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Relationship of Organizational Structure and Capital Structure on Financial Performance of Banks

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This is to certify that the doctoral study by

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Walden University
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Abstract

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MBA, University of Wales, 2013

BS, Makerere University, 1996

Doctoral Study Submitted in Partial Fulfillment

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Abstract

Poor financial performance is a challenge for policy makers, industry regulators, investors, bankers, and business leaders. Understanding the relationship between organizational structure, capital structure, and financial performance is vital for business leaders to promote their long-term survival. Grounded in agency cost theory, the purpose of this quantitative correlational study was to examine the relationship between organizational structure, capital structure, and financial performance of new commercial banks in Uganda to promote their long-term survival. Archived data were analyzed using 60 bank-quarter observations of 5 Ugandan commercial banks closed within 5 years after opening, restructuring, merging, or undergoing an acquisition by another bank between 1991 and 2017. The results of standard multiple linear regression indicated the full model was able to significantly predict financial performance, F (2, 52) = 5.860, p = .005, R^2 = .171. The organizational structure was statistically significant and positively related to financial performance (p = .006). Unexpectedly, the capital structure was not statistically significant (p = .074). As a key recommendation, leaders in the banking industry should focus on implementing an efficient organizational structure to promote the long-term survival of commercial banks. The implications for positive social change include the opportunity for bank leaders and regulators to develop strategies to improve financial performance, ensure longtime survival of banks, and the benefits that accrue from the existence of these banks.

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Dedication

I dedicate this doctoral study to my mother, Hajat Jalia, and late father, Dr. A. Kirimi Kasujja, who encouraged me to pursue education. I would also like to dedicate this doctoral study to my wife, Hajat Rukia, and children for their sacrifices and support to complete this doctoral study. I pray that in some way this doctoral study will help inspire my family to achieve higher goals.

Acknowledgments

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Section 1: Foundation of the Study

The basis for this study was the need for business leaders of commercial banks to know the relationship between capital structure, organizational structure, and financial performance. Bank leaders should understand the relationship between different banking financial performance measures and the potential for banks to fail (Di, Chai, & Geok See, 2016). As an illustration, banks that fail, usually due to poor financial performance, tend to expand rapidly (Di, Chai, & Geok See, 2016). In this study, an increase in size is the measure for organizational structure, one of the independent variables. Massman (2015) found failed banks to expand rapidly in the third and fourth year before failure. Unfortunately, some business leaders finance expansion by taking on more debt and preferred stock rather than common stock or retained earnings. This is a major challenge, especially for new banks without retained earnings. In this study, the composition of debt and equity were studied using the capital structure, a second independent variable.

Multiple-factor studies and *one-factor studies* continue to be conducted explaining the influencers of financial performance. Studies by Kariuki (2015), Awuah-Agyeman (2016), Chadha and Sharma (2016), and Kumar and Ndubuisi (2017), among others, claim that one factor influences or relates to financial performance, whereas other researchers, such as Bayoud, Sifouh, and Chemial (2018), Cekrezi (2015), Frederic (2014), among others, have argued the case of multiple factors. They have proposed internal and external factors that influence financial performance. In addition, some researchers, such as Mihaela (2015), have argued for multiple-factor, and have proposed internal, industry, and external factors that influence financial performance. Contrary to

studies in support of one factor, in this study, I studied two factors that influence financial performance, namely capital structure and organizational structure. I concur with Capon, Farley, and Hoenig (1996) that no one factor influencing financial performance adequately clarifies all areas of the concept. Multiple-factor studies are preferred to one-factor studies in explaining the influencers of financial performance.

This section of the study includes the background of the problem, problem statement, purpose statement, nature of the study, research question, hypotheses, theoretical framework, operational definitions, and significance of the study. This section also includes information related to a review of the professional and academic literature, such as the agency theoretical framework and the study variables which as organizational structure, capital structure, and financial performance. Lastly, this section of the study includes a summary and an overview of Section 2.

Background of the Problem

Achieving good financial performance remains an important objective for business leaders in Uganda to avoid bank failure (Singer, Amoros, Arreola, & Global Entrepreneurship Research Association, 2015). Good financial performance is an essential indicator of a robust banking industry. In the last two decades, the Central Bank of Uganda (BOU) has introduced several measures aimed at strengthening the financial performance of banks. In 2012, the Parliament of Uganda passed the Company Act of 2012, which requires all company leaders to prepare books of accounts every year. In 2016, BOU amended the Financial Institutions Act (2003) to require commercial banks to hold more capital. Because of these laws, financial performance remains a critical driver

of bank performance, as well as a key performance indicator. Practitioners, policymakers, and researchers continue to recognize the importance of financial performance, and many bank leaders pursue many different visions in the search for improved financial performance (Blix, Hofmeister, Schich, & Snethlage, 2016). Due to the absence of rigorously tested theoretical frameworks, bank leaders seeking superior financial performance are unable to weigh the full set of relevant factors appropriately.

Banks often perform poorly because they lack an optimal capital structure during the start-up stage. Bank leaders use an optimal capital structure to improve banks' financial performance and reduce bank failures. In addition to an optimal capital structure, an efficient organizational structure is a relevant driver of good financial performance (Siddik, SajalKabiraj & Joghee, 2017). In 2013, BOU included organizational structure as a key criterion for licensing commercial banks. A suitable organizational structure has the potential to reduce costs, increase profits and bank financial performance, and hence reduce bank failure.

Problem Statement

Poor financial performance by an organization places it at risk of failure (Gill, Mand, Obradovich, & Mathur, 2018). In 2014, approximately 21% of Ugandan businesses that failed showed poor financial performance when they were actively operating (Singer et al., 2015). The general business problem is that business leaders in Uganda do not understand why new businesses are failing. The specific business problem is that some business leaders of commercial banks do not know the relationship between capital structure, organizational structure, and financial performance.

Purpose Statement

The purpose of this quantitative correlational study was to examine the relationship between capital structure, organizational structure, and financial performance. The independent variables were capital structure and organizational structure. The dependent variable was financial performance. The target population included commercial banks in Uganda that closed within 5 years after opening, restructuring, merging, or undergoing an acquisition by another bank between 1991 and 2017. The implications for positive social change include the potential for individuals to obtain jobs in commercial banks and the potential for customers to purchase goods and services from successful businesses.

Nature of the Study

The quantitative method suits the needs of this study. Researchers use quantitative studies to identify results they can use to describe or note changes in the numerical characteristics of a population of interest, generalize to other similar situations, provide explanations of predictions, and explain causal relationships (McCusker & Gunavdin, 2015). The quantitative method was appropriate for this study because the study involved analyzing numerical data and inferring the results to a larger population. A mixed-methods study contains the attributes of both quantitative and qualitative methods (Bromwich & Scapens, 2016). The mixed-method was not appropriate because the study involved testing hypotheses based on established theories, and no qualitative data were needed. The qualitative method is appropriate when the research intent is to explore business processes and investigate the way people make sense and meaning and

depending on their experience (McCusker & Gunavdin, 2015). Also, the qualitative method does not address relationships among variables. Therefore, the qualitative portions of a mixed-method approach were not appropriate for this study.

The correlational design suits the needs of this study. Researchers use the correlational design to examine the relationship between or among two or more variables (Humphreys & Jacobs, 2015). The correlational design is appropriate for this study because a key objective is to study the relationship between a set of independent variables (capital structure and organizational structure) and a dependent variable (financial performance). Other designs, such as experimental and quasi-experimental designs, are appropriate when researchers seek to assess a degree of cause and effect (Campbell & Stanley, 2015). The principal objective of this research study was to examine the strengths and direction of any relationships. Thus, the experimental or quasi-experimental design did not suit the needs of this study because there was no attempt to influence the variables.

Research Question

What is the relationship between capital structure, organizational structure, and financial performance?

Hypotheses

H_0: No relationship exists between capital structure, organizational structure, and financial performance.

H_1: A relationship exists between capital structure, organizational structure, and financial performance.

Theoretical Framework

Jensen and Meckling (1976) developed the agency cost theory. Jensen and Meckling defined the concept of agency costs and showed its relationship to the *separation and control* issue. They investigated the nature of the agency costs generated by the existence of debt and outside equity, such as between shareholders and managers and between debt-holders and shareholders. In addition, they demonstrated who bears these agency costs and why, thus, the influence to firm value and wealth. Jensen and Meckling identified the following constructs underlying the theory: (a) monitoring expenditures by the principal, (b) bonding expenditures by the agent, and (c) residual loss. As applied to this study, the agency cost theory holds that agency costs arise from conflicts between shareholders and managers, debt holders and shareholders (proxies for capital structure), and managers and employees (a proxy for organizational structure) to influence financial performance. The rationale is that agency costs arise from the separation of ownership and control. Shareholders have an interest in profit maximization, whereas managers, employees, and suppliers have an interest in maximizing their self-interest; hence, conflicts arise (Leykun, 2016; Villalobos, 2017; Yu, 2009). Conflicts result in agency costs for firms to bear or to engage in activities to mitigate the costs (Villalobos, 2017). Thus, the increase in agency costs leads to a decline in financial performance (Park, Chae, & Cho, 2016; Wang & Liu, 2018). The agency theoretical framework was appropriate for this study because the separation of ownership and control gives rise to agency problems such as agency problems of managers, agency problems of creditors (both proxy for capital structure), and agency problems of

employees (a proxy for organizational structure). These agency problems generate agency costs. As applied to this study, such agency costs reduce the firm value (a proxy for financial performance) necessary for the long-term survival of firms. Therefore, the agency cost theory met the needs of this study as a theoretical framework.

Operational Definitions

Agency costs: Jensen and Meckling (1976) considered agency costs to be the sum of (a) monitoring expenditures by the principal, (b) the bonding expenditures by the agent, and (c) the residual loss.

Agency problem: An agency problem occurs when the interests of the principal and agent are misaligned, and the principal lacks the information needed to assess the behavior of the agent (Eisenhardt, 1989).

Agency relationship: An agency relationship arises between two (or more) parties when one (designated as the agent) acts for, on behalf of, or as representative for the other (designated the principal) in a particular domain of decision problems. Essentially all contractual arrangements, as between employer and employee or the state and the governed, for example, contain important elements of agency (Eisenhardt, 1989).

Bank failure: Arena (2005) noted that most empirical studies on banking failures consider a financial institution (bank) to have failed if it either received external support or was directly closed. A financial institution has failed if it fits into any of the following categories: (a) the central bank has recapitalized the financial institution, (b) the government has suspended the financial institution's operations, (c) the government has

closed the financial institution, and (d) another financial institution has absorbed or acquired the financial institution (Arena, 2005).

Financial performance: A measure of how well a company can use assets from its primary activity of a business and yield profits for investors; it is a measure of a company's effectiveness (Stanwick & Stanwick, 2010).

Assumptions, Limitations, and Delimitations

Scholars acknowledge study assumptions, limitations, and delimitations to provide the reader with the information necessary to enhance understanding, credibility, and transparency of a study. Assumptions are the beliefs a researcher holds as true without offering proof (Nkwake & Morrow, 2016). Weaknesses, known as limitations, are drawbacks of a study that researchers acknowledge are beyond their control (Horga, Kaur, & Peterson, 2014). Delimitations are a researcher's choices of boundaries to limit the scope of a study (Newman, Hitchcock, & Newman, 2015). The following is a discussion of the assumptions, limitations, and delimitations applicable to this study.

Assumptions

The study contained three assumptions. The first was that data in this study derive from existing data sets. The data were secondary and not originally intended for this study. The second assumption for the study was that the business leaders of the firms under study reported honest, complete, and accurate data for the subject study period. The third assumption was that the theoretical framework based on the agency cost theory is appropriate for the phenomenon under study.

Limitations

The study contained two potential limitations. First, the intention of the available existing data was not to use them in this study. The secondary data could be a potential source of errors, which may hamper the generalization of the findings to all companies. Overcoming this limitation required the use of various data sources from companies, such as websites and annual reports, and the website of BOU.

Another major potential limitation that might hinder the study was the absence of an active secondary market that could have forced me to measure the dependent variable as well as the proxies of the independent variables in terms of book values rather than market values. I limited the study to examining the relationship between organizational structure, capital structure, and financial performance of commercial banks using the independent variables capital structure (measured by debt to equity ratio) and organizational structure (measured by organizational size), and the dependent variable financial performance (measured by return on assets).

Delimitations

The study included five delimitations: the choice of objectives, the research questions, variables of interest, theoretical perspectives I adopted (as opposed to what I could have adopted), and the population chosen to investigate. The purpose of this study was to investigate the relationship of organizational structure and capital structure on the financial performance of banks. The focus of this study was on commercial banks in Uganda that had been in existence for less than 5 years up to 2017. Only the banks that had financial data available from throughout the study period qualified for the

examination. I limited the variables of organizational structure to organization size (SIZE) and those for capital structure to debt to equity ratio (DER). Only return on assets (ROA) measured financial performance. The purpose of the research did not include identifying the cause of the financial performance of banks. The data obtained from quarterly reports was secondary data. In this case, gathering primary data instead of secondary data would not enhance reliability (Björkholm & Johansson, 2015).

Significance of the Study

The significance of the study is one of the most important aspects of the study to others outside of a researcher's immediate circle. This section is important because it includes the benefits of the study to others. In this section, I justify why this study was of value to the practice of business, followed by an explanation of the contributions of this study to professional and practitioner application. Lastly is an identification of how the results of this study contributed to positive social change.

Contribution to Business Practice

The findings, conclusions, and recommendations from the study might fill gaps in business leaders' understanding of the relationship between capital structure, organizational structure, and financial performance for the effective practice of business. The business significance of the study is that business leaders of commercial banks may gain knowledge of the influence of capital structure and organizational structure on the financial performance of their firms.

Implications for Social Change

The implications for positive social change include the potential to create jobs in commercial banks for individuals. According to the Uganda Bureau of Statistics Census of Business Enterprise report of 2010, the financial services sector provided jobs for 27,135 individuals in Uganda, which was equivalent to 2.5% of the employed population in Uganda. To the extent that an individual firm can perform well, it will survive and prosper. Firms that falter by making losses, or by making profits that their stockholders believe to be insufficient, may cease to exist, which leads to job losses.

The implications for positive social change include the potential to improve communities. To the extent that firms are successful financially, they can attract capital, include a variety of forms of investment, and produce goods and services for the benefit of communities. All these contribute to a better quality of life for members of the community in which they live and work.

A Review of the Professional and Academic Literature

The following literature review includes a critical analysis and synthesis of existing literature related to the agency theoretical framework and the study variables, which are organizational structure, capital structure, and financial performance. The focus of the research described is financial performance and examining two potential determinants of financial performance, which through agency costs, explain the failure of commercial banks in Uganda. The literature review includes the most current literature, as well as relevant seminal and historical literature, on these topics. The literature review

includes journal articles, books, dissertations, and reports from governmental and other organizations.

The search strategy included using databases. The databases selected for this literature review included business and management academic databases, such as (a) Business Source Complete, (b) ABI/IFORM Collection, (c) Emerald Management, (d) SAGE Premier, and (e) Elsevier Science Direct Business Management and Accounting. The search tools involved ProQuest Central, Academic Search Complete, and Google Scholar. The search techniques included using reference lists of studies and articles found in searches and investigating suggested related articles during database searches. The initial search involved using keywords such as *financial performance, organizational structure,* and *capital structure,* and their combinations. Subsequent searches included author-supplied keywords. A list of initial and subsequent terms used when searching the literature appears in Table 1.

Table 1

Terms Used in the Literature Review Search

Initial terms	Subsequent terms
Financial performance	Performance, firm performance, organizational performance, bank performance
Organizational structure	Organization structure, bank structure, structure,
Capital structure	Financial structure, bank capital, debt financing, leverage, equity financing
Agency cost theory	Agency theory, principal-agent theory, agency cost of debt, agency cost of equity, agency cost of capital

In this dissertation, I cited 207 sources (85% with dates of publication within 5 years of 2020), and 177 appeared in the literature review. Out of the 177 cited references in the literature review, 152 (86%) of the references had a date of publication within 5 years of my expected graduation in 2020. Of these sources, 85% are peer-reviewed.

Table 2

Summary of Sources Used in the Literature Review

Reference type	Frequency	Percentage
Peer-reviewed journals within 5 years of 2020	133	75%
Peer-Reviewed Journals more than 5 years of 2020	16	9%
Non-Peer-Reviewed Journals within 5 years of 2020	2	1%
Non-Peer-Reviewed Journals more than 5 years of 2020	0	0%
Dissertations within 5 years of 2020	9	5%
Dissertations more than 5 years of 2020	0	0%
Books within 5 years of 2020	8	5%
Books more than 5 years of 2020	5	3%
Government Web Sources	2	1%
Other Websites	2	1%
Total	177	100%

The organization of the literature review section is as follows. First is a restatement of the purpose of the study and hypotheses. Second is a description of the agency theoretical framework underlying the study, along with related supporting and rival theories. Next is a discussion of each independent variable and its measurement within the study (organizational structure and capital structure) and the dependent variable (financial performance). Lastly, I provide a review of methodologies applicable to the study, an analysis of different points of view, and the relationship of the study to previous research and findings.

Application to the Applied Business Problem

The purpose of this quantitative correlational study was to examine the relationship of capital structure, organizational structure, and financial performance of commercial banks in Uganda to promote long-term survival of firms. The hypotheses based upon the research question are as follows:

- H_0: No significant statistical relationship exists between organizational structure measured by organizational size, capital structure measured by debt-equity ratio, and financial performance measured by return on assets.
- H_1: A significant statistical relationship exists between organizational structure measured by organizational size, capital structure measured by debt-equity ratio, and financial performance measured by return on assets.

Agency Cost Theory

Agency cost theory was the theoretical framework suitable for this study. Jensen and Meckling (1976) were the first to define agency costs. They defined agency costs as the costs associated with the cooperative effort by human beings. They focused on the agency costs arising when one entity, the principal, hires another, the agent, to act for him or her. In addition, Jensen and Meckling defined agency costs as the sum of (a) monitoring expenditures by the principal, (b) the bonding expenditures by the agent, and (c) the residual loss.

Agency costs are related to agency conflicts and agency relationships. Jensen and Meckling (1976) used the theory to explain conflicts that bring about agency costs in agency relationships. An agency relationship arises between two (or more) parties when

one (designated as the agent), acts for, on behalf of, or as a representative for the other (designated the principal) in a particular domain of decision problems. Jensen and Meckling explained agency relationships between shareholders and managers and between debt holders and shareholders, whereas Ross (1973) provided a broad definition of the agency relationship that included stakeholders such as managers, creditors, and employees. Ross's broad definition was adopted in this study.

The premise of agency cost theory was that agency costs arise from the separation of ownership and control in corporations. Shareholders have an interest in profit maximization, whereas managers, employees, and suppliers have an interest in maximizing their self-interest; hence, conflicts arise (Leykun, 2016; Villalobos, 2017; Yu, 2009). Conflicts result in agency costs for firms to bear or the leaders of the firms engage in activities to mitigate the costs (Villalobos, 2017). An increase in agency costs, therefore, leads to a decline in financial performance (Park et al., 2016; Wang & Liu, 2018).

Directly identifying and measuring the three components of agency costs was not possible using Jensen and Meckling's (1976) definition. However, indirect estimation was possible, using (a) variables that represent circumstances that most likely lead to agency problems and associated costs and (b) aggregate outcome measures that proxy for specific components of agency costs. According to the literature, the proxy variables that measure agency costs were (a) total asset turnover, (b) operating expense to sales ratio, (c) administrative expense to sales ratio, (d) earnings volatility, (e) advertising and research and development expense to sales ratio, (f) floatation cost, (g) free cash flows,

(h) asset utilization, (i) liquidity, and (j) tangible asset intensity among others (Abdulrahman, 2014; Imbierowicz & Rauch, 2014; Makhdalena, 2015); Mersland, Pascal, & Beisland, 2016). The proxy variables that measure agency costs in banks were operating expenses, asset utilization, liquidity, and tangible asset intensity (Imbierowicz & Rauch, 2014; Mersland, Pascal, & Beisland, 2016).

In a corporate finance context, researchers use agency costs hypotheses to study how to reduce agency costs through various mechanisms. This study involved studying the capital structure and organizational structure behavior as effective ways to mitigate agency costs because of their role in removing free cash flows and improving efficiency. As applied to this study, the agency cost theory holds that I will find agency costs (arising from conflicts between shareholders and managers, debt holders and shareholders, and managers and employees) reduced by capital structure and organizational structure to influence financial performance.

The history and origin of agency cost theory date back to Adam Smith. Smith's book, *An Inquiry into the Nature and Causes of the Wealth of Nations*, (1776) and, mainly, his thoughts on the ineffectiveness of companies with management entrusted to a non-owner agent, is undoubtedly one of the most relevant references for studying problems related to the agency relationship. Until approximately 1870, management and ownership of enterprises were vested in the same person (Lambrechts, 1992). According to Berle and Means (1932), the Great Depression of the 1930s permanently settled the debate on the distinction between owners and managers, during which researchers witnessed the emergence of a new class called the *managers* (Zogning, 2017). The

management of enterprises by professional managers was a rationale accepted by an overwhelming majority of those who then reflected on the management of new companies (Jensen & Meckling, 1976).

Theorists of the agency theoretical framework present some behavioral assumptions concerning the principal, the agent, and the agency relationship. Assumptions about people include self-interest, bounded rationality, and risk aversion (Jensen, 1983). Assumptions about organizations include goal conflict among members (Eisenhardt, 1989; Jensen & Meckling, 1976). Lastly, assumptions about information include the view that information is a commodity that individuals can purchase (Eisenhardt, 1989). Theorists of the agency theoretical framework assume the agent has private information to which the principal cannot gain access at no cost.

Other vehicles for removing shareholder–manager conflicts include the provision of incentive-compatible managerial contracts and the role of the managerial labor market in exerting discipline on managerial behavior. Eisenhardt (1989) developed a model in which a manager has an incentive to invest a firm's resources in assets that are more highly valued under that manager than under the next best alternative manager. Using convertible debt can still be a way to discipline management (Jensen & Meckling, 1976). Convertibles reduce the agency costs of monitoring because they allow lenders to share in a firm's profits.

There is a more radical solution to shareholder-manager conflicts. Kensinger and Martin (1986) proposed that, if a firm's leaders reorganized the firm into a limited partnership (or royalty trust), the managing partner has limited discretion in dividend and

reinvestment decisions. The reinvestment of profits is thus in the hands of individual partners (shareholders), which reduces manager–shareholder agency costs by removing management's decision-making power.

Other scholars have proposed an alternative approach to analyzing shareholder-manager conflicts. Williamson (1988) particularly developed an alternative approach to analyzing shareholder–manager conflicts that involves using transactions-cost economics. Williamson argued that the specificity of the different types of assets owned affects the financial structure of a firm. Lenders do not lend to particular projects because, in the event of failure (liquidation), the amount realized are meager. Thus, leverage should decrease as the degree of asset specificity rises. Specificity affects equity holders less because they necessarily surrender a firm's assets to lenders at liquidation. As asset specificity rises, the costs of debt and equity rise, with the costs of debt rising faster than the costs of equity.

Agency cost theory was applicable and fitted the theoretical framework of the study. To address the how agency cost theory applied to the study, firm performance by way of cost minimization (capital structure) and greater efficiencies (organizational structure) was the desired outcome of the agency theory perspective. When the ownership and management of a firm were separated, the theory indicated that agency problems were created, and agency costs incurred to alleviate these problems (Eisenhardt, 1989; Jensen & Meckling, 1976). Following the theory, the principal has options for reducing agency problems (Eisenhardt, 1989), both of which can curb the agent's opportunistic behavior. In essence, the principal makes a choice between establishing governance

structures based on the agent's actual behavior or the outcomes of that behavior (Eisenhardt, 1989). Choice creates agency costs, which are the costs borne by the principal to monitor and assess agent behavior (Jensen & Meckling, 1976).

Next, I address why agency cost theory applied to this study. The underlying assumption of agency cost theory is the economic model of man (Eisenhardt, 1989; Jensen & Meckling, 1976). The assumption within this model is that individuals will seek to optimize their utility. In the principal-agent relationship, the principal hires an agent to maximize their utility. However, agency cost theory includes an assumption that agents will instead behave opportunistically because they too are self-serving. Therefore, principals enact mechanisms to minimize losses to their efficiency (Eisenhardt, 1989; Jensen & Meckling, 1976). The agency theoretical framework was appropriate for this study because of the various agency relationships in commercial banks that cause agency problems, which caused poor financial performance and bank failure.

Researchers such as Jensen and Meckling (1976) and Eisenhardt (1989), among others, used the agency theoretical perspective to analyze the performance of companies and the remuneration of their CEOs (Zogning, 2017). Also, several researchers used agency cost theory to explain firm decisions such as dividend decisions, capital structure decisions, investment decisions, and organizational structure decisions, among others, arising from agency relationships. Although many agency relationships exist within a firm, the most crucial is the potential conflicts between managers and shareholders and between shareholders and bondholders. Jensen and Meckling (1976) and Jensen (1986) noted that dividends serve to reduce agency costs.

Banks, which were the subject of this study, also experience agency relationships. Banks, like firms, are a nexus of contracts comprising both the explicit and the implicit claims of all stakeholders (Jensen & Meckling, 1976). Banks thus comprise agency relationships mainly between bank shareholders and stakeholders (e.g., regulators, bank managers, creditors, and employees). The separation of ownership (bank shareholders) and control (bank stakeholders) gives rise to agency problems such as agency problems of managers, agency problems of creditors, and agency problems of employees. These agency problems generate agency costs. As applied to this study, financial leverage (a proxy for capital structure) and organizational structure reduce agency costs and thus improve firm value.

The relationship between bank shareholders and bank managers is multidimensional, and the relationship between bank shareholders and banker managers is a principal-agent relationship. The risk assumed in lending and borrowing influences the relationship between bank shareholders and bank managers. Also, the relationship between bank shareholders and bank managers involves issues related to the delegation of authority. In a bank shareholder-bank manager relationship, an opportunistic behavior may not take place because bank managers have a fiduciary duty of professional conduct toward their organization, customers, and each other. Concerning goal congruence, it is in the interest of bank shareholders and bank managers to have a common approach toward the achievement of organizational goals.

Through empirical observations, researchers noted some limitations of the agency cost theory. The agency cost theory is a concept that is sometimes unsuited to social life.

It includes an assumption that actors are self-interested and indivisible and that social relationships do not influence the market (Jensen, 1986; White & Hamermesh, 1981). Also, the theory suggests that solely personal financial interests motivate behavior and that cooperation indicates a contract between the parties. However, the actions of the manager, like all social actions, are rooted in the social structures in progress and not entirely determined by economic incentives and information asymmetries. Thus, it seems unrealistic that the theory adopts a vision in which financial gain is the primary motivator of individuals and organizations (Jensen, 1986).

Another assumption of agency cost theory was that behaviors and consequences are homogeneous and controllable. The theorists of agency cost theory further assumed that behaviors and consequences are relatively homogeneous and easily controlled, which is not true in the real world (Agrawal & Matsa, 2013; Eisenhardt, 1989). In a complex network of dyadic relationships, for example, the simplicity of the dichotomous choice between the monitoring and the proposal of incentives to regulate the conduct or outcome is not sufficient. In addition, remaining on guard against opportunistic behavior can lead to stifled initiatives, creativity, entrepreneurship, and innovation in companies, which is a cost that agency theorists often ignore (Eisenhardt, 1989).

Experts say there is a need for a more integrative overview of the causes of good financial performance. Four of the most important experts share the view of Capon et al. (1996), who noted that a much more holistic and integrative approach is necessary to explain the enormous diversity in firm financial performance. Also, a satisfactory answer to the question of what determines the level of business's performance has been elusive.

According to White and Hamermesh (1981), more theoretical and empirical research is necessary on the complete model. In addition, researchers should improve theory building and evaluation by ensuring a universal language of constructs and variables across levels. According to Eisenhardt (1989), researchers should introduce new concepts that provide a more encompassing perspective. She joined the call for an integrated approach by arguing for a multi-paradigm approach to theory building that can encourage scholars to adopt a more comprehensive view of financial performance.

Rival and Supporting Theories

Researchers offer supporting theories to the agency cost theory to explain the relationship between organizational structure, capital structure, and financial performance. The agency cost theory was suitable because there are more studies based on the quantitative methodology in the literature review and the finance field than for the supporting theories. Similar to Jensen and Meckling's (1976) agency cost theory is Freeman's stakeholder theory and Williamson's transaction cost economics theory. Freeman (1984) noted, "The stakeholder approach is about groups and individuals who can affect the organization, and is about managerial behavior taken in response to these groups and individuals" (p. 48). In contrast, the theory of transaction cost economics entails the assumption that any transaction in an organization has a cost associated with it (Leonard & Wilkinson, 2014).

The stakeholder theory was similar to the agency cost theory in several ways. First, while agency relationships influence agency costs, stakeholder relationships are an essential construct in stakeholder theory. Each stakeholder has a relationship with the

focal organization. Second, firm performance is usually the dependent variable in instrumental stakeholder studies, as in agency cost studies (i.e., firm value). Third, researches have conducted agency theoretical framework research on stakeholders on a micro and macro level, that is, at an individual, organizational, or institutional level. Another similarity between stakeholder theory and agency cost theory is the explanation of the survival and bankruptcy of organizations. Although some researchers have contended that primary stakeholder relationships are crucial to organizations' survival, Capon et al. (1996) claimed that agency relationships through agency costs influence a firm's financial performance and survival. The last similarity is quantification through costs. Agrawal and Matsa (2013) noted that the nonfinancial stakeholders of a firm, such as customers, suppliers, and employees, incur switching costs, especially when a firm is liquidated. Similarly, according to Jensen and Meckling (1976), firms incur agency costs such as monitoring expenditures by the principal and bonding expenditures by the agent.

Another theory that supports the agency cost theory is the theory of transaction cost economics. According to Williamson (1988), transaction cost economics involves economic actors receiving less than full value in economic exchange. The focus of agency cost theory is on principal-agent relationships and on mechanisms to reduce agency loss resulting from the diverging interests of principals and agents (Eisenhardt, 1989). Both the agency cost theory and the theory of transaction cost economics include the assumption that information is not equally available for both parties to do a transaction or in a relationship. There is a prohibitively high cost associated with obtaining the information (Li, Arditi, & Wang, 2014). Last is quantification through

costs. Jensen and Meckling (1976) defined agency costs as the sum of monitoring expenditures by the principal, the bonding expenditures by the agent, and the residual loss, and Leonard and Wilkinson (2014) similarly identified costs during the transaction, as created by the interaction of opportunistic behavior and uncertainty exchanges. For example, in a situation where information impact combines with opportunistic behavior, the cost of a transaction increases in line with the escalation of monitoring and contracting (Leonard & Wilkinson, 2014).

The transaction cost economics theory was not suitable for this study for two reasons. Although transaction cost economics appears in the literature as an alternative approach to analyzing shareholder–manager conflicts, in this approach debt and equity serve as vehicles for corporate governance rather than as financial instruments (Leonard & Wilkinson, 2014). Thus, this argument is at odds with more conventional corporate finance literature, as it creates an impression that debt is a neutral financial instrument with equity being the instrument of last resort.

Another reason the transaction cost economics theory is not suitable is that, in transaction cost theorizing, researchers have shown concern regarding organizational boundaries, whereas, in agency theorizing, the contract is between cooperating parties, regardless of the boundary (Williamson, 1988, Eisenhardt, 1989). In addition, each theory includes unique independent variables. In the transaction cost theory, the variables are asset specificity and small numbers bargaining. Agency theory consists of the risk attitudes of the principal and agent, outcome uncertainty, and information systems (Capon et al., 1996).

Building an exhaustive literature review includes several competing theories that might have potentially served as the theoretical framework through which to study the variables (Capon et al., 1996). Critical among them is the contingency theory. Next is a discussion of contingency theory and its strengths and limitations, among other topics. Last is a discussion of the integrative framework for a firm's financial performance as a rival theory to agency cost theory.

Burns and Stalker in Britain and Lawrence and Lorsch in the United States developed contingency theory in the 1960s. According to the theory, there is no one best way to organize. Thus, organizational structures and control systems that managers choose to depend on or are contingent on characteristics of the external environment in which the organization operates. For example, contingencies, or combinations of individual causal factors, may interact and, in turn, affect financial performance. Capon et al. (1996) identified more than 100 different variables, but those widely used include organization size, routines of task technology, environmental uncertainty, and individual differences.

Contingency theory has several strengths. The dependent variable from the model of the contingency theory is the organizational structure (Magaji, Lawan & Naziru, 2018). The choice of this theory for analyzing relationships with organizational structure is justified, as it embraces factors from more building blocks than the other theories. In addition, contingency theory follows an information processing approach. Contingency theory researchers assume that individuals are boundedly rational and that information is distributed asymmetrically throughout an organization. Contingency theory researchers

focus on the optimal structure of reporting relationships and decision-making responsibilities (Magaji et al., 2018), whereas in agency theory, researchers focus on the optimal structuring of control relationships resulting from these reporting and decision-making patterns; for this reason, contingency theory was not chosen in this study. For example, individuals using contingency theory focus on whether a firm has a divisional or matrix structure. In agency theory, however, the focus is whether performance incentives serve as a form of compensation for managers within the chosen structure.

Theorists of contingency theory made the following assumptions: (a) the better the fit among contingency variables, the better the performance of the organization; (b) rationality (there is always goal consensus among decision-makers within an organization); (c) deterministic models (clear casual inference often made); (d) cross-sectional and nonhistorical empirical methods; and (e) linear model of contingency variables. However, some theorists have heavily criticized the contingency theory. The weak empirical support traces back to the ill-defined concepts of fit and performance and the lack of recognition of the possibility of nonrational objectives. Further still, in an empirical test of the assumptions of contingency theory, Capon et al. (1996) presented some damaging criticisms such as lack of clarity in contingency theory arising from the ambiguous nature of statements used.

There are three main problems of applying the contingency approach to structural-performance relationships (Capon et al., 1996). First, many of the researchers of the studies conducted did not address performance as a variable. Second, researchers did not use hard performance criteria, which reduce the level of confidence in the

reported associations. Lastly, researchers who conducted studies with a contingency theory framework did not demonstrate conclusively that variation in the design of organizations operating in similar structures would have serious consequences for their levels of performance (Child, 1972).

Researchers have offered another rival theory to explain financial performance. Capon et al. (1996) developed the integrative framework for firm financial performance to explain financial performance. This framework comprises three primary building blocks – environment, strategy, and organization. Using the framework, the framers were able to identify how financial performance improved by employing the appropriate combinations and levels of factors composing these building blocks. The managerial implications from Capon et al.'s findings are that a holistic approach best captures the explanation of firm financial performance. Rather than focusing on one or two factors, managers seeking superior financial performance may find it necessary to manipulate many different factors simultaneously.

Among the strengths of this integrative model is that it connects in a single framework: the concepts of industrial environment and business position, organization structure, and strategy (Capon et al., 1996). According to the model, performance is dependent on all the factors, some independently and others in concert. Business strategy directly affects performance, which is how the firm chooses to compete in light of industry conditions and its position in the marketplace. The strategy then influences the design of the organizational structure, but at the same time, structure can constrain and guide the choice of strategy. The fit between the strategy and the structure also affects

performance, as does the internal consistency of the structural elements. There are some limitations to the integrative framework of financial performance. Capon et al. (1996) measured performance over an extended time horizon with variables measured at only a single point in time, which limited the inferences one can draw from the study. This can also lead to dealing incorrectly with reverse causality issues in which achieved performance may lead to some changes. I did not choose this framework as the model for the study because I lacked the time and skills to operationalize it. Skills required include the use of meta-analysis and conventional multirater classification of items into categories, and then within categories, to develop and test a performance function. The basis of the performance function is the general theory of production functions borrowed from microeconomics. Lastly, an integrative or holistic explanation of a phenomenon exists when a variety of plausible explanations is available for a subject under study, but there is no clear indication, which, if any, single explanation is correct.

Capon et al. (1996) applied the integrative framework of financial performance in their study of the financial performance of firms. The goals were to improve understanding of firm financial performance by developing a more integrated framework and to develop a research agenda based on lessons learned. Capon et al. argued for a more holistic approach to the study of firm performance and used a sample of 113 Fortune 500 firms. They adopted a qualitative integrating framework for firm financial performance comprising three basic building blocks: environment, strategy, and organization. From these variables, they built three dozen summary measures (scales) and examined both the linear and the contingent relationships of these new variables with

financial performance. Their results from the meta-analysis indicated that environment and strategy variables dominate in the strength of impact, with strategy providing the most consistent effects. Further, the empirical study indicated the environment and strategy provide the strongest relationships.

Banks and Banking Industry in Uganda

In this section, Uganda is briefly described as the context of the study and then highlight the historical development and status of the banking industry in Uganda. Lastly, is the justification of the choice of this class of banking. The main goals of banking regulation are (a) to affect banks' operations and performance (Rodriguez & Goodwin, 2015); (b) to shape the structure of the banking market; and (c) to stabilize the banking sector and, indirectly, the real economy (Jakovljevic, Degryse, & Ongena, 2015).

Uganda has a strategic position within East and Central Africa, which is a region that includes some of Africa's most economically significant countries. This location at the heart of Sub-Saharan Africa gives Uganda commanding importance as a base for regional trade and investment. Uganda ranked significantly lower than the comparator economies in the Index of Economic Freedom. The World Bank's "Doing Business" indicators (12th edition) provide an in-depth view of how Uganda's regulatory environment fares against its competitors. Uganda's ranking in 2015 was 150th place. Uganda's legal and political regimes contain various legal and regulatory frameworks that protect shareholders, creditors, and employees. For example, labor laws grant employees such rights as union formation, striking, and bargaining power.

The government of Uganda has a flexible foreign exchange rate regime, but it has tended to be overvalued and prone to hard currency shortages. The government has moved markedly toward a freer trade regime. Uganda's development status and trends over the period 2008–2009 to 2013–2014 reflect an improvement in some areas. Uganda's economic growth rate has averaged 5.5% between 2010–2011 and 2013–2014, while inflation has averaged 6.0% (Second National Development Plan, 2015).

Uganda has three significant characteristics of an imperfect market. The first is taxes, as tax policy allows interest to be deductible, which leads to lower costs of debt and provides for personal income taxes. The second is contracting costs, as there are alternative ways to contract optimal behavior. The third is information costs, such as costs that occur through market timing. This happens when managers take advantage of superior information (e.g., issue equity with an overvalued currency or debt with undervalued currency.

Uganda's banking sector has evolved from the first commercial bank established in 1906 to the 25 commercial banks, six credit institutions, and three microfinance deposit-taking institutions in 2016 (Bank of Uganda, 2016). The three dominant types of banks in Uganda are state, private domestic, and foreign-owned. Before the country's independence in 1962, foreign-owned commercial banks dominated the banking sector. Since 1906, over 40 commercial banks have opened up in Uganda (Bategeka & Okumu, 2010; Bank of Uganda, 2016).

The sector has also undergone several policies, legal and regulatory reforms with various degrees of results. Such reforms included liberalization of the interest rate

market, closure of failing banks, liberalization of the foreign exchange market, development of new a legal and regulatory framework for the banking sector, and implementation of internationally accepted standards in banking, particularly the Basel standards, all of these developments still implement in the sector (Toader, 2015). In addition, the sector has gone through several legal reforms. These include the Bank of Uganda Act (1966), Banking Act of 1969, Uganda Development Bank Decree (1972), and the Bank of Uganda Statute (1993). BOU imposed a moratorium on bank licensing from 1996 to 2007. Other legal reforms include enacting the Financial Institutions Act (2004), the Microfinance Deposit-taking Institutions Act (2003), the Money Lenders Act (1952), and the Foreign Exchange Act (2004).

Bank closures, mergers, and acquisitions have characterized the evolution of the banking sector in Uganda, and mergers and acquisitions are reshaping the organizational structures of banks. Before 1962, four commercial banks started and were characterized by mergers. Between 1962 and 1988, before initiating financial sector reforms, nine banks were established or restructured. State-owned banks in the 1960s, the 1970s, and most of the 1980s dominated the provision of banking services in Uganda (Bategeka & Okumu, 2010). This trend changed with the privatization and divestiture of the government of Uganda from the provision of banking services. Leaders of BOU opened over ten private-owned banks in the 1990s. Following the lifting of the moratorium, another ten banks opened by 2009 (Bank of Uganda, 2016).

The status of the banking sector in Uganda includes BOU, commercial banks, credit institutions, microfinance deposit-taking institutions, and development banks

(Bank of Uganda, 2016). BOU authorizes commercial banks to hold savings, checking, and time deposit accounts for individuals and institutions in local and international currencies. In addition, commercial banks buy and sell foreign exchange, issue letters of credit, and offer loans to customers. Leaders at BOU have implemented several significant regulatory reforms. These reforms were possible following amendments to the Financial Institutions Act (2004) and include offering agent banking and Islamic banking, offering bancassurance, and creating a standalone Deposit Protection Fund. The Moneylenders Act (2016) enhances the protection of deposits and limits predatory lending practices. In 2015, there were 25 commercial banks licensed by BOU, with 570 branches and total assets of USD 6.64 billion (Bank of Uganda, 2016). About 38% of the commercial bank branches are in Kampala, with the distribution of the remaining branches about even in the central, eastern, and western parts of the country. Concerning ownership, about 87% of the existing banks are foreign-owned, and their participation is mainly through direct investment in equity holdings.

The banking industry provides a unique setting to test for the presence of agency costs due to the existence of public regulation. As regulation increases, less than perfectly competitive markets exist, and non-profit-maximizing behavior may result. Another factor that distinguishes the banking industry from others is the existence of deposit insurance. With this safety net in place, bankers may increase their risk exposure and vary the capital structure mix accordingly. The prior deposit insurance system created a moral hazard problem, as all banks used to pay the same flat insurance premium, regardless of the riskiness of their operations.

Capital Structure

Capital structure is one of the independent variables in this study. The choice of capital structure is a critical decision for a firm. The debate surrounding the choice of capital structure includes extensive literature that considers the agency cost associated with debt or equity financing (Jensen & Meckling, 1976; Saad, Ghani, Ahmad, & Salim, 2014). The capital structure decision is significant, as it affects the cost of capital and the market value of the firm (Lawal, 2014). The ability of banks to carry out their stakeholders' needs makes them tightly related to capital structure (Anarfo, 2015).

Capital structure refers to a company's funding source for its assets and the mix of equity and debt (Robb & Robinson, 2014, Terzioğlu, 2017). Campbell, Dhaliwal, and Schwartz (2012) defined equity capital as including share capital, share premium, reserves, and surpluses (retained earnings). An entrepreneur who raises money through equity financing effectively sells pieces of the company in return for outside investment (Oranburg, 2016). Debt is the sum of current liabilities and noncurrent liabilities (Grougiou, Leventis, Dedoulis, & Owusu-Ansah, 2014). Financing solutions vary as firms grow large (Coleman, Cotei, & Farhat, 2014), and so does the cost of capital (Cajias, Fuerst, & Bienert, 2014).

Unlike other firms, banks have a mix of deposits, debt, and equity capital to finance loans and other assets of banks. Maintaining adequate capital is important for banks because (a) it absorbs losses and protects them from failure, (b) it is an essential line of defense for creditors and depositors, as well as for the deposit insurance fund, and (c) capital protects the financial system and the economy from the costs that can arise

from bank failures. In contrast, the use of debt influences agency cost in several ways. First, the use of debt reduces the free cash flow available to managers (Jensen, 1986) as interest payments promised to debt holders decrease free cash flow available for investment. This decrease in free cash flow also helps in curtailing overinvestment (Jensen, 1986). The second use of debt is to increase the monitoring of managers by debt holders such as banks, which puts pressure on managers to run businesses profitably (Jensen & Meckling, 1976). The third use is increasing the threat of bankruptcy because, in the case of bankruptcy, managers will lose benefits that they get from the firm. Lastly, banks enjoy a tax advantage on debt interest payments relative to dividends on equity.

Agency cost theory of capital structure. The agency cost theory of capital structure was preferred as the theory to study the relationship between agency costs, capital structure, and financial performance. Jensen and Meckling (1976) brought forth the agency cost theory of capital structure. The agency cost theory of capital structure predicts and confirms that financial leverage mitigates agency costs by reducing free cash flows through regular interest expense payments and by enforcing the return of principal. Empirical evidence finds a positive relationship exists between financial leverage and firm value (Jensen, 1986).

From Modigliani and Miller theory of capital structure, the question of what determines firms' choices of capital structure has been an essential issue in the corporate finance literature. Since the 1950s and 1960s, researchers conducted studies in developing and developed countries to identify those factors that affect firms' choice of capital structure. According to Jensen (1986), common characteristics that are thought to

determine capital structure are tangibility, size, profitability, growth, firm risk, non-debt-tax shields, and industrial classification.

One of the factors that influence the agency cost of capital structure includes the agency cost of equity Jensen (1986). If the firm issues equity, the owner-managers fractional interest within the firm decreases, which increases the incentives for an owner-manager to undertake excessive perk consumption, as the costs to the owner of such activities have lowered because of a reduction in the owner's fractional interest. These are costs called agency cost of equity and include the monitoring expenses of the principal (the equity holders), the bonding expenses of the agent, and the money value of the reduction in welfare experienced by the principal due to the divergence between the agent's decisions and those that maximize the welfare of the principal.

Another factor that influences the agency cost of capital structure includes the agency cost of debt Jensen (1986). If a firm issues debt, then the owner-manager's incentive increases to invest in high-risk projects that, if successful, offer high returns that accrue exclusively to the owner-manager but at the same time increase the likelihood of failure. If the projects fail, the owner-managers exposure is limited to the value of the owner's equity holdings. In contrast, debt holders do not share the profits of success, but share in the costs of bankruptcy; they are incurring additional risk without additional expected returns. As the amount of debt increases, debt holders demand a higher premium to compensate them for the increased probability of failure. Thus, the agency costs of debt include (a) the opportunity costs caused by the impact of debt on the investment decisions of the firm, (b) the monitoring and bond expenditures by both the

bondholders and the owner-manager, and (c) the costs associated with bankruptcy and reorganization.

Measures of capital structure. Two measures of capital structure frequently found in corporate finance literature are debt-equity ratio and debt ratio. The debt ratio refers to total liabilities divided by total assets (IMF Fiscal Monitor, 2016; Moscalu, 2015). Nicholas (2017) supported this choice of debt ratio as a measure of capital structure because the data required calculating both total liabilities and total assets are available from the banks' balance sheet. One limitation of using market value is the unavailability of data. Another measure of capital structure is the DER. The DER refers to total liabilities divided by the book value of common equity (Awuah-Agyeman, 2016; IMF Fiscal Monitor, 2016; Nicholas, 2017). The purpose of calculating this ratio is to obtain an idea of the amount of capital supplied to a firm by its owners and of the asset cushion available to the creditor at the time of liquidation. Specifically, DER = total liabilities / total common equity, where total liabilities = noncurrent liabilities + current liabilities, and total common equity = shareholders' equity. Earlier researchers such as Awuah-Agyeman (2016), Kumar and Ndubuisi (2017), and Nicholas (2017) supported this choice of DER as a measure of capital structure. The DER is most suited as a measure of capital structure in this study. While debt reduces agency costs, too much debt is risky as it increases the probability of bankruptcy. The benefit of agency cost reduction and the cost of bankruptcy is a trade-off. The interaction between benefit and costs determines the optimal capital structure of firms.

The agency cost theory predicts that, when a firm uses more debt, the manager will face more risk of bankruptcy and then be more efficient, agency cost decreases, and the expectation is a better performance of the company (Jensen and Meckling, 1976; Jensen, 1986). A high level of debt forces managers to pay interest and principal periodically and reduces the probability that managers invest in non-optimal investment projects. High financial leverage also introduces outside monitors such as creditors and auditors to monitor managers and reduce perquisites, and force managers to be more efficient to keep their control rights and reputation. Thus, under the theory, there should be a positive relationship between leverage and the firm's performance.

Relationship of capital structure, and financial performance. Several researchers have studied the relationship between capital structure, and financial performance (firm value) of nonbank firms using the agency model, but the results are not convergent. Some researchers found a positive relationship between capital structure, and financial performance of nonbanking firms using agency cost theory as the theoretical framework, including Hastori, Siregar, Sembel, and Maulana (2015); Makhdalena (2015); Awuah-Agyeman (2016), and Ahmed, Awais, and Kashif (2018). A critical analysis of these studies follows.

Researchers who found a positive relationship between capital structure and financial performance of nonbanking firms using agency cost theory as the theoretical framework include Hastori et al. (2015), who investigated the determinants of agency costs on agro-industrial firms listed in the Indonesian Stock Exchange by employing secondary data on 54 companies from 2010 to 2013. The results showed that the

effectiveness of a good governance mechanism, especially the function of the board of directors and board of commissioners in conducting their duties, dividend payout, and leverage, affect agency costs. In contrast, independent commissioners and auditor committee are not significant factors in mitigating agency costs. Ownership concentration also affects agency costs.

Makhdalena (2015) examined the effect of capital structure on agency cost. The population was 29 conglomerate companies listed on the Indonesian Stock Exchange. The study period was 2007–2012. Agency cost is the ratio of operating expenses to sales and capital structure measured by the ratio of liabilities and equity. Institutional ownership, size, and ROA are variable control. The results showed that capital structure, institutional ownership, size, and ROA are simultaneously positive and have a significant impact on the agency cost. While the partial results of the study are: capital structure has a significant positive effect on agency cost; institutional ownership is not a significant positive effect on agency cost. Size is a positive but not significant impact on agency cost. ROA has a significant and negative impact on agency cost.

Awuah-Agyeman (2016) studied the impact of capital structure on the profitability of the manufacturing industry in Ghana using some selected firms in a case study for the period from 2005 to 2012. The 15 firms selected came from different subsectors of the manufacturing industry. Return on equity or profit after interest and tax represented profitability, while capital structure reflected the natural logarithms of short-term debt, long-term debt, and equity. The result showed short and long-term debt negatively related to profitability, but the effect of long-term debt was insignificant.

Equity had a positive association with profitability. The above results are consistent with previous empirical studies and with the literature.

Lastly, among researchers who found a positive relationship between capital structure and financial performance of nonbanking firms using agency cost theory as the theoretical framework, Ahmed et al. (2018) studied the optimal level of capital structure that firm leaders can adopt to improve their financial performance, given the industry dynamics and economic circumstances of the country. Using Hausman's specification test, Ahmed et al. (2018) collected annual data for the period 2005–2014 of the securities listed on the Karachi Stock Exchange 100 to analyze the impact of financial leverage on the firms' performance. ROA, ROE, and Tobin's Q were the proxies of financial performance analyzed against financial leverage. The finding indicated that capital structure, leverage, interest cover, and sales growth were the most significant variables that influence firms' profitability.

Some researchers found a negative relationship between capital structure, and financial performance of nonbanking industries using agency cost theory as the theoretical framework. These included Hussain, Shahid, and Akmal (2016), Chechet and Olayiwola (2014), and Wellalage and Locke (2013). Hussain et al. (2016) supported the view that agency costs are the lowest for short-term debts. According to the agency cost theory, the higher debt ratio decreases agency cost by aligning the interests of managers and shareholders, thereby indicating that a negative relationship exists between leverage and agency cost.

Chechet and Olayiwola (2014) studied capital structure and profitability of firms listed on the Nigeria Stock Exchange using the agency cost theory perspective, with a sample of 70 listed firms for a period of 10 years from 2000 to 2009. The study involved generating panel data for the firms using fixed effects, random effects, and Hausman chi-square estimations. The study involved using two independent variables as surrogates for capital structure: debt ratio and equity ratio. Profitability was the only dependent variable. The results showed that the debt ratio related to profitability negatively, while equity ratio related to profitability positively but not significantly.

Wellalage and Locke (2013) studied the link between female board directors and financial performance and agency costs in Sri Lanka's publicly listed companies. The three variables used as proxies for gender diversity of the board of directors were the percentage of women on the board, a dichotomous dummy, and the Blau index. The study involved using (a) a Tobit model with endogenous regressors to investigate the impact of female board members on agency cost and (b) growth opportunities as a measure of agency cost. After controlling for size, industry, and other corporate governance measures, the finding indicated a significant negative relationship existed between the proportion of women on boards and firm value, as well as an increase in company agency cost.

Some researchers found a mixed relationship between capital structure, and financial performance of nonbanking industries using agency cost theory as the theoretical framework. These included Zhang and Li (2008), Addae, Nyarko-Baasi, and Hughes (2013), and Chadha and Sharma (2016). Zhang and Li (2008) explored the

impact of leverage on agency cost for 323 firms in the United Kingdom. The study involved using multivariate and univariate analysis, and their results confirmed that agency cost is negatively related to leverage. However, when the capital structure comprised sufficient high level of leverage, the results of the univariate analysis showed the opposite (positive) but non-significant relationship between leverage and agency cost.

Addae et al. (2013) studied the relationship between capital structure and profitability of listed firms in Ghana during the period from 2005 to 2009 using regression analysis. The study also involved using average profitability and debt ratios to determine whether Ghanaian-listed firms depended on debt. The results revealed that a statistically significant positive relationship exists between profitability and short-term debt, and a significantly negative relationship exists between profitability and long-term debt. The results also revealed a statistically negative relationship between profitability and total debt.

Chadha and Sharma (2016) studied the impact of capital structure or financial leverage on firms' financial performance. The sample included 422 Indian manufacturing companies listed on the Bombay Stock Exchange from 2003–2004 to 2012–2013. ROA, ROE, and Tobin's Q were the proxies for measuring the firms' financial performance. The findings indicated that financial leverage has no impact on a firm's financial performance parameters of ROA and Tobin's Q. However, financial leverage is negative and significantly correlated with ROE. Other independent variables such as size, age, tangibility, sales growth, asset turnover, and ownership structure are significant determinants of a firm's financial performance in the Indian manufacturing sector.

A few researchers have linked capital structure to the financial performance of banks, specifically using the agency model, but the results were also not convergent. Some of the researchers found a positive relationship between capital structure, and financial performance of banks. These include Mercado-Mendez and Willey (1995), Sagara (2015), Meero (2015), and Bambulović, Huljak, and Kožula (2016). In contrast, Dai (2017) found a negative relationship between capital structure, and financial performance of banks using the agency model. Further, some researchers found a mixed relationship between capital structure, and financial performance of banks using the agency model, including Anarfo (2015) and Kumar & Ndubuisi (2017). Lastly, some researchers' findings were inconclusive, or the researchers found no relationship between capital structure, and financial performance of banks. These include Boodhoo (2009) and Alfadhl and Alabdullah (2013).

Mercado-Mendez and Willey (1995) examined agency theory arguments in the banking industry. The authors examined the 104 largest U.S. banks during the period 1985–1989. Mercado-Mendez and Willey analyzed the effect of four variables that proxy for agency costs (i.e., earnings volatility, managers' portfolio diversification losses, bank size, and standard deviation of bank equity returns) on three financial policy variables (i.e., managerial stock ownership, leverage, and dividend yield). The findings show that bank size and a measure of the managers' portfolio diversification opportunity set affect a bank's level of managerial stock ownership, leverage, and dividends.

Sagara (2015) analyzed the impact of capital structure on financial performance in Islamic banks listed on the Indonesia Stock Exchange in 2014. Sagara calculated capital

structure using total debt to equity capital ratio, whereas estimating financial performance involved using capital, assets, earnings, and liquidity ratios. The results showed that capital structure affected the financial performance of the Islamic banks significantly (by 69%), which indicated that the higher the capital structure of the Indonesian Islamic banks is, the higher the Indonesian Islamic bank's performance is, or vice versa.

Meero (2015) studied the relationship between capital structure and performance in Gulf countries' banks. Meero performed an analysis of the relationship between capital structure and performance in Gulf countries and distinguished between conventional banks and Islamic banks, but both banks showed a similarity in terms of capital structure. The results showed that ROA had a significant negative relationship with financial leverage and a positive correlational with equity to assets ratio.

Bambulović et al. (2016) studied the agency cost of debt by using data on the Croatian banking industry. By testing the agency cost of debt, Bambulović et al. contributed to the literature on bank capital and bank governance in Croatia. Bambulović et al. proceeded by generating a profit efficiency measure believed to be adequate in representing management effort and ability to maximize the value of owners' investment. Next, they modeled profit efficiency using bank leverage and other independent variables. By using variables available at this point, their results did not indicate that debt acts as a clear discipline mechanism for bank managers in Croatia. However, on certain leverage levels, their findings supported agency theory.

Dai (2017) studied the relationship between capital structure and banks' performance in Thailand from 1997 to 2016. By employing the random effect model and

robustness check to tackle the endogeneity problem, the result showed a significant and negative correlational between capital structure and profitability. Also, credit risk and liquidity risk significantly decreased financial performance. Finally, the data indicated that, while improving banks' financial performance, bank managers should be aware of overusing debt, which reduces banks' profitability.

Among the researchers who found a mixed relationship between capital structure, and financial performance of banks using the agency model is Anarfo. Anarfo (2015) studied capital structure and bank performance using evidence from Sub-Sahara Africa. The finding indicated no statistically significant relationship of capital structure existed in Africa. Thus, with these complicated and controversial results, the debate on the relationship between capital structure, and financial performance is still going.

Other researchers who found a mixed relationship between capital structure, and financial performance of banks using the agency model include Kumar and Ndubuisi. Kumar and Ndubuisi (2017) studied the effect of capital structure on the performance of deposit money banks in Nigeria. Ndubuisi obtained data from secondary sources and analyzed the data using the autoregressive distributed lag method. The findings revealed a mixed impact of capital structure variables on performance indicators. The result also showed a positive relationship between bank size and the performance indicators used in the study.

Boodhoo (2009) studied the impact of capital structure on bank performance in Tanzania. Boodhoo used panel data for 5 years and 38 banks operating in the country. The study results indicated the presence of a negative trade-off between the use of debt

and firm performance when measuring the capital structure using the ratio of DER. Boodhoo measured performance by cost efficiency and ROE. Contradicting results emerged when Boodhoo measured the capital structure as the ratio of debt to asset and then measured performance as the ratio of debt to asset. The findings of this study were consistent with most of the previous results but did not provide a single stand on whether leverage affects firm performance.

Alfadhl and Alabdullah (2013) investigated the relationship between some determinants of managerial behavior and agency cost on the one hand and the impact of this relationship on firm performance on the other. Alfadhl and Alabdullah examined three variables that represented the determinants of managerial behavior: managerial ownership, information asymmetry, and percentage of firm debts. Data came from a sample of 27 firms distributed to three economic sectors: banks, industry, and services. The findings regarding the ownership variable confirmed a significant and nonlinear correlational exists between managerial ownership and agency cost of ownership, and firm performance affects such a relationship. As for the other two variables, namely information asymmetry and percentage of firm debts, the findings show no relationship exists between them and agency cost and no impact of performance on this relationship.

As mentioned earlier in this section, a positive connection exists between capital structure, and financial performance. As noted in the theoretical framework section, a relationship also exists between capital structure, and financial performance using agency cost theory of capital structure (Jensen & Meckling, 1976). Therefore, in this study, capital structure is measured by determining the DER. Consistent with the measures of

capital structure used by Sagara (2015), Chechet and Olayiwola (2014), and Hussain et al. (2016), this study included an item to measure the level of debt of the bank.

Organizational Structure

Organizational structure was the second independent variable in this study. The objective of a business organization is to achieve targets in the form of goals and objectives. The goals and objectives that leaders of business organizations set to achieve determine how they allocate tasks to employees. The assigned tasks, grouped into various units and connected, shape the organizational structure. The next topics discussed are definitions, additional theory on organizational structure, and empirical literature on the influence of organizational structure on financial performance.

Several scholars have defined organizational structure in a variety of ways. According to Mintzberg (1978), organizational structure defines the organization of individuals and groups or the division and coordination of their tasks. Other researchers defined organizational structure as capturing the centralization of authority, formalization, complexity, and integration. Daft (1989) defined organizational structure as consisting of formal reporting relationships, including the number of levels in the hierarchy, the span of control of managers and supervisors, and communication across the organization's departments. The definition by Mintzberg is most appropriate for this study.

Relationship of agency cost theory and organizational structure. In this study, the relationship between organizational structure and financial performance of firms examined using agency theory. The focus of agency theory is on the divergent interests

and goals of an organization's stakeholders and the way to use employee remuneration to align these interests and goals (Bambulović et al., 2016). Employers and employees are the two main stakeholders in an organization. Employers assume the role of principal, and employees play the role of agents. The remuneration payable to employees is the agency cost. Employees naturally expect high agency costs, while employers seek to minimize it. According to agency theory, the principal must choose a contracting scheme that helps align the interest of the agents with the principal's interests.

Employees, like shareholders, face agency cost problems (Wang & Liu, 2018). Such problems include effort, time horizon, and risk aversion. Another obvious agency cost is that to gain return for their investment in the firm, employees must depend on the actions of management, even though their interests do not always coincide. Agency problems between employer and employee occur when the employees avoid work because the work is harmful to them, if the employees lack motivation in the workplace, the performance of the workers is affected.

According to Blair (1999), from the shareholders' standpoint, any marginal increase in employees' benefits that does not improve productivity might be a marginal increase in the agency costs of employees. Any ongoing contractual relationship includes costs associated with monitoring to ensure the other contracting party is satisfying his or her obligations under the contract. Thus, in this sense, employees face agency costs as well. Employees in a firm must bear certain monitoring costs or agency costs associated with making sure that the firm's management is keeping their interests at heart. Employees show up to work because they believe that managers can organize their labor

so that they can be more productive than the sum of their productiveness as individuals, and so they share in the gain. Therefore, like shareholders, employees depend on the care, skill, and good faith of the management. If the managers do not make the right management decisions, or if they look after themselves only, both the shareholders and the employees end up harmed. The shareholders receive less return on their investment than they expected, and the employees have jobs that are less attractive than they expected due to them being lower-paying, less secure, and less safe. Both parties must take care to reduce the agency costs of giving over control of something they value to management.

The characteristics of organizational structure are also important. Two extreme types of organizational structure are mechanistic (mechanic) and organic (dynamic) structure. The mechanistic structure is an organizational structure with centralized authority, specific tasks and rules, and closely supervised employees (Anwar, 2015). The organic structure is an organizational structure in which authority decentralizes to the middle, and first-line managers' tasks and roles are left ambiguous to encourage employees to cooperate and respond quickly to the unexpected (Anwar, 2015). Another important aspect is the dimensions of organizational structure. The three major dimensions of organizational structure are centralization, specialization, and formalization. Lastly, the organization management structures are traditional, functional, divisional, and matrix structures. In addition, recent structures include network structure.

Like other firms, banks have a corporate or organization structure (Awino, 2015). Their assets may be under the control of a single corporation, or they may be set up as

multiple corporations linked to each other through a common group of stockholders (Rodriguez & Goodwin, 2015). They may sell all their services through a single office or offer those services through multiple facilities scattered all over the region and around the world. They may reach the public exclusively online or set up scores of neighborhood branch offices to offer their customers a physical presence near their homes or offices. Different types of organizational structures that have dominated the banking industry over the years include unit banking, branch banking, electronic banking, bank holding company, and universal banking organizations.

Measures of organizational structure. Organizational size was the measure of organizational structure adopted in this study. According to Campbell, Bowanas, Peterson, and Dunnette (1974), the structural qualities of an organization are its physical characteristics, such as size, span of control, and flat or tall hierarchy. Size was preferred because secondary data are readily available, reliable, and accessible to measure. Organizational size is arguably the dominant variable in the sociological literature on organizational structure, according to Kimberly (1976). Jensen and Meckling (1976) noted that larger firms face higher agency costs, so they need more monitors.

There are many ways to measure firm size. Total asset value is the proxy to measure the size, according to Azhagaiah and Silambarasan (2014). Stella, Aggrey, and Eseza (2014) used the number of employees as the proxy for size. The age of the firm was most suitable for Bedford and Malmi (2015). The financial statements of commercial banks contain values to measure the size and, thus the strength of this option. Following most previous studies, the logarithm of the total assets of a firm was selected to measure

the firm size in this study. Kimberly (1976) noted that many researchers using size as a variable have both conceptual and empirical problems. A lack of consistency in the reviewed studies may lead to an inadequate understanding of the role of organizational size. For example, school size for schools, the number of beds for hospitals, the number of full-time employees, and so forth are reasonable methods, but the comparison of these studies is challenging. The solution is to use a logarithmic conversion to normalize size.

According to the agency model, the firm is a nexus of contracts among self-interested individuals rather than a unified, profit-maximizing entity (Jensen & Meckling, 1976). Principals (owners) employ agents (employees) to perform work on the principals' behalf. However, agents need constant supervision and management; otherwise, they tend to pursue their interests rather than those of the owners. As firms grow in size and scope, agency costs or coordination costs rise because owners must expend more effort supervising and managing employees.

To reduce agency costs, managers need an organizational structure that minimizes agency costs and thus maximizes value to the shareholders of the firm. With organizational size as a proxy for organizational structure, firms with small organizational size should tend to perform better, in general, as agency costs are low.

Relationship of organizational structure and finance performance. Many researchers have studied the relationship between organizational structure and (financial) performance of firms using various theoretical frameworks, but the results are not convergent, and many of these researchers found a positive relationship between organizational structure and performance in nonfinancial institutions, including Nahm,

Vonderembse, and Koufteros (2004), Csaszar (2008), Lin, Kuo, and Wang (2013), Oluwatayo and Amole (2014), Maduenyi, Oke, Fadeyi, and Ajagbe (2015), and Lai, Chou, and Chen (2015). On the contrary, Pelham and Wilson (1996) and Adjei-Frimpong, Gan, and Hu (2014) found a negative relationship between organizational structure and performance. Still, others found a mixed relationship between organizational structure and firm performance, including Qingmin, Helmut, and Juergen (2012), Oyewobi, Windapo, and Rotimi (2013), Awino (2015), and Zaki, Hussein, Sanad, and El-Khoriby (2015). Ingham (1970), Mahoney, Frost, Crandell, and Weitzel (1972), and Reimann (1975) found no association between organizational size and financial performance.

Lin et al. (2013) reported that firm size, as measured by total assets of a firm, has a significantly positive relationship with CEOs' incentive compensation. Firm size is a measurement to differentiate the size of each firm by total assets of the firm (Lin et al., 2013). The larger of the small firms in the study benefited more from explicit, more analytical decision-making and liaison devices. Nahm et al. (2004) studied the relationship between organizational structure and performance. The purpose of the study was to examine the impact of organizational structure on time-based manufacturing and plant performance. Nahm et al. analyzed a framework for understanding relationships among key sub dimensions that define a firm's structure and reporting relationships, time-based manufacturing practices, and plant performance. The findings indicated that the number of layers in the hierarchy and the level of horizontal integration have direct,

significant, and positive effects on the level of communication and the locus of decision making.

Csaszar (2008) and Oluwatayo and Amole (2014) found a positive relationship between organizational structure and performance in nonfinancial institutions. Csaszar studied the relationship between organizational structure and performance. The purpose of the study was to establish whether organizational structure is a determinant of performance. Csaszar used evidence from mutual funds for the study. The findings were in agreement with the idea that organizational structure shapes performance in an organization. Csaszar further noted that in a poorly designed structure, good performers acquire the shape of the structure. Oluwatayo and Amole studied the organizational structure of architectural firms and their performances using data obtained from 92 architectural firms in Nigeria. The findings show that the size of the firms was an important factor that influenced the organizational structure adopted by the architectural firms. Although the size of the firms also had a direct influence on the performance, no interaction of this variable or any internal firm characteristic with organizational structure led to any significant change in performance. Although the environment did not directly influence organizational structure, it appeared that particular organizational structures worked best when some external influences were high and resulted in higher profit. The results showed that while ad hoc structure leads to better performance in firms where the influence of other professionals was strong, the administered structure was more effective when highly influenced by government privatization programs. The ad hoc structure was not suitable for firms strongly influenced by increasing concerns for a sustainable

environment. The results of the study indicated that although larger architectural firms may record higher profit, architectural firms that adapt their organizational structures to environmental conditions to reap improved profit.

Maduenyi et al. (2015) and Lai et al. (2015) also found a positive relationship between organizational structure and performance in nonfinancial institutions. Maduenyi et al. examined the impact of organizational structure on organizational performance. The purpose of organizational structure is the division of work among members of the organization and the coordination of their activities, so their aim is toward the goals and objectives of the organization. Maduenyi et al. used secondary sources of data collection. The findings revealed that organizational structure has an impact on organizational performance. Therefore, Maduenyi et al. recommended that organizations should endeavor to have a well-defined structure in place to achieve the set objectives. Lai et al. (2015) studied the impact of organizational structure and business strategy on company efficiency, profitability, and risk-taking behavior in the Taiwanese life insurance industry by examining four different types of companies by organizational structure and two different business strategies. The results showed that organizational structures and business strategies have a significant impact on efficiency, profitability, and risk-taking behavior. In addition, they found size, lines of business, leverage ratio, and market share had a significant impact on efficiency, profitability, and risk-taking behavior.

Pelham and Wilson (1996) and Adjei-Frimpong et al. (2014) found a negative relationship between organizational structure and performance. Pelham and Wilson (1996) investigated the linkage between market structure, firm structure, strategy, and

market orientation with small firm performance through longitudinal research of 68 firms with 15 to 65, and an average of 23, employees. The owner assessment of results in terms of market share, growth, and new product launch was the performance measure used. Pelham and Wilson posited that, given the typical low levels of small firm formalization, control, and coordinating systems, greater formalization would positively affect results. They found that a differentiated or specialized structure has a negative relationship to performance as defined by firm growth and market share. Adjei-Frimpong et al. studied the efficiency of the banking industry in Ghana for 2001–2010 using the data envelopment analysis. Adjei-Frimpong investigated the impact of size, capitalization, loan loss provision, inflation rate, and gross domestic product growth rate on Ghana's bank efficiency using both static and dynamic panel data models. The results indicated that Ghana banks are inefficient. Adjei-Frimpong et al. reported a negative relationship between adequate capital, bank capitalization, and cost efficiency, and no correlational between bank size and efficiency in Ghana.

Ingham (1970), Mahoney et al. (1972), and Reimann (1975) found no association between organizational size and financial performance. Ingham investigated the relationship between organizational size and turnover (performance), and the findings indicated no association existed between organizational size and turnover. Ingham's sample consisted of industrial organizations. Mahoney et al. also examined the relationship between organizational size and performance. Their sample consisted of industrial firms, and the findings indicated no association existed between size and performance. In addition, Reimann investigated the relationship between organizational

size and turnover (performance). Reimann used a sample of manufacturing organizations and found no relationship between organizational size and turnover.

Qingmin et al. (2012) and Oyewobi et al. (2013) found a mixed relationship between organizational structure and firm performance. Qingmin et al. studied the relationship between organizational structure and performance, especially through organizational learning and innovation, based on evidence from Austria and China. They used a sample of 90 Austrian and 71 Chinese organizations. Data analysis involved using partial least squares, and Qingmin et al. tested the results using bootstrap methods. The findings indicated that, for younger firms, learning is important in the relationship of organizational structure to performance, but in older firms, innovation is the mediator for structure on performance. Also, senior managers indicated organizational structure improves performance directly and through innovation. However, the middle and junior managers thought organizational learning had an important mediating effect on performance. Therefore, organizational structure influenced performance both directly and indirectly. Oyewobi et al. studied the effect of organizational structure and strategies on construction organizations' performance and found that organization structure has no direct impact on financial or nonfinancial performance. The paper included an integrated construction excellence model as a useful tool for measuring both financial and nonfinancial performance aspects of construction organizations in particular and other service organizations in general.

Zaki et al. (2015) and Awino (2015) also found a mixed relationship between organizational structure and firm performance. Zaki et al. analyzed and evaluated the

effect of organizational structure on contracting companies' performance and success in Egypt. The study covered functional, divisional, and matrix organizational structures. Their results showed that the organizational structure operates in its highest efficiency when hiring the minimum number of the most qualified personnel. Moreover, avoiding centralization, such as routine bureaucracy and extensive paperwork, has a significant impact on performance. Zaki et al. confirmed the domination of functional organization structure in Egyptian companies and concluded that a composite structure between matrix and functional organizational structure based on geographical location or project type may be the optimal organizational structure for Class A contracting firms in Egypt. Awino studied organizational structure and performance of large manufacturing firms in Kenya and argued that structure follows strategy to enhance performance. Awino strongly believed that a strategy is a long-term plan that organizational leaders should develop, but for its success, there has to be an organizational structure in place to provide an avenue for its implementation and to enhance performance. Awino adopted organizational structure as an independent variable and performance as a dependent variable to use a cross-sectional survey and data from 102 large manufacturing firms. The findings indicated that organizational structure on its own using ROA did not influence performance. However, a further test using nonfinancial measures such as internal processes, customer perspective, and performance produced a different result that influenced the performance of large manufacturing firms.

Some researchers have studied the relationship between organizational structure and financial performance of banks specifically, but the results were not convergent.

Some researchers found a positive relationship between organizational structure and financial performance within banks, namely Ngo, Mullineux, and Ly (2014), Karim and Alam (2013), Bokpin (2013), Shah and Dubay (2013), Ismail (2014), and Brewer and Jagtiani (2013). Other researchers found a mixed relationship between organizational structure and financial performance of banks, including Azhagaiah and Silambarasan (2014) and Kariuki (2015). No empirical studies were found with a negative relationship between organizational structure and performance of banks.

Shah and Dubay (2013) and Bokpin (2013) found a positive relationship between organizational structure within banks. Shah and Dubay studied the influence of market orientation on the financial performance, institution size, business growth, and market share of financial institutions in the United Arab Emirates. Shah and Dubay adopted a quantitative correlational design and descriptive statistics and selected ROA, ROE, return on investment, and earnings per share to measure the financial performance of financial institutions. The findings revealed a positive relationship existed between market orientation and financial performance, institution size, business growth, and market share. Bokpin's study involved documenting the determinants and value relevance of corporate disclosure and transparency on the Ghana Stock Exchange. Bokpin employed the Fama and French model by relating firm value to firm-level characteristics, with a sample of 27 firms on the Ghana Stock Exchange over a 6-year period (2003–2008). Bokpin found a positive though statistically insignificant relationship between corporate disclosure and firm value represented by the market to book value ratio and a negative relationship for the stock price. Consistent with the political cost, signaling, agency, and economic

theories of corporate disclosure, Bopkin found firm size, financial leverage, audit quality, age, and profitability to be significant firm-level characteristics that determine corporate disclosure in Ghana.

In addition, Karim and Alam (2013) and Brewer and Jagtiani (2013) found a positive relationship between organizational structure and financial performance within banks. Karim and Alam evaluated the performance of private banks listed on the Bangladesh stock market from 2008 to 2012 and used multiple regression to analyze the impact of bank size, credit risk, operational efficiency, and asset management on financial performance. Karim and Alam found bank size, credit risk, operational efficiency, and asset management had a significant impact on the performance of Bangladesh commercial banks. Brewer and Jagtiani (2013) studied the relationship between institution size and financial performance. In their quantitative study of banks being too big to fail, Brewer and Jagtiani used assets of banks as a proxy for the size of the banks. Large banks had total assets greater than $100 billion. Brewer and Jagtiani concluded that large banking organizations enjoyed greater benefits compared to other organizations and that the market perceived larger institutions as financially safe compared to other institutions.

Further, Ismail (2014) and Ngo et al. (2014) found a positive relationship between organizational structure within banks. Ismail studied the relationship between institution performance, size, and leverage of the institution. In contrast to Brewer and Jagtiani (2013), Ismail suggested that a negative correlational exists between institution size and financial performance in public institutions in Malaysia. Ismail measured the economic

value added of the Malaysian institutions between 1999 and 2002 and noted that the financial performance of institutions decreased with size. Ngo et al. studied the impact of the size of operation on the financial performance of microfinance institutions (MFIs) between 1996 and 2010. The study included a review of microfinance operations in Africa, Asia, Eastern Europe, Central Asia, Middle East, North America, Latin America, and the Caribbean. Ngo et al. used assets in U.S. dollars to classify the size of the microfinance operations as small, medium, or large. The findings indicated that larger MFIs experience greater efficiency, financial performance, and sustainability compared to smaller MFIs. Ngo et al. recommended that small MFIs in Ghana should merge.

In contrast, Azhagaiah and Silambarasan (2014) and Kariuki (2015) found a mixed relationship between organizational structure and financial performance of banks. Kariuki (2015) studied the relationship between organizational structure and ROA of large manufacturing firms in Kenya. The study included a cross-sectional survey used to target 102 large manufacturing firms, and the response rate was 92%. The results indicated that organizational structure did not influence on ROA. Azhagaiah and Silambarasan (2014) studied the impact of institution size on the determinants of corporate leverage and measured institution size using total assets. In addition, Azhagaiah and Silambarasan used total asset value to group cement institutions in India into three categories: small, medium, or large. The study involved reviewing the impact of institution size on the determinant of corporate leverage in 29 institutions listed on the Bombay Stock Exchange. Azhagaiah and Silambarasan concluded that irrespective of institution size, there is high volatility in the corporate leverage of these institutions.

Financial Performance

Financial performance was the dependent variable in this study. This section includes definition of financial performance and a discussion of the determinants of financial performance. This section also includes an introduction of theoretical approaches to studying financial performance. Lastly, a critical analysis and synthesis of scholarly and empirical studies about the topic is presented.

Determinants of financial performance. Researchers from various disciplines, including economics, strategic management, accounting, and finance, have studied the determinants of financial performance in general within firms for a long time (Capon et al., 1996). Ferrouhi, (2014), Francis (2013), and Kärrlander (2013), among others, studied the determinants of financial performance specifically among banks. Several researchers have asserted that no single determinant of financial performance thoroughly explains all areas of financial performance.

According to Abubaker, Hilman and Kaliappen (2018), performance is a measure of the state of an organization or the outcomes that result from management decisions and the execution of those decisions by employees of the organization. Abubaker et al. (2018) added that performance is a set of financial and nonfinancial indicators that offer information on the degree of achievement of objectives and results. Specifically, financial performance is the primary means of measuring and confirming the result of strategic business policies and the operational tasks of organizations based on monetary values (Rahmawati & Dianita, 2011). In addition, financial performance is a measure of how

well a company can use assets from its primary activity of a business and yield profits for investors; it is a measure of a company's effectiveness (Odalo, 2015).

According to Capon et al., the building blocks of environment, strategy, and organization provide a kind of union of the determinants of financial performance suggested by the various conceptual approaches. Of the 428 studies analyzed, Capon et al. identified 33 measures (determinants) of the building blocks. Twelve of these were environment-related; 13 were strategy related, including leverage; and five and three were organization related: organization structure and other performance determinants, respectively.

The eight determinants of banks' performance are (a) liquidity ratio, (b) size of banks, (c) logarithm of the total assets squared, (d) external funding to total liabilities, (e) share of own bank's capital of the bank's total assets, (f) foreign direct investments, (g) unemployment rate, and (h) the realization of the financial crisis variable (Ferrouhi, 2014). Francis (2013) examined 216 banks to determine factors affecting profitability and found that operational efficiency was a strong determinant of profitability. Focusing on the banking industry, Kärrlander (2013) conducted a case study to research the factors that led to the closing of the Malmo Diskont Bank in 1817. The bank closed after 14 years in business, partially because of nebulous laws in place at the time.

Measures of financial performance. Empirical researchers are unanimous in viewing profit or value creation from accounting perspectives or market perspectives, and each has unique challenges (Michelon, Boesso, & Kumar, 2013; Wu & Shen, 2013; Yeh, 2017). Market-based measures include three broad types: price per share, Tobin's Q, and

the market return (Albertini, 2013; Huang & Yang, 2014; Kroes & Manikas, 2014). Tobin's Q is the ratio of market capitalization, working capital, and long-term debt to total assets (Chen & Jermias, 2014). The most commonly adopted measures include share-based prices. Like accounting measures, market-based measures are not devoid of deficiencies. These measures are driven by investors' expectations of the future, such as rumors of a takeover attempt affecting stock price and market value.

The accounting measures of financial performance that proliferate in recent literature include earnings per share (Becchetti, Ciciretti & Giovannelli, 2013; Hall & Lee, 2014), earnings per share growth and return on equity/assets/sales (Huang & Yang, 2014; Servaes & Tamayo, 2013), and asset growth (Ahsan, 2013; Feng, Morgan, & Rego, 2017; Wu & Shen, 2013). Traditional accounting measures of financial performance are return on capital (ROC), ROE, and ROA (Bushman, 2014). The strength of the traditional accounting measures includes ease of use of secondary data that are readily available, reliable, and accessible to measure (Pan, Sha, Zhang, & Wenlan, 2014). Also, ROA shows how efficient management is at using its assets to generate earnings, while ROE measures a corporation's profitability by revealing how much profit a company generates with the money, shareholders have invested (Samad, 2015). The five primary deficiencies associated with accounting measures are (a) scope for accounting manipulation; (b) undervaluation (and overvaluation) of assets; (c) distortions due to depreciation policies, industry valuation, and treatment of certain revenue and expenditure items; (d) differences in methods of consolidating accounts; and (e) differences due to lack of standardization in international accounting conventions (Aliabadi, & Dorestani, 2013;

Chakravarty & Grewal, 2016; Neron, 2015; Xing, Howe, Anderson, & Yan, 2017). However, Klaassen and Eeghen (2015) and Samad (2015), among others, noted that accounting return measures have validity, especially when measured over a longer time.

Return On Assets refers to profits after tax divided by total assets (El-Chaarani, 2014; Hall & Lee, 2014; Klaassen & Eeghen, 2015). Equity is the average common shareholder equity over the reporting period. Calculating ROA involves the following: ROA = profit after tax / total assets × 100, where profit after tax = net earnings after tax deduction (available from bank income statements), total assets = noncurrent assets + current assets (available from bank balance sheets) and multiply by 100 to express it as a percentage. Yazdanfar and Öhman (2015) and Serrasqueiro and Caetano (2015) supported the choice of ROA as a measure of financial performance.

Agency cost theory and financial performance. Abdulrahman (2014) studied the relationship between agency costs and financial performance of firms listed at the Nairobi Securities Exchange (NSE). The target population was all the companies in the NSE that traded continuously within the period 2008–2012. Abdulrahman adopted a census for the firms, analyzed 52 companies trading at the NSE, and used secondary data. The study involved using multiple regression analysis and correlational analysis to determine the relationship between agency costs and financial performance. The results of the study indicated that a positive relationship exists between agency costs and financial performance: thus when agency costs increase by one unit, financial performance increases by 0.02 units. The results also showed that there was no multicollinearity or autocorrelational among all the variables tested.

Pervan and Visic (2012) researched on firm size and evaluated its influence on firm profitability. Apart from investigating the relationship between firm size and performance, Pervan and Visic also explored the effect of some other variables crucial in determining firm profitability. Pervan and Visic conducted the study using data from the 2002–2010 periods, and the results revealed that firm size has a significant positive (although weak) influence on firm profitability. Additionally, results showed that asset turnover and debt ratio also statistically significantly influence firms' performance, and the current ratio was not an important explanatory variable of firms' profitability. Company leaders try to minimize the occurrence of agency problems by providing agency costs. Higher agency cost reflects a higher complexity of agency problems in the company, which causes instability in the company's operational activities and hurts the company's performance (Astuti, Nasuno, & Takagi, 2016).

Wahida (2014) studied the relationship between agency costs and corporate performance using five variables of agency costs proxies: debt ratio, firm size, growth, expense, and efficiency. Agency costs proxies for measuring corporate performance are ROA and ROE. Wahida examined whether any correlation existed between agency costs proxied by debt ratio, firm size, growth, expense, and efficiency ratio and corporate performance for the top 50 and bottom 50 public-listed companies in Bursa Malaysia. The study included secondary data. From the total population of 814, the sample of 100 came from two different categories: the top 50 and the bottom 50 companies covering a period of 5 years from 2008 to 2012. Wahida found that, to a certain extent, the agency costs played an important role concerning the corporate performance. The result obtained

after analyzing the data acquired from Bursa Malaysia indicated that only firm size, expense, and efficiency ratio have a relationship with a significance value of 0.000. Debt ratio and growth variables did not have a significant relationship with corporate performance.

Wang (2010) investigated the association between free cash flow and agency costs and how free cash flow and agency costs influence firm performance. The research purpose was threefold. Specifically, Wang explored the impact of free cash flow on agency costs to reexamine the free cash flow hypothesis and tested the agency theory based on the empirical data from publicly listed companies in Taiwan. Wang used the variable of standard free cash flow to measure free cash flow and six proxy variables to measure agency costs. The findings were that free cash flow has a significant impact on agency costs with two contrary effects: (a) free cash flow could incur agency costs due to perquisite consumption and shirking behavior and (b) the generation of free cash flow resulting from internal operating efficiency could lead to better firm performance. Excluding insignificant proxy variables of agency costs, and including only total asset turnover and operating expense ratio as sufficient agency costs measures, Wang found evidence to support the agency theory, which meant agency cost had a significantly negative impact on firm performance and stock return. Wang also found a significantly positive relationship between free cash flow and firm performance measures, which indicated a lack of evidence supporting the free cash flow hypothesis. The findings indicated an association existed among free cash flow, agency costs, and firm performance.

Much of the literature claims one-factor influences financial performance (Capon et al.). One factor research includes Hastori et al. (2015), Awuah-Agyeman (2016), Ahmed et al. (2018), Bambulović et al., Chadha and Sharma (2016), Kumar and Ndubuisi (2017) among others who studied only capital structure. Kariuki (2015), Maduenyi, Oke, Fadeyi, and Ajagbe (2015), Zaki, Hussein, Sanad, and El-Khoriby (2015), among others studied only organizational structure. Asadi and Pahlevan (2016), Elali (2015), Lopez-Morales and Vargas-Hernandez (2014) among others studied only ownership structure. These and other studies have shown that one-factor influences or relates to financial performance. Other researchers have argued that multiple factors influences financial performance. Some researchers such as Bayoud, Sifouh, and Chemial (2018), Cekrezi (2015), Frederic (2014), among others who argue for multiple factors have proposed internal and external factors that influence financial performance. In their view, internal factors arise from a firm's management decisions, while external factors arise from macroeconomic variables related to the economic environment. Besides, some researchers such as Mihaela (2015), who argue for multiple-factors, have proposed internal, industry, and external factors that influence financial performance. Contrary to researchers in support of one factor, in this study, two factors that influence financial performance are studied, namely capital structure and organizational structure. In conclusion, no one factor that influences financial performance that adequately clarifies all areas of the concept. Multiple-factor studies are preferred to one-factor studies in explaining the influencers of financial performance.

The outlook of the relationships that influence firm financial performance is to focus on the goal of developing an integrative model of financial performance. I concur with Capon et al. and several other researchers who shared the view that a much more holistic and integrative approach is necessary to explain the diversity in firm financial performance. Capon et al. developed and tested the integrative model of corporate financial performance. One of the significant tasks for a research agenda is to highlight dimensions of the field in which research effort is likely to be most useful. A need exists for substantial changes to the basic outlook toward research on financial performance. Capon et al. and Jensen (1986) supported this claim.

Another area of focus for future research is hypothesis testing. The reciprocal linkages between the building blocks and the financial performance are a set of hypotheses regarding relationships between the constructs environment, strategy, and organization. The measures of elements comprising these three basic building blocks and financial performance are intercorrelated. The framework provides strong hypotheses regarding contemporaneous relationships to financial performance that researchers can test in future studies (Capon et al.; White & Hamermesh, 1981). Another important question on the future of the relationship of various factors and financial performance is whether research on financial performance should be data-driven or theory-driven. My view is that both perspectives are important. Researchers can articulate theory from which they can develop hypotheses and then test these hypotheses on data collected with the hypotheses in mind. Conversely, researchers can collect data relevant to the field of

inquiry with a choice of measurement based on theory and existing knowledge and then mine that data for insight.

Lastly, on the research agenda outlook, most performance research implicitly or explicitly has as its model the single business firm operating in a single nation-state. However, for a comprehensive understanding of financial performance, especially of the firms that are together responsible for an increasing portion of the gross global product, the focus needs to include multiproduct, multimarket firms, many of which are significantly multinational in both operations and markets. Constructs that are appropriate for a single business and single nation-state firms may be inadequate for multiproduct, multimarket, multinational firms.

Future researchers need to overcome three major challenges while studying financial performance. First, holistic and integrative explanations have not gained popularity among researchers because they frequently require complex statistical analysis. Such analysis is often difficult to explain, particularly to managers but is necessary because the relatively large numbers of explanatory factors are typically intercorrelated and must receive simultaneous consideration (Capon et al.) Second, the data demands are burdensome. The complexities of securing cooperation from geographically dispersed corporations, identifying appropriate respondents, and scheduling and carrying out the interviews are immense. Lastly, experts in different fields, such as organization, management, strategy, and economics, agree on the importance of a broad concept. Their major challenge is the conceptualization that often

differs markedly. For example, industrial organization, organization theory, and strategy researchers conceptualize the environment construct differently.

Summary

Section 1 began with a discussion of how financial performance can help business leaders prevent their businesses from failure. However, some business leaders of commercial banks do not know whether a relationship exists between capital structure, organizational structure, and financial performance. Thus, a quantitative correlational study was suitable to examine whether any relationship exists between capital structure, organizational structure, and financial performance in commercial banks. According to Jensen and Meckling's (1976) agency cost theory, a positive relationship should exist between capital structure and organizational structure (independent variables) and financial performance (dependent variable).

Section 1 comprised the foundation for the study. Section 2 starts with an expansion on the discussion of the problem statement, purpose statement, role of the researcher, and participants in the study. Next, is a description of the research method and research design chosen, the population and sampling method, and the instrumentation of the study. Section 2 ends with a discussion of the data collection and data analysis process, as well as issues related to study validity.

Section 2: The Project

Section 2 begins with the purpose statement, the role of the researcher, participants, research method, research design, population, and sample size. This section also includes information related to ethical research, instrumentation, data collection technique, and data analysis. This section concludes with a discussion of the study's validity and an overview of Section 3.

Purpose Statement

The purpose of this quantitative correlational study was to examine the relationship between capital structure, organizational structure, and financial performance of new commercial banks in Uganda to promote their long-term survival. The independent variables were capital structure and organizational structure. The dependent variable was financial performance. The target population was new commercial banks in Uganda that had been in existence for less than 5 years up to 2017. The implications for positive social change include the potential for individuals to obtain jobs in commercial banks and for customers to obtain goods and services from successful businesses.

Role of the Researcher

The role of a researcher is to (a) select the research topic; (b) review the literature on existing knowledge; (c) develop the research method and design; (d) select participants; (e) collect, analyze, and report findings, conclusions, and recommendations; and (f) describe the social implications of the study, all of which other researchers can replicate (Hamilton, 2016). The researcher works independently to ensure the data sources are reliable and valid. The researcher collects, analyzes, interprets, and ethically

presents data. The researcher avoids the biases in data collection through precise and careful planning of the data collection process, by using multiple sources of data, by choosing a sample that represents the population, and by using proper measurement metrics (Barley, & Moreland, 2014).

As a chief financial officer, finance manager, and auditor for more than 20 years for various organizations, I have accumulated expertise in corporate finance, financial analysis, corporate performance, and other related areas, which was relevant to address the purpose and research questions for this research. This accumulated expertise helped with better understanding and facilitating the whole study. My facilitating role ensured there was no bias in data collection, sampling, statistical analysis, and interpretation. Researchers should be honest and respectful to all individuals participating in their study (Barley & Moreland, 2014). This study did not include any human participants. Therefore, participant protection procedures and documents such as confidentiality protocols and informed consent forms, as well as precautions for preserving the integrity and impartiality of participants, were not necessary. Because there were no participants in the study, the *Belmont Report* did not apply (Ferrel, Fraedrich, & Ferrel, 2014).

Participants

This doctoral study did not include human participants. Instead, this study consisted of data from BOU's database, as leaders of BOU have a statutory obligation to collect data on individual banks (Cox & Wang, 2014; Dai, 2017). According to Ellram and Tate (2016), researchers often use secondary data and information from government sources in research studies. Financial performance measures for individual banks were

accessible from BOU's database (Lin & Yang, 2016). The data were available free of charge, and no permission was necessary to access the data. I did not identify strategies for establishing a working relationship with participants because the data primarily consisted of publicly available financial information.

Research Method

The quantitative methodology was the most suitable for this study. According to McCusker and Gunavdin (2015), using a quantitative study enables researchers to (a) identify results that note numerical changes or describe in numerical characteristics of a population of interest; (b) generalize to other, similar situations; (c) provide explanations of predictions; and (d) explain causal relationships. Ismail (2014) and Brewer and Jagtiani (2013) employed a quantitative approach to examine the relationship between financial performance, size (organizational structure), and leverage (capital structure) of an institution. Likewise, Shah and Dubay (2013) used quantitative research to study the relationship between market orientation and financial performance, institution size, business growth, and market share. Thus, the quantitative method was appropriate for this study because the purpose of the study was to examine the relationship between variables, namely capital structure, organizational structure, and financial performance.

Qualitative methodology is suitable for studies designed to answer questions of how and why and provide a nuanced understanding of experiences (Alderfer, 2017). The qualitative method is appropriate when the research intent is to explore business processes, how people make sense and meaning, and their experiences (McCusker & Gunavdin, 2015). Also, the qualitative research method was not suitable for examining

relationships among variables (Rogers, 2016). Thus, the qualitative research method was not appropriate for this study. A mixed-methods study contains the attributes of both quantitative and qualitative methods (Bromwich & Scapens, 2016). A mixed-methods study is applicable where a quantitative or a qualitative method was not sufficient to address the research problem (Leider et al., 2014). The combined qualitative and qualitative portions of a mixed method approach were not appropriate for this study.

Research Design

The correlational design was the most suitable for this study. A researcher uses the correlational design to examine the relationship between or among two or more variables (Bosco, Singh, Aguinis, Field, & Pierce, 2015; Humphreys & Jacobs, 2015). Also, a correlational design is a design that researchers commonly use to identify associations among variables (Babajide, Olokoyo, & Adegboye, 2015). The correlational design was applicable for this study because a key objective was to examine whether a statistically significant relationship exists between the independent variables (capital structure and organizational structure) and a dependent variable (financial performance). Campbell and Stanley (2015) supported the view that other designs, such as quasi-experimental and experimental designs, are appropriate when a researcher seeks to assess a degree of cause and effect. The main objective for this doctoral study was to examine whether a statistically significant relationship exists between the independent variables and a dependent variable; thus, the quasi-experimental and experimental designs were not appropriate. A causal-comparative design might appear to be an alternate option for this study but was not appropriate. In causal-comparative research design, a researcher

demonstrates that a statistically significant relationship exists among variables and makes the claim that variations in scores among the independent variables are the cause of variations in scores for the dependent variable (Kozlowski, Chao, Grand, Braun, & Kuljanin, 2013). Researchers use a causal-comparative research design when they want to study the direct, indirect, and mediating relationships between the variables (Barley, & Moreland, 2014). Therefore, also a causal-comparative research design was not for this study.

Population and Sampling

The target population for this doctoral study included commercial banks that closed 5 years after opening, restructuring, merging, or undergoing an acquisition by another bank between 1991 and 2017 in Uganda. During the period 1991 to 2017, BOU closed seven banks, three banks restructured, and seven banks were acquired by other banks to make a population of 17 commercial banks. Researchers such as Bategeka and Okumu (2010) have documented these developments in the commercial banking industry in Uganda. The target population of this study encompasses archival data from all the problem banks licensed by the BOU. The data set variables were capital structure, organizational structure, and financial performance for the period ending 2017. Data on these variables were publicly available from quarterly bank regulatory reports. Using existing data is appropriate and cost-efficient, as long as the data are suitable for answering the research questions (Cheng & Phillips, 2014; Ndubuisi, 2017).

According to McGrath and O'Toole (2016), quantitative studies must demonstrate that the population aligns with the overarching research question. Required levels of

accuracy in research design are dependent on the objectives of the research, the data collected, and the characteristics of the target population (Bosco et al., 2015). The purpose of this quantitative correlational study was to examine the relationship between capital structure, organizational structure, and financial performance. The research question was, "What is the relationship between capital structure, organizational structure, and financial performance?" Commercial banks in Uganda that closed within 5 years of opening, restructuring, merging, or undergoing acquisition by another bank between 1991 and 2017 served as the population in this study and aligned with the overarching research question of examining if capital structure, organizational structure, and financial performance are related.

The two primary methods of collecting samples are probabilistic and nonprobability sampling (Lamb, Hair, & McDaniel, 2015). Nonprobabilistic sampling is the most suitable sampling method for collecting samples for this study. According to Lamb et al. (2015), nonprobabilistic sampling is a method used where not all elements in a targeted population have a chance of selection. Researchers select a nonprobabilistic sampling technique to minimize cost and time by selecting samples based on their judgment (Bosco et al., 2015). Researchers also adopt nonprobability sampling because of convenience, easy access, or when the research goal does not require a representative sample (Bosco et al., 2015; Yin, Wang, & Yang, 2014). Nonprobability sampling is cost-effective and allows the use of prudent judgment (Bosco et al., 2015). Disadvantages of nonprobabilistic sampling include the focus on simplicity rather than effectiveness and a higher dependence on judgment (Bosco et al., 2015).

Purposive sampling was the appropriate nonprobability sampling method for this study. Researchers such as Salvioni, Gennari, and Bosetti (2016) used purposive sampling intending to focus on particular characteristics of a population that best answer the research question. Under purposive sampling, the researchers' judgment and knowledge are essential in selecting the units of the study (Salvioni et al., 2016). An advantage of using purposive sampling is the ease of recruitment of willing and available participants (Bornstein, Jager, & Putnick, 2013). Purposive sampling strategies may be less expensive than other sampling strategies (Bornstein et al., 2013). The results of purposive sampling research may only be generalizable to the population of origin (Bornstein et al., 2013).

The purposive sample of this study included commercial banks that closed within 5 years of opening, restructuring, merging, or undergoing acquisition by another bank between 1991 and 2017 from the BOU Database. This database contained quarterly accounting information published by commercial banks in newspapers. The sample comprised commercial banks that closed within 5 years of opening, restructuring, merging, or undergoing acquisition by another bank between 1991 and 2017 with data required for the relevant tests. The period from the first quarter of 1991 to the fourth quarter of 2017 is relevant because, in 1991, there was privatization and divestiture of the government of Uganda from the provision of banking services. The sample was to comprise 96 bank-quarter observations relating to eight commercial banks. The reason to take into account bank-quarterly observations instead of bank-annual observations was to expand the number of observations to obtain more reliable results in the model. On the

contrary, high-frequency data (such as quarterly data) dramatically increases the risk of meaningless volatility that can mask true relationships. Researchers such as Barth, Gomez-Biscarri, Kasznik, & López-Espinosa (2014) used bank-quarter observations in their studies. Banks and financial institutions not registered as commercial banks (Tier 1) by BOU were excluded from the sample. In addition, excluded banks were those where financial data are not available. Also excluded were those banks that failed but survived for more than 5 years. Banks closed during the research period were included until the time of license removal. Lastly, on exclusions criteria, commercial banks with some bank-quarters for which a complete set of variables is missing were excluded.

Researchers, who need to determine how many observations are required to answer the research question, use sample size and power estimations. The key to generating valid results and identifying the interaction between variables is to have an appropriate sample size (Xu & Yuen, 2014). Researchers should select a manageable sample size that allows them to clarify the relationship between the independent and the dependent variables (Durand, 2013). Identifying the minimum required sample size of commercial banks is vital to validate this doctoral study. Power calculations tell us how many observations are needed to avoid a Type I or a Type II error (Faul, Erdfelder, Buchner, & Lang, 2009). G*Power is a free power analysis program for a variety of statistical tests. G*Power 3.1.9.2 software program is a recommended tool to calculate the appropriate sample size (Faul et al., 2009). Power analysis G*Power 3.1.9.2 was suitable to determine the minimum required sample size to achieve statistical power that represents the population of the study. An a priori power analysis with a medium effect

size (f^2 = .15), a = .05, and two independent variables identified that a minimum sample size of 54 bank-quarter observations is necessary to achieve a power of .80. Increasing the number of bank-quarter observations to 124 would increase the power to .99. Hence, the sample size would need to be between 54 to 124 bank-quarter observations for the study.

Ethical Research

A researcher is responsible for demonstrating the trustworthiness, reliability, and credibility of the methodologies used in research. For quantitative studies, it is vital to develop an ethical approach that is applies to every stage of the study (Jondle, Ardichvili, & Mitchellach, 2014). Doctoral students at Walden University must obtain proposal approval by the Institutional Review Board (IRB) to gather and analyze the required data for completing their studies. The IRB provided the approval number (IRB 11-05-15-0291900) to conduct the study. The crucial role of IRB members is to ensure doctoral proposals meet the acceptability criteria of practice standards and professional conduct, institutional regulations, and applicable laws (Barley & Moreland, 2014).

Data sources for the study were public financial reports of commercial banks published in daily newspapers. The list of licensed commercial banks for each year was available on the BOU website. Economic and industry indicators were also available on the BOU website. This study did not involve human participants. Thus, there was no need for participant protection procedures and documents, such as confidentiality protocols and informed consent forms. For protection purposes, the data was subject to strict

security measures. Data files storage was planned for six years after the publication of the study and after that delete the files.

One of the roles of a researcher is to comply with the ethical standards of the *Belmont Report*. According to the U.S. Department of Health and Human Services (2014), the three ethical frameworks of the 1979 *Belmont Report* that researchers follow are (a) respect, (b) beneficence, and (c) justice. Secondary data was suitable for the study; thus, the *Belmont Report* protocol did not apply to the study. One application of the ethical standards of the *Belmont Report* related to respect was informed consent and the selection of human participants (U.S. Department of Health and Human Services, 2014). The ethical standard in business research is for researchers to maintain the highest possible standards of moral values (Ferrel , Fraedrich, & Ferrel, 2014). Therefore, the researcher's role was to maintain a high level of ethical value during the research process.

Instrumentation

Instruments such as questionnaires, surveys, or other data collection mechanisms were not applicable in this study. Instead, the approach used mirrors the common practice of obtaining data from public sources (Pernollet, Coelho, & van der Werf, 2017). Archival data existed for the independent variables of organizational structure and capital structure in the BOU's publicly available database. Archival data existed for the dependent variable of financial performance in the BOU's publicly accessible database.

Under the Financial Institutions Act (2013), a commercial bank must furnish data to BOU at such times and in such form as BOU may prescribe. Commercial banks provide all information and data on their operations in Uganda, including periodic returns

called for by BOU. Specifically, commercial banks provide the audited balance sheet and profit and loss account to BOU. The reports and statements that the law requires commercial banks to publish and submit to BOU comprise the type of instruments needed for this quantitative correlational study.

Next is a description of the measurement of capital structure, which was one of the independent variables. Capital structure influences the financial performance of firms (Jensen & Meckling, 1976). Corporate finance literature includes several ways to measure capital structure, namely (a) debt ratio (Nicholas, 2017) and (b) the debt–equity ratio (Davydov, 2014). Based on the availability of the data and the previous application, the DER was preferred for this study. Earlier researchers such as Davydov (2016), Cajias, Fuerst, & Bienert (2014) and Nicholas (2017) supported this choice of DER as a measure of capital structure. These researchers measured the DER as below:

Debt-Equity ratio = Total liabilities / Total common equity

Where, *Total liabilities* = Non-current liabilities + current liabilities, and *Total common equity* = shareholders' equity.

Organizational structure, the other independent variable, also influences financial performance (Anwar, 2015). Some commonly used measures of organizational structure include firm size (Azhagaiah & Silambarasan, 2014), number of employees (Stella et al., 2014), and age of firm (Bedford & Malmi, 2015). Organizational size is arguably the dominant variable in the sociological literature on organizational structure (Kimberly, 1976). Management-employee relationships are less satisfactory in large firms (Tansel & Gazioglu, 2013). Improving the management-employee relations in large firms not only

decrease agency costs but also increase productivity and reduce turnover, thus increase financial performance (Tansel & Gazioglu, 2013). Organizational size was the most suitable measure of organizational structure in this study based on previous researchers such as Azhagaiah and Silambarasan (2014); Anwar (2015); Faccio, Larry, & Leslie (2001) among others. These researchers measured firm size as the logarithm of total assets in UGX of the firm.

Financial performance was the dependent variable. Frequently adopted measures of financial performance in the literature include ROA, return on investment and return on equity (Klaassen & Eeghen, 2015; Serrasqueiro & Caetano, 2015; Yazdanfar & Öhman, 2015). ROA was most suitable for this study. ROA is defined as profit after tax divided by total assets (Klaassen, & Eeghen, 2015; El-Chaarani, 2014; Hall & Lee, 2014). This measure comprises two components, effectiveness (profit margin), and efficiency (total assets turnover). It reflects the bank management's ability to generate profits by using the available financial and real assets of the bank (Al-Tarawueh, Abu-Khalaf & Al-Assaf, 2017). A higher ratio means higher profitability. Financial performance refers to net income divided by total assets. ROA is the ratio of net income divided by book equity. The higher the ratio is, the greater the rates of return investors are earning (Yazdanfar & Öhman, 2015). ROA was calculated using;

$$ROA = Profit\ after\ tax / Total\ assets$$

Where, *Profit after tax* = net earnings after tax deduction (available from Banks' income statement), *Total assets* = Non-current assets + Current assets (available from Banks'

balance sheet). Earlier researchers of Yazdanfar & Öhman (2015) and Serrasqueiro & Caetano (2015) supported this choice of ROA as a measure of financial performance.

Next, were the scales of measurement. The four data types are (a) nominal, (b) ordinal, (c) interval, and (d) ratio (Green & Salkind, 2014). Nominal data are data that have no numerical or orderly value, and scale data are data with a numerical value, but without orderly value (Green & Salkind, 2014). Ordinal data are data that have orderly value but without numerical value (Green & Salkind, 2014). The scales of measurement for the variables appear in Table 2.

Table 3

Variables and their Scale of Measurement

List of the variables	Nominal	Ratio	Ordinal	Interval
Organizational structure		Number		
Capital structure		Ratio		
Financial performance		Ratio		

Secondary data is useful in conducting statistical analysis (Garcia & Zazueta, 2015). Commercial bank quarterly data from the BOU database is preferred for this study. The BOU data consist of comprehensive and accurate information retrieved from leading and reliable banking sources (Siddik et al., 2017). The BOU database contains mandatory filing information related to commercial banks' organization structure, capital structure, and financial performance. The public has access to data from this database without a written request.

Data Collection Technique

The research question of this quantitative correlational study was what is the relationship between capital structure, organizational structure, and financial performance of new commercial banks in Uganda to promote their long-term survival? Quantitative data collection is most suitable for this study. The justification for quantitative data collection results from the use of numerical and statistical processes to answer specific questions (Nicholas, 2017; Cheng & Phillips, 2014). Data collection techniques for quantitative studies include surveys, structured records (documents), self-administered questionnaires, and structured observations (Denscombe, 2014). Structured records are the preferred data collection technique to collect data for this study. Researchers such as Makhdalena (2015), Serrasqueiro and Caetano (2015), and Yazdanfar and Öhman (2015) used structured records as a quantitative method of data collection.

Structured records (documents) refers to sources of data such as (a) newspapers and television reports, (b) industry or government reports, (c) files, and (d) documents such as monitoring reports (Denscombe, 2014). The data for this study was got from the BOU library from the abridged quarterly financial statements published in newspapers under the Financial Institutions Act (2013). These include the balance sheet and the profit and loss accounts that contain data relating to the quarterly operational performance of the banks. These reports were appropriate for computing DER, SIZE, and ROA. The BOU databases chosen in this study contained reliable information, and researchers such as Bategeka and Okumu (2010), Frederic (2014), and Nsambu and Ddumba-Ssentamu

(2015) used them in their scholarly research studies concerning financial performance research.

Several advantages exist for using structured records. The advantages to using structured records include (a) easier access to data, (b) the data already exists, and (c) it is less expensive than doing primary research (Pernollet et al., 2017). Documents are easy to use as an extension of other data collection techniques such as observations and interviews, merely as a background or can form a core part of the analysis. In addition, according to Jahedi and Mendez (2014), a broad range of data is collected. Lastly, although primarily motivated by the convenience of the data collection process, an additional advantage of structured records was that I have a passion for analyzing financial statements of companies using data collected from structured records.

Some disadvantages exist due to using structured records. These include (a) the difficulty a researcher faces in understanding and interpreting the data (Schuster, Anderson, & Brodowsky, 2014), (b) a lack of accuracy (Pernollet et al., 2017), and (c) the scarcity of data needed to conduct the research (Liu & Li, 2014). Also, the use of data from structured records includes less control over the data, and there could be bias in the data (Pernollet et al., 2017). The final disadvantage to using data from structured records is that the data may influence the relationship between the variables (Rahman et al., 2015). None of these problems posed a problem during the study.

A pilot study was not necessary for this study because of the use of existing secondary research data. A pilot survey is a strategy used to test the questionnaire using a smaller sample compared to the planned sample size (Denscombe, 2014). In the pilot

phase, researchers administer the questionnaire to a percentage of the total sample or a convenience sample in informal cases (Denscombe, 2014). According to Denscombe (2014), the main objective of a pilot study is to determine whether conducting a largescale survey is worth the effort and because of the use of secondary data. This confirms why a pilot study was not adopted for this study.

Data Analysis

Data analysis is the process of obtaining raw data and converting the data into information useful for decision making by users (Hayes, 2017; Schofield, 2015). The main goal of this study was to answer the overarching question: What is the relationship between organizational structure, capital structure, and financial performance? This study included two independent variables: organizational structure and capital structure. Financial performance was the dependent variable.

The hypotheses based upon the research question are as follows:

H_0: No significant statistical relationship exists between organizational structure measured by size, capital structure measured by debt-equity ratio, and financial performance measured by return on assets.

H_1: A significant statistical relationship exists between organizational structure measured by size, capital structure measured by debt-equity ratio, and financial performance measured by return on assets.

Multiple Linear Regressions

The statistical data analysis suitable for this study was multiple linear regressions. Multiple linear regression is the appropriate method of quantitative data analysis when

there are one interval dependent variable and more than one interval or categorical independent variables (Montgomery, Peck, & Vining, 2015; Akhtar, Misbah, Sidra, Hafiz, & Nasrullah, 2016; Seng, 2016). The dependent variable in this study was financial performance measured as ROA, which was a ratio. The independent variables in the study were organizational structure (measured by size) and capital structure (measured by debt-equity ratio), which had an interval measurement levels. Lopez-Rojas (2016) used multiple linear regression analysis to examine the relationship between organizational structure and capital structure, and financial performance (dependent variable) after adjusting for potential confounders. In this study, simple and multivariate linear regressions were not applicable. Simple linear regression is applicable when studying one dependent and one independent variable (Akhtar et al., 2016; Seng, 2016). Multivariate linear regression is relevant when studying more than one independent and dependent variables (Arnold & Artz, 2015; Bedford & Malmi, 2015; Rogers, 2016).

According to Lopez-Rojas (2016), multiple linear regression analysis can lead to the regression equation: $\hat{Y}= b0 + b1X1 + b2X2 +$ Error term. In the equation, $\hat{Y}$ is the predicted value of the dependent variable, X1 through X2 are the independent variables, b0 is the value of Y when all independent variables (X1 through X2) are equal to zero, b1 through b2 are the estimated regression coefficients and error term represents variation in Y not accounted by the variables X1 through X2.

Another reason for using multiple linear regression analysis was the opportunity to determine, measure, examine, and understand relationships between two or more variables (Akhtar et al., 2016). The last reason for choosing multiple regression analysis

instead of simple or multivariate linear regression analysis was that according to Montgomery et al. (2015), including more than two variables might help to predict the existence, and nature of relationships more accurately. Therefore, multiple linear regressions was appropriate data analysis method for the study.

The other main data analysis techniques considered for this study include (a) nonlinear least squares regression, and (b) logistic regression. Nonlinear least squares regression and logistic regression were not appropriate for this study. Logistic regression measures the relationship between the categorical dependent variable and one or more independent variables, with varying scales of measurement, by estimating probabilities using a logistic function, which is the cumulative logistic distribution (Liu, Li, & Liang, 2014). The dependent variable in this study is a scale level of measurement with scale independent variables. Logistic regression was therefore not appropriate for this study since the study dependent variable is not a categorical variable of two levels or groups. Some statisticians such as Bedford (2015) determined that one could transform the y-variable into something that would give a line by use of a form of log transformation hence the logistic regression.

A nonlinear least squares regression model is defined as a nonlinear model in which the functional part of the model is not linear with respect to the unknown parameters, and the method of least squares is used to estimate the values of the unknown parameters (Rogers, 2016). Nonlinear regression models are fitted with a nonlinear least squares fitting procedure (Alguraibawi, Midi, & Rana, 2015; Seng, 2016), which gives some of the same advantages (and disadvantages) that linear least squares regression has

over other methods. The basic idea of nonlinear regression is to relate a response variable *y* to independent variables *xi*, similarly as in linear analysis, with the only difference that the prediction equation depends nonlinearly on one or more unknown parameters (Rogers, 2016). Nonlinear regression is usually needed when there are physical reasons for believing that the relationship between the response and the independents follows a particular functional form. Nonlinear least squares regression was not appropriate because the functional form is linear, and the values of parameters are known.

Data Cleaning and Screening

Data cleaning procedures applicable to this study include editing, validation, and imputation (Akhtar et al., 2016; Samitas & Polyzos, 2016; Voyer & Voyer, 2015). Editing refers to describing the identification of errors, and validation their correction (Cheng & Phillips, 2014). The remaining procedure, imputation, is the replacement of missing values. Editing was at the micro-level, editing individual records, and at the macro level, editing (aggregate) outputs. Editing also included identifying duplicates while working with excel in compiling the data. In addition, editing involved checking for logical errors and errors within range. Further editing of the data involved dealing with outliers and incorrect values using SPSS during estimating descriptive statistics and testing assumptions for statistical analysis. To avoid data entry errors, double data entry technique were adopted with both entries entered by the researcher at different times (Samitas & Polyzos, 2016). The data validation process involved human intervention to decide on the most appropriate treatment for each failure – based on set criteria. Such criteria include enforcing inclusion and exclusion criteria. The final stage of data cleaning

is imputation for a partial missing response (item non-response) – the proposed solution for a total missing response (unit non-response) is estimation and eliminating missing data (Voyer & Voyer, 2015). Further still on data cleaning, use of quarterly reports led to multiple points of measure for each of the variables in the study. Multiple points of measure were associated with multicollinearity. This violation was addressed by the use of SPSS. Under t-test, select t-test for repeated measurements (Green & Salkind, 2014).

The data file of one worksheet included transformed data, such as (a) ROA, (b) DER, and (c) SIZE, as shown in figure 1 below. The first row contains the data identifiers; BID – Bank Identification, Year – number of years bank was open, Quarter – data for four quarters for a year, etc. Entering study data into a spreadsheet is necessary for further review and calculations. The manual evaluation of spreadsheet content was suitable for avoiding any mistakes or duplication of the data on the independent and dependent variables (Akhtar et al., 2016; Samitas & Polyzos, 2016). Excel spreadsheets were useful tool for calculating financial ratios such as ROA, and DER. The next step involved organizing the data in an SPSS file for statistical analysis.

Excel Data Capturing Template

	A	B	C	D	E	F	G	H	I	J	K
1	BID	YEAR	Quarter	Return	Total Assets	Total Revenue	Total Debt	Total Equity	ROA	SIZE	DER
2	Y	1	1						#DIV/0!	0	#DIV/0!
3	Y	1	2						#DIV/0!	0	#DIV/0!
4	Y	1	3						#DIV/0!	0	#DIV/0!
5	Y	1	4						#DIV/0!	0	#DIV/0!
6	Y	2	1						#DIV/0!	0	#DIV/0!
7	Y	2	2						#DIV/0!	0	#DIV/0!
8	Y	2	3						#DIV/0!	0	#DIV/0!
9	Z	2	4						#DIV/0!	0	#DIV/0!
10	Z	1	1						#DIV/0!	0	#DIV/0!
11	Z	1	2						#DIV/0!	0	#DIV/0!
12	Z	1	3						#DIV/0!	0	#DIV/0!
13	Z	1	4						#DIV/0!	0	#DIV/0!
14	Z	2	1						#DIV/0!	0	#DIV/0!
15	Z	2	2						#DIV/0!	0	#DIV/0!
16	Z	2	3						#DIV/0!	0	#DIV/0!

Figure 1. The first row contains the data identifiers; BID – Bank Identification, Year – number of years bank was open, Quarter – data for four quarters for a year, etc. The last three columns represent the estimates of ROA, SIZE and DER.

Missing Data

Several causes of missing data exist. Missing data can arise from intentionally or unintentionally omitted items (Cheng & Phillips, 2014; Voyer & Voyer, 2015). An omission can occur when transferring data from newspapers to MS-Excel spreadsheet and SPSS program. Such omission was identified and the error corrected through the double-entry of the data. Two different entrants or the same person enters data at different times then compare the two entries for differences until all differences are eliminated.

Missing can arise if data were excluded based on the discovery of erroneous or incomplete data derived from random sampling, The strategy to overcome this problem

was to add companies to the sample through similar systematic random sampling methods to maintain the minimum sample size for this study. There was not worst-case scenario that required exclusion of cases with incomplete data. In bank failure prediction studies by Samitas and Polyzos (2016) cases with missing information were excluded from the analysis.

Assumptions of Multiple Regression Analysis

Researchers base linear multiple regression analysis on assumptions such as (a) outliers, (b) multicollinearity, (c) linearity, (d) normality, (e) homoscedasticity, and (f) independence of residuals (Alguraibawi et al., 2015; Voyer & Voyer, 2015). These assumptions must be valid before any meaningful conclusion about a population. Next is a discussion of each assumption.

Assumption of outliers. A fundamental assumption was that data did not contain any severe outliers (Lopez-Rojas, 2016; Samitas & Polyzos, 2016). The implications of an outlier may indicate bad data (Voyer & Voyer, 2015). If the outlying point is, in fact, erroneous, then the researcher should delete the outlying value from the analysis (Samitas & Polyzos, 2016). Although some plots may record one outlier, the effect of the outlier may not be enough to invalidate the pattern of the points on the scatter plot (Samitas & Polyzos, 2016). Another category of outliers are the multivariate outliers.

Assumption of multicollinearity. The application of linear multiple regression analysis assumes that there is no multicollinearity among the independent variables (Shou & Smithson, 2015). Multicollinearity is a condition where two or more independent variables are highly related or correlated, as one independent variable can be predicted

from other independent variables (Voyer & Voyer, 2015). Multicollinearity can result in misleading and unusual results, inflated standard errors, or reduced power of the regression coefficients that create a need for larger sample sizes (Shou & Smithson, 2015). Therefore, the increase in collinearity leads to increased standard errors associated with β coefficients, reduces the noticeability of the individual independent, and affects the size of R (Voyer & Voyer, 2015). Multicollinearity is not a problem in the multiple regression model if the tolerance static between two independent variables falls above .40. Low tolerance means high multicollinearity, and high tolerance means low multicollinearity.

Assumption of linearity. A linear relationship occurs between the dependent variable and each of the independent variables, and the dependent variable and the independent variables collectively (Lopez-Rojas, 2016). A multiple linear regression model can only accurately estimate the relationship between variables if the relationships are linear. The violation of the linearity assumption may result in biased estimates of the regression coefficients and incorrect predictions (Alguraibawi et al., 2015).

Assumption of normality. For a multiple linear regression analysis to be valid, one assumption is that the variables have normal distributions. According to Liu and Guo (2016) and Shou and Smithson (2015), a normal distribution is a symmetric bell-shaped curve. Normality is affected by skewness (one tail longer than the other, and non-symmetrical), kurtosis (too flat or too peaked), and outliers (individual cases which are far from the distribution). Skew biases the mean in the direction of skew (Liu & Guo,

2016). In the case of kurtosis, the mean is not biased, but the standard deviation is, and hence standard errors and significance tests (Liu & Guo, 2016).

Assumption of homoscedasticity. Homoscedasticity refers to whether the variables are equally distributed, or whether they tend to bunch together at some values, and at other values, spread far apart. The assumption of homoscedasticity refers to the equal variance of errors across all levels of the independent variables (Voyer & Voyer, 2015). The assumption can lead to distortion of the findings and weaken the overall analysis and statistical power of the analysis, which results in an increased possibility of Type I error, erratic and untrustworthy *F*-test results, and erroneous conclusions (Voyer & Voyer, 2015). The various causes of extreme scores in a data set may include data recording or entry errors, motivated misreporting, sampling errors, and legitimate sampling (Alguraibawi et al., 2015).

Independence of residuals. Independence of residuals refers to the assumption that errors are independent of one another (Lewis-Beck & Lewis-Beck, 2015). When violations of the independence of errors occur, standard scores and significance tests are not accurate, and there is increased the risk of Type I error (Voyer & Voyer, 2015). The significant consequences of violating the assumption of independence of residuals include the potential to obtain biased estimates of the regression coefficient and draw inaccurate conclusions (Lewis-Beck & Lewis-Beck, 2015).

Testing Assumptions of Multiple Regression Analysis

In the previous section, there are six assumptions of statistical analysis presented. In this section, for each assumption, there is a process for testing or assessing the

assumption presented. An explanation is provided on how the assumption was tested in the study to permit the generalization of the conclusions drawn from the tests based on sample data to the entire population.

Tests of outliers. Outliers can be tested using both graphical and quantitative approaches to identify outliers in the data. Graphical methods include Normal Probability Plot (P-P) of the regression standardized residual and a Scatter Plot of the residuals (Oldacre, 2016; Pallant, 2016). A scatter is a suitable procedure for testing the assumption of an outlier in multiple linear regressions. Quantitative approaches include several outlier tests such as Dixon, Grubbs, Tietjen-Moore, Generalized Extreme Studentized Deviate (ESD) tests (Pallant, 2016). Besides, when using SPSS to run multiple regressions on your data, you can detect possible outliers, high leverage points, and highly influential points. These can be detected using "casewise diagnostics" and "studentized deleted residuals" (Oldacre, 2016). In this study, the graphical approaches are preferred because they are easy to inspect visually.

Tests of multicollinearity. Two generally applied tests of multicollinearity include the Variance Inflation Factor (VIF) and Correlation Coefficients (Bonna, 2011; Siddik, Kabiraj & Joghee, 2017; Voyer & Voyer, 2015). To this end, using SPSS, the collinearity diagnostics of VIF and its inverse called the tolerance statistic suit to test multicollinearity. The general rule is tolerance should be > 0.1 (or VIF < 10) for all variables. However, if these conditions are not met, then the regression model is biased (Siddiki et al., 2017). If the *VIF* values are approximately 1, the correlation or multicollinearity among independents may not cause a serious problem, and the multiple

regressions model can be used for the prediction between the independent and dependent variables (Bonna, 2011).*VIF* values ranging from 5 to 10 indicate a high correlation between variables that may be a serious problem. To test multicollinearity using correlation coefficients involves creating a correlation matrix using the independent study variables, and then identify coefficients with magnitudes of 0.80 or higher. If the independents are multicollinear, they are strongly correlated.

Tests of linearity. To test the linearity assumption for multiple linear regressions, researcher use scatterplots of variables and standardized residual values (Kristensen & Israelsen, 2014; Pallant, 2010; Oldacre, 2016). In this study, the linearity assumption was tested by creating the P-P of the regression standardized residuals and the scatter plot. Then visually inspect the P-P and the scatter plot. Then ensure that there are no major violations of the assumption of linearity. If the P-P plot reflects the tendency of the points to lie in a reasonably straight line diagonal from the bottom left to the top right, this provided supportive evidence that the assumption of linearity was not grossly violated (Pallant, 2010). The absence of a clear or systematic pattern in the scatter plot of the standardized residuals supports the tenability of the linearity assumption as met.

Tests of normality. There are both graphical and quantitative approaches to test the normality of the data used for the model. Graphical approaches include (a) plotting a Histogram of the variable of interest, (b) Normal Probability Plot (P-P) of the regression-standardized residual, and (c) a Scatter Plot of the residuals (Liu & Guo, 2016; Oldacre, 2016). In this study, a histogram of each variable was created and visually inspected for normal distribution. The plotting a histogram provided an indication of the shape of the

distribution. A normal approximation curve was also added by editing the graph. The normal P-P plot is easier to use when there are small sample sizes. The scatter should lie as close to the line as possible with no obvious pattern coming away from the line for the data to be considered normally distributed. The examination of the P-P and scatter plot ensured that there were no major violations of this assumption. The P-P plot explains the tendency of the points to lie in a reasonably straight line diagonal from the bottom left to the top right, which provides supportive evidence that the assumption of normality has not been grossly violated (Pallant, 2010). The absence of clear or systematic pattern in the scatter plot of the standardized residuals supports the tenability that the normality assumption as met. Quantitative approaches to test normality include The Kolmogorov-Smirnov test and the Shapiro-Wilk's W test. The Kolmogorov-Smirnov test and the Shapiro-Wilk's W test determine whether the underlying distribution is normal. Both tests are sensitive to outliers and are influenced by sample size. For smaller samples, non-normality is less likely to be detected but the Shapiro-Wilk test should be preferred as it is generally more sensitive (Siddiki et al., 2017).

Tests of homoscedasticity. Homoscedasticity is the assumption that the variance of errors is similar at all levels of an independent variable. There are both graphical and quantitative approaches to test homoscedasticity of the data used for the model. Graphical approaches include (a) plotting a Histogram of the variable of interest, (b) Normal Probability Plot (P-P) of the regression-standardized residual, and (c) a Scatter Plot of the residuals (Pallant, 2016). Quantitative approaches include the Levene's test. The homoscedasticity assumption was tested through the inspection of the normal probability

plot of the regression-standardized residuals and the scatter plot. The examination of the P-P and scatter plot ensured that there were no major violations of the homoscedasticity assumption. Further, the homoscedasticity assumption was tested using the plot of z*pred and z*presid. The general assumption was the level of the dispersion of points on the scatter plot. According to Hajjem (2016), at each level of the independent variables, the variance of the residuals should be constant and where not, it is said to be heteroscedastic.

Tests of independence of residuals. One way to diagnose violations of this assumption is through the graphing technique called boxplots in most statistical software programs (Hayes & Preacher, 2014). The assumption of independence of residuals verified by inspecting the P-P of the regression standardized residuals and the scatter plot. The examination of the P-P and scatter plot ensured that there were no major violations of the assumption of independence of residuals. The P-P plot provided the basis for determining the tendency of the points to lie in a reasonably straight-line diagonal from the bottom left to the top right, and provided supportive evidence that the assumption of independence of errors was not grossly violated (Hayes, 2017). The absence of clear or systematic pattern in the scatter plot of the standardized residuals supported the assumption of independence of residuals was met. In addition, quantitatively, the assumption of independence of residuals were tested using the Durbin-Watson statistic which is a simple test to run using SPSS.

Solutions to Assumption Violations

The validity of multiple regression models were confirmed by addressing the underlying assumptions for multiple regression analysis. If the assumptions were not met, the results may not be trustworthy, leading to under- or overestimation of effect size(s) or significance, or a Type I or Type II error. Researchers use several nonparametric statistical techniques when the assumptions of a parametric statistical technique are in doubt or not met, such as transformations or bootstrapping also called "re-sampling" (Hayes, 2017). Some of the transformations included taking the log or square root of the dependent variable. Bootstrapping is a statistical technique that allows assigning measures of accuracy to sample estimates (Dovonon & Goncalves, 2017). Bootstrapping is often used as an alternative to statistical inference based on the assumption of a parametric model when that assumption is in doubt, or where parametric inference is impossible or requires complicated formulas for the calculation of standard errors (Hayes, 2017). Violating assumptions can result in errors. Two types of errors can occur when inferring the statistical significance of the analysis. A Type I error results when researchers reject the true null hypothesis and a Type II error results when researchers do not reject a false null hypothesis (Hayes, 2017)). Decreasing the *p*- value, from .05 to .01, for example, reduces the possibility of a Type I error but also increases the likelihood of a Type II error (Hayes, 2017)). The convention in social and business research is to use $p < .05$ as an acceptable level of statistical significance (Brutus et al., 2013; Lechner & Gudmundsson, 2014; Luft & Shields, 2014). Therefore, I used $p < .05$ in this study for analysis.

In the case of the normality assumption test, if the tests indicate that the data is not normally distributed, three strategies are provided in this study (Liu & Guo, 2016). First, transform the dependent variable, including repeating the normality checks on the transformed data. Some of the transformations included taking the log or square root of the dependent variable. Second, use a non-parametric test. Non-parametric tests are often called distribution-free tests and were used instead of their parametric equivalent. Lastly, if the tests indicate that the data is not normally distributed, then use a parametric test under robust exceptions. Under these conditions, the parametric test was used for data that was not normally distributed and are specific to individual parametric tests. Transformations can enhance or improve normality, but make the interpretation of the findings more difficult and complex (Dovonon & Goncalves, 2017). In the case of the multicollinearity assumption test, to address violations involves combining overlapping variables in the analysis and avoid including multiple measures of the same construct in a regression (Shou & Smithson, 2015). In the case of the linearity assumption test, if the relationship displayed in the scatterplots and pp are not linear, then there will need to run a non-linear regression analysis or transform the data using SPSS.

Interpreting Inferential Results

Interpreting the results of multiple regression analysis involves interpretation of SPSS Output, the coefficients of independent variables and the residuals (Alguraibawi et al., 2015; Akhtar et al., 2016; Raz & Sauer, 2015). Specific parameters interpreted from SPSS output involved the *F* test useful to decide if the model as a whole is adequate to significantly predict the dependent variable (Akhtar et al., 2016). These include (a) *R*, (b)

coefficient of determination - R^2, and standard error of the estimate. The second output relates to the two independent variables. This output provides interpretation of the coefficients of the independent variables and the level of confidence interval for *B*. It includes the un-standardized coefficients such as (c) un-standardized coefficients of the independent variable *B*, (d) standard error for the un-standardized coefficient of the independent variable *SE B*, (e) standardized coefficient of the independent variable *β; t*-statistic *t;* and significance value. Lastly, among the outputs are the residuals. These are the values got when one takes the difference between the predicted y value (based on the independent variables) and the observed y value (Sowinski et al., 2015). An examination of the residuals can tell some things about the model, such as point out outliers that could have had an excess effect on the model, suggest transformations that could improve the model or question the validity of the model.

Coefficient of determination. R^2 is a numerical measure of how much variance in the dependent variable accounts for by the independent variables (Sowinski et al., 2015). R^2 can range from 0 to 1, where higher values represent more variance (Bowman, 2017). For example, an R^2 value of .17 means the independent variables account for 17% of the variance in the dependent variable. While R^2 of .786 means that the two independent variables explain approximately 79% of the variance of the dependent variables. Also, R of say .828 suggests that the correlation is strong.

***F*-ratio.** In the study, the *F*-ratio of the underlying ANOVA table along with its significance value (Sig. or *p* value) were used to determine if the null hypothesis of the research was accepted or rejected (Norris, Plonsky, Ross, & Schoonen, 2015). The *F* ratio

provides the significance of all independent variables; the associated *p value* (Sig.), if less than 0.05, confirms the significance of the measure, and could warrant rejection of the null hypothesis (Raz & Sauer, 2015).

B. *B* is an unstandardized coefficient of the independent variable (Alguraibawi et al., 2015; Bedford & Malmi, 2015). The negative or positive sign of the *B* value could validate the theory of the model. The value of the *B* value would predict by what factor the value of the dependent variable will change, given a unit change in the independent variable, given all other independent variables stayed constant (Raz & Sauer, 2015).

SE B. *SE B* –Standard error for the unstandardized coefficient of the independent variable shows the degree of noise or irregularity in the data (Kuhberger, Fritz, Lermer, & Scherndl, 2015). The standard error of the estimate is the standard deviation of the error term and is the square root of the mean square residual (Bowman, 2017).

Standardized coefficient of the independent variable. β is a standardized coefficient of the independent variable (Gaskin & Happell, 2014). β coefficients represent the amount of change associated with a one-unit change in each of the independent variables (Sowinski et al., 2015). The β is actually the slope of the regression line that mathematically represents the linear regression formula (Raz & Sauer, 2015).

t statistic. The *t* statistic is a ratio of the departure of an estimated parameter from its notional value and its standard error (Liu et al., 2014b). The *t* statistic is the coefficient divided by its standard error (Yang, Zaitlen, Goddard, Visscher, & Price, 2014). The standard error is an estimate of the standard deviation of the coefficient, the amount it varies across cases (Yin, Zhu, & Kaynak, 2015).

Sig (p). The *p value* determines how likely it is to get a test statistic (Bowman, 2017). If the *p* value is smaller than the significance level α, the outcome will result in a reject the null hypothesis in favor of the alternative (Dovonon & Goncalves, 2017). If the *p value* is larger than the significance level α, the outcome will result in a fail to reject the null hypothesis.

Statistical Software

Common software researchers use to analyze statistical data include Statistical Package for the Social Sciences (SPSS), Statistical Analysis System (SAS), MS Excel, and Stata (Rahman et al., 2015). Business researchers often use SPSS (e.g., Abdallah & Alnamri, 2015; Kroes & Manikas, 2014; Rogers, 2016). Therefore, SPSS Version 21.0 was used to clean, screen, and analyze data through descriptive and inferential software applications, and MS Excel was used for data entry.

Study Validity

According to Mohajan (2017), validity concerns what an instrument measures, and how well it does so. Secondary data was preferred in this study because the data were available in databases and company documents. The elements of this section include internal and external validity. Internal validity confirms that the variations in the dependent variable are due to variations in the independent variables, rather than from other external factors (Orcher, 2014). There was no consideration of internal validity for this study because internal validity is only relevant for research that addresses the cause and effect of causal relationships (Barley & Moreland, 2014). External validity is a key criterion in determining the generalization of findings to the entire population or other

samples (Orcher, 2014). In this study, I used inferential statistical techniques such as hypothesis testing and analysis of variables (ANOVA) for generalizing about the study's population.

Next, I describe the threats to statistical conclusion validity. The threats to validate the statistical conclusion refer to conditions, Type I, and Type II errors that inflate the findings from statistical analysis (Acharya & Muddapur, 2014). A Type I error occurs after rejecting a factually true null hypothesis, and a Type II error occurs after accepting a factually false null hypothesis (Green & Salkind, 2014). To validate the conclusion of this study, the researcher shall refer to instrumental reliability, assumptions related to data, and sample size. In this study, secondary data was the exclusive source of data. Using secondary data to conduct statistical analysis is acceptable for quantitative research (Garcia & Zarzueta, 2015). Internal consistency reliability checks were used to validate the reliability of the data.

Data assumptions are key assumptions that pertain to this study. Key assumptions include (a) outliers, (b) independence of error, (c) normality, (d) multicollinearity, (e) homoscedasticity, and (f) linearity. The violation of the key assumptions may result in Type I or Type II errors (Green & Salkind, 2014). Several outlier tests exist, such as Dixon, Grubbs, and Tietjen-Moore's Generalized Extreme Studentized Deviate tests. The three key ways to detect nonlinearity are (a) using previous research or theory for informing current analyses, (b) examining residual plots, and (c) routine running of regression analyses that incorporate curvilinear components. Some analyses used to detect multicollinearity are the variance inflation factor and collinearity analysis.

Researchers can verify or check the homoscedasticity assumption by visually examining a plot of the standardized residuals via the regression standardized predicted value and Levene's test.

Transition and Summary

Section 2 included a restatement of the purpose of this study and an explanation of why I conducted the study. This section also included a description of the participants, the research method and design, and the population and sampling method, followed by a description of the data collection instrument and processes. The information in this section aligned with the research question and the hypotheses. Section 3 includes the findings of the data analysis, the ways the results may affect the professional community and the implications for social change. Section 3 also includes recommendations for future research, a summary, and conclusions for the study.

Section 3: Application to Professional Practice and Implications for Change

This section begins with a discussion of tests for assumptions, and a presentation of the findings including descriptive statistics and inferential results of the data analysis. Next is the application of the study results to professional practice and implications for social change. This section concludes with recommendations for action based on the study and provides personal reflections of the study.

Overview of the Study

The purpose of this quantitative correlational study was to examine the relationship between organizational structure, capital structure, and financial performance of problem commercial banks in Uganda to promote their long-term survival. The independent variables were organizational structure measured by SIZE and capital structure measured by DER. The dependent variable was financial performance measured by ROA of the problem commercial banks in Uganda. The null hypothesis was that there is no relationship between organizational structure, capital structure, and financial performance. The alternative hypothesis was that there is a relationship between organizational structure, capital structure, and financial performance.

Data comprised financial statements for a sample of five commercial banks with 60 bank-quarter observations gathered from newspaper publications. I collected balance sheet and income statement data for individual commercial banks covering the period 1995–2016 on a quarterly basis. By law in Uganda, individual commercial banks must publish their quarterly and annual financial statements in the newspapers. The published financial statements are prepared according to internal financial reporting standards,

approved by senior management and audited by the bank's external auditors. Lastly, such data were composed of relatively homogeneous, financial firms; thus, the performance data required for statistical analysis was "clean," comparable, and abundant as banks operate in a regulated industry. Standard multiple linear regression was chosen to examine the relationship between organizational structure, capital structure, and financial performance of problem commercial banks in Uganda to promote their long-term survival. Tests of assumptions indicated no serious violations. The model as a whole was able to significantly predict financial performance, $F(2, 57) = 5.86$, $p = .005$, $R^2 = .171$.

Presentation of Findings

The following subsections include a discussion on testing of the assumptions, a presentation of descriptive statistics results, a presentation on inferential statistic results, a theoretical conversation pertaining to the findings, and a conclusion with a concise summary. The theoretical conversation pertaining to the findings is split into application to theoretical framework and discussion of findings in relation to the independent variables. SPSS (Version 21) software was used to perform all statistical analysis.

Tests of Assumptions

The assumptions of multicollinearity, outliers, normality, linearity, homoscedasticity, and independence of residuals were evaluated. The results show that these assumptions were not violated. Bootstrapping was not used to combat any influence of assumption violations.

Multicollinearity. Multicollinearity was evaluated by viewing the correlation coefficients among the predictor variables. According to Wooldridge (2015),

multicollinearity exists if the correlation coefficient is greater than 0.7. Results presented in Table 4 show that there is no high correlation between variables, thus signifying that multicollinearity is not a serious concern in the estimations.

Table 4

Correlation Coefficients Among Study Dependent Variables

Variable	ROA	DER	SIZE
ROA	1.000	.229	.350
DER	.229	1.000	.028
SIZE	.350	.028	1.000

Outliers, normality, linearity, homoscedasticity, and independence of residuals. Outliers, normality, linearity, homoscedasticity, and independence of residuals were evaluated by examining the Normal Probability Plot (P-P) of the Regression Standardized Residual (Figure 2) and the scatterplot of the standardized residuals (Figure 3). The examinations indicated there were no major violations of these assumptions. The tendency of the points to lie in a reasonably straight line (see Figure 2), diagonal from the bottom left to the top right, provides supportive evidence that the assumption of normality has not been grossly violated (Pallant, 2010). There is a clear linear pattern in the scatterplot of the standardized residuals (see Figure 3). This supports the tenability of the assumption of a linearity being met. Homoscedasticity was tested through the inspection of the normal probability plot of the regression-standardized residuals and the

scatter plot. The examination of the P-P and scatter plot indicates that the assumption of homoscedasticity has not been grossly violated.

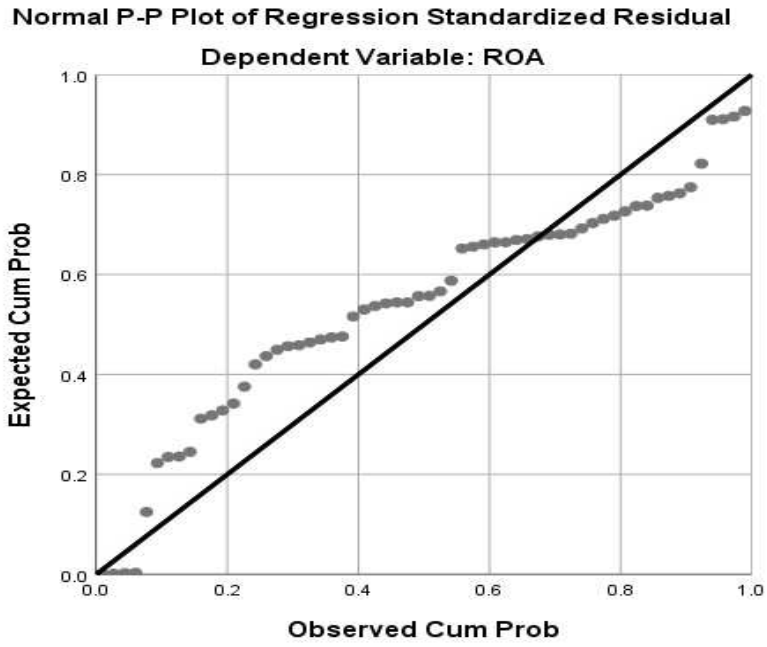

Figure 2. Normal probability plot (P-P) of the regression standardized residuals.

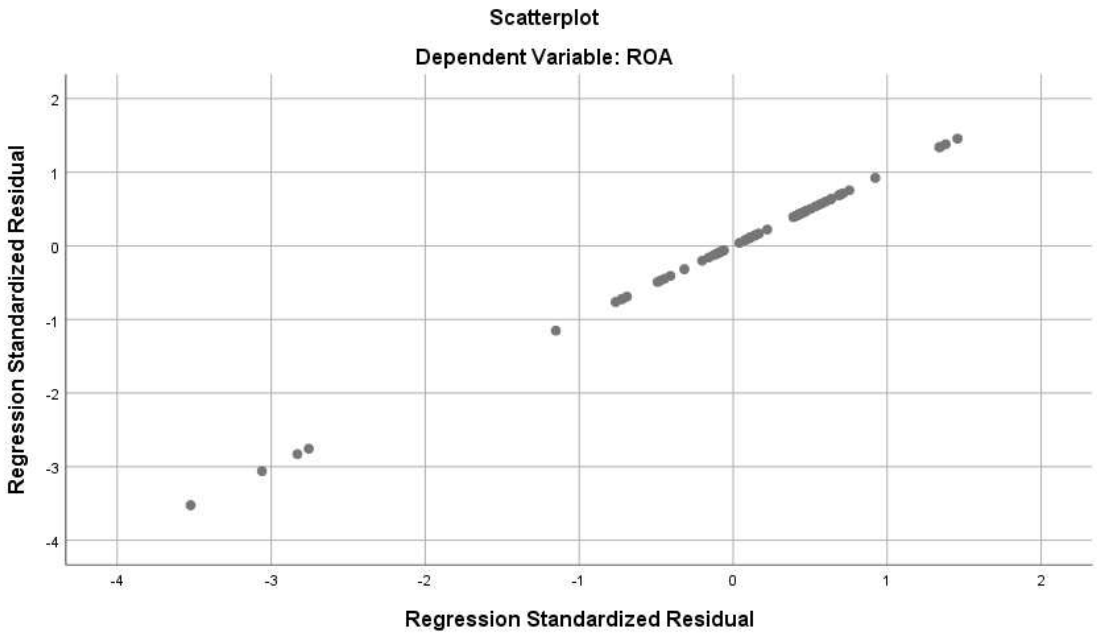

Figure 3. Scatter plot of the standardized residuals.

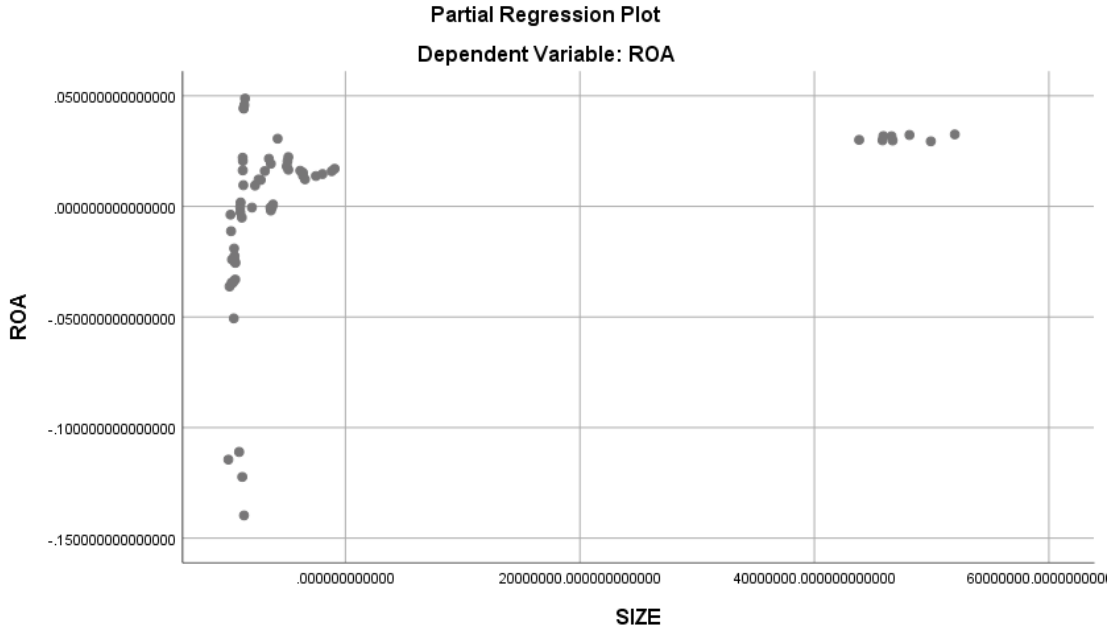

Figure 4. Partial regression plot of ROA and SIZE.

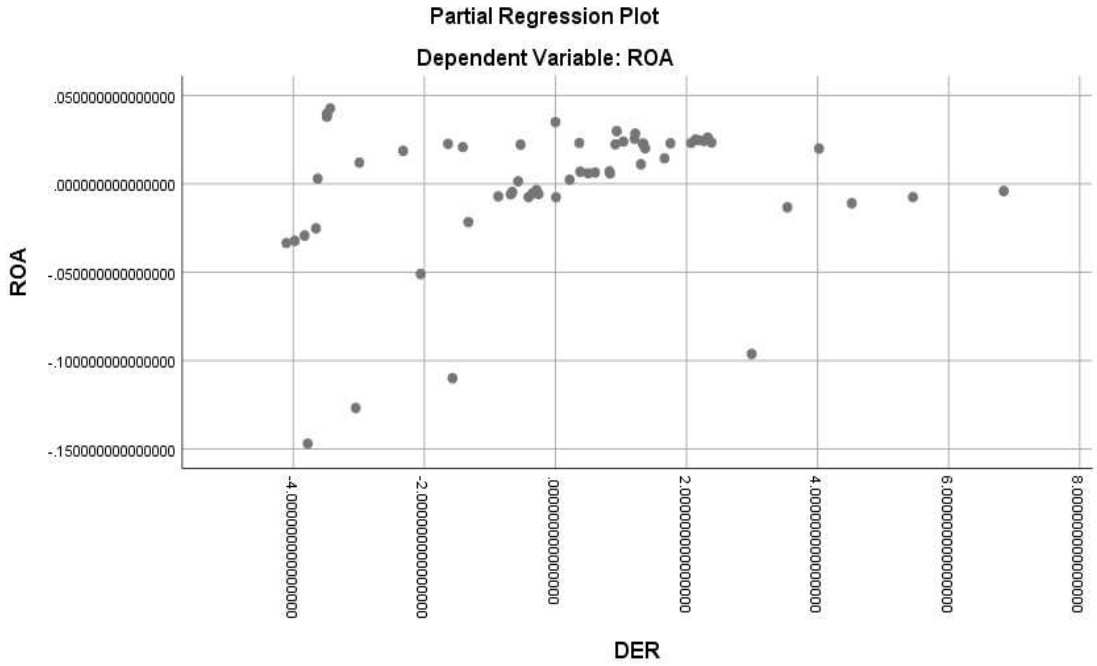

Figure 5. Partial regression plot of ROA and DER.

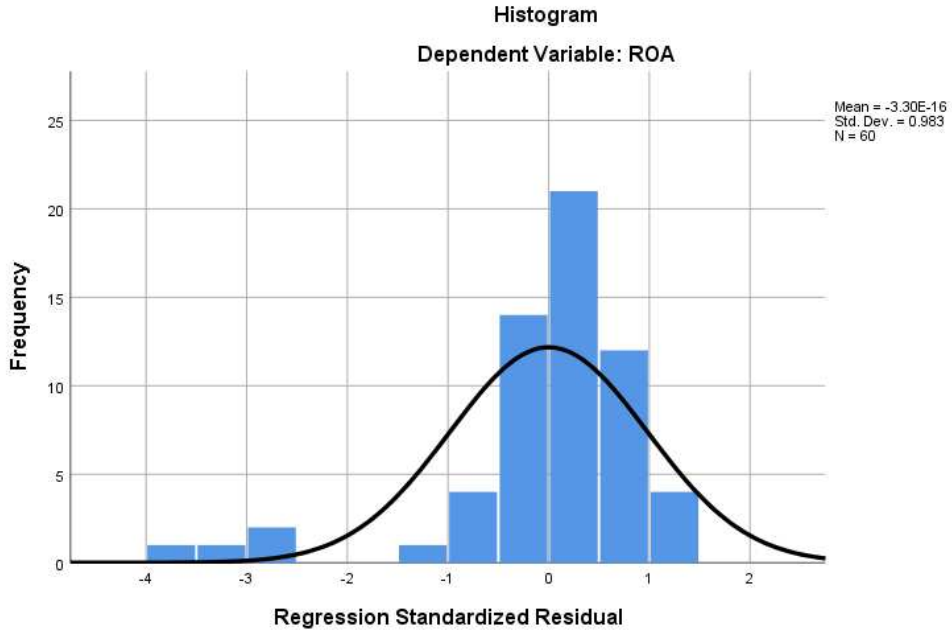

Figure 6. Histogram of dependent variable ROA.

Independence of residuals was tested using the P-P plot and the Durbin-Watson test. The P-P plot provided the basis for determining the tendency of the points to lie in a reasonably straight-line diagonal from the bottom left to the top right and provided supportive evidence that the assumption of independence of errors was not grossly violated (Hayes, 2017). The absence of a clear or systematic pattern in the scatter plot of the standardized residuals supported the assumption of independence of residuals was met. In addition, the Durbin-Watson statistics, from the model summary table of 0.388 was very close to 2. Thus, there was no violation of the independence of residuals.

Descriptive Statistics

Descriptive statistics are useful to explain the basic features of the data in the study. They provide simple summaries of the samples and the measures of central

tendency—which include mean, median, and mode—and measures of variability, which include standard deviation and variance. For this study, data were collected about five problem banks in Uganda licensed by BOU. The data comprised 60 bank-quarter observations gathered from newspaper publications and covering the period 1995–2016. In total, 60 bank-quarter observations were collected. No observations were eliminated due to missing data.

Table 5 presents descriptive statistics for the three study variables. From Table 5, the mean ROA of the sample is -0.022, which means that the sampled banks earned a return of -2.2% of total assets, and standard deviation, which reflects the variability involved, is 0.041. On the other hand, for the main variables of interest (viz. DER and SIZE) the following mean values 4.254 and 10,264,420.520 respectively, were observed, whereas for standard deviations were 2.477 and 18,898,953.217 respectively, which implies that these banks operated with a significant level of debt, and there is also a low deviation from the mean value.

Table 5

Descriptive Statistics for Quantitative Study Variables

		ROA	SIZE	DER
N	Valid	60	60	60
	Missing	0	0	0
Mean		-0.022	10264420.520	4.254
Median		-0.006	3146206.027	4.442
Mode		-.176[a]	56035074.013	0.111[a]
Std. Deviation		0.041	18898953.217	2.477
Variance		0.002	357170432716692.940	6.138

[a]Multiple modes exist. The smallest value is shown.

Inferential Statistical Results

Standard multiple linear regression, α = .05 (two-tailed) test, was used to examine the relationship between organizational structure, capital structure, and financial performance. The independent variables were organization structure measured by SIZE, and capital structure measured by DER. The dependent variable was financial performance measured by ROA. The null hypothesis was that there is no relationship between organizational structure, capital structure, and financial performance. The alternative hypothesis was that there is a relationship between organizational structure, capital structure, and financial performance. Preliminary analyses were conducted to assess whether the assumptions of standard regression analysis, of multicollinearity, outliers, normality, linearity, homoscedasticity, and independence of residuals were met; no serious violations were noted (see Tests of Assumptions).

The model as a whole was able to significantly predict the financial performance of Ugandan problem commercial banks, F (2, 57) = 5.860, p = 0.005, R^2 = .171, as shown in Table 6. The R^2 (.171) value indicated that approximately 17% of variations in the financial performance is accounted for by the linear combination of the independent variables (organizational structure and capital structure). The *p value* from the ANOVA output table labeled Table 7, aided in determining whether organizational structure and capital structure were significant predictors of the financial performance of Uganda problem commercial banks. The p value for the study model was less than 0.05. This implies that one of the two independent variables is statistically significant. The coefficient output table labeled Table 8, aided in determining whether each independent

variable is a predictor of the dependent variable (Pal & Bhattacharya, 2013). The *p value* for organizational structure was below 0.05 and indicated that the organizational structure is a significant predictor of financial performance. The *p value* for capital structure was greater than 0.05 and indicated that the capital structure of problem commercial banks is not a significant predictor of financial performance. The coefficient table displays collinearity statistics.

Table 6

Model Summary[b]

					Change statistics				
Model	R	R square	Adjusted R square	Std. error of the estimate	R square change	F change	df1	df2	Sig. F change
1	.413[a]	.171	.141	.0378	.171	5.860	2	57	.005

[a.] Predictors: (Constant), SIZE, DER

[b.] Dependent Variable: ROA

Table 7

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.017	2	.008	5.860	.005[b]
	Residual	.082	57	.001		
	Total	.098	59			

a. Dependent Variable: ROA

b. Predictors: (Constant), SIZE, DER

The null hypothesis was there is no relationship between organizational structure measured by SIZE, capital structure measured by DER, and financial performance measured by ROA. Based on the ANOVA table F statistic = 5.860, *p value* = .005 indicates that there was a significant relationship between organizational structure, capital structure, and financial performance. From these results, I rejected the null hypothesis that there is no relationship between organizational structure, capital structure, and financial performance and concluded that there was a significant relationship between organizational structure, capital structure, and financial performance.

Table 8

Coefficients

		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	-.045	.010		-4.448	.000
	DER	.004	.002	.220	1.820	.074
	SIZE	.000	.000	.344	2.847	.006

Organizational structure. There is a statistically significant positive relationship between organizational structure and financial performance, with a *p value* of 0.006. The b- coefficient for organizational structure was 0.000. This implies that there is no rise in financial performance with a one unit increase in organizational structure. In other words, financial performance tends to increase as organizational structure increases. The beta coefficient for organizational structure is 0.344. This implies that organizational structure is a better predictor than capital structure with a beta coefficient of 0.220. These results of the coefficients were derived from the multiple regression analysis in Table 8.

Capital structure. As expected, there is a positive relationship between capital structure, and financial performance although there was no statistical significance (*p value* = 0.074). The b- coefficient for capital structure was 0.004. This implies that financial performance increases by 0.004 for each unit increase in capital structure. In other words, financial performance tends to increase as capital structure increases. The beta coefficient for capital structure is 0.220. This implies that capital structure is a less predictor than organizational structure with a beta coefficient of 0.344. These results of the coefficients were derived from the multiple regression analysis in Table 8.

The final predictive equation was:

Financial performance = -0.045 + 0.004 (Capital structure) + 0.000 (Organizational structure).

Analysis summary. The purpose of this study was to examine the efficacy of organizational structure and capital structure in predicting the financial performance of problem commercial banks in Uganda. The standard multiple linear regression was chosen to examine the ability of organizational structure and capital structure to predict financial performance. The model as a whole was able to significantly predict financial performance, F (2, 52) = 5.860, p = .005, R^2 = .171. Organizational structure and capital structure provide useful predictive information about financial performance. Organizational structure with a beta coefficient of 0.344 is a better predictor than capital structure with a beta coefficient of 0.220. The conclusion from this analysis is that there was a significant relationship between organizational structure, capital structure, and finance performance.

Application of Findings to Theory and Variables

The theoretical conversation on the findings of the study is one of the most important parts of the study to those within the immediate researcher's circle. This section is important because it includes a description of, in what ways, findings confirm, disconfirm, or extend knowledge of the theoretical framework and relationship(s) among variables (organizational structure and capital structure). This was achieved by comparing the findings with other peer-reviewed studies from the literature review and new studies since writing the literature review. In addition, care has been taken to ensure interpretations do not exceed the data, findings, and scope.

Application of Findings to Theoretical Framework

The theoretical framework used to underpin the research question was Jensen and Meckling (1976) agency cost theory. This theory was optimal to explain the relationship between organizational structure, capital structure, and financial performance. The agency cost theory predicts that, when a firm uses more debt, the manager will face more risk of bankruptcy and then be more efficient, agency cost decreases, and the expectation is better performance of the company. A high level of debt forces managers to pay interest and principal periodically and reduces the probability that managers invest in non-optimal investment projects. High financial leverage also introduces outside monitors such as creditors and auditors to monitor managers and reduce perquisites and force manages to be more efficient in keeping their control rights and reputation. Thus, under the theory, there should be a positive relationship between leverage and the firm's performance. The findings in the study are consistent with the theory in this area.

Conversely, an increase in agency costs leads to a decline in financial performance and can lead to business failure (Park et al., 2016; Wang & Liu, 2018). The result of problem commercial banks due to a decline in financial performance ties to the existing literature on effective business practice. All in all, the application of agency cost theory to this study yielded a deeper understanding of the patterns of the relationships between organizational structure, capital structure, and financial performance. The application of agency cost theory to business practice yields a more robust and comprehensive approach to commercial bank financial performance.

Another alignment between this study and agency cost theory was the ability of the theory to account for the relationships between organizational structure, capital structure, and financial performance. The correlation between organizational structure and capital structure was small. In terms of predictability, the model was optimal for the regression to determine financial performance. However, the lower correlation between the predictors highlighted the relationships around these variables. Capon et al. (1996) developed the integrative framework for firm financial performance to explain financial performance. This framework comprises three primary building blocks – environment, strategy, and organization. Using the framework, the framers were able to identify how financial performance improved by employing the appropriate combinations and levels of factors composing these building blocks. The managerial implications from Capon et al.'s findings are that a holistic approach best captures the explanation of firm financial performance. Rather than focusing on one or two factors, managers seeking superior financial performance may find it necessary. In conclusion, while the predictive level of

organizational structure and capital structure stands at 17% for the financial performance of problem banks, commercial bank executives must become adept at identifying appropriate combinations and levels of these factors. According to agency cost theory and the results of my research, agency relationships between the predictor and response variables are evident.

Application of Findings to Organizational Structure

Several researchers have studied the relationship between organizational structure and financial performance of banks specifically, but the results were not convergent. Some researchers such as Ngo, Mullineux, and Ly (2014), Karim and Alam (2013), Bokpin (2013), Shah and Dubay (2013), Ismail (2014), and Brewer and Jagtiani (2013) found a positive relationship between organizational structure and financial performance within banks. Other researchers found a mixed relationship between organizational structure and financial performance of banks, including Azhagaiah and Silambarasan (2014) and Kariuki (2015). I did not find empirical studies with a negative relationship between organizational structure and performance of banks. Results of one new study on the relationship between organizational structure and finance performance found since writing the literature review are also tied to the findings of this study.

The findings in this study compared with studies conducted by Shah and Dubay (2013) and Karim and Alam (2013) who studied the relationship between organizational structure and financial performance within banks. Shah and Dubay (2013) studied the influence of market orientation on the financial performance, institution size, business growth, and market share of financial institutions in the United Arab Emirates. Shah and

Dubay adopted a quantitative correlation design and descriptive statistics and selected ROA, ROE, return on investment, and earnings per share to measure the financial performance of financial institutions. The findings revealed a positive relationship existed between financial performance and institution size. In addition, Karim and Alam evaluated the performance of private banks listed on the Bangladesh stock market from 2008 to 2012. They used multiple regression to analyze the impact of bank size, credit risk, operational efficiency, and asset management on financial performance. Karim and Alam found that bank size a positive and significant impact on the financial performance of Bangladesh commercial banks. In conclusion, Shah and Dubay's findings and Karim and Alam findings confirm the results of this study that there is a significant and positive relationship between organizational structure and financial performance on banks.

Further, the findings in this study compared with studies conducted by Ismail (2014) and Ngo et al. (2014) who studied the relationship between organizational structure and financial performance within banks. Ismail measured the economic value added of the Malaysian institutions between 1999 and 2002 and noted that the financial performance of institutions decreased with size. Ngo et al. studied the impact of the size of operation on the financial performance of microfinance institutions (MFIs) between 1996 and 2010. The study included a review of microfinance operations in Africa, Asia, Eastern Europe, Central Asia, Middle East, North America, Latin America, and the Caribbean. Ngo et al. used assets in U.S. dollars to classify the size of the microfinance operations as small, medium, or large. The findings indicated that larger MFIs experience greater efficiency, financial performance, and sustainability compared to smaller MFIs.

In conclusion, Ismail's findings and Ngo et al., findings' confirm the results of this study that there is a significant and positive relationship between organizational structure and financial performance on banks.

Concerning the relationship between organizational structure and financial performance, the findings of this study disconfirm the findings of Azhagaiah and Silambarasan (2014) and Kariuki (2015), who found a mixed relationship between organizational structure and financial performance of banks. Kariuki (2015) studied the relationship between organizational structure and ROA of large manufacturing firms in Kenya. The study included a cross-sectional survey used to target 102 large manufacturing firms, and the response rate was 92%. The results indicated that organizational structure did not influence on ROA. Azhagaiah and Silambarasan (2014) studied the impact of institution size on the determinants of corporate leverage and measured institution size using total assets. In addition, Azhagaiah and Silambarasan used total asset value to group cement institutions in India into three categories: small, medium, or large. The study involved reviewing the impact of institution size on the determinant of corporate leverage in 29 institutions listed on the Bombay Stock Exchange. Azhagaiah and Silambarasan concluded that irrespective of institution size, there is high volatility in the corporate leverage of these institutions. In conclusion, the results of this study disconfirm the findings of studies by Azhagaiah and Silambarasan (2014) and Kariuki (2015) that there is a mixed relationship between organizational structure and financial performance on banks.

One new study about the relationship between organizational structure and financial performance was found since writing the proposal of this study. Machie (2019) studied organizational factors as predictors of performance in public libraries. Machie's quantitative, correlational study applied multiple linear regression to analyze data, to determine if organizational factors predicted performance in public library organizations in the United States.

The analysis results indicated that 72% of the total variation in performance could be explained by the four predicator variables – mission and strategy, structure, systems, and culture. The results were that predicators, mission and strategy, and systems contributed did not statistically significantly contribute to the model. The researcher did not investigate the direction of the relationship. In conclusion, Machie's findings partially confirm the results of this study that there is a significant relationship between organizational structure and financial performance.

Application of Findings to Capital Structure

A few researchers have linked capital structure to the financial performance of banks, specifically using the agency model, but the results were also not convergent. Some of the researchers found a positive relationship between capital structure, and financial performance of banks. These include Mercado-Mendez and Willey (1995), Sagara (2015), Meero (2015), and Bambulović et al. (2016). In contrast, Dai (2017) found a negative relationship between capital structure, and financial performance of banks using the agency model. Further, some researchers such as Anarfo (2015) and Kumar and Ndubuisi (2017) found a mixed relationship between capital structure, and

financial performance of banks using the agency model. Lastly, some researchers' findings were inconclusive, or the researchers found no relationship between capital structure, and financial performance of banks. These include Boodhoo (2009) and Alfadhl and Alabdullah (2013). Results of three new studies on the relationship between capital structure, and financial performance found since writing the literature review are also tied or disputed in relation to the findings of this study.

The findings in this study compared with a study conducted by Mercado-Mendez and Willey (1995) who examined agency theory arguments in the banking industry. The authors examined the 104 largest U.S. banks during the period 1985–1989. Mercado-Mendez and Willey analyzed the effect of four variables that proxy for agency costs (i.e., earnings volatility, managers' portfolio diversification losses, bank size, and standard deviation of bank equity returns) on three financial policy variables (i.e., managerial stock ownership, leverage, and dividend yield). The findings show that bank size and a measure of the managers' portfolio diversification opportunity set affect a bank's level of managerial stock ownership, leverage, and dividends. Mercado-Mendez and Willey findings confirm the findings of this study that there is a positive relationship between capital structure, and financial performance of banks.

Further, as with the findings in my study, Sagara (2015) and Meero (2015) found a significant and positive relationship between capital structure, and financial performance of banks. Sagara and Meero studied the relationship between organizational structure and financial performance within banks. Sagara analyzed the impact of capital structure on financial performance in Islamic banks listed on the Indonesia Stock

Exchange in 2014. Sagara calculated capital structure using total debt to equity capital ratio, whereas calculating financial performance involved using capital, assets, earnings, and liquidity ratios. The results showed that capital structure affected the financial performance of the Islamic banks significantly (by 69%). Meero studied the relationship between capital structure and performance in Gulf countries' banks. Meero performed an analysis of the relationship between capital structure and performance in Gulf countries and distinguished between conventional banks and Islamic banks, but both banks showed a similarity in terms of capital structure. The results showed that ROA had a significant negative relationship with financial leverage and a positive correlation with equity to assets ratio. In conclusion, the results of Sagara and Meero confirm the findings of this study that there is a positive relationship between capital structure, and financial performance of banks.

Bambulović et al. (2016) studied the agency cost of debt by using data on the Croatian banking industry. By testing the agency cost of debt, Bambulović et al. contributed to the literature on bank capital and bank governance in Croatia. Bambulović et al. proceeded by generating a profit efficiency measure believed to be adequate in representing management effort and ability to maximize the value of owners' investment. Next, they modeled profit efficiency using bank leverage and other independent variables. By using variables available at this point, their results did not indicate that debt acts as a clear discipline mechanism for bank managers in Croatia. However, on certain leverage levels, their results supported agency theory.

The findings in this study disconfirm the results of a study conducted by Dai (2017). Dai studied the relationship between capital structure and banks' performance in Thailand from 1997 to 2016. By employing the random effect model and robustness check to tackle the endogeneity problem, the result showed a significant and negative correlation between capital structure and profitability. In addition, credit risk and liquidity risk significantly decreased financial performance. Finally, the data indicated that, while improving banks' financial performance, bank managers should be aware of overusing debt, which reduces banks' profitability. Unlike findings in this study, Dai's findings disconfirm the results of this study that there is a positive relationship between capital structure, and financial performance on banks.

In addition, the findings in this study disconfirm the findings of studies conducted by Anarfo (2015), and Kumar and Ndubuisi (2017). These authors found a mixed relationship between capital structure, and financial performance of banks using the agency model. Anarfo studied capital structure and bank performance using evidence from Sub-Sahara Africa. Anarfo's finding indicated no statistically significant relationship of capital structure existed in Africa. Kumar and Ndubuisi studied the effect of capital structure on the performance of deposit money banks in Nigeria. Kumar and Ndubuisi obtained data from secondary sources and analyzed the data using the autoregressive distributed lag method. The findings revealed a mixed impact of capital structure variables on performance indicators. Findings of studies conducted by Anarfo, and Kumar and Ndubuisi disconfirm the findings of this study that there is a positive relationship between capital structure, and financial performance on banks.

In contrast, the findings in this study disconfirm the results of studies conducted by Boodhoo (2009), and Alfadhl and Alabdullah (2013). These authors' findings were inconclusive, or the researchers found no relationship between capital structure, and financial performance of banks. Boodhoo studied the impact of capital structure on bank performance in Tanzania. Boodhoo used panel data for 5 years and 38 banks operating in the country. The study results indicated the presence of a negative trade-off between the use of debt and firm performance when measuring the capital structure using the ratio of debt to equity. Boodhoo measured performance by cost efficiency and ROE. Contradicting results emerged when Boodhoo measured the capital structure as the ratio of debt to asset and then measured performance as the ratio of debt to asset. The findings of this study were consistent with most of the previous results but did not provide a single stand on whether leverage affects firm performance. Alfadhl and Alabdullah investigated the relationship between some determinants of managerial behavior and agency cost on the one hand and the impact of this relationship on firm performance on the other. Alfadhl and Alabdullah examined three variables that represented the determinants of managerial behavior: managerial ownership, information asymmetry, and percentage of firm debts. Data came from a sample of 27 firms distributed to three economic sectors: banks, industry, and services. The findings regarding the ownership variable confirmed a significant and nonlinear correlation exists between managerial ownership and agency cost of ownership, and firm performance affects such a relationship. As for the other two variables, namely information asymmetry and percentage of firm debts, the findings show no relationship exists between them and agency cost and no impact of performance

on this relationship. Findings of studies conducted by Boodhoo, and Alfadhl and Alabdullah disconfirm the results of this study that there is a positive relationship between capital structure, and financial performance on banks.

Three new studies were found since writing the literature review of this study. These include Mais (2018), Hoque (2019), and Jimba (2019). Mais (2018) investigated the determinants of bank capital structure and performance during his study consisting of three essays on bank capital structure, performance, and financial inclusion. Data comprised the European Economic Area's listed banks over the period 2005–2014. Mais's findings were that equity capital is positively associated with profits (performance). Hoque (2019) studied the effects of capital structure on the performance of US banks. Capital structure was measured by debt to asset ratio and performance by ROA. Hoque's findings were mixed, the effects of capital structure (debt) on performance are positive at lower levels of debt and negative at higher levels of debt. Lastly, Jimba (2019) studied the effect of capital structure on the performance of quoted manufacturing firms in Sub-Saharan Africa within the period 2006–2016. Specifically, Jimba examined the effect of different components of capital structure, namely total debt to total equity, long term debt to total assets, short term debt to total asset, and SIZE. ROA measured performance. The findings of this study were that total debt to total equity and SIZE had a negative influence on the performance. In contrast, long term debt to total assets and short-term debt to total asset had a positive impact on performance. In conclusion, the findings of studies conducted by Hoque (2019) and Jimba (2019) disconfirm the results of this study, while the findings of Mais (2018) confirm the results

of this study that there is a positive relationship between capital structure, and financial performance of banks.

Application to Professional Practice

In the process of analyzing the practical applications to professional business practice, I reflected on the research I conducted on organizational structure, capital structure, and financial performance. My challenge was to synthesize the findings with the academic literature and translate them into practical business solutions for the banking industry. As the focus of this research was on financial performance of problem commercial banks, the applications to professional practice, are for commercial bank executives.

Consistent with my expectations in this study, capital structure is a predictor of financial performance. According to Balasubramanian and Lee (2015), in general, higher leverage indicates that a focal bank carries a bigger debt burden in that principal and interest payments are a large portion of cash flows. Such a bank is highly likely to fail following an increase in interest rates or a financial meltdown. On the other hand, a bank with low leverage is less likely to fail under similar circumstances. Also, this result implies that unless problem banks raise adequate capital, the excessively negative coefficients for capital structure point toward negative leverage. Problem banks encounter agency problems (i.e., moral hazard) because managers of problem banks are likely to sharply increase spending on non-interest expenses before the event of failure. In addition, a large influx of loans drives problem banks toward an undesirable choice of

capital structure. Thus, bank executives need to understand such prominent financial symptoms that precede bank failure to take appropriate action.

In this research, it was found that organizational structure was a more predictor of the financial performance of problem banks than capital structure. However small the influence, banking industry executives must deal with the organizational structure in their business strategy. Over the past decade, Oliver Williamson and other researchers have suggested that the internal organizational structure of large corporations should impact their performance. This is consistent with the findings in this study. Specifically, bank executives responsible for the internal organizational structure of firms need to apply this knowledge to drive efficiency through profitability and possibly growth.

Implications for Social Change

The implications for positive social change include the potential to create jobs in commercial banks for individuals. According to the Census of Business Enterprise report of 2010, the financial services sector provided jobs for 27,135 individuals in Uganda, which was equivalent to 2.5% of the employed population in Uganda. To the extent that an individual firm can perform well, it may survive and prosper. Firms that falter by making losses, or by making profits that their stockholders believe to be insufficient, may cease to exist, which leads to job losses. The findings of the study include a sample of five problem banks that closed or restructured. Unfortunately, data related to these job losses were not available. By helping business leaders to enhance the financial health of banks, the study results may be useful to help new commercial banks avoid business failures and job losses.

In addition, the implications for positive social change include the potential to improve communities. To the extent that firms are successful financially, they can attract capital, include a variety of forms of investment, and produce goods and services for the benefit of communities. All these contribute to a better quality of life for members of the community in which they live and work.

Lastly, the implications for positive social change include the potential to provide bank business leaders with a better understanding of factors that relate to the financial performance of problem banks. The possibility exists to provide bank business leaders with the necessary tools to improve financial performance through the prediction of organizational structure and capital structure optimization. The social change implications include the potential for bank business leaders and other bank officials to improve relationships between them, employees, shareholders, and suppliers. Bank business leaders may be able to reduce agency costs, and therefore the cost of offering banking services (Wang & Liu, 2018).

Recommendations for Action

The review of the results of this study provided a platform for recommendations for actions for commercial banks in Uganda. The findings revealed that organizational structure and capital structure affect the financial performance of commercial banks in Uganda. One action that the commercial bank leaders in Uganda can take is to implement capital strategies that lead to a low DER. Such strategies include relying on customer deposits, reduce reliance on debt, and raising low cost equity. Another action is the implementation of an efficient organizational structure. Bank leaders of new commercial

banks need to be mindful of the size of the firm there are managing. The total revenue of the bank measured SIZE. Business leaders of new commercials banks need to reduce over trading, usually associated with the ambition to meet growth targets. In addition to commercial bank leaders, factors influencing the financial performance of banks should receive more attention from academics and business consultants. A search in the Business Complete database, EBSCOhost database, among others, produced a significant gap in the number of peer-reviewed articles using the keywords banks, capital structure, organizational structure and financial performance. Publishing the results of this study may allow a larger population outside the academic community access to the study finding, which may guide strategic decisions made by commercial bank leaders to strengthen financial performance and subsequently, longtime survival. I will also disseminate the study finding using scholarly and business journals, workshops, and conferences relating to commercial banks.

Recommendations for Further Research

The first recommendation is that future researches include a mixed-method approach. The mixed method would allow for a richer investigation of the dynamics surrounding financial performance. The quantitative method of this study limits the study to a positivist worldview. In addition, a mixed-method approach would provide an opportunity to collect primary data rather than rely on secondary data not intended for this study. Lastly, a mixed-method approach would provide an opportunity to account for several internal, industry, and external factors that could influence financial performance,

thus develop an integrated framework for financial performance as proposed by researchers such as Capon et al. 1996.

Secondly, after analyzing the results of this study, it is my recommendation that future researchers address larger geographical areas. Uganda had a limited number of problem banks. Researching a large geographic area might provide adequate data to analyze the significance of the variables under study fully. This may go a long way in reducing potential sources of errors, thus hamper the generalization of the findings to all companies. Lastly, more research is needed for examining different industries rather than the banking industry, which has unique regulations.

This study has a limitation due to survivorship bias. Survivorship bias is a type of sample selection bias which occurs when a sample is concentrated on subjects that only passed the selection process and ignores subjects that did not pass the selection (Shringarpure and Xing, 2017). The presence of sample selection bias may distort the statistical analysis of a sample and affect the statistical significance of the chosen statistical tests (Shringarpure and Xing, 2017). During the data collection for this study, banks that failed but survived for more than five years were excluded. The focus of this study was on mainly startups with a restriction to survival of at least five years. When interpreting the results of this study, care should be taken not to overlook this limitation. As a recommendation to further research, the restriction of including only banks that failed within five years may be removed such that all failed banks are studied.

The outlook of the relationships that influence firm financial performance is to focus on the goal of developing an integrative model of financial performance. I concur

with Capon et al. 1996 and several other researchers who shared the view that a much more holistic and integrative approach is necessary to explain the diversity in firm financial performance. Capon et al. developed and tested the integrative model of corporate financial performance. One of the significant tasks for a research agenda is to highlight dimensions of the field in which research effort is likely to be most useful. A need exists for substantial changes to the basic outlook toward research on financial performance.

Lastly, on potential research agenda for furthering the scholarly conversation pertaining to the business problem is the focus on a comprehensive understanding of financial performance. The focus needs to include multiproduct, multimarket firms, many of which are significantly multinational in both operations and markets. Most performance research implicitly or explicitly has as its model the single business firm operating in a single nation-state (Capon et al. 1996). Constructs that are appropriate for a single business and single nation-state firms may be inadequate for multiproduct, multimarket, multinational firms.

Reflections

The DBA research process at Walden University has been a life-changing experience. Overtime with colleagues, we have referred this progress to a journey. Sometimes the journey seemed unending, but with support from fault, the end started to become eminent. During this journey, my understanding of organizational structure and capital structure and their impact on financial performance increased. In addition, I

apprehended a quantitative research approach, which was important in both my current profession and future research projects.

Before starting conducting this research, I had some preconceptions. For instance, my extensive professional experience working with financial statements may have influenced a personal bias toward capital structure as a better predictor of financial performance than organizational structure. Another bias was toward capital structure as having a statistically significant relationship with financial performance. Similarly, I had a bias that organizational structure and capital structure are not a significant predicator of the financial performance as the model only catered for internal factors leaving out industry and external factors. Lastly, this study significantly affects my thinking about financial performance of problem banks. Personal experience and a review of the literature confirmed my belief that there is a statistically significant positive relationship between organizational structure and financial performance. The results indicate that organizational structure and capital structure influence the financial performance of banks in Uganda. The information garnered from the study should provide valuable information for leaders of commercial banks in Uganda and future researchers.

Conclusion

In 2014, approximately 21% of Ugandan businesses that failed showed poor financial performance when they were actively operating (Singer et al., 2015). Poor financial performance by an organization places it at risk of failure (Gill et al., 2018). Achieving good financial performance remains an important objective for business leaders in Uganda to avoid business failure (Singer et al., 2015). The specific business

problem was that some business leaders of commercial banks do not know the relationship between organizational structure, capital structure, and financial performance. The purpose of this quantitative correlational study was to examine the relationship between organizational structure, capital structure, and financial performance of problem commercial banks in Uganda to promote their long-term survival. The statistical data analysis suitable for this study was standard multiple linear regressions. The model as a whole, was able to significantly predict financial performance. Organizational structure was statistically significant and positively related to financial performance. Unexpectedly, capital structure was not statistically significant but was positively related to financial performance. Banks may apply the results of this study to add to the body of knowledge and improve professional practices concerning the relationship between organizational structure, capital structure, and financial performance. Individuals may benefit as bank leaders develop strategies to improve financial performance, ensure longtime survival of firms and thus create jobs. As for recommendations, the future research agenda should adopt a mixed-method research approach, address a larger geographical area, and focus on the goal of developing an integrative model of financial performance.

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