

DOES INVESTMENT STRUCTURE MATTERS IN THE NEXUS BETWEEN INCOME DIVERSIFICATION AND FINANCIAL PERFORMANCE IN COMESA REGION? EVIDENCE FROM COMMERCIAL BANKS IN KENYA

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ABSTRACT

Purpose: The article examines whether investment structure moderates the relationship between income diversification and financial performance of Commercial banks in COMESA region.

Approach/Methodology/Design: The study adopted positivist research paradigm and explanatory research design. The data was collected from 31 commercial banks in Kenya from 2008 to 2019. The study considered the following variables: Income Diversification, Investment Structure and Financial Performance. Modern portfolio theory, Agency theory and resource based view theory were adopted.

Findings: The study established that income diversification have positive significant effects on the financial performance. The bank investment structure recorded a negative significant effect on financial performance of the commercial banks. Further, the interaction between investment structure and income diversification presented a negative significant effect on financial performance of the commercial banks. The study adds to debate on diversification premiums and discounts by establishing that investment structure moderates the relationship between income diversification and financial performance. COMESA banks have reasons to diversify their income but should consider the mix of the investment structure to achieve optimum results.

Practical Implications: Since the study support the benefits of diversification, COMESA as a region can accelerate on pushing for policies that encourage bank diversification to improve the profitability. Additionally, the diversifying banks should optimally adjust their investment structures to propel diversification benefits to compensate the declining interest income.

Originality/value: This study contributes to conflicting diversification premiums and discounts by introducing the moderating role of bank investment structure, this indirect effects adds to modern portfolio theory and agency theory that asserts direct relationship of both diversification premiums and discounts respectively.

INTRODUCTION

Regional integration is very important in driving economic growth, innovation and shared prosperity. COMESA is one of the largest regional integration in Africa with the set targets n

2018-2022 growth indicators include but not limited to increase companies participating in regional trade, increased market linkages, expanding the financial inclusions, increasing partnerships and crafting effective policies and laws that support international trade. To achieve these targets a number of key players will be expected to make joint contribution towards the success. One of the key institutions includes the commercial banks in the region that play a critical role facilitating growth of trade by providing effective payments avenues, credit facility, provision of savings options, investment options and promoting financial inclusion (Velonjara & Andrade, 2020). Currently, COMESA is implementing on the flagship project designed to promote trade in both medium and small enterprises (MSMEs) commonly referred to the MSMEs Digital Financial Inclusion Project. With increase of number of MSMEs the financial project is timely since it can integrate regional payments in one digital platform through the existing financial systems characterized by affordable, transparent and offer real-time financial transactions (Zeidy,2020).

To perform such great roles of financial intermediation the commercial banks need to be profitable, able to manage risk and they should have enabled environment to enable them conduct business. It is therefore important for the regional blocks to encourage these institutions such as commercial banks to diversify their activities in order to boost financial performances. A number of regions are still undecided on whether to reject or implement the global bank diversifications restrictions initiatives such as United Kingdom Vicker commission report (Edmonds,2013);Volcker Rule (Richardson et al., 2010) and European Commission's Liikanen Report (Krahnen,2014).These initiatives reduces the opportunities for revenue diversifications while increasing the degree of specialization. It is therefore expected that when firms reduces their diversifications level it will impact on financial performances.

The finance performance of Kenyan commercial banks for instance has attracted a lot of interest in both theory and practice. The theoretical motivating factor for bank diversification still remains conflicting literature that exists between theories that explain increase in profitability, declines in profits and those that explains why some banks have constant profitability. In fact, the theory of firm explains that its objectives are categorized to profit maximization and wealth maximization (Khan & Hussanie, 2018 & Khadka, 2018). Several scholars who support profit maximization belief that their exist behavioral assumption of which model the firms decisions such as ; dividends decisions, financing decisions, investment decisions among others (Weersink & Fulton, 2020). Empirical views relate with profitable firms with good ethics (Primeaux, & Stieber, 1994 and Gibson, 2000) and efficiency (Tan et al., 2018). However, the nexus arises due to the inability of the literature to explain the linear relationships between these firm decisions and profitability. For example, some financial decisions are believed to influence financial performance(Adekunle et al., 2015; Birru, 2016) while another strand of literature argues that the financial performance influences the firm decisions (Hall, 2005; Ayuba et al., 2019).

The unending debate on the relationship between financial decisions and financial performance makes more sense when the analysis is centered on the practical banking strategies thus making it very interesting to practitioners. Bank managers are keen on the financial performance because it is the determinant for decision making, policy formulation, organizational restructuring and bank valuation. Equally, financial performance plays a critical role in explaining bank sustainability and effective functioning of the financial structure both in

terms of financial and banking system (Shawtari, 2018). Some studies directly relate poor bank performance to weak financial decisions and bank operating models such as investment structure (Shawtari, 2019). One of the major decisions relates to income diversification which is described as the move by the bank to non-interest income activities as a way of compensating the declining interest income due to increase of non-performing loans. Though the relationship between income diversification and financial performance has been well documented. The empirical literature shows mixed findings namely premiums or bright side (Nisar, Peng, Wang & Ashraf, 2018 and Rudolph & Schwetzler, 2014) and diversification discounts or the dark side of diversifications (Berger & Ofek, 1995; Lamont & Polk, 2000; Stiroh & Rumble, 2006; Kuppuswamy & Villalonga, 2016; Chang et al., 2016 and Kurniawan & Siswanto, 2021).

Undeniably, the bank managers while making these diversification levels what comes to their mind is the investment structure of the bank since it influences both income diversification levels that is high, medium or low and financial performance. The bank investment structure which is basically the asset structure exist in different forms that is assets held to maturity and assets available for sale (Nepali 2018). These forms of investment structure can influence the bank's degree of diversification which can be low, medium, and highly diversified while the profit levels can be low or higher (De, 1992). Given varied investment structures and preferences of investors, bank management will leverage on such opportunities during diversifications in making optimum financial decisions. As a consequence, the relationship between income diversification and financial performance is moderated by investment structure. According to Kariuki & Sang (2018) and Ukhriyawati et al. (2017) established positive significant relationship between investment structure and bank performance while Brighi & Venturelli (2014) found that on risk-adjusted basis the income diversification increases the bank profitability. They also argued that the results differed with the interaction of income diversification and investment structure of the bank.

Moreover, mixed results are available given investment structures informs the forms of ownership the bank will have in relation to income diversification and financial performance linkage. For instance, there exists a positive (Vidyarthi, 2019; Amoah et al., 2021 and Tariq et al., 2021), detrimental effects (Luu et al., 2019; Doan et al., 2018) and no significant relationship (Mittal & Nihar, 2018) between income diversification, investment structure and financial performance. Despite the valuable insights by researchers, there still exists a gap. As a result, the study sought to determine whether investment structure moderates the direct relationship between income diversification and financial performance of Commercial banks in Kenya.

Overview of COMESA Region

In Africa the largest regional integration is COMESA, posting high number of trade, investments, highest membership coveted by foreign investors, assets and ability to cross border. The region's GDP per capita has increased from less than USD 1 in 1970 to USD 1640.72 in 2019, with an average annual increase rate of 4.02 % (Velonjara & Andrade, 2020). According to COMESA (2020) commercial banks in the region play a critical role in financial intermediation and catalyzing the economic growth through effective integration of the digital payments to promote financial transactions of MSMEs. With the decline of interest income the trend of bank diversification have been growing over a decade

with evidence of non-interest income such as consultancy fees, brokerage, dividend and insurance service fee among others heavily recorded for most of the member state. Table 1 below shows that majority of the countries have diversified to non-interest income between 2000-2019, at some point some members recording the highest degree of diversification for instance Libya (X>90%) and Seychelles (x>80% (Seychelles) while the majority ranging between 40-55% and others shows high degree of specialization some recording less than 5% such as Zimbabwe

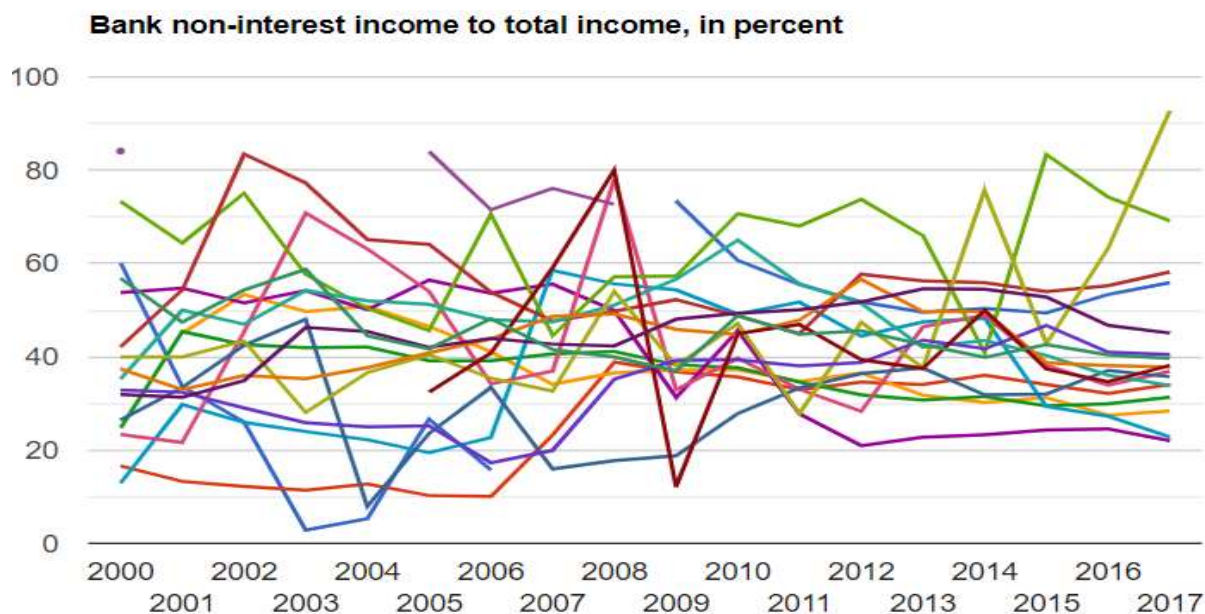


Figure 1. Trends of income diversification amongst COMESA countries(Source Bankscope,2020)

Key



Overview of the Banking Industry in Kenya

The researchers acknowledge the banks' profitability due to the important role played by the commercial banks in financial intermediary and financial deepening in the economic growth (Havrylchyk & Verdier, 2018; Sulaiman & Wale-Awe, 2018 & Ozili & Opene, 2021). There has been mixed financial performance of commercial banks for example over a decade the return on assets (ROA) has been varying due to unfavorable economic conditions due to financial regulation and hostile competition. Global profitability measured by ROA stood at 1.77% (2020), 1.76% (2008) Africa 2.44% (2020), 2.92% (2008) and Kenya 2.63% (2019), 2.6% (2008) (Haubrich & Young, 2019; Nyamongo, 2019). In Kenya the variability on banks ROA in 2018 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 (Kiemo & Kamau,2021). In brief, the

uneven results for ROA ranges from the best performing banks such as Citibank (5.8%) KCB PLC(4.9%)(, Equity Bank (5.1%)and Cooperative bank (4.5%) to lower performers such as Family Bank(1.7%), Middle East Bank (0.7%) and even to those who posted loss such as Transnational bank (-0.6%) and Spire Bank (-6.6%) (CBK,2019). The poor performance has led to profit warning being experience for instance in the case of Family bank in 2019 while on the extreme cases led to some placed under receivership (Chase bank), statutory management (Charter House Bank) mergers (CBA bank and NIC bank and acquisition of National bank PLC by KCB bank ltd among others (CBK;2018 & 2019).

Statement of the Problem

The objective of COMESA is to promote trade amongst participating countries. World trade projection showing a decline in world trade, between 13% and 32% in 2020, and the World Bank project a decline of 11% and 7% in exports and imports for Sub-Saharan Africa due a number of factors including COVID-19 pandemic. Equally, the financial performance of the commercial banks in Africa especially in COMESA for a decade have recorded mixed results with sufficient evidence of declining income from interest, increase in non-performing loans, risk and deteriorating in asset quality (Ozili, 2019; Saidane et al., 2021) while others records better performance due to bank efficiency, bank concentration, proper regulation effective risk management and cross border banking among others (Kanga et al., 2019; Asongu & Minkoua, 2018; Banya & Biekpe, 2018; Ozili, 2018). Majority have innovatively diversified their products to compensate the declining income through offering non-interest services. The trend of income diversification is uneven due to its prevailing cost and benefits. A number of studies have acknowledge that the diversification is beneficial due to; managerial efforts in banking sector risk reduction (Berger et al, 1995 & Schmeits, 2000), sharing of the fixed cost over a multiples products (Berger et al, 2010), tax shield benefits arising from intra-firm transactions (lewellen, 1971) while others believes that diversification initiatives are costly due to agency conflicts and diversification costs.

Moreover, some studies records mixed results given different forms of investment structures of the banks. For instance, there exists a positive (Vidyarthi, 2019 and Amoah, Bokpin, Ohene-Asare & Aboagye 2021), detrimental effects (Luu et al., 2019; Doan et al., 2018) and no significant relationship (Mittal & Nihar, 2018) between income diversification, investment structure and financial performance. Despite the valuable insights by researchers, there still exists a research gap. As a result, the study sought to determine whether investment structure moderates the direct relationship between income diversification and financial performance of Commercial banks in Kenya.

Objective of the study

The general objective of the study is to analyse the moderating effects of investment structure on the relationship between income diversification and financial performance of commercial banks in COMESA region as case of Kenyan Banks.

The specific objectives are; (1) To determine the relationship between income diversification and financial performance; (2) To establish the relationship between investment structure and

financial performance; (3) To analyse moderating effects of investment structure on the relationship between income diversification and financial performance

LITERATURE REVIEW

Theoretical Literature

Theoretically, Modern Portfolio Theory (Markowitz, 1952) grounds the debate on diversification debate by articulating that diversification of portfolios leads to better performance through risk reduction thus introducing risk in this direct relationship. It is applied in the banks with premise that income diversification in array of asset portfolio decreases the variations of returns for the claimholders of the bank thus reducing the chances of failure (Brighi & Venturelli, 2014). Elton & Gruber (1997), explained the importance of the theory on guiding individuals on allocating wealth amongst different assets to obtain more revenues. In brief it explains why the benefits of diversification supersede its cost thus becoming advantageous for banks investing their wealth in array of investment opportunities. The principal assumption of this assertion is that income diversification results to cost saving for banks through producing of economies of scope resulting from utilizing same information and customer cost savings and absorption of the fixed costs (Berger et al., 1987).

Fabozzi, et al. (2002) documented the legacy of the theory by enumerating achievement on asset management and portfolio selection. In the previous studies that has confirmed the positive significant effects of income diversification on financial performances grounding their studies on this theory include; Chung et al. (2013) Amoah et al. (2021) and Mwangi (2017). Equally the theory of financial intermediation posit that the indivisibilities of bank asset structure implies that the diversification increases the bank size that influences financial performance in the long run. (Diamond, 1984; Cerasi & Daltung, 2000).

Empirical Literature

The concept of financial performance in commercials is heavily researched due to its importance it plays in explaining how the banks are efficient (Meeks & Meeks 1981; Chen et al. 2018), profitable (Sri & Pujiharto, 2020), sustainable (Scholtens & van't Klooster, 2019 and Budiman et al. 2021) and valuable (Egan et al. 2017). Studies that are focused on profit maximization theory measures the performances using return on assets as an indicator of profits (Shrotriya, 2019). On the other hand the definition of income diversification is drawn from corporate diversification that explains the deviation of banks from interest income activities such as (Ebrahim & Hassan, 2008). Haubrich & Young (2019), discuss these income diversification classifications and provided an opportunity of sub categorizing noninterest income for the banks into four sections: First, the Service charges income which include income from the sales of checks, Service charges, wire transfer fees, ATM fees and card charges safe deposit box fees. Secondly, income diversification can be sourced from, Trade income that can be earned through leases sales, agent trading revenue, net real estate sales, net securitization income and net other sales. The third classification of income diversification is investment banking income that sums up all income from fiduciary activities, insurance venture capital income, annuity fees and securitization fees. Finally, other bank income which don't fall in the first four above. Whereas, the investment structure is the proportion of major and tangibility assets that banks invest in relation to total assets (Kosova & Slobodyanyuk, 2016). Diamond (1984) pioneered the link between the flexibility of the asset structure, bank diversification, bank size and profitability. He argued that the more the flexible the asset structure is, the more the diversification in various assets hence increasing the bank size thus affecting the profitability of the bank.

The first strand of literature is positive meaning the income diversification is beneficial due to; operation efficiency, risk reduction, lower tax burden, greater debt capacity, lowering of taxes, and an incentive of firms forgoing projects with positive net present value associated with income diversification (Berker & Ofek, 1995). The studies have referred to this strand as the bright side or diversifications premiums (Tate, & Yang, 2015; Koh et al., 2020). The second strand argues that income diversification is costly due to related diversification cost, discretionary diversion of resources, and agency problems commonly referred to as dark side of diversification or diversification discounts (Stiroh & Rumble, 2006; Cadenas et al., 2021). Finally, some studies have jointly considered both strands with no significant difference of the strands (Lin & Huang, 2014; Tran, 2016).

From the above interaction of the diversifications premiums and discounts with other variables, there is need to justify the moderating role of investment structure. Principally, most decisions made regarding income diversifications are made with considerations of factors both banks specific characteristics and economic factors. Sissy et al. (2017) found investment structure to be significant determinant why banks diversify to non-interest income since diversifications requires pool of investment opportunities to venture. Different investment structure can allow banks to invest on optimum opportunities demonstrated on assets held to maturity and those available for sale. These two financial options come with different yields depending on the time frames hence influencing the streams revenues from non-interest activities. Meng et al. (2018) hinted the moderating role of investment structure by raising an assertion that the bigger ratio of banking assets to gross domestic product and lower interest spread (asset scale structure) will lead to higher levels of diversification.

Moreover, a bank can adjust investment structure either increasing or reducing the investment on government securities to accommodate the degree of income diversification strategies. Thus, the investment structure which all about changing of major bank asset base is vital for revenue diversifications. As much as the motive of profit maximization is pushing management to adopt diversification to lead banks away from traditional activities, this to achieve such factors such as the investment structure needs to be considered because it may influence the degree or pattern of diversifications (Lemelin, 1982; Baldwin et al., 2000 and Baek, 2004). From the reviewed literature, there exist a significant number of studies that have related income diversification and investment structure sought to assess the effect of institutional ownership on capital structure (Sissy et al., 2017; Olibe et al., 2017). Lien. & Li, (2013), also established that effective corporate governance structure play critical role amongst diversifying firm value. Diversification results to banks profitability but this relationships may differ when the interaction of the size and degree of capitalization of assets occurs (Brighi, & Venturelli (2014). Luu et al. (2019), supported diversification premiums but noted that this positive relationships varies across different types of banks which has different structures such as investment and ownership. Others hold the view that when the diversification premium are converged with some bank characteristics it results to detrimental effects (Beck & Levine, 2002; Doan et al., 2018). In regards to the existing literature given income diversification and financial performance, the current study aimed at expounding further on the moderating effect of investment structure to add knowledge on the current research gaps of conflicting hypotheses.

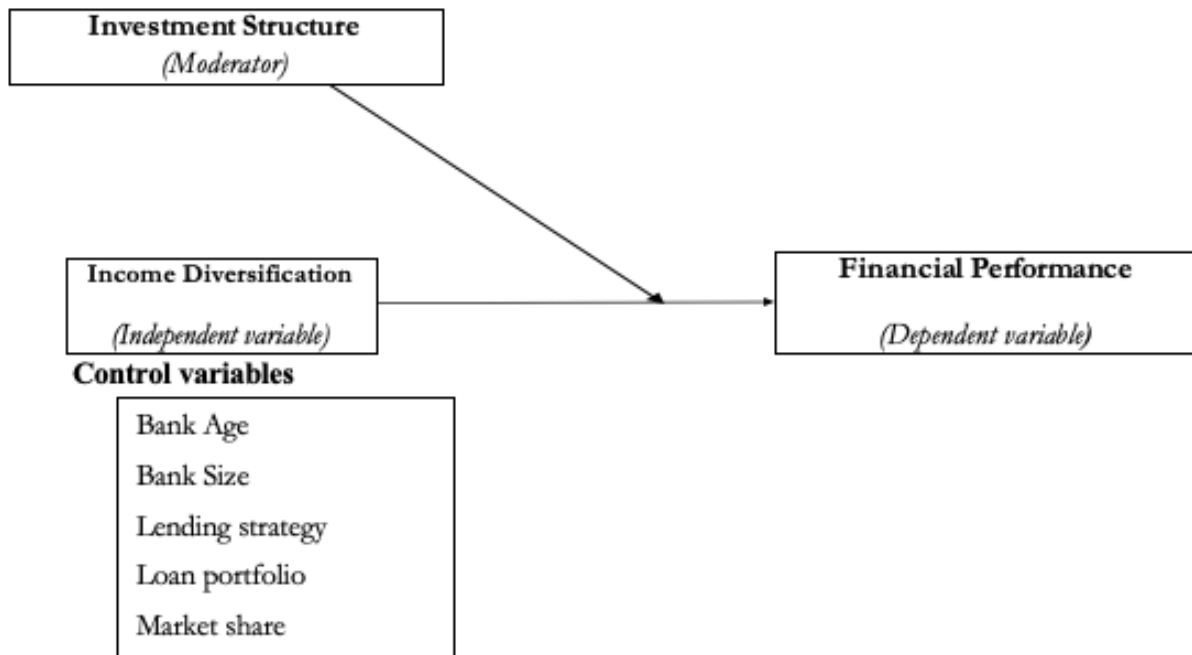


Figure 1. Conceptual Framework

Source: Researcher (2021)

METHODOLOGY AND PROCEDURES

Research model

The research consists of the following sets of variables; the dependent variable (financial performance), independent variable (income diversification), moderating variable (Investment structure) and control variables (bank size, lending strategy, loan portfolio quality and market share). The hypothesis was tested using 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;

$$FP_{it} = \beta_{0it} + \beta_1 ID_{it} + \beta_2 IS_{it} + \beta_3 (ID_{it} * IS_{it}) + \beta_4 Ba_{it} + \beta_5 Bs_{it} + \beta_6 LS_{it} + \beta_7 LPQ_{it} + \beta_8 MS_{it} + \varepsilon_{it} \dots \dots \dots \text{Model 1}$$

Where;

FP is financial performance

ID is income diversification

IS is investment structure

BS is bank size

LS is lending strategy

LPQ is loan portfolio quality

Ms is market share

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

Data Type and Source

The main objective of this study was to establish whether investment structure moderates the relationship between income diversification and financial performance of the commercial banks in Kenya. To achieve this, explanatory research design was adopted guided by post-positivist research paradigm. The panel data was drawn from a sample of 31 commercial banks in Kenya with inclusion criteria of all the banks that have been in operation from 2008-2019. The time frame of 12 years was ideal since more observations were obtained (372) to test research hypothesis and make reasonable inference. Use of audited financial reports was appropriate since they are accessible and reliable for the public.

Measurements of the variables

The measurements of the research variables are illustrated in table I below.

Table I. Measurement of Variables

Type	Variable	Measurement	Reference(s)
Dependent variable	Financial Performance	ROA	Brahmana, Kontesa, & Gilbert, (2018)
Independent variable	Income diversification	1-Herfindahl Hirschman Index (HHI)	Luu, H. N., Nguyen, L. Q. T., & Vu, Q. H. (2019)
Moderating Variable	Investment Structure	$IS = \frac{(ISt - ISt-1)}{ISt-1}$	Diamond, (1984) & Gope (2018)
Control variables	Bank Size	Natural logarithm of total assets	Gürbüz, Yanik and Aytürk, (2013)
	Bank Lending strategy	Ratio of loans to total assets	Githaiga (2021)
	Loan portfolio quality	Ratio of non-performing loans to total loans and advances	Adesina, (2021)
	Market share	Ratio of bank total assets to industry's total assets	Genchev, E. (2012)

RESULTS AND DISCUSSION

This section presents the findings of the study. The summary statistics, the correlation coefficients and the regression results are shown in table II, IV and V respectively.

Table 2. Summary 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
ID	372	.4062503	.078702	.1039373	.49998
IS	372	.4750224	1.15591	.0000805	12.73286

Source: (Researcher, 2021)

Table II (above) presents descriptive statistics of the panel data sampled. The average bank generates a net income of 3.5% with a standard deviation of 2.8%. The highest performer of the period had a profitability measure of 0.436% while the lowest recorded a loss of -3.3

%). The mean income diversity is 40.6% imply that only 59.4% of revenues are drawn from interest alone while the rest were generated from non-interest activities. With respect to the investment structure considered in the change of asset structure, the average bank reported 47.5% change every year with standard deviation of 1.1% and implication of the Kenyan banking asset structure being flexible thus possibility of increase diversifying activities (Cerasi and Daltung, 2000).

Turning to bank-specific characteristics, the study documents that mean bank age stands at 17 years with the oldest bank having 123 years since it start operating in Kenya. The largest bank explained by the number of assets stood to have mean of 17.376 with the highest bank recording 20.0195 and the lowest 14.97238. The lending strategy loan portfolio quality also recorded a mean of 0.54% and 0.12% respectively. The market share values were 3.204% and 0.002% for highest and lowest market respectively hence these results are in accordance with the Kenyan reports that asserts market share of banking industry are classified into three peers namely; large peer group, medium peer group and low peer group. The classes are distinguished by the market share (CBK, 2019). The variation of these bank characteristics influence the bank profitability thus the need to isolate the relationship between income diversification and profitability by controlling them to have an important impact on performance and to be systematic in relation to diversification (Kassem, & Sakr 2018; Skvarciany et al., 2019).

Table 3. Pairwise correlation analysis

	FP	Bank Age	Bank Size	LPQ	FLS	MS	ID	IS
FP	1.000							
Bank	0.3827*	1.0000						
Age								
Bank	0.4865*	0.6902*	1.0000					
Size								
LPQ	0.0815*	-	-	1.0000				
		0.2174*	0.3142*					
FLS	-	-	-	-	1.0000			
	0.3138*	0.1156*	0.1830*	0.1964*				
MS	0.5524*	0.5021*	0.6647*	-	-	1.0000		
				0.2945*	0.1905*			
ID	0.2757*	-0.0205	0.1101*	-0.0370	-0.026	0.1811*	1.0000	
IS	-	-0.1014	-0.0264	-0.0251	0.0204	-0.0544	0.0298	1.0000
	0.1966*							

* Correlation is significant at the 0.05 level (2-tailed).

Table III reports pairwise correlation of variables in the regression analyses. Correlations that is statistically significant at least at the 5% level. Income Diversity is positively and significant correlated to ROA ($r = 0.2757$; $p < 0.05$) but investment structure is negatively and significantly correlated to ROA ($r = -0.1966$; $p < 0.05$). This finding implies that as the bank diversification increases the impact on financial performance also improves hence supporting the following earlier previous studies that correlate with diversification and profitability (Rumelt, 1982 and Grant, Jammie, & Thomas, 1988). However, for investment structure as the changes increases the performances decreases. It was also important to have a look at correlations between financial performance and each of its bank specific characteristics. The results show that apart from financial lending strategy, the other four

control variables these pairwise correlations shows positive and significant at least at the 5% level.

Table 4. Regression Analysis

Variables	Fixed effects	Random effects
_constant	-8.983 (8.12)**	-7.178(0.661)**
ID	0.315(0.112)**	0.314(0.106)**
IS	-0.049(0.019)**	-0.040(0.19)**
ID*IS	-0.233 (0.07)**	-0.262 (0.075)**
Bank age	0.304 (0.099)**	0.099(0.059)
Bank Size	0.241(0.0511)**	0.196(0.040)**
Lending strategy	-0.147(0.048)**	-0.176(0.049)**
Loan portfolio quality	0.130(0.032)**	0.176(0.030)**
Market share	0.089 (0.032)**	0.086(0.024)**
R-sq	0.4863	0.5728
No. of observations	372	372
Hausman test	Prob< Chi2= 0.000	

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

Source: Researcher data, 2021

The results for both fixed and random effect on the moderation shows the relationship between income diversification and financial performance of commercial banks in Kenya as presented in table IV. The study adopted fixed effects results that records bank size, age, loan portfolio quality and market share which were significant and positive to bank performance while financial lending strategy had negative effects but significant($p < 0.05$). The control variables confirms the existing relationship with depended variables as documented on previous studies .Bank size shows a positive ($\beta = 0.241$, $p < 0.05$) relationship with profitability to imply that bank with more assets tend to be profitable since having more assets reduces its administrative costs hence saving on cost(Cerasi & Daltung, 2000 ; Brighi,& Venturelli,2014; Chen et al., 2018 and Amoah, et al.,2021). Bank age shows a positive ($\beta = 0.304$, $p < 0.05$) relationship with profitability, as the bank grows over the years they tend to break, stabilize their operations, manage risk and increase customer base resulting profitability (Lin et al., 2014). This findings is contrary to Talavera et al. (2018) who argued that bank age diversity have had negative impact on performance. Lending strategy presents significant detrimental relationship ($\beta = -0.147$, $p < 0.05$) with financial performance, and on the basis of this result one can conclude that such strategies increases default risk lowering the chances of making profitability(Lee et al., 2014; Githaiga & Yegon, 2019). Loan portfolio quality($\beta = 0.130$, $p < 0.05$) and Market share($\beta = 0.089$, $p < 0.05$) shows positive relationship as documented by Adesina,(2021) and Rau, (2000) respectively.

The regression model had overall significance but its power to explain the total variation of income diversification is good with about 48.63% .Specifically the results of income diversification was a significant and positive effect on the financial performance of commercial banks in Kenya ($\beta = 0.315$ $p < 0.05$). The results indicate that for one unit change of income diversification it increases the bank profitability by 31.5%. This study supports the empirical literature of diversification premiums such as Brahmana et al., (2018) who found that non-interest bank activities increases bank performances. As with Nisar et al., 2018, the study believes that income diversification is beneficial since it increases the profitability and stability of the banks. Amoah et al., (2021) also document that income diversifications drives

the bank's profitability because the financial strategy sources more revenues for the bank. Unlike the above-mentioned studies, the current study is against the proponents of the dark side of income diversification (Cadenas et al. 2021). They argue that income diversification is costly due to agency problems and related diversification cost that reduces the banks returns.

Whereas according to the findings the investment structure had negative and significant effects to financial performance ($\beta = 0.049$; $p < 0.05$). This implies a single change of investment structure will reduce bank performance by 5%. Empirically this is supported by the investing in the government securities in the investment structure presents low returns that takes long to be realized, resources that could have been invested in shorter array that yields more returns and the associated cost of investment though the risk is minimal (Doan et al., 2018). Finally when the two variables are interacted the moderating effect recorded the following results ($\beta = -0.233$ $p < 0.05$).

This means that the relationship is antagonistic. Moderation analysis shows that the bank that do not adjust the investment structure frequently are likely to diversify than the once who adjust always. This implies that activities of income diversification reduce when banks invest on government securities. Sissy & Amidu & Abor (2017) & Nepali (2018) recent studies that hinted possibility of joint effects on this relationship argued that since investment structure is one of income diversification, they hinted by extension that jointly affect income diversification and profitability. But the results are contrary to the study that establish income diversification and adjustment of investment structure is beneficial to banks performance since the structure will present an hybrid of portfolio that yields optimum results during deviation to non-interest activities (Kariuki & Sang 2018; Ukhriyawati, et al., 2017).

In summary the investment structure has a significant effect given income diversification and financial performance of commercial banks in Kenya. The regression model 1 can be fitted as follows;

$$FP_{it} = \beta_{0it} + 0.315ID_{it} - 0.049IS_{it} - 0.233(ID_{it} * IS_{it}) + 0.304Ba_{it} + 0.241BS_{it} - 0.147LS_{it} + 0.13LPQ_{it} + 0.089MS_{it} + \varepsilon_{it}$$

CONCLUSION AND SUGGESTION

The study successfully examined the moderating effect of investment structure on the relationship between income diversification and financial performance. The findings established significant interaction effects between income diversification and investment structure on financial performance. The step wise regression was done with first considering the effects of selected control variables the financial performance which was established that all five variables posit significant effects on the financial performance. Secondly the relationship of income diversification and investment structure and financial performance was analyzed with results showing positive and negative significant relationships respectively. Finally the last hypothesis tested to establish the joint effects in this case the direction between income diversification and financial performance changed when investment structure was introduced but the relationship was still significant. In conclusion the findings shows that investment structure matters during income diversification with aim of improving financial performances.

Implications of the study

To bank managers this study adds more insights on managerial decisions to consider investment structure when making diversification decisions.

Theoretically, first the findings support the modern portfolio theory that postulate that diversifying portfolios are beneficial since it is an avenue to reduce risk and increase returns. However, with the introduction of the investment structure the relationship was reversed. This imply for supporter of this theory they should consider other variables to guide the bank management on making informed decisions. It's also an opening space in research to test other theories that support diversification such as resource based view, market power and internal market hypothesis given the investment structure and other variables. For the scholars focusing on diversification premium and discounts they need to factor in the investment patterns for banks to add more on the two strands.

Bank regulators may use this as an evidence for prompt supervisory action that support non-interest activities while guiding banks on the investment structure. Secondly the government should restructure their investment structures to support diversification activities.

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