

EFFECT OF FIRM SIZE ON FINANCIAL PERFORMANCE ON BANKS: CASE OF COMMERCIAL BANKS IN KENYA

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ABSTRACT

The Kenyan banking sector has undergone through intense shakeups in recent time. It was worth to look into which business models that banks should adopt in order to survive. The size of a firm plays a very crucial role in determining the nature of association between the functional atmosphere and external environment. The size of a firm matters in this new age of intense competition. The research sought to determine the effect of firm size on financial performance of commercial banks in Kenya. To obtain this objective, the study used a descriptive survey. The variables entailed; the number of branches, capital base, number of customer deposit and the loan and advances. The population of the study constituted all the 42 registered commercial banks in Kenya classified in to large, medium and small banks. During the fiscal year ended June 30, 2016, there were 42 commercial banks

and 1 mortgage finance company. The data was gathered from the bank's financial reports and central bank supervision reports for 5 years period from 2012-2016. This research was limited by the operating environment as it was characterized by risks and uncertainties due to its tumultuous nature of banking sector. The research made good use of secondary data; however, the researcher took note of their limitation in terms of rigidity and its historical nature. The study was affected by macroeconomic and microeconomic factors such as regulations and technology. The researcher increased the sample size of the source of data in order to increase the level of reliability and validity of the results. The result of the study is helpful to academicians, policy formulators, researchers, Investors and Customers and managers of organizations.

Key Words: *firm size, financial performance, commercial banks, Kenya*

INTRODUCTION

The issue of firm size is crucial to ensuring stability of financial sector in an economy. It has always been at the centre of discussions. It was prominent in the 2007/2008 global financial turmoil. It was evident that large banks accounted for large proportion of damage to the economy. After the turmoil, the discussion of the optimum firm size has flourished (Vinals,2013).This discussion has increased against the changes of financial set up that has developed markedly over the past few years, caused by financial regulation(Laeven, Ratnovski, and Tong, 2014).

In Kenya, Dubai Bank was placed under receivership in 2015 due to capital and liquidity deficiencies. The bank was subsequently liquidated. In the same year Imperial Bank was put under receivership due to suspected fraudulent activities at the bank. In April 2016 Chase bank went into a bank run. The Kenyan Central Bank had to make an arrangement for its revival. Receivership of three small banks impacted the liquidity distribution within the interbank market, which accentuated segmentation leading to marked reduction of interbank credit lines to small and medium tier banks (CBK, 2016).

Banks need to conduct stress testing in order to survive future dynamics, threats and opportunities. The banking sector all over the world acts as the life blood of modern trade and economic development and through being a major source of finance to economy (Ongore & Kusa, 2013). Profitability is very important for financial institutions. Over a while the study of the effect of financial performance on commercial banks has been an area of concern of experts, investors and analysts across the world (Sufian & Chong, 2008).

The economy depends on the banking industry majorly as far as lending is concerned. Therefore their profitability and stability is crucial. The banking community is an important part of the economy. It is clear that commercial banks play a very crucial role in the allocation of economic resource by basically helping to channel funds from depositors to investors in a continuous manner (Ongore & Kusa, 2013).

Commercial banks are blood veins of the economy. They offer the all important services of providing deposits and credit facilities for customers, making credit and liquidity (Handley-Schachler, Juleff and Paton 2007). Commercial banks are also the channels of effective monetary policy of central banks of the economy of their country (Siddiqui & Shoaib, 2011). The soundness of a banking sector is very critical to the health of country's economy (Sufian & Chong, 2008). The banking sector and the economy of a country are closely related. The soundness of commercial banks largely depends on the financial performance. It normally shows the weakness and strengths of commercial banks. The financial performance of a financial institution is evaluated by determining the profitability (Makkar & Singh, 2013).

Financial institutions are required to keep strict financial ratio requirements. Bank profits are a good source of equity if reinvested back to the business operations. This should lead to safe banks since the profit leads financial stability (Flaming, 2009). Too high profitability is a sign of monopoly. This may affect intermediation. Banks exercising monopolistic tendencies may offer lower returns on deposit but charge high rates on loan. To low profitability may scare away private agent's depositors and shareholders from banking thus resulting in the banks failing to attract enough capital to operate (Garcia-Herrero 2009).

STATEMENT OF THE PROBLEM

The increasing competitions in the banking sector, new innovations and changes in banking sector have made banks to make preparations so as to survive unpredictable financial situation. Profit maximization is key objective of firms. This is the cardinal objective of a business. This is so for the following reason: To earn acceptable returns to the shareholders and its creditors so as to survive and to meet its day to day obligations. The banks' financial performance varies in Kenya and it remains a key purpose for banking sector. Bank profitability and factors that influence it is important to the managers today, especially in these times of intense competition and changing customer expectations (Abiodun, 2013). The impact of firm size on performance remains a key conversation today. Studies by Muturi, (2003) and Muccheke, (2001) have focused on factors explaining banks failure such as liquidity and poor management. Recent trends may suggest the possibility of certain

favorable internal and external environment factors that are different from what happened during the 1990s banks failure. Therefore a gap existed in regard to understanding the relative importance of possible firm size influence on the financial performance of commercial banks in Kenya. This suggested a need for a study that would assess the effects of possible changes in the banking sector. Thus there was need to find out the factors affecting financial health of commercial banks in Kenyan economy which seem to be going through a period of turbulence. The key question in this research is whether size can be a key performance measures given the current state of affairs in banking. Various past studies have produced inconclusive evidence and have failed to show a distinct relationship of firm size on financial performance of banks. Sritharan (2015) found that firm's size is positively related to profitability. Return on assets was used as a measure of profitability. Gatete (2015) There is a moderate correlation between firms and profitability of commercial banks in Kenya. Kigen (2014) show that there is no relationship between profitability and total assets of the insurance institutions in Kenya. Based on above discussion it was therefore imperative that an answer had not been found and further research needed to be done on this topic.

GENERAL OBJECTIVE

The main objective of the study was to find out the effect firm size on financial performance of commercial banks in Kenya.

SPECIFIC OBJECTIVES

1. To determine the effect of the number of customer deposit on financial performance of commercial banks in Kenya.
2. To evaluate the effect of capital base on financial performance of commercial banks in Kenya.
3. To determine the effect of loan and advances on financial performance of commercial banks in Kenya.
4. To evaluate the effect of number of branches on financial performance of commercial banks in Kenya

THEORETICAL REVIEW

Modern Portfolio Theory

This theory was developed by professor Harry Markowitz in 1952. It is based on the concept that there is a risk averse investor who can construct portfolios to maximize on expected returns based on a given level of market risk. He emphasized that risk is an inherent part of higher rewards. He advanced the idea that it is possible to make an efficient frontier of optimal portfolios, resulting into the maximum return at a certain level of risk. It is not enough to concentrate on the risk and return of particular stock. Investors ought to invest and diversify their portfolios. It will lead stable returns and help in risk reduction. It quantifies the benefits of diversification; never put your investment in one basket (The Journal of Finance, 1952).

The theory demonstrates a clear way where investors are able to estimate expected risks and returns. It was his suggestion that the risk of a portfolio should be decreased and the returns expected increased, when stock or assets with different price movements are combined. He recommended that diversification was the way forward as it reduces risks when assets and stocks are put together whose prices move inversely to each other (The Journal of Finance, 1952).

A further research was done in 1970 by Caumnitz. It recommended that portfolios should be evaluated on basis of market price risk, combining risk and return into one measure but not on risk alone. The rank of performance of the mutual funds under consideration was done using the treynor index, Sharpe Index and the Jensen Index. Since the three risk-adjusted performance measures are derived from the CAPM and Capital Market Line (CML), they are consistent with the capital market theory as developed in a mean-variance context (Sears and Trennepohl, 2008). Further research indicates that the performance ranking as a result of three indexes are inconsistent.

The 2003 Treynor and Jensen may differ in their ranking of investment due to the way they account and incorporate the risk element. It may not be well suited to ranking of investment with different risk levels. Studies show that low risk portfolios tend to have positive Jensen index and higher risk portfolios have negative Jensen index (Sears and Trennepohl, 2008). Therefore, the risk level has an influence on the financial performance of the mutual fund. The theory is relevant to all the major variables in this research. In regards to customer deposits and capital base, the bank managers will invest wisely in order to get maximum compensation in bonuses. Bank managers will lend if the interest rates are high. However, if the rates are low, they will channel their deposits to treasury bills and other investments which are regarded as safe havens.

The Agency Theory of a Firm

The correlation of firm size and financial performance is well explained in the agency theory of the firm. It states that firm managers make decisions that are normally skewed towards their objectives and goals. Increasing the firm size is normally intended to boost their ambitious empire building. The assumption is very simple: firm managers increase the size of the firm in order to receive large payments and rewards to enjoy private benefits from the prestige of running a large firm. This theory, by extrapolation, predicts a negative relationship between bank size and bank stability. If managers are left alone then they will pursue an expansive market strategy for their own benefits, such as prestige, better perks, salaries and employee share options. There is a need for separation of ownership and management of the firm. Shareholders hire managers who are serious professionals who have the requisite skills. Managers might take actions, which are not in the best interest of shareholders. This is usually so when managers are not owners of the firm (Jensen & Meckling, 1976). This theory is relevant to the number of branches specific variable. Bank managers will do an expensive branch network expansion due to their nature of managerial empire building. Branch network expansion is expensive and needs a lot of funding from the shareholders' capital. To sustain this expensive strategy the capital base variable has to be touched, more funds will need to be raised.

The Concentration-stability and Concentration-fragility Theory

This theory states that large banks in saturated or concentrated environment can reduce their financial weakness by way of various channels. Large banks may increase their profits by ways of buffers and thus they will not be susceptible to liquidity issues (Uhde and Heimeshoff, 2009). Boot and Thakor (2000) proposed that large banks tend to do credit rationing and few quality investments. This make them are more stable. Central banks and other monitoring agencies tend to find large banks easy to supervise and health to the economy. Large banks have better and broader diversification and reduced level of risks. Larger Banks can therefore do their on investments with little capital and less funding. They also have an advantage of economies of scale. From the discussions above there is a positive correlation between firm size and bank profitability (Laeven, 2014).

According to Mishkin (1999), as banks increase in size, the moral hazard problem is exacerbated for the manager whose risk loving behavior is inflated with the knowledge of being shielded by government's safety net. Concentration fragility hypothesis predicts that there is no relationship between firm size and bank stability.

Arbitrage Pricing Theory

The arbitrage pricing theory consents to the idea that expected returns of financial assets can be expressed in linear function of macro-economic factors where sensitivity to changes in each factor is represented by a factor specific beta coefficient. The model derived rate of return will then be used to price the asset correctly the asset price should equal the expected end of period price discounted at the rate implied by the model. If the price diverges, arbitrage should bring it back into line. In the APT context, arbitrage consists of trading in at least two assets, with at least one being not its true market value. The arbitrageur sells the asset which is relatively too expensive and uses the proceeds to buy one which is relatively too cheap. Under the APT, an asset is said to be under or overvalued if its current price deviates from the price predicted by the model. Ross further argued that each investor will hold a unique portfolio with its own particular array of betas, as opposed to the identical market portfolio (Ross, 1976). The model-derived rate of return will then be used to obtain the price or value of the asset correctly. The asset value should equal the expected end of period asset value or future cash flows discounted at the rate implied by the model. If the asset value changes, arbitrage should bring it back to the line (Dybvig and Ross, 2003). This theory is relevant to all the specific variables. Managers will open many branches as an empire building strategy but it is expensive. For customer deposit, and capital base, the bank managers will invest wisely in order to get maximum compensation in bonuses. Finally, bank managers will lend if the interest rates are high. However, if the rates are low, they will channel their deposits to treasury bills and other investments which are regarded as safe havens.

Factors Affecting Banks' Financial Performance

Number of Customer deposits

The growth of the liabilities is important for a bank this is because it is this liabilities or customer deposits that the banks extend as loans. The ability to attract huge deposits means that bank will earn huge margins when they extend in loans. A research by Okun in 2012 found out that there is a correlation between deposits ratio and ROE. The results also indicated that there is a positive and significant relationship between Deposits Ratio and ROA. The result also indicated that the relationship between loans ratio and ROA and ROE was insignificant. The level of customer deposit affects the liquidity of bank.

Number of Branches

The number of branches that a bank operates has a significant effect on financial performance on financial institutions because they are costly. Brick and mortar branches means that the banks must hire staff, pay for rent and provide security. This is a fixed cost element. A research by Boland in the year 2009 on effect of branch networks on financial performance of banks identified the reasons why the branches may not to be profitability. He found out the reason why many banks struggle is because of many branches. He noted that branches follow a transactional model. It is a cause of huge costs and complexity.

Loans and Advances

The funds extended to customers as credit also called assets. A research on the effect of loan book on profitability of banks by Simiyu (2016) found that growth in a banks' loans portfolio adversely affects the banks financial performance in the subsequent years. It also found that growth in banks' loan portfolio resulted in increased in non-performing loans in subsequent years. These findings support the findings by Foos (2010) that current loan growth leads to increases in loans losses in subsequent years. Diversification is seen as a technique of minimizing exposure to loss. However the findings of this study failed to support that loan portfolio diversification reduces the problem of bad loans as banks grow their loan portfolios. Interest rates provide a pricing mechanism for loans in financial markets. As generally indicated by the law of demand, lower prices (interests rates for the case of loans) would help attract more demand. This study found that commercial banks lower their lending rates so as to attract more borrowers and grow their loan book. The study also found that commercial banks lend more cautiously following periods of financial performance of commercial banks. In addition the study found that in periods of economic expansion banks do not pay much attention to borrowers' credit history.

Capital base

It includes funds used to do investments in the operations of banks; it is normally sourced from owner's equity. Capital forms a percentage of the financial resources of the banking institutions and it plays a crucial role in their long term financing and solvency position (Barrios and Blanco, 2000). As the management to ensure that bank's capital is effectively

managed, determines how adequate the capital is. Having capital adequacy ratios above the minimum levels recommended by the Basle Capital Accord, does not guarantee safety of a bank, as capital adequacy ratios is concerned primarily with credit risks.

Macro-economic Environment

A stable macroeconomic environment is an essential for positive productivity to drive economic growth. Macro economic instability has always been associated with dramatic reduction on investments and capital inflows in Kenya. Uncertainty has been fuelled by high public debt level, high inflation, volatile home currency and changing oil price in the world economies. Fischer in 1993 defined stable macro economic framework as one which has a sustainable fiscal policy and predictable inflation. He further said the key feature for a stable macro-economic environment is low inflation. In principle price volatility of commodities affect production. When inflation rises future pricing is uncertain and it becomes risky for individuals to invest in long term projects (World Economic Forum, 2016).

Another important component of macro-economic factor is debt. Its composition of is crucial as well. A study by Gros in 2011 had a proposition that public debt borrowed abroad or from foreigners is much riskier than domestic public debt. Its exposure to the foreign currency changes is also a key determinant higher interest rate spreads on foreign currency debt amplify the crowding out effect.

RESEARCH METHODOLOGY

Research Design

The research applied a descriptive survey design. Descriptive research is statistical study that detects patterns and trends. Descriptive design attempts to accurately describes characteristics (Kothari 2004) The research was the effect of firm size on the financial performance of Kenyan commercial banks. A descriptive research design is used in structuring research showing all major components of project (Kothari, 2004). Ngigi (2009), and Ndichu (2014), successfully used descriptive design. The commercial banks stopped or started their operation during the study periods were excluded from this research. The reason why descriptive research design was used is because descriptive research design method is meant for discovering inferences or causal relationships between variables (Mugenda and Mugenda, 2003).

Target Population

Ngechu(2004) defined Target population as that specific population where the required information that is desired for study is collected. He further defined it as a well-defined or set of households, group of things or people that are being investigated. The target population of this research composed of commercial banks in Kenya for 2012-2016 classified into large, medium and small banks. As at 31 December 2016, there were 42 commercial banks comprising of 13 large banks and, 29 small and medium banks (CBK, 2016). The sample

decision was used because of the ready availability of the data from central bank of Kenya supervisory reports and banks' financial statements.

Data Collection

Data collection involves collecting and calculating information on specific variable, in a conventional systematic way that makes it possible for the researcher to come up with answers to the formulated research and appraise the conclusions. This study utilized secondary data that were sourced from financial reports of Kenyan commercial banks and Central Bank of Kenya reports. The data collected was for 2012 – 2016 using a data collection schedule. It was in this period that the banking sector witnessed rapid structural changes, innovation, micro and macroeconomic changes.

Data Analysis

The study used tables and figures to interpret the data. A multiple linear regression equation was used to determine the relationship between dependent variables and independent variables. This is because it sought to determine causal relationships between firm size and the financial performance of commercial banks in Kenya. A multiple regression model with four independent variables was used. The dependent variable was bank profitability which was determined using Return on Assets (ROA). It was as follows:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \varepsilon$$

Where: Y= Performance was measured using Return on Assets (ROA) calculated as net income divided by total Assets; X1= Firm size; X2= Number of branches; X3= Capital base; X4= Customer deposits; X5= Loan book quality; α = Regression constant; ε = Error term normally distributed about the mean of zero; $\beta_1 \beta_2 \dots \beta_n$ was the coefficients of the variation to determine the volatility of each variable to financial performance the in regression model.

RESEARCH RESULTS

The general objective of this research was to establish the effect of firm size and financial performance of commercial banks in Kenya. From the findings we can say that the large and medium banks have high ROA as compared to the small banks. The first specific objective of the study was to find out the effect of number of branches on ROA. Research findings showed an increasing trend of banks to open branches. The smaller bankers had a steep gradient. Findings further showed a strong correlation between many number of branches and ROA, as well as a strong correlation of 0.333 of number of branches and ROA. The second objective of the study was the effect of loans and advances on ROA. Findings showed a strong relationship between Loan and advances on ROA with a result of 0.512. Findings further showed a strong trend in relationship between loan and advances and ROA, and growth in the loan and advances of large banks and a stagnant one in the small and medium banks. The third specific objective of the study was to find out the effects of customer deposit and financial performance of banks. Findings showed a strong correlation matrix of 0.434

between customer deposits and ROA, and a positive relationship between in customer deposits on return on assets. The third and final specific objective was to find out the effect of capital base on financial performance of banks in Kenya. Findings showed a strong correlation of 0.462 between capital base and ROA, and the relationship between capital and ROA was positive. The increase in capital base to a bank enables a bank to generate enough earning and hence a positive ROA.

REGRESSION ANALYSIS

The table 1 presents a correlation between ROA and number of branches, loan and advances, customer deposits and capital base.

Table 1: Correlation Matrix

		ROA	NUMBER OF BRANCHES	LOANS	CUSTOMER DEPOSITS	CAPITAL BASE
ROA	Pearson Correlation	1	.333**	.512**	.434**	.462**
	Sig. (2-tailed)		0.000	0.000	0.000	0.000
	N	199	197	154	197	189
NUMBER OF BRANCHES	Pearson Correlation	.333**	1	.847**	.806**	.785**
	Sig. (2-tailed)	0.000		0.000	0.000	0.000
	N	197	205	154	197	188
LOANS & ADVANCES	Pearson Correlation	.512**	.847**	1	.969**	.963**
	Sig. (2-tailed)	0.000	0.000		0.000	0.000
	N	154	154	157	155	150
CUSTOMER DEPOSITS	Pearson Correlation	.434**	.806**	.969**	1	.974**
	Sig. (2-tailed)	0.000	0.000	0.000		0.000
	N	197	197	155	198	188
CAPITAL BASE	Pearson Correlation	.462**	.785**	.963**	.974**	1
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	
	N	189	188	150	188	190

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

The correlation between ROA and various variables were 0.333, 0.512, 0.434, 0.462 for number of branches, loans, customer deposits and capital base respectively. The result of the correlation matrices is that is a significant and strong relationship between ROA the various variables at Correlation is significant at the 0.01 level (2-tailed).

Table 2: Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.756a	.586	.504	.20505

From the finding in the above summary table, R square (co-efficient of determination) =0.586, indicating that 58.5% of the total variation in financial performance of commercial banks is accounted for by corresponding change in Loans and advances, Number of branches, Customer deposits and the capital base.

CONCLUSIONS

The main objective this study was to determinate and evaluate the effects of firm size on financial performance of commercial banks in Kenya. Four specific objectives were derived from the objective. The first objective was to determine the effect of the number of customer deposit on financial performance of commercial banks in Kenya. The second was to evaluate the effect of capital base on financial performance of commercial banks in Kenya. The third was to determine the effect of loan book on financial performance of commercial banks in Kenya. The final was to evaluate the effect of number of branches on financial performance of commercial banks in Kenya. Panel data from 2012 to 2016 of 42 commercial banks was analyzed using multiple linear regressions method. From the discussion of the findings above, it can be concluded that there is a significant relationship between firm size and financial performance of commercial banks in Kenya. The study revealed that banks that have many branches; huge customer deposits, huge capital base and large loan book have positive and high ROA as opposed to banks who have few number of branches, small customer deposits, small capital base and small loan book. Indeed the descriptive analysis of these factors by bank size showed that large banks perform better than the small and medium banks hence the superior profitability performance. In conclusion, the research advocates for consolidation and mergers since there is evidence those large banks perform better than small and medium banks and therefore it finds a positive relationship between firm size and financial performance of commercial banks in Kenya.

RECOMMENDATIONS

From the findings presented in chapter four and summary above, this study recommends that commercial banks should push for mergers and consolidation so that they remain profitable and stable since there is evidence those large banks perform better than small and medium banks.

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