
IMPACT OF LIQUIDITY AND LEVERAGE ON SUSTAINABLE GROWTH OF LISTED DEPOSIT MONEY BANKS IN NIGERIA**Mohammed Abubakar Saidu**

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ABSTRACT

This study examined the impact of liquidity and leverage on sustainable growth (SG) of listed deposit money banks in Nigeria over the period of ten years (2009 - 2018). The data for the study was collected from the annual reports and accounts of the listed DMBs in Nigeria. In addition to descriptive statistics, multiple regression techniques were employed to analyze the data. The study finds that leverage has positive and significant impact on SG whereas liquidity has insignificant but negative impact on SG of listed DMBs in Nigeria. Based on these findings, the study concludes that leverage is an important determinant of SG. Increase it would significantly improve the level of SG and also excessive or increase in liquidity worsen the SG level insignificantly while the sufficient or decrease in liquidity will improve SG level of listed DMBs in Nigeria. On the basis of this conclusion, the study recommends that banks should strive to increase the ratio of debt to equity as it is cheaper and improve SG. Banks should maintain optimum level of liquidity as excessive level of it will negatively affect SG of the bank.

Keywords: Leverage Liquidity, Sustainable growth, Banks

Introduction

Achieving firm Sustainable Growth (SG) is not possible without paying attention to growth strategy and growth capability. Organizations that fail to give adequate attention to growth strategy or growth capability are doomed to fail in their efforts to establish practices of SG in the long run (Daniel, 2013). If a company has a good growth strategy in place, but has not made efforts to obtain sufficient resources, it may find it difficult to achieve long term growth. Equally, company that has sufficient resources and has a poor growth strategy will fail in the long run. Achieving a SG is the prime concern of managers of companies, whether small or big. In a fast changing economic, political and competitive environment, achieving the SG is not an easy task, especially in the present highly complex global environment (Faud, 2014).

Firm SG is the optimum rate of growth that a firm can sustain without having to increase its financial leverage (Nasrollah, 2011). In the basic term, growth is often limited by the amount of equity in the business. The more equity a business has the more chances the business would have for growth but when there is good growth strategy in place. However, if the business is growing too fast than its current equity or resources can handle, then it may be difficult to sustain such growth unless if it raise long term loan from banks or other lending institutions, and if the business is growing too slowly that is far below its current equity or resources, then it may start to become stagnant (Nasrollah, 2011).

Firm leverage is the degree to which a company uses fixed-income securities, such as debentures and other short term interest bearing debt. With a high degree of financial leverage come high interest payments (Jensen &Meckling, 1976). Companies that have high proportion of debt in their capital structure may be at risk of liquidation if they are unable to make payments on their debt. Leverage may not always be bad as it can increase the shareholders' return on their investment and make good use of the tax advantages associated with borrowing for achieving SG.

Firm liquidity measures the company's ability to meet its short-term obligations using its most liquid assets. It is usually measured by the current assets to current liabilities (current ratio). According to Subrahmanyam and Titman (2001) liquidity improves firm operating financial performance which has been found to increase rate of growth of the firm. Firms with more liquid assets are less likely to fail because they can realize cash at the time of need thus outperforming those with less liquid assets.

Considerable studies have been carried out on the relationship between firm financial performance and

growth of companies particularly in developed nations and some parts of Asia with mixed results (Fazli, Mohd&Hushino 2013; Daniel 2013; Michael, Steven & John 2014, Sabari 2016). A common phenomenon in the studies is that firm financial performance and SG are not combined in one study. This means that the contribution in respect of the effect of the financial performance on SG of a firm is not given adequate attention. Considering the importance of financial performance to shareholders and potential investors and also the role SG of firm plays for firm survival, this study found it necessary to examine the impact of firm financial performance on SG. Examining banks financial performance and SG according to Sabari (2016) has become essential especially when one looks at some of the performance indicators of the banks operating in Nigeria, some have been increasing such as net profit margin, return on equity, return on assets, turnover and total asset but still many banks are finding it very difficult to grow. This raised a concern as to whether such phenomenon has any relation to SG of the banks. It is therefore one of the top most important decision management would make towards achieving sound development.

In Nigerian context, SG was studied by Sabari (2016), who investigated the impact of actual and SG on Return on Equity of United Bank for Africa for the period 1998 to 2013, but the study was restricted to considering actual and SG of Returns on Equity (ROE) of UBA Plc. excluding other variables like leverage, liquidity, bank size, and bank age. Thus the findings of the study cannot be generalized to other banks in the industry, as it was a case study consisting of only UBA Plc.

Despite the importance of banking sector to the growth and development of the Nigerian economy, very little effort is made to research on the impact of liquidity and leverage on SG in the sector in Nigeria. In the light of the foregoing, the research examines the impact of liquidity and leverage on SG of listed DMBs in Nigeria.

Based on the objectives of the study, the following hypotheses were developed in null form to guide the study.

- i. Liquidity has no significant impact on SG of listed DMBs in Nigeria.
- ii. Leverage does not have a significant impact on SG of listed DMBs Nigeria.

The remaining part of this paper is divided into the following sections. Review of related literature and Theoretical Framework are in section two. The methodology adopted for the purpose of the study is dealt with in section three. Section four addressed data presentation and analysis, and section five presented summary, conclusion and recommendations.

2. Literature Review

The Concept of Sustainable Growth (SG)

Studies were conducted on the concept of SG by different scholars in order to assess performance, control growth and propose policies for growth stimulation in an organization. The concept of SG differs across firms. It can be defined in terms of quantitative measures such as income generation, business expansion, value addition or qualitative features like market position, product quality and customer goodwill (Aggrawal, 2015). Higgins (2003) explained that SG represents the maximum rate at which a firm can expand its sales or revenues without depleting its financial resources. It is the maximum growth that a firm can sustain without having to increase leverage. A company with excellent growth opportunities but without sufficient financial resources in long-term period to exploit opportunities will find it difficult to grow. However, a company with the necessary financial resources in place to pursue high growth opportunities but without the long-term ability to identify and take benefit those opportunities also will find it difficult to grow.

According to Horne (1998), the SG is the percentage of the optimum growth in sales that may occur in accordance with the target of the operation, debt, and the dividend ratio. With the model of SG, one can determine whether the purpose of the company's sales growth is consistent with the operating characteristics and financial goals. SG can be seen as a change in size during a determined time span. The SG depends on the earnings retention rate and the Return on Equity. Churchill and Mullins (2007) perceived the concept of SG as the growth rate a company can sustain without the need to resort to external funding sources. It is the growth rate that can be achieved using operational means, without divestment and external funding.

Measures of Sustainable Growth (SG)

Over the years, various SG models have been developed. These include; Higgins Model; Van Horne Model and Zakon Model. The explanation of the models is presented below:

a) Higgins's SG (HSG) Model

The concept of SG was developed by Robert C. Higgins in 1977 for separate time framework and it was extended by him for continuous time framework (Higgins, 1981). The model comprise of four accounting ratios namely: dividend payout, profit margin, assets turnover and capital structure. Higgins' SG formula is given as:

$$\text{HSG} = (\text{RE}/\text{NPAT}) * (\text{NPBT}/\text{TO}) * (\text{TO}/\text{NA}) * (\text{NA}/\text{ROE})$$

$$\text{HSG} = (\text{RR} * \text{ROE})$$

Where: HSG= Higgin's SG, RI = Retained Earnings, NPAT = Net Profit after tax, NPBT = Net Profit before tax, TO = Turnover (Sales), NA = Net Assets, ROE = Book value of Equity, RR = Retention Rate.

Higgins first proposed the SG model in 1977 and emphasized on the effective allocation of resources in an organization, and was against the enterprise blindly pursuing growth. According to the Higgins' (2003), the model assumes that the company does not issue new equity capital and portion of retained earnings and debts invest in assets. This increased assets help to increase sales; finally it enhances the profit of the company and this is a cycle within the firm. The increase in assets results in increases in operations which ultimately results in increase in profit and thereby increase in retained earnings (Raiyani, 2011).

Higgins believes that companies have various ways of compensating for the growth of sales over the sustainable rate. They may increase their equity, reduce the level of dividend payments, may resort to external funding or implement cost-reduction programmes. It may happen that these options cannot be implemented for practical reasons. It may happen that the market does not react to the increase of equity, that the payment of dividends cannot be reduced, or that the company is a young one, one that has never paid dividends before. External funding may come at high cost or some companies may not be able to attract external funding. As a consequence, the company will have to decrease its current growth rate. Higgins advises managers to plan any sales increase the way they would manage any other part of the business. Also, ROE and the dividend distribution rate provide financial managers with an important instrument for analyzing growth rates and they can be used for comparing the performances obtained through the use of a certain set of financial policies.

b) Van Horne's SG (VSG) Model

Horne (1987) developed a model to measure a firm's SG. It comprises of four accounting ratios namely: net profit margin, asset turnover, equity multiplier and retention rate of return. This model comprises of sales performance, financing ability and dividend policy of the firm. Van Horne's SG equation is as follows:

$$VSG = \{b (NPBT/TO) * (1+ D/E)\} / (A/S) - b (NPBT/TO) * (1 + D/E)$$

Where; VSG = Van Horne's SG, b = Retention rate, NPBT= Net profit before tax, TO = Turnover (Sales), D/E = Debt to Equity, A/S = Total Assets to Sales.

Horne (1987) defined SG as the maximum annual percentage increase in sales that can be achieved based on target operation, debt and dividend-payout ratios. Van Horne's model is the quantitative descriptive of the SG which is the variance of the sale income. Dhannapal and Ganesan (2010) point out that Van Horne's model is a powerful tool for checking consistency between sales growth, operating efficiency and financial objectives of a firm. In the words of Horne (2007), the idea is that an increase in assets (use of funds) must be equal to liabilities and shareholders' equity (source of fund). The assumption is based on steady state as there would be changes in the model if the underlying variables change.

c) Zakon's SG (ZSG) Model

Traditionally, the relationships between growth, profitability and assets changes have been analyzed through Zakon's SG model (Zakon, 1966). The model suggests that growth could be internally sustainable, if the net assets growth rate is not higher than the retained earnings growth rate. A first version of the model, that is the SG model, is only based on the current internal flow of funds (Current Income + Depreciation). Such statement is due to the following assumptions: capital investments are considered as a scarce resource, both in terms of equity investments and debts, and the management desire to maintain the actual financial structure. In other words, market difficulties to find out financial sources, on a side, and the financial structure desired by the management, on the other; force the firm to finance business growth through current internal flow of funds.

This model highlights the maximum growth that a company may sustain. It was found that some companies have had difficulties as a result of too rapid growth in the volume of activity, namely when the growth has exceeded the company's ability to generate the necessary resources to finance expansion. According to the model, a company can grow without external capital investments and changes in the financial structure, according to its ability to generate internal flow of funds. Zakon's model of SG is as follows:

$$ZSG = D/E * (R - i) * p + R * p$$

ZSG = ZakonSG, D/E = debt / equity ratio, R = Return on Assets, i = interest rate (1- taxation rate) and p = retention ratio.

According to Zakon (1966) SG is determined in terms of a company's profitability, as well as financial policies regarding financial gearing and dividends. A rise in these factors contributes to increase in the business SG. Increase in retained earnings, equity investments and in the amount of debts, by generating financial resources encourages company growth. In particular, it is worth remarking that high dividend if, on a side, satisfies business-owners' requirements and expectations, on the other, drains financial resources that could fuel further business growth. As a consequence a company that wants both to maintain a specific growth rate and to reward equity investments according to business owners'

expectations has to increase business operating profitability and/or its debts to equity ratio. Nevertheless, an increase in debts could provide new financial resources and, hence, generate further growth if the cost of borrowing is lower than the return on net assets.

3. Review of Empirical Studies

Leverage is a financial debt ratio that is used in order to establish the relationship between the external financing of the firm and its total assets (Abbadi&Abbadi, 2012). The pecking order theory states that companies prioritize their sources of financing according to the principle of least effort. This means that companies first use internal financing at startup. When this is depleted, they use debt financing, and when they cannot get any capital anymore through debt financing, they raise capital by looking for external equity. This theory was first suggested by Donaldson (1961). This phenomenon can be explained by the fact that internal financing is the cheapest way to raise additional capital. The access to external financing is often limited for young companies. And even though they are able to attract external financing, they would pay a very expensive price for it. Young companies have a higher failure risk. Therefore, the possibility for young companies to grow is often limited. Another explanation for this hierarchy of financing decisions could be that the entrepreneur wants to fully control the company by himself. Thus he or she is not likely capable to raise required capital from external investors. Raising capital through debt financing is also difficult for a startup company since the lenders do not have any previous financial track records of the company. However, the prior literature on the relationship between leverage and SG has shown mixed results.

Daniel (2013) examines the impact of sustainable growth on the performance of small and medium enterprises in Canada where 8,500 SMEs were selected for the period of twelve years (1999-2010). Univariate and multivariate analysis were used for data analysis. The results show a significant positive relationship between leverage and SG. A study was also conducted by Amarjit and Neill (2011) to find out the factors that affect potential growth of Canadian firms. The study covers 164 Canadian companies for the period of 6 years (2004-2010). The data were analyzed using Ordinary Least Square (OLS) regression model and results indicated significant positive relationship between leverage and SG. Regarding leverage of the firms, a study is also conducted in United State of America by Michael, Steven and John (2014) to examine four financial ratios for the retail sector over the high growth period. The study considers 42 firms selected from four sectors. The data was analyzed using linear regression technique. The result also shows that leverage has positive and significant impact on SG.

Pandit and Tejani (2011) examined textile and clothing segment dominating the retail sector of India with a contribution output of 39% draws attention to bid whether the growth rate being enjoyed by this sector currently is sustainable or not. Sustainable growth rate model can provide an excellent structure to describe the growth path of retail businesses. The study first describes in detail that the textile and apparel segment of the Indian retail sector followed with the meaning and utility of SG rate. The study considers some selected companies of apparel segment of retail sector in India for the duration of last five years from 2006 to 2010. It was found that for the firms to maintain an orderly growth, they have to work on keeping a consistent level in profit margins, asset turnover, leverage, and retained earnings. Only then they can manage to maintain their firm growth.

Loi and Khan (2012) examine the determinants of firm growth in Belgium where 10,323 companies were chosen for the period of 5 years (2002-2006). Ordinary least square regression was used to analyze the data. It was found that leverage has significant positive impact on SG and actual growth. However, the study conducted in USA by Dhanapal and Ganesan (2010) also found that there is negative relationship between SG rate and financial leverage but has positive relationship with operating leverage. Muritala (2012) empirically found that firm growth is lower in firms with higher leverage. This study implies that influence of leverage on growth has been found to be negative. Loi and Khan (2012) examined the determinants of firm SG in the Belgian context for the period of 5 years (2002 - 2006). Ordinary Least square analysis was employed to analyze the data and the result show that there is significant positive impact between liquidity and SG.

Michael, Steven and John (2014) examine the four financial ratios for the real sector over the growth period of 42 companies from 4 sectors. The study covers the period of 3 years from 1998 to 2000. Linear regression was used for analyzing the data and the results shows a significant positive relationship between liquidity and SG. Furthermore, Fazli, Mohd and Hussain (2013) study the effect of liquidity ratio, price to earnings ratio and profitability ratio on SG of 10 listed companies in Indonesia covering period of 4 years from 2010 to 2013. The data was analyzed using multiple regression and T-test techniques. It was found that liquidity and profitability have significant positive impact on SG. However, firms that are able to maintain higher liquidity level will face less severe financing constraints. Surplus cash will shrink financing constraints, enabling the company to finance growth opportunities at lower cost. Logically, a company that is able to invest at a reduced cost will be more motivated to invest, aiming for growth (Gill & Mathur, 2011). Gopinath (2012) investigates the determinants of growth in young Real Estate Investment Trust (REIT) with the view that REIT unique operating conditions may have different implication for the new venture growth. One hundred and forty-eight (148) companies were selected from USA for the period 1993 to 2005. The data was analyzed using multiple regression, correlation and descriptive analysis. The result indicates a positive and significant relationship between liquidity and SG

of the firms. Also, Amarjit and Neill (2011) examine the factors that affect potential growth of 164 Canadian firms using multiple regression (OLS, random and fixed effect) method of data analysis for the period of 3 years (2008-2010). In this study, the result also shows a positive and significant relationship between firm liquidity and SG.

From Nigeria, Oladejo and Oladipupo (2011) used the most common ratio which indicates the extent of liquidity or lack of it is current ratio and quick asset ratio. It was found that there is trade-off between how a firm maintains its liquidity position and its profitability position as well. They opine that to make profit, an organization is likely to be short of liquid assets. Kajola, Alao, Ojurongbe and Jubril (2019) examined the effect of leverage and liquidity on financial performance of Nigerian firms using data of seventeen consumer goods firms listed on the Nigerian Stock Exchange from 2012 to 2017. Using multiple regression method, finding revealed that leverage has significant effect on financial performance. This implies that in order to improve profitability level, corporate managers and top decision makers utilize the advantage of debts' tax shield from the interest in companies' financial structure and proffer robust strategies that will effectively manage liquidity requirements.

3. Methodology

The study used ex-post factor research design since the population of the study consists of all the sixteen (16) listed DMBs on the first-tier securities market of the NSE as at 31st December 2018. The two-point filter was used to arrive at the working population is that a company must have been listed on the NSE on or before 31 December, 2008 and remained listed between 2009 and 2018. As a result of this filter, the number of DMBs in the population reduced to fifteen (15). Jaiz Bank Plc. was excluded from the sample because it does not have the requisite data for the period under investigation since the bank was quoted in 2016. The whole working population was taken as sample size for the study. The study data was based on secondary source derived from the annual reports and accounts of the listed DMBs in Nigeria for the period of the study. Secondary data was used in the previous studies of Rahim & Saad (2016) and Hassan (2016) and as such, it was also used for this study.

The measurement of the dependent variable SG would be based on Higgins SG model which was developed by Robert C. Higgins in 1977 for discrete time framework and it was extended by him for continuous time framework in 2001 and 2007 (Fonseka, Ramos, & Tian 2012). Thus, SG is measured in the study as follows:

Where: = Sustainable Growth,

= Retention rate

= Return on Equity

For the measurement of independent variables, **leverage** is measured by total debt to total assets as in (Daniel, 2013 and Hassan & Pinnar, 2014) and liquidity is measured by the ratio of current assets to current liabilities. **In analyzing the relationship between the bank profitability and deposit and SG, the study used descriptive statistics and linear regression techniques.**

4. Results and Discussion

Descriptive Analysis

This sub-section provides descriptive statistical analysis of the data generated for the study. It provides the summary statistics of the data collected such as the mean, minimum and maximum of both the dependent and independent variables. Thus, Table 4.1 presents the descriptive statistics of the dependent variable Sustainable SG and independent variables.

Table 4.1 Descriptive Statistics of the Variables

| Variable | Obs | Mean | Std. Dev. | Min. | Max. |
|------------------|-----|--------|-----------|---------|--------|
| SG | 150 | 0.0808 | 0.1057 | -0.1689 | 0.3120 |
| Leverage | 150 | 0.8449 | 0.0572 | 0.5980 | 0.9718 |
| Liquidity (Time) | 150 | 1.0219 | 0.2857 | 0.5114 | 1.9796 |
| | | | | | |

Source: Computed by the Author from Annual Reports of the listed DMBs (2009-2018) using STATA version 14. Table 4.1 reveals that SG measured by the ROE multiplied by RR shows a mean value of 0.0808 which is 8.08% with standard deviation of 10.57% suggesting a considerable level of dispersion in SG among the banks during the period. SG has a minimum value of -16.89% and the Maximum value of 31.20%. This further demonstrates high level of variation in SG among deposits money banks in Nigeria.

From Table 4.1, the mean value of leverage which was measured by total debt to total asset of banks is 0.8449, which means that on average, 84% of the assets of the DMBs in Nigeria is financed through debt as of the period of 2008-2017. The standard deviation of the leverage is 0.0527, its minimum value is 0.5980 and the maximum value is 0.9718. This means that more than 84% of the banks are focus on deposit mobilization than equity. Also from the same Table 4.1, liquidity has a mean value of 1.0219 which implies that on average the current liabilities of DMBs is being covered by 1.0219 times of current asset with standard deviation of 0.2857. This indicates that there is high variation in the level of liquidity among DMBs. From Table 4.1 liquidity ranges between 0.5113 and 1.9796, thus, demonstrating that some of the banks do not have enough liquid assets to meet their short term financial obligations

Regression Results

This sub-section presents the regression results of the study. It presents the robustness tests, as well as, the results of the model of the study.

Robustness Test

The robustness test was conducted in order to test the normality and ensure the validity of all statistical inferences for the study. The tests include Multicollinearity, heteroscedasticity, hausman specification and langrage multiplier. The summary of robustness test result is presented in the table below:

Table 2 Summary of Robustness Test Results

| Test | Result | Meaning |
|----------------------------|--------|-------------------------------------------------------------------------------|
| Multicollinearity | 1.01 | Absence of multicollinearity |
| Heteroskedasticity | 0.0000 | Presence of hetroskedasticity which was corrected through the robust GLS test |
| Hausman Specification | 0.1129 | RE model is more robust |
| Langrarian Multiplier Test | 1.0000 | Robust OLS model is more appropriate |

Presentation and Discussion of Regression Result

The regression result of the Robust OLS estimation technique is presented on Table 4.2

Table 3 Regression Results of Robust OLS

| SG | COEF. | ROBUST STD. ERR. | T | P>/T/ |
|--------------|--------|------------------|-------|-------|
| LEV | .6412 | .2341 | 2.74 | 0.007 |
| LIQ | -.0289 | .0184 | -1.57 | 0.118 |
| CONS | -.4313 | .1853 | -2.32 | 0.022 |
| R-sq: | | 0.1310 | | |
| Prob>chi2 | | 0.0201 | | |
| Hausman Test | | 0.1129 | | |
| LM Test | | 1.0000 | | |

Source: Computed by the Author from Annual Reports of the listed DMBs (2009-2018), using STATA version 14.

Table 3 presents the regression result of the dependent variable SG and the independent variables of the study. The *P-Value of 0.0201 indicates the fitness of the model*. The regression results show the cumulative R² (0.1310) which is the multiple coefficient of determination that gives the proportion or percentage of the total variation in the dependent variable explained by the explanatory variables jointly. Hence, it signifies that 13.10% of total variation in sustainable growth of listed DMBs is caused by leverage and liquidity of DMBs and that 86.9% variation in DMBs SG has not been explained by the

explanatory variables used in the model. Further, the F-test which explains the goodness fit of the model. From table 3, there is positive and significant relationship between leverage and SG of listed DMBs at 5% level of significance. This result implies that an increase in leverage level leads to significant increase in SG level of listed DMBs in Nigeria. The result corroborates the findings of Hassan & Pinnar (2014) and Daniel (2013). This implies that companies with higher debt level tend to have higher sustainable SG. Finding however contradicts Muritala (2012) who reported an insignificant impact on SG. The economic implication is that for every unit rise in leverage, sustainable growth will increase by 64%. Practical implications is

Liquidity appears negative and insignificant with SG of listed DMBs. Finding implies an increase in liquidity level of listed DMBs in Nigeria is results to an insignificant decrease in SG. Thus, liquidity has no impact on sustainable growth of listed deposit money banks in Nigeria. The negative relationship between liquidity and SG may be due to the high cost of holding money and lost return that might have been realized if the money were to be invested.

In testing the hypotheses, 5% level of significance as it is normally used in social sciences research. To determine if the hypotheses can be rejected or failed to be rejected at 5% level of significance, the $P > |t|$ value would be compared with 0.05 in the regression, the null hypotheses will fail to be rejected if the $P > |t|$ value is more than 0.05, and rejected if otherwise.

Hypothesis one of the study states that **leverage has no significant impact on the SG of listed DBMs in the Nigeria. From Table 3**, the value of leverage with regards to SG is 0.002. This implies that leverage has a significant impact on the SG of listed DMBs as the p-value 0.002 is less than 0.05. Therefore, the null hypothesis which states that leverage has no significant impact on the SG of listed DMBs in the Nigeria is rejected. **From Table 3**, the value of liquidity with regards to SG is (0.118) indicating that liquidity has no significant impact on the SG of listed DMBs. **Results presents a p-value (0.118) which exceeds 0.05.** As such, the null hypotheses which states that liquidity has no significant impact on the SG of listed DMBs in the Nigeria failed to be rejected. Thus, liquidity does not impact SG of listed DBMs in Nigeria.

5. Conclusion and Recommendations

This study examines the impact of leverage and liquidity on sustainable growth (SG) of listed deposit money banks in Nigeria. The findings of the study indicate that leverage enhances sustainable growth of listed DMBs in Nigeria to a large extent, while liquidity has no impact on SG. As such, the study concludes that an increase in leverage would significantly improve SG of listed DMBs in Nigeria. However, liquidity tends to have no impact on SG. Therefore, based on the findings and conclusions, DMBs in Nigeria should desist from raising its equity share capital as it will deter SG level of the banking industry. Instead, their capital structure should contain more of debt and other long term source of funds if any for the SG of the bank to improve. The management should minimize liquid assets by investing any excess cash as such will impair SG. Thus, the bank management should maintain sufficient level of cash that is enough for the bank to cater for its short term financial needs.

References

- Abbad, M. S., & Abbad, T. R. (2012). The Determinants of working capital requirements in Palestinian industrial corporations. *International Journal of Economics and Finance*, 5(1), 65-75.
- Aggarwal, P. (2015). An Empirical evidence of measuring growth determinants of Indian firms. *Journal of Applied Finance & Banking*, 5(2), 45-66.
- Amarjit, G., & Neil, M. (2011). Factors that influence financial leverage of Canadian firms. *Journal of Applied Finance & Banking*, 1(2), 19-37.
- Churchill, N. C., & Mullins, J. W. (2007). How fast can your company afford to grow? *Harvard Business Review* 79 (5), 135-143.
- Daniels, L. S. (2013). **Small and medium-sized enterprises growth study: Actual vs. sustainable growth.** *Small Business Branch Research and Analysis Directorate*, No. 1
- Dhanapal, C., & Ganesan, G. (2010). Enterprise sustainable growth rate analysis: An empirical study. *International Conference on Business and Economics*, 15-16,
- Donaldson, G. (1961). *Corporate debt capacity*. Boston: Harvard University
- Faud, M. (2014). Determinants of growth in small tourism businesses and the barriers they face: The case of Cappadocia. *International Journal of Business, Humanities and Technology*, 3(4), 1-15.
- Fazli, M., Mohd, S., & Hoshino, G. (2013). Sales growth, profitability and performance: empirical study of Japanese ICT Industries with three Asian countries. *Interdisciplinary journal of contemporary research in business*, 4(11), 138-156.
- Fonseka, M. M., Ramos, C. G., & Tian, G. (2012). The most appropriate sustainable growth rate model for managers and researchers. *The Journal of Applied Business Research*, 28(3)

- Gill, A., & Mathur, N. (2011). Factors that affect potential growth of Canadian firms, *Journal of Applied Finance & Banking*, 1 (4).107-123.
- Hassan, A., & Pinnar, H. (2014). The effect of corruption on firm growth: Evidence from firms in Turkey. *Asian Economic and Financial Review*, 4(5): 607-624.
- Hassan, A. T. (2011). An exploratory evaluation of the impact of regulation on corporate governance practice in Nigerian banks. Thesis Abstracts. Retrieved from www.academia.com
- Higgins, R. C. (1981). Analysis for financial management (6th ed.). New York: McGraw Hill: pp.115-140.
- Higgins, R. C. (2003). *Analysis for financial management*. Boston: McGraw-Hill
- Higgins, R. C. (1977). How much growth can a firm afford? *Financial Management*, 6 (3), 7-16
- Horne, V. J. (1987). Sustainable growth modeling. *Journal of Corporate Finance*, 2 (3), 19-26.
- Horne, V. J. (2007). Sustainable growth modeling. *Journal of Corporate Finance*. (winter) ,pp . 19-25.
- Kajola, S. O., Alao, A., Sanyaolu, W. A., & Jubril, O. A. (2019). Effect of liquidity and leverage on financial performance of Nigerian listed consumer goods firm. *The Journal Contemporary Economy*, 4 (3):91-102.
- Jensen, M., & Meckling, W. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305-360
- Loi, T. H., & Khan, A. A. (2012). *Determinants of firm growth: evidence from Belgian companies*, *Journal of Economics*, Vol. 1
- Michael, P., Steven, A., & John, V. (2014). Understanding small private retail firm growth using the sustainable growth Model. *Journal of Finance and Accountancy*, 39(7), 120- 122).
- Muritala, T. A. (2012). An empirical analysis of capital structure on firms' performance in Nigeria. *International Journal of Advances in Management and Economics*. 1, 116-124.
- Nasrollah, A. (2011). Sustainable growth rate and firm performance: Evidence from Iran Stock Exchange. *International Journal of Business and Social Science*, 2(23).1-7.
- Oladejo, M. O., & Oladipupo, A.U. (2011). Regulatory authorities and the performance of Nigerian Banks: An Appraisal. *Journal of Business and Organizational Development*, 2, 82 -92.
- Pandit, N. & Tejani, R. (2011). Sustainable growth rate of textile and apparel segment of the Indian retails sector. *Global Journal of Management and Business research*. 11(2).23-27.
- Rahim, N., & Saad, N. (2014). Sustainable growth of public listed companies (PLC) using capital structure choices and firm performance in an Asean Market. *Proceeding of the Global Summit on Education GSE 2014*, 4-5, 433 -444.
- Raiyani, J. R. (2011). Performance analysis with sustainable growth rate: *International Journal of Research in Commerce, Economics and Management*. No. 1, Issue1, pp .118-123
- Sabari, M. H. (2016). Actual versus sustainable growth of return on equity in United Bank for Africa Plc. *Journal of Accounting*, 1(2).1-15.
- Subrahmanyam, A., & Titman, S. (2001). Impact of liquidity and profitability of insurance companies in Ghana, *Journal of Finance*, 56, 239-241.
- Zakon, A. (1996). *Growth and financial strategies*. A special commentary. Boston: Massachusetts.