Bank Charges and Performance of Commercial Banks in Tanzania

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Abstract

Bank charges arise from six broad categories of services namely: saving accounts, current accounts, foreign exchange account charges, automatic teller machine transactions, mobile banking, internet banking and money remittances. The nature and trend of bank charges differs from one bank to another. However, the nature and trend of bank charges as well as its impact on performance of commercial bank mainly on the bank profitability has remained an unstudied. This study analysed five commercial banks in Tanzania that have adopted different service charges between 2011 and 2013. By using bank specific charges, the researcher investigated the nature, trends and impact of bank charges on the Return on Assets (ROA) and Return on Equity (ROE). The results reveal that the overall nature of bank charges is not homogenous among the commercial banks studied. Additionally majority of banks have positive trends on the average charges and number of charges imposed by the bank over the year, while few constant or negative trends. The results also indicated that, some charges were significant to banks'performance as measured by Return on Assets (ROA) and Return of Equity(ROE) and others were not. The study contributes to the understanding of the nature, trend of the bank charges and their relation to performance of commercial bank in Tanzania. It calls for the closer examination of the commercial bank diversification of fee generating services and the nature of the bank charges in relation to the performance of financial institutions.

Key Words: Bank Charges, Performance, Commercial banks

INTRODUCTION

Background

The long-term established function of commercial banks has centered on intermediation between surplus spending unit and deficit spending units. The generation of net interest income was done mainly from two core activities; collecting of deposits and issuing loans from which banks pay interest and receive interest income respectively (Roland and Maxwell, 2005). Traditionally, commercial banks manage both payment system and settlement operations in the same line with intermediation course of action and the risks associated with those flows. The advancement of technology have brought another evolutionary era of banking for provision of non interest income services like automated teller machines (ATMs), internet banking, mobile money and other

electronic services which in totality have spearheaded the efficiency and profitability of commercial banks (Hakimi, Hamdi and Djelassi, 2012; Hawtrey, 2003; Pennathura, Subrahmanyamb and Vishwasraoc, 2007)

The development of financial sector in Tanzania can be traced as far back as during the colonial period. Nevertheless several authors: Aikael (2006); Lwiza and Nwonkwo (2002; Swai (2013) and Timothy and Liu (2010) to mention a few, have tried to exploit this phenomenon in their studies. The development of financial system in Tanzania can be divided it into three periods namely; the period before independent, the period after independent and the period after liberalization of banking sector in 1990s. Since the liberations of bank sector 1990s and continously amendment of regulations, commercial banks have been gradually increasing their concern on non interest income services. These services vary from one bank to another depending on bank size, ownership, structure, market share and regulations in place.

In ensuring that cost of services and the risks are accommodated efficiently, different charges are imposed depending on the nature of competition and type of services offered by the particular commercial bank (Bank of Tanzania, 2013). As evidenced by DeYoung and Tara (2004), "the pursuit of non-interest sources of income is risky, and there is evidence that volatility increases as banks seek new non-interest sources"; this is not well tacked in Tanzania commercial banking industry. This study seeks to obtain evidence on bank charges as well as understanding the varying nature and trend of non-interest charges of commercial banks in Tanzania. In the same line the study examined the impact of non interest charges on performance of banks in Tanzania.

Research Objective

The main objective of the study was to examine the impact of bank charges on performance of commercial banks in Tanzania. The specific objectives of the study were:-

a) To examine the nature of bank charges diversification in commercial banks of Tanzania;

b) To examine the trends of bank charges in commercial banks of Tanzania; and

c) To examine extent to which bank charges influence performance of the commercial banks in Tanzania

EMPIRICAL STUDIES

Despite the fact that studies about bank charges and performance of the bank are oriented in developed countries some of them are still relevance to a certain extent in developing countries where the economy and banking system is still at growing stage. From these studies we deduce several assumptions over the nature and trend of noninterest banking activities (bank charges) and its impact to the performance within the Commercial banks.

a) Nature of bank Charges

Diversification of bank charges and how do bank charges varies from one bank to another as raised by Stiroh (2002); Meslier and Tacneng (2013) is the area to be expored in this atudy. The study by

Gorener and Choi (2013) about the volatility of noninterest income arises from fluctuation of noninterest activities (fee based activities) and the exposure to risk gives another insight about nature of bank charges. From these arguments we raise the following question, "What is the nature of bank charges in the commercial banks".

b) Trend of bank charges

The trend of bank charges has been explained by Roland and Maxwell (2005) on what time period under which noninterest banking activities (bank charges) changes. His study shows the improvement of the non interest activities (ATMs technology) and other services that improved the non interest income over time. Thus we pose the question that needs to be answered, "What is the trend of the bank charges in the commercial banks".

c) Bank charges and performance of commercial banks.

Different authors Demirgüç-Kunt and Huizinga (1999); Gorener and Choi (2013); Meslier and Tacneng (2013); Roland and Maxwell (2005) and Timothy and Liu (2010) have tried to explore the relationship between noninterest income and performance of the commercial banks. However there are different measurement indicators of performance of commercial banks. Koch and MacDonald (2003) and later Wu, Chen, and Shiu (2007) provide the most suited measure as used in their studies; Return on Assets (ROA) and Return on Equity (ROE). From the studies we deduce one hypothesis that can be broken into two parties.

Hypothesis 1: *Bank charges (Cheque Book Charge, Inward Fund Transfer Charge, Issue ATM Card Local Charge, ATM Card Withdraw Charge on us, ATM Card Withdraw Charge on others and Mobile Transfer Charge) have impact on Return on Asset (ROA)*

Hypothesis 2: *Bank charges (Cheque Book Charge, Inward Fund Transfer Charge, Issue ATM Card Local Charge, ATM Card Withdraw Charge on us, ATM Card Withdraw Charge on others and Mobile Transfer Charge) have impact on Return on Equity (ROE)*

METHODOLOGY

In answering the first two questions descritive data analysis from the selected banks was examined in terms of average mean and standard deviation of their respective bank charges. The last question was answered by formulating two hypothesis on bank charges in relation to perfromance of bank as measured by ROA and ROE. The balanced panel data analysis of the five (5) banks was applied for a period of three (3) years, giving fifthteen (15) observations. The data was collected from the commercial banks studied namely CRDB Bank PLC, NMB PLC, DCB Commerial Bank PLC, Akiba Commercial Bank PLC and NBC Ltd of which the first three banks are listed in the Dar es Salaam Stock Exchange. Banks studied comprise on average for the three years of study 44.34% and 41.53% of the total banking assets and income respectively in Tanzania.

The panel unit roots test

A number of alternative quantitative approaches have been utilized to analyze the bank performances in banking sector by assessing common co-movements in return on assets and equity. This study has used linear regression for set of returns and various risk measures such as standards deviation on income diversification in consideration of cross section and time series balanced panel data analysis. From the formula, the *i* number of banks and for the *t* number of years, the model is formed as follows:

$$\Pi_{it} = \alpha + \sum_{t=1}^{i=n} \beta_{it} X_{it} + \varepsilon_{it}$$

(i = 1,***n*** represents number of the banks; t = 1, represents number of periods)

Π_{it} , is defined as the dependent variable ROA and ROE,

α, constant term,

β_{it}, vector of X explanatory variable for bank *i* at time *t*,

X_{it}, explanatory variable for bank *i* at time *t*, that include bank charges variables

ε_{it}, error term.

3. Empirical investigation

The examination on nature of the bank charges has shown that some services had average high charges while others had low charges. For instance; Issuing ATM Card Local Charge (IACLC) had in average highest mean while Mobile Transfer Charge (MTC) had the average lowest mean within the studied Commercial Banks. Additionally, some charges had average low charge; for instance Mobile Transfer Charge (MTC) possibly to encourage more customers to adopt new technology. The other charges Inward Fund Transfer Charge (IFTC), ATM Withdraw Charge on us (ATMWConus), ATM Withdraw Charge on others (ATMWConothers) and Cheque Book Charge (CBC) were in between the two extremes. Again variation rate on the amount of charges differ from one charge to another as indicated by the fluctuating standard deviation; thus suggesting that homogenous charges on the similar products and services are hard to find across the banks.

The trend of the bank charges involves a selected period of time from 2011 to 2013. In this case two aspects were examined; number of bank charges per period (year) and average charge per time for individual bank. The results indicated that, ACB PLC and CRDB Bank PLC had positive trend; that is their number of bank charges increases over time. This was possibly a result of investing on new technology and product diversification especially into noninterest activities. The impact is noted by increased in noninterest revenue (Bank of Tanzania, 2013). NMB PLC had constant number of charges over the period yet it had high noninterest revenue on the similar periods. In addition, DCB Commercial Bank and NBC Ltd had negative trend on number of charges per year.

The situation was probably a result of investing in other income sources as indicated by having comparatively small share of noninterest income on their total revenues. On the trend of average charges imposed by the banks over time measured by average mean for the whole periods, the results revealed that CRDB Bank PLC, NBC Ltd, DCB Commercial Bank and NMB PLC had positive trends implying that these banks were increasing their charges for noninterest services over time. On contrary ACB PLC indicated negative trend, this was possibly a strategic goal to motivate their customers and/or more effort was on other source of revenue such as loans.

On relationship between bank charges and performance, an empirical model defines bank performance, *Yit* (measured by ratio of bank's pre-tax profits to Total Assets (ROA) or to its Equity (ROE)) for bank *i* in year *t* as follows (Ceylan, Ozsoz and Helvacıoğlu, 2008):

$$Y_{(i,t)} = \alpha_0 + f(CBC_{(i,t)} + IFTC_{(i,t)} + IACLC_{(i,t)} + ATMWCus_{(i,t)} + ATMWCo\sim s_{(i,t)} + MTC_{(i,t)} + \varepsilon_{(it)})$$

α_0 is a bank fixed effect term that captures time-invariant influences specific to bank *i,* ; Cheque Book Charge (CBC), Inward Fund Transfer Charge (IFTC), Issue ATM Card Local Charge (IACLC), ATM Card Withdraw Charge on us (ATMWCus), ATM Card Withdraw Charge on others (ATMWCo~s) and Mobile Transfer Charge (MTC). The empirical period depends on the availability of data, where the time period used was 2011–2013. Fixed effect model wes developed in ascertain performance of commercial banks measured by Return on Assets (ROA). The summary of the model is shown in Table 1.

Table 1: Summary of the Results for Return on Assets in Relation to Bank Charges.

Variable	Fixed Effect Model
CBC	-0.0000383(-1.71)
IFTC	0.000000754(0.98)
IACLC	0.00000373(2.52)*
ATMWCus	-0.00000254(-0.26)
ATMWCothers	0.0000104(2.3)*
MTC	0.00000616(0.25)
_cons	0.0149595(1.62)
R-squired (N)	0.6866(1.78)

Note: * significant at 10 % test level.

In the test conducted that is within banks effect, Issuing of ATM Card Local Charge (IACLC) and ATM Withdraw Charge on Others (ATMWCothers) are significant variables at 10% test level in Fixed effect model. The other variables; Cheque Book Charge (CBC), Inward Fund Transfer Cost (IFTC), ATM Withdraw Charge on us (ATMWCus) and Mobile Transfer Charge (MTC) are not significant given fixed effect and random effect models, implying that they have minor influence on commercial banks' Return on Assets (ROA). Generally the results indicated that performance of the commercial banks is not the same to all banks studied, and banks do not attain same perfomance as measured by ROA by imposing same charges.

Table 2: Summary of the Results for Return on Equity in Relation to Bank Charges

Variable	Fixed Effect Model
CBC	.-0.0002651(-1.58)
IFTC	.-0.0000012(-0.21)
IACLC	0.0000239 (2.33)*
ATMWCus	0.000025(0.33)
ATMWCothers	0.0000525(1.54)
MTC	0.0000229(0.12)
_cons	0.1181186(1.7)
R-squired (N)	0.6144(1.3)

Note: * significant at 10 % test level.

In ascertain performance of commercial banks measured by Return on Equity (ROE) the results indicate that performance of the Commercial banks is not the same to all banks studied, and banks do not attain same ROE performances by imposing same charges in different ways. The test by Fixed effect model indicated that Issue of ATM Card Local Charge (IACLC) was significant at 1% test level. The other charges; Cheque Book Charge (CBC), ATM Withdraw Charge on other (ATMWCothers) and Mobile Transfer Charge (MTC), Inward Fund Transfer Cost (IFTC) and ATM Withdraw Charge on us (ATMWCus) were not significant on fixed effect implying that they have minor influence on Commercial banks' Return on Equity.

Conclusions

The study has explored bank charges and their contribution to the performance of commercial banks in Tanzania environment. In this study some variables were found influencing the performance of the commercial banks significantly relative to others. To make analysis a balanced panel of financial data was gathered from five (5) Commercial banks for the period of 2011 -2013 on annual basis for five (5) observations making a total of fifteen (15) observations.

The results on nature of the bank charges indicated differing average charges over the periods, purposely to fulfilling strategic goals of the bank, such as encouraging more customers to adopt new technology. Variation (fluctuation) rate on the amount of charges differed from one charge to another; suggesting that homogenous charges on the similar products and services are hard to find within the banks. The trend of the bank charges examined two aspects; number of bank charges per period (year) and average charge per time for individual bank. On the first aspect the results indicated that,there was differing trends within the banks over time; possibly a result of investing in other income sources such as interest revenue activities. Other aspect; the average charge imposed by the bank over year as measured by average mean for the whole periods showed that majority of banks had positive trends implying that bank charges for noninterest services are increasing over time. In analysing the relationship between bank charges and the performance of commercial banks; two hypotheses were formulated on bank charges against ROA and ROE

respectively. The test results indicated that some charges were significant to the performance fo commercial banks while other are not signifacant.

The study contributed to the understanding of the nature, trend of the bank charges and their relation to performance of commercial bank in Tanzania. It calls for the closer examination of the commercial bank diversification of fee generating services and the nature of the bank charges in relation to the performance of banking institutions.

References

Aikael, J. (2006). Commercial Banks Efficiency in Tanzania. *Working Paper, Social Science Research Network*.

Bank of Tanzania. (2013). *Directorate of Banking Supervision Annual Report.* Dar es Salaam: Bank of Tanzania. Retrieved August 20, 2014, from http://www.bot.go.tz

Ceylan, O., Ozsoz, E., & Helvacıoğlu, A. D. (2008). The Impact of Internet Banking on Bank Profitability; The Case of Turkey. *Oxford Business &Economics Conference Program*.

Demirgüç-Kunt, A., & Huizinga, H. (1999). Determinants of commercial bank interest margins and profitability:some international evidence. *World Bank Policy Research Working Paper No. 1900*.

Gorener, R., & Choi, S. (2013). Risk, Return, and Income Mix at Commercial Banks: Cross-Country Evidence. *Journal of Applied Business and Economics, 14 (3)*.

Hakimi, A., Hamdi, H., & Djelassi, M. (2012). Modelling Non-Interest Income at Tunisian Banks. *Asian Economic and Financial Review, II*, 88-99.

Hawtrey, K. (2003). Banks' Non-interest Income: an International Study", Macquarie Mimeo. 225-240.

Koch, T., & MacDonald, S. (2003). *Bank management [M]* (5th ed.). South-Western: Mason OH.

Lwiza, D. R., & Nwonkwo, S. (2002). Market-driven Transformation of Banking Sector in Tanzania. *International Journal of Bank Marketing*, 38-49.

Meslier, C., Tacneng, R., & Tarazi, A. (2013). *Is Bank Income Diversification Beneficial? Evidence from an Emerging Economy.* Université de Limoges,.

Pennathura, A., Subrahmanyamb, V., & Vishwasraoc, S. (2007). *Does Non Iterest Income Impact Bank Performance in Emerging Markets? The Case of India.* Antlanta.USA: Florida Atlantic University.

Roland, C., & Maxwell, C. (2005). *Non-Interest Income and Financial Performance at Commercial Banks in Barbados.* Bridgetown: Central Bank Of Barbados.

Stiroh, K. J. (2002). Diversification in Banking:Is Non Interest Income the Answer? *Federal Reserve Bank of New York*.

Swai, T. A. (2013). *Determinants of Capital Structure and Portfolio Behaviour of Commercial Banks in Tanzania.* Dar es Salaam: University of Dar es Salaam (Unpublished Phd.).

Tara, R., & DeYoung, R. (2004). How Do Banks Make Money? The Fallacies of Fee Income. *Economic Perspectives. (Federal Reserve Bank of Chicago)*, 34-51.

Timothy, V., & Liu, L. (2010). *Determinants of Commercial Bank Performance in Tanzania: A Resource-based View.* Shenyang City: Liaoning University.

Wu, L.-L., Chen, C.-H., & Shiu, F.-Y. (2007). The Impact of Financial Development and Bank Characteristics on the Operational Performance of Commercial Banks in the Chinese Transitional Economy. *Journal of Economic Studies, 2007*, 401-414.