + \beta_4 HCE_{it} \dots \text{eqn. 3}$$

$$ATO_{it} = F_2 + \beta_5 HRC_{it} + \beta_6 HCE_{it} \dots \text{eqn. 4}$$

$$ROE_{it} = F_3 + \beta_7 HRC_{it} + \beta_8 HCE_{it} \dots \text{eqn. 5}$$

$$NPM_{it} = F_{11} + \beta_9 HRC_{it} + \beta_{10} HCE_{it} \dots \text{eqn. 6}$$

Note: equation 2 to 6 are deterministic or mathematical models;

#### Introduce the stochastic random variable (error term) into the model.

$$ROI_{it} = F_0 + \beta_1 HRC_{it} + \beta_2 HCE_{it} + F_{it} \dots \text{eqn. 7}$$

$$GPM_{it} = F_1 + \beta_3 HRC_{it} + \beta_4 HCE_{it} + F_{it} \dots \text{eqn. 8}$$

$$ATO_{it} = F_2 + \beta_5 HRC_{it} + \beta_6 HCE_{it} + F_{it} \dots \text{eqn. 9}$$

$$ROE_{it} = F_3 + \beta_7 HRC_{it} + \beta_8 HCE_{it} + F_{it} \dots \text{eqn. 10}$$

$$NPM_{it} = F_4 + \beta_9 HRC_{it} + \beta_{10} HCE_{it} + F_{it} \dots \text{eqn. 11}$$

Note: equation 2 to 6 are deterministic or mathematical models; equations 7 to 11 are multiple linear regression models or econometric models.

Table3.1.2: Variables measurement and nomenclature

S/N	Names & Codes	Measurement	Variable type
1	Financial Performance-FP	FP=ROI, GPM, ATO, ROE, NPM	Latent-Endogenous
2	Return on investment -ROI	ROI = Earnings before Interest Tax Depreciation Amortization(EBITDA) ÷ [Total Assets - current liability OR share capital + long-term liability ]	Observed/measured endogenous
3	Gross profit margin -GPM	GPM= [Gross profit ÷ total revenue (income)] *100	Observed endogenous
4	Asset turnover ATO	ATO = Revue(sales)/total asset	Observed/ explained
5	Return on equity ROE	ROE= Earnings after tax (EAIT) ÷ number of outstanding ordinary shares	Observed/ explained
6	Net profit margin NPM	NPM= [Net after profit ÷ total revenue (income)] *100	Observed/ explained
7	Human Resource Valuation-HRV	HRV= HRC, HCE	Latent/hidden exogenous
8	Human resource cost-HRC	HRC= human resource development and acquisition cost	Observed/measured exogenous
9	Human capital efficiency-HCE	HCE= Value Added÷ Human Capital	Observed exogenous
10	$\beta$ 1-8	Regression coefficient	Parameter
11	F0-4 (Gandia)	Intercept /constant term	Parameter
12	F	Functional notation	
13	I	Individual firms	
14	T	Time/ year	

Source: Nigerian Stock Exchange, (2016)

The panel data methodology is adopted because the study combined time series and cross-sectional data that is, twenty-four cross-sectional observations for each year and six time series for each listed companies on regressor and explained variables, a total of one hundred and forty-four (144) pooled observations. A panel data set has multiple entities each of which has repeated measurements at different time periods, Hill (2009). Panel data give more informative data, more degrees of freedom and more efficiency. They also provide ways of dealing with diverse data and examine fixed and random effects on the longitudinal data.

## 4. Data Analysis and Results

### 4.1 Answers to Research Questions

*i. To what extent is the joint impact of human resource cost (HRC) and human capital efficiency (HCE) on return on investment (ROI) of Nigeria listed firms?*

Table-4.1.1: Multiple regression analysis model summary of human resource valuation surrogates' prediction on ROI of listed Nigerian firms.

R	R <sup>2</sup>	Adj. R <sup>2</sup>	Std. Error of the Estimate
.440	.194	.180	.107871

Source: Researcher's computation using SPSS version-23

The multiple regression result of the study is presented in table 4.1.1. The regression result in Table 4.1.1 is run by taking ROI as explained variable and human resources valuation surrogates as

regressors. The regression output reveals that the regressand is well explained by the predictors in the model with R-square and adjusted R-square of .194 and .180 (18%) respectively. While the unexplained variation in the model, that is, error term or stochastic random variable (F) had captured .820 or 82% variations.

**ii. What is the joint impact of human resource cost(HRC) and human capital efficiency (HCE) on gross profit margin (GPM) of Nigeria listed firms?**

**Table-4.1.2: Multiple regression analysis model summary of HRC and HCE prediction on GPM of listed Nigerian firms.**

R	R <sup>2</sup>	Adj. R <sup>2</sup>	Std. Error of the Estimate
.604	.365	.354	.219453

Source: Researcher's computation using SPSS version-23

The multiple regression result of the study is presented in table4.1.2. The regression result in Table 4.1.1 is run by taking GPM as explained variable and HRV surrogates as regressors. The regression output reveals that the regressand is well explained by the predictors in the model with R-square and adjusted R-square of .365 and .354 respectively. While the error term or stochastic random variable (F) had explained .646 or 64.6% variations in the model.

**iii. What is the joint impact of human resource cost (HRC) and human capital efficiency (HCE) on asset turnover (ATO) of Nigeria listed firms?**

**Table-4.1.3: Multiple regression analysis model summary of HRC and HCE prediction on ATO of listed Nigerian firms.**

R	R <sup>2</sup>	Adj. R <sup>2</sup>	Std. Error of the Estimate
.356 <sup>a</sup>	.126	.111	93.228808

Source: Researcher's computation using SPSS version-23

The multiple regression result of the study is presented in table 4.1.3. The regression result in Table 4.1.2 is run by taking ATO as explained variable and HRV surrogates as explanatory variables. The regression output reveals that the regressand is explained by the predictors in the model with R-square and adjusted R-square of .126 and .111 respectively. While the unexplained variations that is, error term or stochastic random variable (F) had captured .889 or 88.9% variations in the model.

**iv. What is the joint impact of human resource cost (HRC) and human capital efficiency (HCE) on return on equity (ROE) of Nigeria listed firms?**

**Table-4.1.4: Multiple regression analysis model summary of HRC and HCE prediction on ROE of listed Nigerian firms.**

R	R <sup>2</sup>	Adj. R <sup>2</sup>	Std. Error of the Estimate
.263 <sup>a</sup>	.069	.053	.706091

Source: Researcher's computation using SPSS version-23

The multiple regression result of the study is presented in table4.1.4 the regression result in Table4.1.4 is run by taking ROE as a dependent variable and HRV surrogates as regressors. The regression output reveals that the regressand is explained by the predictors in the model with R-square and adjusted R-square of .069 and .053 respectively. While the unexplained variation by the model, that is, error term or stochastic random variable (F) had captured .989 or 98.9% variation.

**v. What is the joint impact of human resource cost (HRC) and human capital efficiency (HCE) on net profit margin (NPM) of Nigeria listed firms?**

**Table-4.1.5: Multiple regression analysis model summary of HRC and HCE prediction on NPM of listed Nigerian firms.**

R	R <sup>2</sup>	Adj. R <sup>2</sup>	Std. Error of the Estimate
.188	.035	.019	1.602817

Source: Researcher's computation using SPSS version-23

The multiple regression result of the study is presented in table4.1.5. The regression result in Table4.1.5 is run by taking NPM as a dependent variable and HRV surrogates as regressors. The regression output reveals that the regressand is explained by the predictors in the model with R-square and adjusted R-square of .035 and .019 respectively. While the error term or stochastic random variable (F) is .989 or 98.9% variation.

**vi. What is the magnitude and directions of associations between human resources cost (HRC) and return on investment (ROI) of Nigerian listed firms?**

**Table-4.1.6: Karl Pearson Product Moment Correlation Coefficient Statistics between HRV and return on investment (ROI) of listed Nigerian firms.**

	Return on investment (ROI)
Pearson Correlation-HRC	.284**
N	120

Source: Researcher's computation using SPSS version-23

Table 4.1.6 had shown the magnitude and direction of relationship or association between

human resource cost-HRC and return on investment (ROI) of listed Nigerian firms. It was showed that there is positive relationship ( $R = .284$ ), that is 28.4%; this shown that there is relationship between the aforementioned variables. Can we conclude that there is insignificant relationship between thevariables? This led us to test of hypothesis.

**vii. What is the correlation between human resource efficiency (HCE) and return on equity(ROE) of Nigeria listed firms?**

**Table-4.1.7: Karl Pearson Product Moment Correlation Coefficient Statistics between HCE and return on equity (ROE) of listed Nigerian firms.**

	Return on investment (ROI)
Pearson Correlation-HRC	.170
N	120

Source: Researcher's computation using SPSS version-23

Table 4.1.7 had shown the magnitude and direction of relationship or association between human resource cost-HRC and return on equity (ROE) of listed Nigerian firms. It was showed that there is positive relationship ( $R = .170$ ), that is 17%; this shown that there is relationship between the aforementioned variables. Can we conclude that there is significant relationship between the variables? This led us to test of hypothesis.

**Test of Hypotheses**

**i. The joint impact of human resource cost (HRC)and human capital efficiency (HCE) on return on investment (ROI) of Nigeria listed firms is not statistically significant.**

**Table-4.2.1: ANOVA multiple regression analysis model summary of human resource valuation prediction on ROI of listed Nigerian firms.**

	Sum of Squares	df	Mean Square	F	Sig.	Decision
Regression	.327	2	.164	14.069	.000	Accept alternate hypothesis (Ha)
Residual	1.361	117	.012			
Total	1.689	119				

Source: Researcher's computation using SPSS version-23

Furthermore, Table 4.2.1 showed that the two explanatory variables (i.e. human resource cost and human capital efficiency) jointly contributed significantly to the prediction of Return on investment (ROI), ( $F(2, 117) = 14.069$ ,  $Adj.R2 = .18$ ;  $P = .000$ ). However, the remaining variation not

explained by the joint contribution of the human resource valuation surrogates might be accounted for by the effects of extraneous or stochastic random variables. Therefore, the human resource valuation proxy variables were significantly joint contributors to the prediction of listed Nigerian firms' financial performance as proxy by return on investment (ROI) among the firms in Nigeria.

**Table-4.2.2: The Relative Contributions (coefficients) of each of human resource valuation proxies to return on investment (ROI) of listed Nigerian firms.**

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Remarks
	B	Std. Error	Beta			
(Constant)	-.286.	.094		-3.036	.003	Significant
Human Capital Efficiency	.020	.005.	.353	4.054	.000	Significant
Log of Human Resource Cost	.046	.010.	.390	4.481	.000	Significant

Source: Researcher's computation using SPSS version-23

The result in Table 4.2.2 showed the beta ( $\beta$ ) weights of estimates of the strengths of the causation. The entire human resource valuation proxy variables shown to contribute differentially to return on investment (ROI) among listed Nigerian firms' financial performance; human resource cost and human capital efficiency had contributed positively to the variation in return on investment (ROI) which was statistically significant, HRC  $\beta=.390$  ( $t=4.48, p=.000$ ), and HCE  $\beta=.353$  ( $t=4.054, p=.000$ ) respectively; their independent positive contributions to the prediction of listed Nigerian firms' financial performance proxy by return on investment (ROI) is statistically significant.

**ii. The joint impact of human resource cost (HRC) and human capital efficiency (HCE) on gross profit margin (GPM) of Nigeria listed firms is not statistically significant.**

**Table-4.2.3: ANOVA multiple regression analysis model summary of HRV prediction on GPM of listed Nigerian firms.**

	Sum of Squares	df	Mean Square	F	Sig.	Decision
Regression	3.241	2	1.621	33.650	.000	Accept alternate hypothesis (Ha)
Residual	5.635	117	.048			
Total	8.876	119				

Source: Researcher's computation using SPSS version-23

In addition, Table 4.2.3 showed that the two explanatory variables (i.e. human resource cost

and human capital efficiency) jointly contributed significantly to the prediction of gross profit margin (GPM), (F(2, 34) = 33.65, Adj.R2 = .354; P=.000). However, the remaining variation not explained by the joint contribution of the human resource valuation surrogates might be accounted for by the effects of extraneous or stochastic random variables. Therefore, the human resource valuation proxy variables were significantly joint contributors to the prediction of Nigeria listed firms' financial performance as proxy by gross profit margin (GPM).

**Table-4.2.4: The Relative Contributions (coefficients) of each of the Regressors to the Joint Prediction of gross profit margin (GPM) among listed Nigerian firms.**

	nstandardizedCoefficients		Standardized Coefficients Beta	t	Sig.	Remarks
	B	Std. Error				
(Constant)	.321	.192		1.673	.097	Insignificant
Human Capital Efficiency	.074	.010	.586	7.589	.000	Significant
Log of Human Resource Cost	-.014	.021	-.053	-.691	.491	Insignificant

Source: Researcher's computation using SPSS version-23

The result in Table 4.2.4 indicated that the beta ( $\beta$ ) weights of estimates of the strengths of the causation. The entire human resource valuation proxy variables shown to contribute differentially to gross profit margin (GPM) of Nigeria listed companies; human capital efficiency and human resource cost had contributed both positively and negatively to the variation in gross profit margin (GPM) which were statistically significant and insignificant to listed companies' financial performance, HCE  $\beta$ =.586(t=7.589,p=.000) and HRC  $\beta$ =-.053(t=-.691,p=.491), respectively; their independent contributions to the prediction of the regressand is statistically differ to listed Nigerian firms' financial performance proxy by gross profit margin(GPM).

**iii. The joint impact of human resource cost (HRC) and human capital efficiency (HCE) on asset turnover (ATO) of Nigeria listed firms is notstatistically significant.**

**Table-4.2.5: ANOVA multiple regression analysis model summary of HRV prediction on ATO of listed Nigerian firms.**

	Sum of Squares	df	Mean Square	F	Sig.	Decision
Regression	147127.660	2	73563.830	8.464	.000	Accept alternate hypothesis (Ha)
Residual	1016918.453	117	8691.611			
Total	1164046.113	119				

In addition, Table4.2.5 showed that the two explanatory variables (i.e. human resource cost and human capital efficiency) jointly contributed significantly to the prediction of asset turnover (ATO), ( $F(2, 117) = 8.45, \text{Adj.}R^2 = .011; P = .000$ ). However, the remaining variation not explained by the joint contribution of the human resource valuation surrogates might be accounted for by the effects of extraneous or stochastic random variables. Therefore, the human resource valuation proxy variables were significantly joint contributors to the prediction of Nigeria listed firms' financial performance as proxy by asset turnover (ATO).

**Table-4.2.6: The Relative Contributions (coefficients) of each of the Regressors to the Joint Prediction of ATO among listed Nigerian firms.**

	Unstandardize d Coefficients		Standardize d Coefficients Beta	t	Sig.	Remarks
	B	Std. Error				
(Constant)	-209.536	81.391		-2.574	.011	Significant
Human Capital Efficiency Log of	-6.321	4.168	-.137	-1.517	.132	Insignificant
Human Resource Cost	28.439	8.908	.289	3.192	.002	Significant

Source: Researcher's computation using SPSS version-23

The result in Table4.2.6 indicated that the beta ( $\beta$ ) weights of estimates of the strengths of the causation. The entire human resource valuation proxy variables shown to contribute differentially to asset turnover (ATO) of Nigeria listed companies; human resource cost and human capital efficiency had contributed both positively and negatively to the variation in asset turnover (ATO) which were statistically insignificant to listed companies' financial performance, HRC  $\beta = .289 (t = 3.192, p = .002)$ , and HCE  $\beta = -.137 (t = -1.517, p = .132)$  respectively; their independent contributions to the prediction of the regressand is statistically differ to listed Nigerian firms' financial performance proxy by asset turnover (ATO).

**iv. The joint impact of human resource cost (HRC) and human capital efficiency (HCE) on return on equity (ROE) of Nigeria listed firms is not statistically significant.**

**Table-4.2.7: ANOVA multiple regression analysis model summary of HRV prediction on ROE of listed Nigerian firms.**

	Sum of Squares	df	Mean Square	F	Sig. Decision
Regression	4.337	2	2.169	4.350	.015 Accept alternate hypothesis (Ha)
Residual	58.332	117	.499		
Total	62.669	119			

Source: Researcher's computation using SPSS version-23

In addition, Table 4.2.7 showed that the two explanatory variables (i.e. human resource cost and human capital efficiency) jointly contributed significantly to the prediction of return on equity (ROE), (F (2, 117) = 4.350, Adj.R2 = .053; P=.015). However, the remaining variation not explained by the joint contribution of the human resource. In addition, Table 4.2.7 showed that the two explanatory variables (i.e. human resource cost and human capital efficiency) jointly contributed significantly to the prediction of return on equity (ROE), (F (2, 117) = 4.350, Adj.R2 = .053; P=.015). However, the remaining variation not explained by the joint contribution of the human resource valuation surrogates might be accounted for by the effects of extraneous or stochastic random variables. Therefore, the human resource valuation proxy variables were significantly joint contributors to the prediction of Nigeria listed firms' financial performance as proxy by return on equity (ROE)

**Table-4.2.8: The Relative Contributions (coefficients) of each of the Regressors to the Joint Prediction of return on equity (ROE) among listed Nigerian firms.**

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Remarks
	B	Std. Error	Beta			
(Constant)	-1.352	.616		-2.193	.030	Significant
Human Capital Efficiency	.079	.032	.234	2.497	.014	Significant
Log of Human Resource Cost	.152	.067	.210	2.248	.026	Significant

Source: Researcher's computation using SPSS version-23.

The result in Table 4.2.8 indicated that the beta ( $\beta$ ) weights of estimates of the strengths of the causation. The entire human resource valuation proxy variables shown to contribute differentially to return on equity (ROE) of Nigeria listed companies; human resource cost and human capital efficiency had contributed positively to the variation in return on equity (ROE) which were statistically significant to listed companies' financial performance, HRC  $\beta=.210(t=2.248,p=.026)$ , and HCE  $\beta=.234(t=2.497,p=.014)$  respectively; their independent contributions to the prediction of theregressand is statistically significant to listed Nigerian firms' financial performance proxy by return on equity (ROE).

**v. The joint impact of human resource cost (HRC) and human capital efficiency (HCE) on net profit margin (NPM) of Nigeria listed firms is not statistically significant.**

**Table-4.2.9: ANOVA multiple regression analysis model summary of HRV prediction on NPM of listed Nigerian firms.**

	Sum of Squares	df	Mean Square	F	Sig.	Decision
Regression	11.035	2	5.517	2.148	.121	Accept alternate hypothesis (Ha)
Residual	300.576	117	2.569			
Total	311.611	119				

Source: Researcher's computation using SPSS version-23

In addition, Table 4.2.9 showed that the two explanatory variables (i.e. human resource cost and human capital efficiency) jointly contributed insignificantly to the prediction of net profit margin(NPM), (F (2, 117) = 2.148, Adj.R2 = .019; P=.121). However, the remaining variation not explained by the joint contribution of the human resource valuation surrogates might be accounted for by the effects of extraneous or stochastic random variables. Therefore, the human resource valuation proxy variables were insignificant joint contributors to the prediction of Nigeria listed firms' financial performance as proxy by net profit margin (NPM).

Table-4.2.10: The Relative Contributions (coefficients) of each of the Regressors to the Joint Prediction of net profit margin (NPM) among listed Nigerian firms.

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Remarks
	B	Std. Error	Beta			
(Constant)	-.956	1.399		-.684	.496	Insignificant
Human Capital Efficiency	.148	.072	.197	2.072	.040	Significant
Log of Human Resource Cost	.088	.153	.055	.573	.568	Insignificant

Source: Researcher's computation using SPSS version-23

The result in Table 4.2.10 indicated that the beta ( $\beta$ ) weights of estimates of the strengths of the causation. The entire human resource valuation proxy variables shown to contribute differentially to net profit margin (NPM) of Nigeria listed companies; human resource cost and human capital efficiency had contributed both negatively and positively to the variation in net profit margin (NPM) which were statistically insignificant to listed companies' financial performance, HRC  $\beta = -.519$  ( $t = -1.240, p = .224$ ), and HCE  $\beta = .630$  ( $t = 1.505, p = .142$ ) respectively; their independent contributions to the prediction of the regressand is statistically insignificant to listed Nigerian firms' financial performance proxy by net profit margin (NPM).

**vi. What is the magnitude and directions of associations between human resources cost (HRC) and return on investment (ROI) of Nigerian listed firms?**

Table-4.2.11: Karl Pearson Product Moment Correlation Coefficient Statistics between HRC and return on investment (ROI) of listed Nigerian firms.

	Return on investment (ROI)
Pearson Correlation-HRC	.284
Sig. (2-tailed)	.002
N	120

Source: Researcher's computation using SPSS version-23

Table 4.2.11 had shown the magnitude and direction of relationship or association between human resource cost-HRC and return on investment-ROI of listed Nigerian firms. It was shown that there is positive relationship ( $R = .284$ ), that is 28.4%; this shown that there is relationship between the aforementioned variables. Can we conclude that there is insignificant relationship between the variables? This led us to test

of hypothesis. It was showed that there is positive significant relationship ( $R = .284$ ;  $p=.002$ ). We therefore, accept the null hypothesis ( $H_0$ ) and reject the alternate hypothesis( $H_a$ ) and conclude that the degree and direction of relationship between return on investment (ROI) and human resource cost (HRC) among the listed Nigerian firm is significant.

**vii. The correlation between human capital efficiency (HCE) and return on equity (ROE) of Nigeria listed firms is not statistically significant.**

**Table-4.2. 12: Karl Pearson Product Moment Correlation Coefficient Statistics between HCE and return on equity (ROE) of Nigeria listed firms.**

	Return on equity (ROE)
Pearson Correlation-HCE	.170
Sig. (2-tailed)	.063
N	120

*Source: Researcher's computation using SPSS version-23*

Table 4.2.12 presents the magnitude and direction of relationship or association between human capital efficiency-HCE and return on equity-ROE of listed Nigerian firms. It was revealed that there is positive relationship ( $R = .170$ ), that is 17%; this shown that there is relationship between the aforesaid variables. Can we wrap up that there is insignificant relationship between the variables? This led us to test of hypothesis. It was showed that there is positive significant relationship ( $R = .170$ ;  $p=.063$ ). We therefore, accept the null hypothesis ( $H_0$ ) and reject the alternate hypothesis ( $H_a$ ) and conclude that the degree and direction of relationship between return on equity (ROE) and human capital efficiency (HCE) among the listed Nigerian firm is not significant.

**4.4 Discussion of findings**

Human resource valuation proxy variables were significantly joint contributors to the prediction of listed Nigerian firms' financial performance as proxy by return on investment (ROI) among the firms in Nigeria. Human capital efficiency and human resource cost have positive significant impact on profitability. This result is consistent with the findings of (Adebawojo e tal, 2015; Agbiogwu, e tal, 2016; Kwarbai & Akinpelu ; Okpako, Atube, & Olufawoye, 2014; Olayiwola, 2016; Omodero, e tal, 2016; Prosvirkina, 2014) who agreed that human assets or capital had positive impact on organizational profitability but this result is not aligning with the findings of (Ahmadu, 2013; Izedonme, Odeyile &

Kuegbe, 2013; Khadijeh & Arash, 2014), their results revealed that human assets or investment in human has no significant impact of effect on firms' financial performance.

Furthermore, human resource cost and human capital efficiency were significantly joint contributors to the prediction of gross profit margin (GPM), asset turnover (ATO), and return on equity (ROE) this corroborated with the findings of (Bassey & Tarpang, 2012; Kwarbai & Akinpelu ; Okpako, Atube, & Olufawoye, 2014; Olayiwola, 2016; Prosvirkina, 2014) they discovered that human resource accounting surrogates substantially influenced companies'

or organizational profitability but this deviate from the results of (Izedonme, Odeyile & Kuegbe, 2013; Khadijeh & Arash, 2014) who reported that human value or human capital has no significant positive impact on companies' profitability. In addition, human capital efficiency has negative insignificant effect on asset turnover (ATO) this result is similar to the findings of Ahmadu (2013) who discovered that human capital efficiency has no significant impact on profitability of Nigerian banks. While human resource cost has positive significant impact on asset turnover (ATO) this result has been corroborated with the findings of Omodero, Alpheaus, and Ihendinihu, (2016) they reported that human resource cost have positive and significant effect on profitability of Nigerian firms.

In summary, human capital efficiency (HCE) has positive significant effect on four of the financial performance surrogates except the negative insignificant effect it had on asset turnover (ATO) while human resource cost (HRC) has significant impact on three of the financial performance surrogates but it has insignificant positive and negative impact on net profit margin (NPM) and gross profit margin (GPM) respectively.

The degree and direction of relationship between return on investment (ROI) and human resource cost (HRC) is significant. This finding is substantiated by the results of (Ayanda, Lawal & Ben-Bernard, 2014; Edom, Inah, Adanma, & Eyisi, 2015; Ifurueze et al, 2015; Olowolaju, & Oluwasesin, 2016) they all reported that there is a positive relationship between the indicators of human resource cost (acquisition, training, development etc.) and organizational financial performance. But this result did not aligned with the findings of (Zohreh & Safar, 2011; Yusuf, 2011) they reported that there is no correlation between human resource /capital value and firms' profitability. While degree and direction of relationship between return on equity (ROE) and human capital efficiency (HCE) among the listed Nigerian firm is not significant. This findings supported by the findings of (Yusuf, 2011; Zohreh & Safar, 2013) but negated by the result of Parham and Heling, (2015) who observed that there is positive significant relationship between human capital efficiency and organizational profitability. Finally our empirical results show that the prediction of human resource valuation surrogate had moderately predicted the listed Nigerian

companies' financial performance proxy variables.

## 5. Implications, Conclusion and Recommendations

### 5.1 Implications of Findings

From the empirical results we are able to infer that human resource valuation proxy variables have both positive and negative impact on the financial performance proxy variables. Holding all other factors constant, the additional change in human resource cost (HRC) or human capital efficiency (HCE) will lead to increase in return on investment (ROI) to the tune of thirty-nine percent (39%) and thirty-five point three percent (35.3%) respectively. They are both statistically significant to listed companies' performance in Nigeria respectively. This can be represented in a model form  $ROI_{it} = -.286 + .390HRC_{it} + .353HCE_{it} + Fit_{it}$ .....the fitted model.

Likewise, for return on equity "ceteris paribus" that is all things being equal, one marginal change in human resource cost (HRC) or human capital efficiency (HCE) will cause a significant change of twenty-one percent (21%) and twenty-three point four percent (23.4%) respectively. This can be depicted in an econometric model.  $ROE_{it} = -1.352 + .210HRC_{it} + .234HCE_{it} + Fit_{it}$  fitted model.

While additional change in human resource cost (HRC) or human capital efficiency (HCE) holding all other variable constant will lead to insignificant decrease or significant increase in gross profit margin (GPM) to the tune of minus five point three percent (-5.3%) or fifty-eight point six percent (58.6%) respectively. This can be illustrated in a model form.  $GPM_{it} = .321 -.053HRC_{it} + .586 HCE_{it} + Fit_{it}$  fitted model.

The same also applicable to asset turnover, any additional change in human resource cost (HRC) or human capital efficiency (HCE) will to a significant increase of 28.9% and insignificant decrease of -13.7% in asset turnover (ATO), this can be fitted thus:  $ATO_{it} = \beta_2 + .289HRC_{it} -.137HCE_{it} + Fit_{it}$  regression line.

Finally, an additional change in human resource cost (HRC) or human capital efficiency

(HCE) will lead to an insignificant increase of 5.5% and a significant increase of 19.7% in net profit margin (NPM) of selected listed Nigerian companies' financial performance. This can be depicted in a model form  $NPM_{it} = -.956 + .055HRC_{it} + .197HCE_{it} + Fit...$  line of best fit.

The degree and direction of relationship between return on investment (ROI) and human resource cost (HRC) among the listed Nigerian firm is significant.

This shows both variables move in the same positive direction at higher magnitude, that is, as one variable increases the other also increases which

is significant; likewise, the degree and direction of relationship between return on equity (ROE) and human capital efficiency (HCE) among the listed Nigerian firms move in the same positive direction but at low magnitude.

The implications of the model stated above that captains of industries or managers should increase human capital investment in order to enhance or improve their organizational profitability and efficiency. Furthermore, managers need to ascertain the level of human resources cost/asset that will yield maximum human capital efficiency that can be seen to be optimal so that underutilization of employee would be eliminated.

## 5.2 Conclusion

Human resource valuation surrogates significantly influenced financial performance of selected companies listed on the Nigerian Stock Exchange and companies that place more emphasis on human resource valuation or accounting, and maintaining, treating it as a pure asset will have motivated work force. Furthermore, investments in human resources have positive optimal effects on profitability and activity ratios of firms and as such the firm will have commitment towards development of employees and providing conducive working atmosphere to improve employees' productivity and organisational financial performance.

Capitalizing human resource cost or human asset would positively impact on financial performance of organizations and disclosure as intangible asset in the statement of financial position; will boost the morale of the employees or workers; thereby permitting or allowing the managers, captains of industry, shareholders to make informed decisions about their human assets or capital in order to avoid redundancy of valuable human asset. This is the only

through path towards comprehensive business information goal congruence. Finally, human resource accounting information of an organization is crucial factor for decision makers in an era of competitive economy.

## 5.3 Recommendations

Based on the empirical findings of the study, the following recommendations were submitted:

i. Nigerian listed companies should minimize their human resource cost or human investment in order to create optimality by increase their human capital efficiency.

ii. Human resource cost should include all the expenses incurred on enhancing knowledge, education, expertise and skills of employees. This may involve salaries and wages, training and development, payments for conventions and conferences, dues and subscriptions etc.

iii. Nigerian listed companies should capitalise their human resource cost to augment their financial performance. Also this will enable the shareholders to know the total human asset value of the organization and the manager can also make accurate, timely and informed decision.

iv. Nigerian listed companies should inculcate the culture of capitalising and reporting all investment on human resource that increase human capital efficiency (productivity) and organizational financial performance, so that, the rate at which asset is utilized to generate income can be determined by management and other stakeholders.

v. Financial Reporting Council of Nigeria and other relevant agencies should create accounting standard for human resource accounting measurement as it would ensure uniformity in disclosures and a reliable comparison of human resource value.

## 5.4 Contribution to Knowledge

The exceptionality of this study is that the study develops a conceptual model on human resource valuation theoretical framework in order to introduce significant insight from different fields, so that, the concept of human resource valuation can be properly understood.

The study estimates the Nigerian listed companies' financial performance model which is proxy by return on asset (ROI, GPM, ATO, ROE and NPM) in order to establish the validity of the estimated model through F-test, t-test, Durbin Watson and Variance Inflationary Factor (VIF) statistics.

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