

Effects of Income Diversification and Financial Performance of Kenyan Commercial Banks.



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ABSTRACT:

Aim/purpose – This paper aims at examining the impact of income diversification on financial performance. The motivating factor is an occasion by raising pursuance of interest activities and fluctuations of profitability among banks due to the declining interest income and stiff competition.

Design/methodology/approach – This study uses a sample of 31 Kenyan banks and data for the period 2008-2019. Data is analyzed through fixed-effect regression analysis.

Findings – The study finds that income diversification improves bank profitability. The findings are attributable to an increase in non-interest income and possible risk diversification. Moreover, the study controls for several banking sector-specific factors that affect financial performance. The results show bank size, age, loan portfolio quality, lending strategy, and market share have a significant effect.

Research implications – Based on the results, the study recommends that bank managers should consider engaging in non-traditional activities that generate non-interest income to compensate for deteriorating interest income and to boost performance. In addition, the study recommends that bank regulators should relax rules that limit the extent to which banks can engage in non-interest earning activities

1. INTRODUCTION

Commercial banks are important agents in the financial intermediation process and financial inclusion; thus drivers of socio-economic development. Specifically, the banking sector mobilizes savings from households, repackages them, and advance loans to investors (Bongomin, Munene, Ntayi, & Malinga, 2019). Therefore, given the importance of commercial banks, the sector continues to receive a lot of focus both in practice and research. Furthermore, the global financial crisis that took place in 2007-2008 stressed the importance of a stable and resilient banking sector. During these period majorities of banking, firms faced a sharp decline in interest income because of the reduction in loans and advances to both government and private sector. In the most recent days, and during the covid-19 pandemic many lessons can be picked on the importance of income diversification. While the performance of specialized banks declined, that of diversified banks remained relatively stable; thus salvaging the economy of many countries that otherwise have collapsed (Li, X.eng, Zhao & Carter, 2021).

Though banks are highly regulated, financial liberalization and competition continue to push banks to engage in embracing non-lending activities such as investment advisory services, real estate management, and trading in securities to achieve risk diversification (Fang, Hasan & Marton, 2014; Sissy, Amidu & Abor, 2017). Income diversification is considered a strategy of cushioning banks against the erosion of mainstream income generated from traditional lending businesses (Brei, Borio & Gambacorta, 2020). The concept of income diversification is grounded on Markowitz's (1952) Modern Portfolio Theory which central proposition is on risk and return. The theory claims that a firm may maximize return by holding diversified portfolios from an array of the asset in which varied risk and return tradeoff.

Haubrich and Young (2019), discuss these income diversification classifications into four non-interest income streams. First, is the service charges income (income from the sales of checks, Service charges, wire transfer fees, ATM fees, card charges safe deposit box fees). The second is the trade income (net loans and leases sales, trading revenue, net real estate sales, net securitization income, net other sales). Third, is the investment banking income (income from fiduciary activities, insurance venture capital income, annuity fees, and securitization fees). Finally, is the unclassifiable bank income (rent on a property and

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other real estate, food stamps, bank guarantee on asset importation, foreign exchange gains). Through revenue diversification, it is expected that the revenue base will increase due to the expansion of revenue streams and also avoiding the banks' unexpected risks which affect the variability of the performances. Commercial banks may also adopt various forms of diversifications depending on various opportunities that present to them. Though there is an increasing trend toward income diversification among banks globally, the anatomy and the magnitude varies (Haubrich & Young, 2019; Elsas, Hackethal & Holzhäuser, 2010)

Additionally, prior studies provide evidence of the presence of cross-selling and cross-subsidization between non-lending activities; implying that non-traditional activities may stimulate banks' lending business (Stiroh, 2004). This implies that and ultimately the financial performance of banking institutions. Although the nexus between income diversification and firm performance has been subjected to extensive empirical studies, the findings show mixed results. Some studies show a significant and positive relationship (Githaiga, 2021; Luu, Nguyen & Vu, 2019). While others believe that diversification has some cost implications on the bank performance (Kurniawan & Siswanto, 2021; Sharma & Anand, 2018). Other studies show no significant relationship between non-interest activities (Dina Patrisia & ShabbirDastgir, 2017; Manyuru, Wachira, & Amata, 2017). Based on the conflict findings as shown in the extant literature, there is a need to further investigate the nexus between income diversification and bank financial performance.

The rest of the paper is structured as follows: the next section presents an overview of the Kenyan banking sector. The third section reviews the existing literature. The fourth section presents the finding. The final section concludes.

2. OVERVIEW OF THE BANKING INDUSTRY IN KENYA

In Kenya, the financial performance of commercial banks has been fluctuating due to several factors such as stiff competition, unfavorable macroeconomic factors, regulatory framework and firm factors, and other factors which have increased over the years. The profitability results show variability on return on assets at for instance in 2018 it reduced from 2.8% to 2.63% in the same period the pre-tax profit increased to Ksh. 152.7 billion down Ksh.133.2 billion in 2017 (CBK;2018 & 2019).The variability is visible in both interest and non-interest sources of income which have to experience stiff completion and also including all the other participants in the industry including non-bank financial intermediaries, market-based financial institutions, and most recently from fin-tech companies (Faith, Raphael, and Stephanie, 2019). Mulindi (2021) shared an overview of the key bank performance of both listed and unlisted commercial banks, the gross loan portfolio quality experienced exponential growth over 15 years for both the listed and unlisted banks realizing an average value of 40billion in 2003 to a higher figure of 135 billion in 2013 and 4 billion in 2003 to higher figure of 35 billion in 2013 respectively.

Currently, in sub-Saharan Africa (SSA) Kenyan banking industry is ranked among the broadest and most developed having 49 financial institutions, comprising 43 commercial banks, 1 mortgage finance company, and five deposit-taking microfinance institutions (CBK 2019). The most pronounced role these institutions have to play in promoting financial inclusion meaning most Kenyans can access the services of these financial institutions with statistics showing that financial deepening increased for instance the number of deposit accounts increased from 8.5 million in 2009 to 62.01 million in 2019 while the deposit increased from 0.8 trillion to 62.01 trillion in the same period.

The journey has been contributed largely by major regulatory reforms implemented which started in the 1990s. These structural reforms were geared towards improving performance in form of efficiency and promoting healthy competition in the banking sector. The regulatory framework that has influenced the operation and performance of commercial banks include the Microfinance Act (2006), Vision 2030 (2008), Banking act (2012), capping of interest rate (2014), and Companies Act 2015 among others. These regulatory frameworks affect both positive cost-efficiency and others hurt the cost efficiency of the banks (Mulindi, 2021).

Despite this development, both at policy and financial the banking sector in Kenya still faces myriad of challenges including; failure of bank policies to yield optimum results, volatility of non-interest income, continuous overreliance of small depositors savings, skewness of government lending, declining profitability, increase on non-performing loans (NPLs) in some banks and insufficient quantities of commercial banks loans to finance long-term infrastructural projects, etc (Kiemo *et.al* 2019). This study, therefore, focuses on this financial institution because first because they are all have adopted income diversification as a way of increasing revenue this allows us to test the diversification discounts and premiums which still debatable. Second, previous studies and reports have noted unanimously links income diversification and profitability thus elaborating this conversation in the Kenyan context.

This study seeks to contribute to the finance literature through the following path. First, in addition to the existing literature on income diversification in the lens of diversification premium or discounts, this study investigates the relationships because of

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modern portfolio theory and agency theory thus confirming or rejecting one theory in a period full of various reforms including various acts such as capping of interest rate and relaxation of the cap. Secondly, establishing the relationship between income diversification and bank performance will shade more practical implications for managers to make informed decisions especially the benefits and the cost of diversifying into non-interest activities in quest of improving their financial performance. Consequently, using panel data analysis and a universal sample of 31 commercial banks covering a period of 2008-2019, this study finds evidence that income diversification has a significant positive effect on bank financial performance thus confirming the existence of diversification premium in Kenya.

3. REVIEW OF THE EMPIRICAL LITERATURE

Income diversification is grounded on finance theories such as modern portfolio theory, agency theory, coinsurance effect hypothesis, transaction cost hypothesis, internal capital market hypothesis, and market power hypothesis. These contemporary theories have been tested mostly to advocate possible links between income diversification and corporate value. However, the relationship between income diversification has been subject to extensive empirical studies though extant literature shows inconclusive findings.

The first strand of literature focuses on the diversification premiums premised on superior benefits arising from diversifications as opposed to its costs. Proponents of a diversification premium (bright side of diversifications) emphasize the synergies arising from related diversification; financial and operational synergies (Saftiana, 2018). It has also been argued that diversified firms enjoy lower transaction costs as opposed to stand-alone firms and have more efficiency, utilization of sharing of resources, tax benefits, and improving firm efficiency (Shin, Ahn & Lee, 2015). Furthermore, Chris, Lawrey, Brandon, Morris (2019) claim that corporate diversification is positively related to shareholders' wealth with their findings showing that portfolios of diversified-firm outperform those of focused firms. Evidence also shows the focused firms' diversification leads to cross-subsidization. In the same vein, Salma and Hussain (2018), Tatsuo Ushijima (2016) provide additional evidence for diversification premium by suggesting that diversification reduces business risk and suggesting the rms' profitability and value. Studies also show that income diversification improves the financial sustainability of a firm (Manchun *et al.*, 2019; Githaiga, 2021).

On the contrary, the second strand of literature is premised on the existence of income diversification discounts (dark side of diversification). For instance, the study by Berger, Hasan, and Zhou (2010) and Delpachitra and Lester (2013) indicate that income diversification destroys firm value through income volatility and increased risk. The discount is associated with particular inefficiencies center on an inefficient internal capital market that fails to optimally allocate funds to promising investment opportunities. Studies supported this with the opinion that diversification harms firm performance because diversification drains resources from overinvestment in loss-making projects or assets with a negative net present value from cross-subsidization, agency problems, and increasing cost associated with diversification (Hoechle *et al.*, 2012).

The third strand of literature also exists, in this study, there is no clear distinction if diversification is beneficial or costly. Dina *et al.* (2017), advanced this debate by determining examining whether business diversification brings the advantage of the internal market which will create firm efficiency in accessing financial resources they diversification had a significant positive effect on financial performance while the related diversification shows a significant negative relationship. Following this view, another study noted that though a negative relationship may occur, there could be a possibility of reverse suggest at high levels of diversification especially when mediated by the growth opportunities to form a U-shaped form of diversification–value relationship (Manyuru *et al.*, 2017).

Interestingly, some studies find no consensus as to whether income diversification is a value creator or destroyer. For example, a study by Oh *et al.*, (2015) reported an inverted S-shaped relationship between geographical diversification and financial performance and a negative linear relationship between product diversification and financial performance; which necessitates the need to investigate both intervening and contextual factors.

4.1. RESEARCH MODEL

The research consists of three sets of variables; the dependent variable (financial performance), independent variable (income diversification), and control variables (bank size, lending strategy, loan portfolio quality, and market share). The hypothesis will be tested using the panel data analysis estimation model and the choice between fixed and random effect will be determined by the results of the Hausman test. The study econometric model is shown below;

$$FP_{it} = \beta_{0it} + \beta_1 ID_{it} + \beta_2 BS_{it} + \beta_3 LS_{it} + \beta_4 LPQ_{it} + \beta_5 MS_{it} + \varepsilon_{it}$$

Where;

PF is financial performance

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ID is income diversification

BS is the bank size

LS is lending strategy

LPQ is loan portfolio quality

Ms is the market share

B₁... B_n denotes the beta coefficients and ε is the error term

4.2. Data and Methodology

The main objective of this study is to examine the impact of income diversification on the performance of Kenyan commercial banks. This study employs panel data drawn from all Kenyan commercial banks for the years 2008 – 2019. However, after excluding firms with missing data the final sample consisted of 31 banks; which yielded 372 bank-year observations. The measurements of the research variables are illustrated in table 4.1 below.

Table 4.1 Measurement of variables

Type	Variable	Measurement	Reference(s)
Dependent variable	Financial Performance	ROA(return on assets)	Fang, J., Lau, C.-K.M., Lu, Z., Tian, Y., and Zhang, H. (2019),
Independent variable	Income diversification	1-HHI	Seo&Chung,(2017)
Control variables	Bank Size	Natural logarithm of total assets	Gürbüz, Yanik and Aytürk, (2013)
	Bank Lending strategy	The ratio of loans to total assets	Githaiga and Yegon (2019)
	Loan portfolio quality	The ratio of non-performing loans to total loans and advances	Dimitrios, Helen, and Mike (2016)
	Market share	The ratio of bank total assets to industry's total assets	Genchev, E. (2012)

RESULTS AND DISCUSSIONS

This section presents the findings of the study. The descriptive statistics, the correlation coefficients, and the regression results are shown in Table I, II, and III respectively.

Table I: Descriptive statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
FP	372	.0359195	.0284539	.0033	.436
Bank Size	372	17.37676	1.225367	14.97238	20.0195
Bank Age	372	35.8871	29.21328	1	123
FLS	372	.540505	.1731026	.00895	.8956
LPQ	372	.1248543	.1056437	.0089204	.9010086
MS	372	3.204624	4.841534	.002	20.62
DIV	372	.4062503	.078702	.1039373	.49998

Source: (Researcher, 2021)

Table I (above) present a general synopsis of the panel data for the 31 commercial banks in Kenya covering the period of 12 years (2008-2019). Based on the table financial performance (ROA) had mean of 0.00359195 (minimum= -0.0033 and maximum = 0.436; standard deviation = 0.0284539). This implies that for the 372 observations the highest performance stood at 43.6% with some banks making losses thus giving a negative return on assets for this case -0.0033. The standard deviation also gives the picture of how the ROA was fluctuating from the mean by 2.84539% showing the existence of the trend movement of the financial performance among banks and across the years. The variability of financial performance from this descriptive statistics implies that the unsteady performance of the performance is evidence confirming the need for examining

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this trend with aim of linking it with other constructs as suggested by the background of the study and statement of the problem.

Principally, it concurs with the case study of three giant African commercial banks which revealed that most commercial banks in Africa project both upward and downward movement or decline in the returns. The mean income diversification, was 0.4062503 (minimum= 0.1039373 and maximum = 0.49998 standard deviation = 0.1039373). In brief, the data shows that diversification exists in nearly all banks indicated with highly diversified banks stand at a high of close to 50% meaning some incomes from the banks may not necessarily come from interest income. The mean of 0.4062503 implies that though firms have diversified the proportion can be close to 41% thus need to study on as suggested by (Elsas *et al.*, 2010). For the control variables, the statistics were as follows; bank age which was measured using the number of years reveal an average of 35.8871 years, taking study period to be between 2008 to 2019 (minimum= 1.000 and maximum = 123.00; standard deviation = 29.21328), secondly, the bank size revealed an average size of 17.37676 measured by the number of the assets owned by the bank (minimum= 14.97238 and maximum = 20.0195; standard deviation = 1.225367). The average value for bank lending strategy was 0.1248543 minimum=0.0089204 and maximum = 0.9010086; standard deviation = 0.1056437). The mean for loan portfolio quality was 0.1248543 (minimum=0.0089204 and maximum = 0.9010086; standard deviation=0.1056437). The mean for market share one of the control variables in the study stood at 3.204624 (minimum=0.002 and maximum = 20.62; standard deviation=4.841534).

Table II: Pairwise correlation analysis

	FP	Bank Age	Bank Size	LPQ	FL	MS	ID
FP	1.000						
Bank Age	0.376*	1.0000					
Bank Size	0.487*	0.6856*	1.0000				
LPQ	0.120*	-0.1459*	-0.2897*	1.0000			
FLS	-0.314*	-0.1083*	-0.1830*	-0.1436*	1.0000		
MS5	0.552*	0.5009*	0.6647*	-0.3242*	-0.1905*	1.0000	
ID	0.242*	-0.0101	0.1357*	-0.0308	-0.0136	0.1847*	1.0000

The results presented above show that the correlation between Bank age and FP is positively and significant with pairwise Pearson correlation (r) ($r = 0.376$; $p < 0.05$). Although massive research has raised a point that bank age is beneficial to the firm profitability because older banks are more stable than newly formed banks, supported fully by this study. Contrary to this average finding some studies believe that bigger banks may also attract adverse effects emerging due to the complexity and risk associated with aggressive diversification by larger banks. Secondly for the bank size and financial performance are the results records a positive relationship ($r = 0.487$; $p < 0.05$). The analysis also reveals that Loan portfolio quality (LPQ) and Market share and financial performance were positively correlated ($r = 0.12$; $p < 0.05$) and ($r = 0.552$; $p < 0.05$). Contrary to this relationship it was not in the case of lending strategy (FLS) which had a negative significant correlation ($r = -0.314$; $p < 0.05$). Finally, the correlation results between income diversification (ID) and financial performance (FP) was significantly positive ($r = 0.242$; $p < 0.05$). As the income diversification, they tend to improve the return on assets making more banks intensify in diversification by entering into new financial products which seem profitable

Table III: Regression Analysis

Variables	Fixed effects	Random effects
_constant	-8.048(0.769)**	-6.485(0.627)**
Income diversification	0.521(0.086)**	0.483(0.083)**
Bank age	0.331(0.103)**	0.083(0.059)
Bank Size	0.235(0.053)**	0.195(0.041)**
Lending strategy	-0.147(0.050)**	-0.171(0.050)**
Loan portfolio quality	0.149(0.033)**	0.199(0.031)**

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Market share	0.108(0.033)**	0.098(0.023)**
R-sq	0.3962	0.4690
No. of observations	372	372
Hausman test	Prob> Chi2= 0.000	

** significance levels 5%. *Standard errors are in parentheses*

This study sought to examine the relationship between income diversification and financial performance of commercial banks in Kenya and the hypothesis was tested using the results of multiple regression analysis. The results for the fixed effect and random effect regression analysis are presented in Table III. The hypothesis is tested using the fixed effect regression as suggested by the results of the Hausman test (Prob>chi2=0.000). Based on the findings income diversification has a significant positive effect on the financial performance of commercial banks in Kenya ($\beta = 0.5207469$, $p < 0.05$). The results indicate that for one unit change of income diversification it results in a change of 0.521 changes in the financial performance of the commercial banks. The overall model explains a 39.62% change in bank financial performance. Therefore, the hypothesis that income diversification has no significant effect on the financial performance of commercial banks in Kenya is rejected. The study concludes that income diversification has a significant effect on a bank's financial performance. The findings are consistent with previous studies that support diversification premiums (Rudolph & Schwetzler, 2014 and Markides, 2016 and Similarly, the results conform with the theoretical assertions of the modern portfolio theory that through diversifying income streams a firm may increase its revenue and minimize risk (Markowitz, 1952). As for the control variables, the findings indicate that bank age ($\beta = 0.3310576$, $p > 0.05$), bank size ($\beta = 0.2346092$, $p > 0.05$), bank lending strategy ($\beta = -0.147006$, $p < 0.05$), loan portfolio quality ($\beta = 0.1495628$, $p > 0.05$) and market share ($\beta = 0.1081826$, $p < 0.05$) are significant determinants of financial performance.

CONCLUSION

Determinants of banks' financial performance of commercial banks continue to be subject of interest among practitioners, regulators, and banks are key agents of financial intermediation. Therefore, this study sought to examine whether income diversification affects the performance of Kenyan commercial banks. The study employed a sample of 31 banks and panel data for the period 2008 to 2019. The hypothesis was tested using the results of the fixed effect regression. The findings of this study show that income diversification had a significant positive and effect on the financial performance of commercial banks in Kenya ($\beta = 0.4523371$, $p < 0.05$); which favors the "diversification premium" hypothesis. Based on the results, the study recommends that bank managers should consider engaging in non-traditional activities that generate non-interest income to compensate for deteriorating interest income and to boost performance. In addition, the study recommends that bank regulators should relax rules that limit the extent to which banks can engage in non-interest earning activities.

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