



Contribution of Capital Markets on Performance of Financial Institution in Rwanda, A Case of Bank of Kigali Public Limited Company

Author: Emmanuel NDUWAYEZU¹ Co-Author: Dr. KATO MAHAZI KASOZI²

¹nduwamuella@gmail.com, ²mkato@uok.ac.rw

^{1,2}University of Kigali, Rwanda

ABSTRACT

This study investigates the impact of capital markets on the financial performance of financial institutions in Rwanda, focusing specifically on the Bank of Kigali Plc. The research aims to achieve the following objectives: To Examine the effect of equity Market on the performance of financial institution in Rwanda. To access the effect of bond market on the performance of financial institution in Rwanda. To establish the effect of securitized product on the performance of financial institution in Rwanda. The modern portfolio theory, market segmentation theory securization theory of finance were used in this study. This research adopted descriptive and correlational research designs. The study population is 33 individuals and census method were used because small population. Questionnaire was used for data collection. Collected data were analyzed using descriptive and inferential statistics. The results showed that there is positive and significant contribution of ($M=4.12$, $SD=1.069$, $p=0.038<0.05$) equity markets on performance of Bank of Kigali public limited company, there is positive and significant contribution of ($M=4.27$, $SD=0.944$, $p=0.006<0.05$) bond markets on performance of Bank of Kigali public limited company, and there is positive and significant contribution of ($M=3.87$, $SD=1.147$, $p=0.019<0.05$) securitized products on performance of Bank of Kigali public limited company. The study concludes that equity markets, bond markets and securitized products contribute positively and significantly to the performance of Bank of Kigali public limited company. The study suggests that Bank of Kigali should advised to implement a systematic approach for the regular review and updating of equity market conditions. Further it recommends that Bank of Kigali should encourage to invest in comprehensive training programs focused on bond markets. Additionally, Bank of Kigali should encourage to invest in comprehensive training programs focused on securitized products.

Key words: Capital Markets, Financial Institution Performance and Contribution

GENERAL INTRODUCTION

Background of the study

According to Véron and Wolff (2016) capital market serves as a crucial component of the financial system, facilitating the raising of capital through the issuance of securities. Capital market is influenced by various factors, including interest rates, economic indicators, and regulatory frameworks. Understanding these dynamics is essential for investors and policymakers alike, as

they navigate the complexities of market behavior and investment strategies. In general, the capital market is integral to the functioning of the economy, enabling the flow of capital and fostering financial development (Obadire, 2023).

Globally, financial performance is influenced by capital market which is a network of specialized financial institutions, mechanisms, processes, and infrastructure that facilitates the connection between suppliers and users of medium- to long-term capital for investment in economic development projects. In Vietnam, Ngo and Le (2019) investigates the causal relationship between banking efficiency and capital market development. The findings concluded that larger the capital market and less efficient in banking system. Sehrawat et al. (2020) study indicated that the Indian market is gradually getting integrated with global markets, as evidenced by the Johansen test of cointegration. This suggests that the Indian market is gradually becoming more integrated with global markets. Moreover, Kamalnath (2023) highlighted the excessive proliferation of rules and regulations, the lack of rigorous policy analysis and transparent consultations in corporate and financial sectors, and the need to improve the enforcement machinery for corporate and securities laws in India.

Despite commendable progress, these issues require urgent attention to ensure the success of the country's capital markets. Augusto de la Torre and Sergio (2007), in Latino-America, argued that having both well-functioning banks and securities markets can enhance economic stability, as shocks to one sector of the financial system can, to some extent, be offset by others. Mishkin and Stanley (2018) noted that capital markets are essential to the operation of modern economies, providing a means for raising and distributing capital. They support economic growth, innovation, and wealth creation by efficiently channelling funds from savers to those who can use them productively. As financial markets evolve with technological progress and regulatory changes, the relationship between capital markets and financial institutions will continue to be a key area of focus in promoting economic growth and financial stability.

In Africa, in the past few decades, capital investment for expansion projects has been a challenge for companies, especially in developing countries. According to Kolapo and Adaramola (2012) most of these companies require a large amount of capital to fund their running businesses, but sometimes banks refuse to provide them with credit or loans to fund their projects. This may be caused by the lack of credibility to guarantee the collateral to repay the loan. Another problem is the banks charge high interest rates and the loan repayment period is very short. Moreover, in Kenya, according to Ngugi et al. (2006) capital market was one of the key factors that can help to boost the economic growth and development of different countries. It is also a source of investment capital to different businesses through issuances of corporate bonds; improving the wealth and financial stability of countries through issuances of government bonds and after all, impacting the increase the wealth of investors who can decide to invest in buying stocks. However, the capital market cannot operate alone for impacting economic growth, there some other macroeconomic factors such as employment rate, inflation, natural resources, exports, and other socio-economic factors.

In Rwandan, capital market was initiated from the Formation of the Rwanda Stock Exchange (RSE) after the 1994 Genocide, Rwanda embarked on economic reconstruction, which included the establishment of its capital market. The Rwanda Stock Exchange was officially launched in 2005, marking a significant milestone in the development of capital markets in the country. Initially, the RSE provided a platform for financial institutions to raise capital through equity and debt instruments. The market was relatively small, but it offered opportunities for institutions to diversify their funding sources and expand their operations. Over the years, the RSE

saw gradual growth in terms of market capitalization, trading volumes, and the number of listed companies. Financial institutions used the capital to issue bonds and equities, raising funds for expansion and development projects (RSE, 2017). Sticking on the recent development, market reforms and innovations in recent years have seen efforts to strengthen the Rwandan capital market through regulatory reforms, market innovations, and infrastructure improvements. The introduction of new financial products and enhanced market infrastructure aims to increase market efficiency and investor participation in capital market in Rwanda (CMA, 2020). These developments have positively impacted financial institutions by providing better access to capital, improving market liquidity, and offering new investment opportunities. Institutions have increasingly used capital markets for raising funds, managing risks, and enhancing their financial performance. Despite growth, the Rwandan capital market faces challenges such as low liquidity, limited market depth, and a small investor base. These factors impacted on the performance of financial institutions, as raising substantial capital could be challenging.

Statement of the Problem

The performance of financial institutions is essential for the overall stability and growth of the financial sector in any country. The financial performance failure occurs when a company or individual fails to meet expected financial goals, often resulting in declining revenue, increased debt, low profitability, or inability to cover expenses, potentially putting the entity at risk of insolvency or bankruptcy (Sandell & Svensson, 2016).

In Rwanda, despite the potential benefits, the actual impact of capital markets on the performance of financial institutions in Rwanda has not been comprehensively investigated, leaving a significant gap in both academic research and policy development (Boyd John & Bruce Smith, 2021). The CMA became the regulatory of the market and RSE became the market operator. However, the extent to which this development has translated into improved performance for financial institutions remains unclear. This lack of localized research hampers the ability of policymakers to develop targeted strategies to maximize the benefits of capital markets for financial institutions in the country. The challenges raise important questions about the role that capital markets can realistically play in enhancing the performance of financial institutions in Rwanda, particularly in comparison to more traditional forms of financing. While some studies have studied on capital markets provide financial institutions with access to cheaper and more diversified sources of funding, thereby enhancing their performance (Mishkin & Stanley, 2018),

Moreover, there are concerns that the relatively low levels of participation in Rwanda's capital markets may limit their effectiveness in improving the performance of financial institutions. Factors such as low financial literacy, limited institutional investor base, and underdeveloped market infrastructure are often cited as barriers to the full realization of the benefits of capital markets (Ntirenganya & Kayitana, 2021). Hence, the studies evidence specific to contribution of capital markets on performance of financial institutions in Rwanda were limited.

Given the potential for capital markets to serve as a catalyst for financial sector development, it is imperative to understand their impact on the performance of financial institutions in Rwanda. This research aims to fill the existing gap by examining effect of capital markets on financial performance of Rwandan institutions, taking into account the unique characteristics of Bank of Kigali public limited company.

Research Objectives

This research is made of both general and specific objectives, and these are shown in the following arguments

Research Objectives

The study specifically seeks:

- i. To examine the contribution of equity markets on performance of Bank of Kigali public limited company
- ii. To assess the contribution of bond markets on performance of Bank of Kigali public limited company
- iii. To analyze the contribution of securitized products on performance of Bank of Kigali public limited company

Research Hypotheses

H01: There is no significant contribution of equity markets on performance of Bank of Kigali public limited company;

H02: There is no significant contribution of bond markets on performance of Bank of Kigali public limited company;

H03: There is no significant contribution of securitized products on performance of Bank of Kigali public limited company.

LITERATURE REVIEW

Theoretical review

This section provides an in-depth analysis of the theories, models, and frameworks that explain the contribution of capital markets to the performance of financial institutions.

Modern Portfolio Theory

Modern Portfolio Theory, developed by Harry Markowitz in 1952, is a foundational theory that explains how financial institutions can optimize their portfolios through the use of capital markets. According to MPT, investors (and by extension, financial institutions) can construct portfolios that maximize returns for a given level of risk by diversifying their investments across different asset classes.

Surtee and Alagidede (2023) noted that Modern portfolio theory (MPT) and the Sharpe ratio are popular investment methodologies, but their use of market sentiment for low-risk, high-earning portfolios has limitations. A study suggests that investors could potentially earn higher returns using Sterling and Treynor ratios. These ratios offer higher-performing portfolios and have indicators to help investors determine when to use them. These new methods outperform current indexes and funds and are more robust than the capital asset pricing model used for evaluating investment performance. Further research with different ratios and advanced optimization algorithms is recommended.

Berk and Tutarlı (2021) investigated the application of Modern Portfolio Theory (MPT) using additional criteria related to financial analysis, specifically debt-to-equity and return on equity. The research reveals that Portfolios 3 and 5 with lower debt-to-equity ratios performed better during a financial turmoil, while Portfolio 8 with 9 companies with ratios larger than 0.2 had positive returns. The results suggest that while applying MPT with these criteria is sound, investors could diversify further by selecting portfolios with higher number of securities and better

financial ratios. This research introduces a new direction to the ongoing debate on the death or aliveness of Markowitz's theory, and could be applied by practitioners in the field. The study also aims to bring a new direction to the ongoing debate on whether Markowitz's theory is dead or alive.

Rahmani (2024) pointed out that the portfolio theory, introduced by Harry Markowitz, suggests diversifying stock portfolios to reduce investment risk. This research investigates the application of portfolio theory in information and knowledge retrieval. The study uses content analysis and text analysis to extract key concepts, and then evaluates and compares the functions of modern portfolio theory in information retrieval and the field of information science and epistemology. 12 experts in knowledge management, indexing, cataloging, information systems, and librarians were selected as an expert panel. The results show that portfolio theory is effective in information retrieval, positively impacting five groups: creators, indexers, information system users, information systems, and librarians. Capital markets enable financial institutions to diversify their investments, reducing risk exposure and enhancing returns. Holding various securities improves financial performance.

This model is important to this study as it plays a crucial role in investment management by providing a framework for constructing an optimal portfolio that maximizes expected return for a given level of risk. The theory emphasizes the importance of diversification, suggesting that a well-diversified portfolio can reduce unsystematic risk, which is specific to individual assets. It aided the researcher to explain the effect of equity market on the performance of financial institution in Rwanda.

Market segmentation theory

John Mathew Culbertson introduced the Segmented Markets Theory in his 1957 paper, "The Term Structure of Interest Rates." Visser (2016) noted that Market segmentation theory posits that the bond market is divided into distinct segments, each characterized by different investor preferences and behaviors. This theory suggests that various groups of investors have specific needs and requirements that influence their investment choices, leading to a separation in the demand for bonds across different maturities and risk levels. From this theory indicate that interest rates for bonds are not solely determined by overall supply and demand but are also influenced by the preferences of these segmented groups. For instance, some investors may prefer short-term bonds for liquidity, while others may seek long-term bonds for yield. This differentiation can lead to varying interest rates within the bond market, as each segment reacts differently to changes in economic conditions.

Ateca-Amestoy (2020) emphasized the importance of teaching individual decision-making models specifically related to cultural goods and services. It highlights the necessity of testing these models to understand the variations in demand across different demographic groups. The foundation of this analysis is rooted in microeconomic principles, which elucidate how disparities in access and demand are influenced by the resources available to various groups. By grasping these differences, students are better equipped to tackle critical issues such as market segmentation and pricing strategies within arts organizations. The study also suggests potential data sources that can be utilized for empirical exercises, enabling the estimation of participation models that reflect representative samples of the population. This approach aims to enhance the understanding of consumer behavior in the context of cultural offerings.

The bond market is characterized by its segmentation based on term structure, which refers to the varying lengths of time until bonds mature. The pricing of bonds is influenced by the

dynamics of supply and demand specific to each term. This indicates that the market operates differently for short-term, medium-term, and long-term bonds, with each segment responding uniquely to economic conditions and investor preferences. Understanding these factors is essential for analyzing bond market behavior and making informed investment decisions (Thomas, 2016).

Market segmentation theory is meaningful to this study as it suggests that understanding these segments can provide valuable insights for issuers and investors alike. By recognizing the distinct characteristics and preferences of different investor groups, market participants can tailor their strategies to better meet the needs of these segments, potentially leading to more effective bond issuance and investment decisions. Market segmentation theory highlights the complexity of the bond market and the importance of considering investor behavior in financial analysis. Additionally, it aided the researcher to explain the effect of bond market on the performance financial institution in Rwanda.

Securization Theory of finance

Securitization Theory in finance particularly evident during the financial crisis of 2007-2008, where the collapse of mortgage-backed securities revealed vulnerabilities in the securitization process. Hu (2011) pointed out that Securitization Theory in finance involves pooling debt and selling its cash flows to investors. It involves pooling debt like mortgages, auto loans, and credit card debt, and selling the cash flows as securities like bonds or collateralized debt obligations (CDOs). Investors are repaid from the interest and principal collected from the debt. Securitized assets include asset-backed securities (ABS), residential mortgage-backed securities (MBS), and commercial mortgage-backed securities (CMBS).

Buchanan (2016) posited that Securitization theory in finance is centered on the process of pooling various types of debt, such as mortgages, auto loans, and credit card debt, and subsequently selling the associated cash flows to investors. This process transforms these debts into securities, which can take the form of bonds or collateralized debt obligations (CDOs). Investors receive returns through the interest and principal payments collected from the underlying debt. The primary types of securitized assets include asset-backed securities (ABS), residential mortgage-backed securities (MBS), and commercial mortgage-backed securities (CMBS). This financial mechanism allows for the redistribution of risk and provides liquidity to the market by enabling the conversion of illiquid assets into tradable securities (Schwarcz, 2015).

Deku et al. (2019) examined the impact of securitization on bank behavior and financial stability. It found that banks with higher credit and market risk were more likely to securitize assets before the 2007-2009 financial crisis. This led to increased systemic risk and deterioration in bank lending standards. Mortgage securitization resulted in weaker screening, lower denial rates, and misreporting of credit quality. Corporate loan securitization led to poorer ex-post bank monitoring of corporate borrowers. Despite Europe being the second largest securitization market, there is limited research on its impact on lending behavior and post-crisis regulatory incentive alignment mechanisms. Evidence on securitization activity in emerging markets like Latin America and China is also limited.

Ndungu (2020) noted that Securitization theory in finance refers to the process of transforming illiquid assets into securities that can be sold to investors. This process involves pooling various financial assets, such as mortgages or loans, and creating a new financial instrument that represents a claim on the cash flows generated by these assets. One of the main points of securitization theory is its ability to enhance liquidity in financial markets. By converting illiquid assets into tradable securities, it allows for a more efficient allocation of capital and risk.

Additionally, securitization can provide issuers with access to a broader range of funding sources, potentially lowering borrowing costs. From securitization theory include the importance of credit enhancement mechanisms, which are employed to improve the credit quality of the newly created securities. These mechanisms can include over-collateralization, reserve accounts, and third-party guarantees. Furthermore, the theory highlights the role of rating agencies in assessing the risk associated with securitized products, which can significantly influence investor demand and pricing.

Broer (2018) securitization theory was used in structured finance boom of the 2000s may have been due to disagreement about default risk of collateral assets. Risk-neutral investors pay high prices for risky tranches, while low-correlation investors diversify and pay high prices for riskless senior tranches. High-correlation investors value junior tranches when aggregate conditions are good. Risk aversion and short selling through credit default swaps reduce prices of pass-through and structured securitizations but may increase return to tranching.

This theory is important to this study as it can offer substantial benefits, it also carries inherent risks. The complexity of securitized products can lead to a lack of transparency, making it challenging for investors to fully understand the underlying risks. Securitization theory provides a framework for understanding the transformation of assets into securities, emphasizing the balance between enhancing liquidity and managing associated risks. It aided the researcher to explain the effect of securitized products on the performance financial institution in Rwanda.

Empirical review

Capital markets, by providing alternative sources of financing such as equity and bond markets, allow banks and other financial institutions to diversify their funding sources. This helps enhance their liquidity and reduce reliance on deposits and traditional debt.

Equity market and Performance of Financial institution.

Arsyad (2015) investigated the possibility of long-term cointegration between East and Southeast Asian equity markets using Johansen's cointegration method. The study uses the Granger-causality test and forecast variance decomposition method to test short-term causal relationships. The results show that there is cointegration, but the integration process is not complete. The cointegrating vector also indicates that member countries of ASEAN+3 respond differently to external shocks. In terms of short-run causal direction, Japan Granger-causes all equity markets in Southeast Asia, while Singapore and Vietnam Granger-cause all equity markets in East Asia. This suggests that Japan is the market with most linkages in Southeast Asia, while Singapore and Vietnam are the markets with most linkages to East Asia. Furthermore, Japan is the most influential equity market in Southeast Asia, while Singapore is the most influential equity market in Southeast Asia. The study focuses on the existence and extent of financial integration in the East and Southeast Asia region, providing evidence that equity market integration in ASEAN+3 is far from complete. Policymakers in East and Southeast Asia can benefit from this study, as it provides evidence that ASEAN+3 member countries respond differently to policy shocks, which may hinder the development of regional financial integration and the effectiveness of region-wide authority in ASEAN+3.

Dumas et al. (2017) studied an international financial market model where residents of different countries have different beliefs about public signals in Canada. It investigates how domestic investors' informational advantages affect equity markets. The model generates four international finance anomalies: co-movement of returns and capital flows, home-equity

preference, dependence of firm returns on home and foreign factors, and abnormal returns around foreign firm cross-listing in the home market. The relationships with empirical differences-of-opinion proxies align with the model.

Ma et al. (2016) studied uses high-frequency data from the Shanghai Composite Index (SHCI) and Shenzhen Composite Index (SZCI) to analyze market efficiency and cross-correlation during pre-crisis and crisis periods. The research uses detrended fluctuation analysis and detrended cross correlation analysis with rolling window approach to verify the null hypothesis of no long-term dependence. The findings show that Shanghai equity market efficiency deteriorated during the financial crisis, while Shenzhen equity market efficiency improved. The highly positive dependence between SHCI and SZCI varies with time scale, and during the crisis, there was a significant increase in dependence at shorter time scales but no significant change at longer scales.

Korkpoe and Kawor (2018) the study examined the presence of regimes in the volatility of returns of the Ghana Stock Exchange index using single- and two-regime Markov-switching threshold GARCH with skewed and student-t innovations. The 2-regime threshold GARCH(1,1) with skewed student-t innovations provided a better fit to the data, avoiding the practice of single regime choice that pulverises unconditional volatility through complex averaging, leading to overestimation and underestimation of risk during low and high regimes.

Nuwagaba, A. (2013) studied on the analysis of Rwanda's equity market, conducted over a six-month period from November 2012 to April 2013, identified a limited number of firms participating in the market. Specifically, only four companies have issued securities: Bank of Kigali, Bralirwa, Kenya Commercial Bank, and Nation Media Group. The study highlighted that local firms have raised a total of \$29,446,506.52 in equity, while foreign firms contributed a mere \$310.92. The findings indicate that the equity market in Rwanda is segmented and suggests a need for enhancement through integration with regional partners. Furthermore, Rwanda's average economic growth rate of 8.2 percent presents an opportunity for further improvement, particularly through the development of its capital market. This underscores the potential for growth and the importance of fostering a more robust equity market to support the country's economic objectives.

Bond Markets and performance of financial institutions.

Chiong et al. (2022) studied on the integration of ASEAN bond markets has significantly impacted the Philippines' inflationary pressures, credit expansions, and challenges. Bond markets in ASEAN economies have experienced rapid development but remain less integrated. This study examines the impact of ASEAN bond market integration and past crises on the Philippines' inflation, credit, and growth from 1992 to 2017. The study uses the Ordinary Least Square method (OLS) to analyze the relationship between inflation, credit, bond market index, real interest rate, and integration on the Philippines' growth. Results show that credit has a significant positive relationship with GDP growth, while inflation has a negative relationship. However, the bond market index and integration show no significant negative results. The study suggests ways to develop and grow the debt market in the Philippines, ensuring long-term economic stability and growth to compete with other ASEAN economies.

Sahoo et al. (2019) investigated the relationship between the foreign exchange and bond markets in India, utilizing a bivariate asymmetric BEKK-GARCH (1,1) model over a period from April 4, 2005, to March 31, 2017. The findings reveal significant bidirectional return and volatility spillovers between the two markets, indicating that fluctuations in one market can influence the other. Notably, these spillovers persist even during times of low foreign portfolio investments in the Indian bond markets, highlighting the robust interconnections that exist between the foreign

exchange and bond markets in India. This suggests that market participants should consider these linkages when making investment decisions.

Kodongo et al. (2023) explored the impact of macro economic factors on the bond market performance in Kenya. Equity and bond markets are crucial for economic efficiency and strong financial sector development. The Kenyan bond market, despite being relatively small compared to the rest of the world, remains vital for government bonds despite economic difficulties. This research examined the impact of macroeconomic variables on the Kenyan bond market performance. It found significant positive correlations between interest rates and bond market turnover and between the money supply and bond market development. Exchange rate and bond market development were negatively linked, while inflation rate and bond market development had no statistical significance. The negative relationship between equity market performance index and bond market development was also not statistically significant. Dual causality relationships were observed between equity market performance and bond market performance, with dual causality with interest rates, exchange rates, money supply, and bond market turnover.

Mugisha et al. (2024) a study examined the multivariate time series analysis of economic indicators in relation to external public debt stock dynamics in RWANDA. The 2007/2008 financial crisis led to a significant increase in national borrowings worldwide, causing fiscal issues for governments. In Rwanda, the level of borrowed funds rose from 19.4% in 2010 to 59.7% in 2019, highlighting the need for further research on the impact of economic indicators on public borrowings. This study analyzed economic indicators related to government debt accumulation in Rwanda using a multivariate time series analysis. The research aimed to check for stationarity, perform co-integration analysis, and forecast the external government borrowings level in the next five years. Historical data was collected from 1973 to 2022, and secondary data was obtained from the World Bank and National Institute of Statistics of Rwanda. The study found all variables to be stationary after differentiation, and no long-term association was found. The forecasting techniques predict foreign national borrowings to rise up to 74.22% in 2027.

Securitized product and performance of financial institutions.

Gauthier and Gauthier (2020) studied on overview of securitization and its various aspects, including the creation and sale of securitized products. The study showed securitization, outlining fundamental concepts and terminology associated with the process. It traces the cash flows involved in a typical securitization, providing a foundational understanding of how these financial instruments operate. The study categorized various types of securitized products, highlighting the substantial size of the securitized bond markets. It identifies the most common types of securitized bonds, setting the stage for a more detailed exploration of their structures in subsequent discussions. It concluded with a brief examination of valuation techniques pertinent to these bonds, emphasizing the significance of negative convexity in the assessment of their value.

Pu et al. (2017) studied on design of a securitization product for China's environmental pollution liability insurance is being considered. China has implemented various policies to combat environmental pollution over the past three decades, leading to the need for research into environmental pollution liability insurance. This study aims to design a financial derivative for China's environmental pollution liability insurance to provide substantial compensation for potential catastrophic environmental loss exposures, particularly from the chemical industry. The principal risk bond yields 9.4%, the principal partial-risk bond yields 10.09%, and the principal risk-free bond yields 8.94%. This loss exposure transfer framework transfers the catastrophic risks of environmental pollution from traditional insurance and reinsurance markets

to the capital market, strengthening the underwriting capacity of insurance companies, mitigating compensation risks for insurers and reinsurers, and providing a new channel for transferring environmental pollution risks.

Muiruri and al. (2015) studied the views of commercial banks executives on securitization as a financing mechanism in Kenya. The researchers used unstructured personal interviews with 172 key officials from 43 banks, focusing on mortgage, credit, risk, compliance, and debt recovery. The study found that bankers were not convinced that the benefits of securitization outweigh its disadvantages, but rather that it is a positive trend likely to benefit the bank industry. Despite not being confident that securitization will play a major role in the Kenyan banking industry in the future, they generally believe that securitization is likely to gain momentum in Kenya. The study recommends banks to use securitization to ensure adequate capital and allow managers to invest their liquid assets to generate more income and boost performance.

Gorton and Metrick (2013) studied the literature on securitization, a process where loans held to maturity on financial intermediaries' balance sheets are sold in capital markets. Securitization has grown significantly since 1990, becoming one of the largest capital markets. In 2005, non-mortgage asset-backed securities in US capital markets exceeded US corporate debt, leading to the recent financial crisis. Despite its transformative effect, the literature on securitization remains small, and many fundamental questions remain unanswered.

RESEARCH METHODOLOGY

Research Design

This research adopted descriptive research design. Descriptive research studies are those studies, which concerned with describing the characteristics of a particular individual or characteristics of a group. It is used to systematically describe a phenomenon or population. It focuses on providing a detailed account of the characteristics, behaviors, and attributes of respondents. Descriptive research design was adopted for this study because; first, it will be used to quantitatively describe specific aspects of population in this study. While, correlational research design was used to examine the relationships between variables without manipulating them.

Population and sampling

The population of this study was 33 individuals involved in capital markets on performance of financial institutions in Rwanda. The population comprised of one (1) managing director, seventeen (17) finance department staff, four (4) marketing department staff, five (5) operation Department staff, one (1) investor and five (5) administrative staff. Further, the study used census method in research is a comprehensive approach that involves collecting data from every individual within a defined population.

Research Instruments

The main objective of this research is to explore the effect of capital markets on the performance of financial institutions in Rwanda. This study employed primary source approach. For this study, primary data were collected from the respondents through the use of questionnaire and interview guide. The questionnaire tool facilitated the collection of quantitative data from finance department, marketing department, operation department, investment, and administrators, enabling a comprehensive analysis of various research questions. Questionnaire was categorized into two section, Section A for profile background of respondents, while Section B for effect of

capital markets on the performance of financial institutions in Rwanda. The Likert scale ranging was used where Keys: SD = Strongly Disagree (1), D= Disagree (2), N= Neutral (3), A= Agree (4), SA= Strongly Agree (5). While, interview guide tool was a vital resource that contributes to the reliability of qualitative data from managing director.

Data Analysis Methods

Data analysis were carried out in alignment with the research objectives and hypotheses. It involves examining the role of the capital market in the performance of financial institutions in Rwanda. The collected data were analyzed through both descriptive and inferential statistical methods. Descriptive statistics will be used to summarize the data and provide a quick overview of key statistics related to the study's objectives using mean, standard deviation. While, inferential statistics were applied to explore the hypothesized relationships between the study variables. The Model summary, Analysis of Variance (ANOVA) and regression coefficients were employed to assess whether the independent variables have a significant impact on the dependent variable.

FINDINGS & DISCUSSION

Response rate

The findings present the response rate in a questionnaire. Out of 33 questionnaires given to the respondents, 33 questionnaires were filled, returned and complete. It means that the response rate is a 96.9%. The respondent answered 32 questionnaires. In addition, 3.1% of questionnaires were incomplete.

Descriptive statistics

The mean values were then interpreted within specific ranges: from 0.01 to 1.00 as very low mean, 1.01 to 2.00 as low mean, 2.01 to 3.00 as neutral, 3.01 to 4.00 as high mean, and 4.01 to 5.00 as very high mean. The data's homogeneity or heterogeneity was determined by examining the standard deviation, with data categorized as homogenous if the standard deviation is less than or equal to 0.5, and heterogeneous if it exceeds 0.5.

Contribution of equity markets on performance of Bank of Kigali public limited company

This section presents the results derived from the questionnaires. The respondents were asked to the contribution of equity markets on performance of Bank of Kigali public limited company. The means and standard deviations of the variable were calculated and presented in Table 1.

Table 1: Descriptive statistics on contribution of equity markets on performance of Bank of Kigali public limited company

	Mean	Std. Dev.
Equity markets are operated through the interaction of buyers and sellers	4.03	1.092
Equity markets are unsure to raise liquidity	4.28	.991
Equity markets are used to unsure investment options	4.00	1.047
Equity markets are enabled bank to raise capital	4.19	1.148
Overall	4.12	1.069

Table 1 outlines the descriptive findings on the contribution of equity markets on performance of Bank of Kigali public limited company. A significant number of respondents

agreed with the statement that the equity markets are operated through the interaction of buyers and sellers, as indicated by the very high mean score of 4.03. This indicates a very strong positive agreement among the respondents. The response data showed a standard deviation of 1.092, indicating a significant degree of heterogeneity among the participants. Similarly, respondents expressed agreement the statement that equity markets are unsure to raise liquidity, with a very high mean score of 4.28. This mean score indicates a very strong positive agreement. The standard deviation of 0.991 indicates a heterogeneous response pattern.

Moreover, the high mean score of 4.00 for the statement that equity markets are used to unsure investment options indicates a high level of positive agreement among participants. The standard deviation of 1.047 indicates some degree of heterogeneity in responses, indicating a wider spectrum of opinions. On the statement that the equity markets are enabled bank to raise capital, the high mean score of 4.19 indicates strong positive agreement, but the standard deviation of 1.148 shows heterogeneity in responses.

The overall very high mean of 4.12 for the combined statements reflects an overall strong positive perception that there is contribution of equity markets on performance of Bank of Kigali public limited company, with a standard deviation of 1.069, indicating some heterogeneity in opinions among the respondents. The findings are supported by Stoian and Iorgulescu (2019) asserted that capital markets, including equity markets, play a big role in the financial performance and growth of financial institutions which include raising capital for growth and expansion, enhancing liquidity, valuation and market perception, risk management and diversification, regulatory compliance and governance. capital markets, especially equity markets, are integral to the performance and growth of financial institutions.

On this context discussion of equity markets on performance of Bank of Kigali public limited company, an interviewee stated that

“Equity markets significantly impact financial institutions' performance, with growth resulting in increased asset values, improved capital positions, and increased investor confidence, leading to higher profitability. Conversely, downturns can negatively affect financial institutions, as declining stock prices can reduce asset values, potentially leading to losses and diminished capital reserves. Volatility in equity markets can also increase uncertainty, prompting institutions to adopt more conservative strategies, further limiting growth opportunities. The performance of financial institutions is also influenced by their exposure to equity markets through investment portfolios and trading activities. Institutions with significant equity holdings may experience greater volatility in earnings, while those with diversified portfolios may mitigate risks. The interplay between equity markets and financial institutions is crucial for shaping operational strategies and long-term viability”.

The findings also confirm the Modern Portfolio Theory as it explains how financial institutions can optimize their portfolios through the use of capital markets. In the context of contribution of equity markets on performance of Bank of Kigali public limited company, managers use investment management by providing a framework for constructing an optimal portfolio that maximizes expected return for a given level of risk.

Contribution of bond markets on performance of Bank of Kigali public limited company

This section presents the results derived from the questionnaires. The respondents were asked to the contribution of bond markets on performance of Bank of Kigali public limited company. The means and standard deviations of the variable were calculated and presented in Table 2.

Table 2: Descriptive statistics on contribution of bond markets on performance of Bank of Kigali public limited company

	Mean	Std. Dev.
Bond markets are recognized which involves identifying the different types of bonds traded and their issuers	4.37	.751
Bond risks are assessed for the potential loss on a bond investment	4.25	.880
Bond markets are managed to ensure institution performance	4.22	1.070
Duration management of bond markets are fixed	4.25	1.078
Overall	4.27	.944

Table 2 outlines the descriptive findings on the contribution of bond markets on performance of Bank of Kigali public limited company. A significant number of respondents agreed with the statement that bond markets are recognized which involves identifying the different types of bonds traded and their issuers, as indicated by the very high mean score of 4.37 (SD= 0.751). The mean indicates a very strong positive agreement among the respondents and the response data showed a standard deviation which indicates a significant degree of heterogeneity among the participants. Similarly, respondents expressed agreement the statement that bond risks are assessed for the potential loss on a bond investment, with a very high mean score of 4.25 (SD= 0.880). The mean score indicates a very strong positive agreement and the standard deviation indicates a heterogeneous response pattern.

Moreover, the very high mean score of 4.22 (SD= 1.070) for the statement that bond markets are managed to ensure institution performance, indicates a very high level of positive agreement among participants. The standard deviation indicates some degree of heterogeneity in responses, indicating a wider spectrum of opinions. On the statement that the duration management of bond markets are fixed, the very high mean score of 4.25 (SD=1.078). The mean indicates very strong positive agreement and the standard deviation shows heterogeneity in responses.

The overall very high mean of 4.27 for the combined statements reflects an overall strong positive perception that there is contribution of bond markets on performance of Bank of Kigali public limited company, with a standard deviation of 0.944, indicating some heterogeneity in opinions among the respondents. The findings are supported by Sahoo et al. (2019) asserted the relationship between the foreign exchange and bond markets in India. The findings reveal significant bidirectional return and volatility spillovers between the two markets, indicating that fluctuations in one market can influence the other.

On this context discussion of bond markets on performance of Bank of Kigali public limited company, an interviewee stated that

“Bond markets significantly impact institutional performance through various mechanisms. Variations in interest rates directly affect bond valuation, affecting the portfolio performance of institutions holding these securities. Rising interest rates can lead to losses for institutions heavily invested in fixed-income assets. The bond market also serves as a critical indicator of economic health, with bond yields indicating investor sentiment and economic forecasts. High liquidity allows institutions to enter and exit positions with minimal price impact, enhancing risk management and optimizing returns. Conversely, a lack of liquidity can hinder performance, especially during market stress. Lastly, regulatory changes and monetary policy decisions can significantly influence bond market dynamics, affecting institutional performance. Institutions must remain vigilant and adaptable to these changes to maintain competitive performance in the evolving financial landscape. The

interplay between bond markets and institutional performance emphasizes the importance of strategic asset allocation and risk management in achieving financial objectives”.

The findings confirm the market segmentation theory as it highlights the complexity of the bond market and the importance of considering investor behavior in financial analysis. In the context of contribution of bond markets on performance of Bank of Kigali public limited company, managers analyze the bond market behavior and making informed investment decisions.

Contribution of securitized products on performance of Bank of Kigali public limited company

This section presents the results derived from the questionnaires. The respondents were asked to the contribution of securitized products on performance of Bank of Kigali public limited company. The means and standard deviations of the variable were calculated and presented in Table 3.

Table 3: Descriptive statistics on contribution of securitized products on performance of Bank of Kigali public limited company

	Mean	Std. Dev.
Securitized products provide financial institution with mechanism for removing assets from their balance sheet	4.13	1.070
Securitized products increase liquidity in a variety of previously illiquidity financial products	3.72	1.198
Securitized products allow financial institution to provide their profit	3.88	1.157
Securitized products offer relatively attractive yields	3.75	1.164
Overall	3.87	1.147

Table 3 outlines the descriptive findings on the contribution of securitized products on performance of Bank of Kigali public limited company. A significant number of respondents agreed with the statement that securitized products provide financial institution with mechanism for removing assets from their balance sheet, as indicated by the very high mean score of 4.13. This indicates a very strong positive agreement among the respondents. The response data showed a standard deviation of 1.070, indicating a significant degree of heterogeneity among the participants. Similarly, respondents expressed agreement the statement that securitized products increase liquidity in a variety of previously illiquidity financial products, with a high mean score of 3.72. This mean score indicates a strong positive agreement. The standard deviation of 1.198 indicates a heterogeneous response pattern.

Moreover, the high mean score of 3.88 for the statement that securitized products allow financial institution to provide their profit, indicates a strong positive agreement among participants. The standard deviation of 1.157 indicates some degree of heterogeneity in responses, indicating a wider spectrum of opinions. On the statement that the securitized products offer relatively attractive yields, the high mean score of 3.75 indicates strong positive agreement, but the standard deviation of 1.164 shows heterogeneity in responses.

The overall very high mean of 3.87 for the combined statements reflects an overall strong positive perception that there is contribution of securitized products on performance of Bank of Kigali public limited company, with a standard deviation of 1.147, indicating some heterogeneity in opinions among the respondents. The findings are supported by Gauthier and Gauthier (2020) studied on overview of securitization and its various aspects, including the creation and sale of securitized products. The study showed securitization, outlining fundamental concepts and

terminology associated with the process. It traces the cash flows involved in a typical securitization, providing a foundational understanding of how these financial instruments operate.

On this context discussion of securitized products on performance of Bank of Kigali public limited company, an interviewee stated that

“Securitized products play a significant role in influencing the performance of financial institutions. These financial instruments, which pool various types of debt and sell them as securities, can enhance liquidity and diversify risk for institutions. By allowing banks and other financial entities to offload certain types of loans, securitization can improve balance sheet management and capital efficiency. Moreover, the performance of institutions can be positively impacted through increased access to funding. Securitized products can attract a broader range of investors, thereby expanding the capital base available to institutions. This influx of capital can be utilized for further lending or investment opportunities, ultimately contributing to growth and profitability. However, the complexity and inherent risks associated with securitized products must be carefully managed. Institutions that engage in securitization must maintain robust risk assessment frameworks to mitigate potential adverse effects on their performance. The 2008 financial crisis highlighted the vulnerabilities linked to securitized products, underscoring the necessity for stringent regulatory oversight and prudent risk management practices. While securitized products can enhance institutional performance through improved liquidity and funding access, they also require careful management of associated risks to ensure long-term stability and success”.

The findings also confirm the securitization theory in finance as it refers to the process of transforming illiquid assets into securities that can be sold to investors. In the context of contribution of equity markets on performance of Bank of Kigali public limited company, managers provided a framework for understanding the transformation of assets into securities, emphasizing the balance between enhancing liquidity and managing associated risks.

Performance of Bank of Kigali public limited company

This section presents the results derived from the questionnaires. The respondents were asked to the contribution of securitized products on performance of Bank of Kigali public limited company. The means and standard deviations of the variable were calculated and presented in Table 4.8.

Table 5: Descriptive statistics on performance of Bank of Kigali public limited company

	Mean	Std. Dev.
Financial institution is performed as profit set	4.22	.975
Financial institution is performed as liquidity set	4.16	.987
Financial institution is performed as solvency set	4.09	.995
Financial institution is performed as operating efficiency	4.16	1.167
Overall	4.15	1.031

Table 5 outlines the descriptive findings on performance of Bank of Kigali public limited company. A significant number of respondents agreed with the statement that financial institution is performed as profit set, as indicated by the very high mean score of 4.22 (SD=0.975). The mean indicates a very strong positive agreement among the respondents and the response data showed a standard deviation which indicates a significant degree of heterogeneity among the participants. Similarly, respondents expressed agreement the statement that financial institution is performed as liquidity set, with a very high mean score of 4.16 (SD= 0.987). The mean score indicates a very strong positive agreement and the standard deviation indicates a heterogeneous response pattern.

Moreover, the very high mean score of 4.09 (SD= 0.995) for the statement that financial institution is performed as solvency set, indicates a very high level of positive agreement among participants. The standard deviation indicates some degree of heterogeneity in responses. On the statement that the duration management of financial institution is performed as operating efficiency, the very high mean score of 4.16 (SD=1.167). The mean indicates very strong positive agreement and the standard deviation shows heterogeneity in responses.

The overall very high mean of 4.15 for the combined statements reflects an overall strong positive perception that there is performance of Bank of Kigali public limited company, with a standard deviation of 1.031, indicating some heterogeneity in opinions among the respondents. The findings are supported by Stoian and Iorgulescu (2019) asserted that capital markets, including equity markets, bond markets, play a big role in the financial performance and growth of financial institutions which include raising capital for growth and expansion, enhancing liquidity, valuation and market perception, risk management and diversification, regulatory compliance and governance.

On this context discussion of bond markets on performance of Bank of Kigali public limited company, an interviewee stated that

“Capital markets significantly impact institutional performance by providing funding, facilitating investment opportunities, and enhancing financial stability. They enable institutions to finance operations, expand activities, and invest in new projects, leading to improved performance and growth. Transparent pricing mechanisms in capital markets attract investors, increasing market capitalization and enabling equity leverage. The performance of institutions is linked to the overall health of capital markets, with a robust market boosting investor confidence and a downturn reducing funding and operational challenges. Actively engaged institutions benefit from increased liquidity, enabling effective asset and liability management and providing a buffer during economic downturns, ensuring stability and continued operations. In conclusion, capital markets are crucial for institutional performance, emphasizing the importance of a well-functioning financial system for organizational success.

Inferential statistics

The study utilized inferential statistics like hypothesis testing, and regression analysis to analyze data and determine the relationship level between study variables. The study was conducted using different null hypotheses: **H₀₁**: There is no significant contribution of equity markets on performance of Bank of Kigali public limited company; **H₀₂**: There is no significant contribution of bond markets on performance of Bank of Kigali public limited company; and **H₀₃**: There is no significant contribution of securitized products on performance of Bank of Kigali public limited company;

Table 6: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.897 ^a	.804	.783	.34008

a. Predictors: (Constant), Securitized products, Equity markets, Bond markets

Table 6 presents the Model Summary for the regression analysis. The R value of 0.897 indicates a strong positive correlation between the predictors (equity markets, bond markets and securitized products) and the dependent variable (performance of Bank of Kigali public limited

company). The R Square value of 0.804 signifies that approximately 80.4% of the variability in the performance of Bank of Kigali public limited company can be explained by the independent variables in the model.

Table 7: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	13.261	3	4.420	38.221	.000 ^b
	Residual	3.238	29	.111		
	Total	16.500	32			

a. Dependent Variable: Financial institution performance

b. Predictors: (Constant), Securitized products, Equity markets, Bond markets

Table 7 presents the findings of Analysis of Variance (ANOVA). The table indicates a significant F-statistic of 38.221 ($p=0.000$). The F-statistic assesses the overall significance of the regression model, testing whether there is a significant difference between the model with predictors (equity markets, bond markets and securitized products) and the dependent variable (performance of Bank of Kigali public limited company). In this case, the p-value ($p=0.000 < 0.05$) associated with the F-statistic indicates that the predictors jointly have a significant effect on explaining the variance in the dependent variable (performance of Bank of Kigali public limited company).

Table 8: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.709	.342		2.070	.048
	Equity markets	.301	.138	.341	2.178	.038
	Bond markets	.511	.172	.550	2.969	.006
	Securitized products	.280	.118	.274	2.372	.019

a. Dependent Variable: Financial institution performance

Table 8 presents the coefficients for the regression model predicting dependent variable (performance of Bank of Kigali public limited company) based on the predictors like equity markets, bond markets and securitized products. The constant term has an unstandardized coefficient (B) of 0.709 with a standard error of 0.342 ($p=0.048 < 0.05$). Regarding to the predictors, all predictors show statistically relationship with dependent variable (performance of Bank of Kigali public limited company). Specifically, for every-one unit increase in the equity markets, there is a 0.301 unit increase in the performance of Bank of Kigali public limited company. In addition, there is a significant effect ($p=0.038 < 0.05$) of equity markets on performance of Bank of Kigali public limited company. In addition, for every-one unit increase in the bond markets, there is a 0.511 unit increase in the performance of Bank of Kigali public limited company. In addition, there is a significant effect ($p=0.006 < 0.05$) of bond markets on performance of Bank of Kigali public limited company. Lastly, for every-one unit increase in the securitized products, there is a 0.280 unit increase in the performance of Bank of Kigali public limited company. In addition, there is a significant effect ($p=0.019 < 0.05$) of bond markets on performance of Bank of Kigali public limited company.

CONCLUSION & RECOMMENDATIONS

Conclusion

This study aims to explore the effect of capital markets on the performance of financial institutions in Rwanda, specifically focusing on the Bank of Kigali public limited company. It focused on equity markets, bond markets, and securitized products.

The study notes that equity markets contribute to performance of Bank of Kigali public limited company. Further, it highlights the significant effect of equity markets on performance of Bank of Kigali public limited company. The study highlights the significant role that equity markets play in enhancing the performance of the Bank of Kigali public limited company. It emphasizes the relationship between the bank's financial outcomes and the dynamics of equity market activities. The research provides valuable insights into the interconnectedness of banking performance and equity market conditions.

The study proves the contribution of bond markets on performance of Bank of Kigali public limited company. Moreover, it posits the significant effect of bond markets on performance of Bank of Kigali public limited company. The study highlights the significant role that bond markets play in influencing the performance of the Bank of Kigali Public Limited Company. It establishes a clear connection between the activities within bond markets and the financial outcomes of the bank. This research underscores the importance of bond market dynamics in shaping the performance metrics of financial institutions, particularly in the context of the Bank of Kigali.

The study concludes that securitized products contribute to performance of Bank of Kigali public limited company. Moreover, it proves the significant effect of bond markets on performance of Bank of Kigali public limited company. Further, the study highlights the significant role of securitized products in enhancing the performance of Bank of Kigali Public Limited Company. It emphasizes that these financial instruments are instrumental in driving the bank's overall success. This underscores the importance of integrating such financial strategies within the bank's portfolio to optimize performance outcomes.

Recommendations

The study concludes that there is contribution of equity markets on performance of Bank of Kigali public limited company. However, the study recommends that should adopt a diversified approach to equity markets tend to achieve more stable returns, mitigating risks associated with market volatility. This helps in strong governance and risk management practices which are essential for institutions to navigate the complexities of equity markets effectively.

Bank of Kigali is advised to implement a systematic approach for the regular review and updating of equity market conditions. This mechanism is essential to ensure that the bank's operations and strategies remain aligned with the evolving market landscape. Additionally, it is important for the bank to gather and incorporate feedback, which will help in assessing the effectiveness of its current practices. By doing so, Bank of Kigali can enhance its responsiveness to market changes and better meet its operational needs.

The study concludes that there is contribution of bond markets on performance of Bank of Kigali public limited company. However, managers should analyze the emphasizes the importance of diversification within bond portfolios. Institutions that diversify their holdings across various bond types and maturities are better positioned to mitigate risks and enhance returns. This approach allows for a more resilient performance in the face of changing interest rates and economic conditions. Bank of Kigali is encouraged to invest in comprehensive training programs focused on

bond markets. This initiative aims to enhance the bank's understanding of capital market requirements. Additionally, it will ensure that the bank's lending criteria are well-aligned with capital market's needs. By prioritizing such training, the bank can improve its operational effectiveness.

The study concludes that there is contribution of securitized products on performance of Bank of Kigali public limited company. However, the study recommends that managers should emphasize the importance of thorough due diligence and risk assessment when investing in securitized products, as market conditions can influence their performance.

Bank of Kigali is encouraged to invest in comprehensive training programs focused on securitized products. This initiative aims to enhance the bank's understanding of capital market needs, which is essential for aligning its offerings with market demands.

This study aims to explore the effect of capital markets on the performance of financial institutions in Rwanda, specifically focusing on the Bank of Kigali public limited company. It focused on equity markets, bond markets, and securitized products. Further researchers should assess the effect cash management in capital management on financial performance.

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