Funding Sources, Competitiveness and Performance of Commercial Banks in Kenya

Jeff O. Arodi, Winnie I. Nyamute, Kennedy O. Okiro, and Caren M. B. Angima

ABSTRACT

The nature of the funding source a commercial bank decides to adopt is a key performance determinant. Ideally, banks make use of either shareholders' equity, borrowed funds, or customers' deposits to finance their operations. The liberalization in the sector has made it possible for many players to exist and as a result, each player has had to come up with a unique competitive way that allows them to attract and retain the best funding sources capable of yielding positive performance. Much as there are studies that have sought to investigate the concept of funding and performance among commercial banks, both in developing and developed economies, the studies yield mixed findings. This study sought to determine the mediating effect of the bank's competitiveness on the relationship between funding sources and performance. A descriptive research design was adopted and used to evaluate the two hypotheses formulated for each of the study's objectives. Secondary data obtained from 35 commercial banks that have been consistently operating in Kenya was gathered between the years 2011 to 2021. Findings obtained from the fixed effect regression model after performing a four-step regression mediation procedure indicate that bank competitiveness has a mediating effect on the relationship between funding sources and performance. This finding point to the need for both policymakers and implementers to come up with clear policies that can enable banks to utilize funds obtained from various sources more prudently and in the process ensure their performance remains optimum.

Keywords: Commercial Banks, Competitiveness, Funding Sources, Performance.

I. INTRODUCTION

A. Background

Firm funding sources entail the evaluation of issues related to the restrictions on the supply of resources from specific sources (Tarantini & Do Valle, 2015). Amidu and Wolfe (2013) view funding as ways through which firms source their long-term, medium-term, and short-term capital. Crespi and Mascia (2018) view it as the acquisition of financial resources and their utilization by the management both in the short and long term from certain sources to meet the objectives of the firm.

Like any other business venture, Bank funding and sourcing depend on the relative ease with which funds from different sources are obtainable. In reality, bank managers have to come up with a financial policy that guides them in choosing a particular funding source while taking into consideration the fluctuation of business volume, the character of the firm's asset, level of competition, firm size, expected stability of profit among others (Amidu & Wolfe, 2013). Shareholders' equity is act as a protection shield against insolvency owing to its sentimental value, on the other hand, if there is an urgent need to cater for certain expansion or temporary money deficiency and the time available is insufficient to organize equity funding, commercial banks may find it appropriate to borrow from other banks. Lastly, customers' deposits constitute funds that are easily available for both operational and profitable deployment (Shollapur & Baligatti, 2010). The use of demandable debt often results in a mismatch in the maturity on both asset and liability since depositors may withdraw more funds that could overstretch the supply within short notice, if not well handled by bank managers, it can trigger liquidation, and this can be costly.

Funding studies present diverse ways of measuring funding sources, Thiagarajan and Arulraj (2012) used the proportion of the various funding options available which include issued debentures, equity, public deposits, institutional borrowings, and operating liabilities. Demirgüç-Kunt and Huizinga (2010) employed the proportion of non-deposit funding and deposit in banks as a measure of funding sources while Shollapur and Baligatti (2010) used the cost of borrowed funds and equity. Funds obtained in the form of capitalization from the owners are equated to owners' stake and will be referred to as shareholders' equity in the rest of the document usually. In an attempt to investigate how performance is related to funding sources, this study used the raw values of three available funding sources which are deposits due from other banks, deposits due from customers, and the amount of equity capital.
Competitiveness is a state where the market through the power of consumers tends to reward firms that are innovative and efficient while at the same time penalizing those considered inefficient, this state is achieved when rivalry is sufficiently threatening the operations of an incumbent to an extent that they constantly strive to continually improve to maintain their competitive advantage (OECD, 2021). Competitiveness is further reinforced by the various attempts by the firm’s management in meticulously selecting and using policies, regulatory frameworks, and structures geared toward achieving stability and profitability by assembling all their competencies, as well as the overall ability of a firm’s management in creating and implementing valuable and unique market strategies which result in a benefit (Barney, 1991; Porter, 1985).

The banking landscape is characterized by intense competition, to gain competitive edge banks, have resorted to devising ingenious ways of luring customers and investors to them by providing what they feel is required in the market. Poaching and luring talented staff who are responsible for directing performance in firms is a common practice that usually helps firms to gain a competitive advantage (Musau et al., 2018). A bank with no competitive advantage may suffer a slow death in the long run while a bank that has a competitive edge over the other may have improved performance as it may have better market dominance. Therefore, proper balancing of the need of the providers of the fund and managing the expectations of the bank is the special link that competitiveness provides in the relationship.

Amidu and Wolfe (2013) used Lerner’s index to measure the level of market power of each bank, Danisman (2018) and Kamande et al. (2019) uses Structure-Conduct-Performance (SCP) as a connection between performance and market structure. Musau et al. (2018) on the other hand used the Herfindahl Hirschman Index (HHI), the number of firms and concentration ratio, while Chen et al. (2019) used the H-statistics model. This study adopted the use of The HHI as provided in the various annual Central Bank of Kenya (CBK) supervisory reports which were computed in terms of the market share index of each bank, the measure was appropriate for the study since it limits the problems associated with concentration ratio which is associated with SCP of competition as it provides more information regarding the market strength of each player, moreover, data on the same was also easily available.

Kamande et al. (2019) define performance as the efficient and effective deployment of resources by firms to achieve set objectives. The performance concept is important since it demonstrates the firm’s ability in measuring the actual production output against planned output and results found to be satisfactory (Naz et al., 2016). Much as Performance fails to readily lend itself to a common definition due to its multidimensionality as a concept for instance, in financial terms, it is used as a measure of market value, profitability, and value at risk among others. Moreover, in terms of operation, it is a yardstick for both efficiency and effectiveness (Verweire & Berge, 2004).

Performance whether operational or financial is reflected by the firm’s profitability which proves how well it is being managed and confirms the competencies in management in the allocation of scarce resources and controlling of costs (Abusharbeh, 2020). Performance measure in banks ascertains the level of compliance, success, and financial position through proper resource utilization which results in wealth and profit maximization for the shareholders. To measure and operationalized performance in research, Tobin’s Q model has been employed by several scholars, for instance, Dang et al. (2018) and Okiro (2014) adopted the measure while other scholars like Abusharbeh (2020) have opted to use CAMELS model. These two popular measures make use of specific financial ratios which are computed from items found in the firm’s final financial statement. From the items, it is possible to come up with ratios that can enable one to determine the adequacy of capital, the asset and management quality, the firm’s earning ability in addition to its liquidity position, and how sensitive the firm is to market risk. CAMELS model specifically make use of these six indicators which by extension are combined to come up with the acronym “CAMELS”. This study adopted the CAMELS rating system as a measure of performance due to its robustness as it incorporates six dimensions that indicate a multidimensional approach to performance, moreover, it also doubles up as an internal control tool used by the regulator in evaluating whether the financial institution is sound or not. Commercial banks act as a catalyst to the growth of economies since they are the main source of business funds in various economies regardless of their status, to achieve this, several commercial banks have been at the forefront of gaining a competitive advantage by improving the quality of the service they render both on the local and international stage to sustain better performance (Abusharbeh, 2020). The Kenyan banking sector is considered to be the most advanced within the East Africa region, characterized by intense competition, that has been experienced in the area of fund mobilization and operations (Mdoe et al., 2018). The increased tier 1 bank branch network has resulted in banks competing for both savings and loan clients. Poaching and luring talented staff who are responsible for directing performance for these institutions is a common practice sector.

B. Problem Statement

Stability in the banking sector largely depends on the strategy they adopt when choosing their funding sources, commercial bank managers have to craft their unique ways of fund mobilization, they have to determine the right proportion of the various funding sources and decide on when and where to source funds. IMF (2013) report cited the excess reliance by the majority of big banks in the United States on long-term funding sources which were abruptly demanded within the shortest time possible as one of the possible triggers of the 2007-2009 global financial crisis (GFC). During a financial crisis, banks often find it hard to borrow from fund providers as most of them tend to lack the requisite collateral making access to funding extremely hard for less competitive players (Du & Girma, 2009) As a mitigating tool to this, banks should be in a position to generate sufficient income capable of offsetting all their operational costs to create a sustainable intermediation role and in the process create a healthy financial performance (Ongore & Kusa, 2013). In an ideal situation, bank funding should aid in the growth of banks, and
be in a position that helps them minimize scenarios that can lead to any form of crisis. In developing countries, the banking space is considered crowded and survival depends on the ingenuity of the competitive approach adopted by the players which should allow them to gain a competitive edge over the others through the implementation of valuable marketing strategies that yields better performance (Musau et al., 2018). To streamline performance, managers on behalf of businesses have to rank the available funding sources to enable them to competitively operate in the market space and settle on a source(s) whose values are consistent with the organization’s funding philosophy (Davydov, 2014).

Literature has extensively analyzed the link between a bank’s funding sources and performance, little evidence exists between these sources and the general performance; most scholars have treated them as irrelevant balance sheet items. A contextual gap is established in Jin et al. (2017) study which alludes that the bank funding problem triggered by weakness in the asset section in the statement of financial position resulted in a mismatch of currency, maturity of liabilities and assets hence creating a balance sheet pressure that ultimately exposed the performance of these banks to a series of misfortunes as they engaged in the panic sale of their asset which resulted in a compromise on the quality of their underlying asset due to a price reduction and unhealthy competition during the Global Financial Crisis. Thiyagarajan and Arulraj (2012) study on the other hand established that funding gaps among India’s non-banking institutions are effectively mitigated through short-term borrowings and this positively affects profit. This study focuses on Kenyan commercial banks context using the general performance of commercial banks as opposed to profit which is a narrow measure of performance.

A study by Jin et al. (2017) found the performance of selected banks in the US to be directly related to retail funding. The blanket use of the entire liability in the study fails to depict the correct picture since some liability items are not necessarily related to funding and US financial market is considered more liberal with strong regulatory structures compared to the Kenyan setup, presenting a contextual gap. Tuyishime et al. (2015) study on the performance of Rwanda’s Equity bank established that the senior bank managers have a critical role in the mobilization of retail customers’ deposit mobilization which is a key funding source. The study was however limited in scope as it only considered one source of funding and one aspect of performance which was financial, moreover, the study did consider only one commercial bank in the entire country which is comparatively smaller. In realization of the bigger and more diverse financial market in Kenya compared to Rwanda, a similar study with an expanded scope was necessary. On the same note, the Rwandan study used both secondary and primary data, this, however, presents an opportunity to further question whether it is appropriate to use both at the same time, considering that the analysis approach taken for both primary and secondary data tend to be different, that is, the aspect of primary data being used could only cover the views at one point as it is one cross-sectional data in nature. This study attempted to bridge this gap by incorporating commercial banks’ data aided by a longitudinal panel approach in analysis, thus addressing the contextual and methodological gap.

The methodological gap is established based on how performance has been measured in various studies. The use of return on equity (ROE) and return on asset (ROA) as performance measures have been seriously questioned after the occurrence of the Global Financial Crisis, before the crisis, several banks ended up in a receivership state resulting in the majority of investors losing their savings despite exhibiting a strong financial position based on using ROA and ROE as performance measure exhibiting a positive outlook (ECB, 2010). This study bridged this gap by incorporating the CAMELS model which makes use of an index of six parameters as a measure of bank performance. The use of the CAMELS index as a measure is of benefit as it tends to reduce the risk of misclassifying raw accounting data that must be done when single-dimensional measures such as return on equity (ROE), return on asset (ROA), and net interest margin (NIM) are deployed as performance measures (Antoun et al., 2018). In attempting to address the gaps already highlighted, this study endeavored to answer the following research question: are there relationships among funding sources, competitiveness and performance of commercial banks in Kenya?

II. LITERATURE REVIEW

A. Theoretical Framework

Scholars have put forward an explanation of the possible relationship between funding sources, bank competitiveness, and the performance of commercial banks using several theories and hypotheses. The pecking order theory and the Structure-Conduct-Performance (SCP) theory were used to anchor this research. The pecking order theory was developed out of the work done by Myers and Majluf (1984), they postulated that an adverse selection tends to make firms prefer internal financing over external, and in the event, there is a need for external funding, they will then prefer to issue debt over equity due to its association with a lower transaction and information cost. The theory suggests a hierarchical order of funding sources, internal funding being the most preferred followed by debt, equity is only used when it is insensible to increase the debt level (Frank & Goyal, 2003). In support of the transactional cost, Birru (2016) postulates that debt is the most preferred funding source compared to equity owing to the low transactional cost attached to it, that is, whenever a debt is used, the firm’s value is improved as a result of the elimination of the external transactional cost.

The pecking order theory is further based on the premise of information asymmetry, that is, a misperception by potential investors may result in overvaluing the value of the firm whenever called upon to provide funding as they may expect and demand higher returns on their investment and this can result in equity mispricing, hence the non-attractiveness. Bank managers have more information regarding the business’s true value and risk compared to outside investors (Shyam-Sunder & Myers, 1999). Whenever a business seeks external funding, the lender attaches divergent opinions on such a move; therefore, how bank managers combine the available sources of financing to come up with the desired proportion mix informs their performance in the long run.

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It has been observed that firms that use internal sources in financing tend to have a more stable profit as the cost associated with such funding is way low compared to external funding (Birru, 2016).

The Structure-Conduct-Performance theory developed in 1930 was formulated out of the work of a group of economists at Harvard University led by Edward Mason and his PhD student Joe S. Bain (Lee, 2007). SCP proposed an arbitrary connection between “industry structure and performance” thus suggesting that firms may adopt differentiation strategies but eventually, industry structure determines profit-sharing (Iacobelli, 2017). The supposed “structure” is a representation of three components which include, the level of product differentiation by a firm, the concentration of the seller in the market space, and any possible entry barriers. “Conduct” on the other hand, denotes an entity’s action which includes; “advertising, strategies for pricing, collusion, investment in capacity and research and development”. Performance on the other hand refers to results or stability measured in terms of allocative efficiency. SCP hypothesis envisions a chain reaction in which structure causes conduct which in turn determines the performance.

B. Conceptual Framework

This study assessed the nature of the relationship between a bank’s funding sources and performance and further assessed the mediating effect of bank competitiveness on the relationship as depicted by the conceptual model (Fig. 1) below. This study used the proportion of all the available funding sources categorized as Deposits due from other banks, deposits from customers and total equity as the indicators for the independent variable. These indicators were used in assessing whether a bank relies on any of them as a source of funding (Jin et al., 2017).

The CAMELS rating model was used in measuring the performance of a bank which is the dependent variable and was computed as the composite vector for the six key performance indicators which include capital adequacy status, the quality of the asset, the capability of management, earnings strength of the firm, liquidity status and sensitivity status. The capital adequacy status specifically deals with factors that reflect the bank’s financial soundness to absorb unexpected losses and avoid insolvency (Misra & Aspal, 2013). Bank asset quality is composed of current assets, permanent assets, credit portfolio, and various investments among others, in practice the quality of loans that the bank gives out determines the quality of the assets that the bank holds on its balance sheet (Majumder & Rahman, 2016). The Management’s efficiency demonstrates the ability of the management in attracting deposits capable of giving out quality loans with a lower probability of defaults which can result in losses. Earning quality on the other hand is the efficiency of a bank to control costs and make profits while liquidity as the fifth indicator refers to the bank’s ability to honor its short-term financial obligations, it is normally explained by the composition of bank assets and clarifies income sources and measures the liquid assets held in loans. The market share index approach adopted in this study was the mediating variable. It was calculated as a ratio of each bank’s sales and banking industry sales during the year under consideration (Musau et al., 2018), which was the measure of Bank competitiveness.

From the above conceptual model in Figure 1, the following null hypothesis was formulated and tested: $H_0$: The mediating effect of the bank’s competitiveness on the relationship between funding sources on the performance of the commercial banks in Kenya is not significant.

III. METHODOLOGY

A. Data

In this study, 42 commercial banks registered by CBK as of January 2021 were targeted and since this number was fairly manageable, there was no need for sampling and a census method survey was adopted. However, upon sorting and cleaning the collected data, 35 commercial banks were found to have had complete data as they have been in constant business during the period under review representing 83.33% of the earlier projected population size. Data that were not used for analysis purposes were either from those banks that were under statutory management receivership or were from deregistered commercial banks or those registered after 2011. Following Kithinji et al. (2017) who only considered data for only the commercial banks that had been in constant business throughout the study period, the use of 35 commercial banks for the final analysis was justified. Concerning the period of study, a panel data set of eleven years for time-series data was considered substantive enough for a meaningful analysis as depicted by many scholars who have adopted a minimum of
five years for time-series data (Mdoe et al., 2018).

Much of the banking reforms in Kenya were initiated from the year 2010, more so after the promulgation of the 2010 constitution which gave the regulator more independence hence the ability to strictly enforce the various regulatory requirements like the enforcement of the minimum capital requirement level to be maintained by all banks, most banks had also started recovering the effect of the 2007/2008 post-election violence and the effect of the GFC. With a vibrant parliament, some major laws like the interest capping law of 2016 came into effect, the same was however amended in the year 2019. Also, in this period, a tight regulatory approach was adopted by the CBK and several banks were put under receivership and others even closed. With the aforementioned, the period selected provided a comprehensive outlook on the Kenyan banking sector.

Secondary data collected from banks’ annual financial reports released by the banks and banking sector supervision reports that are released on an annual or quarterly basis by the CBK was used in the study. Informed by the need for the researcher to collect information that is divergent in practice while at the same time taking into account the financial variables over a certain time horizon, secondary data was thus considered appropriate as most of what is contained in those reports was either audited or provided by a reputable regulator and chances of getting unreliable information was minimal (Thiyagarajan & Arulraj, 2012).

B. Data Analysis

A combination of inferential and descriptive statistics aided by panel data analysis was used in examining the extent to which the bank’s competitiveness mediates the relationship between the funding sources and the performance of commercial banks. In describing the data, a researcher attempted to describe some silent features by computing descriptive statistic measurements on the collected data as the foremost analytic approach to the collected data. By so doing, the researcher was able to get a clear picture of the respective means of the variables, and both values for minimum and maximum, in addition to their standard deviation, variance coefficient of deviation, skewness and kurtosis. The inferential analysis was aided by the Pearson correlation analysis which determined the direction and strength of the correlation. To contextualize the effect of a mediator in this study, commercial banks’ competitiveness was introduced as the intervening variable and was measured using the market share index. In seeking to answer the dilemma posed by the aforementioned, the period selected provided a comprehensive outlook on the Kenyan banking sector.

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**C. Findings and Discussions**

The researcher was able to get a clear picture of the data by having the computations of the respective means of the variables, values for minimum and maximum, in addition to their standard deviation. A summary of these results for all the variables of the study is presented in Table 1.

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**Table 1: Descriptive Statistics**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>FS1</td>
<td>0.5</td>
<td>0.2</td>
</tr>
<tr>
<td>FS2</td>
<td>0.7</td>
<td>0.3</td>
</tr>
<tr>
<td>FS3</td>
<td>0.6</td>
<td>0.1</td>
</tr>
</tbody>
</table>

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The independent variable (IV) in this study was the funding source which was measured using deposits due from other banks, deposits from customers, and equity capital. The measure that was used to measure the extent to which a bank manager relies on either retail or wholesale funding or paid-up capital. Data related to deposits due to other banks were operationalized by taking items on the liability side of a bridged financial statement data which specifically summed up items related to balances due to the CBK, liability deposit balances due to local banking institutions, liability deposits, and balances due to banking institutions abroad and liability balances due to banking institutions in the group. For deposits due to customers and equity share capital, their raw figures were collected and populated in the Excel data sheet. A look at the three indicators for the independent variables which are the deposits from other banks, deposits from customers and equity capital shows a mean of 14729.12, 80551.53 and 16524.12 respectively. Their minimum and maximum values (in terms of millions of shillings) for the deposit from other banks are 20 and 241422, while for the deposit from customers is 393 and 652204 equity capital on the other hand had -1820 and 123823. The Mediating variable was measured using the market share index and had a mean of 2.8001 with a minimum of 0 and a maximum of 14.52 suggesting that only a few banks control the larger market share, this is further supported by observing the average data points for this entire data set which is highly distant from their mean as indicated by a maximum of 14 and a minimum of zero. The bank performance representing the dependent variable was measured using the CAMELS rating model which is the composite rank for the six indicators making it up. The approach taken in computing each rank was in line with the approach used in Abusharbeh (2020) study. The CAMELS indicator had a mean rank of 3.2780 which indicates that on average the commercial banks that were reviewed had a fair performance (Masood et al., 2016). On the other hand, the minimum rank of 1.8333 lies in the territory of strong performance while the maximum value of 4.6667 depicts an unsatisfactory performance (Abusharbeh, 2020; Masood et al., 2016).

In seeking to answer the dilemma posed by the objective of the study and aided by the null hypothesis that the mediating effect of the bank’s competitiveness on the relationship between funding sources on the performance of the commercial banks in Kenya is not significant.

The four-step procedure proposed by Baron and Kenny (1986) yielded the following linear regression outputs. In the first step, a significant association was established between bank funding sources and performance using unbalanced panel data for 35 commercial banks as depicted by results displayed in Table II.

The outcome of the regression results, as obtained, indicates that the three funding sources that were under consideration had a statistically significant positive impact on commercial banks’ performance measured as depicted by the prob (F-statistics), the R-squared and adjusted R-squared value of 0.00000, 0.596996 and 0.553650 respectively. The 0.596996 for R-squared values is an indication that 59.6996% of commercial banks’ performance measured using CAMELS rank is explained using the three funding sources and on the same note if adjusted R-squared value 0.553650 is used for the same explanation, then the percentage changes to 55.365%. This may be a possible explanation as to why most banks are aggressively calling for retail customers’ deposits as most of them are considered a cheap source of funds for banks (Baidoo et al., 2018; Haddawee & Flayyih, 2020). The overall significance of the model as indicated by the Prob (F-statistics) of 0.000000 is smaller than the standard alpha (α) of 0.05 used for decision making, this does not only suggest that the model as it is, is good enough but also is an indication that funding sources indeed do influence performance.

The second step in establishing the mediation effect entails obtaining whether the relationship between funding sources

### Table I: Summary of Descriptive Statistics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deposit due to other banks</td>
<td>14729.12</td>
<td>26969.098</td>
<td>20</td>
<td>241421.57</td>
</tr>
<tr>
<td>Deposit from customers</td>
<td>80551.53</td>
<td>112767.3</td>
<td>393</td>
<td>652204</td>
</tr>
<tr>
<td>Shareholder equity</td>
<td>16524.12</td>
<td>22631.41</td>
<td>-1820</td>
<td>123823</td>
</tr>
<tr>
<td>Market share Index</td>
<td>2.80</td>
<td>3.48</td>
<td>0</td>
<td>1.8333</td>
</tr>
<tr>
<td>CAMELS Rank</td>
<td>3.2779</td>
<td>0.6135</td>
<td>0</td>
<td>0.6135</td>
</tr>
</tbody>
</table>

### Table II: Step 1 Effect of Funding Sources on the Performance of Commercial Banks

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistics</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funding S1</td>
<td>0.000000307</td>
<td>0.00000142</td>
<td>0.216609</td>
<td>0.8286</td>
</tr>
<tr>
<td>Funding S2</td>
<td>0.000000491</td>
<td>0.00000443</td>
<td>1.990443</td>
<td>0.0473</td>
</tr>
<tr>
<td>Funding S3</td>
<td>0.593884</td>
<td>0.131113</td>
<td>4.529540</td>
<td>0.0000</td>
</tr>
<tr>
<td>C</td>
<td>0.910188</td>
<td>0.483193</td>
<td>1.883694</td>
<td>0.0604</td>
</tr>
<tr>
<td>R squared</td>
<td>0.596996</td>
<td>0.000002</td>
<td>13.77271</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

### Table III: Step 2 Effect of Funding Sources on the Competitiveness of Commercial Banks

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistics</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funding S1</td>
<td>-0.0000039</td>
<td>0.000002</td>
<td>-1.950590</td>
<td>0.0519</td>
</tr>
<tr>
<td>Funding S2</td>
<td>0.000000852</td>
<td>0.00000696</td>
<td>11.85836</td>
<td>0.0000</td>
</tr>
<tr>
<td>Funding S3</td>
<td>0.328255</td>
<td>0.185226</td>
<td>1.772181</td>
<td>0.0772</td>
</tr>
<tr>
<td>C</td>
<td>0.954646</td>
<td>0.682616</td>
<td>1.392425</td>
<td>0.1629</td>
</tr>
<tr>
<td>R squared</td>
<td>0.975645</td>
<td>F-statistics</td>
<td>372.44210</td>
<td>0.000000</td>
</tr>
<tr>
<td>Adjusted R-squared</td>
<td>0.973025</td>
<td>Prob (F-statistics)</td>
<td>0.000000</td>
<td></td>
</tr>
</tbody>
</table>
and competitiveness is significant. Table III displays this regression output.

The outcome of the regression results indicates that the three funding sources that were under consideration had a statistically significant positive impact on the competitiveness of commercial banks measured using the market share index as depicted by the prob (F-statistics), the R-squared measure and adjusted R-squared measure of 0.00000, 0.975645 and 0.973025 respectively. The 0.973025 for R-squared values is an indication that 97.3025 % of the competitiveness of commercial banks measured using the market share index is explained using the three funding sources and on the same note if adjusted R-squared value 0.973025 is used for the same explanation, then the percentage changes to 97.3025%. The overall significance of the model as indicated by the Prob (F-statistics) of 0.00000 is smaller than the standard alpha (α) of 0.05 used for decision-making, this suggests that commercial banks’ funding sources significantly influence the competitiveness of these banks and this warranted the move to the third step as shown in the next section.

A third step which involves running a regression with the intent to examine whether there is a significant relationship between bank competitiveness used as the independent variable and the performance of commercial banks remaining as the dependent variable was performed and results are displayed in Table IV.

The regression output result indicates that Banks’ competitiveness measured using the market share index had a statistically significant impact on the performance of commercial banks measured using the market share index as depicted by the R-squared value of 0.556750 which explains 55.675% of commercial banks’ performance and the adjusted R-squared of 0.512298 in an indication that 51.2298% of banks performance is explained by their competitiveness.

Moreover, the Prob (F-statistics) of 0.000000 is smaller than the standard alpha (α) of 0.05 used for decision-making, thus suggesting the existence of a statistically significant association between competitiveness and performance among commercial banks. This, therefore, fulfilled the third condition of testing mediation hence creating an avenue of proceeding to the final inspection criteria of mediation as set out (Baron & Kenny, 1986). In addition, the Prob (F-statistics) of 0.000000 is an indicator that the association is significant.

The results of step 3 led to the final regression analysis being done. The supposed mediator variable (competitiveness) was used to control the effect of the independent variable on the dependent variable and the results showed a significant association as depicted in Table V. The mediator was introduced as part of the explanatory variable in the relationship.

| Table IV: Step 3 Effect of Banks’ Competitiveness on the Performance of Commercial |
| Variable | Coefficient | Std. Error | t-Statistics | Prob. |
| Market Share Index | 0.105 | 0.0304 | 3.463162 | 0.0006 |
| C | 2.983153 | 0.087972 | 33.94903 | 0.00000 |
| R-squared | 0.556750 | F-statistics | 12.52476 | - |
| Adjusted R-squared | 0.512298 | Prob (F-statistics) | 0.000000 | - |

| Table V: Effect of Funding Sources and Banks’ Competitiveness on the Performance of Commercial Banks |
| Dependent Variables: CAMELS RANK |
| Variable | Coefficient | Std. Error | t-Statistics | Prob. |
| Funding S1 | 0.000000228 | 0.00000142 | 1.60352 | 0.0727 |
| Funding S2 | 0.000000114 | 0.000000584 | 1.95763 | 0.0511 |
| Funding S3 | 0.600462 | 0.13185 | 4.55142 | 0.00000 |
| Market Share Index | -0.020004 | 0.038205 | -0.524532 | 0.6002 |
| C | 0.929315 | 0.485075 | 1.915816 | 0.0562 |
| R-squared | 0.597319 | F-statistics | 3.38925 | - |
| Adjusted R-squared | 0.552707 | Prob (F-statistics) | 0.000000 | - |

The result of this regression output should then point to a significant association based on the obtained F-statistics probability which was smaller than the standard alpha (α) of 0.05 used for decision-making. The outcome of the regression results, as obtained, indicates that the three funding sources (the independent variables) that were under consideration and the mediator variable (market share index) introduced as part of the explanatory variable had a statistically significant impact on the performance of commercial banks measured using the CAMELS as depicted by the R-squared value of 0.597319 which shows 59.7319% of the commercial bank’s performance measured using CAMELS’ rank is explained by the four variables, moreover, when Adjusted R-squared value of 0.552707 is used, it shows that 55.2707% of the commercial bank’s performance measured using CAMELS’ rank is also explained by the four explanatory variables. To decide whether to reject or accept the assertion of the model, the conditions set out by Baron and Kenny (1986) are also fulfilled as they suggest an overall significant association based on the fact that the overall F-statistics probability for the entire model is 0.000000 which is less than the standard alpha (α) of 0.05 and further indicates that the model is fit for use as it is. Evaluation of the direction of coefficients market share index in both table 4 and table 5 shows 0.105 and - 0.020004 respectively. The latter is smaller compared to the former an indication that all the conditions as set out by Baron and Kenny (1986) are met and therefore the results lead to an overall conclusion that bank competitiveness mediates the relationship between funding and performance of commercial banks in Kenya.

In assessing the intervening effect of customers’ deposits and loans on the relationship that exists between the bank’s restructuring effort and its financial performance, Kithinji et al. (2017) study established two contrasting findings, that is...
that customers’ deposits intervene in the relationship while loans from customers do not.

They recommended to the bank management to put more focus on deposits concurring with the findings of this study since deposits from customers seem to be a major component in funding as suggested by research findings. Based on these two findings, it is prudent for bank managers to engage in actions that attract customers’ deposits, as they are considered cheap and easy to maintain. The current business environment also complicates the frequent need for these deposits by customers, as most of them would prefer having their money in the banks as opposed to deploying them in the business environment considered uncertain.

In evaluating the effect of competition on performance in the banking sector Uddin and Suzuki (2014) study findings point to a direct association agreeing with the findings of this study. Though the two studies show similar findings, a critical look at both reveals that in Uddin and Suzuki (2014) study competition has been used as the independent variable while in this study it has been used as the intervening variable, nonetheless does not change significantly change the idea that competitiveness indeed has a positive influence. The reality in the Kenyan banking sector marketplace depicts a practice where banks tend to focus on their special clientele, no wonder a bank considered small will still find herself in a sustainable business model regardless of the tight competition regime. During data collection, certain banks were found to be concentrated in a certain geographical region or were serving a special group of clients, a possible indicator that the banks have segmented themselves in the marketplace.

To answer the dilemma of what makes banks to be good monitors to their borrowers and eventually end up with better performance Hughes and Mester (2017) documented that Banks tend to have an incentive advantage compared to other intermediaries as a result of using a liability that has a demandable debt feature. Considering that banks usually have a high debt level as one of the components of funding, this study fails to account for this claim. Despite, bank managers being naturally programmed to be diligent in coming up with a plan likely to increase the insolvency risk. The findings of this study also failed in ascertaining this claim as observed in Hughes and Mester (2017) study. Moreover, safety concerns and performance pressure in banks are heightened by the fact that insurance cannot fully cover the risk associated with the demandable debt component in the funding, research findings did not have anything to back the claim. Lastly, an information advantage also arises from the fact that banks can lend their money to those sectors which are informally opaque to borrow in both the equity market and public debt, the role of performance information was never established. Since this study did not have a clear definition of the debt component in the funding structure a suggestion to have another study with this clearly defined is hereby made.

D. Limitations of the Study

Much as some challenges were encountered during the period of study, efforts were made to ensure that such challenges present a minimum impact on the study so that findings could be relied on. Some of these challenges are nonetheless highlighted as follows. Despite the regulatory requirement on disclosure of banks’ financial reports for both detailed and bridged versions, some banks had not fully adhered to the requirement but instead had only a few years of the same information on both their website and head offices. At some point, the researcher had to get a written intervention from CBK to the various banks to make them comply. As a result of this limitation, the effort to get data related to deposits due to other banks became a daunting task and consequently led to the use of unbalanced panel data and also ended up using data for only 35 banks from the initial 42 proposed. In the process of reviewing the literature and collecting data, the researcher discovered a non-uniform way of coming up with the CAMELS rank. From all the annual supervisory reports that were used in gathering the secondary data, CBK acknowledged the existence of CAMELS rating for banks, however, the criteria for compiling them was never made public thus denying the researcher to have the opportunity to compare the computed and published figures.

E. Suggestions for Future Research

In a bid to address some of the limitations experienced during the study where different scholars had different matrices for computing the CAMELS rank, and with limited literature supporting which matrix is the most preferred, the researcher proposes further research, especially among firms operating in developing economies like Kenya on the best matrix to be adopted by both scholars and industry players.

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