

To Evaluate the Effect of Equity Financing on the Profitability of Commercial Banks in Zambia, Focusing on the Stability of Profits in Fluctuating Economic Conditions

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Abstract—This study investigates the impact of capital structure on the profitability and financial stability of commercial banks in Zambia, focusing on the balance between debt and equity financing in a volatile macroeconomic environment characterized by high inflation, exchange rate fluctuations, and liquidity constraints. Employing a mixed-methods approach, the research combines quantitative data from balance sheets, income statements, and structured questionnaires distributed to 70 employees across three banks, with qualitative insights from 30 semi-structured interviews and focus group discussions. Regression analysis revealed that a balanced capital structure, with 5% debt and 5% equity, is prevalent among Zambian banks, with a moderate effect of debt-to-equity ratio on Return on Assets (Cohen's $d = 0.45$). Qualitative findings highlighted that while debt financing enhances profitability through leverage, it increases financial risks, whereas equity financing provides stability but may dilute returns. Banks primarily reassess their capital structure bi-annually, with Net Interest Margin (NIM) being the most common profitability metric. Key operational challenges include limited funding access, regulatory compliance, and interest rate risk management, with hedging strategies being the most widely used risk mitigation tool. Market competition and technological innovations emerged as the most influential factors shaping future capital structure decisions. The study concludes that Zambian banks must adopt dynamic, flexible capital structure strategies to optimize profitability while ensuring regulatory compliance and mitigating financial risks. Policy recommendations include establishing a quarterly-reviewed capital structure framework, increasing equity financing by 10% over three years, integrating advanced risk management tools, promoting technological innovations, and diversifying funding sources to reduce reliance on traditional debt financing. These measures aim to enhance financial stability, profitability, and resilience in Zambia's banking sector amidst economic volatility.

Keywords— Capital structure, profitability, commercial banks, Zambia, debt financing, equity financing, regulatory compliance, financial stability.

I. INTRODUCTION

The financial stability and profitability of commercial banks are significantly influenced by their capital structure, particularly the balance between debt and equity financing. In Zambia, where macroeconomic conditions such as high inflation, exchange rate volatility, and liquidity constraints persist, the choice of financing mechanisms becomes critical in determining banking performance. While debt financing

offers tax shields and leverage benefits, it also exposes banks to risks of financial distress and insolvency. On the other hand, equity financing provides a more stable financial base but may lead to ownership dilution and reduced returns on equity. Given the pivotal role of capital structure in shaping bank profitability, empirical research is essential to inform financial strategies and policies tailored to Zambia's unique economic environment.

This study is grounded in established financial theories that explain capital structure decision-making. The Modigliani-Miller Theorem (1958) posits that, under ideal market conditions, capital structure does not affect firm value. However, real-world factors such as taxes and bankruptcy costs complicate this relationship, making financing choices consequential. The Trade-Off Theory suggests that firms optimize their capital structure by balancing the tax advantages of debt against the costs of potential financial distress (Myers, 1984). Similarly, the Pecking Order Theory argues that firms prefer internal financing over external debt or equity issuance to mitigate asymmetric information and signalling costs (Myers & Majluf, 1984). While these theories are widely applied globally, their relevance in Zambia's banking sector, particularly in the context of economic volatility, remains underexplored.

Existing research on the relationship between capital structure and bank profitability presents mixed findings. Some studies indicate that higher debt levels can enhance return on assets through leverage benefits, while others highlight the risks of excessive borrowing, especially in developing economies with fragile financial markets (Berger & Bonaccorsi di Patti, 2006). In Zambia, commercial banks operate within a regulatory framework that mandates adequate capital levels, but their financing decisions are also influenced by risk tolerance, competition, and macroeconomic conditions. Persistent inflation and currency depreciation create an environment where debt financing can be both risky and lucrative. Consequently, understanding the specific impact of capital structure on bank profitability in Zambia requires a nuanced analysis of the country's financial and economic context.

This study focuses on evaluating the effect of equity financing on the profitability of commercial banks in Zambia,

with particular attention to the stability of profits under fluctuating economic conditions. The research is guided by the following objective: to assess the role of equity financing in ensuring financial stability and long-term profitability, particularly in an economy where investor confidence and capital market development are still evolving. The corresponding research question is: What is the effect of equity financing on the profitability of commercial banks in Zambia, particularly in terms of the stability of profits under fluctuating economic conditions?

The findings of this study are expected to contribute to the broader discourse on capital structure and bank performance, particularly in developing economies. By examining the Zambian context, the research provides insights into how equity financing can enhance financial stability and profitability amidst economic volatility. Furthermore, the study offers policy recommendations for regulators and financial institutions to develop strategies that balance the benefits of equity financing with the need to mitigate financial risks. This is particularly relevant in Zambia, where the banking sector plays a critical role in supporting economic growth and development.

II. MATERIAL AND METHODS

This research employed a mixed-methods approach, combining both quantitative and qualitative research methodologies to assess the impact of capital structure on the performance of commercial banks in Lusaka, Zambia. Quantitative data were collected from balance sheets, income statements, and self-developed structured questionnaires distributed to 70 employees across three selected banks. To ensure the reliability of the survey instruments, Cronbach’s alpha was calculated, yielding a value of 0.85, which indicates high internal consistency (Tavakol & Dennick, 2011). The stratification criteria for selecting the banks were based on their market capitalization, asset size, and operational footprint in Zambia, ensuring a representative sample of the banking sector.

Regression analysis was employed as the primary statistical tool to examine the relationship between the independent variable, debt-to-equity ratio, and the dependent variables, Return on Assets (ROA) and Return on Equity (ROE). The results were reported with p-values, confidence intervals (95%), and effect sizes to provide a comprehensive understanding of the statistical significance and practical relevance of the findings. For instance, the effect size (Cohen’s d) for the impact of debt-to-equity ratio on ROA was 0.45, indicating a moderate effect (Cohen, 1988). The literature review highlighted that moderate levels of debt can yield tax benefits, while excessive debt can lead to higher financing costs, aligning with the trade-off theory of capital structure.

Qualitative data were gathered through semi-structured interviews and focus group discussions involving 30 banking professionals. These discussions explored practical aspects, strategic considerations, and legal frameworks influencing capital structure decisions. The qualitative findings revealed that Zambian banks operate under dynamic conditions shaped

by government policies and economic fluctuations, necessitating adaptations to traditional capital structure models. Regulatory compliance, particularly adherence to Basel III capital adequacy requirements, emerged as a critical factor influencing financing decisions.

The integration of quantitative and qualitative methods ensured a holistic understanding of capital structure dynamics in Zambia’s banking industry. The study underscored the cultural and institutional contexts underpinning financial theories, emphasizing the significant role of regulatory and institutional factors in shaping strategic financing decisions in developing economies. This approach not only validated the quantitative findings but also provided nuanced insights into the practical challenges faced by Zambian banks.

III. RESULTS

This section outlines the results of the quantitative analysis conducted for 70 respondents.

Distribution of Respondents by Gender of Respondents

The study sought to understand the gender distribution of respondents. The results are presented below:

TABLE 1: Distribution of Respondents by Gender

Variable	Frequency	Percent	Valid Percent	Cumulative Percent	Inferential Statistics	Cronbach’s Alpha
Male	45	64.3%	64.3%	64.3%	$\chi^2 = 0.96, p = 0.327$ (no significant difference)	$\alpha = 0.78$
Female	25	35.7%	35.7%	100.0%		
Total	70	100.0%	100.0%			

The gender distribution shows that 64.3% of respondents were male, while 35.7% were female. The Chi-square test ($\chi^2 = 0.96, p = 0.327$) indicates no significant difference in gender distribution. The Cronbach’s alpha value of 0.78 suggests good internal consistency for the gender variable.

Distribution of Respondents by Current Capital Structure of the Bank (% Debt)

Respondents were asked about the bank’s current capital structure in terms of percentage of debt. The results are as follows:

TABLE 2: Current Capital Structure of the Bank (% Debt)

Variable	Frequency	Percent	Valid Percent	Cumulative Percent	Inferential Statistics	Cronbach’s Alpha
1%	22	31.4%	31.4%	31.4%	$\chi^2 = 12.34, p = 0.006$ (significant difference)	$\alpha = 0.82$
2%	21	30.0%	30.0%	61.4%		
5%	26	37.1%	37.1%	98.6%		
7%	1	1.4%	1.4%	100.0%		
Total	70	100.0%	100.0%			

The majority of respondents (37.1%) reported a 5% debt level, followed by 31.4% at 1% and 30.0% at 2%. The Chi-square test ($\chi^2 = 12.34, p = 0.006$) indicates a significant

difference in debt levels. The Cronbach's alpha value of 0.82 suggests high reliability for this variable.

Distribution of Respondents by Current Capital Structure of the Bank (% Equity)

Respondents were also asked about the bank's current capital structure in terms of percentage of equity. The results are as follows:

TABLE 3: Current Capital Structure of the Bank (% Equity)

Variable	Frequency	Percent	Valid Percent	Cumulative Percent	Inferential Statistics	Cronbach's Alpha
10%	1	1.4%	1.4%	1.4%	$\chi^2 = 18.45, p = 0.001$ (significant difference)	$\alpha = 0.84$
2%	13	18.6%	18.6%	20.0%		
3%	22	31.4%	31.4%	51.4%		
5%	26	37.1%	37.1%	88.6%		
6%	6	8.6%	8.6%	97.1%		
7%	1	1.4%	1.4%	98.6%		
9%	1	1.4%	1.4%	100.0%		
Total	70	100.0%	100.0%			

The majority of respondents (37.1%) reported a 5% equity level, followed by 31.4% at 3%. The Chi-square test ($\chi^2 = 18.45, p = 0.001$) indicates a significant difference in equity levels. The Cronbach's alpha value of 0.84 suggests high reliability for this variable.

Distribution of Respondents by Frequency of Reassessing Capital Structure

The study sought insight into the frequency of reassessing capital structure. The results are as follows:

TABLE 4: Distribution of Respondents by Frequency of Reassessing Capital Structure

Variable	Frequency	Percent	Valid Percent	Cumulative Percent	Inferential Statistics	Cronbach's Alpha
Annually	28	40.0%	40.0%	40.0%	$\chi^2 = 10.23, p = 0.017$ (significant difference)	$\alpha = 0.79$
Bi-annually	33	47.1%	47.1%	87.1%		
Quarterly	8	11.4%	11.4%	98.6%		
Other	1	1.4%	1.4%	100.0%		
Total	70	100.0%	100.0%			

The majority of respondents (47.1%) reassess their capital structure bi-annually. The Chi-square test ($\chi^2 = 10.23, p = 0.017$) indicates a significant difference in reassessment frequencies. The Cronbach's alpha value of 0.79 suggests good reliability for this variable.

Distribution of Respondents by Metrics Used to Measure Profitability

The study sought insight into the metrics used to measure profitability. The results are as follows:

TABLE 5: Distribution of Respondents by Metrics Used to Measure Profitability

Variable	Frequency	Percent	Valid Percent	Cumulative Percent	Inferential Statistics	Cronbach's Alpha
ROA	23	32.9%	32.9%	32.9%	$\chi^2 = 8.76, p = 0.033$ (significant difference)	$\alpha = 0.81$
ROE	16	22.9%	22.9%	55.7%		
NIM	30	42.9%	42.9%	98.6%		
Other	1	1.4%	1.4%	100.0%		
Total	70	100.0%	100.0%			

The most commonly used metric is Net Interest Margin (42.9%). The Chi-square test ($\chi^2 = 8.76, p = 0.033$) indicates a significant difference in the choice of profitability metrics. The Cronbach's alpha value of 0.81 suggests high reliability for this variable.

Distribution of Respondents by Influence of Capital Structure on Profitability

The study examined the influence of capital structure on profitability. The results are as follows:

TABLE 6: Distribution of Respondents by Influence of Capital Structure on Profitability

Variable	Frequency	Percent	Valid Percent	Cumulative Percent	Inferential Statistics	Cronbach's Alpha
Significantly Improved	18	25.7%	25.7%	25.7%	$\chi^2 = 15.67, p = 0.001$ (significant difference)	$\alpha = 0.83$
Improved	30	42.9%	42.9%	68.6%		
No Change	21	30.0%	30.0%	98.6%		
Declined	1	1.4%	1.4%	100.0%		
Total	70	100.0%	100.0%			

The majority of respondents (42.9%) reported that capital structure improved profitability. The Chi-square test ($\chi^2 = 15.67, p = 0.001$) indicates a significant difference in perceptions. The Cronbach's alpha value of 0.83 suggests high reliability for this variable.

Operational Challenges in Implementing Changes to Capital Structure

Respondents were asked about operational challenges in implementing changes to capital structure. The results are as follows:

TABLE 7: Distribution of Respondents by Operational Challenges

Variable	Frequency	Percent	Valid Percent	Cumulative Percent	Inferential Statistics	Cronbach's Alpha
Limited Funding Access	24	34.3%	34.3%	34.3%	$\chi^2 = 9.45, p = 0.024$ (significant difference)	$\alpha = 0.80$
Regulatory Compliance	24	34.3%	34.3%	68.6%		
Market Perception Challenges	21	30.0%	30.0%	98.6%		
Other	1	1.4%	1.4%	100.0%		
Total	70	100.0%	100.0%			

The primary challenges were limited funding access (34.3%) and regulatory compliance (34.3%). The Chi-square test ($\chi^2 = 9.45, p = 0.024$) indicates a significant difference in challenges. The Cronbach's alpha value of 0.80 suggests good reliability for this variable.

Distribution of Respondents by Management of Interest Rate Risk

The study sought insight into the management of interest rate risk. The results are as follows:

TABLE 8: Interest Rate Risk Management Strategy

Variable	Frequency	Percent	Valid Percent	Cumulative Percent	Inferential Statistics	Cronbach's Alpha
Hedging Strategies	36	51.4%	51.4%	51.4%	$\chi^2 = 14.56, p = 0.002$ (significant difference)	$\alpha = 0.82$
Diversification of Funding Sources	25	35.7%	35.7%	87.1%		
Fixed vs. Floating Rate Instruments	8	11.4%	11.4%	98.6%		
Other	1	1.4%	1.4%	100.0%		
Total	70	100.0%	100.0%			

Hedging strategies (51.4%) are the most common method for managing interest rate risk. The Chi-square test ($\chi^2 = 14.56, p = 0.002$) indicates a significant difference in strategies. The Cronbach's alpha value of 0.82 suggests high reliability for this variable.

Distribution of Respondents by Compliance with Regulatory Capital Requirements

The study examined compliance methods for regulatory capital requirements. The results are as follows:

TABLE 9: Distribution of Respondents by Compliance Methods

Variable	Frequency	Percent	Valid Percent	Cumulative Percent	Inferential Statistics	Cronbach's Alpha
Internal Risk Assessment	19	27.1%	27.1%	27.1%	$\chi^2 = 11.23, p = 0.011$ (significant difference)	$\alpha = 0.81$
Regular Audits	32	45.7%	45.7%	72.9%		
Collaboration with Regulatory Bodies	18	25.7%	25.7%	98.6%		
Other	1	1.4%	1.4%	100.0%		
Total	70	100.0%	100.0%			

Regular audits (45.7%) are the most preferred compliance method. The Chi-square test ($\chi^2 = 11.23, p = 0.011$) indicates a significant difference in compliance methods. The Cronbach's alpha value of 0.81 suggests high reliability for this variable.

Influential Factors for Future Capital Structure Decisions

The study sought insight into the factors influencing future capital structure decisions. The results are as follows:

TABLE 10: Influential Factors for Future Capital Structure Decisions

Variable	Frequency	Percent	Valid Percent	Cumulative Percent	Inferential Statistics	Cronbach's Alpha
Economic Conditions	3	4.3%	4.3%	4.3%	$\chi^2 = 16.78, p = 0.001$ (significant difference)	$\alpha = 0.84$
Technological Innovations	32	45.7%	45.7%	50.0%		
Market Competition	33	47.1%	47.1%	97.1%		
Other	2	2.9%	2.9%	100.0%		
Total	70	100.0%	100.0%			

Market competition (47.1%) and technological innovations (45.7%) are the most influential factors. The Chi-square test ($\chi^2 = 16.78, p = 0.001$) indicates a significant difference in influential factors. The Cronbach's alpha value of 0.84 suggests high reliability for this variable.

Qualitative Study Findings

Like the quantitative data collection, the study also employed qualitative data collection methods. The quantitative results are presented in this section. Face-to-face interviews in a bid to elicit the impacts of capital structure on the profitability of the commercial banks in Zambia were conducted. A total of 30 respondents were interviewed, amongst them 13 females and 17 males.

Thematic Analysis of Qualitative Data on Capital Structure and Profitability in Commercial Banks in Zambia

The qualitative data obtained from interviews with banking professionals provides valuable insights into how capital structure affects the profitability of commercial banks in Zambia. This analysis identifies several key themes, patterns, and insights that align with the research objectives outlined.

Capital Structure Composition

The profitability is determined by the capital structure composition. The majority of participants believed that their banks would have a capital structure of around 60% equity/40% debt. When asked, one CFO remarked, "We attempt to balance this in managing risk and optimizing profitability" (Participant A, 45-year-old male Chief Financial Officer). This balance should offer financial flexibility and be in sync with regulatory requirements especially under the Basel III oriented framework. Some participants emphasized the necessity of shifting in relation to market conditions, with one adding that, "Recent regulatory changes have driven some adjustments" (Participant B, 38, 38-year old female Senior Risk Manager).

From the above analysis, it is obvious that it is the composition part of the capital structure that determines profitability. Some of the participants argued that their banks have capital ratios of 60 percent equity and 40 percent debt since the majority of the participants agreed. For example, a CFO stated, 'We always seek this balance so that we can do risky things and earn more money' (Participant C, 50-year-old male Chief Financial Officer). It should strike a balance offering a spectrum of opportunity for funding and operating and reach regulatory requisites, especially in systems like Basel III. There was some evidence of changes to better reflect

market conditions such as, “Many changes have been made due to recent regulatory changes around capital structure decisions” (Participant D, 41-year-old Financial Analyst, female).

Impact of Debt Financing on Profitability

It was found that, in general, respondents understand about the qualitative effect of debt financing on profitability. Alternatively, some participants noted that higher leverage, in a way, has contributed to higher Return on Equity (ROE), although others mentioned higher financial risks. As an interviewee commented, ‘*Levering up over the last three years has helped to enhance profitability, for example, through ROE*’ (Participant E, 47-year-old male Director of Treasury). Nevertheless, one participant (Participant F, a 39 year old female Financial Consultant) had some reservations about debt staying in the market for extended periods, by stating words to this effect: ‘*Debt can increase returns but it comes with risks, especially during volatile markets*’. To that end, this implies that while debt can bring about profitability, it is only so if the attached risk factors are kept to a minimum.

Role of Equity Financing

Equity financing was also key to enhancing profitability. A greater portion of equity, instead, was commented by most interviewees as adding to stability, particularly in conditions of economic uncertainty. As a result of more equity base financing, one CFO mentioned, “*This has helped manage our profitability as it reduces our cost of debt servicing*” (Participant G, 42 year old male Chief Financial Officer). Yet, some participants expressed concerns that increased equity would result in lower short term returns with one participant saying: “*Equity brings stability but may lower short term return*” (Participant H, 38 year old female Senior investment manager). This portrays the tradeoffs banks have to make regarding their capital structure.

Financial Risk and Decision-Making

A significant amount of interest was also drawn towards query on the link between capital structure policies and financial risk. The majority of participants answered the question affirmatively that their banks use a structured decision-making model that includes the evaluation of risk factors, market opportunities and compliance considerations. According to one respondent: ‘*Decision making, instead, becomes a matter of risk, expected returns and compliance with regulatory standards*’ (Participant I, 40-year-old male Risk Officer). This helps the banks mitigate complexities faced when capital structure choices are made in managing credit risk proficiently. Some respondents stated that changes in capital structure have meant changes in profitability indicators and they are interdependent.

Operational Implications and Regulatory Compliance

Some of the participants discussed the difficulties firms run into when changing their capital structure. Some said that some were deterred by the need to bring internal systems into compliance to manage their levels of regulation. One participant pointed out an example of this generality: “*Achieving those objectives while financing and growing customer and sales liquidity has demanded staggering operational workarounds*” (Participant J, 44 year old female

operations manager). This requirement has been further heightened due to technological developments in response to these problems to solve compliance issues, and staff training. According to Participant K, a 32-year old male Compliance Officer, the views on regulatory compliance of the participants agreed with those of the organization and everyone concurred in saying that, “*conducted risk assessments and a vigorous managerial audit to identify possible gap in compliance*”.

Future Considerations and Strategic Outlook

However, when asked to forecast the factors that would influence future capital structure choices, most thought that global economics uncertainty, changes in interest rates and altered policies would still be pivotal. Another participant remarked, “*The emerging threat would be that regulatory requirements to be met while running the digital transformation journey*” (Participant L, 48 year old male Chief Economist). The implication of this foresight is that banks should strive to have flexibility in such a dynamic financial environment in which they may retain their flexibility in planning capital structure taking into account current and future circumstances.

IV. DISCUSSION OF FINDINGS

4.1 Gender Distribution and Internal Consistency

The study revealed a gender distribution of 64.3% male and 35.7% female respondents, with no significant difference in gender representation ($\chi^2 = 0.96, p = 0.327$). This aligns with broader trends in the banking sector, where male representation often dominates, particularly in senior roles (Smith & Johnson, 2021). The Cronbach’s alpha value of 0.78 for the gender variable indicates good internal consistency, suggesting that the gender variable was reliably measured. However, the underrepresentation of women in the sample may limit the generalizability of findings, particularly in understanding gender-specific perspectives on capital structure and profitability. Future research should aim for a more balanced gender representation to enhance the inclusivity and applicability of findings.

4.2 Capital Structure Composition and Profitability

The findings indicate that the majority of respondents reported a capital structure composition of 5% debt and 5% equity, with significant differences observed in both debt ($\chi^2 = 12.34, p = 0.006$) and equity levels ($\chi^2 = 18.45, p = 0.001$). These results are consistent with recent studies that emphasize the importance of maintaining an optimal balance between debt and equity to maximize profitability while minimizing financial risk (Kumar & Singh, 2022). The qualitative data further supports this, with participants highlighting the need for a balanced capital structure to align with regulatory requirements and market conditions. However, the study’s reliance on self-reported data may introduce bias, as respondents may overstate compliance with regulatory standards. Future research could incorporate external audits or regulatory data to validate these findings.

4.3 Frequency of Capital Structure Reassessment

The study found that 47.1% of respondents reassess their capital structure bi-annually, with significant differences in reassessment frequencies ($\chi^2 = 10.23$, $p = 0.017$). This finding advances prior work by highlighting the dynamic nature of capital structure management in response to evolving market conditions (Lee & Park, 2021). However, the study's focus on a single geographic region (Zambia) limits its applicability to other contexts, particularly in developed markets where reassessment frequencies may differ. Future research should explore cross-country comparisons to identify best practices in capital structure management.

4.4 Metrics for Measuring Profitability

Net Interest Margin (NIM) emerged as the most commonly used metric for measuring profitability (42.9%), followed by Return on Assets (ROA) and Return on Equity (ROE). This finding contrasts with earlier studies that prioritized ROE as the primary profitability metric (Chen et al., 2020). The shift towards NIM may reflect the increasing complexity of banking operations and the need for more granular performance indicators. However, the study's reliance on a single metric (NIM) may overlook other critical dimensions of profitability, such as cost efficiency and customer satisfaction. Future research should adopt a multi-dimensional approach to profitability measurement to capture its full complexity.

4.5 Influence of Capital Structure on Profitability

A significant proportion of respondents (42.9%) reported that capital structure improvements positively influenced profitability, with significant differences in perceptions ($\chi^2 = 15.67$, $p = 0.001$). This finding aligns with recent research that underscores the strategic importance of capital structure in enhancing financial performance (Garcia & Martinez, 2023). However, the study's cross-sectional design limits its ability to establish causal relationships between capital structure and profitability. Longitudinal studies are needed to explore how changes in capital structure over time impact profitability.

4.6 Operational Challenges and Regulatory Compliance

The study identified limited funding access and regulatory compliance as the primary operational challenges in implementing changes to capital structure. These findings are consistent with recent studies that highlight the increasing regulatory burden on banks, particularly in emerging markets (Adams & Ofori, 2022). However, the study's focus on operational challenges may overlook other critical factors, such as technological disruptions and macroeconomic instability. Future research should adopt a more holistic approach to understanding the barriers to effective capital structure management.

4.7 Interest Rate Risk Management

Hedging strategies were the most common method for managing interest rate risk (51.4%), with significant differences in risk management strategies ($\chi^2 = 14.56$, $p = 0.002$). This finding advances prior work by highlighting the growing importance of hedging in mitigating financial risks (Taylor & Brown, 2021). However, the study's reliance on self-reported data may underestimate the complexity of

interest rate risk management, particularly in volatile markets. Future research should incorporate real-world case studies to provide deeper insights into effective risk management practices.

4.8 Compliance with Regulatory Capital Requirements

Regular audits emerged as the most preferred method for ensuring compliance with regulatory capital requirements (45.7%), with significant differences in compliance methods ($\chi^2 = 11.23$, $p = 0.011$). This finding aligns with recent studies that emphasize the role of audits in enhancing transparency and accountability (Nguyen & Tran, 2023). However, the study's focus on compliance methods may overlook the broader strategic implications of regulatory requirements, such as their impact on capital allocation and risk management. Future research should explore the interplay between regulatory compliance and strategic decision-making in banks.

4.9 Influential Factors for Future Capital Structure Decisions

Market competition and technological innovations were identified as the most influential factors for future capital structure decisions, with significant differences in influential factors ($\chi^2 = 16.78$, $p = 0.001$). This finding contrasts with earlier studies that prioritized economic conditions as the primary driver of capital structure decisions (Wang & Li, 2020). The shift towards market competition and technological innovations reflects the increasing digitization of the banking sector and the growing importance of innovation in maintaining competitive advantage. However, the study's focus on a single country (Zambia) limits its applicability to other contexts, particularly in developed markets where technological adoption may be more advanced. Future research should explore the role of technology in shaping capital structure decisions across different regions.

4.10 Limitations and Future Research Directions

While this study provides valuable insights into the relationship between capital structure and profitability in commercial banks, several limitations must be acknowledged. First, the study's reliance on self-reported data may introduce bias, particularly in responses related to regulatory compliance and profitability metrics. Second, the cross-sectional design limits the ability to establish causal relationships between variables. Third, the focus on a single geographic region (Zambia) limits the generalizability of findings to other contexts. Future research should address these limitations by incorporating external data sources, adopting longitudinal designs, and exploring cross-country comparisons. Additionally, future studies should examine the role of emerging technologies, such as blockchain and artificial intelligence, in shaping capital structure decisions and enhancing profitability.

Conclusion

In conclusion this study advances our understanding of the relationship between capital structure and profitability in commercial banks, particularly in the context of emerging markets. The findings highlight the importance of maintaining an optimal balance between debt and equity, the dynamic

nature of capital structure management, and the growing influence of market competition and technological innovations. However, the study's limitations underscore the need for further research to validate these findings and explore their applicability in different contexts. By addressing these limitations, future research can provide deeper insights into the strategic role of capital structure in enhancing bank profitability and resilience in an increasingly complex and dynamic financial environment.

V. CONCLUSION

This study underscores the critical role of capital structure in shaping the profitability and financial stability of commercial banks in Zambia, particularly in a volatile macroeconomic environment characterized by high inflation, exchange rate fluctuations, and liquidity constraints. The findings reveal that while debt financing can enhance profitability through leverage benefits, it also exposes banks to financial risks, whereas equity financing provides stability but may dilute returns. The majority of banks maintain a balanced capital structure, with 5% debt and 5% equity, and reassess their capital structure bi-annually to adapt to market conditions. Key challenges include limited funding access, regulatory compliance, and managing interest rate risks, with hedging strategies being the most common risk management approach. Market competition and technological innovations are identified as the most influential factors for future capital structure decisions. The study highlights the need for banks to adopt flexible, dynamic strategies to optimize their capital structure while ensuring regulatory compliance and mitigating financial risks.

VI. RECOMMENDATIONS

1. Develop a Dynamic Capital Structure Framework (Specific, Measurable, Achievable, Relevant, Time-bound)

Banks should establish a dynamic capital structure framework that is reviewed quarterly (rather than bi-annually) to better respond to Zambia's volatile economic conditions. This framework should include clear metrics for debt-to-equity ratios, aligned with Basel III requirements, and be supported by regular stress testing to assess resilience under adverse scenarios. By 2027, all commercial banks should implement this framework to enhance financial stability and profitability.

2. Enhance Equity Financing Mechanisms (Specific, Measurable, Achievable, Relevant, Time-bound)

To strengthen financial stability, banks should increase equity financing by 10% over the next three years, targeting a 60% equity/40% debt ratio. This can be achieved through initiatives such as retained earnings, issuing new shares, or attracting long-term investors. Regulators should incentivize equity financing by offering tax benefits or reduced capital requirements for banks that maintain higher equity levels, thereby reducing systemic risks.

3. Strengthen Regulatory Compliance and Risk Management (Specific, Measurable, Achievable, Relevant, Time-bound)

Banks should adopt advanced risk management tools, such as AI-driven analytics, to improve compliance with regulatory capital requirements and manage interest rate risks more effectively. By 2027, all banks should integrate these tools into their operations, with regular audits conducted semi-annually to ensure transparency and accountability. Collaboration with regulatory bodies should be enhanced to address compliance challenges and align with evolving Basel III standards.

4. Promote Technological Innovations in Capital Structure Decision-Making (Specific, Measurable, Achievable, Relevant, Time-bound)

Banks should invest in digital transformation to leverage technological innovations, such as blockchain and AI, in optimizing capital structure decisions. By 2026, 80% of commercial banks should adopt these technologies to improve data accuracy, reduce operational costs, and enhance decision-making processes. This will enable banks to better navigate market competition and economic uncertainties.

5. Address Funding Access Challenges (Specific, Measurable, Achievable, Relevant, Time-bound)

To mitigate limited funding access, banks should diversify their funding sources by exploring alternative financing options, such as green bonds or public-private partnerships. Regulators should facilitate this by creating a conducive environment for capital market development. By 2028, banks should reduce their reliance on traditional debt financing by 15%, thereby improving liquidity and reducing financial risks.

These recommendations are directly tied to the study's findings, emphasizing the need for a balanced, adaptive approach to capital structure management in Zambia's banking sector. By implementing these strategies, banks can enhance profitability, ensure regulatory compliance, and build resilience against economic volatility.

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