

# RISK MANAGEMENT APPLICATION AMONG QUOTED DEPOSIT MONEY BANKS IN NIGERIA

Lawal, Quadri Adebayo and Moshood, Abiodun Abolade

Department of Management and Accounting  
Obafemi Awolowo University, Ile-Ife, Nigeria

**Abstract:** The study examined the extent of derivative usage among deposit money banks in Nigeria with a view to determining the extent of derivative usage among deposit money banks in Nigeria between 2012 and 2019.

The study employed secondary data. Data were obtained from the Nigerian Stock Exchange Factbook and audited annual reports of fourteen deposit money banks. They were purposively selected based on the availability of complete financial information for the sampled period (2012 – 2019). Data collected were analyzed using tables, graphs, bar chart.

The result showed that individual usage of derivative instrument of selected quoted deposit money banks in Nigeria ranged from 0% to 64% and the overall application of the derivative instrument in the selected period ranged between 0% and 29%.

The study concluded that derivative usage is still below the optimum use but significantly applied by quoted deposit money banks in Nigeria.

**Keywords:** Derivative, Risk Management.

## 1. Introduction

The competition for market shares and earnings has become tougher which necessitates firms seeking for foreign markets to sell their products. However, operating in an international environment comes with its own risk. The risk that could cause variability in cash-flow of the business is regarded as business risk. This risk may decrease the cash flows of the firm or reduce earnings (Khan, Ali, Kiran, Mubeen, Khan & Ali, 2017). In order to reduce the business risk and any other market risks faced by firms, derivatives as a product have been structured to manage the risk. Khan et al.(2017) defined market risk as the risk that occur as result of adverse changes in market interest rate, currency exchange rate, commodity price and equity price. Recently, the



usage of derivative has been increasing over the last few years because of the operations of many firms that has gone beyond their countries of incorporation. Also, the introduction of market defined interest rate (IR), exchange rates (ERs), and investment in overseas markets for obtaining lower cost of financing corporations motivate the use of derivative instruments for minimizing firm's market risk. Derivative is defined as any contractual arrangement that derives its value from the underlying assets. The financial crisis of 1987 and the global financial crunch of 2008 have highlighted the significance of using derivative instruments to hedge the adverse effects on firm's risk and value (Paligorova & Staskow, 2014).

Derivative is a financial instrument that is used in mitigating risk and providing a protection (hedging) about downward risk. It comes in four different forms which could be options, forward contract, future contract and swap. Derivative was introduced to the Nigerian Stock Exchange on 1st of January 2012 despite that it has been incorporated into Chartered Institute of Stockbrokers (CIS) examination since 2010. However, the value of a firm could be eroded from loss due to application of derivative instruments. The complexity of derivative instrument requires careful handling of the financial product. Although it can provide a protection for downward risk, if it is not carefully structured, it could lead to a very huge loss. In 2012, JP Morgan Chase lost \$6.2 billion in the popular scandal known as "London Whale". The Managing Director dismissed the event by referring to it as the tempest in a tea pot. (US Senate, 2013). Firms within the financial sectors are known to be the major users of derivative in mitigating the losses that could result from business and market risk. (Gebhardt, 2012; Chalmers & Godfrey, 2000; Nguyen and Faff, 2002; Heaney & Winata, 2005) and the losses that could be suffered may be substantial. As a result of loss that the application of derivative could cause and its introduction into the Nigeria capital Market. The complexity of derivative usage and its ability to create additional risk for a firm which could lead to corporate failure are responsible for the reason why management is always reluctant to make use of derivative in risk mitigation. Ability of derivative instruments in eliminating every form of risk should spur many firms to apply it wherever the opportunity presents itself. Despite the advantage and benefits that derivative instrument could offer, developing markets have few derivative products to hedge their risk. The financial firms' application of derivative and the extent to which the derivative applies in eliminating risk requires empirical evidence in the developing market like Nigeria.

## **2. Literature Review**

### **2.1 Conceptual Review**

#### **2.1.1 Derivatives**

Derivatives are referred to as financial instruments which give a return in respect of the performance of other underlying instruments. Therefore, derivative return is got from other instruments. Based on the definition, a derivative performance relies on the performance of another underlying asset. Buyers and sellers meet in its market and decide its price; where the

seller then gives the asset to the buyer and has the payment in exchange. The amount at which the asset is purchased at immediate transaction is called cash price or spot price. A derivative has a specified life span: its contract/agreement is entered at a particular date and is ended or terminate at a future date. In accordance with the rules of law, derivative involves an understanding between two parties in which one party does something for another party. In other view, it involves the two parties exchanging roles or doing something for each other at a future date. Thus, no immediate exchange of money.

Derivatives are made in form of legal agreements or contracts. The buyer who bought the derivative instrument, is referred to as the "long" or the "holder" because he holds the derivative instrument and holds a long position. The seller is called the "short" because he holds a short position. A derivative contract does state the right and obligation of the two parties. This contract is meant to be, and mostly recognized by the law as commercial contract that the parties are expected to be upheld and supported in the system. Nevertheless, disputes sometimes occur, and the legal practitioner will be required to come in and settle the matter. The presence of derivative instruments leads to the unavoidable question of what purposes they serve. For instance, if someone can partake in the concern of a business by holding its shares, what could be the reason why another instrument will be needed that takes value from the changes of the share's value? Although equity market and other fundamental markets exist independently and very often perform reasonably well even without derivative market, but it is possible that the derivative market improves the performance of the markets of the underlying asset.

Derivative market provides positive opportunities that do not exist when not in place. Derivative is used to create strategies that cannot be implemented with the underlying in isolation. More effective risk management is now performed and practiced by market participants due to the performance transformations facilitated by derivative. Indeed, the entire field of derivative, that focused mostly on the instruments themselves initially, is now more concerned with the uses of the derivative instruments.

### **2.1.2 Forward Contract**

Forward contract involves arrangement which subsists between two parties. It involves a buyer who agrees to purchase derivatives instrument from the seller at a future date at a price agreed upon at the beginning of the contract. It is a customized arrangement between the parties that state clearly the terms and conditions such as time of the delivery, place of delivery and the underlying assets in question. Forward market is a very large private market in today's financial word, which comprises market participants like banks, investment banks, government and corporations. The buying and selling of an underlying asset of the contract is at a future date. The underlying instruments can be foreign currency, interest rate, a commodity, bond, stock or combination of the securities. In the case of interest rate, it derives its value from its own movement in the market not from the bond in which the interest rate related to. Therefore, such contracts call for the exchange of another interest payment in the future.

The forward market is an unregulated and private market. Any such transactions involving commitment between parties for the later sales and purchases of an underlying asset is referred to as forward contract. In financial world today, forward contract is one of the famous and interesting contract but there is major disadvantage called default risk. Default risk is inherent in any forward contract because of the structure. Forward contract is a private arrangement among the parties involved and one party has and the other party has obligation. The party with the right may choose to exercise his or her right and any contrary apart from such action will lead to default. Default risk is possible and common in forward contract because parties involved, especially, when they have financial crisis may decide not to honour the agreement before the expiration date. On this note, parties with high credit rating are expected to be involved in forward contract.

### **2.1.3 Future Contract**

This is like any other derivative instrument which share almost the same characteristics with the forward contract. In fact, it is always referred to as a type of forward contract because it has the same definition and other features of the forward contract. Though, future contract is like a forward contract but there is a unique feature which differentiates the forward contract from the future contract. Future contract is a standardized public transaction which normally takes place in a capital market i.e. stock exchange market. Capital market is an organized exchange or platform which is capable of providing the facilities which brings together the seller and the buyer of a future contract.

It also establishes the mechanism that will enhance both parties to perform their respected obligations at the contract expiration. Exchange determines the expiration date of the underlined instruments, how many units will be considered in a contract and any other relevant terms and conditions as may be required by the contract. Another major difference is a default risk which is attached to the two contracts. Default risk is embedded in the forward contract because it is not an organized or a standardized market that is regulated by any authority or agency. Default risk occurs when the losing party of the contract refuses to perform its obligation as stated by the contract or when the parties involved are facing serious financial crisis and both are left with no option than default.

Therefore, parties with high credit rating are expected to be involved in forward contract. However, future contract payment is guaranteed by the exchange because exchange will pay off any of the parties that fails to perform its obligations. In fact, exchange normally acts as an intermediary between the parties of the future contract so as to ensure that the contract is effective. This system ensures that each party has an agreement with the stock exchange and not directly with each other. Exchange is paid to the party who needs to be paid and collects money from the party who is expected to do so to avoid any contact between the parties. Exchange guaranteed is as a result of the introduction of the clearing house which serves as a helper to the

exchange. Clearing house is in charge of verifying and requiring that increment and any other social event are settled in a consistency manner. The system significantly and consistently settles the market differences on a daily basis. The advantages and disaster of the contract are taken into consideration in a daily record of the party.

#### **2.1.4 Swap**

Swap is other form of derivative instrument which shares the same attributes with forward contract. Swap is an arrangement that exists between two parties with the sole aim of exchanging cash flow in the future period. It also involves a situation in which a party of person agrees to pay other party of person a certain cash flow which will be determined by the unknown or uncertain actions of other underlying factors, which include interest rate, exchange rate, price of the stocks or commodity owned price. Other parties also make a promise that series of uncertain payment will be made through other unknown factors as well. Payment of swap is normally referred to as fixed or floating. Swaps, like forward contracts are not subjected to direct regulations and are private transactions. Swaps are regarded as the most successful of all derivative transactions.

#### **2.1.5 Options**

An option can be described as a derivative instrument which gives rise to buy or to sell an underlying without any obligation from a party to another at a price determined today, i.e. exercise price over a particular time. An option that gives right to the party to buy is called a call option while an option that gives right to sell is referred as a put option. An option price is referred to as a strike price, exercise price and striking price which are fixed price for underlying to be bought or sold as determined at the beginning of the transaction.

The right owner in an option contract has right to exercise its right if the price direction is favourable and the option holder will decide not to exercise if the price direction is not favourable. Also, decision of the option holder depends on the event that is taking place. Therefore, most times, options are called contingent claims. There are different types of instrument which contain an option and also contingent in nature. For instance, companies that issue convertible debt gives an opportunity to the holder to convert the debt to companies shares in the future date. Callable bond is another example of an instrument that have embedded options in them because in this instrument holders have right or opportunity to call the bond before the expiration. Decision to call the bond or convert the debt to company share depends on the movement or trend of such instrument and how beneficial it is to the holder.

### **3. METHODOLOGY**

#### **3.1 Research Design**

The Research design for this study is descriptive in nature. Data obtained were analysed using descriptive analysis. The application of derivative was determined using content analysis. A value of 1 was awarded when derivative was applied and zero if otherwise.

### **3.2 Population, Sample Size and Sampling Techniques**

The study basically consists of quoted financial institutions (deposit money banks) on the Nigerian Capital Market. As at September 2019, twenty-three deposit money banks are listed in the Nigeria Stock Exchange. A sample of fourteen money deposit banks were purposively selected from the population. The sample size selected stems from the fact that the banks selected were in existence throughout the study period and their data were readily available and accessible to the researcher.

## **4. Data Analysis and Presentation of Result**

### **4.1 The Extent of Derivative Usage among Quoted Deposit Money Banks in Nigeria**

Financial derivative is one of the modern useful financial instruments to hedge the risk in the modern market. It is used to reduce or transfer risk among the market participants depending on their position. It has been in used in many countries of the world including Nigeria. Though, it was introduced into the Nigerian capital market as one of the traded financial instruments in year 2012 and since then financial and non-financial companies quoted in the market have been making use of the instrument. Financial firms are major users of the instrument because of the nature of their transactions. In order to determine the level of derivative usage among deposit money banks in Nigeria Table 4.1 shows statistical evidence.

Descriptive statistics was conducted to examine the level of derivative usage among quoted deposit money banks in Nigeria. Where there is derivative usage, 1 is awarded and where there is no usage, 0 is awarded. Table 4.1, reveals that over the period of analysis, the level of derivative usage improved across the firms ranging from 0% to 64% with average of 29% over the 14-year-periods. The individual derivative to total derivative for each period was also considered for derivative usage among quoted deposit money banks in Nigeria. The same procedure of awarding one for usage and zero for non-usage were followed. From Table 4.2, it can be seen that there was no usage from 2006 to 2012, this was due to the fact that derivative instrument has not been introduced in the Nigeria capital market. Eco and UBA banks are the only two deposit money banks that started derivative usage in 2011 despite the fact that it was not traded on the Nigerian capital market.

Figure 4.1 shows that over the 14-year period, First Bank of Nigeria, Fidelity, Jaiz and Unity Bank did not make use of any derivative instruments. FCMB had applied derivative 7% for the selected period, followed by Sterling Bank which had applied derivative instrument at 21% of the selected period, Union Bank had applied 29% for the selected period while Wema Bank had applied it for 36% of the selected period. Ecobank and UBA had led other banks in the application of derivative instruments, this is not surprising as the two banks were listed on the international stock exchange. In the overall application of the derivative instrument of the quoted Deposit Money Banks in the selected period, the extent of usage of derivative was 29% as shown to the Table 4.2.

**Table 4.1 The Extent of Derivatives usage among quoted Deposit Money Banks in Nigeria**

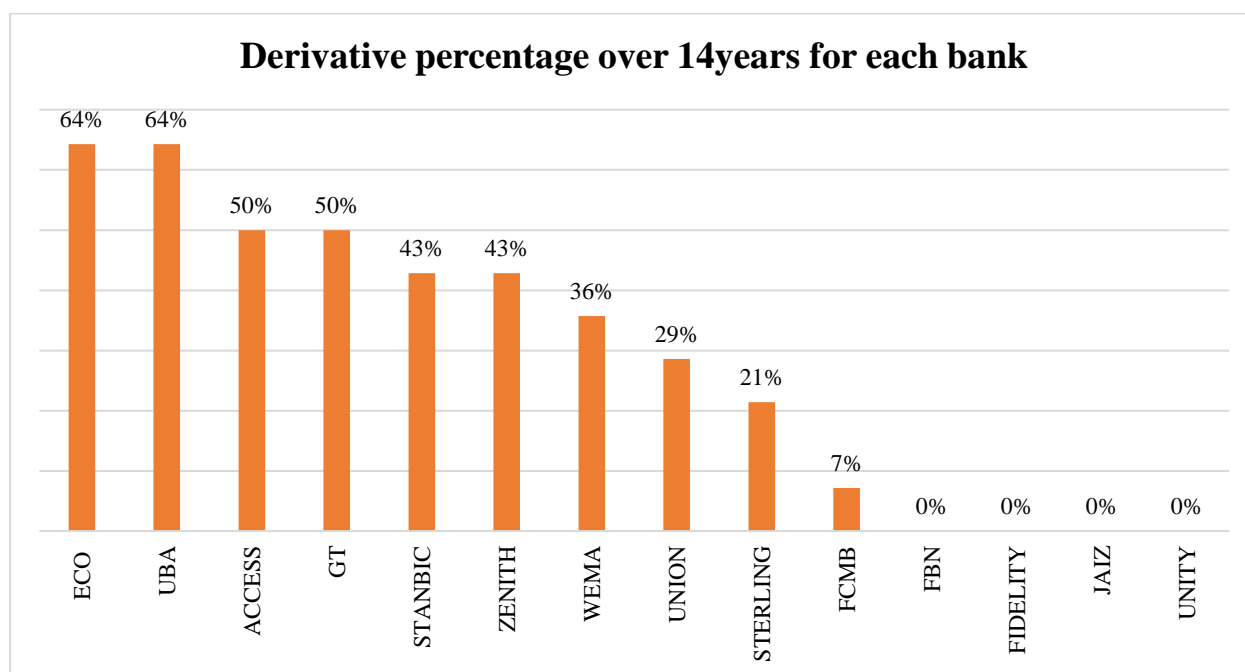
S/N	Banks	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total Deriv	Period	Deriv_%	Deriv_ranking
1	ACCESS	0	0	0	0	0	0	0	1	1	1	1	1	1	1	7	14	50%	3
2	ECO	0	0	0	0	0	1	1	1	1	1	1	1	1	1	9	14	64%	1
3	FBN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	0%	11
4	FCMB	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	14	7%	10
5	FIDELITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	0%	11
6	GT	0	0	0	0	0	0	0	1	1	1	1	1	1	1	7	14	50%	3
7	JAIZ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	0%	11
8	STANBIC	0	0	0	0	0	0	0	0	1	1	1	1	1	1	6	14	43%	5
9	STERLING	0	0	0	0	0	0	0	0	0	0	1	1	1	0	3	14	21%	9
10	UBA	0	0	0	0	0	1	1	1	1	1	1	1	1	1	9	14	64%	1
11	UNION	0	0	0	0	0	0	0	0	0	0	1	1	1	1	4	14	29%	8
12	UNITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	0%	11
13	WEMA	0	0	0	0	0	0	0	0	1	1	1	1	1	0	5	14	36%	7
14	ZENITH	0	0	0	0	0	0	0	0	1	1	1	1	1	1	6	14	43%	5

Source: Author's Computation (2020)

**Table 4.2 The Extent of Derivatives Usage among Quoted Deposit Money Banks in Nigeria**

S/N	Banks	No Derivative (0)	Yes Derivative (1)	Total	Extent
1	STANBIC	8	6	14	0.4286
2	UNITY	14		14	0.0000
3	UBA	5	9	14	0.6429
4	ECO	5	9	14	0.6429
5	ZENITH	8	6	14	0.4286
6	FBN	14		14	0.0000
7	STERLING	11	3	14	0.2143
8	FCMB	13	1	14	0.0714
9	UNION	10	4	14	0.2857
10	FIDELITY	14		14	0.0000
11	WEMA	9	5	14	0.3571
12	GT	7	7	14	0.5000
13	ACCESS	7	7	14	0.5000
14	JAIZ	14		14	0.0000
	<b>Total</b>	<b>139</b>	<b>57</b>	<b>196</b>	<b>0.2908</b>

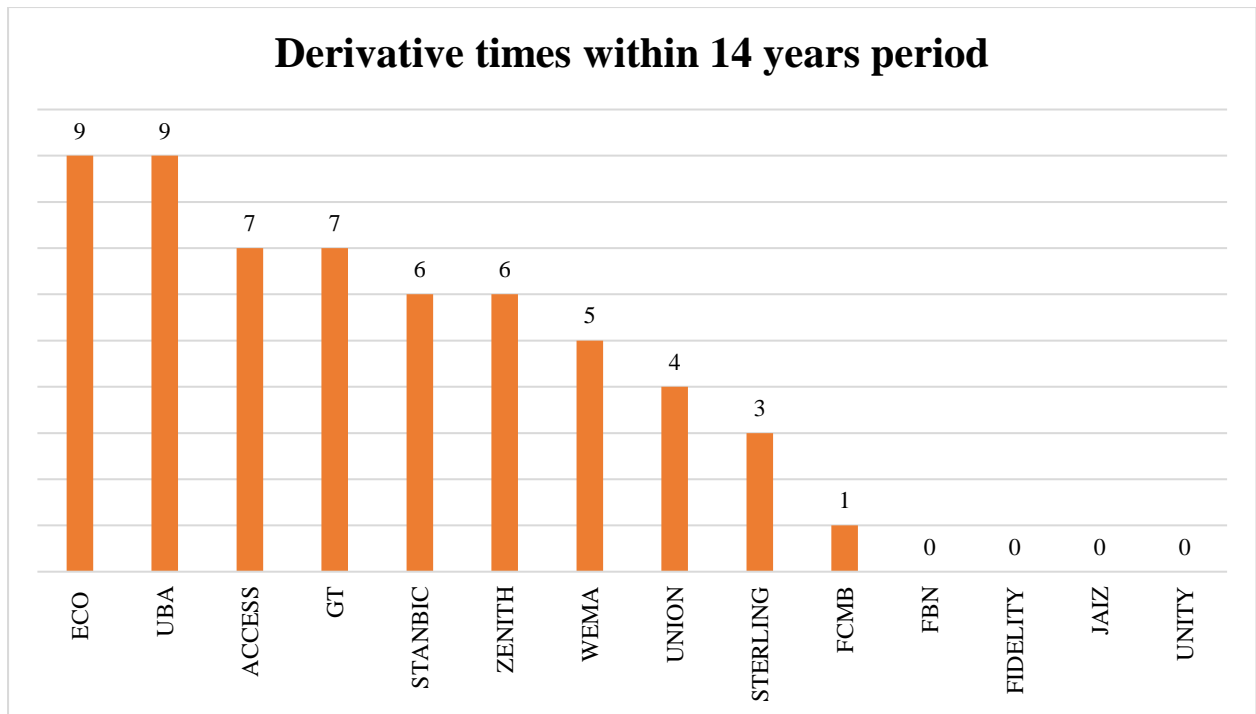
Source: Author’s Computation (2020)



**Figure 4.1 The Extent of Derivatives Usage among Quoted Deposit Money Banks in Nigeria**

Source: Author’s Computation (2020)





**Figure 4.2 The Extent of Derivatives Usage among Quoted Deposit Money Banks in Nigeria**

Source: Author's Computation (2020)

## 5. Conclusion and Recommendations

Based on the findings of this research work, it could be reasonably concluded that most of the firms operating in the financial sector of the Nigerian economy included in this study had been applying derivative instrument to hedge the risk with the aim of increasing the market values. The application of derivative by deposit money banks is increasing over the years but some still have not applied it but in totality its usage is still improving year in year out.

As a result of the findings from this study and conclusions reached, the following recommendations were made:

- i. The management of financial firms should be encouraged to make use of derivatives in their operations to hedge risks, this will lead to increase in the market values of the firms.
- ii. Since introduction of derivative instrument to the financial market, the application of derivative is still below intermarket industry average. Therefore, it is recommended that the members of staff in the treasury and risk management should be trained to know the risk involved and the advantages of usage of derivative in enhancing firms' values.
- iii. Relevant regulatory agency on financial market should maintain compulsory training on when and how and necessary factors to be considered when applying derivative instruments.

## References

- [1] Bhagawan, P. M., & Lukose, J. P. (2009). The determinants of currency derivatives usage among Indian non-financial firms: An empirical study. *Studies in Economics and Finance*, 34(3), 363-382.
- [2] Carlos, J. L., & Singh, J. (2013). Can hedging affect firm Value? An oil and gas mining perspective. Fraser Valley: Simon Fraser University.
- [3] Haushalter, G. D. (2000). Financing Policy, Basis Risk and Corporate Hedging: Evidence From Oil and Gas Producers. *The Journal of Finance*, 55(1), 107 - 152.
- [4] Judge, A. (2004). The determinants of foreign currency hedging by UK non-financial firms. *Electronic Journal*, 10(1), 455-478.
- [5] Khan, N., Ali, K., Kiran, A., Mubeen, R., & Khan, Z. (2017). Factors that affect the derivatives usage of non-financial listed firms of Pakistan to hedge foreign exchange exposure. *Journal of Banking and Financial Dynamics*, 1(1), 9-20.
- [6] Lookman, A. A. (2004). Does Hedging Increase Firm Value? Evidence From Oil and Gas Producing Firms. *Tepper School of Business Carnegie Mellon University*.
- [7] Myers, S. C., & Majluf, N. S. (1984). Corporate Financing and Investment Decisions When Firms Have Information That Investors do not Have. *Journal of Finance Economics*, 13, 187 - 221.
- [8] Paligorova, T., & Staskow, R. (2014). The use of financial derivatives by Canadian firms. *Bank of Canada Review*, 47-54.
- [9] Parlapiano, F., & Alexeev, V. (2017). Exchange Rate Risk Exposure and the Value of European Firms. *The European Journal of Finance*, 23(2), 111 - 129.
- [10] Smith, C. W., & Stulz, R. M. (1985). The Determinants of Firms' Hedging policies. *Journal of Financial and Quantitative Analysis*, 20, 391 - 405.
- [11] Teodora, P., & Staskow, R. (2014). The Use of Financial Derivatives by Canadian firms. *Bank of Canada*, 47-54.
- [12] Zeidan, R., & Rodrigues, B. (2013). The Failure of Risk Management for Nonfinancial Companies in the Context of the Financial Crisis: Lessons from Aracruz Celulose and Hedging with Derivatives. *Applied Financial Economics*, 23, 241 - 250.