How Does Risk Management Contribute to Firm Financial Performance? Among Banks in Kenya

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Abstract

The objective of the study is to examine the effect of risk management on firm financial performance among banks in Kenya. The study was guided by balance scorecard model. The study took a positivism position which maintains that observation and reason are the best means of understanding events. The study made use of an explanatory research design. The study used this approach to explain and identify the cause-and-effect relationship between risk management and firm financial performance. The target population for this study was 42 banks in Kenya and 35 banks were surveyed after the inclusion exclusion criteria. Secondary data from annual audited financial reports for the sampled banks for the periods 2013 to 2019 were used to meet the objectives of the study and Data collection schedule was used to extract data from bank annual reports. The data was analyzed using both descriptive and inferential statistics. The risk management regression results revealed a positive and significant effect on firm financial performance (= 40.18176, p= 0.000). This means that increasing risk management strategies by one unit improved bank financial performance by 40.18176 units. The practical implications of the positive and significant effect of risk management strategies on firm financial performance emphasize the importance of prioritizing risk management practices within banks. By adopting robust risk management frameworks, banks can enhance their financial stability, competitive advantage, regulatory compliance, strategic decision-making, investor confidence, and overall performance in the market. Continuous improvement in risk management practices is essential to adapt to evolving risks and maximize long-term financial success. Therefore, enhancing risk management practices can positively impact the overall financial health and success of the organization.

Keywords: Risk management, Bank size, Bank liquidity, and Firm financial performance

INTRODUCTION

The possible facets of firm performance include profitability performance, growth performance, market value performance, customer satisfaction, employee satisfaction, environmental performance, environmental audit performance, corporate governance performance and social performance (Bătae, Dragomir, & Feleagă, 2021) and (Gunday, Ulusoy, Kilic, & Alpkan, 2011). Profitability performance is the ability of a business to earn a profit. A profit is what is left of the revenue a business generates, after it pays all expenses, directly related to the generation of the revenue, such as producing a product,

and other expenses related to the conduct of the business activities. The objective of the firm is to maximize wealth of the existing shareholders (Edvardsson, Johnson, Gustafsson, & Strandvik, 2000), (Bovet & Martha, 2000), and (Kaplan & Cooper, 1998). Superior financial performance is a way to satisfy investors and it can be represented by profitability, growth and market value. These three aspects like profitability, growth and market value, complement to each other. The profitability measures a firm's past ability to generate returns (Santos & Brito, 2012). Market value performance refers to the price in the market. The financial asset, like the share of a company, should fetch value in the marketplace. Market value is also commonly used to refer to the market capitalization of a publicly-traded company and it is obtained by multiplying the number of its outstanding shares by the current share prices (Glick & Hutchison, 2005).

Risk can be anything that would hinder an organization from achieving its objectives (Woods, 2007) Therefore, risk management is any set of actions taken by individuals or corporations to alter the risk arising from their primary lines of business. The generic risk management framework includes four major risk management components, risk identification, risk measurement, risk mitigation and risk monitoring and reporting. Thus, risk management in banking is the logical development and execution of a plan to deal with potential losses. Usually, the focus of the risk management practices in the banking industry is to manage an institution's exposure to losses or risk and to protect the value of its assets. In general banking business is regarded as risky business (Boland, 2012).

(Pagach & Warr, 2007) examined the effect of risk management on firm performance of companies listed on Polish Stock Exchange for 5-year period (2000- 2005). The study concluded that that risk management increases firm performance. Moreover, (Silva, Silva, & Chan, 2019) carried out research on risk management adoption and firm performance in 30 companies listed on Brazilian stock exchange for a period of 9 years. The findings show a positive and significant relationship between risk management and firm performance. Further, (Teoh, Lee, & Muthuveloo, 2017) examined the impact of risk management on the performance of Malaysian public listed firms. The study found that risk management implementation in Malaysia positively impacted firms' performance. Additionally, (Hoyt & Liebenberg, 2011) measured the relationship between risk management and firm performance in the US insurance market. Their results indicated that there is a positive relationship between risk management and performance. (Onwumere, Imo, & Ugwuanyi, 2012) investigated the impact of risk management on the performance of brewery industry in Nigeria. The study found that risk management has a positive and significant effect on the performance of brewery industry in Nigeria. In Kenya, (N. Waweru & Kisaka, 2012) examined the level of risk management implementation for 22 firms listed on NSE for the year ended December, 2009. The results showed that an increase in the level of risk management implementation in companies positively contributes to the value of the companies.

Empirical evidence on the relationship between risk management and performance is still limited in Kenya due to the difficulty in explaining the relationship between risk and firm performance, as a direct relation or simply a consequence of risk. Although initial studies signal a positive relationship between risk adoption and firm performance, so far, the context of investigation has been mainly confined to the US and European countries. Little is known about risk in African countries such as Kenya as firms have significantly different characteristics compared to US and European firms (Falkner & Hiebl, 2015).

The problem addressed in the study was the need to understand the impact of risk management strategies on the financial performance of banks. Risk management is a critical aspect of the banking industry, as banks face various risks that can have significant implications for their financial health (Al-Tamimi & Al-Mazrooei, 2007). However, the specific relationship between risk management and financial performance needed to be empirically examined to provide concrete evidence and inform decision-making in the banking sector. Therefore, the objectives of the study were to examine the relationship between risk management strategies and firm financial performance in banks and to determine the magnitude of the impact. The aim was to provide empirical evidence and insights into the importance of effective risk management practices in enhancing the financial performance of banks (Paape & Speklé, 2012).

LITERATURE AND HYPOTHESIS DEVELOPMENT

Risk Management

In recent years, a paradigm shift has occurred regarding the way to view risk management. Rather than looking at risk management from a silo-based perspective, the trend is to take a holistic view of risk management commonly referred to as enterprise risk management (ERM) which is the process of identifying and analyzing risk from an integrated, company-wide perspective. It is a structured and disciplined approach in aligning strategy, processes, people, technology and knowledge with a purpose of evaluating and managing the uncertainties the enterprise faces as it creates value (Li, Wu, Marshall, Chipulu, & Ojiako, 2014).

The growing interest in risk management has been attributed to a series of challenges in the business world ranging from global financial crises, corporate frauds and scandals as well as the collapse of major corporate entities such as Enron, Worldcom and Barings bank. This prompted governments, law making bodies, regulators and other stakeholders within the global economic community to explore further insights and understanding of current and emerging risks facing organizations. Proper management of risk is expected to increase firm's revenue and profitability which will invariably impact financial performance (Paape & Speklé, 2012).

There are three types of risks: preventable, external, and strategy. Preventable risks and external risks are downside risks. Preventable risks are internal risks that the firm should eliminate cost effectively, typically using rules-based, internal audit methods (Kaplan & Mikes, 2012) and (Mikes & Kaplan, 2014). External risks such as Political, Economic, Social, Technological, Ecological and Legal (PESTEL) are not preventable; hence, the company should mitigate their impact, for example with lobbying and business continuity plans or by transferring the risks using insurance (Baghiyeva, 2019). Strategy risks, in contrast to preventable and external risks, are risks that the company consciously takes on with the goal of increasing firm performance. Thus, strategic risks are those that firms choose to take on to increase firm value creates two problems. First, it makes strategic risk depend on the firm's thinking around undertaking the risk. The firm that blithely does something without considering a potential problem does not face a strategic risk from that problem, while the firm that carefully considers a potential problem does (Bromiley, Rau, & McShane, 2016). A firm that takes a given action to increase performance has a strategic risk whereas another firm that does the same thing in the same circumstances with a different motive does not. Making what is a strategic risk dependent on firm motivation seems undesirable. Furthermore, many would assume that all risks the firm takes on are taken

on consciously with the hope the risk will help the firm achieve its goals; this would make all risks strategic (Kaplan & Mikes, 2012).
Enterprise risk management (ERM) is a new paradigm for risk that involves managing a myriad of risks in a holistic manner. In recent years, a shift of trend has been observed on how the organizations view and manage risks as a fundamental concern of any organization. Instead of the traditional risk management method which is based on the silo approach, organizations now treat risk management from a holistic perspective which commonly known as enterprise risk management. Enterprise risk management is a process, effected by an entity's board of directors, management and other personnel, applied in strategy setting and across the enterprise, designed to identify potential events that may affect the entity, and manage risk to be within its risk appetite, to provide reasonable assurance regarding the achievement of entity objectives (Coso, 2004). Enterprise Risk Management as a discipline has received unprecedented interest and international attention in recent years. The growing interest in ERM has been attributed to a series of challenges in the business world ranging from global financial crises, corporate frauds and scandals, as well as the collapse of major corporate entities. This has prompted governments, law making bodies, regulators and other stakeholders within the global economic community to explore further insight and understanding of current and emerging risks facing organizations (Paape & Speklé, 2012).

The rationale behind ERM approach is that the performance of the firm is maximized when top management sets strategy and objectives to strike an optimal balance between growth and return goals, and the related risks, and efficiently and effectively allocate resources in pursuit of the entity's objectives. The goal of ERM approach is to create, protect, and enhance shareholder value by managing uncertainties that could influence the achievement of organizational objectives. The implementation of ERM strategically implies with the understanding of the complete array of risks that an entity faces, it can best achieve its strategic, operations, reporting and compliance objectives. Thus, in today's business world, the ultimate purpose of an ERM framework would be seen as the facilitation of the process to be described, automated, monitored and improved as part of the cycle of continuous innovation and responsiveness to the business dynamics (Teoh et al., 2017).

The banking sector business environment is embroiled with business risks such as interest rate risks, legal risks, credit risks, technological risks etc. which can have a negative impact on an organization performance. This is because banks require higher returns or risk premium to take on higher levels of risk and to compensate for the risk that they cannot eliminate through diversification. Thus, risk taking is an inherent element of banking and profits are in part the reward for successful risk taking in business (Waweru, 2012), (Goldstein & Turner, 1996), and (Choudhry, 2022). Specifically, credit risk is the most important risk exposure for banks due to strong connection with bank profitability and economic growth. For banks, a proper investment decision means the greatest return on investment at the lowest credit risk. Each loan without repayment decreases banks' profitability, which in turn may result in bank failure if the bank cannot pay off its liabilities. Thus, successful implementation of ERM practices in the banking sector enable banks to increase value by reducing operational risks and uncertainty of returns that guarantee high financial performance (Lechner & Gatzert, 2018).

Specifically, bank decisions such as acquisition, trading in derivatives, or lending in consumer loans are clearly strategic risk choices. Further, the other portion of bank risks comes from the interaction of policies, procedures, and criteria that determine how the bank engages in new strategic choices (Bessis, 2011). The composition of a

bank's entire lending portfolio, for example, is an ERM problem; an excessively risky or undiversified portfolio can lead the bank into bankruptcy. At the same time, a bank with a policy of not verifying borrowers' credit histories or addresses before issuing a loan and with a policy of making the loan process as easy for customers as possible would face a strategic risk because the interaction of these two policies strongly influences the loans the bank makes and its consequent loan portfolio. In contrast, the bank's operational risk management problem comes in what loans to reject and what prices to offer potential borrowers of given risk levels (Tabak, Fazio, & Cajueiro, 2011). Here, the bank is not directly concerned with the negative consequences of a given loan. The problem is to appropriately price and select loans to achieve an appropriate expected return. Unlike strategic risks, the bank should not be concerned with risk per se, but rather should focus on the expected value. Thus, for an appropriately high interest rate, loans to individuals who have a relatively high probability of default can be profitable. At the same time, individuals may have very low default probability but may command such a low interest rate that lending to them is not profitable. Thus, at the operational level, the bank should be concerned largely with expected value of each loan, but at the firm or strategic level, the bank should be concerned with the possibility that either a single big loan or the portfolio of loans, and the set of policies or criteria the bank will use to make loans, will damage the organization significantly (Bromiley & Rau, 2014).

Risk Management and Firm Financial Performance

The study examined scholarly research studies that gathered and analyzed data to investigate the relationship between risk management and bank financial performance. (Ping & Muthuveloo, 2015) evaluated the implementation of ERM and its effect on firm performance in public listed companies of Malaysia. Through survey method, they analyzed almost 103 responses with structural equation model. Their findings suggested that the implementation of ERM positively influenced firm performance. In a similar study, (Soliman & Mukhtar, 2017) investigated how ERM implementation by firms, selected from the banking and insurance sectors, affected their performance. The study found a positive and significant relationship between ERM implementation and firm performance. Further, a survey of risk managers in the United States (US) provide support that risk management improves firm performance (Gates, Nicolas, & Walker, 2012). Correspondingly, an investigation of 82 insurers in the US show the significant positive relation between risk management and firm performance (McShane, Nair, & Rustambekov, 2011). Conversely, (Ndoka, Islami, & Shima, 2017)investigated the relationship between risk management and performance of listed firms on Malaysia Stock Exchange. The study examined 175 listed companies from the year 2008-2012. The study found a negative relationship between ERM and performance of listed firms in Malaysia. Further, (Olayinka, Emoarehi, Jonah, & Ame, 2017)conducted a study on the influence of risk management on the performance of listed firms in Iran financial market. The study found a negative relationship between risk management and performance for firms listed on Tehran Stock Exchange. Additionally, (Ballantyne, 2013) analyses risk management and firms' financial performances based on a sample of 134 U.S. publicly traded companies. The study found that risk management adoption is not associated with firm's financial performance. Also, (Agustina & Baroroh, 2016) investigated the relationship between risk management and firm performance in Indonesian 53 banks from 2011 to 2013. They employed ROE to measure firm performance. Their results indicated that there is no relationship between risk management and ROE.

Although the studies signal inconclusive relationship between risk management and firm performance, evidence is mainly drawn from developed countries. Clearly, there is

little empirical evidence supporting the risk management and performance relationship among Kenyan firms which have different characteristics compared to those in developed economies. Therefore, there is need to understand the effect of risk management on bank performance in Kenya. Therefore, it is hypothesized that;

H_{01}: Risk management has no significant effect on firm financial performance

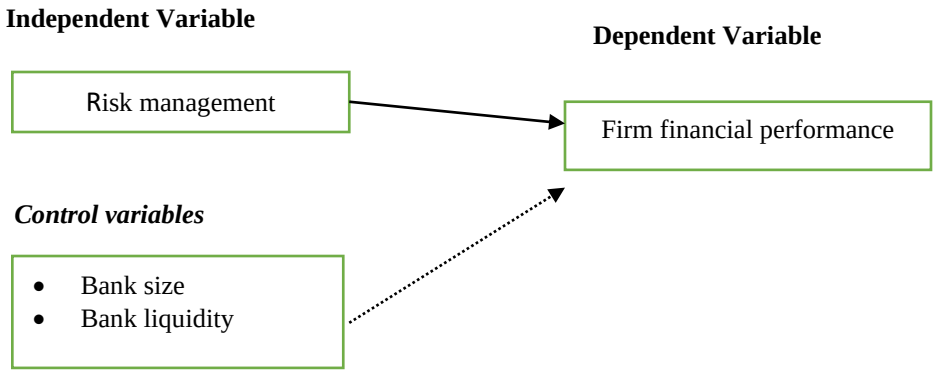

Figure 1: Conceptual framework

METHODOLOGY

Research Philosophy

The study took a positivist stance, which holds that observation and reason are the best ways to understand events. It holds that reality is given objectively and can be measured using properties that are independent of the researcher. This stance was appropriate because it demonstrated a cause-and-effect relationship derived through a scientific method such as quantitative research, as well as taking a theory verification approach. Because it provided a rich environment for the development of estimation techniques and theoretical results, the study used quantitative panel data regression methodology.

Research Design

The study made use of an explanatory research design. The study used this method to explain the relationship between risk management and firm financial performance and to identify the cause-and-effect relationship. Explanatory research evaluates the impact of specific changes to existing situations and goes beyond description to explain why a phenomenon occurs in order to predict future occurrences (Mohammed & Knapkova, 2016) and (Soltanizadeh, Rasid, Golshan, & Ismail, 2016).

Target Population and inclusion exclusion criteria

This study's target population consisted of 42 Kenyan banks in Kenya. According to the Central Bank of Kenya database, the inclusion criteria included banks that were in operation from 2013 to 2019. The exclusion criteria required banks that were placed in receivership or registered in Kenya after 2013 to be isolated. As a result of the exclusion criteria, the sample size was reduced to 35 banks. These banks were surveyed and data analyzed over a seven-year period, yielding a total of 245 firm-year observations.

Data Types and Data Collection Instruments

Secondary data from annual audited financial reports for the sampled banks from 2013 to 2019 were used to meet the study's objectives. In addition, the Central Bank of

Kenya bank supervision annual report was used to supplement bank annual audited financial reports. To extract data from bank annual reports, a data collection schedule was used.

Measurement of Variables

Table 1: measurement of variables

Variable	Type of the variable	Measurement and formula
Firm financial performance	Dependent variable	ROA = total revenue/total assets
Risk management	Independent variable	Risk management = loan loss provision/total loan
Bank size	Control variable	Bank Size = Log of Total Assets
Bank liquidity	Control variable	Loan-to-Deposit (LD Ratio) =Total Loans/Total Deposits

Data Analysis

The study employed both descriptive and inferential statistics to analyze the relationship between risk management strategies and firm financial performance in banks. Descriptive statistics were utilized to summarize and present key characteristics and measures of central tendency and variability of the variables under investigation. This included calculating means and standard deviations to provide a clear and concise description of the data. Inferential statistics, on the other hand, were applied to draw conclusions and make inferences about the population based on the 35 Banks surveyed. This involved conducting regression analysis to determine the statistical significance and magnitude of the relationship between risk management and financial performance.

Model Specification

Financial Performance (FP) was the dependent variable, Risk Management (RM) was the independent variable, and Bank Size (BS) and Bank Liquidity (BL) were the control variables. The following were the models:

$$FP_{i,t} = \alpha + \beta_1 BS_{i,t} + \beta_2 BL_{i,t} + \varepsilon \quad (1)$$

$$FP_{i,t} = \alpha + \beta_1 C_{i,t} + \beta_2 RM_{i,t} + \varepsilon \quad (2)$$

Where;

α = Constant term
β = Regression coefficient
$C_{i,t}$ = Control Variables
ε = Error term
i = bank entity
t = period 2013…2019.

ANALYSIS AND RESULTS

Descriptive and correlation analysis

Table 2 presents the descriptive statistics and correlation matrix for the variables in the study, namely firm financial performance (FP), bank size (BS), bank liquidity (BL), and risk management (RM). Descriptive statistics provide summary measures of the

variables, including the mean and standard deviation (S.D). The mean represents the average value of the variable, while the standard deviation indicates the variability or dispersion of the data around the mean.

Firm financial performance (FP), had a mean value of 0.0859, indicating that, on average, the financial performance of the banks was relatively positive. The standard deviation (S.D) of 0.0265 suggests that there was some variability in financial performance among the banks, with some potentially performing better or worse than the average. Regarding bank size (BS), the mean value was 10.5614, which represents the average size of the banks. The standard deviation (S.D) of 1.3231 indicated that there was a considerable variation in bank size, with some banks being significantly larger or smaller than the average. Bank liquidity (BL), had a mean value of 0.7851, suggesting that, on average, the banks had a relatively high level of liquidity. The standard deviation (S.D) of 0.1306 indicated that there was some variation in liquidity levels among the banks, with some potentially having higher or lower liquidity than the average. In terms of risk management (RM), the mean value was 0.0118, which indicated that, on average, the banks had a relatively low level of risk management in place. The standard deviation (S.D) of 0.0082 suggested that there is not much variability in risk management practices among the banks, with most banks having similar levels of risk management.

The correlation matrix in Table 2 revealed the relationships between the variables: firm financial performance (FP), bank size (BS), bank liquidity (BL), and risk management (RM). The correlation between firm financial performance (FP) and bank size (BS) was -0.6846, indicating a strong negative correlation. This suggested that larger banks tend to have lower financial performance. In other words, as the size of a bank increases, its financial performance tends to decrease. The correlation between firm financial performance (FP) and bank liquidity (BL) was 0.0537, indicating a weak positive correlation. This implied that there was a slight association between bank liquidity and financial performance. However, the correlation was not strong enough to draw definitive conclusions about the impact of liquidity on financial performance. The correlation between risk management (RM) and firm financial performance (FP) was 0.4664, indicating a moderate positive correlation. This suggested that there was a meaningful relationship between effective risk management and improved financial performance in banks. As risk management practices improve, the financial performance of the banks tends to improve as well.

Table 2: descriptive statistics and correlation matrix

Variable	mean	S.D	FP	BS	BL	RM
FP	0.0859	0.0265	1.0000			
BS	10.5614	1.3231	-0.6846	1.0000		
BL	0.7851	0.1306	0.0537	0.2226	1.0000	
RM	0.0118	0.0082	0.4664	-0.3107	0.1000	1.0000

FP: firm financial performance, BS: bank size, BL: bank liquidity, and RM: risk management

Hypothesis testing and regression analysis

Table 3 presents the fixed effects regression results for the variables in the study: firm financial performance, bank size, bank liquidity, and risk management. The R-squared value of 0.7060 indicated that approximately 70.6% of the variation in firm financial performance is explained by the regression model. The constant term had a coefficient of 0.066 with a significance level of ***. This constant term represents the intercept or baseline value of firm financial performance when all other variables are held constant.

The p-value indicated that this constant term was statistically significant at a 1% level of significance. The regression coefficient for bank size was -0.000 with a significance level of **. This suggests that bank size had a negative but negligible effect on firm financial performance. The p-value indicated that this coefficient was statistically significant at a 5% level of significance. The coefficient for bank liquidity was 0.014 with a significance level of **. This implied that bank liquidity had a positive and significant impact on firm financial performance. The p-value suggested that this coefficient was statistically significant at a 5% level of significance. The coefficient for risk management was 19.655 with a significance level of ***. This indicated a strong and highly significant positive effect of risk management on firm financial performance. The p-value indicated that this coefficient was statistically significant at a 1% level of significance.

Table 3: fixed effects regression results

Firm financial performance	**Coeff.**	**p**
Bank size	-0.000	**
Bank liquidity	0.014	**
Risk management	19.655	***
Constant	0.066	***

Prop>F= *** R-sq. = 0.7060

DISCUSSION

The results from Table 3 provide valuable insights into the relationship between firm financial performance and the variables of interest: bank size, bank liquidity, and risk management. To better understand these findings, it was helpful to link them with the scholarly studies mentioned earlier. The positive and significant relationship between risk management and firm financial performance in Table 3 aligns with the findings of several scholarly studies. (Ping & Muthuveloo, 2015)found that the implementation of Enterprise Risk Management (ERM) positively influenced firm performance in Malaysian public listed companies. This supports the notion that effective risk management strategies can contribute to improved financial performance. Additionally, the study by (Soliman & Mukhtar, 2017) in the banking and insurance sectors also found a positive and significant relationship between ERM implementation and firm performance. (Gates et al., 2012) surveyed risk managers in the US and provided support for the idea that risk management improves firm performance. These findings collectively reinforce the notion that robust risk management practices can have a positive impact on financial performance. The negligible effect of bank size on firm financial performance observed in Table 3 is consistent with the study by (Ndoka et al., 2017), which found a negative relationship between ERM and performance of listed firms in Malaysia. Similarly, (Olayinka et al., 2017) found a negative relationship between risk management and performance for firms listed on the Tehran Stock Exchange. These studies suggest that bank size may not be a significant determinant of financial performance, emphasizing the need to focus on other factors, such as risk management and liquidity. The positive relationship between bank liquidity and firm financial performance in Table 3 is in line with the study by (Ping & Muthuveloo, 2015), which found a positive association between liquidity and firm performance in Malaysian public listed companies. This suggests that maintaining adequate levels of liquidity can contribute to better financial performance. It is worth noting that there were studies with contrasting findings as well. (Ballantyne, 2013)found no association between risk management adoption and firm financial performance in a sample of US publicly traded companies. Similarly, (Agustina & Baroroh, 2016) did not find a

relationship between risk management and Return on Equity (ROE) in Indonesian banks. These studies highlight the complexity of the relationship between risk management and financial performance, which may vary depending on factors such as industry, country, and specific risk management practices.

CONCLUSION AND RECOMMENDATION

The findings indicated a negative correlation between bank size and firm financial performance, a weak positive correlation between bank liquidity and financial performance, and a moderate positive correlation between risk management and financial performance. These statistics offered initial insights into the relationships among the variables, highlighting the potential impact of risk management strategies on improving bank financial performance. The findings also suggested that while bank size has a negligible effect on financial performance, bank liquidity and risk management significantly influence it. Specifically, higher levels of liquidity are associated with improved financial performance, and effective risk management strategies have a substantial positive impact on financial performance. These results reinforce the importance of liquidity management and the implementation of robust risk management practices for enhancing firm financial.

REFERENCES

Agustina, L., & Baroroh, N. (2016). The relationship between Enterprise Risk Management (ERM) and firm value mediated through the financial performance. *Review of Integrative Business and Economics Research*, *5*(1), 128.

Al-Tamimi, H. A. H., & Al-Mazrooei, F. M. (2007). Banks' risk management: a comparison study of UAE national and foreign banks. *The Journal of Risk Finance*, *8*(4), 394-409.

Baghiyeva, D. (2019). *Azeri Walnut*. ADA University.

Ballantyne, R. (2013). *An empirical investigation into the association between enterprise risk management and firm financial performance*. Lawrence Technological University.

Bătae, O. M., Dragomir, V. D., & Feleagă, L. (2021). The relationship between environmental, social, and financial performance in the banking sector: A European study. *Journal of cleaner production*, *290*, 125791.

Bessis, J. (2011). *Risk management in banking*: John Wiley & Sons.

Boland, A. (2012). Managing risk on global basis. *Journal of accounting and Finance*, *12*(1), 2012.

Bovet, D., & Martha, J. (2000). *Value nets: breaking the supply chain to unlock hidden profits*: John Wiley & Sons.

Bromiley, P., & Rau, D. (2014). Towards a practice-based view of strategy. *Strategic Management Journal*, *35*(8), 1249-1256.

Bromiley, P., Rau, D., & McShane, M. K. (2016). Can strategic risk management contribute to enterprise risk management? A strategic management perspective. *A Strategic Management Perspective (October 20, 2014). Forthcoming: Bromiley, P., Rau, D., and Mcshane, M*, 140-156.

Choudhry, M. (2022). *The principles of banking*: John Wiley & Sons.

Coso, I. (2004). Enterprise risk management-integrated framework. *Committee of Sponsoring Organizations of the Treadway Commission*, *2*.

Edvardsson, B., Johnson, M. D., Gustafsson, A., & Strandvik, T. (2000). The effects of satisfaction and loyalty on profits and growth: products versus services. *Total quality management*, *11*(7), 917-927.

Falkner, E. M., & Hiebl, M. R. (2015). Risk management in SMEs: a systematic review of available evidence. *The Journal of Risk Finance*, *16*(2), 122-144.

Gates, S., Nicolas, J.-L., & Walker, P. L. (2012). Enterprise risk management: A process for enhanced management and improved performance. *Management accounting quarterly*, *13*(3), 28-38.

Glick, R., & Hutchison, M. (2005). Capital controls and exchange rate instability in developing economies. *Journal of International Money and Finance*, *24*(3), 387-412.

Goldstein, M., & Turner, P. (1996). Banking crises in emerging economies: origins and policy options. *Trade Currencies and Finance*, 301-363.

Gunday, G., Ulusoy, G., Kilic, K., & Alpkan, L. (2011). Effects of innovation types on firm performance. *International Journal of production economics*, *133*(2), 662-676.

Hoyt, R. E., & Liebenberg, A. P. (2011). The value of enterprise risk management. *Journal of risk and insurance*, *78*(4), 795-822.

Kaplan, R. S., & Cooper, R. (1998). *Cost & effect: using integrated cost systems to drive profitability and performance*: Harvard Business Press.
Kaplan, R. S., & Mikes, A. (2012). Managing risks: a new framework. *Harvard business review, 90*(6), 48-60.
Lechner, P., & Gatzert, N. (2018). Determinants and value of enterprise risk management: empirical evidence from Germany. *The European Journal of Finance, 24*(10), 867-887.
Li, Q., Wu, Y., Marshall, A., Chipulu, M., & Ojiako, U. (2014). Enterprise risk management and firm value within China's insurance industry. *Acta Commercii, 14*(1), 1-10.
McShane, M. K., Nair, A., & Rustambekov, E. (2011). Does enterprise risk management increase firm value? *Journal of Accounting, Auditing & Finance, 26*(4), 641-658.
Mikes, A., & Kaplan, R. S. (2014). *Towards a contingency theory of enterprise risk management*.
Mohammed, H. K., & Knapkova, A. (2016). The impact of total risk management on company's performance. *Procedia-Social and Behavioral Sciences, 220*, 271-277.
Ndoka, S., Islami, M., & Shima, J. (2017). The impact of liquidity risk management on the performance of Albanian Commercial Banks during the period 2005-2015. *International Journal of Social Sciences and Education Research, 3*(1), 70-76.
Olayinka, E., Emoarehi, E., Jonah, A., & Ame, J. (2017). Enterprise risk management and financial performance: Evidence from emerging market. *International Journal of Management, Accounting and Economics, 4*(9), 937-952.
Onwumere, J., Imo, G., & Ugwuanyi, U. (2012). Does OMO As A Monetary Policy Tool Have Impact On Price Stability In Nigeria. *Research Journal Of Finance And Accounting, 3*(10), 45-54.
Paape, L., & Speklé, R. F. (2012). The adoption and design of enterprise risk management practices: An empirical study. *European Accounting Review, 21*(3), 533-564.
Pagach, D., & Warr, R. (2007). An empirical investigation of the characteristics of firms adopting enterprise risk management. *North Carolina State University working paper*.
Ping, T. A., & Muthuveloo, R. (2015). The impact of enterprise risk management on firm performance: Evidence from Malaysia. *Asian Social Science, 11*(22), 149.
Santos, J. B., & Brito, L. A. L. (2012). Toward a subjective measurement model for firm performance. *BAR-Brazilian Administration Review, 9*, 95-117.
Silva, J. R., Silva, A. F. d., & Chan, B. L. (2019). Enterprise risk management and firm value: Evidence from Brazil. *Emerging Markets Finance and Trade, 55*(3), 687-703.
Soliman, A., & Mukhtar, A. (2017). Enterprise Risk Management and firm performance: an integrated model for the banking sector. *Banks and Bank Systems*.
Soltanizadeh, S., Rasid, S. Z. A., Golshan, N. M., & Ismail, W. K. W. (2016). Business strategy, enterprise risk management and organizational performance. *Management Research Review, 39*(9), 1016-1033.
Tabak, B. M., Fazio, D. M., & Cajueiro, D. O. (2011). The effects of loan portfolio concentration on Brazilian banks' return and risk. *Journal of Banking & Finance, 35*(11), 3065-3076.
Teoh, A. P., Lee, K. Y., & Muthuveloo, R. (2017). The impact of enterprise risk management, strategic agility, and quality of internal audit function on firm performance. *International Review of Management and Marketing, 7*(1), 222-229.
Waweru, E. W. (2012). *The effect of financial innovations on risk management of commercial banks in Kenya*.
Waweru, N., & Kisaka, E. S. (2012). *The effect of enterprise risk management implementation on the value of companies listed in the Nairobi Stock Exchange*.
Woods, M. (2007). International risk management: systems, internal control and corporate governance.