RELATIONSHIP BETWEEN NON-INTEREST INCOME AND DEPOSIT MONEY BANKS' PROFITABILITY IN NIGERIA

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Abstract
Nigerian banks are finding it unattractive to rely on interest income as the main revenue generating stream, thus innovating on fee based transactions to earn non-interest income. The study examined the relationship between non-interest income and banks' profitability in Nigeria between 2006 and 2015 and assessed the relationship between their non-interest income and interest income. Five out of the 21 banks were purposively selected for the study. The research design was ex-post facto of the survey type. Percentages and Pearson correlation were used to analyse the collected secondary data. The results indicate strong significant relationship between non-interest income and profit before tax (PBT) with (r) =0.769 and between non-interest income and interest income with r=0.723 (p=0.000 < 0.05). The study concluded that non-interest income and banks' profitability are positively and significantly related. It was recommended that banks should continuously improve their services to generate more non-interest income to boost profitability.

Keywords: Non-interest, income, banks, profitability

Introduction

Traditionally, deposit money banks formerly known as commercial banks in Nigeria are established to cater for the financial needs of the people in terms of deposit mobilisation and asset generation, which consequently impact the economy of the nation. According to Unang'o (2015), banks help in improving the efficiency of the entire economy, which makes it important for them to be profitable and remain evergreen. In other words, the banking sector is the engine of any nation's economy (Ndubuaku, Ohaegbu & Nina, 2017). The quest for profitability has made the Nigerian banking system to be highly competitive and regulated. With dwindling interest income from loans and advances, coupled with intense regulation from the Central Bank of Nigeria and stiff competition among banks, non interest income has been put in the forefront as a major component of banks' total income**.**

Non-interest income is not entirely new to the Nigerian banks and their customers but the introduction of liberalized banking has allowed banks' involvement in different activities such as investments, trading and money transfer through which non-interest income is earned. Despite this, the relationship between non-interest income and banks' profitability appears unclear, although banks strive to generate non-interest income.

Recently, an increasingly open market and tough regulation have made it imperative for banks in China to source for non interest income vigorously (Sun, Wu, Zhu & Stephenson, 2017). In fact, such tight regulations from the Central Bank of Nigeria (CBN) and Asset Management Corporation of Nigeria (AMCON) have led to the liquidation of some deposit money banks carrying high toxic loans. The operating licenses of some banks have been revoked in recent past. Many banks are taking calculated risks in creating assets thus reducing interest receivable from loans and by extension the total revenue of the banks (Amakiri, 2016). The stringent conditions for loans seem to have made banks' reliance on interest income for profitability and market sustainability daunting. Even with risk management policies, some banks use a huge percentage of their earnings for loan loss provisioning (Depo-Mogaji, 2016). Shareholders and other interested bodies will want the banks to be profitable enough to declare dividends and bonus shares.

In addition, the fall in the price of crude oil has impacted negatively on business activities (Onyenweaku, 2015). Banks tend to focus non-interest generating activities that appear to be insulated from issues limiting loans through which interest income is earned. One of the benefits of non-interest income is that it is more stable than interest income and fee-based activities reduce bank risks through diversification (Kohler, Dullmann, Herrmann & Memmel, 2013). Roger and Sinkey (1999) reported that the trend of non-interest income in banks should be of interest with a view of re-strategising by the banks on the way forward. One set of arguments holds that restricting banking scope to the traditional activities reduces likelihood of failure related to risk businesses, while the second set argues that non-interest income enhances bank profitability and reduces risk; although the third set holds that the impact of non-interest income on bank performance is uncertain (Sun et al., 2017). There are few studies on non-interest income and profitability of deposit money banks in Nigeria and with contradictory results.

Literature review

Conceptual review

Non-interest income is a financial concept that is usually associated with the banking sector. According to Smith, Staikouras and Wood (2003), non-interest income is defined as a mixture of heterogeneous components that differs in terms of their relative importance. These include deposit service charge, credit card fees, and fees associated with electronic funds transfer. Stiroh (2004) opined that institutions charge fees that provide non-interest income as a way of generating revenue and ensuring liquidity in the event of increased default rates.

Profitability may be defined as the ability of a given instrument to earn a return from its use. The management of any firm should be able to identify its strength and weakness, likewise exploit opportunities and tackle threats if it is determined to make profits. The profitability of banks can be appraised at the micro and macro levels of the economy. At the micro level, profit is the essential prerequisite of a competitive banking institution and the cheapest source of funds. It is not merely a result, but also a necessity for successful banking in a period of growing competition on financial markets. The basic aim of a bank's management is to achieve a profit, as the essential requirement for conducting any business. At the macro level, a sound and profitable banking sector is better able to withstand negative shocks and contribute to the stability of the financial system.

According to Adeusi, Kolapo, and Aluko (2014), a bank is said to be 'profitable' if it can accrue financial gains from the capital invested into the operational activities of the bank. The success of a bank is determined by how well the bank made profits in the course of a financial period. For banks to be profitable, they have to assume a reasonable level of risk. Profitability may be measured through return on investment (ROI), return on assets (ROA), return on equity (ROE) and profit before tax (PBT). This study has adopted profit after tax as the measure of Nigerian deposit money banks' profitability and defined profitability as the positive left over when cost is deducted from income.

Theoretical review

The study is based on the theory of total quality management (TQM). Deming (1982) is reputed to be the father of total quality management (TQM) and offers a theory of management based on his 14 key principles or points for management to follow for significantly improving the effectiveness of a business or organization. He asserted that long term commitment to new learning and new philosophy is required of any management that seeks transformation. The assertion is true of non interest income generation that will be consistent, effective and significantly impact profitability in Nigerian banks and perhaps reduce the influence of interest income to banks performance. Accordingly, management's failure to plan for the future brings about loss of market, which leads to loss of jobs hence management must develop innovative plans to stay in business, protect investment, ensure future dividends and provide more jobs through improved product and service. This is applicable to banks and the creation of non income earning activities in the face of dwindling interest income in recent years (Were and Wanbua, 2014). Low interest rates due to regulation and increased default rates contribute to the reduction in credit income in banks. Total quality management (TQM) is relevant to this study in that customers appear to be ready to pay for quality. Therefore, quality delivery of banking activities to generate non-interest income could serve as referrals to prospective customers once the actual customers are satisfied. Customer satisfaction lies with the customers and not the service providers. TQM could also be linked to this study because cost effectiveness and timeliness of service delivery tend to enhance customer loyalty and retention, thus satisfied customers bring more business to the bank and by extension more non-interest income. TQM which promotes continuous improvement of products and services that satisfy the needs of the customers will yield more non-interest income to the banks.

Empirical review

According to De Young and Roland (2001), volatility factors must be considered in the process of instituting non-interest income for an institution's financial performance. They found that despite credit risk and fluctuations in interest rates, interest income from loans may be less volatile than non-interest income from fee-based activities. Fee-based activities may require greater operating leverage than lending activities, which makes bank earnings more vulnerable to declines in bank revenues thereby influencing bank financial performance. Smith et al. (2003) further found that well-managed banks expand more slowly into non-interest activities, and that marginal increases in non-interest income are associated with poorer risk-return tradeoffs on the average.

Stiroh (2006) reported that increased focus on non-interest activities at U.S. commercial banks was associated with declines in risk-adjusted performance, but found little potential for diversification benefits across broad lines of banking business. Feldman and Schmidt (1999) found that analysts regularly attribute bank profitability in recent years to the significant growth of non-interest income. Smith et al. (2003) also investigated the diversification effects of non-interest income at banks in 15 different European countries and found non-interest income to be more volatile than interest income over time. They found negative correlations between non-interest income and interest, which led them to conclude that non-interest income tends to stabilize bank earnings.

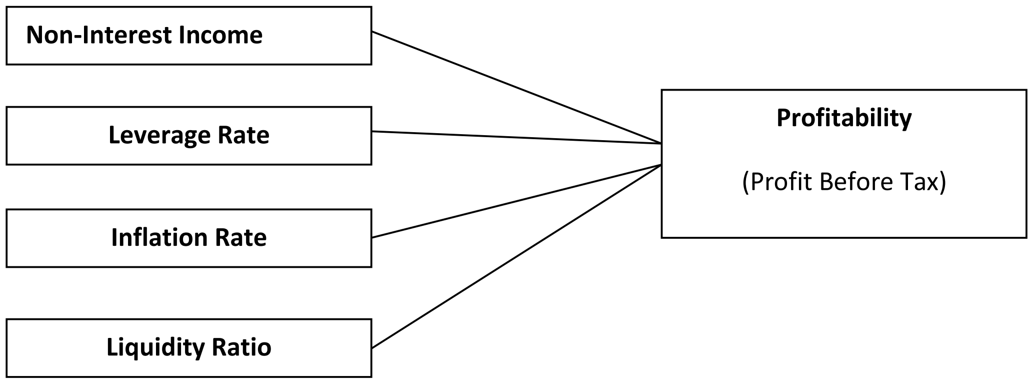
A well-managed bank will set its fees to fully exploit market demand, and will cross-sell additional fee-based products to a larger percentage of its core customer base. Thus, holding product mix and banking strategy constant, the intensity of non-interest income is likely to be a forward -looking signal of a bank's financial success (De Young& Rice, 2003). De Young (1994) shows that cost-efficient deposit money banks generate more non-interest income, but does not explore the causal relationship between these variables. According to Muckian (2014), data clearly indicates that service fees, including those charged by credit unions are a key factor in driving customers away. This means that sometimes fee-based income is made at the expense of customer relationship and loyalty. Similarly, Brunnermeier, Dong, and Palia (2015), reveals that banks' non-interest income either from trading income or venture capital income is related to systemic risk in the United States of America. Mndeme (2015) examined the impact of non-interest income on bank performance of Tanzanian banking sector using fixed effect model (FEM) from 2002 to 2012. The sample of 25 banks with more than 90 percent market-share-based total assets was used. The findings suggest that relying on non-interest income activities may adversely affect bank performance. Besides the study found that interest income has positive impact on performance. However due to improvement of technology, competition, existences of interest forbidden society and deregulation, the focus only on interest income activities in this modern age might not be viable. Thus diversification might be the best alternative because findings confirmed the hypothesis that diversification is good for the banking sector performance in Tanzania. De Young and Rice (2003) study demonstrates a number of empirical links between banks' non-interest income, business strategies, market conditions, technological change, and financial performance between 1989 and 2001. The results indicate that well-managed banks expand more slowly into non-interest activities, and that marginal increases in non-interest income are associated with poorer risk-return tradeoffs on average. These findings suggest that non-interest income co-exists with, rather than replacing interest income from the intermediation activities that remain banks' core financial services function. Stiroh (2002) assessed potential diversification benefits from this shift. The results suggest little obvious diversification benefit from the ongoing shift toward non-interest income.

Oniang'o (2015) shows that increased default rates make it imperative for banks to source for non-interest income to show-up profitability. The researcher found that non-interest income is largely unaffected by economic and financial market cycles while it is usually not controlled by law or regulation in Kenya. Mndeme (2015) concluded that non-interest income is good for the banking sector profitability. Accordingly, non-interest income is among the significant factors that may influence bank profitability. Saunders, Schmdit and Walter (2014) who studied with larger sample of US banks found non-interest income to be associated with higher profitability across all banks' groups. Perhaps negative influence of non-interest income on bank performance may be explained by managerial diseconomies where transaction costs outweigh the benefits.

Conceptual framework

In this study the dependent variable is banks' profitability while the independent variable is non-interest income in deposit money banks in Nigeria. The variables and their relationship are shown in the below.

Independent Variables Dependent Variable



Source: Author

Methods

Five out of 21 deposit money banks were selected through purposive sampling, which is a non-probability sampling technique. The population of deposit money banks in Nigeria is 21. Five out of 21 banks is about 25 percent of the population. This sample appears sufficient, unbiased and representative of the population. The study was based on expost facto of the survey research design to address the objectives of the study. The five banks namely Guaranty Trust Bank, First Bank of Nigeria, Fidelity Bank, Access Bank and Zenith Bank are major players in the Nigerian financial industry. Secondary data on profit before tax, interest income and non-interest income from 2006 to 2015 were extracted from published financial statements for analysis. The independent variable of non-interest income was assessed in association with liquidity ratio, prime lending rate and inflation rate which are factors that influence banks' profitability. Percentage was used and Pearson correlation was employed at $p > 0.05$ level of significance for data analysis. The STATA statistical package version was used.

Results and discussion

Table 1 shows that there is a statistically significant relationship between non-interest income and profit before tax of DMBs. The Pearson Correlation value (r) is 0.769 is an indication of a strong positive relationship between non-interest income and profit before tax of DMBs. This means that an increase in non-interest income may also lead to an increase in profit before tax of DMBs in Nigeria to the tune of 76.9%. The result shows that non-interest income is a correlate of profitability of DMBs. This means that an increase in non-interest income may also lead to an increase in profit before tax of DMBs in Nigeria to the tune of 76.9% which indicates that the linear combination of the four independent variables (Total Non-interest Income, Liquidity Ratio, Prime Lending Rate and Inflation) strongly predict the actual dependent variable (profitability). The study showed that there is a significant relationship between non-interest income and profit before tax of DMBs.

Table 1: Correlation Results of the Relationship between Non-Interest Income, Inflation Rate, Lending Prime Rate, Liquidity Ratio and Profit Before Tax of DMBs in Nigeria

		Inflation Rate	Prime Lending Rate	Liquidity Ratio	Profit Before Tax
Non-Interest Income	Pearson Correlation	-0.044	-0.135	-0.045	0.769**
	Sig. (2-tailed)	0.761	0.349	0.755	0.000
	N	50	50	50	50

**. Correlation is significant at the 0.01 level (2-tailed).

Source: Field Survey, 2018.

The result of the correlation shows that non-interest income is significantly and positively correlated with interest income, indicating that there is a relationship between interest income and non-interest income, though not a causal relationship. From table 2, the significant value $p_{=}$ (0.000) is less than 0.01 (</= 0.01), (Confidence level) .The Pearson Correlation value (r) is 0.723, which indicates that there is a strong positive statistical relationship between non-interest income and interest income of DMBs to the tune of 72.3%. This could be indicative of the fact that non-interest income in the Nigerian banking industry is co-existing with interest income.

Table 2: Correlation Results of the Relationship between Non-Interest Income and Interest Income of DMBs in Nigeria

		Non-Interest Income	Interest Income
Non-Interest Income	Pearson Correlation	1	0.723**
	Sig. (2-tailed)		0.000
	N	50	50
Interest Income	Pearson Correlation	0.723**	1
	Sig. (2-tailed)	0.000	
	N	50	50

**. Correlation is significant at the 0.01 level (2-tailed).

The five deposit money banks selected for the study were found to earn non-interest income. The result of the correlation analysis shows that non-interest income is significantly and positively correlated with interest income, though not a causal relationship. The result supports the findings of Stiroh (2002) that non-interest income has become more correlated with net interest income. Secondly, the findings of the study indicate that there is a significant relationship between non-interest income and profit before tax of DMBs. This is in agreement with the findings of Sheng and Wang (2008) that increased non-interest income proportion in total bank income can efficiently improve the performance of commercial banks. It also supports the findings of Sanya and Wolfe (2011) that diversification decreases insolvency risks and enhances profitability. It is in agreement with the findings of Feldman and Schmidt (1999) that the profit of the bank depends mostly on non-interest income but not interest income as people generally expect. In contrast with the findings of this study, Sun et al. (2017) found that there is non-linear relationship and a general negative correlation between non-interest income ratio and performance of banks in China. Gamra and Plihon (2011) show that long time focusing on non-interest income generates volatility of bank earnings, increased operating risk and require higher management ability. Stiroh and Rumble (2006) and Smith et al. (2003) show that non-interest income unfavourably affects bank performance.

Conclusion

The findings from this study showed that non-interest income has positive and significant relationship with deposit money banks' profitability. Also, interest income and non-interest income are statistically related.

Recommendations

Based on these, it is recommended that products and services that will yield high non-interest income are innovatively developed. Also, it is recommended that banks should further deploy effective and efficient technology that will ease banking transactions which the consumers will be willing to pay for.

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