

## 1. Introduction

Over the counter (OTC) financial transactions are usually negotiated bilaterally between parties who are often under no obligation to report their deals to any regulatory body. Such transactions are clearly different from those that occur on organised exchanges which are more formal, transparent and regulated (Chovancová and Gregor, 2003). Recently however, especially after the 2007-2009 global financial crisis, the regulatory environment in the OTC market has changed tremendously. Much attention is now paid to issues such as the use of electronic trading platform, the establishment of Central Counterparties (CCP) to clear OTC transactions, promotion of exchange-traded derivative (ETD) and the use of trade repositories to report OTC trades (Chui, 2011; FSB, 2012).

These developments in the global OTC market are gradually making it difficult to differentiate OTC transactions from those on organised exchanges. One major factor that is also concealing the difference is the fact that physical trading floors which have always been the bedrock of exchanges are gradually giving way to electronic trading venues (Dodd, 2008). Thus, the adoption of electronic platforms by OTC and regular exchanges as well as initiatives to make OTC transactions transparent and cleared are making these two markets resemble each other.

The Nigerian OTC market has existed for several years. However, until recently it has been largely unregulated, similar to what is found in many jurisdictions. The registration in 2012 of two OTC exchanges, Financial Market Dealer Quotation (FMDQ) and National Association of Securities Dealers (NASD) by the Securities and Exchange Commission (SEC) is a laudable step towards bringing transparency and liquidity to the country's OTC market. These exchanges commenced by serving as platforms for financial instruments that were formerly traded OTC and they possess high growth potentials.

In support of these potentials, the current study attempts to draw lessons from recent developments in the global OTC market that are relevant to Nigeria. It is also an opportunity to characterise the Nigerian OTC market. The study is therefore organised into four major sections. In addition to this introduction, section two presents a background analysis on the global OTC market; section three is on the analysis of trends and structures of the Nigerian OTC market. Finally, section four presents some policy lessons and implications that can be derived from the study.

#### 2. Background on Global OTC Markets

Over the counter is a decentralised or off-board market for unlisted securities. In the traditional dealer type of the market, it involves bilateral negotiations, usually through telephone between two or more parties (Chovancová and Gregor, 2003). Such negotiations are conventionally unregulated and the dealing parties set their own terms without having to inform any central governing body. Consequently, there are some risks associated with OTC, the most significant of which is counterparty risk. This entails the failure of one party to honour an agreement, a situation exacerbated by the absence of a central body to ensure compliance.

Major financial instruments traded OTC are derivatives which are used to hedge risks coming from exposure to varying financial and macroeconomic conditions. They derive their values from an underlying instrument such as stocks, commodities, credit events, currencies and other derivatives. Examples include futures, options, forwards, contract-for-difference and swaps. Derivatives can be customised for specific risk and entities or be standardised. Customised derivatives are flexible instruments traded on OTC markets while standardised derivatives, known as Exchange Traded Derivatives (ETDs), are traded on exchanges (Chui, 2011). An emerging form of derivatives is Cleared OTC Derivatives. Although privately negotiated, they are booked with a Central Counterparty (CCP) so that dealers are not directly exposed to each other's counterparty risk (Heckinger, 2013).

Other instruments traded OTC include bonds, equities, loans, repurchase agreements, currencies and other structured products (Heckinger, 2014). Some of these are traditional OTC securities and others, such as equities, are traded OTC because the companies are small and cannot meet the traditional listing requirements of an exchange.

Transactions on OTC are clearly different from those on organised exchanges as the latter are more formal, organised, transparent and traceable. Because exchanges serve as counterparty to both parties to a deal, the chances of default are minimised. They centralise trading and clearing of instruments on them, whether in a physical location or electronically, and they have specific listing requirements and regulations that must be attained and maintained by securities listed on them. It has been argued that the level of regulation on exchanges is characteristically more stringent so as to protect retail investors but this is not needed in OTC since it is a wholesale market for professionals (Dayanand and Rathinam, 2010). Further comparisons between OTC and exchanges are summarised in Table 1.

Table 1: Comparisons of OTC and Exchanges

Criteria	Over the Counter	Exchange
Regulatory and Standardised Framework	<ul> <li>Decentralised with many agents linking buyers and sellers</li> <li>Usually unregulated with the claim that OTC transactions occur between sophisticated parties</li> <li>Products are tailor-made</li> <li>No guarantor</li> <li>Trades usually do not go through clearing house</li> <li>Information on price and volume is private</li> </ul>	<ul> <li>A centralised platform with the Exchange connecting buyers and sellers</li> <li>It is well regulated</li> <li>There are listing requirements</li> <li>Products are standardised</li> <li>Exchange serves as the guarantor</li> <li>Trades go through clearing house</li> <li>Information on volume and prices is public</li> </ul>
Strengths	<ul> <li>Provides liquidity for unlisted securities</li> <li>Can reduce administrative, intermediary and general transaction costs.</li> <li>Engenders competition</li> <li>Availability of custom-made products that can serve as 'perfect' hedge</li> </ul>	<ul> <li>Better and transparent transactions, enforcement, security, visibility</li> <li>Low counterparty risk as the Exchange is the counterparty and ensures delivery</li> </ul>

Criteria	Over the Counter	Exchange
	<ul> <li>expiration and settlement periods and terms determined by trading parties</li> <li>Allows small companies' stocks to be traded; especially those that cannot meet the stringent requirements of exchanges</li> <li>Suitable for trades with low order flows</li> <li>Serves as laboratory for the development of new products</li> <li>Meets the needs of sophisticated participants</li> <li>Overtaking Exchanges in volume traded due to improved electronic trading and alternative investing</li> </ul>	Many dealers on particular security assist price discovery and uniformity     High liquidity
Weaknesses	<ul> <li>Vulnerable to abuse and fraud</li> <li>High counterparty risk</li> <li>Price information difficult to obtain and vulnerable to manipulation</li> <li>Low liquidity</li> <li>High volatility</li> <li>Difficult to establish the size of the market</li> <li>Can be exploited by high risk companies and those with bad credit records</li> <li>Largely responsible for the 2007-2009 financial crisis</li> </ul>	<ul> <li>Gives a lot of power to the Exchange</li> <li>Products may not meet specific need and can be rigid</li> <li>Less competition</li> <li>May be difficult to trade stocks of small companies</li> </ul>

Source: Authors' compilation from various reviews

## 2.1. Size and Structure of the OTC Market

The notional amount outstanding of the global OTC derivatives market stood at US\$493trn at the end of 2015 while that of ETD stood at US\$63.5trn (BIS, 2016). The OTC derivatives are those based on asset classes like interest rate swaps (IRS), equity basket or index, commodities, credit default swaps (CDS) and foreign exchange, while the ETD are futures and options on interest rates and foreign exchange (BIS, 2016; Heckinger, 2014). There are two ways to measure OTC trades; first is the financial value of the amount the dealing parties agree to swap and the second is the principal or notional value on which the swap is based. (Heckinger, 2014). Information is relatively more available on derivatives than other instruments traded OTC; hence, the focus on derivatives in this sub-section.

Figure 1 shows three distinct phases: periods of growth, relative stability and decline. OTC transactions recorded remarkable growth in the ten years to December 2008. In comparison, relative stability was recorded in the subsequent five years. Finally, it underwent a steady decline from a peak of US\$710.63 in December 2013 to less than US\$500 trillion in December 2015.

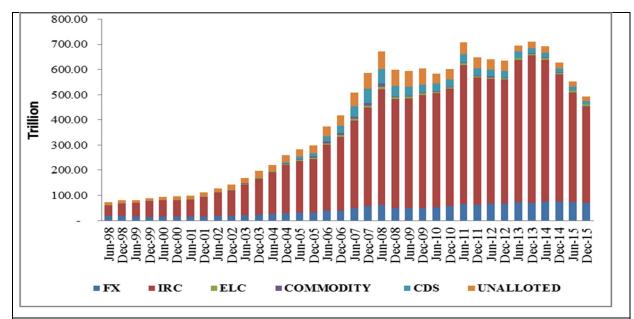


Figure 1: OTC Derivatives Market (US\$ Million) – Notional Amounts Outstanding (by type)

Note: FX- Foreign exchange contracts; IRC- Interest rate contracts; ELC- Equity-linked contracts; COMMODITY - Commodity contracts; CDS- Credit default swaps; UNALLOTED: Unallocated contracts.

Source: Authors' computations from BIS data

# 2.2. Recent Regulatory Environment

The global financial crisis of 2007-2009 represented a major event that shaped the regulatory environment of the OTC market. Large US companies like Enron Corporation and American Insurance Group (AIG) were victims of various OTC derivatives transactions that were literarily not secured. These consisted of varying degrees of layers without the requisite risk management safeguards. Efforts to forestall such occurrences have focused on improved counterparty risk management and in favour of promoting exchange-traded derivative markets (Chui, 2011).

In 2009, G-20 leaders approved three measures to regulate OTC derivatives. One was the setting of the 2012 deadline that standardized OTC derivatives be traded either on an exchange or cleared through CCP. Second, non-centrally cleared contracts should be subject to higher capital requirements. Third, all OTC derivative contracts should be reported to trade repositories' (FSB, 2012; Dayanand and Rathinam, 2010). Globally, the OTC derivatives regulation is being strengthened with institutions such as the Committee on Payment and Settlement Systems (CPSS) and International Organization of Securities Commissions (IOSCO) which now focus on designing and raising the frameworks for Central Counterparties (CCPs), Central Security Depository (CSD), payment systems, trade repositories and the introduction of the Legal Entity identifier (LEI) codes (BIS, 2012).

Similar regulations and functions are contained in the Dodd-Frank Act (2010) for the US and in the operations of the European Securities and Market Authority (ESMA) and European Markets

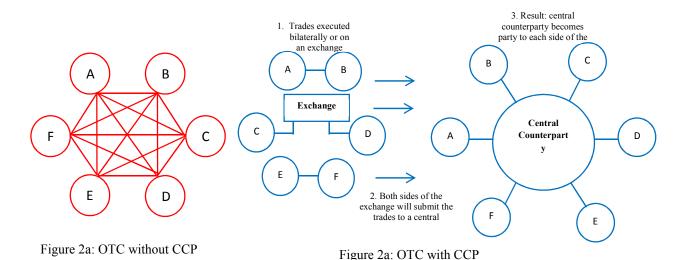
Infrastructure Regulation (*EMIR*) for Europe. There are also various other initiatives in Canada and Asia towards improving the reporting, transparency and clearing of OTC transactions.

#### 2.3. Central Counterparty (CCP) Clearing House

Counterparty risk which is typical of OTC can be reduced by clearing done on the platform of a CCP (Duffie et al., 2010), which is a clearing house for derivatives trading (BIS, 2012a). CCP can also be used to clear other financial transactions like equities and bonds. A CCP serves as the buyer to every seller and the seller to every buyer thereby ensuring the performance of open contracts. It also provides a foundation for centralized risk management (such as multilateral netting, collateralization, and loss mutualisation) and data processing operations (such as trade registration and reporting) that benefit clearing members of the CCP (Heckinger, 2013).

The establishment of CCP moves OTC derivatives closer to ETDs as the latter also uses clearing houses. When transactions are not centrally cleared, as shown in figure 2a, the relationship can be opaque and overlapping as no single market participant has a total view of the credit and liquidity relationships upon which it is dependent. However, with CCP (figure 2b), the numerous bilateral exposures are substituted for a single net exposure to a financially and operationally robust counterparty (Steigerwald, 2013).

Because CCP are important financial infrastructure, it is necessary to mitigate the risk of their collapse. This can be done through controls such as stringent membership access, a robust margining regime, clear default management procedures and significant financial resources like a guarantee fund. A CCP must also have methods in place for quickly recapitalizing, or for quickly unwinding its derivatives positions with minimal impact on counterparty risks and on the underlying markets. Regulators should ensure that a CCP's risk management design and financial resources are robust enough to allow the CCP withstand extreme loss scenarios (Duffie, 2010; Steigerwald, 2013).



Source: Duffie, et al., (2010)

The operation of OTC market in India is instructive. The Reserve Bank of India (RBI) regulates OTC derivatives while the Securities and Exchange Board of India (SEBI) and respective exchanges regulate ETDs. Historically, the OTC contracts were earlier banned in India to prevent undesirable speculation in securities (Dayanand and Rathinam, 2010). However, according to the authors, two committees were set up by SEBI between 1996 and 1998 to consider the appropriate regulatory framework for trading derivatives and recommend risk mitigating measures. The committees resolved that only ETDs could be allowed in India, while OTC derivatives should remain banned. Meanwhile, the authors continue, RBI later initiated the trading of two types of OTC derivatives, Interest Rate Swaps (IRS) and Forward Rate Agreements (FRA). The aim of this was to deepen India's money market and enable financial institutions hedge interest rate risks. Thus, one of the counterparties to such trades must be regulated by RBI, providing a surveillance avenue for the authority (Dayanand and Rathinam, 2010). This scenario also applies in England where the Bank of England is saddled with the responsibility of regulating the operation of the CCP.

In 2002, India established what can be called a CCP, Clearing Corporation of India Limited (CCIL). It was originally created to aid an efficient and safe debt and foreign exchange market in the country; but now act as a trade repository for trades in OTC derivatives. Banks and other primary dealers are expected to report their IRS and FRA trades within 30 minutes of such trades. CCIL is regulated by the RBI and it is mandated to maintain a guarantee fund alongside adequate lines of credit with different commercial banks for effective settlement and confidence. It collects different margins, such as initial margin, spread margin, mark to market margin and volatility margin; it also takes contributions from members into the default fund. Recently, the report of a Committee on Financial Sector Assessment (CFSA) recommended that India needs to encourage the entry of more CCPs as CCIL suffers from concentration of risk in one entity such that its failure may have a market-wide effect on the financial sector (Dayanand and Rathinam, 2010).

#### 2.4. Role of Technology in OTC Development

OTC trades have historically been done over the phone (phone brokering); but the development in technology since early 1990s has significantly affected how most of these trades are currently conducted. For instance, the electronically brokered OTC market provides a multilateral trading environment similar to organised exchanges, which may be used to match bids and offers to execute trades (Dodd, 2002). Moreover, the recent regulatory environment and the application of CCP have been facilitated through the use of technology. Many global OTC transactions are now expected to be done via electronic trading platforms that qualify as Swap Execution Facilities (SEFs) which operate like exchanges (Heckinger, 2014).

In recent times, the need for a physical trading floor that had been the bedrock of exchanges is gradually becoming less important as transactions can be done electronically from various locations that are connected to an exchange's platform (Dodd, 2008). Beyond the traditional auction exchanges therefore, development in technology has led to the introduction of electronic exchanges and electronic communication networks (ECNs). Consequently, the difference between exchanges and OTC has become blurred by the introduction of technology which has led to higher liquidity and lower information asymmetry.

#### 3. Nigeria's OTC Market

Nigeria's OTC market was until recently largely unregulated, as in most other jurisdictions. Although many of the transactions were carried out by regulated financial institutions, the size and structure of the market was unrecorded. It was estimated that several private placements conducted in Nigeria generated up to 1,000 unlisted bonds and stocks which were hidden in investor's portfolio and traded on OTC market (Chilkoti, 2012). Meanwhile, significant efforts have been made since 2010 to make Nigeria's OTC market transparent through the creation of a formal market for the instruments that were formerly traded OTC.

# 3.1. Regulatory and Institutional Framework

The Securities and Exchange Commission (SEC) has the mandate to register Securities Exchanges as contained in section 28 of Investment and Securities Act-ISA (2007). Relating to OTC/Exchanges registration, section 315 of ISA defines securities exchange as an exchange or approved trading facility such as a commodity exchange, metal exchange, petroleum exchange, options, futures exchanges, over the counter market, and other derivatives exchanges.

Further, rule 274 of the SEC Rules and Regulation (2011) specifies the registration requirements for OTC to include the form to be obtained (SEC 5A) and the documents to be supplied with the minimum paid-up capital of N500m. So far, SEC has registered two OTC exchanges in Nigeria, namely; Financial Market Dealer Quotation (FMDQ) in November, 2012 and National Association of Securities Dealers (NASD) in December, 2012.

## 3.2. Financial Market Dealer Quotation (FMDQ) OTC

FMDQ is a registered OTC securities exchange in Nigeria. It evolved from the operations of the Financial Markets Dealers Association (FMDA). In July, 2010, the association decided to conduct all its OTC operations under a SEC-registered organisation. Consequently, FMDQ OTC was incorporated in January, 2011 and registered by SEC in November, 2012 to perform OTC functions (Onadele, 2015).

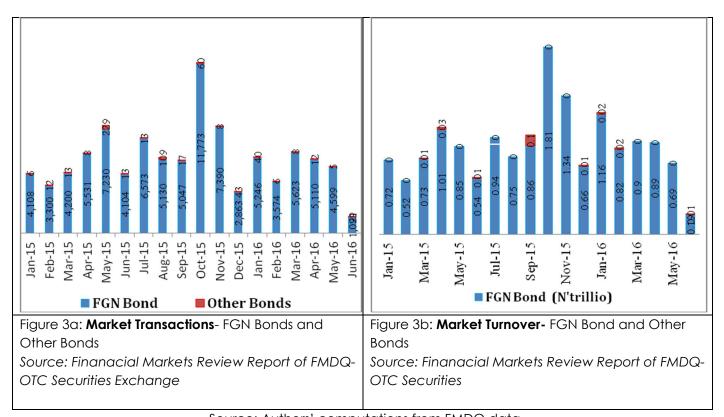
#### 3.2.1. Bonds Market

FMDQ launched the Bloomberg E-Bond trading and surveillance system in March, 2014 and obtained SEC's approval for its bond listing and quotation rules in December of the same year. Prior to this period, most of the bonds issued in Nigeria were on the Nigerian Stock Exchange (NSE) but there was a minimal trading activity at the secondary market level. Currently, the FMDQ platform presents opportunity to trade these bonds in a liquid market. The first corporate bond was listed on FMDQ by United Bank for Africa PLC in April, 2015 and the platform has since attracted other corporate bonds such as Stanbic IBTC, FCMB, Nigeria Mortgage Refinance Company, Fidelity Bank, Transcorp Hotels and C&I Leasing).

In addition to providing a platform for trading Federal Government bonds, FMDQ also witnessed the listing of its first FGN bond valued at N4.8tr in July, 2015. The platform is equally working towards providing market structure that will facilitate the trading of private companies' bonds which have always been available at the private placements level. However the challenge in the CAMA on

the trading of securities of private companies needs to be resolved before this initiative can see the light of day.

Figures 3a and 3b show respectively the monthly transactions and turnover of FGN Bond and other bonds. The figures show that the FMDQ-OTC market is dominated by FGN bond trades, which accounted for 95 percent of transactions and 90 percent of turnover for the period January, 2015 to June 2016. Total transactions recorded on FGN bond dropped from 4,108 in January, 2015 to 1,099 in June, 2016, while that of other bonds grew substantially from 6 in January, 2015 to 24 in June, 2016. Similarly, total turnover on FGN bond fell from N0.72 trillion in January, 2015 to N0.19 trillion in June, 2016. In contrast, total turnover on the other types bonds rose marginally from zero in January, 2015 to N0.01 trillion in June, 2016.



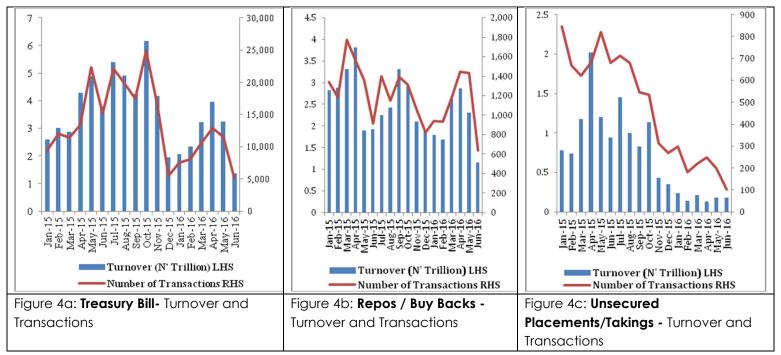
Source: Authors' computations from FMDQ data

Commercial Papers (CP) are also admitted into FMDQ; example of which are those of Stanbic IBTC, Wema Bank, Nigerian Breweries, Guinness Nigerian PLC. It is expected that the market for CP will develop significantly in the future given a Central Bank of Nigeria's directive in July, 2016 that commercial banks should deal only in CP that are registered and quoted on an authorised securities exchange.

#### 3.2.2. Money Market Instruments

Several money market instruments are listed and traded on the FMDQ. The company commenced in April 2014, the calculation of Nigerian Inter-bank Offered Rate (NIBOR) in compliance with IOSCO principles for financial benchmark. There was also the quotation of

N2.85tr Nigerian Treasury Bills on the platform in July, 2015. The total turnover and transactions of Treasury Bills, Repos/Buy Backs and Unsecured Placements/Takings from January 2015 to June 2016 is presented in Figure 4a, 4b and 4c. Figure 6a depicts significant evidence of volatility. Turnover in Treasury Bills rose from N2.59 trillion in January, 2015, to reach a peak of N6.15 trillion in October, 2015 before declining to N1.36 trillion in June, 2016. A similar pattern of Treasury bills transactions rose from 9,403 in January, 2015 to peak at 24,923 in October, 2015 and later fell to 5,214 in June, 2016.



Source: Authors' computations from FMDQ data

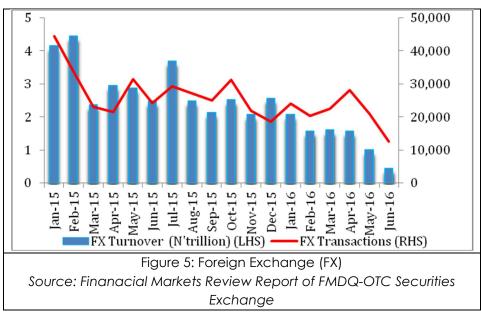
Figure 4b shows that the total turnover and transaction in Repos/Buy Backs declined over time and comparatively mild fluctuations are observable. The value rose from N2.83 trillion in January, 2015 to peak at N3.82 trillion in April, 2015 before falling to N1.16 trillion in June, 2016. Figure 4c depicts that both turnover and total transactions of Unsecured Placements/Takings fell dramatically during the period, rising from N0.78 trillion in January, 2015 to N2.02 trillion in April, 2015 and eventually falling to N0.18 trillion in July, 2016.

# 3.2.3. Foreign Exchange Market

The exchange rate regime operated in Nigeria has implications for the operations of the interbank foreign exchange market (IFEM). In April, 2015, FMDQ, along with the CBN, launched the Thomson Reuters Foreign Exchange Market Tracker Solutions. When the country moved from IFEM with pegged exchange rate to a more market-determined system in June, 2015, the level of foreign exchange transactions on the FMDQ improved significantly. Specifically, the Nigerian spot foreign exchange two-way quote market started operating on the FMDQ platform. In July, 2016, the CBN also mandated all authorised dealers to execute all foreign exchange trades with their corporate clients only through the FMDQ-advised trading and surveillance system. Another development in

the foreign exchange market with the potential for deepening the market, reducing uncertainty and managing risk was the introduction of the OTC Foreign Exchange Futures Market by the CBN.

Figure 5 depicts the monthly activities in the foreign exchange market based on their turnover and transactions for the period January 2015 to June 2016. It is shown that the foreign exchange turnover and transactions declined during this period. Specifically, the total foreign exchange turnover dropped from N4.14 trillion in January, 2015 to N0.44 trillion in June, 2016 with an average turnover of N2.38 trillion. Also, foreign exchange transactions fell significantly from 44,458 in January, 2015 to 12,485 in June, 2016. On the average, foreign exchange transactions stood at 25,511. The declining trend is an evidence of the foreign exchange challenges that the country is currently witnessing.



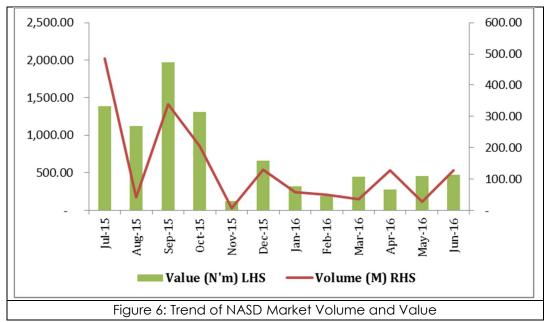
Source: Authors' computations from FMDQ data

# 3.3. National Association of Securities Dealers (NASD) OTC

NASD was founded in June, 1998 to promote and operate an OTC market that is open to all interested registered securities dealers in Nigeria. Having been registered by SEC to operate OTC market in Nigeria, the company launched its trading platform in July, 2013. It is a platform for trading financial securities that are not listed on an exchange, particularly, the NSE. It therefore presents a great opportunity for investors operating in private placements segment to trade and discover the prices of instruments in their portfolios.

In addition to providing liquidity and trading platform to unlisted securities in Nigeria, NASD also has the plan of offering its services to other securities in the West African sub-region. Although unlisted equities are its starting point, the NASD is also a potential channel for trading unlisted bonds and commercial papers. Other considerations include, private equity and Small and Medium Enterprises (SMEs).

Figure 6 shows the trend analysis of the volume and value traded on NASD from July, 2015 to June, 2016. Market volume fluctuated over the period considered as it declined from 486.07million in July, 2015 to as low as 7.10 million on November 2015 and later rose to 128.47million in June, 2016. The average market volume stood at 136.3 million. Also, market value fell during the sampled period as it stood at N1, 386.57 million in July 2015 and later declined to the least value reported at N126.11 million in November 2015. It later rose to N472.29 million in June, 2016 with an average market value traded for the period at N726.62 million.



Source: Authors' computations from NASD data

#### 4. Policy Lessons and Implications

It has been shown in this study that the global OTC landscape is witnessing significant changes resulting from improved regulatory framework and application of technology. The Nigerian OTC market is equally experiencing this development as the country makes efforts at formalising domestic OTC transactions. Some lessons can be drawn in order to consolidate on the achievements recorded so far.

Nigeria has made remarkable efforts at regulating and bringing transparency to the operations of the OTC market. It is important the country continue in this area by ensuring that more financial instruments that are still traded in the traditional OTC way are attracted to the platform of the OTC Exchanges. While making efforts at bringing in instruments of public companies, simultaneous attempt may need to be made to revise laws that currently prevent trading in securities of private companies.

In addition to developing and attracting the existing instruments into the formal market, there is also the need to create new products with the potential for deepening the Nigeria's financial market. The crucial ones are derivatives which can be used to manage risks. This will require investments in designing appropriate regulations, legal framework and enabling environment.

There is the need to develop the capacity of the regulators, financial market operators and companies in the areas of regulating, pricing and utilisation of such instruments (Olowookere, 2012a).

Since the country already has functioning OTC Exchanges, preference should be for Exchange Traded Derivatives (ETDs) over the traditional OTC derivatives. This is important because the global practice is currently in favour of ETDs as they are more transparent and less susceptible to counterparty risk that is typical of OTC transactions. In other words, when Nigeria finally develops its derivative market, it should be on the platforms of its Stock Exchange and OTC Exchanges rather than on the traditional unorganised OTC. Therefore, the current clearing infrastructure adopted will be relevant.

In addition to this existing clearing infrastructure however, it will be necessary to set up dedicated CCPs that will be used to clear derivatives transactions. For the sake of efficiency and minimisation of default risk, it is important that the country operates more than one of such clearing institutions. Although the exchanges will have a preference for their existing clearing infrastructure, dedicated CCPs will still be relevant because derivatives have market-wide risks that go beyond a particular exchange.

There is also the need for enhanced collaboration between the SEC and CBN in the areas of regulating and originating the evolving financial market in Nigeria. This is necessary both for policy consistency and overall growth of the market (Olowookere, 2012b).

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