Evaluation of Operational Risk Management Practice and Financial Performance of Commercial Banks in Kenya

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ABSTRACT

Commercial banks in Kenya have been facing financial performance challenges. This is reflected in the fluctuating financial performance demonstrated by various performance indicators. For instance, Kenya's banking sector's profit before tax dropped by an 8.8% margin to Ksh. 219.2 billion in the FY ending December 31, 2023, from Ksh. 240.4 billion reported in the preceding year (CBK, 2023). Out of the 38 commercial banks and one mortgage firm, only 11 institutions posted a strong performance rating under the CAMEL rating system employed by the CBK. This study was conducted to determine the effect of operational risk management practice on financial performance. The theory of enterprise risk management and the economic value-added model anchored the study. A cross-sectional survey research design was adopted. The study employed a deductive approach and quantitative research methods. All 38 licensed commercial banks in Kenya constituted the unit of analysis. The accessible population included heads of finance, credit, compliance, operations, and marketing. A census design was adopted to obtain the respondents who constituted the unit of observation. A structured questionnaire and a data collection sheet were used to collect primary and secondary data, respectively. The Statistical Package for Social Sciences was utilized to assist in analyzing the data using descriptive and inferential statistics. Operational risk management practice exhibited a positive correlation with financial performance. The effect of operational risk management on financial performance was statistically significant at p-value = 0.05 (t = 31.2; p = 0.000 < 0.05). The study concluded that operational risk management practice was crucial to the financial performance of Kenya's commercial banks. It was recommended that banks develop policies that effectively guide operational risk identification, assessment, and management.

Keywords: Commercial banks, economic value-added model, enterprise risk management model, financial performance, operational risk, operational risk management

INTRODUCTION

The overriding objective of commercial banks is to maximize their financial performance. This notwithstanding, it is evident that while some banks perform well financially, the financial performance of others is poor [1]. Therefore, commercial banks are concerned with factors that affect their financial performance. Financial performance is defined as a firm's achievement over a particular period regarding the collection and allocation of financial resources [2].

Operational risk is defined as the loss a business is likely to incur due to failed or inadequate internal processes, systems, people or external factors. The key operational risk aspects include internal processes, infrastructure, human factors, external events and systems. These aspects lead to direct and indirect losses to a business. These losses take the form of expected, potential or unexpected losses [3]. Operational risk constitutes a significant proportion of banks' risk exposure. This risk is quite different from other financial risks. It is classified as a pure financial risk since it always results in the bank's financial loss. It can potentially lead to a bank suffering from other financial losses [4].

Commercial banks in the United States continue to report excellent financial performance. For instance, the

largest bank by assets in the country, JPMorgan Chase, posted revenue amounting to USD 158.1 billion in FY 2023. Cumulatively, the leading 10 commercial banks in the US reported revenue of USD 656.7 billion in the same financial year [5]. These statistics notwithstanding, the performance of commercial banks in the US has considerable room for improvement [6].

An effective risk management strategy is crucial to Nigerian commercial banks' profitability. The effective management of credit, operational, and liquidity risks enhances the financial performance of Nigerian commercial banks [7]. The lending operations of commercial banks expose them to the risk of loan defaults, referred to as credit risk. Commercial banks are highly likely to incur losses when the internal processes fail (operational risk occurs). In Nigeria, operational risks have led to commercial banks incurring huge losses through fraud and forgery [7].

The financial performance of commercial banks in Kenya has been fluctuating. The latest bank supervisory report by the Central Bank of Kenya (CBK) noted that the profits for the year ending December 31st 2023, dropped to Ksh. 219.2 billion from Ksh. 240.4 billion was posted in the previous year [8]. However, the liquidity ratio increased slightly over the same financial period from 50.8% to 51.0%. The total income for the overall banking sector rose to Ksh 0.899 trillion by the end of FY 2023 from Ksh 0.745 trillion as of the end of FY 2022 [8]. Operating risks are some of the financial risks inherent to the banking sector in Kenya. The uncertainty in the occurrence of these risks underscores the importance of their management, granted that these risks are hypothesized to affect the financial performance of commercial banks in the country.

As of the end of 2023, there were 38 commercial banks licensed and regulated by the Central Bank of Kenya (CBK). The list of these banks is annexed in Appendix II [8]. These banks are categorized into three tiers based on their asset size: tier one, tier two, and tier three. The bank's Weighted Composite Market Share Index (WCMSI) is used to determine these tiers. Tier 1 banks have an MCMSI above 5%; tier 2's index ranges from 1% to 5%, while tier 3's index is below 1% [9]. Tier 1 banks consist of large commercial banks whose assets amount to hundreds of billions of Kenyan shillings, making it very difficult for them to collapse.

Statement of the Problem

Commercial banks in Kenya have been facing financial performance challenges. This is reflected in the fluctuating financial performance demonstrated by various performance indicators. For instance, Kenya's banking sector's profit before tax dropped by an 8.8% margin to Ksh. 219.2 billion in the FY ending December 31, 2023, from Ksh. 240.4 billion reported in the preceding year [8]. Out of the 38 commercial banks and one mortgage firm, only 11 institutions posted a strong performance rating under the CAMEL rating system employed by the CBK. Though this was a slight increase from the 7 banks that recorded a strong performance in 2022, the number of banking institutions that posted satisfactory financial performance dropped from 21 to 15 over the same period [8]. Poor financial performance was also underlined by the report that the banking sector recorded the highest non-performing loans-to-gross loan ratio (14.8%) in 2023 since 2007. This was indicative of prevailing credit risks faced by the banking sector [10]. Poor, declining or fluctuating financial performance has astronomical implications for the economy. This is founded on the fact that the banking centre contributes immensely to the GDP. As of 2023, the banking sector accounted for approximately 47% of Kenya's GDP [10]. Despite the existence of contextual financial performance problems among commercial banks, there is scant, if any, empirical literature linking operational risk management to financial performance. This further demonstrated a conceptual gap since it was, hitherto, not apparent how operational risk management affected the financial performance of commercial banks in Kenya. Consequently, these gaps informed this study.

Objective

To examine the effect of operational risk management practice on the financial performance of commercial banks in Kenya

Hypothesis

H₀: The effect of operational risk management practice on the financial performance of commercial banks in

Kenya is not significant.

H$_A$: The effect of operational risk management practice on the financial performance of commercial banks in Kenya is significant.

Theory of Enterprise Risk Management

Enterprise risk management (ERM) theory was developed in the mid-1990s by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The theory states that an entity can increase its stakeholders' value through risk identification, assessment, and management. It underlines the need for an organization to deal with the agency problem of risk aggregation and risk management [12].

The theory views risk management from a holistic perspective. It views all risks facing an entity together. The theory underlines the importance of management solving risks facing a firm on two bases: risk aggregation and risk governance, which are mechanisms that address information and agency problems, respectively [12]. The focus of ERM is on the aggregated risk exposures of the entire organization as well as how to assess its willingness and capacity to accept these exposures.

The theory is criticized for arguing that ERM is an evolving phenomenon that can take many years before it can be consistently practiced [13]. It also has shortcomings, demonstrated by the challenges in its implementation. These include ERM treating risks as discrete items, the perception that all risks are bad, role ambiguity, overemphasis on reporting, and over-adherence to static processes [13].

Enterprise risk management theory anchors this study. The theory has been applied in past empirical studies, which are partly similar to the present study. For instance, the theory was employed in a study on ERM and the performance of listed financial firms in Kenya [14]. The theory has also been used in a study that examined ERM and its link to organizational performance in Nigeri [15]. The present study applies the ERM theory to demonstrate various aspects of financial risk management. The theory illustrates how commercial banks can effectively manage operational risk to enhance their financial performance. This is informed by the assertion that this theory views all risks facing an entity together [12].

Economic Value-Added Model

The economic value added (EVA) model was propounded by Stern Stewart and Company consulting group (Stewart & Co.) in 1985 and advanced in 1991 and 1995. The model calculates or computes the economic value created by an entity over a particular period [16]. The EVA refers to a firm's operating profit after taxes (NOPAT) less the cost of capital. In other words, EVA is the change in the NOPAT [17]. Proponents of the model assume that an increment in a firm's EVA results in increased value of the firm. It is indicated that EVA is computed as follows [18].

$$EVA = NOPAT - (invested\ capital \times WACC)$$

Where: invested capital represents the sum of capital leases, debt and shareholders' equity, and WACC represents the weighted average cost of capital.

The EVA concept, however, has several inconsistencies which compromise its application. The model is only applicable to measure short-term performance; hence, it is inapplicable in long-term investments [19]. Another limitation is the fact that the true EVA of long-term investments cannot be accurately determined since long-term investments can only be subjectively estimated. Moreover, the EVA model cannot be used by firms which expect positive cash flow in the distant future [19].

The tenets of the EVA model justified its suitability for anchoring commercial banks' financial performance. Economic value added is highly recommended for measuring value creation in an organization [20]. Commercial banks' objective is to maximize value for investors, as depicted by ROE. The higher the ROE, the greater the value to equity holders.
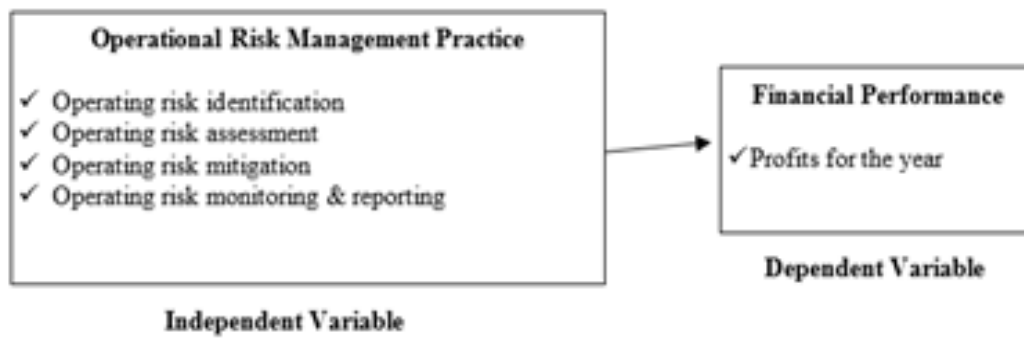
Conceptual Framework

Fig 1: Conceptual Framework

Fig 1 illustrates two distinct sets of variables: The independent variable (operational risk management practice) and the dependent variable (financial performance). Each variable has been operationalized using measurable indicators (or sub-constructs). It was hypothesized that there existed a relationship between the two sets of variables.

Empirical Review

Empirical studies pertinent to operational risk management and financial performance have been reviewed. For instance, an empirical survey in Russia examined operational risk management in a commercial bank [21]. The objective was to describe operational risk, its types, tools, and assessment methods. The study adopted empirical-level research methods while a hypothetical-deductive method was used at the theoretical level. The study revealed that operational risk management leads to a bank's stability and profitability. It also results in the attractiveness of the banking services to customers hence enhancing its competitiveness.

While focusing on commercial banks in Nigeria, an empirical study determined how risk management affected financial performance [7]. The study relied on secondary data from listed commercial banks between 2012 and 2021. A sample of 14 listed banks participated in the study. Descriptive and inferential statistics were employed to analyse the collected data. The study results indicated that operation risk did not significantly affect the commercial banks' net interest margin. Yet, the study failed to examine operational risk management and how it affects the financial performance of commercial banks.

A local study empirically investigated how financial risks affected the financial performance of commercial banks [22]. Specifically, the study examined the effect of operating risk on financial performance. A descriptive cross-sectional research design was adopted. Pertinent data was sourced from 37 commercial banks operating in Kenya. According to the study findings, operating risks did not have a statistically significant effect on the financial performance of the surveyed banks. The study focused on operating risks but not their management, hence occasioning a conceptual gap relative to the present study.

Another local study provided perspective on the operational risk and financial stability of commercial banks in Kenya [23]. The objective was to determine the link between operational risk and the financial stability of these banks. A correlational research design was adopted, involving data from 39 commercial banks for the period from 2017 to 2021. The study noted that operational risk was a significant predictor of financial stability. There was a conceptual gap as the reviewed study linked operational risk to financial stability rather than financial performance. It also addressed operational risk, but not its management.

Research Gaps

A critique of the analysed studies pointed out the differences and similarities between those examined earlier and the current research. For instance, a local research study employed a cross-sectional design, akin to the one used in this study, both focusing on all licensed commercial banks in Kenya [22]. In contrast, another local study

utilised a correlational design, yet it too concentrated on the same commercial banks. Noteworthy research gaps emerged [23]. The former study delved into operating risks but did not address their management, leaving a conceptual void concerning the present study [22]. Additionally, the latter research study created a conceptual gap by correlating operational risk with financial stability rather than with financial performance, also exploring operational risk without considering its management [23].

METHODOLOGY

The methodology illustrates the entire process of determining the most suitable research design, target population, census survey, data collection and analysis methods.

Research Design

A cross-sectional survey research design was adopted. Cross-sectional studies are descriptive since they examine the characteristics of a given phenomenon in a particular population at a specified point in time [24]. The aforesaid corroborates the present study, which examined financial risk management and financial performance of commercial banks at the time the data was collected. The study also adopted a deductive approach, where it sought to draw (deduce) conclusions regarding the aforementioned study constructs. Moreover, quantitative methods were employed. Therefore, quantitative (numerical) data were collected and subsequently analyzed concerning financial risk management and financial performance of commercial banks in Kenya. It is indicated that quantitative methods involve gathering numerical data, for instance, in survey research. It also uses specific statistical techniques to analyse numerical data [25].

Target population

The target population refers to all members of the population of interest sharing similar characteristics relative to the phenomenon under investigation [26]. The target population constituted the employees of the 38 licensed commercial banks in Kenya as of December 2023 [8]. Commercial banks under receivership or statutory management were excluded from the study. The accessible population consisted of the heads of finance, credit, operations, compliance, and marketing departments of the aforementioned banks. A subset of the target population that can be reached by the researcher within the available budget and schedule constitutes the accessible population [27]. Given that there are 38 fully operational commercial banks, the accessible population comprised 190 staff encompassing finance, credit, operational, compliance, and marketing departments' heads. Importantly, the 38 commercial banks constituted the unit of analysis.

Census Survey

A census design was employed to get the respondents from the accessible population. This implies that there was a complete enumeration of all the heads of finance, credit, operations, compliance, and marketing departments of the 38 commercial banks in Kenya. The choice of the census design was informed by the fact that sampling would have resulted in avoidable bias in selecting commercial banks and specific respondents. The 190 heads of departments constituted the unit of observation. The census survey was also employed because it enhanced the reliability and generalizability of the study results [28].

Data Collection Procedure

A structured questionnaire and a data collection sheet were used to collect primary and secondary data, respectively. Questionnaires are highly recommended for collecting data in survey studies. It is postulated that survey questionnaires are the cornerstone of every survey research [29]. The questionnaire was structured in conformity with a Likert scale of five points ranging from 'strongly disagree' to 'strongly agree'. Before administration for the main study, the questionnaire was pilot-tested to assess its validity and reliability. The questionnaire met the required content validity while both study constructs, operational risk management practice ($\alpha = 0.803$) and financial performance ($\alpha = 0.811$), returned Cronbach's alpha value above the minimum recommended threshold of 0.7. The secondary data collection sheet was modelled in a manner that optimized its applicability in the collection of documented data from financial reports of the 38 commercial banks in Kenya.

Pertinent data was collected after obtaining the relevant introductory letter, consent, approval, and research permit.

Data Analysis and Results Presentation

The collected data was analyzed with the assistance of the SPSS (Statistical Package for Social Sciences) Version 28. Data analysis used both descriptive and inferential statistical procedures. Primary data was analyzed first followed by secondary data. The respective results were then triangulated with the view of establishing similarity, contrast or how they complemented each other relative to operational risk management practice and financial performance. Importantly, descriptive statistics took the form of frequencies, percentages, mean, mode, median, standard deviation, range, skewness, and kurtosis. Correlation and ordinal least square (OLS) regression analysis were the inferential statistics that were used to analyse the collected data. The results were presented in tabular and narrative formats. The regression analysis followed this model.

$$Y = \beta_0 + \beta_1 X_1 + \varepsilon$$

Where:

   Y   = Independent variable (financial performance)

   β_0 = Constant

   β_1 = Regression coefficient for independent variable

   X_1 = Independent variable (operational risk management practice)

   ε = Margin of error

FINDINGS AND DISCUSSION

This section outlines the results of descriptive and inferential analysis. It also documents a discussion of the results by juxtaposing them against the findings of past empirical studies.

Descriptive Statistics

The perspectives of department heads on operational risk management and financial performance in Kenya's commercial banks were examined. The degree of agreement or disagreement on various pertinent propositions was assessed on a scale from 1 to 5 (strongly disagree to strongly agree), as illustrated in Tables 1 and 2.

Table 1: Descriptive statistics for operational risk management practice

	SD (%)	D (%)	N (%)	A (%)	SA (%)	Mean	S.D.
Operating risk identification is important in risk management.	0	0	0	37 (25.0)	111 (75.0)	4.75	.434
Operating risk assessment enables risk mitigation.	0	0	0	49 (33.1)	99 (66.9)	4.67	.472
The bank reports on the identified and assessed operating risks.	0	0	12 (8.1)	43 (29.1)	93 (62.8)	4.55	.642
The bank identifies operating risks regularly.	0	0	12 (8.1)	64 (43.2)	72 (48.6)	4.41	.637

The bank continuously monitors operating risks.	0	0	24 (26.2)	66 (44.6)	58 (39.2)	4.23	.710
The bank assesses operating risks immediately after they are identified.	0	0	27 (18.2)	100 (67.6)	21 (14.2)	3.96	.570

On average, it was strongly agreed that operational risk identification was important in risk management (mean = 4.75; S.D. = 0.434), operating risk assessment enabled risk mitigation (mean = 4.67; S.D. = 0.472), and that banks reported on the identified and assessed operating risks (mean = 4.55; S.D. = 0.642). Most respondents either agreed or strongly agreed that commercial banks identified operating risks (agree/strongly agree = 91.8%), continuously monitored operating risks (agree/strongly agree = 83.8%), and assessed operating risks immediately after they were identified (agree/strongly agree = 81.8%). The respondents' views concerning all aspects of operational risk management were largely similar (S.D. < 1.000).

Table 2: Descriptive statistics for financial performance

	SD (%)	D (%)	N (%)	A (%)	SA (%)	Mean	S.D.
Financial risks have directly/indirectly impacted the bank's profitability.	0	0	0	24 (16.2)	124 (83.8)	4.84	.370
The bank projects to realize increased profitability.	0	0	0	56 (37.8)	92 (62.2)	4.62	.487
The bank's profitability has increased steadily over the past 5 years.	0	13 (8.8)	21 (14.2)	90 (60.8)	24 (16.2)	3.84	.797
The bank is more profitable compared to other commercial banks in Kenya.	3 (2.0)	37 (25.0)	22 (14.9)	50 (33.8)	36 (24.3)	3.53	1.169
The bank realized the targeted profits for the year over the past 5 years.	0	41 (27.7)	24 (16.2)	68 (45.9)	15 (10.1)	3.39	1.000

It is evident from the results shown in Table 2 that the heads of credit, marketing, operations, finance, and compliance were strongly in agreement that financial risks directly or indirectly impacted commercial banks' profitability (mean = 4.84; S.D. = 0.370), and that these banks projected increased profitability (mean = 4.62; S.D. = 0.487). Although a few heads of departments disputed (disagree = 8.8%) or were indifferent (neutral = 14.2%), most concurred (agreed/strongly agreed = 76.8%) that commercial banks' profitability had increased steadily over the past five years. There were divergent views regarding some commercial banks being more profitable than others (mean = 3.43; S.D. = 1.169). In tandem, while some banks were more profitable, others were less profitable.

Secondary data was also used to illustrate the financial performance of Kenya's commercial banks for the period between 2019 and 2023, as shown in Table 3. The profits for the year posted by each of the 38 licensed commercial banks constituted the financial performance indicators. Summary statistics for the aggregated profits for the year are presented in Table 3.

Table 3: Summary statistics for aggregated profits for the year

Indicator	FY2023 Ksh '000'	FY2022 Ksh '000'	FY2021 Ksh '000'	FY2020 Ksh '000'	FY2019 Ksh '000'
Total	180,696,107	176,058,786	147,881,780	88,035,566	105,548,926
Mean	5,162,746	4,890,522	4,107,827	2,515,302	3,015,684
Highest	26,666,744	34,736,113	32,184,821	18,346,857	22,705,901
Lowest	619	9,705	47,078	-200,904	-1,063,235
Range	26,666,125	34,726,408	32,137,743	18,547,761	23,769,136

Source: Respective Commercial Banks' Annual Financial Reports (2019-2024)

According to the results shown in Table 3, the highest profits for the year were recorded in the financial year 2023 (Ksh 180.70 billion), while 2020, which recorded Ksh 88.04 billion, was the least profitable year for commercial banks operating in Kenya. These results could be explained by the fact that in 2023, Kenya had stabilized politically after the general elections in 2020. The year 2020 witnessed the climax of the coronavirus disease 2019 (COVID-19), which immensely affected the financial and economic situations of all industries, including the banking sector. According to a survey by the Kenya Bankers Association (KBA), there were economic shocks induced by COVID-19 [30].

Except in 2020, when the total profits dipped considerably due to the COVID-19 pandemic, commercial banks have recorded rising profitability. The average profits recorded by the commercial banks oscillated between Ksh 2.5 billion and Ksh 5.2 billion. The year 2022 recorded the highest profits range of Ksh 34.7 billion. Notably, Equity Bank and KCB were found to be the most profitable banks over the 5 years when the survey was conducted. The findings corroborated the fact that both banks are the largest by account holders and assets, respectively. As of 2024, the two banks were the leading commercial banks in Kenya, with their cumulative tier 1 capital reaching USD 2.66 billion [31].

Inferential Statistics

Correlation and simple linear regression constituted the inferential statistical analyses conducted on the collected data. Whereas the overriding objective of the correlation analysis was to assess the nexus between operational risk management practice and the financial performance of commercial banks in Kenya, simple regression was employed to determine the effect of the aforementioned practice on banks' financial performance. The relevant results are presented in Tables 4, 5, 6 and 7

Table 4: Spearman's correlation results

		ORM	FM
ORM	Pearson Correlation	1	.933[**]
	Sig. (2-tailed)		.000
	N	148	148
FM	Pearson Correlation	.933[**]	1
	Sig. (2-tailed)	.000	
	N	148	148
**. Correlation is significant at the 0.01 level (2-tailed).			

Key:

FM   = Financial Performance
ORM   = Operational Risk Management

According to the correlation results shown in Table 4, it was established that the relationship between operational risk management practice and financial performance was positive, strong and statistically significant ($r = 0.933$; $p = 0.000 < 0.05$). Therefore, enhancing the aforementioned management practice was bound to have a substantial increase in commercial banks' financial performance. These results were contrary to the observation that operating risks did not have a statistically significant effect on commercial banks' financial performance [22].

Table 5: Model summary for ORM against FP

Model	r	r Square	Adjusted r Square	Std. Error of the Estimate
1	.933[a]	.870	.869	.16712
a. Predictors: (Constant), ORM				

According to the results shown in Table 5 ($r2 = 0.933$), operational risk management practice could explain a 93.3% variance in financial performance. The results underscore the huge importance of managing operational risk to the financial performance of commercial banks.

Table 6: ANOVA for ORM against FP

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	27.188	1	27.188	973.441	.000[b]
	Residual	4.078	146	.028		
	Total	**31.266**	**147**			
a. Dependent Variable: FM						
b. Predictors: (Constant), ORM						

The results illustrated in Table 6 ($F_{1,146} = 973.441$; $p = 0.000 < 0.05$) indicate that there existed a linear relationship between operational risk management and financial performance. Therefore, it was appropriate to use the adopted simple linear regression model ($Y = \beta_0 + \beta_1X_1 + \varepsilon$) to analyse the effect of operational risk management on the financial performance of commercial banks as demonstrated in Table 7.

Table 7: Regression coefficients for ORM against FP

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.356	.142		-2.512	.013
	ORM	.994	.032	.933	31.200	.000
a. Dependent Variable: FM						

The results shown in Table 7 ($Y = -0.356 + 0.994X_1$) indicate that a 0.994-unit change in operational risk management practice led to a unit change in financial performance while other factors were held constant. It was also established that the effect of operational risk management practice on financial performance was statistically significant ($t = 31.2$; $p = 0.000 < 0.05$). The results led to the rejection of the null hypothesis: The effect of operational risk management practice on the financial performance of commercial banks in Kenya is not significant. These results contradicted the findings of the previous studies. For instance, a study on local commercial banks noted that operating risks did not have a statistically significant effect on banks' financial performance [22].

CONCLUSIONS AND RECOMMENDATIONS

The study made crucial conclusions drawn from key study findings. It also made recommendations in tandem with the conclusions made.

Conclusions

The study underscored the importance of operational risk management to commercial banks. Therefore, it was concluded that it was crucial to identify, assess and manage operating risks to which commercial banks are exposed. Consequently, the study inferred that bank regularly identified and continuously monitored these risks. Furthermore, it was concluded that managing operational risks hugely impacted the financial performance of commercial banks in Kenya.

Recommendations

The boards of directors and the top management of commercial banks should develop policies that can guide operational risk identification, assessment, and management. Since bank staff are involved with day-to-day bank operations, they will find the findings and inferences made by this study important in identifying and monitoring operational risks to maximize commercial banks' financial performance.

Ethical Approval: The researcher anonymized the primary data sources and also ensured that the collected data was handled confidentially.

Conflict of interest: There was no conflict of interest during data collection, analysis and presentation of study findings.

Data availability: Primary data was easily available, as well as secondary data on the financial performance of commercial banks.

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