International Research Journal of Advanced Engineering and Science
ISSN (Online): 2455-9024

An Assessment on the Impact of Risk Management on Profitability of Commercial Banks: A Case of Commercial Banks in Lusaka District

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***Abstract*— *The Main purpose of the study was to assess the impact of risk management on the profitability of commercial banks in Lusaka district. A cross-sectional study design was used and census was used to pick all commercial banks, 18 in total in Lusaka district that were visited. Data were obtained using a structured questionnaire. The sample size was a census of all available 18 commercial banks, however, only 16 commercial banks were visited due to the COVID 19 restrictions in the facilities and time constraints. Regression ideas (logistic regression was used to find associations and statistical significant for known variables. The best fit model, backward stepwise logistic regression was used to predict variables that were significant or had an association with profitability. The study found that top management support, training of employees on risk management, appropriate management of risks and availability of effective technology had a greater impact on a bank's profitability. In addition, most commercial banks in Lusaka district use the eight components of risk management in their daily operations on managing risks. These findings show that top management support (P=0.043), availability of technology (P=0.014) as well as Risks (P=0.011) were all statistically significant when adjusted with the Logistic Best fit model, taking into account other variables.*

***Keywords*— *Profitability, Risk Management, Risks and Commercial Banks.*

I. INTRODUCTION

Risk is the potential that a given threat or vulnerability of an asset may result in a loss or damage to assets. Banks play an integral role in a country's economic development (Batten & Vo, 2019). Further, it is a well-known fact that banks have been regarded as the biggest monetary organizations around the world, stretching far beyond and having branches everywhere, working tirelessly for long hours. They have functions that range from offering loans, acting as reservoirs for individual's funds to presentation of numerous items and scanning conversion scales (Bhatti et al. 2020). The aim of any financial institution or bank is profitability and profit maximization through earning funds at lower rates and allowing investors and consumers borrow at higher rates making their goals attainable (Saleh & Afifa, 2020). However, banks face numerous risks in their pursuit of profit making and maximization. Bhatti et al. (2020) state that some of the notable risks which banks face and require management are liquidity risk which influences consistency and endurance of an organization, credit risks that are caused by failure by counterparties to commit to agreed terms and conditions, operational risks that come as a result of misfortunes emanating from internal procedures, human resource and frameworks put in place and lastly market risks brought in by macroeconomic factors instability of costs, differences in finances and swelling rates. Although many studies have indicated that risk management goes beyond eliminating negative outcomes of exposures and the fact that currently, the globalization and business environment leads many firms and organizations to think beyond profitability, this research paper will however be limited to the impact of risk management on profitability (Mohammed & Knapkova, 2016). There are a number of definitions to risk management. Srinivas (2019) defines risk management as a well-structured, planned and designed process whose goal is to help an organization such as a bank make right decisions whose aim is to identify, categorize these risks and further knowing how to manage and control them. All this is done to ensure that costs, time and quality are best utilized in order to harvest benefits such as profit.

What then is the impact of risk management on a bank's profitability? For us to fully understand the impact that risk management has on profitability, it is imperative that we look at how each risk affects profitability. Chou & Buchdadi (2016) indicate that time and again when banks and other financial institutions lend and extend credit to consumers, most of them do not return payments and this ultimately puts a strain on the bank's aim to make profit which could eventually lead to failure of a bank. This has therefore been one of the reasons for many banks introducing risk management strategies especially on credit risk. Chen & Pan (2012) report that credit risk is the highest risk that is faced by banks as it causes more alarms together with problems associated with it. The continuous and persistence of non-performing loans becomes one of the reasons of greater failure that banks experience. Risk management strategies are therefore key as they bring in comprehensive and extensive procedures on managing credit risk which results not only in the bank's survival but also performance (Saleh & Afifa, 2020). Chen et al. (2018) on the other hand state that when there is inadequate liquidity in a bank, it has no capacity to get sufficient finances, i.e. by an increase in liabilities or by promptly converting assets through reasonable costs which results in negatively affecting profitability. With this, the authors state that with a proper risk management team and strategies in place such as holding more loans result in banks having larger financing gaps, making the

Ulayi Owen Shiku, Jacqueline Siwale, and Gwebente Mudenda, "An assessment on the impact of risk management on profitability of commercial banks: A case of commercial banks in Lusaka district," *International Research Journal of Advanced Engineering and Science*, Volume 9, Issue 4, pp. 46-56, 2024.

effect of size negative and eventually the effect size on liquidity becoming non-linear. For operational risks, Okeke et al. (2018) contend that management of operational risks is very cardinal for banks as this risk often becomes a huge constraint as it is the main root cause of many financial failures, including non-profit making banks. Risk management therefore puts in place appropriate measures aimed at ensuring qualitative transactions are done without processing errors thereby providing effective services to consumers. This statement is endorsed by Gikundi et al. (2014) who stated that managing operational risks effectively has a positive impact on the profitability of a bank. On market risks and its impact on a bank's profitability and how risk management cushion this, many research focus on banks stability to compete in a competitive world. According to Marian & Theresa (2020), stability of a bank deals with Net Interest Margin or Bank Spread which entails a bank's way of earning interest from borrowers as well as the interest it gives out to depositors. The author therefore concludes that without a strategic market risk management plan that deals with crises, instability in banks may result in banks not attaining profit making and profit maximization.

1.2 Statement of the problem

Banks play a big role in the provisions of financial solutions to consumers around the globe. However, because banks constantly manage assets and liabilities, they are highly vulnerable to risks. Aluko et al. (2019) indicates that the higher the bank's exposure to risks in the professional management of assets and liabilities, the greater the negative effects that banks face in maximizing its profits as the sole goal of the bank. It is therefore concluded that the survival and profit realization of every commercial bank solely depends on its ability to manage its risks and other issues like advance portfolios effectively. This is so in order to survive and compete which is dependent on its ability to make profit. It is therefore against this background that this study will focus on the impact of risk management on a commercial banks' profitability.

1.3 Main Objective

To assess the impact of risk management on commercial banks' profitability.

1.3.1 Specific Objectives

- To identify what risks are associated with profitability in commercial banks.
- To establish factors that affect risk management on profitability in commercial banks.
- To establish what strategies are used in managing risks to ensure profitability in commercial banks.

1.3.2. Research Hypothesis

H0: Risk management has an impact on profitability of a bank.
H1: Risk management does not have an impact on profitability of a bank

II. Literature Review

2.1 Risks Associated with profitability in banks

Profitability is cardinal in the operations of any bank. It is meant to have an impact on the steps taken by the bank under "risk taking behavior." It is a well-known fact that the higher the profitability the more a bank's performance is highly graded. However, as alluded to earlier, it is factual that even in an atmosphere of the volatility, banks are faced with financial risks. Zhongming, Frimpong & Guoping (2019) outlined five risks that hinder a bank's profitability. These include credit risk, liquidity risk, foreign exchange risks, market risks, operational risks, interest rate risks and business risks. The effects of these risks on the performance and eventual profit or loss in the operations of the banks cannot be overemphasized. Arif & Nauman (2012) argue that liquidity risk for example occurs due to any bank's failure to fully honor its obligation to settle its dues by failing to liquidate "a portion at a reasonable price." On the other hand, Al-Zarqan (2013) suggests that there is a relationship between the financial position and the profitability of trade finance.

2.2 Risk Management and Profitability in Banks

Banks usually make most of their profits through charges they put on their services that they offer to clients and interest they earn out of assets. This entails that the profits of a bank are measured by Returns on Assets and Equity (Khan and Sattar, 2014). Haneefet et al (2012) in their study on risk management found that numerous banks have been subjected to many issues as a result of bad risk management practices they put in place in their firms.

Another study by Kithinji (2010) contends that there is also a relationship between risk management practices against the institution's profitability. The observation on the negative relationship between credit risk and its profitability Return on Assets (ROA) and Return On Equity (ROE) can't go without notice. Adequate business capital is said to have a relationship in between two profitability variables i.e. ROA and ROE. However, it is worth to note that the return on equity is a more effective measurement of profitability than return on assets and this indeed entails strong relationships between credit risk and commercial bank's profitability.

Therefore, viable banks' activities must involve putting in place financial intermediation, provision of services, loan provision to its consumers as well as strong strategies that are aimed at managing risks. Profitability in a commercial bank therefore is a reflection of a bank's good risk management system with a credit checking and risk monitoring system that help in risk reduction (Zhongming, Frimpong & Guoping, 2019).

2.2.1 The Risk Management Theory

The Risk Management Theory is based on three key basic concepts namely, regression, diversification and utility. Markowiz (2019) argues that justifying the use of diversification to intelligently allocate investments that are aimed at minimizing devaluations from expected rates of return. Regression rules on the other hand operates in a variety of ways that include calculating the probability of risks and arriving at predicting the fluctuations of the business. The author further states that the utility method which was first proposed by Daniel Bernoulli in 1738 entails paying attention to sizes of effects caused by different outcomes.

2.3 Factors affecting risk management and profitability

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Literature has noted various factors and determinants of risk management which eventually affect a bank's performance and subsequently profitability. Mahmoud & Ahmed (2014) indicted several factors that include; Organizational factors (Top management support & training), Training, Technological capacity, Risk related factors, Risk understanding and risk management, Risk identification and Risk assessment and Analysis.

2.3.1 Organizational Support

Research has indicated that top management support is one of the most popular variables that attracts attention from most researchers on how it effectively impacts risk management. Mikes and Kaplan (2014) note that support from top management is a cardinal factor in the effectiveness of risk management. Togok (2016); Banasadegh, Riahi & Davari (2014); Maina, Mbabazize, & Kibachia (2016); Zafar et al. (2015) and Agoi (2017), all echo these findings by denoting that there is actually a direct relationship between the effectiveness of risk management, security risk and risk management success and top management support.

An empirical study done by Ngundo (2014) found that top management support presents a significant and direct effect on the effectiveness of risk management and a bank's good performance. These results are consistent with what Sax & Torp (2015) who found that a management and top leadership style has a direct and significant effect on risk management and performance of a firm. The assertion is also supported by Maina et al. (2016) who found that in Uganda, top management has direct and positive impacts on the progress of institutions.

2.3.2 Training

Business like any other venture has to survive and make profit using human resource as one of its tools. The human resources are its players, whose attributes are crucial and play an important role that may either lead to success or failure. Their efforts are mostly significant and contribute positively in enhancing a bank's capacity to create value for its consumers (Luburic, 2016). To enhance their potentials and realize them, Luburic (2015) notes that top management must put in place structures that act as a basis for risk management to work such as creating and maintaining a common vision, values, and a conducive environment that enables people to fully operate to meet the bank's objectives. It is then noted that one cardinal element in all these processes is the training of these human resources in risk management. Similar to risk management training for individuals, Ljubic, Rakovic & Dimitrov (2016) state that training, especially for human resource brings about improvement in knowledge and skills on a particular subject which in return enhances the organization's performance. The authors' further state that the primary and core purpose of training is to familiarize individuals with anticipated risks arising from the daily operations of the bank.

2.3.3 Technological Capacity

A very popular researcher, Davis was of the view that banking technologies play a critical role in improving the performance of handling banking requirements. Svata (2020) in his findings on IT in bank risk management echoes this by stating that it has become increasingly apparent ITs and Information Systems have a great and significant impact on the business in banks. Zhang et al. (2018) further agrees to the above statement by revealing that technology has an advantage of providing significant progress to bank. An example given is that of a bank having cost advantages thereby increasing profitability and reducing or minimizing risks. Additionally, more studies have shown that technology or electronic banking services increase a bank's performance and reduces its risks (Long et al., 2017). Another way of creating a strong technological base that is risk resilient is the integration of such techniques as new pricing process where profitability is calculated and taking into account such risks as credit risk, market risk and operational risk. For instance, in dealing credit risk, banks in its assessments must have a strong client base for a long time. The integrated tool is useful in behavioral models that estimate probability of the client's default based of the credit history of the client (Gartner, 2012). However, the disadvantages of technology cannot be overlooked. Cavus & Chingoka (2015) argue that a look at mobile banking for instance gives us an idea of how risky it is to use technology. Most mobile banking consumers are at a greater risk of being scammed, through receipt of fake SMS messages, as well as hackers. This is even worse when a customer loses their mobile devise leaving them vulnerable to unlawfully access of their private and confidential information (Chitungo & Munongo, 2013).

2.3.4 Risk Related Factors

Risk management is one tool that has become an integral part of every institution's success, the banking system inclusive. However, because risks are uncertainty future events that when left unchecked eventually affects an organization's success and its profitability objectives, they have a greater impact on risk management as a whole (Risal, 2018).

More so, studies have shown that there is probably a temptation to conclude the usefulness of risk management and its many advantages towards solving problems associated with risks in banks. However, practicing risk management to pursue profit entails taking risks. This means banks must take bold decisions that are meant to lower the huge risks that might befall them (Arora & Sharma, 2014).

2.3.5 Risk Identification

As the first key step in risk solving, risk identification examines and clarifies the state and content of the risks that are involved in any transaction, business and/or operations that the bank makes and through this a basis is determined to see which risks are more of a potential threat and important so that they are exposed (Bojinov, 2016).

Dallas (2015) on the other hand states that a cardinal prerequisite of an effective risk identification program is the need to have a good information base that has similar attributes to the activity, with trained human resource as well as procedures and protocols put in place that relate to the identification of risks.

2.3.6 Risk Assessment and Analysis

The best technique suitable for analysis of financial risks is based on the bank's review. Greuing & Bravatanovic (2013) indicate that bank risk-based analysis requires a broad and balanced framework of risk assessment, risk management and risk analysis itself whose other elements should include

important factors with a qualitative nature. The authors further state that these named elements should encompass great style of corporate management and governance, consistency and completeness of internal controls, availability and adequacy as well as accuracy and timeliness of information systems management and sound support.

2.5 Conceptual Framework for Risk Management

A conceptual framework for factors affecting risk management as shown in figure 1 below has been adopted for this paper. The dependent variable, profitability is affected by the six factors namely top management support, training programs for employees, technological capacity, risks, risk identification and risk assessment and analysis. All these are cardinal in an effective risk management plan that will ensure a bank attains profitability. This paper therefore proposed Yazid et al. (2018) conceptual framework to test the significant influence of the mentioned factors toward a bank's profitability through risk management.

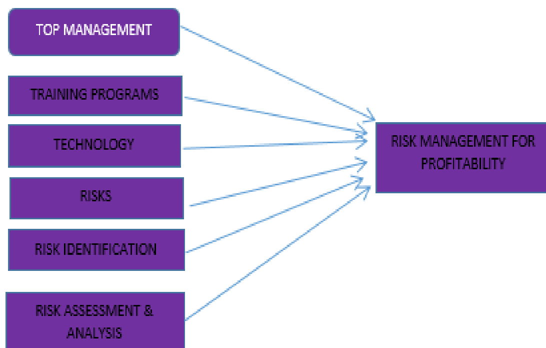

Figure 2.5.1: Conceptual Framework
(Source: Yazid et al. 2018)

2.6 Strategies used in Risk Management to Maximize Profitability

Risk management requires a stiff and directional approach in order to effectively achieve core aims in commercial banks. There are several strategies and undertakings that are done for an effective risk management. Bojinov (2016) states that taking risks is one of the ways to minimize on potential risks. It is an essential and possibly integral part of the gaining capital and maximizing business profits. Further the BIS (2012) contend that risk identification, assessment, monitoring and control or mitigation in risk management are effectively a basis of assessing overall risk capacity, and this in relation to the profile bank of risks, markets as well as macroeconomic conditions.

Asadi (2015) on the other hand outlines a well-planned risk management strategy which encompasses various stages in it. These stages include risk management itself, risk identification, qualitative risk analysis, planning of risk responses, risk monitoring and control.

These are all illustrated in the table below.

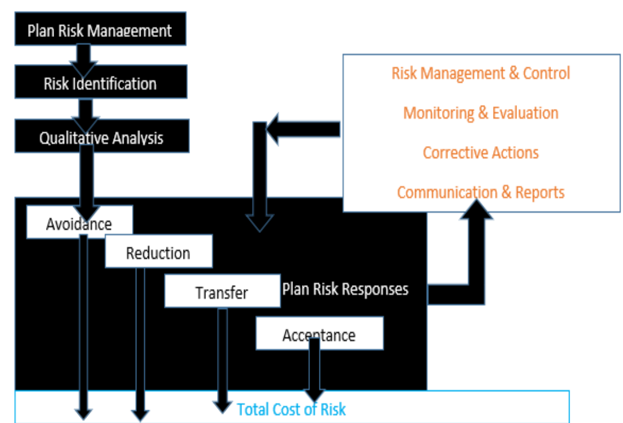

Figure 2.6.1 Risk Management Strategy

Figure 2.6.1: Interactions of different stages of Risk Management (Marketing & Branding Research, 2015)

According to Asadi (2016), the components of risk management as shown in figure 2.0 above include a strategic risk management plan, risk identification, qualitative analysis, risk avoidance, risk reduction, transfer of resources and responsibilities, risk acceptance and estimation of the total cost of the risk. On the sidelines of these plan risk responses, risk monitoring and control, monitoring an evaluation, corrective actions and communications and reports are vital. Further, Jadidi & Orouji (2013) state that these eight stages are derived and taken from the idea of managing an institution with a systematic and holistic approach. The approach is that of the components of internal environment, setting up aims and objectives, identification of events, evaluation of events, positive reactions to events, control measures, flow of information and communication and monitoring. Other strategies include an Enterprise Risk Management (ERM) approach, which is a top-down approach to managing emerging risks. Its considerations are organizational strategies and are more focused on ways aimed at mitigating risks and optimization of opportunities that are important to employees and management. This approach is based on key principles that include:

- Shared responsibilities of all executives, managers and employees
- Inclusion and integrated into all systems and activities within the organization (Freeman, Malik & Holt, 2013)

Another useful strategy is the Risk Management Strategy (RMS). This strategy initiated by the EEA and the Norway Grants for 2014-2021 is built on a broadly lane that intends to assess a range of emerging risks through drawing of a number of methods and sources of information such as brainstorming and active engagements of other stakeholders for tangible result (FMC, 2016). A number of studies as seen in this chapter have looked at the impact of risk management on a bank's profitability. According to different authors such as Israel & Simeon (2013), Kambi & Ali (2016), Olamide, Uwalomwa, & Ranti, (2015), Yousfi, (2014), Ghani, (2015), Res, Sa, & Gemechu (2016), Oluwafemi, Stephen & Akele, (2014), risk management is an important element that play a role in determining the bank's overall profitability. Further,

International Research Journal of Advanced Engineering and Science
ISSN (Online): 2455-9024

According to Yousfi (2014), risk emanating from the inability of the bank to either to manage intended obligations or defuse fund results in an increase in assets and this results in a fall due is known risks such liquidity. Therefore, this definition entails that liquidity risk is not just inadequate financial resources but also a surplus of these resources that are unused. Thus, with an effective risk management plan, banks would diligently and effectively take on 'gap management' which is maintaining an equilibrium between financial resources and how these funds are used (Christopher, 2019). From the literature in Zambia, it is noted that not much has been done on the impact of risk management on commercial banks' profitability and therefore this study intends to fill this gap by looking at different commercial banks in Lusaka.

III. METHODOLOGY

The study will adopt a quantitative cross-sectional design and use a structured questionnaire to answer its research questions. A deductive approach was used to conduct an in-depth study of the impact of risk management on the profitability of commercial banks in Lusaka using a structured questionnaire as a means of gathering useful data. The study population was 18 commercial banks in Lusaka district Zambia and 16 were sampled. Data was collected using a structured questionnaires and analysed using both SPSS and STATA version 20. However, to determine the impact of risk management on a bank's profitability at commercial banks in Lusaka, both descriptive and inferential statistics were used. For descriptive statistics, categorical variables had numbers and percentages being reported were as for continuous variables, the means and standard deviations or medians and inter-quartile ranges were reported. Univariate analysis of variables was performed to analyze covariance with the outcome variable. Ecological regression was used to evaluate the impact of risk management on bank profitability. Multi-variable logistic regressions were used to identify which variables are associated with the outcome variable, taking into account other variables and further remaining with variables that are statistically significant. 95% confidence intervals and P-values of 0.05 were reported to show statistical significance. Reliability was evaluated based on the Cronbach Alpha value obtain through STATA version 20 through a presentation in chapter four. The confirmation of reliability and validity was only done when the Cronbach Alpha value was between 0.6 and 0.8.

IV. DATA ANALYSIS

The main objective of this study is to evaluate the impact of risk management on the profitability of commercial banks in Lusaka region. The data was collected using structured questionnaires of which 18 questionnaires equivalent to the number of banks were handed out to the commercial banks.

4.1. The Types of Risks found at commercial Banks in Lusaka district

The aim of this specific objective was to get an insight of what kind of risks that may affect profitability at each commercial bank in order to lay out a foundation on the impact of risk management on profitability at each of these banks. The following responses are given by the commercial banks as indicated in the figure below.

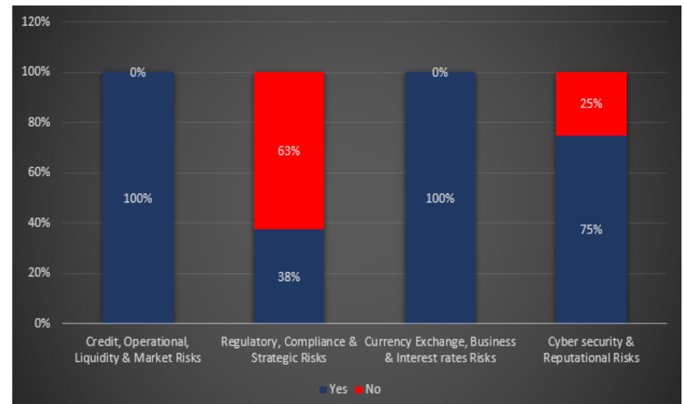

Figure 4.1

Risks above are categorized by how common they are as shown in above. Field data from commercial banks in Lusaka district shows that among the common risks that any bank can face such as credit, operational, liquidity and market risks, predominantly all the 16 commercial banks, representing a proportion of 100% stated that they faced all of the named risks in their operations and pursuit of profit. None of the banks visited stated to have never faced any of the four mentioned risks. Further, only 6 commercial banks with a percentage turn-out of 37.5% stated that they faced regulatory, compliance and strategic risks whereas 10 commercial banks representing 62.5% of the total population stated they did not face regulatory, compliance and strategic risks in their daily operations. Commercial banks were also asked on whether they faced currency exchange risks, business risks and interest rates risks. The responses obtained were that all the 16 visited commercial banks giving a percentage of 100% faced currency exchange rates risks, business risks and interest rates risks in their operations in pursuit of profit and none of the commercial banks stated otherwise. Further, the majority (12 commercial banks) of the banks representing a proportion of 75% stated to have faced cyber security and reputational risks in their operations while only about 4 commercial banks with a proportion of 25% stated not to have had faced cyber security and reputational risks in their operations. With regards comparisons with other studies, the results of this study on the most common risks faced by commercial banks are in line. For instance a study done by Stephen et al. (2015) on risk management strategies in financial institutions in Nigeria found that the major risks faced by most commercial bank world-wide are credit risk, operational risks, market risk and liquidity risk. This assertion correlates with the current study's findings from commercial banks in Lusaka especially on the four types of risks which recorded a 100% response rate. Safari et al. (2016) also echoes these assertions by stating that there are six common risks in banking which includes credit, liquidity, operational, market, strategic and compliance risks.

4.2 The Impact of Risk Management on the Profitability of Commercial Banks in Lusaka district.

International Research Journal of Advanced Engineering and Science
ISSN (Online): 2455-9024

This focuses on the statistical part of the independent variables against the outcome variables from research findings in commercial banks in Lusaka district in terms of how the independent variables affected the outcome variable (Profitability) with regards statistical significance and associations. It gives a detailed analysis on the impact of risk management on the profitability of a commercial bank, in relation to the research objectives, specifically those broken down to; risk found in commercial banks, the factors affecting risk management in these banks and strategies used in dealing with those factors.With this analysis of variables, it helps us understand the impact of risk management as a tool to deal with risks faced by commercial banks helps a bank achieve its business objective which is mainly profitability. As stated in chapter three above, data was coded in excel sheet and analyzed using STATA version 16.0. The findings are presented through tabulations and further subtitles as indicated below.

4.2.1 Predictor Variables (Descriptive and Inferential Statistics)

The Table below presents an in-depth analysis of both unadjusted (Bivariate) and adjusted using multiple logistic regression statistics to assess the impact of risk management on a bank's profitability in Lusaka district.

TABLE 4.2.1

Predictor	Unadjusted			Adjusted		
	Odds ratio	p- value	95% CI	Odds ratio	p-value	95% CI
Top Management Support	2.58	0.023	1.14,5.83	**2.15**	**0.095**	**0.88 , 5.30**
Training	2.02	0.028	1.08 , 3.78	**2.56**	**0.020**	**1.16 , 5.62**
Technology	0.99	0.023	0.97,1.00	**0.98**	**0.026**	**0.97,1.00**
Risk Identification	2.23	0.011	1.20,4.15	**1.75**	**1.116**	**0.88 , 3.39**
Risk Assessment & Analysis	3.37	0.046	1.02,11.09	**6.44**	**0.008**	**1.64 , 25.3**
Risks	2.33	0.068	0.94,5.77	**3.57**	**0.016**	**1.27 , 10.0**

The results from Table 4.2.1 above on the multiple logistic regression (Bivariate, unadjusted) and (Multivariable, adjusted) indicate a variety of outcomes. After adjusting for other variables, Top Management Support (Pr=0.095; Odds, 2.15), Risk Identification (Pr=1.116; Odds, 1.75), Risk Assessment and Analysis (Pr=0.008; Odds, 6.44) were not statistically significant but had an increased chance of having an impact on management of there by attaining profitability of commercial banks risks, accounting for Technology, training and risks. It is also noted that Training of employees (Pr=0.020; Odds, 2.56) and effective dealing with Risks at the commercial banks (Pr=0.016; Odds, 3.57) both increased chance of attaining profitability in the banks and also showed statistical significance indicating that there is no difference and that this is due to chance. However, it is further noted that non-availability of Technology (Pr=0.026; Odds, 0.98) also decreased chance of having of attaining profitability and that it has a negative impact on risk management accounting for all the other variables. However, these results are not enough to make conclusions on the impact of risk management on profitability and therefore in order to have best predictors of profitability, we chose to go further in analysing these predictors significantly in the model by further adjusting them using the best fit model of logistic regression as shown in table below.

TABLE 4.3: Adjusted Logistic Regression Best Fit Model (Backward Step-Wise)

Predictor	Odds ratio	p-value	95% CI
Top Management support	2.47	0.043	1.03 , 5.94
Training	2.82	0.008	1.31 , 6.08
Technology	0.98	0.014	0.97,1.00
Risk Identification	1.82	1.127	0.98 , 3.89
Risk Assessment & Analysis	6.49	0.007	1.68 , 25.1
Risks	3.76	0.011	1.35 , 10.4

Results from the best fit logistic model as shown in Table above indicate that Top Management Support (Pr=0.043; Odds, 2.47) in all bank activities and an effective management of Risks (Pr=0.011; Odds, 3.76) both had an increased chance of gaining profitability at the banks. On the other hand, it is also noted that not having good technology (Pr=0.014, Odds: 0.98) predicted less chance of attaining profitability at banks and that it was statistically significant. Therefore, we then conclude that Top Management Support, an effective management of Risks and good technology are best predictors of profitability in commercial banks. To further quantify and fully explain the above analysis, respondents were asked (commercial banks) to what extent these predictors affect risk management and further profitability of a commercial bank. The results below have given a detailed explanation.

TABLE 4.4 Top Management Support, Risks and Technology

Predictors	Frequency	Percentage %
Top Management Support		
High extent =1	14	87.5%
Low extent =2	2	12.5%
Total	**16**	**100%**
Risks		
High extent=1	16	100%
Low extent=2	0	0%
Total	**16**	**100%**
Technology		
High Extent=1	13	81.25%
Low Extent=2	3	18.75%
Total	**16**	**100%**

As shown in Table above, field data on what extent the predictors of profitability affected commercial banks' pursuit of profit indicates that 14 commercial banks representing a proportion of 87.5% stated that having support for every bank activity from top management was cardinal if maximization of profits in the banking sector. This they say was top priority if indeed banks were to effectively achieve their goals. However,

only 2 banks with a proportion of 12.5% were of the view that top management support only affected profitability to a low extent because regardless of support from management or not, if other issues such as unforeseen circumstances befall the bank, it would still not make profits and achieve its goals. Hence, they argued that it takes a collective approach to attain profitability including all stakeholders in the institution such as employees.

Further, when asked whether risks themselves have a huge impact on a bank's profitability and to what extent, predominantly all the respondents (16 commercial banks) representing a 100% response rate overwhelmingly stated that if a commercial bank handles its risks well and maintains that trajectory, the bank is assured of attaining profitability. Asked on whether technology has affects risk management and eventually profitability of a bank, majority of respondents (13 commercial banks) representing a percentage of 81.25% contended that to a higher extent, not having adequate and advanced technology reduced efficiency in the operations of a bank and thereby not managing these operations effectively thereby making loses instead of profit. However, only a few commercial banks, 3 (18.75%) out of the 16 argued that regardless of whether there is adequate technology or not, managing risks and thereby maximizing profit can be achieved. These results are summarized and shown in the figure below.

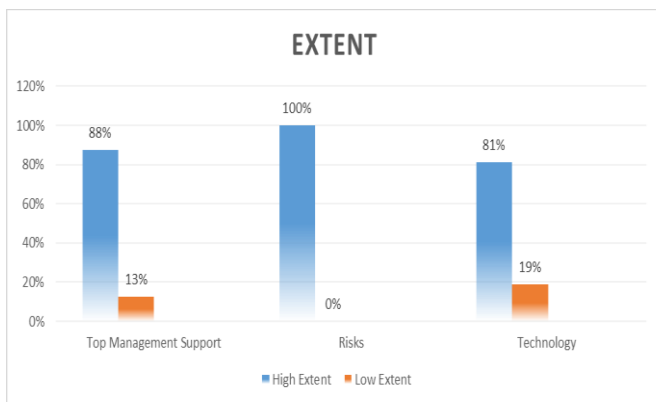

Figure 4.1: The extent and impact of Top Management Support, Risks and Technology on a banks' Profitability in Lusaka district

The results above are similar to what many researchers discovered on the three predictors. According to a study done by Togok (2016), there is a direct relationship between top management support and the effectiveness of an enterprise such as a commercial bank. Further, Banasadegh, Riahi & Davari (2014), Ngubo (2014) and Maina, Mbabazize & Kibachia (2016), all found that there was a strong relationship between risk management and effectiveness of a commercial bank which in return brings about profitability. On the effect of risks on profitability of a bank, research has shown relationships. Fan Lee (2014) investigated the impact of credit risk management on commercial bank profitability and results and found a relationship. Saeed & Zahid (2016) support the above assertion with regards to what they found in their study. They observed in their study that credit risk was one of the most dangerous risk to a commercial bank if left unchecked. On whether technology impacts profitability of a bank to a high extent, a study done by Nawaflesh (2015) reveals that many studies have discovered a significant information technology use expansion on profitability, costs and production Italians Banks.

TABLE 4.5: The Extent and impact to which Training, Risk Identification & Risk Assessment/Analysis affect Profitability of Commercial Banks in Lusaka district

Predictors	Frequency	Percentage %
Training		
High extent =1	11	68.75%
Low extent =2	5	51.25%
Total	**16**	**100%**
Risk Identification		
High extent=1	9	56.25%
Low extent=2	7	43.75%
Total	**16**	**100%**
Assessment & Analysis		
High Extent=1	10	62.5%
Low Extent=2	6	37.5%
Total	**16**	**100%**

The question on the extent to which training of employees on risk management, risk identification and risk assessment and analysis affect profitability required respondents to give their responses on a scale of higher extent to lower extent. The results from field data show that 11 commercial banks, representing a proportion of 68.75% stated that training of employees on risk management affected profitability to a higher extent and has a great impact in shaping the bank's goals and objectives while 5 commercial banks indicated otherwise by stating that training of employees on risk management affected profitability just to a lower extent and had a small impact. They stated that as long as a bank has set up goals and objectives to help carry out its operations, profitability is attainable.

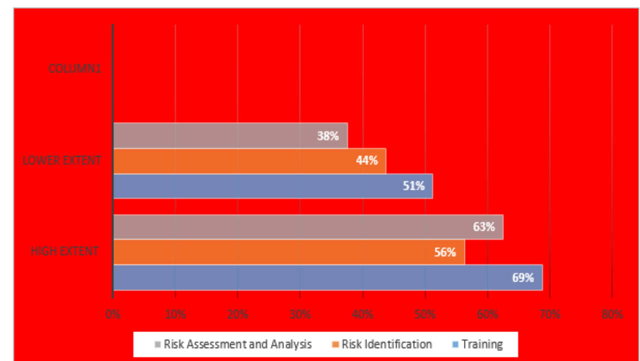

Figure 4.2: The Extent and impact to which Training, Risk Identification & Risk Assessment/Analysis affect Profitability of Commercial Banks in Lusaka district

Further, half of respondents, 9 commercial banks, representing 56.25% of the total population alluded that identification of risks affects profitability to a higher extent in that knowing the existence of a risk and its source is the part of the solution to that risk while less than half of commercial banks, 7 representing a percentage of 43.75% indicated that risk identification only affects profitability to a lower extent. However, similar to training of employees for risk management, predominantly a huge proportion (62.5%) representing 10 commercial banks in Lusaka district contended that risk assessment and analysis affected profitability to a higher extent and had a huge impact profitability of a bank

where-as less than half of the commercial banks, 6 with a percentage of 37.5% stated that risk assessment and analysis affected profitability to a lower extent.

The above results are uniform to what many other studies have found out. A report on why employee training for risk management is important by Ten (2017) indicates that training of employees on management of risk has a greater impact on the success of a commercial bank. The author suggests that employee risk management training is one way to strengthen the team's ability to manage risk. This improves risk management maturity which in turn gives better governance, greater awareness of potential risks and a more holistic approach to issues. It was gives a base and commitment of employees to the ideals and objectives of the firm, an element that births effectiveness in dealing with issues of the bank and in return maximizes profits. On risk identification and its impact on profitability, Bojinov (2016) states that risk identification is essential as it examines and clarifies the composition and contents of the risks involved in the bank's operations be it transactions, or mare business and this determines importance and threats of risks. Asat et al. (2014) further agrees that risk identification is the first step of a well aligned risk management system that plays a critical role in maximization of profits of a bank. They assert that a good risk identification plan ensures effectiveness and efficiency in the operations of a firm. Risk assessment and analysis are also cardinal in the operations of the bank as seen from field data. This is also in line with what most studies have stated. Khalid & Amjad (2012) state in their study that addressing of risks as well as analyzing them gives a leeway to solving risks. The authors contend that active risk analysis and assessment processes are important in helping bank owners and other stakeholders in commercial banks put up future plans that technically put them in good positions to measure, prioritize and help reduce anticipated risks.

4.6. Strategies used in Risk Management to Maximize Profitability at commercial banks in Lusaka district.

The table below shows strategies used in risk management was to get firsthand data on whether the commercial banks have used any of the three strategies of risk management of not in their risk management program in pursuit of profit.

TABLE 4.6: Strategies for Risk Management in commercial banks in Lusaka

Strategy	Frequency	Percentage %
Uses 8 components of Risk Management		
1. Yes	12	75%
2. No	4	25%
Total	**16**	**100%**
Uses the Enterprise Risk Management Approach		
1. Yes	6	37.5%
2. No	10	62.5%
Total	**16**	**100%**
Uses the Risk Management strategy		
1. Yes	4	25%
2. No	12	75%
Total	**16**	**100%**

Field data on the types of strategies used by different commercial banks on management of risks is shown in Table above. Field data shows that all the 16 commercial banks use different approaches at different times in dealing with risks. Hence data from the field indicate that majority of commercial banks, 12 in total, representing a percentage of 75% in Lusaka district stated that they used the eight (8) components of risk management in their management of risks they encountered while 4 out of the 16 commercial banks said they did not use the eight (8) components of risk management in the operations. Further, 6 commercial banks, a proportion of 37.5% indicated to have had used the Enterprise Risk management approach at some point in their management of risks. However, a huge number of commercial banks (10) that is about 62.5% of respondents stated that they did not use this kind of approach in their management of risks. Lastly a few commercial banks in Lusaka district, 4, with a percentage of 25% stated to use Risk Management Strategy (RMS) as one of the strategies to deal with their risks while the majority of commercial banks (10) with a proportion of 75% indicated to have had never used this type of risk management approach in their operations. The results of strategies used in risk management in the commercial banks of Lusaka district are summarized in Figure below.

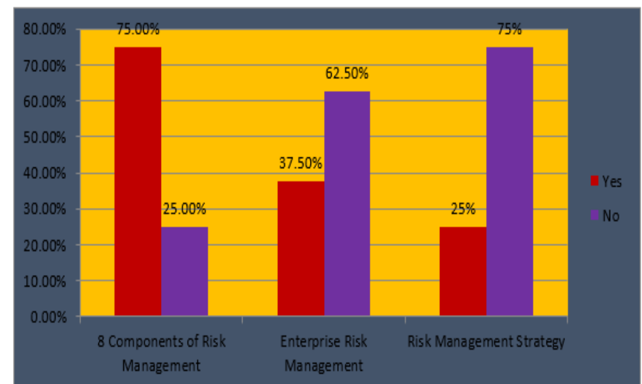

Figure 4.7: Strategies used in Risk Management in commercial banks in Lusaka district.

The field results from commercial banks in Lusaka district are also in line with what many studies have indicated on which strategy is the most commonly used in relation to risk management. For instance, Srinivas (2019) states that most firms use the eight components of risk management and ERMs because of their broad and effective nature. Freeman, Malik & Holt (2013) also contend that these two are widely used because of their clear structures and disciplined approach with aligned strategies, processes, and space for individuals, technology and knowledge which enhances evaluation and management of all risks and uncertainties arising from pursuit of profitability and value creation.

4.7 Reliability

Reliability in this study answered the question: What method did the researcher use to conduct the investigation? The level of trust that researchers place in a source is now referred to as credibility and dependability, and it is dependent on the context of publishing. The researcher inspects the instruments to evaluate and improve the dependability of the interview and

Ulayi Owen Shiku, Jacqueline Siwale, and Gwebente Mudenda, "An assessment on the impact of risk management on profitability of commercial banks: A case of commercial banks in Lusaka district," *International Research Journal of Advanced Engineering and Science*, Volume 9, Issue 4, pp. 46-56, 2024.

questions, ensuring that meaningful data is collected. The questions are double-checked to verify that the answers are reliable and relevant to the study (Korstijen and Moses, 2018).

As a result, different tactics were applied in this study to ensure the research's trustworthiness. This is required to guarantee that the results are consistent and that the measurements are repeatable. (Yin, 2014). Only when another researcher conducts the study and is able to achieve the same results under similar settings can reliability be demonstrated. The following procedures were utilized to ensure dependability in this work, and they are provided as indicated by (Yin, 2014). (Thomas and Magilvy, 2011),

(a) All detailed descriptions of the research processes and procedures were retained by the researcher; (b) In chapter three, a detailed systematic explanation of data collection and study design was offered. This included the first stage which was to select respondents, the followed by a thorough collection and analysis of data which ensured it was of quality.

4.8. Validity

Yin (2014), and Thomas and Magilvy (2011) have suggested some methods to that are useful in achieving validity and this was adopted for this study and these include:

The study's evidence was derived from a variety of sources;

I) Saturation of data
II) Addressing the study's weaknesses.
III) It will be ensured that at least two or three sources of data triangulation will be used (Denzin, 2012).

To achieve validity through the guidelines above, the researcher used multiple sources of literature which included documents and articles along with through primary data from the field with commercial banks in Lusaka district. This study also used the same set of research questions as the previous one. Because it presented various data sources as evidence through comparisons with previous data, triangulation ensured and addressed construct validity (Beverland and Lindgreen, 2010). Triangulation has the advantage of reducing participant bias and providing support for a researcher's conclusions.

4.9 Hypothesis Testing

H0: - Risk Management has an impact on the profitability of a bank.

The above hypothesis has been adopted because the findings of the study indicate through the findings from the field that risk management practiced in commercial banks in Lusaka district indeed has an impact on the profitability of a commercial bank. Most commercial banks in Lusaka indicated that factors like top management support, training of employees on risk management, availability of technology and proper handling of risks, all had a positive impact on the profitability of commercial banks. The commercial banks further indicated that other factors like risk identification and assessment and analysis were also vital in the profitability of the banks. This therefore entails that that risk management plays a critical role in driving the bank's prosperity agenda as it acts as a catalyst in making sure that the goals, objectives and plans of commercial banks are met without difficulties. Risks hinder progress and with a properly laid out risk management plan, profitability in banks is the ultimate result. The consistency and good well planned strategies gives commercial banks confidence and bring about efficiency even through partnerships for other businesses that the banks may wish to engage in.

H1: - Risk Management does not an impact on the profitability of a bank.

This hypothesis, on the other hand has not been accepted because; based on the primary data; risk management has an impact on the profitability of commercial banks.

V. Conclusions and Recommendations

5.1 Conclusion

This study focused on evaluating the impact of risk management on the effectiveness of business support in the Lusaka region. Profitability was defined as the ability of a bank to obtain profit from its economic activities or it is a firm's ability to use its investments in order to generate earnings exceeding the cost of the investments they used (Nishanthini & Nimalathasan, 2013). On the other hand, risk management according to Srinivas (2019) is a well-planned as well as structured strategy and process used to make effective and right decisions so as to identify, clarify, quantify and assess encountered risks in order to manage and eventually control or eradicate them. The study indicated that the distribution of data was non-normal (not symmetric). The study used logistic regression ideas to explore and analyze data in predicting the best variables that impact profitability through risk management. The study also showed that the distribution of data was non-normal (not symmetric).

5.2 Recommendations

In order for commercial banks in Lusaka to fully realize their potential in risk management, top management of banks therefore should attach considerable importance to improve the ability to identify, measure, monitor and control the overall level of risks undertaken and this can be done through using a number of processes which may include;

- Organizational structures on risk management in the banks
- A comprehensive risk management approach carried out
- Broader and well laid out business strategies, capital strength, management expertise and overall willingness to assume risk.
- Guidelines and other parameters used to govern risk taking and management should include well detailed structures of prudential limits.
- Strong MIS for reporting, monitoring and controlling risks;
- Properly and well laid out procedures, effective control and comprehensive risk reporting framework.

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