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Impact of Money Market on the Liquidity of Some Selected Quoted Banks in Nigeria

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Abstract: Finance is a major key element in fostering growth and development of a company and financial managers look mainly to the money and capital market for various term funds. The Nigerian money market has lagged behind in performing its intermediation role in providing such needed funds to the companies thus, limiting their operations. Against this background, this study examines the impact of the Nigerian money market instruments on the liquidity of ten selected quoted banks from 2005-2014. Secondary data were used and the multiple regression econometric technique was used to analyze the data. The study found that firms' working capital and profitability have a significant impact on the money market instrument. Since, the money market is very vital for financial managers to raise short-term funds, amongst others the study recommends that to improve the money market there should be adequate monitoring and surveillance of the activities of the market participants and also the introduction of new and flexible financial instruments.

Key words: Money market, working capital, money market instruments, technique, data

INTRODUCTION

According to Nwankwo (1991), when all other factors of production (land, labour and entrepreneur) are held constant, the most important factor that can facilitate economic activities, investment initiatives, economic growth and development is finance. Finance is an important factor in any organization and many use the Nigerian money market as an avenue to get short term funds. The money market is a collection of financial institutions set up for the granting of short-term loans and dealing in short-term instruments that are readily convertible into cash and whose maturity ranges between a few days to 1 year. The market provides ample opportunities for investors and corporate financial managers with surplus funds to lend at short term, thereby meeting the demands of borrowers who are in need of temporary finance for liquidity and can offer an acceptable claim to money.

The importance of the money market to the growth and development of the Nigerian economy in general cannot be over-emphasized. This is because the market acts as intermediation to channel funds from the surplus side to the deficit side of the Nigerian population for short term investments mainly in trade and commerce. Thus, the development of the money market smoothens the progress of financial intermediation and boosts lending to economy (Ikpefan and Osabuohien, 2012). Money markets play a key role in banks' liquidity management and the transmission of monetary policy, control of money supply and demand-pull inflation, determination of short-run interest rate (Ekmekcioglu, 2013). The study by Kehinde and Adejuwon (2011) showed that financial market is key to the development of the economy, therefore, the development of the money market is in stakeholders' interests: the banking system itself, the central bank and the economy in general.

In many developing countries such as Nigeria, the money market has lagged behind in performing its intermediation role of providing funds to deficit investors and this has further hampered economic growth and development. Ikpefan and Osabuohien (2012) stated that unlike in advanced economies where the money market constitutes the most institution for creating liquidity for

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government, companies and individuals, the Nigerian money market is inadequate and constrained by the absence of sub-markets and availability of adequate credit instruments required for the smooth operations of the market. This was further buttressed by Isedu who opined that the market has not succeeded in generating sufficient securities from companies and institutions while the ranges of securities available lack depth in terms of the volume and value of securities available. Moreover, Dabwor (2010) opined that money laundering and misappropriation of government funds puts "pressure on the money market as corrupt officials buys up foreign exchange for export", thus leading to capital flight. The study by Edo and Okelegbe also showed that factors like misappropriation of funds and insider trading have been problems affecting the Nigerian money market while corruption of the system was seen by them as the biggest problem facing the market that even transparency is unable to fix due to lack of quality corporate governance. They posited that if the system was working as it should, the impact on economic growth would be positive in that the economy could recover and support the nation. Much have been said and written about the Nigerian capital market but the reverse is the case for the money market in the country.

In view of the issues discussed earlier, there is the need to examine this crucial market and evaluate its performance in terms of its contributions to the liquidity and profitability of some quoted banks in Nigeria. This is because according to Ben-Caleb (2009), some promising investments with high rate of return has turned out to be failures because of inadequate working capital while many factories have either been temporarily or completely shot down because they could not meet their financial obligations as at when due when due because of liquidity problems.

Research hypotheses:

- H_0: there is no significant impact of working capital of banks on money market instruments in Nigeria
- H_0: there is no significant impact of profit after tax of banks on money market instruments in Nigeria

Conceptual framework and literature review

Growth of the Nigerian money market (pre-sap era): The establishment of the CBN in 1959 signalled the inauguration of the Nigerian money market as the CBN issued some short-term debt instruments on behalf of the federal government. Also, some instruments were created along the way. In April 1960, the CBN on behalf of the federal government, made the first issue of treasury bills to the tune of 18 million naira. At the end of June 1986, treasury bills outstanding amounted to 17 billion naira. The call money fund scheme was introduced in 1962.

Financial institutions maintained minimum balances with the CBN for clearing purposes, the excess of which was lent to the call money fund scheme at 2% below the treasury bills, thus financial institutions used the scheme as a first line of defense against any liquidity pressure. However, the scheme was abolished in 1974 following government's improved financial position which led to the shortage of bills in which the resources of the fund could be invested. Thus, what exists today is call money outside the CBN.

The produce bills finance scheme also introduced in 1992, made commercial bills an important money market asset. Under the scheme, a consortium of financial houses discounted marketing Board's export produce bills after they had been accepted by the Nigerian Produce Marketing Company (NPMC). The CBN supported the scheme by providing rediscount facilities but the scheme was abolished in 1968 because of the refusal by banks to discount cocoa and cotton bills in 1964 and 1967, respectively due to sales uncertainties in those years. The treasury certificates was introduced in 1968 in order to increase the range of available money market instruments as well as provide the federal government with funds to finance the prosecution of the civil war and post-war reconstructions. At the end of June 1986, treasury certificates outstanding stood at 6.7 billion naira.

Following the acute shortage of money market instruments during the years before the Structural Adjustment Programme (SAP) in 1986, the CBN introduced two new instruments in 1975 namely certificate of deposits and bankers' unit fund in order to encourage further development of the market. Certificate of deposits was designed to channel commercial banks' surplus funds into the merchant banks while the bankers' unit fund was meant to channel surplus funds of banks and other financial institutions into federal government stocks. At the end of June 1986, the total money market assets stood at 24.2 billion naira as against 18 million naira in 1960.

Structural Adjustment Programme (SAP) era: The structural adjustment programme was launched on July 1986 by the federal government to alter and restructure the consumption and production patterns of the economy from high import dependency and over-reliance on export of crude oil as well as eliminating price distortions that emanate from over-valued naira exchange rate. The tempo of activities in the money market has increased markedly since 1986 within the context of financial deregulation. The money market operated in an atmosphere of relative freedom under an improved institutional environment. Up to 1993, the market interest rates continue to be determined by the market forces of demand and supply. Ceilings were however placed on interest rate in 1994 with the aim of inducing the recovery of the productive sectors of the economy.

However, a worrisome issue that came up was the capital market crash that happened in 2008 which made many of the quoted stocks illiquid as their holders were unable to convert them to cash to meet their domestic and other investment needs. This affected the money market as new investors were scared of jumping into a vehicle that seems not to have a brake should they wish to disembark. There were also other issues like distress borrowing by ailing banks that use the money market, huge fiscal deficits financed by the banking system and rising inflation and interest rates.

Literature review: Working capital simply means the resources which a firm has at hand to run its daily operations and it provides a measure of business's liquidity. This type of capital makes a firm meet its short term obligations as they fall due. Van Horne described working capital management as the administration of current assets in the name of cash, marketable securities, receivables and inventories.

According to Brigham and Daves, working capital management involves both setting working capital policy and carrying out that policy in day-to-day operations. Thus, working capital management is important because of its effects on the firm's profitability and risk and consequently its value.

Working capital management seeks to maintain an optimum balance of its component thereby ensuring that firms operate with sufficient fund (cash flows) that will service both their short term and long term debt. Arnold asserts that if there is too little working capital, it results in inventories, finished goods and customer credit not being available in sufficient quantity. On the other hand, if there are excessive levels of working capital, the firm has unnecessary additional cost. This creates a sort of imbalance in the working capital components, making their management difficult which in practice is a situation that firms (both small and fast growing ones, even multinationals) are confronted with.

Therefore, despite the significant impact efficient working capital management has on business growth not much has been done in the area of the provision of empirical evidence in support of the claims of money market on working capital and profitability performance of Nigeria companies. Given this lack of empirical studies, it is hoped that this study will fill this gap.

MATERIALS AND METHODS

The study was conducted using secondary data from the past financial statements of seven selected quoted banks in Nigeria. The seven banks are Diamond Bank PLC, Fidelity Bank PLC, Guaranty Trust Bank PLC, Stanbic IBTC Bank PLC, Skye Bank PLC, United Bank of Africa PLC and Zenith Bank Plc. The sampling method used to select the banks was purposive sampling while the selected years are from 2005-2014. Multiple regression technique was the econometric technique used to establish the nature of the relationship between money market instruments, working capital and profitability of the banks. The equation is the original equation derived from the research hypothesis:

$$MKT = a_0 + a_1 NWC + a_2 NEP + U_1$$

Where:

MKT = Total Money Market instruments
NWC = Net Working Capital
NEP = Net Profit

Measurement of variables and abbreviations are given in Table 1.

Unit root test: This test will be carried out to test for the stationarity of all the variables. The test will be carried out at first difference, trend and intercept with two as the maximum lag. Table 2 shows that all the variables to be used for this study are stationary at 1% significance level.

Table 1: Measurement of variables and abbreviations

Variables	Measurement	Abbreviations
Money market instrument	Eligible development stock+ Certificate of deposit+commercial papers+bankers acceptance+FGN bond	MKT
Net working capital	Current asset-current liabilities	NWC
Net profit	Profit after tax	NEP

Researcher's compilation

Table 2: Unit root test

Variables	ADF unit root	Unit root at 1%	Stationarity
LMKT	-3.8171	-3.5194	Stationary
LNWC	-5.6241	-3.5194	Stationary
LNEP	-4.2143	-3.5194	Stationary

Researchers computation using e-views 7

A priori expectations: Due to the fact that banks run to the money market for liquidity purposes and coupled with the fact that the money market act as a "last resort" for banks and quoted firms to raise short-term funds, it is expected that the money market instruments should be positively and statistically significant in impacting both the working capital and the profitability of the ten quoted banks. This is because banks use the money market instruments to either raise fund or source for fund from the money market.

RESULTS AND DISCUSSION

Analysis of dependent variables is given in Table 3.

Coefficients: The slope of the coefficient of LNWC (net working capital) is in line with a priori expectation as it has a positive relationship with LMKT (money market instruments). Thus, this shows a positive working relationship between them as the working capital of the selected quoted banks directly impacts the money market while LNEP (net profit) falls opposite with a priori expectations as it has an inverse relationship with LMKT. This shows that there are other factors that affect bank's profitability like good marketing strategy, flexible financial services, etc.

Goodness of fit test (R^2): The R^2 is equal to 0.92 that is 92% of the endogenous variable LMKT (money market instruments) is explained by LNWC (net working capital) and LNEP (net profit).

Test of significance

t-statistics: The probability value must be $\leq$10% for the variable to be statistically significant. Looking at the probability value above, all the independent variables were statistically significant in explaining the dependent variable LMKT. While the constant was 6%, LNWC (net working capital) and LNEP (net profit) were both 10% also thus proving that money market instruments significantly boosts both banks' working capital and profitability. It also proves the a priori expectation of money market instrument significantly improving both firms' working capital and profitability.

Table 3: Analysis of dependent variables

Variables	Coefficient	SE	t-statistic	Prob.
C	-32.068400	21.164310	9.452389	0.0637
LNWC	2.950372	0.546382	4.126743	0.0972
LNEP	-0.851679	0.345717	-2.436740	0.0874

Dependent variable: LMKT; Method: two-stage least squares; Date: 07/15/14 Time: 21:37; sample (adjusted): 1995 2010; included observations: 7; R^2 = 0.925382; Mean dependent var = 8.573093; Adjusted R^2 = 0.845687; SD dependent var = 0.404203; SE of regression = 0.432709; Akaike info criterion = 30.208520; F-statistic = 50.17439; Schwarz criterion = 31.756150; Prob. (F-statistic) = 0.000000; Hannan-Quinn criter = 32.926300; J-statistic = 2.957437; Durbin-Watson stat = 2.013765; Prob. (J-statistic) = 0.376570

F-statistics: This measures the overall significant of all the independent variables in explaining the dependent variable. The value must be <50% including 0% for all the variables to be significant. The F-statistics shows a value of 0% which is <50% thus showing that all the variables are statistically significant in explaining the dependent variable GDP.

Test of hypotheses

Hypothesis one:

- H_0: there is no significant impact of working capital of banks on money market instruments in Nigeria
- H_1: there is a significant impact of working capital of banks on money market

Instruments in Nigeria: From the econometric result obtained, we accept H_1 that there is a significant impact of working capital of banks on money market instruments in Nigeria. This highlights the importance of the money market to banks' liquidity through financial instruments traded in the market. This significant relationship occurs because no bank can do without liquidity for funds, thus bank's financial managers need the money market instruments to attract their needed funds.

Deposit money banks' portfolio is made up of short-term deposits, savings account, fixed deposit account, short-term investments in money market instruments like treasury bills and treasury certificates and as such they need the money market to strengthen their portfolio.

Hypothesis two:

- H_0: there is no significant impact of profit after tax of banks on money market instruments in Nigeria
- H_1: there is a significant impact of profit after tax of banks on money market instruments in Nigeria

Also, from the econometric result obtained above, we accept H_1 that there is a significant impact of profit after tax of banks on money market instruments in Nigeria. This is because most funds from bank's investment are gotten from the money market. Also, most funds from the loan portfolio of banks are sourced from the money market too (Appendix 1-3).

CONCLUSION

This study is all about how the total Nigerian money market instruments over the years has improve banks' liquidity. The multiple regression technique along with annual time series data that span over a 10 years period (2005-2014) was used to study this impact. Net working capital and net operating profit (independent variables) were regressed alongside money market instruments made up of Eligible development stock, certificate of deposit, commercial papers, bankers acceptance, FGN bond as dependent variable. From the results obtained while the net working capital was positively significant in explaining total money market instrument, net operating profit was negatively statistically significant in explaining total money market instrument.

RECOMMENDATIONS

Based on the findings in section four and being mindful of the problems militating against the growth of the money market in Nigeria, the researcher has favoured the implementation of the following recommendation:

- Government should ensure that policies that would develop and strengthen the money market should be made and implemented. Example of such policies includes policies to reform the central bank discount window operations
- Banks should come up with a sound working capital policies as a way of improving corporate profitability
- Banks should also improve upon their working capital which is the life blood of any organization
- There should be the introduction of new, flexible and versatile money market instruments suited to the prevailing conditions in the country but which can adapt to changing circumstances
- In managing working capital, financial managers should appraise investments in working capital using capital investment models in order to determining the viability of such investment

APPENDIX

Appendix 1: Profit after tax of selected banks in Nigeria

Years	Diamond Bank	Fidelity Bank	GT Bank Plc	Stanbic IBTC Bank	Skye Bank	UBA Plc	Zenith Bank
2005	2,526,552	2,263,000	5,331,000	2,358,155	492,719,000	4,653,000	7,155,926
2006	3,849,545	3,162,000	7,906,000	4,124,020	1,585,746	11,463,000	11,488,800
2007	6,930,754	4,160,000	7,259,000	7,141,000	5,517,000	26,988,000	17,509,145
2008	7 ,078,931	4,714,000	28,073,252	9,214,000	5,126,000	19,514,000	46,524,991
2009	4,883,446	5,376,000	28,603,078	6,258,000	1,130,000	12,889,000	14,692,000
2010	6,522,455	5,828,000	39,320,255	4,829,000	2,264,053	2,167,000	33,335,000
2011	22,868,254	5,959,000	51,741,620	3,232,000	3,751,522	16,385,000	41,301,000
2012	23,073,427	17,924,000	85,263,826	5,300,000	4,447,269	47,375,000	95,803,000
2013	29,754,522	7,721,000	85,545,510	8,332,000	4,331,798	46,483,000	83,414,000
2014	8 ,348,425	9,028,000	93,139,178	16,000,000	5,499,287	12,587,000	46,669,000

Appendix 2: Working capital of selected banks in Nigeria

Years	Diamond Bank	Fidelity Bank	GT Bank Plc	Stanbic IBTC Bank	Skye Bank	UBA Plc	Zenith Bank
2005	11,258,118	5,053,387	46,293,166	9,034,780	3,697,221	109,716,000	180,407,249
2006	31,066,966	12,174,536	72,767,868	6,256,364	12,164,132	102,754,000	360,291,162
2007	78,928,707	19,733,974	70,756,000	8,120,000	17,807,000		563,581,290
2008	17,764,318	25,285,350	252,003,983	9,605,000	40,216,000	95,733,000	1,108,827,501
2009	62,470,986	38,661,271	255,944,975	7,772,000	30,579,000	38,972,000	115,044,000
2010	27,606,200	25,505,000	273,074,591	10,048,000	80,321,000	39,819,000	130,604,000
2011	55,784,079	82,271,000	368,282,477	30,072,000	100,432,895	124,826,000	211,098,000
2012	132,196,061	117,291,000	210,300,286	25,840,000	109,987,000	629,481,000	313,546,000
2013	228,322,128	207,834,000	228,609,551	20,722,000	142,698,000	620,426,000	587,793,000
2014	211,982,604	173,500,863	288,761,277	21,104,000	90,435,964	620,426,000	549,201,000

Nigeria stock exchange fact book

Appendix 3: Money market financial instruments

Years	Eligible development stock	Certificates of deposits	Commercial papers	Bankers acceptances	FGN bonds	Total
2005	101,361.5	0.0	194,591.2	41,123.5	250,830.0	587,906.2
2006	319,332.3	0.0	193,511.6	45,743.5	643,940.0	1,202,527.4
2007	694,061.0	2,497.9	363,369.5	81,834.0	1,186,160.0	2,327,922.4
2008	914,106.1	0.0	822,700.9	66,398.7	1,445,599.6	3,248,805.3
2009	1,094,947.8	0.0	722,521.8	109,361.8	1,848,986.6	3,775,818
2010	1,229,049.7	50,500.0	509,079.1	62,243.6	1,974,930.0	3,825,804.4
2011	1,471,774.9	35,000.0	365,267.9	38,760.4	0.0	1,910,803.2
2012	1,568,810.0	60,000.0	188,204.3	14,312.0	0.0	1,831,326.3
2013	1,730,069.4	0.0	210,549.8	61,077.3	0.0	2,001,696.5
2014	1,448,129.9	0.0	189,216.4	79,172.3	2,901,600.0	4,618,118.6

Adeola (2014)

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