THE EFFECT OF COMMISSIONS AND FEES ON THE FINANCIAL PERFORMANCE OF COMMERCIAL BANKS IN KENYA: THE MODERATING ROLE OF VIRTUAL BANKING

Tom Abonyo Ajigo*
Department of Accounting and Finance
School of Business and Economics
Jaramogi Oginga Odinga University of Science and Technology (JOOUST)

Edwins Baraza, PhD, FKIB**
Department of Accounting and Finance
School of Business and Economics
Jaramogi Oginga Odinga University of Science and Technology (JOOUST)

Joanes Ofwa Wu'adongo, PhD***
Department of Accounting and Finance
School of Business and Economics
Jaramogi Oginga Odinga Uiniversity of Science and Technology (JOOUST)

Abstract
The moderating role of virtual banking on commission / fees and financial performance has been a matter of debate. Whether, this role has enhanced commissions and fees is the ground for anchoring this study. The study sought to assess the effect of commissions and fees and analyze the moderating role of virtual banking on the relationship between Commissions and Fees and the Financial Performance of commercial banks in Kenya. This study was guided by the Resource Based Theory, Market Power Theory, Adoption, Diffusion and Usage of Innovations Theory (ADUI) and Transactional Cost Innovative (TCI) Theory. The study adopted quantitative research paradigm design. The target population comprised of 120 senior management staff from 40 Commercial Banks operating in Kenya between the years 2013 to 2017. Cochran (1963) formula was used to arrive at a sample size of 36 commercial banks. Simple random sampling technique was used in the study. Secondary and Primary data collection methods were used. Instrument reliability stood at Cronbach's Alpha of 0.879. The study tested for unit root and stationarity, co-integration, multi-collinearity, presence of outliers, normality and heteroscedasticity. The results showed that Commissions and Fees had a positive significant influence on the financial performance ($\beta = 1.892$, $t = 30.501$, $p=0.000<0.05$). On moderation, the results indicated that the interaction effect of Virtual Banking had a positive significant influence on the relationship between Commissions/Fees and the financial performance ($\beta_2 = 1.057$, $\beta_3 = 1.623$, $t = 21.916$, p-value $=0.000 < 0.05$). The study recommended that banks should embrace virtual banking to improve income and financial performance. The study will be significant in the management of financial institutions; Government policy makers and other regulators may use it and can also form a basis for further research.

1.0 Introduction

The moderating role of virtual banking in its relationship with commissipon/fees and the financial performance of commercial banks is seen in the pervasive and flexible involvement of the banking model in form of online banking activities which allow customers to enjoy services such as account opening, fund transfer, payment services, and e-shopping; hence, virtual banking also known as

online banking is the service provided as in a bank through M-banking. In the last few years, the Kenya's banking industry has experienced volatile revenue earning levels and profitability. At the same time the focus on commission and fees have grown, perhaps driven by the fact that the increase in commissions and fees rates trails the monetary policy rate – the Central Bank Rate (CBR). A notable public concern is that Kenya's banks do not reduce their commissions and fees rates in tandem with the CBR's reduction (CBK, 2007). This study looked at commission and fees with a view to analyzing the moderating role of virtual banking on its quantity. The debate on regulating level of commission and fees in Kenya over a perception of unreasonably high rates set by commercial banks raised several concerns. Loss – making banks tended to generate a smaller share of their operating income from commission and fees (CBK, 2007), a state of affairs underlying two perspectives: on the one hand there was competitive pressure in the market for commercial banks, given commission and fees as one of their main income sources. As a result, driven by the need to maximize profit, banks are tempted to pay great attention to commission and fees rates that they charge. Commission and fees rates on the other hand are highly depended on level of business activities by commercial banks in addition to guideline by the central bank, which exposes the banks' earnings to sensitivity on changes in such guidelines. The Kenya's public's concern was that banks, in particular the big ones, exploited their customers as they raced to report 'super profits' by way of charging high commission and fees. However, it was believed that the problem was embedded in over concentration on commission and fees income. This raised the question on whether Kenya's banks could reduce the effect of the over-concentration to ease the pressure on commission and fees level by focing more to cost management.

1.1 Statement of the problem

Although financial performance of commercial banks in Kenya has tremendously improved over the years, it largely depended on interest income from commercial banks' loans and commissions and fees from over the counter transactions. Traditionally, banks adopted manual transactional methods, which limited their growth in terms of profitability, visibility, geographical expansion and growth in customer base. Banking services have however evolved over the years from traditional to modern ways of transacting businesses including digital and virtual banking due to innovation leading to income diversification and improved operational efficiency.The moderating role of virtual banking on commissions/ fees and financial performance has been a matter of debate and whereas commercial banks in the recent past have embraced income diversification following public outrage about the high interest rates they charge, banks stakeholders are concerned whether this shift in income sources will leave the banks in their current superprofit level; this is the ground for anchoring this study. According to Markowitz (1952), diversification in commercial banking is about commercial banks generating income from non-interest earning activities and from interest earning activities and realigning the bank's income to include less of the traditional interest income and more of non-interest income activities.

1.2 Objective of the study

The effect of commissions and fees on the financial performance of commercial banks in Kenya: The Moderating Role of Virtual Banking.

<center>**2.0 LITERATURE REVIEW**</center>

2.1 Theoretical literature review
The following theories were adopted for the discussion of this study.

2.1.1 Resource Based Theory (RBT)
The relevance of the resource-based theory to this study was that, unless a commercial bank has adequate financial resources to mount a vibrant and robust infrastructural system to support innovation and virtual banking, it may lag behind in achieving high commissions and fees, financial goals and performance. This diversification in resource capacities will lead the banks to diversify their incomes, by entering new markets. Therefore, possesion of resources by a bank is not only beneficial in generating entry barriers but by also directly aiding diversification in associated activities which offers costs- benefits relation to the commercial banking business, finally leading to diversification in the income earned.
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2.1.2 Transactional cost innovative (TCI) theory
Niehans (2006) pioneered the transactional cost innovative theory; and advocated that the dominant factor of financial innovation is the reduction of transaction cost. Financial innovation is in fact therefore the response of the advancement in technology, which caused the transaction cost to reduce. The reduction of transaction cost can stimulate financial innovation and improvement of financial services. Transaction costs innovation (TCI) theory was relevant in this study. For instance, the use of internet connected information technology (ICIT) can substantially reduce a bank's transaction cost and improve operational efficiency as it enables efficient coordination, management, and use of information. Mobile and internet-connected IT may further lower transaction costs as it provides also off-site access to the bank's internal database and other relevant sources of information. Consequently, reduction of operation costs through virtual banking models such as agency banking, internet banking and mobile banking may influence growth in profitability for the banks hence enhanced performanceof the banks.

2.2 The Concept of Commission and Fees

Commissions and fees are the non-interest income of the banks. The debate over diversification however raised questions on whether the shift of the banks' business towards non-interest income had a negative or positive impact on profitability and sustainability. Since Kenyan banks were used to reporting increasing profitability, there was need to explore other viable sources of income that would maintain profitability at current levels while reducing the level of commission and fees charged.This study therefore sought to assess potential of fee-based product mix on their ability to boost the performance of commercial banks in Kenya.In that context, diversification in the banking industry suggested the existence of various forms of diversification; namely geographical, source of income, products and /or service, and economic sector (Tabak et al., 2011; Pennathur,2012). These studies discussed income diversification into non-interest income sources as additional banking theory argued that credit diversification reduced the probability of default (Tabak et al., 2011). Therefore less diversified banks were more vulnerable to economic downturns by exposing themselves to fewer sectors, thus suggesting that credit portfolio would yield benefits if it was diversified. Further, it was argued that concentration strategy was highly related to risk, because of the belief that diversifation by firms reduced risks (Lin et al., 2012; Smith et al., 2003)

2.3 The concept of Virtual Banking
This is the provision and availment of banking services that does not require the customers to physically visit commercial banks' branches; and technology used in the banking has focused on reducing cost of distribution. Virtual banking is therefore, characterized as a process innovation by making customers handle their own banking without physically going to the bank branches. It also allows non-banks to provide only closed network limited to the existing clients. Considering that, new products and services are specifically designed and offered on the virtual banking platform, given the new technology features; virtual banking has also an aspect of product innovation (Jhumkee, 2007). Virtual banking has become popular channel for banks in providing banking services to their customers. The conveniences associated with this new mode of banking has tremendously reduced the hassles associated with traditional banking such as the inconvenience of physically going to the bank branch, spending hours in queues, not to mention reduced cost of banking associated with its use (Khalil et al., 2010). Virtual banking model allows instructions to automate delivery of new and traditional banking products and services directly to customers using its interactive electronic communication channels (Maher et al., 2010). Alan (2009) observed that in the course of the previous decade, virtual banking has attracted a lot of interest from bankers, financial services participants and regulators. Improving the efficiency of virtual banking is therefore considered to be important to the banking industry as it helps the banks maintain profitable growth by automating work done manually by employees, thus reducing cost and retaining customers.

2.4 Conceptual Framework
A conceptual framework is a research tool intended to assist a researcher to develop awareness and understanding of the situation under scrutiny and to communicate it. It forms part of the agenda for negotiation to be scrutinized, tested, reviewed and reformed as a result of investigation and it explains the possible connections between the variables (Smyth, 2004). The study conceptualized the moderating role of virtual banking (moderator variable) on Commissions and Fees (the Independent Variable) against Financial Performance (Dependent Variable).
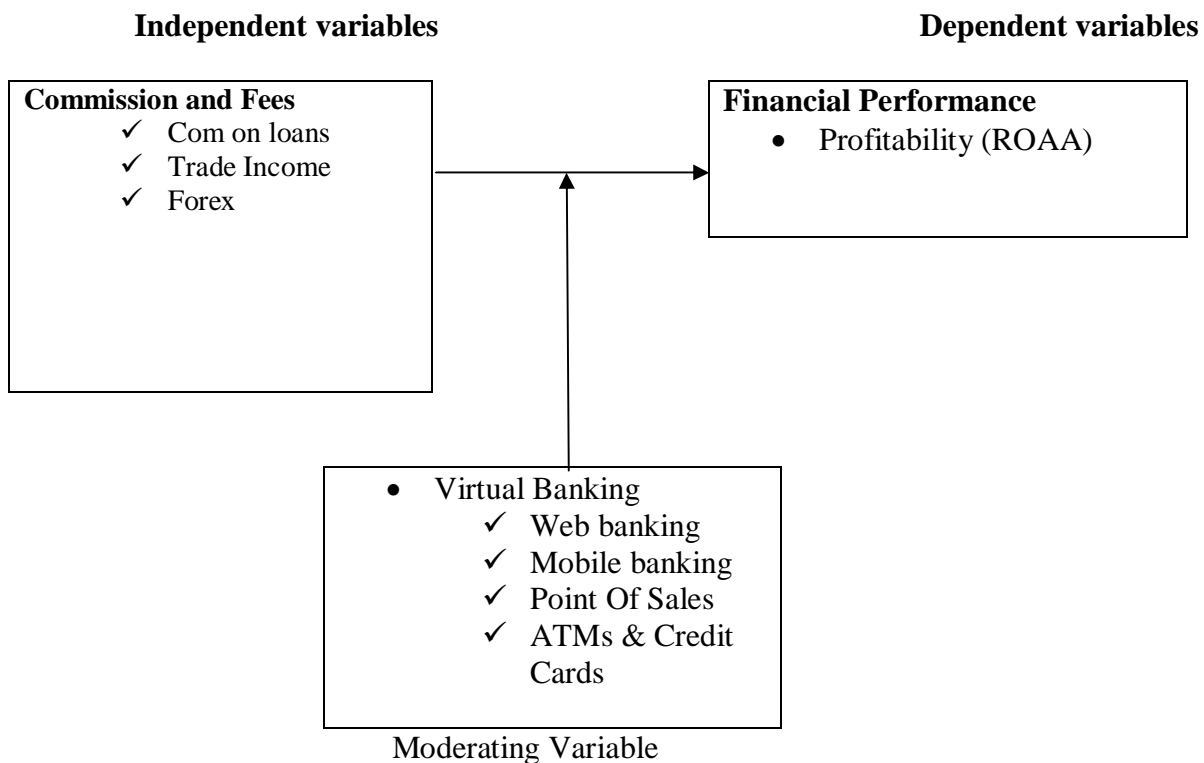
Independent variables   **Dependent variables**

Figure 2.1: Conceptual framework
Source – Researcher (2021)

3.0 RESEARCH METHODOLOGY

3.1 Research Design

The study was guided by quantitative research paradigm design as it was based on testing of a theory composed of variables, measured using numbers, then analyzed by use of statistical procedures to determine whether the predictive generalizations of findings hold true (Creswell, 2003). The study adopted balanced Panel Data analysis research technique.

3.2 Study area

The area of study was Kenya. The study covered all the commercial banks in Kenya all headquartered in Nairobi with their branches spread across the country. Kenya is a country in East Africa lying in the latitudes and longitude of 4^oN and 4^oS as well as 34^oE and 42^oE respectively. Virtual Banking has a moderating role on commissions/ fees and the Financial Performance of Commercial Banks in Kenya.

3.3 Target Population

The target population comprised of 120 senior management staff drawn from 40 Commercial Banks operating in Kenya between the years 2013 to 2017. This comprised of 40 heads of credit, 40 heads of operations and 40 heads of Information Technology (IT) all based at Head Offices of the Commercial Banks operating in Kenya.

3.5 Sampling technique and sample size

Cochran (1963) formula was used to select the sample size of banks for the study from the total number of banks. The Cochran (1963) formula is given as:

Infinite sample size; $n_o = \dfrac{[Z^2 P(1-P)]}{e^2}$

Where;

       N = Total population

       n = Sample size (from finite population)

       Z = given Z value (from Z table) = 1.96

       P = percentage of population = 0.5

       e = margin of error = 5% = 0.05

       q Value = (1 – P) = 0.5

Thus,

    $n_o = \dfrac{[(1.96^2)0.5(1-0.5)]}{0.05^2} = 384.16$

From the above,

$$n = \frac{n_o}{\left[1 + \left(\frac{n_o - 1}{N}\right)\right]}$$

$$n = \frac{384.16}{\left[1 + \left(\frac{384.16 - 1}{40}\right)\right]} = 36;$$

Hence, 36 banks were the sample size that was studied. The formula assumes a margin precision of 0.5 and a confidence of 95%; Cochran (1963) formula was adopted to arrive at a sample size of 36 commercial banks. Simple random sampling was used to select the 36 commercial banks arrived at from the Cochran (1963) formula for the study from the total population of 40 banks. Simple random sampling technique was considered as suitable because it gives all the banks a chance to be selected for this study. A sample size of 108 comprising 36 heads of Credit, 36 heads of Operations and 36 heads of Information Technology (IT) representing 90% of the target population (Table 3.1) was used. The study considered the senior managers of the selected commercial banks totaling to 108 as the respondents.

3.6 Data collection

3.6.1 Types and sources of data

This study used both primary and secondary data. Primary data was collected from original sources while Secondary data was obtained from journals, periodicals, magazines, libraries, reports, internet, banks' financial statements and other publications.

3.6.2 Data Collection Instruments

Both the questionnaires and interview schedules were used to collect data from the sample population. Each item in the questionnaire was developed to address specific objective (Mugenda, 1999). Personal or face to face and telephone interviews were conducted.

3.7 Piloting

The questionnaire was administered to a total of 12 (11.1%) respondents representing 4 commercial banks out of the 40 commercial banks operating in Kenya. Blumberg et al (2014) noted that the size of a sample to be used for pilot testing varies depending on time, costs and practicality, but the same would tend to be 5-10 per cent of the main survey. The banks involved in the pilot study were UBA bank Limited, Middle East bank Limited, Chase Bank Limited and Dubai Bank Limited. These

banks were chosen for piloting because they operate in a similar environment and they were not to be part of the study. Cronbach's alpha coefficient was generated to establish reliability. A coefficient index of 0.807 was attained and this was considered to be sufficient indicator that the questionnaire would give reliable results for the study.

3.8 Reliability of the Research Instruments
Reliability test was conducted to determine the internal consistency and stability of the data. Reliability refers to the consistency of a measure (Middleton, 2019).

3.9 Validity of Research Instruments
Validity refers to the accuracy of a measure (Middleton, 2019). Data collection instrument was exposed to subject and research experts who included the university supervisors to critique for clarity and ability to collect intended data.

3.10 Data analysis and presentation
The study was guided by quantitative research paradigm. Since the study focused on the relationship between variables, bivariate analysis was conducted using Pearson's correlation techniques (O' Connor, 2011) and Panel data analysis.

3.10.1 Simple Linear Regression Analysis
To predict financial performance (Y) of the commercial banks given commissions and fees in time t (X_{2t}) under second study hypothesis (H_{02}), the study used the following linear regression model: $Y = \beta_0 + \beta_{2t} X_{2t} + \varepsilon_{it}$, where β_0, and β_2, are constants and regression coefficient respectively.

3.10.2 Moderation Analysis
In moderation analysis the study adopted Partial Least Squares Path Modelling (PLS-PM) in Panel Data through XLSTAT software for which the relationships between one dependent variable and one independent variable were moderated with the Virtual banking as a moderator. In the model, the interaction effect was used to indicate the presence/absence of the moderation effect. To model the moderation effect of Virtual banking (V) on the relationship between Financial Performance (Y_{it}) and Commissions and Fees (X_{it}) under hypothesis (H_{02b}), the following regression model was used: $Y_{it} = \beta_0 + \beta_1 X_{it} + \beta_2 V + \beta_3 X_{it}V + \varepsilon_{it}$. Thus, $Y_{2t} = \beta_0 + \beta_1 X_{2t} + \beta_2 V + \beta_3 X_{2t}V + \varepsilon_{it}$, where; The moderator variable Virtual Banking (V) is connected to the independent variable Commission and Fees (X_{2t}) multiplicatively and is integrated into the analysis as an interaction term $X_{2t}V$ so that the moderator effect can be interpreted concerning its scope and significance. β_0 is a constant and $\beta_1, \beta_2,$ and β_3 are regression coefficients.

3.11. The Assumptions and Testing of Regression Assumptions:
This study performed the following tests of the regression assumptions.

3.11.1 Normality Test
Pallant (2005) observed that an assessment of normality of the dependent variable is a prerequisite condition in multiple linear regression analysis. All the variables are assumed to be normally distributed. If the dependent variable is not normally distributed, then there would be problems in the subsequent statistical analyses.

3.11.2 Linearity
The presence of linear pattern would imply that the linearity assumption is satisfied. It is assumed that there is a linear relationship between the independent and dependent variables.

3.11.3 Test for Heteroscedasticity
It tests whether the variance of the errors from a regression is dependent on the values of the independent variable.

3.11.4 Multi-collinearity Test
Multi-collinearity describes the relationship among independent variables in a study. The study adopted the use of Variance Inflation Factor (VIF), tolerance values and correlation coefficients to detect multi-collinearity.

3.11.5 Test for Outliers
In statistics, an outlier is a value recorded for a given variable that seems unusual and suspiciously lower or greater/higher than the other observed values. These could be due to typing error or reading error. In large samples if only a few scores are greater than the absolute 3.3, then there is no cause for alarm (Pallant, 2007). Outliers' scores can only happen on interval and ration scale variables (Gravetter *et al.,* 2000).

3.11.6 Unit Root and Stationery Test
Unit root tests were done as a common procedure to determine whether the trending or financial data variables follow a random walk. If the existence of a unit root for a series cannot be rejected, then the series is said to follow a random walk. In any case there always exists a long-run equilibrium relationship among non-stationary time series variables.

3.10.5.7 Co-integration test
Co-integration tests investigated possible correlations among several time series data (multivariate variables) on Commission/Fees and financial performance in the long term. The panel co-integration tests were done using the XLSTAT software model.

4.0 DATA ANALYSIS, PRESENTATION AND DISCUSSIONS

4.1 Descriptive Analysis on Interest Income:
Respondents were assessed on Commissions/Fees and its diversification effect amongst commercial banks in Kenya. Using the matrix with questions on commission and fees, they were asked to put a tick (√) in the column to the right side of the option that best suited their response. The rating was on a scale of 1 to 5 with 1 denoting Strongly Disagree, 2 - Disagree, 3 – Undecided, 4 - Agree and 5 – Strongly Agree. Results for descriptive analysis for Commissions/Fees were as indicated in Table 4.5 below.

Table 4.5: Commission and Fees

Sr.	Constructs (Statements)	SDA	DA	U	A	SA	Total	Mean	StdDev
C.1	The bank's commission and fees has greatly increased due to Income Diversification	2	3	0	18	85	108	4.676	4.219
C.2	Commission and fees include transactional and operational charges	0	0	1	19	89	108	4.824	4.312
C.3	The bank's system security is capable of detecting income leakages	0	0	0	33	75	108	4.694	4.190
C.4	All the bank's services and activities attract either commissions or fees.	1	1	1	40	65	108	4.546	4.069
C.5	In some cases commission and fees are not collected due to human error	0	0	0	37	71	108	4.657	4.154
C.6	There is a lot of human intervention in the collection of commissions and fees	4	6	2	34	62	108	4.333	3.935
C.7	The collection of commissions and fees is automated and requires minimum or no human intervention.	2	0	0	41	67	108	4.620	4.119
C.8	Banks' commissions and fees are derived from various income sources of the bank.	0	5	3	31	69	108	4.519	4.060
C.9	Although CBK is doing enough to check on the banks'compliance to procedures on commissions and fees, commissions and fees remain a major source of income for the banks	1	2	1	23	81	108	4.676	4.201
C.10	Commissions and fees should be diversified through innovation.	0	0	0	81	27	108	4.250	3.742
Average contribution of Commissions and Fees on Financial Performance		Mean	%Mean		Standard Deviation			Standard Error of the Mean	
		4.555	91%		0.76353			0.07343	

From Table 4.6: The findings of the study revealed that on average, the contribution of commission and fees on the financial performance of commercial banks in Kenya was 91.09% (mean = 4.555, Standard Deviation = 0.76353), rated high. Thus, income from commission and fees has greatly increased due to Income Diversification by commercial banks as confirmed by 17% and 79% of the respondents who agreed and strongly agreed respectively. 19% and 75% of the respondents also agreed and strongly agreed respectively to the fact that commissions and fees income should be diversified through innovation. 21% and 75% of the interviewees agreed and strongly agreed respectively that although CBK is doing enough to check on banks' copmliance to procedures on commissions and fees,commissions and fees remain a major source of income for the the banks. 38% and 54% of the respondents both agreed and strongly agreed respectively that the collection of commissions and fees is automated and requires minimum or no human intervention across the banks.37% and 60% of the respondents agreed and strongly agreed respectively tha, all the banks services and activities attract either commissions or fees. They agreed and strongly agreed at 34% and 66%respectively that in some cases commissions and fees are not collected due to human error.

4.3.10 Descriptive Analysis on Financial Performance:

Respondents were assessed on the financial performance of the commercial banks in Kenya. Using the matrix with questions on Financial Performance, they were asked to put a tick ($\sqrt{}$) in the column to the right side of the option that best suited their response. The rating was on a scale of 1 to 5 with 1 denoting Strongly Disagree, 2 - Disagree, 3 Undecided, 4 - Agree and 5 – Strongly Agree. Results for descriptive analysis for Financial Performance were as indicated in Table 4.10 below.

Table 4.10: Financial Performance

Sr.	Constructs (Statements)	SDA	DA	U	A	SA	Total	Mean	StdDev
F.1	Virtual banking has enhanced the financial performance of most commercial banks today	1	5	1	83	18	108	4.037	3.564
F.2	Our bank is rated in its current tier due to it's financial performance	2	6	4	67	29	108	4.065	3.626
F.3	Our bank's current assets are easily convertible to cash	0	4	0	53	51	108	4.398	3.925
F.4	Debts owed by our bank reduces returns on equity	1	4	1	63	39	108	4.250	3.788
F.5	Interest rates affects our bank's long term equity earnings	3	1	1	44	59	108	4.435	3.986
F.6	Financial policy of the country influences our bank's dividend payout ratios/rates	0	5	2	20	81	108	4.639	4.174
F.7	The banks'profitability has had a positive growth for five years	0	1	1	98	8	108	4.046	3.528

F.8	NPAs have led to our bank's poor financial performance	0	0	0	31	77	108	4.713	4.208
F.9	Virtual banking is a costly venture to most commercial banks in Kenya	0	0	0	12	96	108	4.889	4.372
F10	Virtual banking has played a moderating role between interest income, operating efficiency, commissions/fees and loan loss provisions to ensure increased financial performance	3	3	3	46	53	108	4.324	3.892
Average Financial Performance of Commercial Banks in Kenya		Mean		%Mean		Standard Deviation		Standard Error of the Mean	
		4.380		87.59%		1.7543		0.1688	

From Table 4.10: The findings of the study revealed that on average, the financial performance of commercial banks in Kenya was 87.59% (mean = 4.380, Standard Deviation = 1.7543), rated high. Thus, the financial performance of the commercial banks in Kenya remains as confirmed by 77% and 17% of the respondents who agreed and strongly agreed respectively by stating that, virtual banking has enhanced the financial performance of most the commercial banks today. 91% and 7% of the respondents also agreed and strongly agreed respectively to the fact that profitability of the banks has had a positive growth of/for five years. 12% and 89% of the respondents agreed and strongly agreed respectively that Virtual banking is a costly venture to most commercial banks in Kenya. This has greatly affected the financial performance of commercial banks in Kenya. All the interviewees from the 36 Commercial Banks in Kenya indicated that NPAs have led to their bank's poor financial performance. 43% and 49% of the respondents agreed and strongly agreed respectively that Virtual Banking has played a moderating role on commission and fees to ensure increased financial performance.

4.4 Hypothesis Testing
4.4.1 Tests for Regression Assumptions
The study sought to test for the assumptions for linear regression between Commission and Fees and Financial Performance of commercial banks in Kenya.

4.4.1.1 Test for Normality
Pallant (2005) observed that an assessment of normality of the dependent variable is a prerequisite condition in multiple linear regression analysis. All the variables are assumed to be normally distributed. If the dependent variable is not normally distributed, then there would be problems in the subsequent statistical analysis.

Table 4.24: Results of Hypotheses Testing

Model summary	Int Inc
R	0.716
R Square	0.513
Adjusted R Square	0.538
Std. Error	0.062
ANOVA	
Degrees of freedom, (DF)	107
F- statistic, (F)	930.33
p-value for F- statistic	0.000
Regression Coefficients	
Intercept	366.1
β (Unstandardized coefficient)	1.892
Standardized Beta Coefficient	0.716
t (β)	30.501
p-value (β)	0.000
t (Intercept)	1.746
p-value (Intercept)	0.000

4.5.1 Hypothesis: $H_{02:}$ Commission and fees have no significant effect on the financial performance of commercial banks in Kenya. The study sought to assess the effect of commission and fees on financial performance of commercial banks in Kenya. The Coefficient results in Table 4.24 showed a positive significant influence ($\beta = 1.892$, t = 30.501, p=0.000<0.05) and therefore the study rejected the null hypothesis and concluded that commission and fees had a statistically positive significant influence on financial performance of commercial banks in Kenya from the year 2013 to 2017. Commission and fees had a positive standardized beta coefficient value of 0.716 as shown in the coefficients results of Table 4.24, an indication that a unit improvement in Interest income was likely to result to an improvement in the financial performance of commercial banks in Kenya by 71.6%. The ANOVA results as shown on commission and fees in Table 4.24 were, F = 930.33, P = 0.000 < 0.05 and 107 degrees of freedom; this was a clear indication that the linear regression model was a good fit to the dataset. The commission and fees were able to explain 51.3% of the variation in the financial performance of commercial banks in Kenya as indicated by the R^2 value of 0.513 as shown Table 4.24. The following linear regression model was used to predict the financial performance of commercial banks in Kenya as a result of growth in Interest Income: $Y_{it} = \beta_0 + \beta_2 X_{2t} + \varepsilon_{it}$. Thus, Financial Performance = 366.1 + 1.892 commission and fees+ε_{it}. Hence, $Y_{it} = 366.1 + 1.892 X_{1t} + \varepsilon_{it}$. This model fits the data well (F=930.33, p<.0000 and R^2=0.513). According to the results of the model, commission and fees greatly improves the financial performance of commercial banks in Kenya. The findings of this study agree with that in a study by Mutuma, J. (2016): in a study in a study on strategies adopted by commercial banks in Kenya to enhance financial performance, which concluded that non-interest income, and in this case, commission and

fees are posively related to profitabilityof commercial banks hence most commercial banks should practice diversification in order to boost their profits and expand their businesses.

Table 4.25: Results of Moderation Analysis

Model summary	Int Inc
R	0.723
R Square	0.523
Adjusted R Square	0.512
Std. Error	0.0218
ANOVA	
Degrees of freedom (*DF*)	107
F- statistic, (F)	104.360
p-value for F- statistic	0.000
F-Change statistic	7.609
p-value for F- Change statistic	0.006
Regression Coefficients	
Intercept	158.96
β (Unstandardized coefficient)	0.461
Standardized Beta Coefficient	0.721
t (β)	25.214
p-value (β)	0.000
t (Intercept)	2.713
p-value (Intercept)	0.000
Interaction Effect	
β_2 (Unstandardized coefficient)	1.057
β_3 (Unstandardized coefficient)	1.623
Standardized Beta Coefficient	0.925
t (β_{23})	21.916
p-value (β_{23})	0.000

Source: Research Data, 2020

4.5.5.1.1 Hypothesis H$_{05b}$: Virtual banking has no significant moderating role on the relationship between Commission and Fees and Financial Performance of commercial banks in Kenya. Based on the findings in Table 4.25, Commission and Fees show that the interaction effect of Virtual Banking had a positive and significant moderating influence on the relationship between Commission and Fees and the financial performance of Commercial Banks in Kenya as indicated by significant beta and p values (β_2 = 1.057, β_3 = 1.623, t = 21.916, p-value =0.000 < 0.05). Therefore, the study rejected the null hypothesis (H$_{05b}$) and concluded that Virtual Banking had a positive and significant moderating influence on the relationship between Commissions and Fees the financial performance of Commercial Banks in Kenya. The ANOVA results as shown in/for the Commission and Fees Model of Table 4.25 were significant as indicated by the F-Statistic,(F = 104.360, P = 0.000 < 0.05) which indicated that the Partial Least Squares Path Modelling (PLS-PM) in Panel data through XLSTAT software model was a good fit to the dataset. The results indicated that Commissions and Fees had a statistically strong positive significant influence on the financial performance of commercial banks in Kenya (R = 0.723; p = 0.000<0.05); an indication that due to the moderating

role of virtual banking there was great improvement in Commissions and Fees by commercial banks hence increased financial performance. A coefficient (R) between +0.5 and +1 or -0.5 and -1 indicates a strong relationship. The overall model was able to explain 52.3% of the variation in financial performance as indicated by the R Square value of 0.523 in Table 4.25. To model the moderation effect of Virtual banking (V) on the relationship between Financial Performance (Y_{it}) and Interest Income (X_{it}) under hypothesis (H_{05b}), the following model was used: $Y_{it} = \beta_0 + \beta_1 X_{it} + \beta_2 V + \beta_3 X_{it}V + \varepsilon_{it}$. Thus, $Y_{1t} = \beta_0 + \beta_1 X_{2t} + \beta_2 V + \beta_3 X_{2t}V + \varepsilon_{it}$: Where; β_0 is a constant and $\beta_1, \beta_2,$ and β_3 are regression coefficients. Hence from Table 4.25: $Y_{2t} = 158.96 + 0.461X2t + 1.057V + 1.623X_{2t}V + \varepsilon_{it}$. This model fits the data well (F=104.360, p<.0000 and R^2=0.523).

5.1 Summary of Findings

The findings of the study revealed that on average, the contribution of Commissions and Fees on the financial performance of commercial banks in Kenya was 91.09% (mean = 4.555, Standard Deviation = 0.76353), rated high. The results indicated that Commissions and Fees had a statistically strong positive significant influence on the financial performance of commercial banks in Kenya (R = 0.716; p = 0.000<0.05). A coefficient (R) between +0.5 and +1 or -0.5 and -1 indicates a strong relationship. ANOVA test showed a positive significant influence ($\beta = 1.892$, t = 30.501, p=0.000<0.05). The ANOVA results also showed (F = 930.33, P = 0.000 < 0.05) and 107 degrees of freedom; this was a clear indication that the linear regression model was a good fit to the dataset. The Commissions and Fees were able to explain 51.3% of the variation in the financial performance of commercial banks in Kenya as indicated by the R^2 value of 0.513. The findings further revealed that: Commissions and Fees shows that the interaction effect of Virtual Banking had a positive and significant influence on the relationship between Commissions and Fees and the financial performance of Commercial Banks in Kenya as indicated by significant beta and p values ($\beta_2 = 1.057$, $\beta_3 = 1.623$, t = 21.916, p-value =0.000 < 0.05). The ANOVA results were significant as indicated by the F-Statistic, (F = 104.360, P = 0.000 < 0.05). The overall model was able to explain 52.3% of the variation in financial performance as indicated by the R Square value of 0.523.

5.2 Conclusion

The study rejected the null hypothesis (H_{02}) and concluded that Commissions and Fees had a statistically positive significant influence on financial performance of commercial banks in Kenya from the years 2013 to 2017. The study rejected the null hypothesis (Ho_{5b}) and concluded that Virtual Banking had a positive and significant influence on the relationship between Commissions and Fees and the financial performance of Commercial Banks in Kenya.

5.4 Recommendations

The study recommends from conclusion and finding on objective two that commercial banks in Kenya should work towards diversifying Commissions and Fees to improve their financial performance. This study concentrated on the role of Virtual Banking as a moderator. It was not possible to study the role of digital banking as a moderator on income diversification, operational efficiency and financial performance of commercial banks in Kenya. This requires further research. Further research should also be carried out on other industries, for example, retail, wholesale and manufacturing industries who are the main consumers of financial products.

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