2022

Relationship Between Capital Structure and Financial Performance of U.S. Retail Bank

Nelson Jonah Usoro
Walden University

Walden University

College of Management and Technology

This is to certify that the doctoral dissertation by

Nelson Jonah Usoro

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

Review Committee
Dr. Robert Haussmann, Committee Chairperson, Management Faculty
Dr. Danielle Wright-Babb, Committee Member, Management Faculty
Dr. Mohammad Sharifzadeh, University Reviewer, Management Faculty

Chief Academic Officer and Provost
Sue Subocz, Ph.D.

Walden University
2022

Abstract

Relationship Between Capital Structure and Financial Performance of U.S. Retail Banks

by

Nelson Jonah Usoro

Keller Graduate School of Management: DeVry University

MS, 2012

Walden University

M.Phil., 2019

Lagos State University

BS, 2006

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Management

Walden University

February 2022

Abstract

The decision to fund the operations of a company through debt or equity has implications for the long-term sustainability of the organization. The purpose of this quantitative causal-comparative study was to evaluate the impact of capital structure on the financial performance of U.S. retail banks and to observe the behavior of the banks during a time of crisis to determine whether capital structuring decisions could support the bank in surviving financial distress. The research questions focused on the effects of capital structure, including common stock equity with preferred stock compared to common stock equity with secured debt, on earnings, profitability, liquidity, and dividends per share to sustain banks in times of economic downturn. Modigliani and Miller's model of financial management provided the framework for the study. Secondary data were collected from financial statements of 30 U.S. retail banks. Descriptive analysis, histogram analysis, regression analysis, and correlation analysis were conducted to test the hypotheses. The results indicated that capital structure had a significant impact on earnings, liquidity, profitability, and dividend per share of the banks. Banks had a greater reliance on debt funding, and this impacted their profits and liquidity. Moreover, large banks with a larger client base were able to perform better than small banks in terms of revenue, profits, and dividend payments to shareholders. The results may effect positive social change by indicating the appropriate choice of capital structure that would offer the best return for U.S. retail banks.

Relationship Between Capital Structure and Financial Performance of U.S. Retail Banks

by

Nelson Jonah Usoro

Keller Graduate School of Management: DeVry University

MS, 2012

Walden University

M.Phil.,2019

Lagos State University

BS, 2006

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Management

Walden University

February 2022

Table of Contents

List of Tables

List of Figures

Chapter 1: Introduction to the Study

In response to the existing adverse economic situation as had been marked by 2008's great recession and inflations, researchers have drawn attention toward studying the banking sector with a focus on their financial performances (Anarfo, 2015; Oguna, 2014; Widyastuti et al., 2019). The prolonged impact of economic depression was traced by the 2020's evidence of collapsed stock markets around the world where the global stock market losses have persisted with markets in the United States, the United Kingdom, and Hong Kong going down by 22.7%, 26.5%, and 45.5%, respectively (Kang et al., 2020). Despite the adverse impacts of the tough economic moments characterized by recession and inflation on the global banking sector, researchers such as Golberg and Johnson (2021) and development organizations such as Bankrate have continued to rank banks based on the quality of their services and profitability. Banks acquire revenues through lending and borrowing, which implies that the financial efficiency of banks depends on their scale of operations. Although larger banks have relatively large finance network bases to borrow and lend funds, smaller banks are disadvantaged from accessing reliable financing entities (Ahmad et al., 2012). Moreover, the level of market competition in the retail banking sector has significantly increased, a phenomenon that was attributed partly to technological advancements and partly to the improvements in the monetary structure in which the banks operate (Hirtle & Stiroh, 2007). Because many studies, including Anarfo (2015) and Berger and Bouwman (2013) have presented clear evidence on how several factors such as economic recession, inflation, and stiff competition in the banking sector adversely affect the financial performances of retail

banks, the need to explore the financial performance of banks with a narrowed focus on the changes on their capital structures was justified. Considering the evidence on the factors affecting banks' performances, the capital structure of the bank is closely related to its financial performance, a phenomenon that has continued to persist as a major concern in the retail banking sector, supporting the need for studying the capital structure because it is the varying factor in the relationship. R. Ahmed et al. (2016) reported that when the bank's capital structure varies, the cost of capital of the corporation also changes, influencing the market value. According to Hirtle and Stiroh (2007), retail banks play a critical role in sustaining the backbone of the economy by providing market-based funding to local businesses, which provided the rationale for a narrowed study emphasizing the impact of variation in the capital structure on the overall performance of retail banks.

Rosenberg (2019) referred to the capital structure as the financing mix of banks, which is mainly composed of both equity and debts, usually used in the financing of the operation of the banks. Capital structure determines how the bank sources funds to finance its assets or projects; however, the composition of the capital structure depends on the prevailing economic situation (Birru, 2016). Undesirable economic situations such as depressions have, on several occasions, negatively affected the nature as well as the composition of the capital structure, and most retail banks have been reported to opt for debt financing (Anarfo,2015). This approach has forced the banks to forgo profitable opportunities for investments (Pinto et al., 2017). On the other hand, Hafeez et al. (2018) admitted that retail banks that have consistently depended more on equities than debts for

financing growth opportunities had made significant positive performances. Nonetheless, the choice of type or source of finance does not depend on the internal factors of the organization and instead is largely informed by the prevailing local and international market situations such as recession, inflation, and so on. For example, the 2008's great recession contributed to a remarkable financial crisis that compelled many retail banks to have a finance mix sourced from the capital market, including secured debts and preferred stock to form their capital structures (Kallberg et al., 2013). Secured debt, usually referred to as the debenture stock, is the bond issued by financing firms, usually refundable with accruing interests, whereas the secured debt is issued by the existing assets of the borrowing retail bank (Edwin, 2020). The preferred stock is described as the preference share because it involves investment in the retail bank in the form of stock acquisition, entitling the investor to a certain fixed amount of dividend with a priority of payment over the common stakeholders (De Baggio, 2014). The source and nature of the capital generally depend on the market or performance goals of the bank.

The economic crisis that began at the end of 2007 in the United States interfered with the credit market, which subsequently disoriented how banks sourced funds. The situation contributed to an extreme liquidity crisis both in the short-term and long-term money markets (Ghasemi & Ab Razak, 2016). This crisis had severe repercussions on many states where several banks were prompted to seek the intervention of the central government and were directed to issue additional equities to sustain the least acceptable capital loss (Kashyap et al., 2008). Moreover, former President Obama provided 787 billion dollars as a bailout to American International Group because the mortgage

banking corporation could not support banks' mortgage lending anymore (Amadeo, 2020). Based on these U.S scenarios, it is now clear that acknowledging the important role that the decision involving capital structure plays in determining the overall performance of retail banks is essential for their success in the capital market. It is for such reasons that Kwan (2015) proclaimed the importance of retail banks and other firms in the financing industry adopting best practices, particularly regarding their decisions concerning capital structure. Practitioners and academic researchers have recognized the decisions pertaining to the capital structure of banks or financing firms as critical because they directly influence the risk and return of shareholders and lenders (Siddik et al., 2017). Many studies on the effects of capital structure on the performance of retail banks (Kothari, 2018; Shiferaw, 2018) have focused on giving an explanation of an appropriate and suitable mix of financing or security sources that should be adopted by firms to fund their real investments.

Capital structure theorists have tried to model and establish whether the mechanism through which investment proposals by retail banking firms are financed is important, and if it is then the optimal or appropriate capital structure should be identified. According to Jennings (2016) and Salim (2018), the optimal or most appropriate mix is one that will reduce the banks' capital acquisition cost significantly while at the same maximizing the dividend of the shareholders. How retail banks tend to select the appropriate amount of equity and debts to formulate their capital structures has remained unclear. The aspect of capital structure is critical in retail banking finance because it determines the capability of the banks to s atisfy the expectations of their

stakeholders and customers (Belkhir et al., 2016). Often, by effecting some alterations in the capital structures, retail banking corporations have had the opportunity to positively change their capital costs (Kallberg et al., 2013) and improve their performance in the capital market. The current study focused on exploring the aspect of capital structure with specific emphasis on the correlation between the capital structure and performance of U.S. retail banks. I sought to determine whether changes in capital structure would sustain the performance of retail banks, especially during economic downtimes or financial crises.

Background

In banking and finance, capital structure has been used to imply the way banks finance their assets using a blend of hybrid securities, equities, and debts (Goyal, 2013). The concept of capital structure has been an interesting area of concern for many researchers (Klingstedt & Lager, 2016; Kwan, 2015; Muritala, 2012) in finance, who have focused on establishing the relationship between the performance of banks and their capital structures. Most of the studies, particularly in the field of business administration, have focused on the aspects or factors driving the financial performance of banking corporations. Schmidt (2018) argued that, individual bank performance would depend on the banks' operation strategies, their ability to identify as well as capitalize on the existing business innovations and opportunities, their branding, marketing strategies, and so on. Other researchers have taken a more specific approach to examine whether certain parameters in the financial statements of retail banking corporations are associated with their performance in the market.

De Massis et al. (2018) and Vyas and Giri (2016) questioned what would be the best formula for measuring financial performance of retail banks. These measures could be described as income statements, balance sheet financial ratios, stock market, volatility, or Tobin's Q, which integrate accounting values to market values. The capital structure of the retail banks, such as the relationship between equity and debt capital, has been used in many studies as independent variables when exploring the financial performance in various geographical market contexts, organizations, and periods (Arends, 2020; Wall Street mojo, 2020). Generally, the existing link between the retail banks' capital structure and their financial performances has remained an issue of interest and a hotly debated and widely researched topic for several decades in the field of finance studies. The origin of the debate has been linked to the famous Miller and Modigliani's postulate in the 1950s, which argued that the performance of banking firms is independent of their capital structures and that their capital structures are nondynamic and fixed figures that they would not be in a position to alter for some time (Fitzsimmons, 2017; Onyiriuba, 2017). Therefore, it would be easily insinuated that banking corporations barely have control over their capital structures and rather remain subject to the market.

According to Hirtle and Stiroh (2007), Miller and Modigliani's postulation is only valid in some theoretical contexts and lacks empirical support. Other researchers have found that the relationship between the capital structures and the performances of various retail banks is largely dependent on context-related issues such as the industry, country, growth, and strategy (Carlson, 2018; Kothari, 2018; Onyia, 2016). However, contrary to Miller and Modigliani's view, other researchers have also argued that the capital structure

aspect is an active strategy undertaken by retail banking firms and that such strategies are dynamic and not fixed over a period (Barstow, 2019; Deesomak & Thomas, 2007). The link between the capital structure and financial performances of retail banking corporations has been tested in the United States. R. Ahmed et al. (2016) argued that capital structure and financial performance of banking firms are linked to other well-established models in finance, including signaling, pecking-order theory, trade-off theory, agency theory, franchise-value hypothesis, and efficiency-risk hypothesis. Considering some of the corporate finance-related theories, such as the trade-off theory and agency theory, a positive relationship between capital structure and financial performance has been established (Barth & Miller, 2017; Dimon, 2018). Such discoveries have continued to hold despite criticisms, some of which have claimed that these theoretical implications have never been supported by empirical observations of the retail banking firms and that they have failed to acknowledge the financial risks associated with every choice of asset financing (Hirtle & Stiroh, 2007; Kwan, 2015). The criticism appears to be that the theories have so far not reached a common conclusion that would be generalizable to all categories of firms, including retail banks.

Several related studies have addressed the effects of capital structure on the retail bank's financial performances, even though some of the findings have contradicted each other (Johnson, 2019; Oguna, 2014). This kind of mixed evidence and assumptions have provoked researchers to further examine the influence of capital-structure-related decisions on the financial performance of retail banks. Fitzsimmons (2017) maintained that the relevance of financing decisions could not be overemphasized because most of

the factors that have been attributed to risks in retail banks can be effectively mitigated using financial decisions and strategies that drive the achievement of objective and growth in an organization. In that light, the capital structure remains a critical aspect that needs the administrator's attention because it determines the sustainability of banks' financing operations that largely depends on the availability or nature of common stock equity, preferred stock, and so on (A. S. Salim, 2018). Moreover, Anarfo (2015) established that there is no link between the sustainability of retail banks and their capital structures, particularly in terms of sustaining such corporations in times of economic depression or financial crisis. Consequently, theorists and scholars (Klingstedt & Lager, 2016; Modigliani & Miller, 1958) have maintained that capital structure significantly impacts the sustainability of banking corporations, particularly in their financial performance.

All of these theories and findings have indicated the connection between the capital structure and financial performances of retail banks (Pinto et al., 2017; Shiferaw, 2018). The current study addressed capital structure as a course of financial performance, a phenomenon that has been described as capital structure (e.g., preferred stocks, secured debts, and common stock equity) being independent variables while financial performance (e.g., earnings, stockholders shares, liquidity, dividend, profitability, and sustainability) being dependent variables. The current study addressed the relationship between capital structure and financial performance of corporations in the U.S. retail banking sector. Specifically, the study's aim was to establish an appropriate combination of capital components comprising preferred stocks, secured debts, and common stock

equity that would enable retail banks in the United States to yield greater earnings, liquidity, stakeholders' dividend, and profitability.

Problem Statement

The influence of capital structure on the financial performance of retail banks, according to Pinto et al. (2017), has been a topic of empirical study in the field of finance administration. This topic has been widely researched, more so after the occurrence of the great recession in 2008, which saw a dramatic decline in dividend yields in the retail banking sector with a drop from 3% in 2007 to 0.55% in 2008 (Hubbard & O'Brien, 2018). The need to establish the relationship between capital structure and financial performance in banking corporations has inspired part of the research on financial economics following the contribution of Modigliani and Miller (1958) on the capital structure framework. Capital structure is a crucial parameter in the enhancement of the performance and value of banking firms (George, 2015). The decisions on capital structure are critical owing to the impacts such decisions have on the ability of organizations or corporations to survive in competitive market environments. The challenge that most retail banks in the United States encounter when structuring their capital components relates to the determination of their effects on the overall financial performance, which is a crucial factor in determining the value as well as the survival of the retail banks in the competitive market (Berger & Bouwman, 2013). Some decisions pertaining to capital structure made by financial administrators have failed to include the anticipated value to the corporations, although such decisions could have been meant to satisfy the interest of the managers or shareholders (Siqueira et al., 2017). Even when

dividends or shares are not held so closely, the equity owners are usually large in their numbers while a reasonable proportion of shareholders control a significant percentage of the retail banks' shares. Such trends have often contributed to the tendency of these shareholders to have fewer interests to keep in check the managers who, when given such freedom, tend to pursue different objectives that are parallel to that of equity owners.

Retail banks in the United States are known to have unique characteristics that seem to render them attractive for investigation. One aspect is that they are secured with relatively high backing to their assets, which sustains their operations (Hawaldar et al., 2016). Financing choices and equity performance are closely tied to the underlying assets that are valued and held at the prevailing market value on the financial position statement (Amadeo, 2020). Furthermore, retail banking corporations in the United States are in a different market setting, which makes them unique when compared to their counterparts operating in other parts of the world. Corporations in the retail banking sector have collateral deals that could be applied to support their higher debt levels, and according to the trade-off model, this would imply that the financial distress costs are more likely to be relatively lower (Amadeo, 2020). Studies of decisions on capital structure for retail banking corporations in the United States have indicated that such organizations deploy more leverage because most of their assets are treated as debt collateral (Birru,2016). This has seemed to support their optimal capital structure with the target on the leverage concept as provided for in the trade-off framework.

Multiple researchers have tested the hypothesis establishing the connection between capital structure and the financial performance of banking institutions (Hirtle, &

Stiroh, 2007; Widyastuti et al., 2019); however, none of them have been carried out in the context of the retail banking sector in the United States establishing the link with capital structure. Although these researchers have maintained that many retail banks prefer financing new investments or assets from retained earnings and would only raise debt capitals if internal resources were inadequate, the current study addressed the difference between profitability and leverage. I examined the relationship between capital structure and financial performance of U.S. retail banking corporations. The results of the study may effect positive social change by indicating the appropriate choice of capital structure that would offer the best return for the retail banks in the United States.

Purpose of the Study

The purpose of this quantitative study was to examine the relationship between capital structure and financial performance of the retail banks, with a specific focus on the U.S. perspective because the country's retail banking sector is regarded as the strongest (see Kashyap et al., 2008). By establishing the relationship between capital structure and financial performance, I was able to establish the most suitable mix of capital that could result in the maximum performance of the bank in terms of profitability, shareholders' earnings, and other benefits. Capital structure components such as preferred stock, secured debt, and common stock equity were used as independent variables, and they were manipulated to test their impacts on the dependent variables. The dependent variables were testable and measurable variables such as the size of the bank, market share, survival, liquidity, deposits, and working capital ratio, which could be examined statistically. I adopted a quantitative method and causal-

comparative research design. Capital structure was assumed to be a form of finance determined by secured debt to common stock equity ratio compared to preferred stock to common stock equity ratio. The financial performance of the U.S based retail banking corporations was assumed to be greater earnings, shareholders' dividend, liquidity, sustainability, and profitability. The choice of financing that is likely to yield higher growth of dividend is expected to come into action, including reduced cost of capital, especially if the administrators and shareholders in the retail banking sectors are well-disciplined and informed.

Research Questions and Hypotheses

RQ1: What effect does the capital structure combination of common stock equity with preferred stock compared to common stock equity with secured debt have on earnings to sustain banks in times of economic downturn and financial crises?

H_o1: There is no effect of the capital structure combination of common stock equity with preferred stock compared to common stock equity with secured debt on earnings to sustain banks in times of economic downturn and financial crises.

H_a1: There is an effect of the capital structure combination of common stock equity with preferred stock compared to common stock equity with secured debt on earnings to sustain banks in times of economic downturn and financial crises.

RQ2: What effect does the capital structure combination of common stock equity with preferred stock compared to common stock equity with secured debt have on profitability to sustain banks in times of economic downturn and financial crises?

H_o2: There is no effect of the capital structure combination of common stock equity with preferred stock compared to common stock equity with secured debt on profitability to sustain banks in times of economic downturn and financial crises.

H_a2: There is an effect of the capital structure combination of common stock equity with preferred stock compared to common stock equity with secured debt on profitability to sustain banks in times of economic downturn and financial crises.

RQ3: What effect does the capital structure combination of common stock equity with preferred stock compared to common stock equity with secured debt have on liquidity to sustain banks in times of economic downturn and financial crises?

H_o3: There is no effect of the capital structure combination of common stock equity with preferred stock compared to common stock equity with secured debt on liquidity to sustain banks in times of economic downturn and financial crises.

H_a3: There is an effect of the capital structure combination of common stock equity with preferred stock compared to common stock equity with secured debt on liquidity to sustain banks in times of economic downturn and financial crises.

RQ4: What effect does the capital structure combination of common stock equity with preferred stock compared to common stock equity with secured debt have on stockholders' dividends to sustain banks in times of economic downturn and financial crises?

H_o4: There is no effect of the capital structure combination of common stock equity with preferred stock compared to common stock equity with secured debt on

stockholders' dividend to sustain banks in times of economic downturn and financial crises.

H_a4: There is an effect of the capital structure combination of common stock equity with preferred stock compared to common stock equity with secured debt on stockholders' dividend to sustain banks in times of economic downturn and financial crises.

These research questions and hypotheses with an illustration of how independent and independent variables were measured are presented in Table 1.

Table 1

Research Questions, Hypotheses, and Mechanism of Measuring Variables

Research question	Null hypothesis	Alternative hypothesis	How variables were measured
RQ1: What effect does the capital structure combination of common stock equity with preferred stock compared to common stock equity with secured debt have on earnings to sustain banks intimes of economic downturn and financial crises?	$H_0$1: There is no effect of capital structure combination of common stock equity with preferred stock compared to common stock equity with secured debt on earnings to sustain banks in times of economic downturn and financial crises.	H_a1: There is an effect of capital structure combination of common stock equity with preferred stock compared to common stock equity with secured debt on earnings to sustain banks in times of economic downturn and financial crises.	<u>Independent variables:</u> 1. *Common stock equity* = Total equity-preferred stock-additional-in capital-retained earnings + Treasury stock; 2. *Preferred stock* = annual preferred dividend divided the current market price per share; 3. *Secured debt* = measured by calculating the value of all the collateralized debts. <u>Dependent variable:</u> Earning- calculating annual increment in the asset and securities
RQ2: What effect does the	$H_0$2: There is no effect of	H_a2: There is an effect of	<u>Dependent variable:</u>

capital structure combination of common stock equity with preferred stock compared to common stock equity with secured debt have on profitability to sustain banks in times of economic downturn and financial crises?	capital structure combination of common stock equity with preferred stock compared to common stock equity with secured debt on profitability to sustain banks in times of economic downturn and financial crises.	capital structure combination of common stock equity with preferred stock compared to common stock equity with secured debt on profitability to sustain banks in times of economic downturn and financial crises.	*Profitability* = return on assets + return on equities
RQ3: What effect does capital structure combination of common stock equity with preferred stock compared to common stock equity with secured debt have on liquidity to sustain banks in times of economic downturn and financial crises?	$H_0$3: There is no effect of capital structure combination of common stock equity with preferred stock compared to common stock equity with secured debt on liquidity to sustain banks in times of economic downturn and financial crises.	H_a3: There is an effect of capital structure combination of common stock equity with preferred stock compared to common stock equity with secured debt on liquidity to sustain banks in times of economic downturn and financial crises.	<u>Dependent variable:</u> *Liquidity* = measured by the ratio of net loans to customer and short-term funding
RQ4: What effect does capital structure combination of	$H_0$4: There is no effect of capital structure combination of	H_a4: There is an effect in capital structure combination of	<u>Dependent variable:</u> Stockholders' dividend = dividend paid out divided by the bank's total net income

common stock equity with preferred stock compared to common stock equity with secured debt have on stockholders' dividend to sustain banks in times of economic downturn and financial crises?	common stock equity with preferred stock compared to common stock equity with secured debt has on stockholders' dividend to sustain banks in times of economic downturn and financial crises.	common stock equity with preferred stock compared to common stock equity with secured debt on stockholders' dividend to sustain banks in times of economic downturn and financial crises.

Theoretical Framework

Several theories relating to capital structure and financial performance have been documented in the context of financial management and administration. Modigliani and Miller's (1958) model provided the framework for the current study. Modigliani and Miller's theory argues that the sustainability of modern business financing remains a subject of the nature of capital structure selected to establish the performance of the banking corporation. Modigliani and Miller's framework, along with other relevant models, aligned with the current study's problem statement, research questions, purpose, and background. By examining the relationship in connection to the study, I anticipated enhancing the knowledge pertaining to the impact of capital structure on the financial performance of corporations in the retail banking sector, with a particular focus on the U.S. perspective.

In regard to the modern capital theory, Pinto and Joseph (2017) claimed that the optimal capital structures for retail banking institutions are a fundamental factor in determining the normal capital component, the overall capital cost, and the value of the firm. In recognition of the controversy around the relationship between capital structure and financial performance of retail banking corporations, Chou et al. (2017) and Kallberg et al. (2013) insinuated that optimal capital structure presents what corporations have achieved. This outcome discredits ideal conditions; therefore, only a limited number of retail banking corporations use capital structure in determining their financial performances. In contrast, Durand (1957) emphasized the need to focus on the impacts of capital structure rather than dwelling on the value and their capital costs. This argument is reasonable because the cost of capital is affected by the capital structure of the retail bank, especially when it is composed of secured debts.

The possible existence of optimal capital structure has significant repercussions on the overall financial performance of retail banks. When a large amount of the capital is composed of debt, the retail bank corporation accords priority to the debt over taxes, a move that would contribute to poor financial performances characterized by high interests on debts, adversely affecting the profit (Chou et al., 2017). Moreover, there are critical views that concern the capital structure of retail banks, particularly in relation to the value of the bank, capital costs, and how the banks finance their assets with equity–debt combinations (Baker & Wurgler, 2017). However, Chou et al. (2017) insisted on the need for optimal capital structure to neutralize any possible high debt level that would otherwise hinder the bank from achieving its goals associated with financial performance.

Giebel and Kraft (2015) observed that when the capital structure of a bank mainly consists of secured debts, then organizations would prioritize profit over taxes because the remittable interests on the debt would adversely impact the benefits. Such conditions emphasize the significance of capital structure in the determination of the financial performance of retail banks.

The connection between these theoretical frameworks and the nature of the current study was underpinned by the fact that the value of the capital structure consisting of common stock, secured debt, and preferred stock could yield optimal capital structure when effectively chosen or mixed. This would contribute to desirable financial performance outcomes characterized by greater earnings, liquidity, shareholders' dividend, profitability, and enhanced sustainability of the retail banks, especially in seasons of economic downturn and financial crises. This argument aligned with Modigliani and Miller's (1958) model, which maintains that the performance of modern retail banking firms is dependent on the nature of capital choice.

Nature of the Study

To answer the research questions in this study, a quantitative approach was needed to compare the changes of the independent variables such as common stock equity, secured debt, and preferred stock with the behavior of the dependent variables, including earnings, profitability, liquidity, stockholders' dividend, and sustainability. The nature of the study aligned with the problem statement and the purpose statement, which focused on establishing whether debt instruments or preferred stock should be used to finance retail banking activities. Often, retail banking activities have focused on optimization of

earnings, profitability, liquidity, stockholders' dividend, and sustainability in times of economic downturn and financial crises. The causal-comparative design approach was used because it provided ample time for carrying out deductive testing, empirical measurement, and analysis of the hypothesis between leverage ratios and the weighted average cost of capital of banks (see Venkatesh et al., 2013). Usually, the existing relationship between variables is not easily established when the objective measurement is put together. The main concern in the current study focused on assessing the objective measures related to the performance of banks in terms of changes in their capital structures. The approach required quantitative methods of collecting and analyzing data.

The causal-comparative design provided more opportunity for the application of the correlation and descriptive research designs, which are used when the research involves quantitative data requiring an in-depth analysis of secondary sources. A mixed design is commonly preferred because it connects the dependent, independent, and covariate variables to establish the relationship between two or more study phenomena (Venkatesh et al., 2013). The current study involved the use of secondary data consisting of common stock equity, secured debt, and preferred stock obtained from U.S. retail banks selected randomly for use in this research. These data were used as the independent variables. On the other hand, the data related to regulatable parameters such as earning, liquidity, profitability, stockholders' dividends, and sustainability were deployed as the dependent variables in the quantitative analysis. The influence of capital structure on the financial performance of retail banks in the United States is the way in which these dependent variables are affected by the changes in the independent variables. The study

involved the use of secondary data from annual reports and financial statements, including common stock equity, preferred stock, secured debt, market price per share, price-earnings ratio, debts, capital employed, leverage ratio, and weighted average cost of capital. These annual reports and financial statements were obtained from the internet, banks' websites, university libraries, business schools' online libraries, and financial institutions in the United States.

The correlation between these independent and dependent variables was established by extracting and validating excerpts perceived as most relevant from some of the publicly available financial reports and financial statistics or statements of local banks in the United States. Being publicly available implies that these secondary sources could be obtained freely from the public domain or platforms such as websites, databases, e-books, magazines, case studies, published articles, conference papers, and other research report locations in the United States. Some of the data collected from secondary sources included literature review material and scholarly journals from previous research on capital structure and its impacts on performance, with specific reference to the U.S. perspective. The study involved secondary sources of data, with a maximum of 5 consecutive years of financial statements for the 2015–2019 period from a maximum of 30 U.S. retail banks.

Definitions

Capital structure: A combination of debts and equity such as surplus and reserves that comprise the finances of a bank or firm (Siddik et al., 2017). Capital structure has

always been a component of financial management because it is the center of expectation of different interested stakeholders in a corporation.

Debt: Either long-term or short-term borrowing intended to finance the activities of a bank or firm. Many corporations prefer the use of debt to finance their operation because the interests paid on the debt are nontaxable, thereby improving the corporation's value (Iavorskyi, 2013).

Equity: The interests of shareholders on the assets of the firm after the deduction of the liabilities. Equity is often in the form of preferred stock, common stock, retained earnings, capital surplus, and reserves (Stephen, 2012).

Financial leverage: The debt or equity ratios, which are usually used to measure the value of equity in a corporation by assessing the debt portfolio of the organization Sultan and Adam, (2015).

Financial performance: The measure of how good shareholders are by the end of a given financial year or period compared to how the shareholders were initially or at the start of the same period in question (Abbadi, 2012). The state of shareholders is usually determined using ratios obtained from the financial statement.

Return on asset: The bank's net income divided by the average total asset. The ratio determines the firms' ability to use assets to enhance their profitability (Heikal et al., 2014).

Assumptions

This research followed the theory of Modigliani and Miller (1958) and was based on the following assumptions on capital structure. The perfect capital market implies the following:

- elimination of any transaction cost;
- absence of startup cost;
- no investor's action can influence the stock price;
- private and public information are available and accessible by investors without limitation;
- there is no restriction on buying and selling stock;
- companies belonging to similar categories of business have the same risk;
- the borrowing rate (kd) is fixed and constantly lower than the required rate of return on capital employed (ke) (e.g., kd <ke);
- all investors have the same approximation of the anticipated return for individual stocks;
- the net incomes generated by companies are transferred to dividend accounts and distributed to investors/shareholders;
- there is no cost emanated from bankruptcy; and
- taxes do not exist and are not considered, if any.

Scope and Delimitations

I used an empirical study design because the existing knowledge had been trusted for a long time and the empirical method of research helps in integrating both practices

and the research. Also, the instructional science and the educational process required to progress are not complicated. The use of an empirical study design was intended to ensure respect for and recognition of the existing contextual differences while building on the known facts and offering the opportunity for the required standards and levels of professional research. The empirical study design involved the use of secondary data extracted from a sample of registered retail banks in the United States. I also utilized annual reports and financial statements that were freely available from banks' websites and the Federal Reserve website. Because the study relied completely on the data gathered from secondary sources, any errors that might have occurred in the original data collection could not be avoided.

Limitations

Because the secondary data were collected from the existing financial reports of local banks and other confidential publications, access to such data was restricted, which limited the quality and amount of data gathered. Such data, though, are often useful in realizing the ways of financing capital in most retail firms, including banks. Banks officers may have been reluctant to release essential data of their organizations because the data could have contained critical information about their operation and performance secrets against their competitors. Calculations of the leverage ratios, debt, market prices per share, and the weighted average costs of capital presented serious challenges in using large data sets. The requirement of an extra hand to help through the process of statistic analysis may have been necessary, yet it could have led to additional costs of the study. Substantial data sets also required commitment and time to understand.

Significance

Kwan (2015) suggested that there is the tendency of many retail banks to use secured debts as a way of formulating capital structure with consideration of the impacts. The current study was justified because it was expected to call attention to the effect of secured debt and preferred stock financing of capital structure on the performance of the retail banks. There is no standard method of leverage that retail banks should adopt. In the current study, a different perception of capital structure was adopted to answer the question about which level of leverage needs to be attained if options of secured debt or preferred stock are implied. The study may contribute to the realization of whether debt security or preferred stock is convenient and could also indicate which method is more profitable in terms of dividends growth. The study may also contribute to previous research by assessing the likelihood of banks attaining a better performance of their financial operations while maintaining a realistic relationship between leverage and preferred stock or secured debt. There was limited literature on the subject, especially in the determination of which method of financing capital structure provides larger dividends to equity shareholders (see Kwan, 2015); therefore, this study was expected to be beneficial to future researchers who may consider using it as a reference. Moreover, a study of the relationship between capital structures and how a retail bank performs had not been conducted on the aspect of preferred stock combined with common stock equity compared to secured debt combined with common stock equity. This deficit constituted a research gap that warranted the current study.

Significance to Theory

This study was significant in that the level of leverage could be determined if the bank settles for secured debt or preferred stock. Options with higher dividends for investors or shareholders are more likely to be put into consideration as a result. Belkhir et al. (2016) noted that the performance of banks is greatly attached to these factors, including the demand by the retail banking firms for credit as well as the capability to access the credit. There have been significant concerns about the preference of stockholders of local banks on debt as a method of financing banking activities (Dawar, 2014). The return on investment for options of preferred stock or secured debt as a method of capital structure also presents a considerable contribution to their investments, which implies that the capital structure has positive effects on the performance of retail banks (Pinto & Joseph, 2017). When a retail bank recognizes means to encourage profitability by making profits from all of its business projects, the amount available for other businesses to borrow is improved, which indicates an enhancement in the performance (Chou et al., 2017). Therefore, banks are able to provide capital for starting up more businesses through loans, which will enhance community development.

Significance to Practice

The study was expected to contribute to the professional body of knowledge through the use of theoretical frameworks and empirical tests to explain the way capital structure affects the performance of retail banks. The study focused on the way different banking firms choose between equity and debts as well as their relationship proportions to finance their banking activities. Banking managers and stakeholders usually find

unfavorable debt-to-equity ratios if the debt is the most common financing option in their capital structures (Belkhir et al., 2016). The debt-to-equity ratios are fundamental in informing the level of risk involved in managing the capital structure and making viable decisions. In the event of economic distress, determining the level of leverage of a bank remains a contentious issue once optimal capital has been achieved. Moreover, this study was expected to bridge the gap by providing a comparison of secured debt and preferred stock for financing retail banks in the United States. The main purpose was testing the theory of Modigliani and Miller (1958) by relating the capital structure to the performances of retail banking firms. Developed nations such as the United Kingdom have made significant strides toward this research by emphasizing secured debt and common stock equity, but not preferred stock and common stock equity. The findings of the current study may improve the knowledge and understanding in support of professional practice in bank financing by challenging these previous developments while comparing secured debt and preferred stock with common stock equity added in either scenario as part of capital structure. The study may also address one of the significant aspects of establishing corporate finance: capital structure balance for the effective operation of retail banks both in the United States and other regions globally.

Significance to Social Change

Social change is influenced by several factors, including cultural symbols and the overall way of behavior of the surrounding community, availability of economic resources, government stability and flexibility, and diversity in the societal organization (Belkhir et al., 2016). The current study was expected to contribute to community

development by demonstrating the need to improve local banks, which are sources of capital for many organizations. Cultural symbols, which many communities associate with, might be depicted by the findings of the study. When local retail banks implement capital financing methods and policies that have better impacts on their revenues and enhance their overall performances, there is the opportunity of engaging in other community projects, which improve the overall status of communities by enhancing their standards of living (Weisul, 2017). Additionally, the current study may positively impact social change by determining a method of capital structure that offers better returns for banks, thereby providing opportunities for giving back to the local communities. When a suitable way is implied, banks can engage in various community projects as Babania et al. (2018) recommended, including granting scholarships to needy students, championing products and services, establishing health facilities, funding of environmental protection programs, and other services focusing on charity programs to the community, which would improve the overall well-being of the society.

Summary and Transition

This study included the theoretical framework built on the research of Modigliani and Miller (1958). The findings of the study were aimed at providing a detailed explanation of the relationship between capital structure and the financial performance of retail banking firms, with particular emphasis on the U.S perspective. The study of capital structure was intended to explain the way banks and other blue-chip organizations utilize the combination of financial securities to manage their operations. Modigliani and Miller indicated that capital structure is irrelevant under positive constrain assumptions.

Therefore, researchers have conducted studies on capital structure with more relaxed rule assumptions, leading to the affirmation of optimal capital structures. The current study was organized into five main chapters, with Chapter 1 as the introduction. The introduction comprised the background, problem statement, purpose of the study, research questions and hypotheses, theoretical foundation, nature of the study, definitions of terms, assumptions, scope and delimitations, limitations, and significance of the study. Chapter 2 presents a literature review of the capital structure and financial performance of the corporations in Africa, Asia, Australia, and New Zealand, Europe, North America, and South America as applicable when related to the U.S. situation.

Chapter 2: Literature Review

Chapter 2 includes a review of the documented theories and literature on the impact of capital structure on the financial performance of retail banking firms. By exploring these sources, I anticipated that they would provide a strong and reliable foundation for the research. The sections of Chapter 2 provide the basis for developing knowledge and establishing the appropriate scope in streamlining the research questions and objectives to the existing theories addressing the relationship between capital structure and financial performance. The literature review consists of the literature search strategy, theoretical foundation, conceptual frameworks, and summary. The theories explored include the agency-cost theory, capital structure irrelevant theory, pecking-order theory, and trade-off theory. These theories provide an account of academic work and evidence from scholars who have carried out similar research and adopted the same conceptual framework. The general problem of concern with the current studies in the field of capital structure in relation to financial performance was that bank managers are perceived as liable for determining the capital structure, yet this is not the case ideally. The capital structure may involve a combination of common stock equity, preferred stock, and secured debt that will sustain banks in times of economic downturn and financial crisis; therefore, the decision regarding the appropriate combination should involve several stakeholders, including shareholders and the executives. Capital structure formulated after broad consultations would contribute to desirable financial performances characterized by optimum earnings, liquidity, shareholders divined, profitability, and

sustainability of the retail banks, especially in the seasons of financial crisis or economic meltdown.

Literature Search Strategy

The capital structure model was based on the theory of Modigliani and Miller (1958). Most of the literature reviewed in the current study was dated from that time. Studies conducted in the last 5 year, were scarce. Most of the literature review addresses studies conducted around the period the theorists pronounced the findings of their research. Despite these limitations, the current study remained strongly grounded in the existing theoretical frameworks. The literature reviewed in the study constitutes a mixed time frame ranging from 1958 to the present day. The keywords searched from the targeted databases included *capital structure, earnings, dividend, growth, liquidity, profitability,* and *sustainability*. I included brief summaries of recent scholarly articles to justify the perceived problem as well as analytical descriptions relevant to the concept of capital structure and financial performance in the context of the U.S. retail banking sector. The following are some of the pieces of literature that were fundamental in the study.

- Babania et al. (2018) recognized that when the market value of a bank is maximized, the benefits are restricted not only to the shareholders but also to the management and creditors of the retail bank.
- Baker and Wurgler (2015) explained the benefits of capital structure, especially in the improvement of the banking sector profits.

- Belkhir et al. (2016) noted that the description of capital structure and capital value affinity has remained contentious for several years, meaning there has been a question of whether a fraction of debt should be inclusive in the capital of a bank.
- Dalwai (2015) analyzed the impact of corporate governance and the regulations by the government in relation to the overall performance of banks.
- Dawar (2014) suggested that the use of debt funds hurts the way financial institutions perform. Dawar's assumption was in contrast with the agency theory.
- Giebel and Kraft (2015) established that retail banks in situations of secured debt tend to value profits before tax because the interest on the debt of the bank affects the overall benefits.
- Ippoliti (2015) stated a theory to practice, noting the state of the market in the United States as imperfect because making an accurate prediction of the stock market is impossible. Investors subsequently opt to make their evaluation of the present market price concerning the stock of the firm. The current market value of firms is, therefore, critical in finding the worth of the investing firms.
- Ryan et al. (2014) explained that capital structure has a highly significant effect on firms and that tax agency signals contemplation as well as the way other divergent costs affect the value of a bank. The proponents of no capital-structure-value relationship, on the other hand, involve the arbitrage approach instead.

- Siddik (2017) related the findings of similar studies on the impact of capital structure and how they perform in the banking sector of Bangladesh.
- Véron and Wolff (2016) explained that capital structure is vital as a long-term solution to financing retail banks. The use of these sources of funding, including preferred stock or secured debt, enables banks to undertake their operations smoothly.

Table 2

Literature Search With Strategy in Tabular Format

Database/library	Search engine	Search terms	Combination of search terms	Time frame	Literature type	Source	Result	Note
Elsevier Walden University Library	Microsoft /Bing	*Capital structure*	*Capital structure, earnings, growth*	2000 to 2020	Theoretical framework	Scholarly research work and peer review	50	Many literature reviews on this aspect
Emerald Insight/ Walden University Library	Microsoft/Bing	*Earnings*	*Earnings, Growth*	2000 to 2020	Theoretical framework and peer review	Scholarly research Work and peer review	49	Many literature reviews on this aspect
Academia.edu/Research gate	Google/Microsoft/Bing	*Growth*	*Growth, Dividend*	1958 to 2020	Seminal review, Current review	Scholarly review	50	Add in terms of sustainability
Science Direct/ Bizfluent	Google/Microsoft/Bing	*Liquidity*	*Liquidity, profitability, earnings, growth*	2001 to 2020	Seminal review, Scholarly review, Peer review	Literature citations, Scholarly review	0	More details with analysis

Theoretical Foundation

Theoretical foundation in research concerns the philosophical framework on which the study is underpinned and forms the connection between the practical

components and theoretical aspects of the investigation being undertaken (Mostafa & Boregowda, 2014). The current study was underpinned by theories relevant to capital structure and how it influences the financial performance of banking businesses in the United States. All banking businesses require capital to attain their business goals. The sourcing of funds provides the opportunity for making the right selection for the most appropriate financing combinations that would facilitate the banking corporations to achieve desirable objectives such as optimum sustainability, liquidity, profitability, shareholders' dividend, and earnings (Rehman, 2016). Managers in financial organizations rely on valid theoretical frameworks and in-depth research to identify preferred capital combinations that would best suit their organizations. Studying the connection between capital structure and financial performance in banking corporations while relating to the primary underpinning theoretical background allows for a more clear and elaborate comprehension of the factors responsible for the enhancement and growth of banking corporations; therefore, the was a need for extensive description of the theoretical background in this literature review. The relevant capital structure theories that underpinned the study included the agency-cost theory, trade-off theory, pecking-order theory, and capital structure irrelevant theory.

Agency Cost Theory

This theory postulates that the capital structure of any given firm is determined by its agency costs, which usually include both equity and debt issue costs. The costs associated with the equity issued often include agent (e.g., the manager) bonding expenses, principal (e.g., equity holders) monitoring expenses, and minimized principal

welfare associated with divergent decisions of agents from those that would contribute to a maximized principal welfare. Debt issue, on the other hand, optimizes the incentives of owner-managers to venture and invest in highly risky projects that would produce extremely high returns to the owner-managers, although it increases the possibility of failures that the debt holder would have to necessarily share when it is actualized (Salim, 2018). In the event debt holders would predict such failures, then a relatively higher premium would be needed, and in turn, could cause a substantial increase in the debt costs. The agency cost associated with debt includes the opportunity costs normally caused by; the debt impacts on the banking corporations' investment decisions; the bond and monitoring expenditures incurred by both the owner-manager and shareholders; and finally, the cost associated with the reorganization and bankruptcy (Chechet & Olayiwola, 2014). Since it would be seen that both debt and equity incur some agency costs in this particular scenario, then the maximum possible debt-equity ratios would involve the trade-off between these two forms of costs.

In general, agency cost theory encompasses those expenses that a banking corporation would incur, with the costs originating from certain actions of the management. The theory involves shareholders in giving out clear plans and arrangements to the management team on how their banking corporations would be appropriately run (Muneer, Bajuri, & Saif-ur-Rehman, 2013). The management team would then come up with their own arrangements and ignore that of the business owners (e.g., the shareholders). In this way, the aspect of agency theory comes in as an agency-principal, with the management being the agent while the shareholders being the

principals (Means & Berle, 1932). Therefore, Gill, Biger, and Mathur (2011) concluded that the occurrence of agency costs is entirely attributable to the conflict of interest that often arises between the managers and owners of the banking corporations. So far, two types of such conflict of interest have been identified.

Shareholder–Manager Conflicts

This type of conflict of interest emanates from the effort to separate control from ownership. In the event managers do not own the corporations completely, then they are obliged to capture only a portion of the profits acquired from their activities that are perceived to enhance value, although they are expected to be responsible for the whole costs associated with these activities (Jansen & Mackling, 1976). Gill et al. (2011) explained that, instead of working under the interests of the shareholders in order to optimize the value of the banking corporation, the management has always preferred to work towards increasing the size of the corporation in order for them to have benefits associated with control. Moreover, Bloomenthal (2020) indicated that the management officers usually have the necessary incentives that are needed for corporations to grow or expand beyond their optimal sizes and accept even those projects perceived to bear negative net present value. This apparent overinvestment issue could extend to the worst scenario with minimized opportunities for growth and availability of free cash flow in the system (Rajan & Zingales, 2016). Nonetheless, the problem would be addressed by issuing debts to help solve agency problems since debts tend to make corporations commit to remit the money in order to bar managers from making an investment in negative projects (Muneer et al., 2013). These aspects where managers are compelled to

commit to paying cash and restricted from engaging in negative projects are described as a non-discretionary feature of debt.

Shareholder–Bondholder Conflict

In this type of conflict of interest, the shareholders or their elected representatives are usually allowed to make important decisions involving the transfer of wealth or shares from bondholders to the shareholders. Usually, the bondholders are believed to be well aware of the circumstances under which such cases of expropriation of wealth might take place, and they would demand extremely higher returns on their debts and bonds to protect against this (Jansen & Mackling, 1976). Banking corporations with higher growth opportunities may easily minimize this kind of conflict of interest by ensuring lower leverages while at the same time making use of a large amount of long-term debt than other corporations in more advanced industries.

Capital Structure Irrelevance Theory

This theory emanated from Modigliani and Miller's (1958) work, where it is postulated that the value of corporations remains unaffected by their capital structure when the banks are subjected to highly restrictive assumptions. According to the *Capital Structure Irrelevance Theory*, it is maintained that an optimal capital structure does not exist. Durand (1957) disclosed that there is no material impact between the choice of debt and equity financing on the value of the firm. Since then, the Modigliani and Miller (1958) theory has generated many controversies among scholars and researchers, leading to multiple studies on optimal capital structure. According to Ario and Ghafar (2016), the agency cost of debt is the alternative forgone to benefit from debt. Therefore, it implies

that firms, including banks, with limited convenience to trade in assets may have greater debts. Myers (1984) justified that a firm that wants to create new investment may not need to raise capital from issuing of shares but rather through going for low risk secured debt. This recommendation is acceptable because the additional share capital could dilute the current shareholders' equity value and discourage investment in the corporation; existing shareholders may want redemption for cash. In connection to this, Jansen (1989) envisioned that firms with optimal capital structures may be prone to high leverage, an idea which Myers (1984) argued that greater leverage could ease the conflict between shareholders and managers over the most preferred or selected investment. The assertion of Myers (1984) was confirmed by Berger (2002), stating that agency costs would be lower if the leverage ratio is increased. Consequently, there will be an improvement in the performance of the retail bank, all other things being equal or kept constant. The latter used the efficiency risk hypothesis to analyze that Modigliani and Miller's (1958) theory of capital structure could lead many banking corporations to opt for a lower equity ratio because higher efficiency debt could eliminate or reduce bankruptcy cost, especially in the event of economic downtown and financial crises.

Pecking Order Theory

This theory does not consider optimal capital structure as the starting point and, instead, provides the empirical factual argument that banking corporations show distinct preferences for making use of internal finances as either excess liquid assets or retained earnings over external finances (Tarver, 2020). The *Pecking Order Theory* envisions that in the event internal funds are insufficient to finance the prevailing investment

opportunities, the corporation might or might not necessarily look for external financing; however, if it would do so, then they would be expected to select from among the available different external financial sources in a way that ensures minimized asymmetric information cost (Salim. 2018). With the existence of this information asymmetry between the potential financiers and the corporation, the relative finance costs tend to differ from one choice of financing to the other. Moreover, Serrasqueiro and Caetano (2015) noted that having sufficient slack would enable corporations to minimize the information asymmetry, usually associated with outsourced financing. Either the information asymmetry-related pecking-order or trade-off theory as used in capital structure has received weak support. The resulting financing pecking order has been, therefore, as follows; firstly- internally created funds, and secondly- low-risk and share financing.

Myers and Majluf (1984) suggested that *Pecking-Order Theory* contends corporations have certain preference orders for the capital to be utilized to finance their businesses. Managers have, however, tried as much as possible to avoid issuing equities whenever it is possible. Furthermore, Serrasqueiro and Caetano (2015) have predicted that managers would always adopt a pecking order approach by first utilizing their internal funds, followed by risky debts, and eventually resorting to using equity as the final option. Nonetheless, Graham and Harvey (2020) maintained that in the incidences where investment opportunities are absent, retail banking corporations have often retained their profits while building up financial slacks to avert having to necessarily raise funds externally in the future. The *Pecking Order Theory* considers the market-to-

book ratio as one of the most effective approaches to measuring the availability of investment opportunities. While bearing in mind such interpretations, Myers (2001) observed that the typical link existing between the capital structure and market-to-book ratio is challenging to reconcile using the static pecking order framework. Moreover, the iterations from such static versions have equally suggested that opportunity moments for high investments would seem to thrust higher leverage towards the possible capacity of the debt. At extents where higher market-to-book ratios coincide with higher investments, such periods end with lower leverage. The existing empirical evidence concurs with the postulations of the trade-off and the pecking order theories (Serrasqueiro, & Caetano, 2015). Moreover, the empirical tests to establish whether either *Trade-Off Theory* or *Pecking-Order Theory* would be an appropriate predictor of desirable capital structures provide support for the capital structure theories.

Trade-Off Theory

Essentially, the term *Trade-Off Theory* has been used widely by different scholars to adequately describe and package related theories. This theory provides that a corporation, as a business entity, has a duty upon itself to define the reason for its seeking debt and equity financing (Myers, 1977). In their views, Serrasqueiro et al. (2011) explained that in all the involved theories, the managers responsible for the operation of the corporation assess some of the various benefits and costs of leverage arrangements. Normally, the assumption is made that the interior solutions are obtained so as to ensure that marginal benefits and marginal costs are well-balanced (Myers, 2001). The first-ever version of the *Trade-Off Theory* stemmed up from the debate and arguments over

Modigliani and Miller's model. By integrating corporate income tax to the initial irrelevance, debt benefits are created as it serves to shield incomes or earnings from being taxed (Bloomenthal, 2020). As the objective function of the corporation remains linear with the provision to offset the debt's cost, it implies 100 percent debt financing. With this, it remains the fact that several aspects of the definition of *Trade-Off Theory* as Myers had packaged merit further discussion and debate.

In the first place of such debates or discussions, the target would not be observed directly, and it remains imputable from the existing evidence; however, it all depends on whether a structure is added or not (Salim, 2018). Several pieces of literature have tried adding this structure in many different ways. Secondly, it would be debated that the tax code presents higher complexities than would be perceived by the theory. Nonetheless, Serrasqueiro and Caetano (2015) reminded that varying conclusions about the target would be drawn, albeit depending on the tax code features or aspects that are included for consideration. The third debate would be that the cost of bankruptcy must necessarily be the cost of deadweight instead of transferring from a claimant to the other. In their contribution to the concept of bankruptcy costs, Grace and Mira (2018) concluded that the nature of such costs is equally important. Fourthly and lastly, the cost of the transaction must assume a specific form in order for the analysis to apply or function. In order to attain gradual adjustments instead of abrupt ones, then the marginal cost incurred in the adjustment must substantially increase, especially when such adjustments are relatively larger.

Traditional Model of Capital Structure

The traditional theory of capital structure is one of the conceptual frameworks of the model originated from Ezra Solomon (n.d). According to him, a firm can increase its debt proportionately to increase its total value by reducing its overall cost of capital. Debt is easier to raise than equity funds because the protocol for the former is not strict as the latter. Solomon's traditional approach to capital structure contends that a reduced amount of debt can lower the firm's overall cost of capital, thereby enhancing the firm's value. The original increment in the cost of equity is more than offset by the lower cost of debt. But as debt escalates, shareholders discern tremendously, and the cost of equity increases continuously to a point at which the advantage of lower cost of debt is more than offset by more expensive equity.

The Modigliani and Miller (1958) version of the traditional model of capital structure stipulates that a company's economic reputation is impacted according to the extent they are financed. The theorists' model further explained that an upward or downward movement in the instruments used for financing a company's capital structure, such as common stock equity, preferred stock, and secured debt, could account for its market value. This analogy is epitomized by the fact that, in the real world of business enterprising, the more money in a person's disposal-just like an organization is an artificial person, the greater economic comfort the person enjoys. According to Fred (2015), the optimal capital structure can be achieved by companies when the weighted average cost of capital is minimized. In the traditional model, there is a relationship between capital structure and the value of the firm.

Literature Review

Empirical Review

This section explores various previous relevant studies that had been conducted by other researchers in the field of capital structure of retail banks in relation to their financial performances, particularly in the context of the United States' retail banking sector. Several studies have conducted empirical tests to investigate extensively the relationship existing between the capital structure and the profitability of firms listed in the stock exchange market (Amarfo, 2015; Barker & Wurgler, 20; Gill et al., 2011). How different firms or corporations chose between equity and debts in the appropriate proportions to finance their business operations, a phenomenon that has become the central focus of the current studies. Krishnaswami et al. (1999) further noted that the analysis of debt issues could be examined from the aspect of *Agency Theory* and cost arising from the principal threat. Essentially, it is worth arguing that debt can be used to provide a solution to agency problems between shareholders and secured debtholders as well as shareholders and corporate officers (Jensen & Mackling, 1976). The work of managers will be efficient when their organization is able to maximize profit from projects financed by debt, common stock equity, or preference shares. The implication is that when a firm is financially sufficient, corporate managers are more comfortable exercising due diligence and ethical behavior. Financing a company with debt may lead it to financial distress but will not alter the control potentials of the shareholders. On the other hand, issuing common stock equity to raise money will dilute the shareholders' voting rights. The best choice for companies is to issue out redeemable preference shares.

The redeemable preference shares could be called back when the company attains its financial stability. The right issue is additional common stock equity offered to a company's existing shareholders. With both choices, shareholders' control will not be altered.

Variables of Capital Structure

In this study, the notable variables on banks' capital structure are profitability, liquidity, stockholders' dividend, earning growth, sustainability, common stock equity, secured debt, and redeemable/irredeemable preferred stock. This part of the literature review explains these variables of capital structure.

Profitability

Danis et al. (2014) suggested that corporations prefer raising their capital from a range of sources, starting with earnings, followed by debts, and then new equity. This approach to raising capital, according to Velnampy and Niresh (2012), has been preferred by many firms citing a relatively high cost of transaction involved in issuing out new equities when compared to debts. Having agreed with these findings, Shubita and Alsawalhah (2012) added that the aspect of pecking order would also come into play as a result of information asymmetry. In their model, Fama and French (2002) observed that going by simplified *Pecking-Order Theory*, the amount of debt would proportionately increase as the investment tends to exceed the retained earnings and subsequently fall when the investment amount becomes less than the total retained earnings. This relation implies that when the profitability remains constant, and the retained earnings

continuously exceed the investments, then the amount of leverage would be relatively lower for firms that are more profitable.

Now drawing from the concept of trade-off model and in consideration of the bankruptcy costs, Velnampy and Niresh (2012) indicated that the agency cost associated with a manager-security holder and the corporate interest expenses predicts a favorable relationship between debt ratio and profitability. However, while borrowing from the idea of the *Pecking-Order Theory*, Shawal (2020) maintained that when costs of the transaction, as well as that of information asymmetry between outsiders and insiders, are taken into consideration, it indicates that the relationship between debt ratio and profitability would be negative since the retained earnings are utilized. Subsequently, it then becomes positive when debts are issued, and again, negative whenever new equities are raised. Therefore, profitability forms a fundamental component of a corporations' capital structure.

Liquidity

Sharma and Paul (2015) asserted that many banking sectors or industries relying on liquidity had presented varied liquid levels to satisfy their requirements for operations as well as to effectively manage the rate of return for firms. In support of this argument, Ghasemi and Ab Razak (2016) suggested that the aspect of liquidity remains one key factor considered in the determination of the capital structure of the corporation. Similarly, Rodrigo (2018) acknowledges the findings and interjects that the *Pecking Order* and *Trade-Off* theories do not have a common ground of understanding in regard to the connection between leverage and liquidity. With this kind of capital structure,

highly liquid corporations have the advantage of satisfying their business obligations while acquiring more debts. Nevertheless, the negative approximation of the possible impact of *Pecking-Order Theory* would be simplified as most corporations prefer internal funding to external financing.

Dividend

A dividend payment depends on the extent to which the independent variables of a capital structure perform. With that said, it implies that the stockholder's dividend is a dependent variable of capital structure. A dividend is the sharing of the organization's earned profit from operations to the shareholders as decided by the board of directors after apportioning part for reserve (Boyle & Chen, 2020). Stockholders that hold common stock equity of dividend-paying companies are likely to qualify for dividend payment in as much as they own the stock before the ex-dividend dates. The dividend could be paid out in cash or by issuing additional stock right issue and treasury stocks to the existing shareholders. Information about dividend payout materializes when there is a comparable increment or decline in the company stock price (Boyle & Chen, 2020). Blue-chip companies that engage in oil and gas, banking and financial, basic materials, health and pharmaceuticals, and utilities, tend to frequently distribute dividends to investors to ensure stockholders' confidence, trust, and wealth accumulation. Shareholders' dividends may change capital structure because retained earning hikes common equity (Eshna, 2016). The meaning of this expression is that high dividend payout results in a drastic decrease in reserve- the retained earnings, which forms one of the capital structure

components. On the other hand, a less or no dividend payout will increase the firms' capital structure.

Earnings

Banks do not make sales because they are not involved in the selling of physical goods. Revenue from banking services is better classified as earnings. Fitzsimmons (2017) maintained that a strong capital structure implies the potential for earnings to grow. Earnings growth is the rate of upward improvement in a company's earnings per share (EPS) in a given duration, in correlation with the same period from the preceding year. Earnings may also be related to different firms in a class of industry or sector. Earnings growth is a variable that depends on the capital structure model because the stronger the equity and secured debt of a bank, the better the bank grows in terms of earnings. An efficient capital structure is one with higher leverage. A bank with stronger outstanding shares, the capital stock used to calculate market capitalization, yields greater earnings with no debt (Scott, 2020). Therefore, it translates that companies with better capital structures are more efficient, liquid, less risky, and able to survive without debt. According to Chen and James (2020), the strategy of the growth rate of a firm also depends on its ability to maximize earnings. Growth changes the annual variable of earnings proportionately to the investment worth. The growth rate in earnings is beneficial in measuring corporate achievement and predicting its future performances. As such, it has been understood that the more expensive and exotic the company's capital structure (comprising of the independent variable—common stock equity, secured debt, and preferred stock) are, the wealthier and more powerful its stockholders, corporate

officers, and the business earnings potentials becomes. The capital structure of a bank is highly determined by the increase and cohesion of its earnings. If its earnings are expected to remain adequately stable, it can raise a greater amount of debt if it wants to. A sustainable earning gives the assurance that the firm will not face any financial hardship in meeting its fixed obligations of interest payments on debts. On the same note, the rate of growth in earnings affects the capital structure decision. The greater the growth in earnings, the better chance of the firm to borrow money for further funding. On the opposite side, in a situation where the firm's earning is highly going up and down or experiencing a turndown, debt financing will not enhance the strength of the capital structure.

Sustainability

Sustainability is one of the dependent variables of a capital structure. Adequate finance of a lending institution with equity, secured debt, and preferred stock leads to the survival of the bank for a protracted number of years without sinking in bankruptcy. Operational self-sufficiency and sustainability are vital indices of a strong capital structure (Bogan, 2017). Moments in the life cycle of a firm are characterized by the number of years that it has been operating (De Sausa-Shields & Frankiewwicz, 2019). The sustainability of the capital structure of a bank is judged from the perspective of new, young, and mature managers (Bogan, 2017). Operational sustainability is defined as having operational self-sufficiency of 100% or more, while financial sustainability is having an operational self-sufficiency level of 110% or more. Bogan (2017) measured operational self–sufficiency as:

$$\textbf{\textit{Operational self} - \textit{sufficiency}} = \frac{\textbf{\textit{Total Financial Revenue}}}{\textbf{\textit{Financial Expenses} + \textit{Operating Expenses} + \textit{Loan Loss Provision Expenses}}}$$

Finally, the study concluded that the independent variable of capital structure concentrates on the outreach, efficiency, and financial sustainability of a firm. According to Booth et al. (2001), many capital structure decisions are influenced by the same variables in both developed and developing economies. The takeaway idea here could as well be applied to the knowledge of optimal capital structure for banks in general, especially during economic downturns and financial crises.

Common Stock

Common stock is the financial security that serves as the credential for ownership of a corporation. Holders of common stock appoint the board of directors and cast ballots on company policies (Chen, 2020). This form of equity typically yields higher dividends to investors. Ambrose (2019) argued that common stock equity is the primary foundation for the capital structure of a retail bank. The author emphasized that should a company go through liquidation, common stockholders will claim remnants of the company asset after a full settlement of secured debtholders, preferred stockholders, and other creditors (Ambrose, 2019). Common stock equity is an independent variable because it is the basis of financing the company, and other financing options look to it because it is a contribution from the founders and the commitment from the original owners of the investment. Anarfo (2015) states that capital structure is the financing mix of debt and equity used to finance the firm. This statement implies that secured debt, common stock equity, and preferred stock are independent variables that determine the dependent variables. The fact is that in the event of bankruptcy, the common stockholders are only

paid either in cash or in-kind after all other creditors and classes of securities are settled, which makes it a highly risky investment for common equity holders. Arguably, common stock is an important part of any investor's portfolio of investment. They carry heavier weights of risks when compared to the certificate of deposit, preferred stock, and secured debt. Jiang (2020) puts it that greater risk of investment comes with higher reward potentials. Despite the volatility exposure experienced by common stockholders from common stock equity, in the long run, common stock equity still stands a greater chance of lucrative performance over other forms of investment instruments. Some common stocks are issued to target companies' growth value due to growth in earnings, hence, the issuer can tag the stock as a growth stock. In contrast, the value stock is tagged by issuing companies that are risky to invest in because of their newness in the capital market. Common stock could as well be classified according to the company market capitalization, which can be large, medium, or small (Chen, 2020). Stable corporations trade their stock in the first-class capital market such as New York Stock Exchange, etc.

Secured Debt

Secured debt, also known as debenture stock, is a type of bond or long-term financial instrument backed by collateral, also known as the borrower's asset. The reason for the collateral is to mitigate the risk the lender may incur should the borrower become unable or refuse to repay. Banks and other firms float secured debt to raise capital structure (Chen, 2020). Secured debt is an independent variable component of the capital structure because it is used to finance and determine the financial performance which is in terms of profitability, liquidity, dividend, and sustainability. Common stock, preferred

shares, and secured debt are typical examples of independent variables. Lenders will prefer to provide debt capital to corporations with excellent financial standing by way of secured debt instead of unsecured debt since the former is a less risky investment while the latter is highly risky. Lenders will restrict a corporate borrower from disposing of the collateral asset by placing on it any kind of lien. In other words, debt capacity increases liquidity. In as much as the collateral asset is physically in possession of the borrower, lenders will be prepared to provide funds (Morellec, 2001). The large body of schools of thought argues that corporate debt is symbolized by heterogeneity (Morellec, 2001). Perhaps, this argument was based on the findings of the agency theoretical research, which describes the symbolism of debt heterogeneity as multiple types of debt that form a consortium of debt in the capital structure of retail banks. Such findings are attributed to groups of scholars, including Bolton and Freixas (2000), Diamond (1991, 1993), Demarzo and Fishman (2007), and Park (2000). Rauh and Sufi (2008), who classified corporate debt heterogeneity into bank debt, straight bond debt, convertible bond debt-commercial paper, mortgage debt, and all other debts. These debts are prioritized according to the purpose they serve. For this study, one key concern is secured debt which represents one of the components of a bank's capital structure.

Preferred Stock

Stock is a representative of one's interest or ownership of a corporation. Preferred stock or preference share, as it is called in the commonwealth countries, gives the secured debt holders the right to a higher dividend distribution than the common stockholders (Ganti, 2020). Preferred stockholders also enjoy the advantage of getting paid first when

the company declares dividends. In the event that the company liquidates, the preferred stockholders are settled first before the common stockholders. However, the secured debt holders or bondholders will be paid before the preferred stockholders. The equity-common stockholders are only entitled to any cash balance or asset distribution that remains after all other creditors are settled (Scott, 2020). In any given year, when a company is unable to pay or declare dividends, preferred stockholders will have theirs carried forward to the next dividend period and accumulated for them; that only applies to accumulated preference stock. Also, preferred stock is classified as redeemable and irredeemable stock. Redeemable stock means that the issuing company can call back the stock at a certain time and pay the holders the face value of the stock, which does not apply to the holders of irredeemable preference stock. Even though the preferred stock has all these benefits over common stock, preference shareholders are not equity holders. This assertion implies that the preferred stockholders do not take part in the ownership of the corporation. The takeaway point here is that in the long run, in as much as the business continues to exist, common stockholders stand to benefit the more due to the share valuation and appreciation. Preferred stockholders do not have the authority to vote in shareholders' meetings or to even appoint a proxy to represent them. In considering preferred stock as a capital structure component, it is an independent variable because it plays the same role as the common stock equity when used as part of a firm's capital structure.

Determinants of Capital Structure

Raising funds to start a project is a hardline decision to make, especially for the banking businesses. Capital structure refers to a company's long-term source of funds (Shawal, 2020). Leverage is the key element of capital structure, and it is the application of sources of funds that enables the firm to incur fixed costs such as rent and cost of storage or pay for annuities to keep on the operations of the firm should it not be solvent enough to acquire its own building or purchase assets such as motor vehicles (Acaravci, 2015). Leverage is the pro-rata component of a company's long-term sources of funds which is based on their overall influence on the total capitalization of the firm. There are qualitative and quantitative factors that contribute to corporate officers' decisions on which capital structure combination will favor their organization. Planning is the most essential ingredient in capital structure decision-making. Lack of adequate planning yields a negative capital mix which could result in a firm's insolvency. There have been multiple studies on the factors that influence the choice of capital structure of a bank. Examples of such research studies carried out are those of Alamai et al. (2020), Touil and Mamoghli (2020), and Yildiz and Karan (2020), just to mention a few. In connection to these studies, the notable contributing influences on the choice of banks' capital structure are the size of the firm, financial leverage, assets tangibility, growth opportunities, and age of the firm. The numerous empirical and theoretical studies reveal more other factors that influence the capital structure, and more highlights have been to clarify the possible determinant.

As such, this section presents a brief analysis of the characteristics that differentiate theories of capital structure offer that may affect the firm's liquidity, earnings growth, shareholders' dividend, and sustain banks in times of financial crises and economic downturn. These attributes are the collateral value of assets, industry classification, volatility of the business, return on asset, growth, uniqueness, industry classification, size of the firm, and profitability. This part has also discussed the relationship of these aspects to the optimal capital structure preferred and their discernible indicators.

Age of the Firm

The longevity of a firm determines its growth and its overall annual performance. This analogy also implies that the age of a firm is a factor in its growth. As Aniekan, Nsikan, and Udosen (2019) had stated, a firm's persistence in its line of business signifies a better performance than the contrary. Abdullahi et al. (2010) state that when time elapses, the hazard encountered by a business is put behind it after surviving a hard time, hence, the firms' setting, and footing will improve. The registration of a firm accounts for its existence till its present-day operations, supported by its economic viability (Shumway, 2001; Person, 2004). The journey to the aging of a firm shapes its moments in awfully going concern. The tenure of a company enables its application for capital market listing to gain easy approval. Lodener, Waelchli, and Cherokee (2020) assert that the capability of a firm to sustain its capital structure, multiplies its growth opportunities, and increases its exposure to the media and educational institutions, justifies its suitability and survival in the industry environment, although such factors depend on the age of the

corporation. Numerous studies that emphasize the age of the firm, including that of Shumway (2018), Pastor and Veronesi (2017), Farmer and French (2019), and Chun et al. (2018), also apply a method to assess the age of such firms. The affinity over profitability and firm age are contentious; some argue that there is an idealistic fundamental link surrounding the age and value (Akinyomi & Olagunju, 2012; Halil & Hassan, 2012; Papadogonas, 2007). Others have bestowed unsavory or undesirable relationships (Coad et al., 2007; Dogum, 2013; Majun, 1997). This diverse feedback has made the argument tentative. Loderer and Waelchli (2010) dissect the effectiveness of connections surrounding firms' age and performance, engaging a know-how position constituting 10,930 registered corporations in the U.S. from 1978-2004. The outcome from their experiment recorded that as corporations become bigger in size, their return on asset, Tobin's Q ratio, and margin of profit tend to decline. However, the finding is contrary to that of Coad et al. (2013), which established that older corporations cherish greater returns, and profits are recognized between firms' age and performance. Ghfoorifard et al. (2014) had their evidence to disagree, and they analyzed the link between age, size of the firm, and financial performance in 96 listed companies registered in the Hong Kong stock exchange market from 2010-2013 and supported the effectiveness of connection between firms' age and their profitability. Hubbard (2018) conducted research for small banks in New Zealand; also, Edhart (2016) for small and medium scale enterprises in Germany. Harris and Ravi (2017) conducted tests on 100 firms of real sector corporations from 2010 to 2013 in Japan but did not confirm the connection between firm age and return on asset. Also of importance is that the study by Frank and Goyal (2008), from

2003 to 2006 on 160 firms in Amsterdam. The study model demonstrated a reliable relationship between profitability and the age of a corporation. On the contrary, Dogan (2013) established a detrimental affinity between firm age and return on assets, testing the existence of various relationships on data obtained from 200 listed firms in the year 2008 to 2011 inclusive. Ashcraft (2008) upholds that organizations' passive tradition in recent times indicates that they are felicitous to establish a rigid and difficult to accept changes within the ambiance. New companies eventually produce small portions exhibiting poorly fashioned brand names, lack of capital, and company names with older companies (Kakani et al., 2001; Salim, 2018). Long-standing corporations are accomplished, rich with superior performance, and are not susceptible to liabilities of age. In addition, long-standing corporations enjoy reputation and assets duration, which guarantee them an exclusive pillar on a better sales achievement. Inasmuch as the age of a firm has a positive impact on its performance, it is still relevant to recognize the age of the firm as a vital variable of capital structure.

Assets' Tangibility

Campello and Giambona (2011) argued that the nature of assets that a corporation owns has a direct effect on its choice of capital structure. Arguably, one could imagine from the analytical point of view that tangible assets are always used as secondary security to guarantee the approval of a loan, and again, tangible assets are productive assets that power other factors of production. With that, Muritala (2012) supported this argument by predicting that the asset is a key determiner of the composition of a firm's capital structure as it encompasses the ratio of the available tangible assets to the total

assets as well as the ratio of inventory to total assets. Furthermore, Lim et al. (2020) emphasized the existence of a positive relationship between leverage and tangibility as well as the negative relationship between leverage and intangibility. Nonetheless, the theory of trade-off portends a positive relationship between tangible and leverage assets. Campello and Giambona (2011) added that tangible assets usually provide higher collateral value than intangible assets, which means the tangible assets have the capability to support many debts. Therefore, it is evidenced that tangible assets minimize the costs associated with financial distress; thus, making it an important variable in the formation of capital structure.

Salim (2018) claimed that greater tangibility takes down the vulnerability of the debtor and will increase the worth of the assets in the case of insolvency. Demiurge and Maksimov (2001) discovered that the greater a firm's tangible asset is, the higher the likelihood that it must float secured debt instrument; conversely, the lesser the tangible asset, the more evidence of a declining business; hence, there is a possibility that there is a close relationship between tangibility of asset and leverage. Considering the prominent aspect of a bank's performance, the ownership of tangible assets is deemed essential. Many pieces of literature on capital structure and the performance of banks have revealed the existence of correlations between financial performance and tangible assets ownership. Hernández (2018) claims that firms that rely on intangible assets as a sole end to sustainability will make indebtedness and larger outlays of financial distress than the firm which maintains larger investments on tangible assets. Researchers have carried out separate empirical studies on investment in tangible assets, which have yielded different

results to companies, including retail banks. Gonzales (2018) reviewed the effect of a bank's venturing in tangible assets on its operating margin of profit. Four major banks in Panama were investigated from 2007 to 2012, and the finding indicates that although the relationship between the amount of venture in tangible asset and its impact on operating profit was positive, the result was not statistically dynamic. Thus, it implies that the result did not encourage any impressive positive effect of conjecture in tangible assets on the operational profit of banks in Panama.

In looking into the other side, Allen and Frank (2019) explore the effect of venturing in tangible assets on the profitability of banks in Canada. They gathered information from the twelve-monthly report and account for ten major banks in Canada between the same period of 2007 to 2012. The connection between the dependent variable, profitability, and the independent variable, common stock equity, displayed a significant relationship between them. In a further study, Almanza (2011) used a simple regression analysis technique to assess the financial performance of seven Jordanian banks from 2005 to 2009 and envisaged the impetus of variables drawn by the asset management, bank size, and operational efficacy on financial performance. The study was used to certify that higher shareholders' equity, assets, credits, and total deposits do not, on their own, help banks to attain higher profit performance. The relation between financial performance and operational efficacy in asset utilization and asset size occurred and was well-established with the multivariate breakdown that financial performance is strikingly one-sided by the declared rationale. Allen, Carlett, and Marquez (2015) in researching the effect of capital structure in the banking sector of New Zealand explored

derivatives of profitability, liquidity, tangibility, interest rate, and growth rate through the use of financial information of five banks between 2011 to 2014. Their results showed that there is evidence of a close relationship between financial performance and capital structure. In this study, asset tangibility is a dependent variable because funds generated from the issuing of shares, such as common stock equity, will be applied to the acquisition of tangible assets. However, the tangible asset is only listed in this aspect of the dissertation paper but does not constitute a major variable. Therefore, it is inevitable that the type of assets that a firm owns would have significant effects on its decisions relating to capital structure.

Collateral Value of Assets

Grossman and Hart (1982) iterated that, tangible assets have the likelihood to pose significant effects on the retail banking corporations' decisions to borrow as they are relatively less exposed to the cost of information symmetries and that they normally bear greater values than compared to tangible assets in situations of bankruptcy. Titman and Wessels (1988) concurred with this finding and added that the standard hazard risks are substantially minimized when the banking corporation issues out tangible assets as collateral security. This is applicable since it implies a positive signal or indicator to the creditor who, in any case of default, would ask for auctioning of the existing assets. In that perspective, tangible assets seem to serve as perfect collateral for the corporation to acquire loans. Similarly, Rampini and Viswanathan (2013) argued that a banking corporation would alternatively have the value of its equity increased by simply issuing out collateralized debt in the event the existing editors have not given such guarantees.

Therefore, Titman and Wessels (2019) concluded that most retail banking corporations set aside incentives to enable them to do so, and anyone would undoubtedly anticipate a positive connection or relationship between the degree of leverage and the value of tangible assets.

In consideration of agency issues between shareholders and managers, Gómez et al. (2014) suggested that the banking corporations having more tangible assets are optimistic of more opportunities to acquire additional debts; hence, increasing the proportion of debt in the entire capital structure. Nonetheless, Myers and Majluf (1976) associated this kind of financing to the behavior of some managers with the tendencies to deliberately decline the proposals to liquidate corporations even where the value of liquidation is much higher than the overall value of the organization. Yet, Jensen and Meckling (1976) and Scott (1977) explained that, indeed, it is a fact that by maximizing the leverage, the likelihood of default tends to increase exponentially, all of which are to the shareholders' benefits. In this way, the impact of using assets as collateral on the capital structure of the corporation is positively eminent.

Now drawing from the perspective of the *Pecking-Order Theory*, Graham and Leary (2011) argue that banking corporations with very few tangible assets lack collateral security, which subjects them to be more sensitive or vulnerable to the problems associated with information asymmetry costs. In concurring with this assertion, Myers (1984) and Galai and Masuli (1976) explained further that such corporations would, therefore, prefer issuing debt rather than equity whenever they would be in need of external financing; thus, contributing to the anticipation of a negative or undesirable

relationship between the leverage and the valuable intangible assets. However, several empirical investigations have made conclusions that there are positive relationships between the debt level and the collaterals.

Volatility of the Business

Mallisa and Kusuma (2017) asserted that the volatility in a business would be perceived as the proxy for the corporation risk or the bankruptcy probability of the firm. Having agreed with this assertion, Ahmed and Hla (2019) explained further that the volatility of a firm is normally regarded to have a negative relationship with the corporation's leverage. In that regard, Dreyer (2011) illustrated that a banking organization would be said to be highly volatile when it is affected by season, weather, or emotion. For instance, the price of a hotel room is affected by seasonality because during the winter season, people want to travel out of cold areas to where it is warmer or has a more favorable climate, and as such, the demand for the service of the concerned business will deteriorate.

According to Mishra (2011), the assumption of the negative relationship between volatility and leverage was empirically established. Nonetheless, Bradley and Kim (1984) elaborated that as the variance of the corporation assets' value tends to increase, then the systematic risk of the existing equity significantly decreases. Therefore, Ghasemzadeh, Heydari, and Mansourfar (2019) discussed that the risk of business is anticipated to be positively related to the corporation's leverage. In that light, the confirmation of this positive relationship between the leverage and volatility of the corporation is entirely attributed to Mishra's (2011) work. Contrarily, the discovery of the negative relation

between the two mentioned variables is reportedly owed to Dreyer (2011). The volatility in the earnings of a banking corporation bears a portended negative effect on the level of debt. To emphasize further the power of volatility in relation to business operations of the bank, Ahmed and Hla (2019) explained that any banking corporation sensing great volatility or high risk in its earnings or profits has a high likelihood to become bankrupt; thus, have very low and inadequate creditworthiness to acquire more debt. With this, it would be valid to hypothesize or conclude that there is a negative connection or relationship between volatility (risk) and the capital structure of the retail banking corporation.

Ghasemzadeh et al. (2019) explained the effects of volatility or risk by showing that borrowed funds often have disadvantages to a firm because the higher the indebtedness ratio, the delicate it becomes to the corporation, and the cost of funding and equity increases. Also, Mallisa and Kusuma (2017) agreed with this argument and posed that if the corporation faces tough times and its operating profit is not sufficing to cover interest expense, the stockholder will have to finance this deficit from their own wealth, and if they cannot, the corporation will be declared bankrupt. In this way, it would be deduced that earning-related risks negatively impact the debt-equity ratio since risks associated with such high earnings cast serious doubts on the ability of the banking corporation to pay interests or dividends to shareholders as well as affects the levels of debt.

Return on Asset

Khrawish (2011) postulates that return on asset (ROA) is an important factor to consider in assessing the performance of a bank. The return on assets is derived by dividing earnings by total assets. Return on asset indicates the ability of a bank to increase earnings and profit by using its resources through its agents to access financial potentials. The bank agents are the directors, managers, and officers who act on its behalf. DeMarzo (2014) explained that return on asset (ROA) displays how efficient the bank is as a result of converting its asset to create higher revenue. In addition, return on asset is used to measure the way the bank management exercises skills of applying net income to absorb capital expenditure, yield dividends to shareholders, and create reserves for the organization. According to Wen (2010), the higher the return on asset, the sooner the bank attains its operational efficiency and both short-term and long-term goals.

Iyer et al. (2014), in their paper, proved a positive relation regarding the components of capital structure and financial performance of Norwegian banks. The study is drawn out from an astute work on determinants of capital coordination of banks in the Scandinavian country from 2007-2009 by creating the use of financial data of banks registered in the country's security market. A covariate analysis depiction of all banks operating in Norway was utilized in the study over the period of 2007-2009. Financial performance was evaluated using earning per share, return on equity, and return on assets considering that the independent variables were short-term debt, long-term debt, and total debt to capital ratio. The research work of Salim (2018) cites an analysis of the study conducted by Gleason et al. (2000) on the relationship between capital structure

and performance from 14 European commercial banks that exhibited the presence of a dismal alliance between the capital structure of those banks and their return on assets (ROA), sales growth, and earnings before tax. To validate the result, the capital structures of these banks were flecked by the ROEs and ROAs. The performances of the banks were fashioned with social inspiration overall. The young and growing banks have the prospect of generating more dividends to the investors. The research work of Cohen (2013) addressed the relationship between capital structure and liquidity management. The researcher, in his study, investigated European banks by using cash flow and the correlation to assess the performance as well as the rate of the cash conversion cycle. The study compared the compatibility with the financial performance measured by ROAs and ROEs and established that there exists a link to trade direction. However, it affirmed the effect of capitalization on operational efficacy.

Return on Equity

Vătavu (2015) stated that return on equity (ROE) is the ratio applied to measure or determine the benefits accruing to the shareholders as a result of their investments in the banking corporation. Velnampy and Niresh (2012) agreed with this definition and mentioned other names used to refer to the ROE, including return on net worth, return on average common equity, and return on ordinary shareholders' funds. They further added that ROE applied to establish return rate on the interest-related interest (e.g., shareholder's equity) of the ordinary or common stock owner. As such, Vătavu (2015) explained that ROE is calculated as a function of the combination of utilization efficiency

of the profitability assets and gearing level. High ROE is desirable for efficient financial performance in all business organizations.

Velnampy and Niresh (2012) argued that any banking corporation business with a high return on equity has a better chance to win investors' confidence and boost a better footing in the capital market. A capital market is where long-term securities are traded; an example is the New York Stock Exchange. Similarly, Salim and Yadav (2012) added that such banking corporations could also generate cash easily to finance operations, thus, it follows that the stronger a bank is, in terms of return on equity, the better stability it retains in generating profit. As Khrawish (2011) has initially iterated, return on equity (ROE) is the proportion of net income after taxes, distributed by total equity capital. The ROE mirrors the efficiency in the bank's use of depositors' money to do business and converting to cash and generating profit. Goyal (2013) emphasized that it indicates the competency of the management to effectively invest funds; therefore, it could be concluded that the healthier the ROE, the effective the application of debenture fund because both depositors' funds and debenture such as secured debt are liabilities to the banks, and the banks use the fund to supply more funds for business continuity.

Di Patti and Berger (2002) adopted the replacement technique to measure the effect of capital structure on banks' performance on 130 banks in Italy from 1990 to 1995. They used an estimated comparison that analyzed the reverse causality from performance to capital. Profit was used to measure the firms' performance, and an agency cost was the controlled measure for capital structure, distinctive bank physiognomy, market condition, and regulation were relatively included within the test information. The

conclusion demonstrated that the weakening of owners' equity towards capital ratio by 1% at the model average brings about a boost in return on equity of the concerned half dozen percent. Their analysis is dependable on the *Agency Theory*,supporting a vital outcome. Gropp and Heider (2009) acknowledged comparable results obtained from investigating 100 European banks publicly registered and their performance from 2002 to 2008. Short-term and total debts were correlated with profit, but an unexpected relationship between long-term debts and return on equity was gathered. With these, it is notable clearly that ROE is a tool that mostly applies to measure the efficiency of banking corporations at generating earnings or profits from every single unit of shareholders' equities. Goyal (2013) emphasized that ROE is the indicator of how well or effectively a corporation deploys its funds meant for investment to ensure growth in the earnings. Velnampy and Niresh (2012) supported this argument and stated that ROE represents that kind of return or earnings the corporation is obtaining from the funds that shareholders have invested in the bank. Therefore, Salim and Yadav (2012) explained that banking corporations that record high returns on their equities are reported to have more capacity to generate funds internally. Arguably, an overall observation would be made that any apparent variation in the capital structure would bear substantial effects on ROE; thus, depicting a true or actual reflection of the financial performance of the banking corporation. ROE is computed as follows:

$$ROE = \frac{Net\ income\ less\ tax}{Shareholders'equity}\ or\ \frac{Profit\ after\ tax}{Total\ ordinary\ shares\ in\ issue}$$

Profitability

Myers (1984) cited the works of Brealey and Myers (1984) and Donaldson (1961), stating that firms attempt to create capital structure by first raising money internally through retained earnings, secondly, from secured debt, bonds and debenture or other forms of credit, and lastly, by issuing new equities through a right issue. The author suggested that the cost of new issues could erode the available resources, thereby causing firms to opt for other options before the equity stock. Based on this, going straight to generate funds from the right issue or new issue may dilute the controlling potentials of existing shareholders; this decision could discourage investment in the organization. The cost referred to by Myers (1984) are those arising due to asymmetric information or transaction cost. Myers (1984) concluded that whatever the contention, the previous profit of a firm after setting aside the dividend to be distributed should constitute the primary portion of its current capital structure. Titman and Wassels (2019) used the models of operating income over sales *(O/S)* and operating income over total assets *(OI/TA)* to ascertain the claim of profitability influence on the capital structure.

Non-Debt Tax Shield

Gao (2016) asserted that as certain investment and depreciation expenditures are tax-deductible, they would be perceived as substitutions of tax benefits accruing from debt financing. Having agreed with this argument, Krisnanda and Wiksuana (2015) added that banking corporations with large non-debt tax shields that are more profitable in nature might choose to incorporate fewer debts in the composition of their capital structures. De Angelo and Masulis (1980) argued further that depreciation, tax credit on

investment, and deferred tax losses could be contrary to taxes, such as debt interest. These operational items can be used to minimize the cash outflows and reduce the financing requirements of corporations so that to minimize the cost of capital to its lowest minimum (Gao, 2016). The above-mentioned items are non-debt instruments with a tax credit factor, also called a non-debt tax shield. These findings support what was mentioned previously in this literature review that the theoretical framework of Modigliani and Miller (1958) states that the capital structure of a firm has nothing to do with the value of the enterprise. But regarding corporate income tax, the greater the tax rate, the higher the debt interest deduction, thereby pushing companies to use higher tax rates to choose higher leverages to increase business value (Gao, 2016). Modigliani and Miller (1963) were of the notion that the net worth of companies with debt is greater than that of corporations that are debt-free. Therefore, it follows that companies with debt can make more profit due to interest tax credit. Debt tax credit shields the profit so that severe tax deduction should not affect it; for that reason, it is referred to as a debt tax shield. A tax shield is a kind of legal downward adjustment from taxable income that lowers tax payable. Tax shield varies for different countries and depends on which deduction is qualified for tax avoidance or tax evasion. The deduction that falls under avoidance is allowed by tax laws, while disallowable items, if deducted, will be tantamount to tax evasion. The amount of tax shield is calculated on the prevailing tax rate for corporations or individuals in the specific country. Where higher tax rates exist, the deductible value increases as well. Depreciation, amortization, mortgage payments, and interest expense are some of the prominent common expenses that qualify for a tax shield. In some cases,

income may be reduced for a particular year because of unclaimed tax loss from the preceding year.

According to Corporate Finance Institute (2020), corporations and individuals enjoy the advantages of tax shields. Companies use capital structure optimization and accelerated depreciation methods to reduce the impact of tax on profit. The effect of adjusting tax shield is important for corporations to appraise their optimal capital structure so that to equalize debt and equity funding. Knowing fully well that interest expense on debt is tax-deductible and that dividends on equity shares are not, funding debt becomes much cheaper. On the other hand, Fama and French (2002) argued that as more profitable banking corporations tend to experience a relatively higher expected rate of tax, the portended pay-off from expenses shield associated with interest tax is much higher for banking corporations deemed to be more profitable. On that note, Gao (2016) insisted that being tax-deductible, interest expenses might compel more profitable corporations towards attaining higher debt ratios. Therefore, it remains apparent that there is no clear consensus on the aspect or nature of the relationship, whether negative or positive, between debt ratios and the degree of non-debt tax shields.

Another point is that since the depreciation expense is tax-deductible, organizations generally would want to maximize depreciation expenses with high momentum when filing their tax returns. Corporations may also adopt different depreciation methods; examples of such methods are declining balance, sun-of-digit, or sum-of-years-digit so that they minimize taxes in the early years. However, irrespective of the adopted method of depreciation, the aggregate expense will not change over the

asset's life span. In this fashion, the time value of money is a necessity because that is where the benefit is derived. The legal obligation of the whole show is for companies to push tax expenses out as far as they can. As it stands, inasmuch as depreciation is a non-cash expense and tax is a cash expense, there is the existence of real-time value of money. To improve cash flow and to augment the business net worth, tax shields are applied, and the application method is by multiplying the deduction by the tax rate.

According to Titman and Wessels (2019), the index on non-debt tax shields consists of the ratio of investment tax credits over total assets *(ITC/TA)*, depreciation over total assets *(D/TA)*, and in-line valuation on non-debt tax shields over total assets *(NDT/TA).* The latter measure is calculated using the recognized federal income tax payment *(T)*, Operating Income *(OI)*, Interest Payment *(I)*, and the corporate tax rate. In their sampling period, the corporate tax rate was 48%, putting them to apply the equation.

$$None\ Debt\ Tax\ Shield = \frac{OI - i - T}{0.48}$$

which follow from the equality.

$$Tax\ Payment = 0.48\ (OI - i - None\ Debt\ Tax\ Shield)$$

These indices measure the prevailing tax deduction in relation to the associated capital equipment and, therefore, only record the non-debt tax shield variables.

Growth

Growth opportunities are an impetus to a firm. However, high growth could likely cause a firm to fall short of retained earnings which may result in the firm not being able to finance its positive net present value projection (Heshmati, 2001). With this

development, the firm will be pushed to source for secured debt (Amarfo, 2015; Hall et al., 2004). The study of Barton et al. (1989), Kester (1986), and Titman and Wessels (1988) suggest there is a positive relationship between capital structure and growth of the firm. However, some researchers have come out with an exceptional report that there exists a negative relationship between a firm's growth in assets and its capital structure because the firms that attain higher growth use less debt, particularly going by the *Pecking Order Theory* (Amarfo, 2015; Kim & Sorensen, 1986; Rajan & Zingales, 1995; Roden & Lewellen, 1995). Also, Michqelas et al. (1999) furnished that the future growth of a firm is positively related to leverage ratio (Anarfo, 2015). Therefore, the leverage ratio remains a cardinal factor in determining the growth of the firm in terms of financial performance.

Both Zeitin and Tian (2007) have one idea that retail banking corporations that are aged have the capability of increasing yield from investment. One way to improve profit and growth channels is the passive learning methodology known as the "passive learning model" originated by Jovanovic (1982). The model was implemented to forecast the yearly growth velocity to prove whether managers are efficient in managing unit costs of products and boosting production efficiency. When production is effective in unit price, saving, and quality control, there is the tendency for the organization to reduce expenses, save cost, make super profits, and stand the test of competition. If companies notice that they have properly apportioned economic gain, the growing concern principle will be constant. In other words, companies that acquire consistently detrimental business data will soon disappear from the competitive market arena (Bhattacharjee, 2005). In that

regard, it is worth noting that large organizations tend to be more proficient but with less opportunity for progress in terms of economic viability and development, leading to a disorganized method for growth, especially among soaring companies (Kiani et al., 2012; Salim, 2018). Thus, there is the need to consider the aspect of the economic viability of the banking corporations if they have to achieve progressive growth.

The 2004 research on corporate development protective cover in the United Kingdom that Liu and Hsu (2006) conducted disclosed that growth and profit have a positive connection to the performance of British retail banking corporations. Following this study, Hobarth (2006) postulated that to achieve higher profit, banks should embrace improved economic capital management, incur lesser non-income driven liabilities, and target larger preserved earnings to arrive at a greater business horizon. In another development, Bittazi et al. (2008) analyzed the Italian manufacturing corporations and acclaimed that the company's sales growth and their profit ratio painted a clear picture that capital structure renders tremendous impetus to a corporation's performance. Henderson (2017) ascertained that operational income adds to a strong and important result on the growth of firms. Miguel (2019) states that investments that are financially sound projects greater yields and that, in contrast, poorly financed investments result in a low level of returns magnitude. Bloomenthal (2020) carried out research on firms with 15 workers and came out with the result showing a positive impact of improvement in profit on firm growth. On the contrary, Curtis (2017) clarified unwelcomed conformity in growth and profit. Further, Gardame and Gerald (2019) confirmed a nullifying relationship between a firm's capital structure and growth in financial performance.

Conversly, Bottezi and Maizen (2018) criticized that there is no appealing connection between growth and profit. As such, it would be analyzed that each of the above scholars displayed a different hypothetical and experimental literature in order to find a solution to the problem in the relationship between capital structure and growth opportunities of firms. The bone of contention here was whether growth could bring about profitability? Could companies making steady profit withstand constant growth, or could they cultivate their fortune? This study reflected on the impact of the growth of companies on their capital structures.

Companies with major parts of their capital structure consisting of common stock equity, also known as equity-controlled corporations, have a penchant for investing insignificantly to annex wealth from the company's debenture holders. Subsequently, the cost identified with the agency relationship is expected to be higher for firms with growth potentials that are more malleable in choosing imminent investments. Foreseeable growth should be negatively related to long-term debt levels. According to Myers (1984) and Titman and Wessels (2019), the agency problem is alleviated if the company trades short-term instead of long-term debt, implying that short-term ratios may be positively correlated with the growth rate, where a growing company alternates short-term financing for long-term financing. According to Green (1984), Jensen and Meckling (1976), Smith and Warner (1979), and Titman and Wessels (2019), the agency cost will diminish on condition that a firm issues convertible debt because the convertible debt ratio is susceptible to becoming clearly relevant to growth possibility.

Essentially, Salim and Yadav (2012) insisted that it is worthy of recognizing that growth chances are capital assets that are value-added to a corporation and that it does not form part of the collateral security and, of course, cannot generate any current taxable income. Consequently, there is a negative correlation existing between debt and growth potentiality. Titman and Wessels (2019) put forward that growth indicators encompass capital expenditures over total assets *(CE/TA)* and that the growth of total assets is measured by the percentage change in total assets *(GTA).* Bentler and Bonett (1980) posit that the corporations that generally invest in research and development are mostly successful, generating future investment, research and development over sales (RD/S) could also serve as an impetus for growth potential.

Size of the Firm

Salim (2018) pointed out that the size of a firm being associated with the measure of leverage plays an important role in the choice of capital structure to boost the firm's performance. Large corporations adopt economies of scale to lower the cost of finished goods or services by using mass production. In a situation where companies engage in mass production, the total cost will be allocated to the total unit produced. In this fashion, the total fixed cost, which does not vary based on the quantity produced, will be apportioned to a larger quantity to reduce the selling price per unit. The practice of economies of scale gives a company the advantage to overcome competition (Kenton, 2020). Unfortunately, small corporations cannot take advantage of economies of scale to lower costs. Banks that are small cannot operate many branches to enjoy economics of scale (Druny, 2020). The size of a firm boosts its competition by way of attractiveness to

investors and availability of resources to employ the service of experts. Majumdar (2014) stated that it would be difficult for small firms to become great because of the inability to gain access to large capital, thus, they will encounter poor financial performance due to limited resources. Size has an important statistical control on the financial performance of corporations. Tarawneh (2016) stated that banks with several branches, large deposits, market capitalization, liquidity, and perhaps, many complimentary services will stand the chance of surviving in terms of market share of competition and high performance. In addition to the large capital structure that may enable the expansion of big banks, operational efficiency has to be maintained by way of assets management and effective monitoring of deposits to ensure the stability of liquidity to avoid distress (Hayes, 2020). Aquilina (2018) carried out experimental research and concluded that operational efficiency and asset management could boost banks' size vigorously and positively improve their financial performances. Kalok (2018) investigated 15 deposit-taking banks, 20 licensed banks, and 10 restricted licensed banks in Hong Kong from 2012-2017 and noted some abnormalities in their capital structure. With these findings, it is recommendable that banks should welcome the absolute divergent assertion of financial leverage unequivocal affiliation among the sizes of the bank and financial leverage where fixed assets to deposit ratio and variance coefficient of working rewards are skeptically relevant.

According to Warner (1977) and Ang et al. (1985), when small and medium-size enterprises go through a setback from bankruptcy, the large-size firms have a higher tendency to struggle from a direct effect of bankruptcy. Smith (1977) supported this

argument and added that the anticipated costs of bankruptcy are relatively higher for corporations with more volatile earnings, and such banking corporations have more likelihood of being smaller in size; thus, small-sized corporations would be directed towards achieving lower target ratios of debt. Similarly, Armstrong et al. (2010) gave evidence suggesting that the ratio of cost of bankruptcy to the value of the corporation increases with a decrease in the value of the firm; likewise, large banking corporations have also tended to highly diversify their funding sources which makes them less likely to become bankrupt. However, large-sized companies with highly intelligent management teams do diversify the firm's resources and operations by engaging the firm in various investments, have mitigated the risk of loss of profit and bankruptcy. The implication, therefore, is that large-sized firms stand a better chance of obtaining secured debt and utilizing it efficiently and effectively than small and medium-sized corporations. For this reason, Ang et al. (1985) and Warner (1977) concluded that there is a positive correlation between size and leverage of the firm backed by the *Trade-Off Theory* (Chen, 2013). Apparently, it would be generally argued that large corporations enjoy more opportunities to borrow or acquire debts at friendly and better terms than their smaller counterparts, a phenomenon which would give the reason why the capital structures of large firms are comprised of more debts.

Financial Leverage

Leverage is used in the capital structure to indicate the way borrowed money is applied to an enterprise to make it expand, solvent, and be able to avert risk. Hayes and James (2020) define financial leverage as an investment strategy that allows firms, retail

banks inclusive, to use debt or any kind of external borrowing to expand or turn around the business. Capital structure and leverage are complementary methods of funding a bank in the sense that both are focused on the liquidity aspect of the bank by providing capital for it to meet its obligations. A leveraged investment enables its investors to gain, and the business becomes more profitable. A company becomes financially strapped when it does not have access to equity or debt funds, consequently, the investors lose in the investment and experience a decline in net worth (Andy, 2016). According to Panday (2017), a highly leveraged bank can absorb fixed costs and account for its interest expense without going through a decline. The benefits from borrowed money could extinguish expenses incurred in sourcing for the funds. In this way, financial leverage is considered double functional because it enables the skyrocketing of investors' earnings, and the company will be devoid of loss, possibly emanating from the shortage of funds to finance working capital. Onaolapo and Sunday (2016) research the capital structure and the performance of banks in Nigeria by using the multivariate analysis technique and concluded that leverage significantly supports the performance of a bank. Also, Bryan and Birmingham (2019) applied the multivariate analysis technique to review the effects of capital structure on the financial performance of British banks. They used secondary data obtained from the bank's' annual reports and financial statements while using a stratified sampling technique. Khan (2018) used the least square regression analysis technique on 32 corporations in Saudi Arabia. The conclusion labeled a cloudy affiliation but not statistically connected with financial leverage and bank performance. Hazan and Zaker (2017) and Kester (2016) used a multi-spatial data operation to research banks'

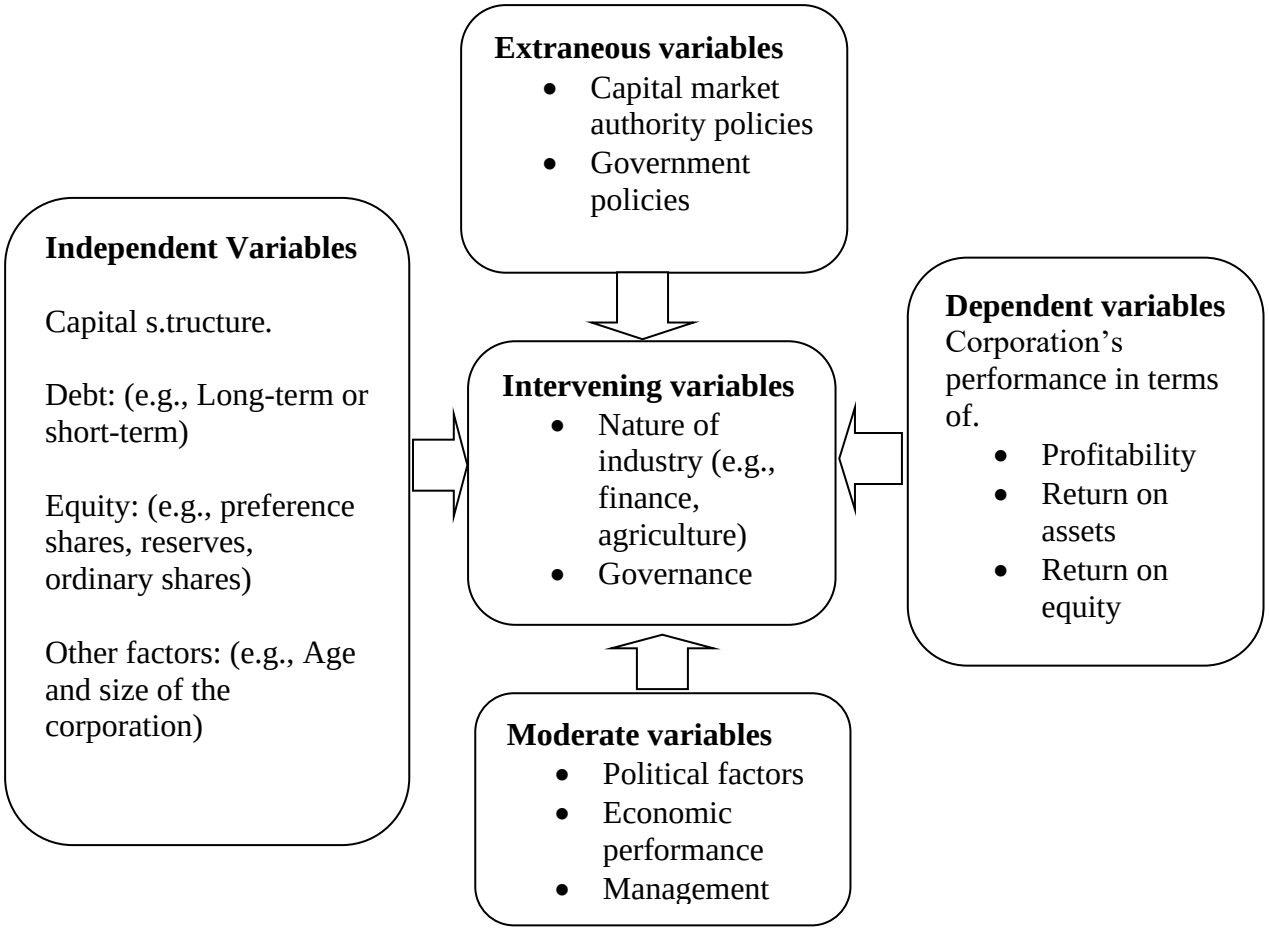
capital structure performance in Japan. Murphy (2017) carried out a corresponding study in Australia. The study maintained that financial leverage constitutes an essential and inimically relevant firm, and financially leveraged firm performance was unsatisfactory even though the result was not statistically important. Roden et al. (2018) established a positive connection between financial leverage, growth, financial performance, and the size of the business. The research was focused on the Australian stock market and the result aligned with the *Agency Theory*. This aspect of the literature review is in isolation from other funding methods of the capital structure but has focused primarily on financial leverage. Moreover, it has incorporated financial leverage with liquidity in determining the variables of the capital structure components.

Conceptual Framework

Generally, the conceptual framework would be perceived as the figurative representation illustrating the actual inter-relationship existing between the variables as identified in the literature review. Salkin et al. (2018) argued that the conceptual framework is applied to help clearly identify the key concepts, expectations, theories, beliefs, and assumptions that underpin the research. In that regard, the conceptual framework of the current study is entirely on the basis of the relationship between the dependent and independent variables, as they have been identified from the introduction all throughout the literature. In other words, the conceptual framework illustrates explicitly the effects of capital structure on the financial performance of banking corporations. Whereas the independent variables mainly include the capital structure consisting of both long-term and short-term debts and equity (e.g., preference and

ordinary shares) among other factors, the dependent variables in the performance of the corporation include stock market return, financial ratios, profitability, and return on equity. Figure 1 shows the conceptual framework.

Figure 1



Conceptual Framework

Summary and Gap in the Literature

The empirical findings from the current literature review suggested that the profitability, growth, age, and size of the bank, volatility, and asset structure, among other factors, are important variables that affect the capital structure of the bank. Moreover, several theories or models were confronted with justifying the relationship between the capital structure and financial performance, as aforementioned. Overall, the literature established and emphasized the negative relationship between the operating assets and leverage of banking corporations. Banking corporations with relatively higher percentages of operating assets are normally financed using long-term debt capital. This trend could be attributed to the fact that higher percentages of the operating assets of the banks imply less risk in operation and, thus, the banks would not be susceptible to more risks from the utilization of more long-term debt as the capital. Additionally, the long-term debt and size of the banking corporations have a negative relationship which, therefore, implies that due to the limited access to the available equity capital market of smaller banking corporations, they tend to resolve and depend largely on long-term debts to meet their financing needs.

In this literature, it was noted that there is a certain relationship between the capital structure and the performance of the banking corporation; however, none of the literature reviewed had attempted to study this relationship with emphasis on the retail banks, specifically in the context of banking environment of the United States. This, therefore, triggered the questions as to what effects capital structure has on the financial performance of retail banking corporations operating in the United States. Subsequently,

it had created a big gap in the literature whereby the current study would want to explore how the factors associated with the capital structures influence the performance of retail banking corporations in the United States' banking environment. The study also investigated the influence of different capital ratios as the Federal Reserve Bank of the United States has implemented so as to regulate retail banks as well as establish if they actually bear any significant impact on the banks' financial performances.

Chapter 3: Research Method

This chapter presents the methodology used to carry out the study to achieve the identified objectives, provide responses to the research questions, and verify the hypotheses. The chapter consists of of the research design and rationale; methodology; sample population; sampling procedures; procedures for recruitment, participation, and data collection; archival data; data analysis plan and presentation; threats to validity; ethical procedures; and a summary.

Research Design and Rationale

Because the research was focused on examining the relationship between capital structure and financial performance of retail banks in the United States, I adopted a quasi-experimental design to conduct the study. Referred stocks, secured debts, and common stock equity of the selected corporations were used as the independent variables, and earnings, liquidity, shareholders' dividend, sustainability, and profitability of these banks were used as the dependent variables. This design was preferred in this study because I attempted to establish the cause-effect relationship between different variables. In this study, capital structure was the cause, and financial performance was the associated effect, which aligned with the problem statement that focused on establishing whether debt instruments or preferred stock should be used to finance banking activities to optimize profits, earnings, and dividend. The quasi-experimental design was used because it provided ample time for carrying out deductive testing, empirical measurement, and analysis of the hypothesis between leverage ratios compared to the weighted average cost of capital of banks on either side (see Venkatesh et al., 2013).

Khalid et al. (2017) defined independent variables as those that are controlled to test and establish the effects on the dependent variables, whereas the dependent variables are those that are tested and measured to justify or disprove the hypothesized phenomenon of the study. Other dependent variables that were considered in this study were either intervening variables (e.g., the size of the bank, working capital ratio, deposits, and liquidity) or control variables (e.g., survival and market share).

Capital structure was defined as the form of finance: secured debt-to-common stock equity ratio compared to preferred stock-to- common stock equity ratio. Financial performance of the retail banks was defined as the earnings, profitability, liquidity, and stockholders' dividend in times of economic downturn and financial crises. Because the study involved secondary data, I used a maximum of 5 years of financial data retrieved from 30 U.S. retail banks. For a manageable scope study, a total of five retail banks, including Chase Bank, Bank of America, Capital One Bank, BBVA Compass, and Wells Fargo Banks, were picked for data collection. Research tools, including histograms, were deployed for data analysis and presentations.

Methodology

The research methodology for this study was quantitative with a causal-comparative design. Secondary and archival sources or materials obtained from banks' websites, university libraries, and the internet were used. Publicly available information or data pertaining to common stock equity, preferred stock, and secured debt of various selected retail banks were used as the independent variables, whereas earnings, profitability, liquidity, and stockholders' dividend were used as the dependent variables.

The secondary sources included annual performance reports and yearly financial statements, which contained the appropriate information regarding stock equity, secured debts, preferred stocks, profit, stockholders' dividends, and so on. The secondary data sources were available in the public domains and were easily accessed.

The data collection was implemented by validating and extracting relevant excerpts from recent financial reports, financial statistics, and statements of local banks in the United States. Materials were extracted from public sources, including websites, databases, e-books and books, magazines, case studies, published articles, conference papers, and other locations for financial reports such as Bloomberg. Additionally, other data collected from secondary sources included literature review material and scholarly journals from previous research on capital structure and the U.S. retail banking sector.

Population

Delice (2010) referred to the study population as the compiled elements from which the researcher would make inferences. The population is usually the largest set of elements, with the smaller set being known as the sample. The target population of the current study comprised U.S. retail banking corporations. Although over 50 retail banks qualified for the investigation, I narrowed the scope to investigate 30 major banks, which included Bank of America, BBVA Compass, Chase Bank, Wells Fargo Banks, and others. For a narrowed scope of study focusing on most current trends in the financial market of the United States, I extracted data over a period of 5 years from 2016 to 2020. This time frame was the period during which most retail banking corporations had implemented several changes such as integration and implementation of advanced

banking operation technologies, most of which were intended to contribute to the improvement of financial performance of these banks (Cooper & Schindler, 2003). Moreover, many of these banks were reported to have acquired large sums of capital to implement a number of these projects. Also, this period was appropriate for consideration due to the data availability and was reasonable owing to the fact that data analysis over a long period of time often proves complex. The study sample comprised U.S. retail banks between 2016 and 2020. There was a total of 30 retail banks, and it was possible to acquire reliable or valid financial statements. Only five banks out of the fifteen were deemed suitable for the study.

Sampling and Sampling Procedures

Because the current study was initially expected to encompass a census of all the retail banking corporations in the United States, certain filters were used to achieve the required sample for the study. This process refers to the sampling technique, which, according to Collins (2006), is the approach to selecting the most suitable components from an identified or target population. Even if a technique is a straightforward random description, it is built on a mixture of circumstances such as phenomenon, article or item, capacity, outlook, and nature of the study (Myers, 2006; Salim, 2018). For the current study, a nonprobability sampling technique, also referred to as purposive sampling, was applied to filter the study components into a manageable sample size from the larger population. Based on priority power analysis, I identified samples from over 70 fully operational retail banks in the U.S. financial sector, leaving only 30 banks for the analysis. Other banks were excluded on several grounds: having negative values in fixed

assets, current assets, and total assets; having negative depreciation, negative capital, and paid interest; never having operated during the 5-year period of the study time frame; not meriting all statutory requirements (e.g., capital adequacy in any year within the study period); and having made loss in any of the years within the study time frame.

Procedures for Recruitment, Participation, and Data Collection (Secondary Data)

As the study involved the use of secondary data, the material recruitments process focused on identifying mostly annual reports and financial statements. These were identified from the internet, the banks, university libraries, and financial institutions' libraries in the U.S. Khalid, Abdullah, and Kumar (2012) argued that the existing relationship between variables is not easily established when the objective measurement is put together and; the current question focuses on the same issue, which is assessing the performance of banks in terms of the capital structure. The approach goes hand in hand with the methods of collecting and analyzing data. The quasi-experimental design gives more room for the application of correlation and descriptive research designs. Quantitative data requires a proper in-depth analysis of the literature review, which connects the dependent, independent, and covariate variables (Venkatesh et al., 2013). This study focused on comparing and establishing which combination of funding sources would boost investors' dividends and corporations' overall profitability, among other benefits.

The study fully involved secondary sources of data and some of the information that was obtained from the secondary sources of data include the market price per share, price-earnings ratio, debts, capital employed, leverage ratio, the weighted average cost of

capital, etc. The collection of secondary data has, therefore, been done by validating and extracting relevant excerpts from the recent financial reports, financial statistics, and statements of local banks in the U.S. As had been mentioned previously, most of these materials were retrieved from the public domains such as websites, databases, e-books and books, magazines, case studies, published articles, conference papers, and other research report locations in the US.

Archival Data

Owing to the fact that the study has adopted a quantitative approach, the researcher opted for archival data. Where information needed is not available elsewhere other than the organization that owns the data, archival data has often been used as the only option (Community Toolbox of the University of Kansas, 2020). According to the community toolbox of the University of Kansas 1994-2020, archival data is the data that is already in existence in administrative procedures, previous studies, and evaluated reports. In this research, archival data was obtained from the annual reports and financial statements of the selected five retail banks in the US. Moreover, the researcher has also taken caution and awareness of the possible type of archival data available from various banking institutions. The importance of using archival data is that they are easier and less time-consuming to collect when compared to the process of collecting the primary data; the data must have been already processed by experienced statisticians and other personnel with relevant expertise in the field concerned.

Data Analysis Plan and Presentation

Data analysis is generally the process that involves reviewing, cleaning, conversion, and display of data with the main aim of identifying and highlighting only the most useful and relevant information, suggesting logical conclusions, and facilitate informed decision making. Since the study has utilized a quantitative method and quasi-experimental design, a quantitative method of data analysis was applied. Jones (2016) refers to quantitative data analysis as the procedure of attempting to synthesize phenomena by organizing the collected numerical data and evaluating them mathematically with the aid of statistics. According to Cooper and Schindler (2014) and Salim (2018), editing, which involves the acquisition and preparation of data, generally forms the initial step of data analysis. Through editing, the researcher is able to identify and differentiate erroneous, omitted, repetitive, and inaccurate information for redress, correction, and validation before they are considered viable. Therefore, this step is crucial as it helps the researcher to ascertain that the overall quality of the gathered information as well as appropriate assortment criteria attained.

Cleland (2015) stated that editing is the first step in the processing of raw data where wrong entries or omissions are detected and corrected; thus, guaranteeing that the data are accurate and consistent with the research questions and objectives; well-arranged and complete to simplify tabulation and coding. The subsequent step was coding of the data, which involved assigning either numerals or other relevant symbols to the information as retrieved. Chowdhury (2015) iterated that coding of data is crucial and necessary in order for the researcher to conduct efficient analysis by eliminating

redundant information while retaining the critical data for synthesis. In this way, solutions would be classified or categorized into various defined plans for analysis. The quantitative information input technique was then used to convert the collected and already coded secondary data into a form or medium that allows for viewing, controlling, directing, and utilization of the information or data.

The coded quantitative information was evaluated with the use of descriptive statistics, which depicted the characteristics or behavior. As such, descriptive tools were, therefore, applied to clean and sanitize data while discovering issues and summarizing the distribution of data. In research, data distribution is the affiliated array of counting values, starting from the least to the highest value of the study variables, as obtained from the frequency tabulation (Salim, 2018). The mean, average, standard deviation, median, maximum, mode, maximum value, and variance were utilized to describe all the variables under the phenomenon or population of the study. Chase Bank, Bank of America, Capital One Bank, BBVA Compass, and Wells Fargo Banks and other banks were the population of study in the context of the current research. The descriptive statistical measures were used to characterize the mid-point, spread, and form of distributions that appropriate as the basic tools for data description. Inferential statistics measure was used to check and establish specific objectives and affirm the hypotheses. In order to effectively achieve these analysis applications, the study deployed the statistical package for social sciences (SPSS) to test and verify the reality of the data gathered. Further, correlation statistics were applied to describe the degree or extent of the causal relationship between the dependent and independent variables. Common stock equity, preferred stock, and secured

debts were the independent variables, whereas greater earnings, liquidity, sustainability, dividend, stockholders' dividends, and profitability of the selected banks were the dependent variables. Finally, data were interpreted and presented in tables, graphs, and pie charts. The interpretation of the data was enhanced through a detailed and comprehensive discussion of the findings. The following research questions and hypotheses were used to direct or guide the process.

RQ1: What effect does capital structure combination of common stock equity with preferred stock compared to common stock equity with secured debt have on earnings to sustain banks in times of economic downturn and financial crises?

$H_0$1: There is no effect of capital structure combination of common stock equity with preferred stock compared to common stock equity with secured debt on the earnings to sustain banks in times of economic downturn and financial crises.

H_a1: There is an effect of capital structure combination of common stock equity with preferred stock compared to common stock equity with secured debt on the earnings to sustain banks in times of economic downturn and financial crises.

RQ2: What effect does capital structure combination of common stock equity with preferred stock compared to common stock equity with secured debt have on profitability to sustain banks in times of economic downturn and financial crises?

$H_0$2: There is no effect of capital structure combination of common stock equity with preferred stock compared to common stock equity with secured debt on the profitability to sustain banks in times of economic downturn and financial crises.

H_a2: There is an effect of capital structure combination of common stock equity with preferred stock compared to common stock equity with secured debt on the profitability to sustain banks in times of economic downturn and financial crises.

RQ3: What effect does capital structure combination of common stock equity with preferred stock compared to common stock equity with secured debt have on liquidity to sustain banks in times of economic downturn and financial crises?

H_03: There is no effect of the capital structure combination of common stock equity with preferred stock compared to common stock equity with secured debt on the liquidity to sustain banks in a time of economic downturn and financial crises.

H_a3: There is an effect of capital structure combination of common stock equity with preferred stock compared to common stock equity with secured debt on the liquidity to sustain banks in times of economic downturn and financial crises.

RQ4: What effect does capital structure combination of common stock equity with preferred stock compared to common stock equity with secured debt have on the stockholders' dividends to sustain banks in times of economic downturn and financial crises?

H_04: There is no effect of capital structure combination of common stock equity with preferred stock compared to common stock equity with secured debt on the stockholders' dividends to sustain banks in times of economic downturn and financial crises.

H_a4: There is an effect of capital structure combination of common stock equity with preferred stock compared to common stock equity with secured debt on the

stockholders' dividends to sustain banks in times of economic downturn and financial crises.

Model for the Study

The study used the following statistical models:

RQ1: Earnings = $\alpha+\beta_1$Common_Stock+ β_2Prefered_Stock+ β_3Secured_Debt

RQ2: Profitability = $\alpha+\beta_1$Common_Stock+ β_2Prefered_Stock+ β_3Secured_Debt

RQ3: Liquidity = $\alpha+\beta_1$Common_Stock+ β_2Prefered_Stock+ β_3Secured_Debt

RQ4: Stockholders' dividend = $\alpha+\beta_1$Common_Stock+ β_2Prefered_Stock+ β_3Secured_Debt

Threats to Validity

External Validity

For external validity in the research design, there is always a causal link between the causes and effects (Kessler & Vesterlund, 2015). In this study, the independent variables such as common stock equity, secured debts, and preferred stock were used as the causes, whereas the anticipated effects were greater earnings, stockholders, liquidity, dividend, profitability, and sustainability of the identified US banks, especially during the moments of financial crises and economic downtimes. Taylor and Asmundson (2018) stated that external validity refers to the extent to which study results could be generalized. Furthermore, Henderson et al. (2013) emphasized that the external form of research design validity often encompasses the generalizability of the findings of the research, which informs the extent to which the results of the quasi-experimental research could be generally applied across a larger population or experimental variables from

which the sample was obtained. In this study, the external validity has focused on the degree to which the outcome of the quasi-experimental design would be applied to the 30 US banks.

The threat to the external validity of the chosen research design had, therefore, been assessed by simple tests of the degree to which a researcher could generalize the finding on the impact of capital structure on the performance of the 30 US retail banks to other retail banks in the same market setting over the given time range. Therefore, major threats to external validity include the three main types of interactions such as selection, history, and setting. The threat to external validity associating with the selection, history, and setting in this study is the possibility that the sample size could be relatively small such that the findings obtained could not be applied to the management of other banks located in other geographical regions as well as in the near future within and beyond the US. These questions the reactive effects of experimental arrangements and multiple-treatment interference of the findings. Khorsan and Crawford (2014) indicated that the only option to establish if this kind of threat exists is by determining whether the outcomes of the research design vary with banks and their geographical locations. This insinuates that further research would be necessary to better understand and appreciate the aspect of external validity in this research.

Even in the events where the sample population tends to belong to the right target population, but the recruitment factors have often caused a threat to the external validity of the research design (Alm et al., 2015). For example, the selection of 30 US banks could have been unrepresentative of the true retain banks whose performances have

experienced significant impacts as a result of changes in the capital market structure. This kind of threat to the external validity could be mitigated by comparing the performance data of banks over a given period of time as presented by different sources such as business schools, university libraries, and internet sources, among others.

Internal Validity

The internal validity of a research design generally concerns the relationship between observation and theory. Specifically, Datler, Jagodzinski, and Schmidt (2013) explained that internal validity refers to the extent to which the observed changes in the dependent variables could be attributed directly to the changes in the independent variable. As far as the context of the current study is concerned, internal validity would be established by evaluating the extent to notable changes in independent variables such as working capital ratios, liquidity and deposits, size of the banks, sustainability, the dividend of shareholders, profitability, and earnings are attributable directly to the variations in the independent variables, including preferred stocks, secured debts, and common stock equity among other factors. In that regard, internal validity is essentially a point of degree (e.g., describing how low, medium, or high) instead of one absence or presence. Based on these facts, it would be pre-empted that the confidence of the researcher in the findings is directly proportional to the actual strength of the research design's internal validity (Taylor & Asmundson, 2018). This study, therefore, believes that a good and reliable quasi-experimental or casual comparative research design is that which is founded on the tenets of strong internal validity. This was achieved in the manner in which the study sample or population consisting of the 30 US banks have been

randomized to suit the experimental condition and other means to ensure variations in the capital ratios. Moreover, liquidity and deposits, size of the banks, sustainability, and dividend of shareholders, among other dependent variables, could be attributed and traced directly to the quasi-experimental manipulation of preferred stocks, secured debts, and common stock equity as the independent variables.

The current study has mainly used a quasi-experimental design which Dülmer (2016) insists presents the weakest internal validity, which is associated with several threats, including history, maturation, statistical regression, experimental mortality, attrition, and interaction with selection. When certain changes observed in the dependent variables such as capital ratios, liquidity, sustainability, the dividend of shareholders, and profitability, like in this case that is caused by certain extraneous events that had taken place in between pre-test and post-test; then it proves difficult and challenging to establish if the findings are as a result of experimental manipulation. This situation implies that there are changes effected on the preferred stocks, secured debts, and common stock equity as independent variables. This threat to internal validity, according to Persson and Wallin (2012), could be addressed by choosing only dependent variables that could not significantly have been interfered with by the outside or external influences. The dividend of shareholders of the banks is an example of such dependent variables. Also, changes in the participant's banks over a given period of time, yet such changes do not form part of the interest of focus in the study, may eventually lead to the growth of banks' revenues; thus, such threats to internal validity could be addressed with the aid of putting in place a reliable control group.

Construct Validity

Construct validity concerns the causal relationship between the study outcome and treatment (Chester & Lasko, 2021). Specifically, for constructs to be scientifically validated or accepted, they have to be structured within nomological networks comprising of provisions that are either deterministic or statistical. The assessment of construct validity is majorly done to establish if the inferences made about the study findings are both meaningful and meet the objectives of the research (Oluwatayo, 2012). In linking these implications to the current study, the central focus of the construct for the research on the relationship between capital structure and the retail banks' performances was to determine how variations on the independent variables (e.g., preferred stocks, secured debts, and common stock equity, etc.) affect the status of dependent variables (e.g., working capital ratios, liquidity, deposits, sustainability, profitability, etc.).

In this study, mono-operation bias was one key factor likely to cause serious threats to the construct validity. This kind of threat majorly concerned the independent variables where the study was required to engage several variables to ascertain the validity of its construct (Chester & Lasko, 2021). The current study has only identified three independent variables, including preferred stocks, secured debts, and common stock equity; thus, likely to compromise the quest of the study to justify its construct validity. This threat would be effectively addressed by increasing the number of independent variables. Hypothesis guessing is another possible threat to the construct validity of the current study's research design. This threat is associated with the fact that a majority of researchers are really not interested in engaging passively in the research and; thus, they

struggle to establish what the study is all about and culminated in guessing the hypothesis of the study. In this study, the hypothesis, “there is no effect in capital structure combination of common stock equity with preferred stock compared to common stock equity with secured debt yield greater earnings to sustain banks in times of economic downturn and financial crises?” could have been guessed. This threat could be addressed by presenting well-research and informed hypotheses.

Ethical Procedures

In every piece of research, the researcher is obliged to ensure utmost adherence to the set ethical procedures and considerations. The validity and reliability of the research are dependent on the data access approval and clarity to all involved parties or participants. The International Review Board envisions and maintains that these ethical procedures encompass access consent, confidentiality, integrity, legality, openness, honesty, and objectivity alongside avoidance of copyright infringement or jeopardy (Goldenberg et al., 2015). Strict adherence and observation of these procedures are essential, especially in a quantitative study such as this where previous secondary sources, such as literature, annual financial statements, and yearly reports on financial performances were collected, compiled, and copyrighted by other scholars and experts. Despite the fact that these sources are commonly available freely in the public domains such as websites and the internet, materials comprise information and knowledge of other researchers, scholars, professionals, and experts necessitated the need to follow the due ethical procedures. However, some of the websites were partially encrypted to regulate or restrict access to the information.

As part of the agreement to gain access to protected data sites such as the encrypted banks' websites and school online (ODeL) libraries, I sought the IRB approval number to access by uploading or issuing a signed administrative letter from the college seeking due permission to be allowed to carry out the study at the selected websites and online libraries. In this way, permission to access and carry research on various target subjects' platforms was sought from the IRB through the university. The documentations seeking IRB approval were uploaded in various forms, including emails, application statements, letters, etc. Moreover, the researcher sought institutional approvals where they were necessary, by communicating priorly to the study sites, particularly regarding the nature of the research project and the actual procedure for securing approval access in the process of conducting the dissertation.

Utmost ethical concerns were observed where the researcher had to seek the permission of various banks to consent access to their website for the recruitment of relevant materials and resources. According to Ponterotto (2010), such processes are important since sharing of organizational data such as financial statements on consecutive financial performances often involves more sensitive privacy concerns. In that regard, the recruitment method for such materials and the plan to address them had to take into consideration several privacy concerns, including assurance that such data would only be used strictly for academic purposes. Moreover, the custodians of the targeted data, such as the selected banking corporations and learning institutions, were not pressured, or subjected to undue influence to yield the needed data and, instead, they were given adequate opportunity and time to verify consent-seeking forms before they would give

their permission to access the data. The researcher ensured no bias in the presentation of the data upon the analysis. This was to conform with the IRB's dictates that require that the analysis and presentation of the research data should be well-balanced and devoid of misleading as well as exaggerated emphasis that would make the entire outcome of the study abnormally and excessively attractive and appealing (Klitzman, 2012). Extra caution had been taken to ensure that the anticipated benefits or advantages were not overstated. The study has also heightened confidentiality as well as privacy by not excluding organizations' sensitive information from the dataset documents or in the final published report.

Summary

In summary, this chapter presented explicitly all the instruments used in the collection, compilation, and analysis of the data. 30 banks were identified as the study population. Whereas the preferred stocks, secured debts, and common stocks information retrieved from these banks was used as the independent variables, sustainability, profitability, dividend of stockholders, liquidity, and the earning data was used as the dependent variables. The impact of capital structure on the performance of the five selected US banks is the key phenomenon that the study seeks to establish by identifying and analysing the relationship among these independent and dependent variables. The study relied on the freely available annual reports as well as financial statements of these banks to retrieve the data. The study refers to these annual reports and financial statements as freely available since they were retrieved from public platforms or domains such as financial institutions, business schools, university libraries, the internet, and

banks in the United States. This implied that the study had only used secondary sources of data which were retrieved through validation and extraction of relevant excerpts from the said reports, financial records, and statements of the US banks. Through the purposive sampling approach, data was extracted from sources published within the 2016-2020 period. The study deployed a quantitative research method and casual comparative as the research design. As such, apart from using a casual comparative, the study considered a quasi-experimental research design to establish the phenomenon connection between the capital structure and the performance of the US retail banks. Success completion of the highlighted methodology yielded substantially significant data for the analysis whose results were presented in the subsequent chapter four of the study.

Chapter 4: Results

Data Collection

Data were extracted from the financial statements of U.S. banks, as listed in the appendix. For ethical and legal reasons, the names of the banks were masked in this research. These banks were available in the public domain of the New York Stock Exchange and Securities and Exchange Commission. The common stock equity, preferred stock, and secured debts were the independent variables, and the earnings (revenue), profitability, liquidity, stockholders' dividends, and earnings per share were the dependent variables. The extent to which the dependent variables would survive with the help of the independent variable would indicate the sustainability. The impact of capital structure on U.S. banks was explained by how the dependent variables were influenced by the independent variables. The data collection was completed by validating and extracting relevant excerpts from the recent financial reports, financial statistics, and statements of U.S. banks.

Descriptive Statistics

This section provides a summary of the data incorporated into the analysis. The descriptive information of different variables used in the study is provided to give a better understanding of the data set. The data were analyzed to understand the overall performance of the U.S. banking sector from 2016 to 2020.

Table 3

Descriptive Statistics

Variable	*N*	Minimum	Maximum	Mean	Std. deviation
Earnings	150	45530.00	119543000.00	17894768.2333	29517639.49393
Profitability	150	-6798000.00	36431000.00	4617802.6333	8287314.62963
Liquidity	150	0.32	1.78	0.89	0.12
Dividend per share	150	.04	8.00	1.3433	1.30441
Common stock	150	98838.00	1079314000.00	112192570.6200	203926797.64046
Preferred stock	150	100670.00	30063000.00	3386593.3333	7937223.19633
Secured debt	150	12124200.00	334292000.00	41532586.6667	90689766.60429
EPS	150	-2.94	44.00	4.8665	6.76072
Valid *N* (listwise)	0				

Table 3 shows the descriptive analysis for the different variables incorporated in the study. In table 3, the average earnings of the bank from 2016 to 2020 was in the range of $17.89 million. This included banks of different sizes. A wide difference was observed between the lowest and the highest earning and the between the earnings in the region of $2.9 million. From Table 3, it could be inferred that there was a wide gap in the earnings of different banks. The large banks had been able to obtain greater customer share and earn higher revenues. On the other hand, smaller banks received less market share. Consequently, their earnings were lower than the average earnings of the larger banks.

According to Table 3, the situation of profitability for banks of different sizes was varied. The data showed that since 2016, some of the banks earned substantial profits while others were not as successful in turning their revenues into profit. This was the reason that certain banks incurred losses in their operations. The loss-making banks remained ineffective in covering their expenses. From Table 3, it could be inferred that

market size in the United States plays an important role in the profitability of the commercial and investment banks. The large banks were able to convert their revenues into profit because they were able to offer multiple services to their client. On the other hand, smaller banks faced several difficulties in running successful and profitable operations.

Data from Table 3 show that in terms of liquidity, the position of the banks had remained peculiar. Overall, the U.S. banks faced liquidity issues as their immediate assets were found to be lower than their immediate liabilities. From Table 3, it could be inferred that most of the U.S. banks were relying on short-term liabilities compared to short-term assets of which this may cause them to face liquidity problems in the future. The banks would be able to leverage their positions and earn better profits due to the use of leverage in their capital structure, but they would also be forced to bear interest expenses and financial costs associated with the short-term liabilities.

Table 3 shows that the average dividend of the U.S. banks had generally been in the range of $1.30 per share From these data, it could be inferred that the U.S. banks had not been able to contribute back to the shareholders in terms of lucrative dividend returns. Moreover, a wide gap between minimum and maximum dividend payments was observed. The minimum dividend payment during the period was $0.04, and the maximum was $8.00. The figures reflect the financial potential and earning capabilities of the larger and smaller banks. The financial institutions in the United States with the larger size and greater revenue were able to contribute back to the shareholders in a more generous way. Smaller banks, on the other hand, were not as successful in returning to

their shareholders. Some banks may have been unable to pay any dividends due to year-end losses. The data in the table reflect that in terms of returns, the overall U.S. banking sector could not be termed a lucrative prospect from the perspective of exceptional financial performance for the shareholders.

Table 3 indicates that the average value of the common stock of the U.S. banks remained in the range of $112 million. The variable does not provide the market values of the different U.S. banks but could be used to understand the overall equity value and size of the financial institutions. According to the table, the U.S. banks had a value as large as $10.79 billion, which was substantially higher than the average figure. From the table, it could be inferred that large and established banks served as market leaders not only because of their product offerings and servings but also due to their large size through which they were able to create a difficult working environment for the smaller banks with lesser equity and debt capital. Some of the large banks such as Bank of America and JP Morgan that had been able to operate for various decades had a stronger market presence compared to the smaller and regional banks.

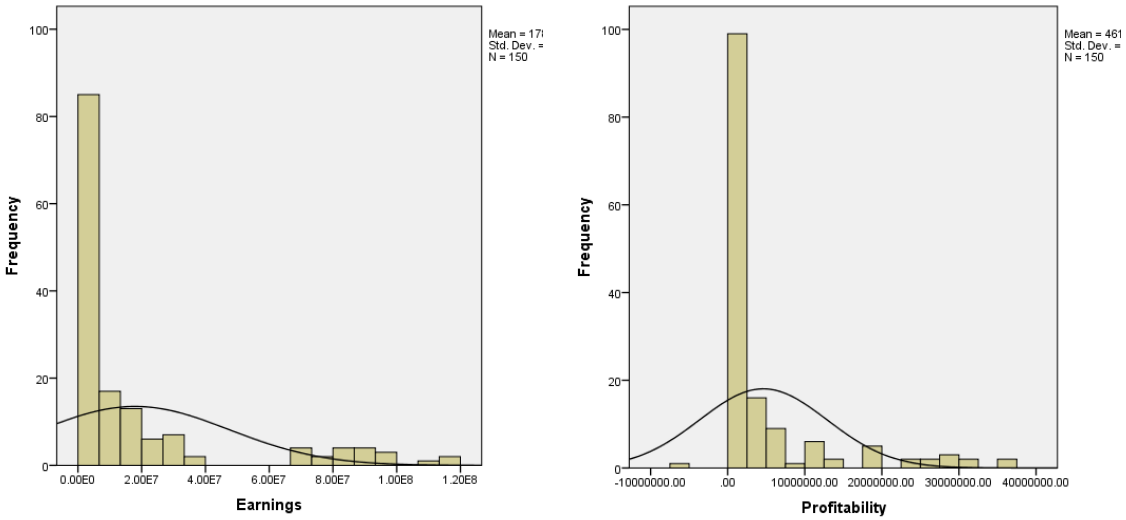
The debt position as apparent in Table 3 is critical. The table shows that most of the U.S. banks included in the analysis had a high level of secured but long-term debts. As a result, most of the U.S. banks were highly leveraged. From Table 3, it could be inferred that U.S. banks were highly leveraged, and the proportion of their debt financing was in clear competition with their equity financing. The inclusion of debt in their capital structure was reflective of their large-scale dependence on debt for the running of their operations as compared to equity financing. The extraordinary reliance on debt could lead

to problems for a few banks in times of serious financial crisis when they may find themselves unable to repay the debt owned by them.

The case of EPS, according to Table 3, was also in line with the overall behavior of the U.S. banking sector. From 2016 to 2020, some of the banks had been able to show an EPS of $44 per share while others were able to show a loss per share of $2. The average EPS for the period was $4, out of which $1.3 had been paid back to the shareholders in terms of profits. From the table, it could be inferred that the banks had been keeping most of their profits as retained earnings as compared to distributing them the shareholders.

Figure 2

Histogram for Earnings and Profitability

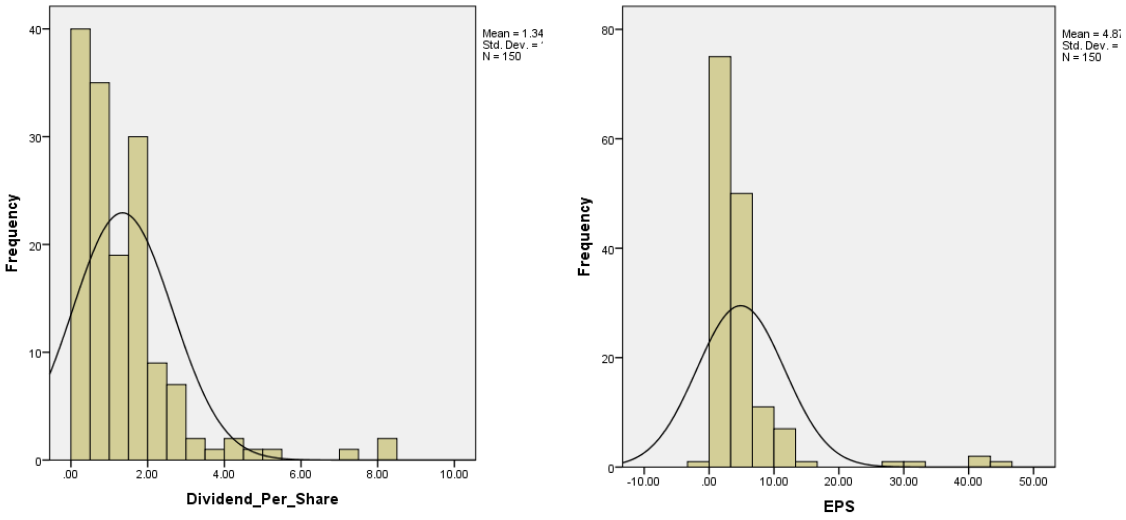


The above histograms represent the values for earnings and profitability. The histograms represent those earnings and profitability of the US banks are not normally distributed. The majority of the banks are earning minute earnings and profits while the

minority of the banks has been earning significantly higher revenue leading to improved profits.

Figure 3

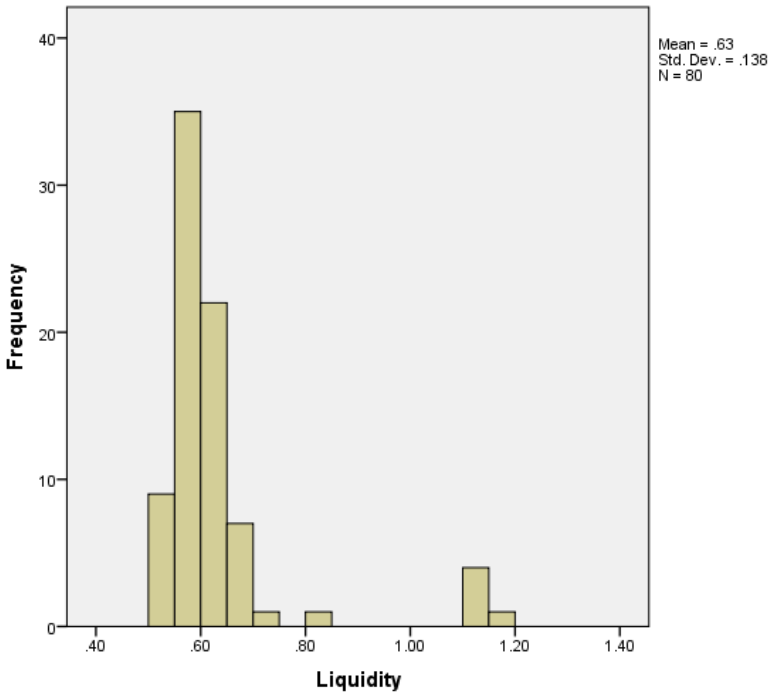
Histogram for Dividends and EPS



The above histograms represent the values for Dividend and EPS. The histograms represent those earnings per share and dividends per share similar to the earnings and profitability are not normally distributed rather skewed to one direction. The majority of the banks have been giving dividends in the range $0 to $5. On the other very a smaller number of banks have been giving above $5 dividends. In the case of earnings, the majority of the banks had earned on per share basis in the range $0 to $13. On the other hand, very a smaller number of banks have been giving earnings per share of more than $15.

Figure 4

Histogram for Liquidity



The above histogram represents the values for liquidity. The histogram shows that the majority of the banks have maintained liquidity in the range of 0.5 to 0.7. On the other hand, a smaller number of banks has maintained liquidity above 1. The histogram of liquidity represents that US banks generally have a greater proportion of current liabilities in their balance sheet as compared to their current assets.

Correlation Analysis

Table 4

Correlation Analysis

		Earnings	Profitability	Dividend_Per_Share	Common Stock
Earnings	Pearson Correlation	1	.912**	.179*	.201*

	Sig. (2-tailed)		.000	.028	.014
	N	150	150	150	150
Profitability	Pearson Correlation	.912**	1	.315**	.155
	Sig. (2-tailed)	.000		.000	.058
	N	150	150	150	150
Dividend_Per_Share	Pearson Correlation	.179*	.315**	1	-.100
	Sig. (2-tailed)	.028	.000		.221
	N	150	150	150	150
Common Stock	Pearson Correlation	.201*	.155	-.100	1
	Sig. (2-tailed)	.014	.058	.221	
	N	150	150	150	150
Preferred stock	Pearson Correlation	.959**	.886**	.074	.176*
	Sig. (2-tailed)	.000	.000	.371	.032
	N	150	150	150	150
Secured debt	Pearson Correlation	.893**	.767**	.092	.138
	Sig. (2-tailed)	.000	.000	.264	.093
	N	150	150	150	150
EPS	Pearson Correlation	.061	.248**	.756**	-.059
	Sig. (2-tailed)	.456	.002	.000	.473
	N	150	150	150	150
Liquidity	Pearson Correlation	.189*	.138	.062	.654
	Sig. (2-tailed)	.032	.093	.473	.554.
	N	150	150	150	150

Correlations

		Preferred stock	Secured debt	EPS	Liquidity
Earnings	Pearson Correlation	.959	.893**	.061*	.959**
	Sig. (2-tailed)	.000	.000	.456	.000
	N	150	150	150	150

Profitability	Pearson Correlation	.886**	.767	.248**	.893**
	Sig. (2-tailed)	.000	.000	.002	.000
	N	150	150	150	150
Dividend_Per_Share	Pearson Correlation	.074*	.092**	.756	.061
	Sig. (2-tailed)	.371	.264	.000	.456
	N	150	150	150	150
Common Stock	Pearson Correlation	.176*	.138	-.059	.651
	Sig. (2-tailed)	.032	.093	.473	.554.
	N	150	150	150	150
Preferred stock	Pearson Correlation	1**	.854**	-.022	.959**
	Sig. (2-tailed)		.000	.785	.000
	N	150	150	150	150
Secured debt	Pearson Correlation	.854**	1**	.035	.893**
	Sig. (2-tailed)	.000		.669	.000
	N	150	150	150	150
EPS	Pearson Correlation	-.022	.035**	1**	.061
	Sig. (2-tailed)	.785	.669		.456
	N	150	150	150	150
Liquidity	Pearson Correlation	.959**	.886**	.074	.035
	Sig. (2-tailed)	.371	.264	.000	.323
	N	150	150	150	150

From the table 4 it could be inferred that as per the correlation analysis earnings had a significant correlation with secured debt and profitability. The profitability on the other had a significant relationship with variables such as earnings, dividend per share, preferred stock, and EPS. Dividend per share had a significant but weak relationship with secured debt and profitability. Preferred stock had a strong correlation with secured debt.

The table therefore reflects the significance and magnitude of relationship between different variables.

Regression Analysis

RQ1: What effect does the capital structure combination of common stock equity with preferred stock compared to common stock equity with secured debt have on earnings to sustain banks in times of economic downturn and financial crises?

Table 5

Model Summary

Model Summary							
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	df1
1	.670[a]	.640	.639	7285198.94457	.640	766.686	3

Model	Change Statistics	
	df2	Sig. F Change
1	146[a]	.000

a. Predictors: (Constant), Secured debt, Common Stock, Preferred stock

Table 5 reflects the value of R and R square. According to the table, the value of R is .670 which shows a strong correlation between the dependent and the independent variables. From the table it could be inferred that around 67% of the change in earnings could be explained through capital structure.

Table 6

ANOVA

ANOVA[a]						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	12207354309 8152736.000	3	40691181032 717584.000	766.686	.000[b]
	Residual	77488220546 39387.000	146	53074123661 913.610		
	Total	12982236515 2792128.000	149			
a. Dependent Variable: Earnings						
b. Predictors: (Constant), Secured debt, Common Stock, Preferred stock						

From Table 6 it could be inferred that there exists a significant relationship between the dependent variables that is earnings per share and the independent variables that are Secured Debt, Common Stock and Preferred stock as the sig value is >0.05. From the readings it could be interpreted that the model could be used to explain the change in EPS as a result of a change in the debt and equity capital.

Table 7

Coefficients

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	4547048.027	717444.082		6.338	.000
	Common Stock	.005	.003	.037	1.791	.075
	Preferred stock	2.666	.146	.717	18.308	.000
	Secured debt	.090	.013	.275	7.078	.010

Table 7 shows that Preferred stock and Secured debt had a significant relationship with the EPS. From the table it could be inferred that an increase in debt and preferred stock could lead to a rise in the earnings per share of the company. This could be associated with the fact that a rise in leverage leads to increased operations within the available resources consequently, leading to higher revenues and earnings.

H_o1: There is no effect of capital structure combination of common stock equity with preferred stock compared to common stock equity with secured debt on earnings to sustain banks in times of economic downturn and financial crises.

H_a1: There is an effect of capital structure combination of common stock equity with preferred stock compared to common stock equity with secured debt on earnings to sustain banks in times of economic downturn and financial crises.

As per the results of the regression analysis the alternative hypothesis no:1 has been accepted while the null hypothesis no: 1 has been rejected.

RQ2: What effect does the capital structure combination of common stock equity with preferred stock compared to common stock equity with secured debt have on profitability to sustain banks in times of economic downturn and financial crises?

Table 8

Model Summary

Model Summary							
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	df1
1	.887[a]	.786	.782	3871501.51805	.786	178.913	3

Model	Change Statistics

	df2	Sig. F Change
1	146[a]	.000
a. Predictors: (Constant), Secured debt, Common Stock, Preferred stock		

The value of R in the table 8 is .887, indicating a significant correlation between the dependent and independent variables. The correlation is positive and strong in nature. From the table it could be inferred that around 67% of the change in profitability could be explained through capital structure.

Table 9

ANOVA

ANOVA[a]						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	8044933477185699.000	3	2681644492395233.000	178.913	.000[b]
	Residual	2188324504618911.500	146	14988524004239.120		
	Total	1023325798180461 0.000	149			

From the table 9 it could be inferred that as the sig value is >0.05, the figures suggest that there is a significant relationship between the dependent variable, profitability, and the independent variables, secured debt, common stock, and preferred stock. From the readings it could be interpreted that the model could be used to describe those changes in debt and equity capital affect profitability of US banks.

Table 10

Coefficients

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1454825.936	381264.242		3.816	.000
	Common Stock	5.384E-006	.002	.000	.003	.997
	Preferred stock	.893	.077	.856	11.546	.000
	Secured debt	.003	.007	.036	.490	.625

a. Dependent Variable: Profitability

According to the table 10 only Preferred stock had a significant association with Profitability. From the table it could be inferred that a growth in preferred stock will result in a rise in the company's profitability. It could also be interpreted that this may be linked to the fact that a rise in preferred stock capital provides a dual advantage of equity and debt capital. Consequently, it could be argued that the board is able to delay the payment of fixed dividends to the shareholders which could be used in the operations to avoid external funds and the finance cost associated thereof, leading to a rise in the profitability of the banks.

H_o2: There is no effect of capital structure combination of common stock equity with preferred stock compared to common stock equity with secured debt on profitability to sustain banks in times of economic downturn and financial crises.

H_a2: There is an effect of capital structure combination of common stock equity with preferred stock compared to common stock equity with secured debt on profitability to sustain banks in times of economic downturn and financial crises.

As per the results of the regression analysis, the alternative hypothesis no:2 has been accepted while the null hypothesis no: 2 has been rejected.

RQ3: What effect does capital structure combination of common stock equity with preferred stock compared to common stock equity with secured debt have on liquidity to sustain banks in times of economic downturn and financial crises?

Table 11

Model Summary

Model Summary							
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	df1
1	.473[a]	.448	.411	1.30351	.448	1.068	3

Model	Change Statistics	
	df2	Sig. F Change
1	146[a]	.005

a. Predictors: (Constant), Secured debt, Common Stock, Preferred stock

The value of R in the table in table 11 is .473[a], showing that the dependent and independent variables have a significant relationship. From the table it could be inferred that the magnitude of the relationship however cannot be termed to be strong, and the findings suggest that a weak relationship exists between the dependent and independent variables. Around 47.3% of the change in liquidity could be explained through capital structure.

Table 12

ANOVA

ANOVA[a]						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	7.6244	3	1.915	1.012	.005[b]
	Residual	347.3036	146	1.235		
	Total	354.928	149			
a. Dependent Variable: Liquidity						
b. Predictors: (Constant), Secured debt, Common Stock, Preferred stock						

Table 12 highlights that the dependent variable, liquidity, and the independent variables, secured debt, common stock, and preferred stock, have a significant association although the magnitude is weak. The table reflects that the model could be used to explain that change in liquidity is affected by change in the long-term debt and equity capital.

Table 13

Coefficients

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.362	.178		10.607	.000
	Common Stock	2.345E-010	.000	.127	1.390	.097
	Preferred stock	1.982E-009	.000	.005	.042	.004
	Secured debt	0.326E-009	.000	.101	.648	.003
a. Dependent Variable: Liquidity						

According to table 13, preferred stock and secured debt had significant relationship with liquidity, but common stock did not have this impact. From the table it could be inferred that when the long-term debt is increased, the firms tend to be more liquid. This is in-contrast to the normally held view that debt leads to more liquidity issues as compared to the equity financing. It could be argued that the long-term debt may not be affecting liquidity to the extent that short term debt could affect. A more appropriate measure to evaluate the liquidity could be its comparison with short term liquidity measures.

H_o3: There is no effect of capital structure combination of common stock equity with preferred stock compared to common stock equity with secured debt on liquidity to sustain banks in times of economic downturn and financial crises.

H_a3: There is an effect of capital structure combination of common stock equity with preferred stock compared to common stock equity with secured debt on liquidity to sustain banks in times of economic downturn and financial crises

As per the results of the regression analysis, the alternative hypothesis no:3 has been accepted while the null hypothesis no: 3 has been rejected.

RQ4: What effect does capital structure combination of common stock equity with preferred stock compared to common stock equity with secured debt have on stockholders' dividend to sustain banks in times of economic downturn and financial crises?

Table 14

Model Summary

Model Summary							
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	df1
1	.514[a]	.521	.501	1.30351	.521	1.068	3

Model	Change Statistics	
	df2	Sig. F Change
1	146[a]	.005

a. Predictors: (Constant), Secured debt, Common Stock, Preferred stock

The value of R in the table in table 14 is .614[a], showing that the dependent and independent variables have a significant relationship. The relationship is positive and moderately stronger in nature. From the table it could be inferred that around 51.4% of the change in dividend could be explained through capital structure.

Table 15

ANOVA

ANOVA[a]						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	5.446	3	1.815	1.068	.005[b]
	Residual	248.074	146	1.699		
	Total	253.520	149			

a. Dependent Variable: Dividend_Per_Share

b. Predictors: (Constant), Secured debt, Common Stock, Preferred stock

Due to the sig value being greater than 0.05 in table 15, the statistics show that the dependent variable, Dividend per share, and the independent variables, secured debt,

common stock, and preferred stock, have a significant association. From the table it could be inferred that the model could be used to explain how debt and equity capital changes affect dividend per share distributed by the commercial and investment banks in the United States.

Table 16

Coefficients

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.362	.128		10.607	.000
	Common Stock	-7.398E-010	.000	-.116	-1.390	.047
	Preferred stock	1.086E-009	.000	.007	.042	.007
	Secured debt	1.469E-009	.000	.102	.648	.518
a. Dependent Variable: Dividend_Per_Share						

Common stock and Preferred stock were found to have a significant relationship with Dividends per share, according to the table 16. However, it is important to note that the relationship between dividends and common stock is negative. From the table it could be inferred that an increase in common stock will lead to a reduction in the dividend per share. This is also relevant from the perspective that a rise in the number of shares leads to a distribution in the dividend causing each stockholder to receive less and less unit of the profit. An increase in preferred stock may result in an increase in the dividends per share.

H_o4: There is no effect of capital structure combination of common stock equity with preferred stock compared to common stock equity with secured debt on liquidity to sustain banks in times of economic downturn and financial crises.

H_a4: There is an effect of capital structure combination of common stock equity with preferred stock compared to common stock equity with secured debt on liquidity to sustain banks in times of economic downturn and financial crises

As per the results of the regression analysis, the alternative hypothesis no:4 has been accepted while the null hypothesis no: 4 has been rejected.

Summary

The chapter of the results and analysis conducted a statistical analysis of the data to test the hypothesis set at the start of the research. The analysis was based on the financial data of thirty US banks and financial institutions. At first, the data obtained from the financial statements of the banks were evaluated through descriptive analysis. The analysis provided the overall description of the financial data. Some of the important findings of the data include the following. The large-scale banks have been able to gain a larger share of the client base, resulting in higher revenues. The earnings of smaller banks are lower than the earnings of larger banks on average. Overall, liquidity concerns plagued US banks, since their immediate assets were determined to be less than their immediate liabilities. Financial institutions in the United States with a larger size and higher income were able to return a larger portion of their profits to shareholders. Large and well-established banks have dominated the market not just because of their product offerings and services, but also because of their scale, which has made it difficult for

smaller banks with less equity and debt capital to compete. The presence of debt in their capital structure reflects their large-scale reliance on debt for the functioning of their business, as opposed to equity financing. Rather than dispersing gains to shareholders, banks have kept the majority of their profits as retained earnings.

The regression analysis was conducted to evaluate the impact of dependent variables such as earnings, profitability, liquidity, and dividend by common stock, preferred stock, and secured debt. The independent variables were expected to be affected by the changes in the capital structure. The results showed that all four alternative hypotheses were accepted, and all null hypotheses were rejected. This showed that common stock preferred stock and secured debt which in combination could be termed as the capital structure of the corporation have a direct effect on a variety of variables. Consequently, it could be argued that these variables would play an important role for the banks to sustain in times of economic downturn and financial crises.

Chapter 5: Discussion, Conclusions, and Recommendations

Interpretation of the Findings

The results suggested that earnings had a significant relation with the capital structure. Consequently, it could be argued that if the U.S. banks want to expand their earnings, one of the important decisions to be made by the board is to select a capital structure that could support them in enhancing their operations. If they opt for measures that may not lead to an optimal capital structure, this could impact their level of earnings. The results were found to be in line with the assertions of Rehman (2016) who argued that the sourcing of funds provides the freedom to the corporations that they could use to achieve their objectives in terms of sustainability, liquidity, profitability, shareholders' dividend, and earnings. The results showed that when the capital structure is supported with long-term debts, it leads to a positive impact on earnings. This could be associated with the fact that when banks are able to get long-term loans, they are facilitated in two ways. First, the banks get substantial funds that they could use to increase their services and product offering. Second, because the secured debt is long-term, the banks are not concerned about their immediate repayment problems. In the short to medium term, this leads to a positive impact on a bank's earnings. The results are in line with the arguments of Bloomenthal (2020) who contended that debt benefits are established by incorporating business income tax into the initial irrelevance because the factor leads to a savings of the tax. This could be another reason why debt is considered to be beneficial for revenue enhancement.

The results suggested that the impact of capital structure on profitability was found to be positive. The banks that maintained secured debt and preferred stocks were able to maintain their profitability. The behavior could be termed surprising from the fact that banks with long-term debt also have to incur the financing cost, which should logically lead to a reduction in the profit. However, the results suggest that the situation is different. In the context of U.S. banks, this could be associated with tax shields that lead to a reduction in the taxation expenses of these banks. The results were found to be in validation of the assertions of Velnampy and Niresh (2012) who claimed a favorable relationship between debt ratio and profitability. The results were found to contrast with the findings of Shawal (2020) who maintained that the relationship between debt and profitability should be negative because the retained earnings are already consumed, which leads to the requirements of additional funds. The results suggest that the debt increases the financing cost; however, it leverages the revenue. Consequently, the banks are able to magnify their earnings through leverage. The role of debt in increasing the profit could only be realized in the situation in which leveraged revenue is able to cover the financial costs and leave substantial profits to the banks. The positive relationship between debt and profitability could therefore also be linked with the effective utilization of the debt by the senior and executive management of the banks. Ineffective utilization of debts may not be able to reap similar benefits.

The results indicated that when banks decide on their capital structure, an effect on the liquidity of the banks could also be observed. This could be understood from the perspective that, unlike short-term debt, banks' reliance is placed on the long-term debt,

which does not negatively impact the liquidity of the banks. Banks are expected to be more negatively affected in the scenarios in which short-term liabilities are used to cover the short-term assets and advances of the banks. When banks cover their operations with long-term debt, this may not put significant pressure on the liquidity of the banks. The long-term debt has its respective challenges for the banks; however, in terms of liquidity, long-term debt could be expected to have a positive impact. The results were found to be in line with the findings of Ghasemi and Ab Razak (2016) who highlighted that the aspect of liquidity remains one key factor considered in the determination of the capital structure of corporations. This is also true from the perspective that in the post-housing-mortgage crisis phase, the banks are required to ensure a certain level of liquidity under Basel and different conventions. The results suggest that dividend payment has a negative relation with the common equity. As the equity capital increases, the dividend to the respective shareholders reduces in size and therefore is a capital structure that needs careful consideration. The results support the arguments of Eshna (2016) who emphasized that dividend payments lead to a reduction in retained earnings, which is a capital structure component. Consequently, a negative relationship exists between dividends payments and the capital structure of a bank.

Limitations of the Study

The study was completed after going through multiple obstacles and limitations; however, these limitations could not impact the overall effectiveness of the research. The first limitation was the availability of the financial data of the banks. The sample contained 30 U.S. retail banks. The data were obtained from the financial statements;

however, obtaining financial statements of 30 banks was a challenging task. Data for variables such as liquidity were rarely available. The second limitation was the data incorporated in the study were quantitative in nature. Consequently, the analysis of the data was one-dimensional. The third limitation was the secondary nature of the data. The data were obtained from financial statements, but any type of expert opinion could not be incorporated in the study that could have further enhanced the overall findings. It could be argued that the study was able to achieve its objectives despite the associated limitations.

Because the secondary data were collected from financial reports of local banks and other confidential publications, access to such data may have been restricted, which might have limited the quality and amount of data gathered. Such data are often useful in realizing the ways of financing capital in most of the retail firms, including banks. Bank officers may be reluctant to release essential data of their organization because the data could contain critical information about their bank. Calculations of the leverage ratios, debt, market prices per share, and the weighted average costs of capital are challenge of huge data sets.

Recommendations

The first recommendation for future research is to conduct analysis from multiple perspectives. For example, because the current study addressed retail banks, it is recommended that future studies include investment banks and other financial institutions in the sample. The second recommendation is to conduct a qualitative analysis of the data. It is generally assumed that qualitative analysis leads to subjective interpretation;

however, qualitative analysis also ensures multidimensional investigations in which the subject matter is evaluated from different perspectives. The third recommendation is to use primary data in future research. This refers to the experts' opinions, views, thoughts, and experiences regarding the impact of capital structure on the different variables. Executives, officers, policymakers, directors, and other stakeholders who have a closer association with retail banks in the United States could provide their experiences and observations with respect to the subject matter. Their experiences would be expected to further enhance the research process.

Implications

The study is expected to have different implications for the stakeholders. First, the study provides empirical evidence to the stakeholders regarding the significant impact of capital structure on the different variables. From the perspective of practice, based on the findings, the stakeholders could select an appropriate ratio of debt, equity, and preferred stocks for better performance and enhanced operations. If the banks want to attract shareholders with higher dividend payments, they may prefer to reduce the equity capital and substitute it with debt capital or preferred stock because these measures would be able to attract better investment for the financial institutions. The methodological implications of the study are also important because the current study focused on retail banks; future studies could include other financial institutions such as investment banks, hedge funds, or insurance companies. With the assistance of the findings obtained from the current research, the shareholders could have a closer watch on the decision making

of the management, and they could carefully evaluate whether the decisions being taken by the management supports shareholders' wealth maximization.

Conclusion

The study was focused on evaluating capital structure and the performance of U.S. retail banks. The housing mortgage crisis of 2007–2008 severely impacted various industries across the world; however, the most severely impacted industry was the banking sector. In the United States, several banks went bankrupt and others had to be bailed out by the government. The crises forced academicians and economists to revisit notions associated with banking performance. The most important of these notions was the capital structure of the banks and its relative impact on banking performance. It was identified that banks were highly leveraged, which was one of the reasons for their inability to withstand the crises. Modigliani and Miller (1958) argued that the performance of banking firms is independent of their capital structures.

From the perspective of MM theory, the capital structure of the firm should not significantly impact the performance of the banks. It was identified that not only capital structure had a significant performance with the firm performance but a change in the capital structure such as reallocation of debt and equity could lead to changes in the profitability, earnings, and liquidity of the firm. Moreover, the financial crises and the resultant negative development also forced the Basel committee to introduce Basel III regulations which were specifically focused on capital adequacy and liquidity risk. Consequently, it could be argued that after financial crises, the capital structure of the banks and their performance has obtained a renewed interest among academicians. The

study aimed to establish an appropriate combination of capital components comprising preferred stocks, secured debts, and common stock equity that would enable retail banks in the United States to yield greater earnings, liquidity, stakeholders' dividend, and profitability.

The objective set by the research study focused on evaluating the impact of capital structure on bank earnings, assessing how capital structure impacts the profitability of the banks and analyzing the capital structure's influence on the liquidity of US banks. The research question focused on understanding the effect that the capital structure combination of common stock equity with preferred stock compared to common stock equity with secured debt have on earnings, profitability, liquidity, and dividend pay-out to sustain banks in times of economic downturn and financial crises. The study identified that the proportion of debt and equity could have a different impact on the financial capacity and balance sheet of the banks. The firms that have a greater proportion of their assets financed by equity capital would have a less financial cost and interest expenses to bear. They are also at the freedom to distribute their profits via dividends or reinvest them as retained earnings.

When the ratio of debt is greater, it provides two different scenarios to the banks. At first, the banks would be leveraged to extend their operation however the leverage would come at a price. The banks would be forced to bear the direct financial cost of the debt capital, having an impact on their profitability and earnings. Consequently, it could be argued that the decision of capital structure is a decision of trade-off between different factors that directly impact a firm's performance. The capital structure decision is

therefore one of the challenging decisions to be decided by the strategic leadership such as the board of directors. More challenging is the ascertainment of the fact whether the capital structure is fit to survive the negative impacts of any future financial crisis. In the case of the United States, the banks were witnessed to have a significant drop in their dividend yields. This revealed that the capital structuring and debt to equity ratio of the banks during the housing mortgage crises were not adequate to save them from such shocks.

In the specific case of the United States, it was identified that the retail banking corporations have substantial collateral agreements that might be used to back their high debt levels, implying that financial distress costs are more likely to be substantially lower, according to the trade-off model. Capital structure decisions made by retail banking corporations in the United States showed that banking firms use more leverage since the majority of their assets are considered as debt collateral. As a result, it appears that their optimal capital structure, based on the leverage concept as specified in the trade-off framework, has been greatly supported. However, this leads to the main challenge that such banking firms would find it difficult to survive in a new financial crisis. The regression analysis was incorporated to observe how earnings, profitability, liquidity, and dividends are affected by common stock, preferred stock, and secured debt, the dependent variables. Changes in the capital structure were predicted to alter the independent variables. All four alternative hypotheses were accepted, while all null hypotheses were rejected, according to the findings. This demonstrated that the capital structure of the firm, which includes common stock, preferred stock, and secured debt,

has a direct impact on variables such as liquidity, profitability, dividend per share and earnings. As a result, it may be claimed that these variables will play a critical part in the banks' ability to survive during economic downturns and financial crises.

References

Abbadi, S.&Abbadi,R.(2012).The determinants of working capital requirements in Palestinian Industry corporations. ResearchGate. (PDF) The Determinants of Working Capital Requirements in Palestinian Industrial Corporations (researchgate.net)

Acharya,V. V., & Kulkami, N.(2019). *Government guarantees and bank vulnerability during a crisis: Evidence from an emerging market.* NBER working papers 26564. National Bureau of Economic Research, Inc.

Ahmad, Z., Abdullah, N. M. H., & Roslan, S. (2012). Capital structure effect on firms performance: Focusing on consumers and industrials sectors on Malaysian firms. *International Review of Business Research Papers*, *8*(5), 137–155.

Ahmed, R., Zafar, M. R., & Zeeshan, F. (2016). Impact of capital structure on bank profitability. *International Journal of Scientific Publication.*

Ahmed, Z., & Hla, D. T. (2019). Stock return volatility and capital structure measures of nonfinancial firms in a dynamic panel model: Evidence from Pakistan. *International Journal of Finance & Economics*, *24*(1), 604–628.

Alm, J., Bloomquist, K. M., & McKee, M. (2015). On the external validity of laboratory tax compliance experiments. *Economic Inquiry*, *53*(2), 1170–1186.

Amadeo, K. (2020). *The great recession of 2008 explained with dates. What happed and when?* https://www.thebalance.com/the-great-recession-of-2008-explanation-with-dates-40568

Anarfo, E. B. (2015). Capital structure and bank performance–evidence from Sub-Sahara Africa. *European Journal of Accounting Auditing and Finance Research*, *3*(3), 1–

20.

Andy, J.C. (2016).Techniques firms use to evaluate corporate projects. The post audits. Advance online. https://. ajjacobson.usThe. Post Audit - Capital Structure - Andrew Jacobson (ajjacobson.us)

Arends, B. (2020). *Investors should be wary of Warren Buffet's crash warning. Leaving the party too early can cost you as much as leaving too late.* https://www.marketwatch.com/story/investors-should-be-wary-of-warren-buffetts-crash-warning-2020-08-26

Armstrong, C.S., Guay, W.R., & Weber, P.J. (2010). The role of information and financial reporting in corporate governance and debt contracting. Journal of Accounting and Economics, 50, 179-234

Ang, J.S., Cole, R.A., & Wuh Lin, J. (1985, reviwied 2000). Agency costs and ownership structure. Journal of Finance, 55(1), 81-105

Ary, D., Jacobs, L. C., Sorensen Irvine, C. K., & Walker, D. A. (2018). Introduction to research in education. *Cengage Learning*, *8*(3), 1–597. https://doi.org/11.1208/DF-03-2014-00

Aquilina, M. (2018). Impact of investment banks in Mexico Texas finance. Advance online, https://doi.org/10.2620/jip.

Babania, A., Hesan, M., Kahreh, M. S., & Tive, M., (2018). Analyzing the applications of customer lifetime value (CLV) based on benefit segmentation for the banking sector. *Procedia-Social and Behavioral Sciences*, *109*, 590–594. https://doi.org/10.1016/j.sbspro.2013.12.511

Baker, M., & Wurgler, J. (2015). Do strict capital requirements raise the cost of capital? Bank regulation, capital structure, and low-risk anomaly. *American Economic Review*, *105*(5), 315–20. https://www.aeaweb.org/articles?id=10.1257/aer.p20151092

Barstow,O.(2019).Impact of capital structure on commercial banks. Seven river publishers, Lagos Nigeria

Barth, J. R., & Miller, S. M. (2017). *Benefits and cost of higher banks leverage ratio.* https://www.mercatus.org/publications/financial-markets/benefits-and-costs-higher-bank-leverage-ratio

Belkhir, M., Maghyereh, A., & Awartani, B. (2016). Institutions and corporate capital structure in the MENA region. *Emerging Markets Review*, *26*, 99–129.

Bentler, P. M., & Bonett, D. G. (1980). Significance tests and goodness-of-fit in the analysis of covariance structures. Psychological Bulletin, 88, 588-606. http://dx.doi.org/10.1037/0033-2909.88.3.588https://doi.org/10.1016/j.ememar.2016.01.001

Berger, A. N., & Bouwman, C. H. S. (2013). How does capital affect bank performance during the financial crisis? *Journal of Financial Economics*, *109*(1), 146–176.

Bergstresser, D. (2017). *Changes in the municipal capital markets since the financial crises.* https://www.brookings.edu/blog/up-front/2017/07/14/key-changes-in-the-municipal-bond-market-since-2007/

Birru, M. W. (2016). The impact of capital structure on financial performance of commercial banks in Ethiopia. *Global Journal of Management and Business*

Research.

Bloomenthal,A. (2020) Overvalued stock definition. The Investor.Overvalued Definition (investor.com)

Campello, M., & Giambona, E. (2011, July 15-20). *Capital structure and the redeploy ability of tangible assets* Finance Conference, Chicago, United States.(No. 11-091/2/DSF24). .

Carlson,B. (2018, (2018, October, 25)When stock fell 10%... A wealth of common sense. When Stocks Fell 10%… (awealthofcommonsense.com)

Chester, D. S., & Lasko, E. N. (2021). Construct validation of experimental manipulations in social psychology: Current practices and recommendations for the future. *Perspectives on Psychological Science*, *16*(2), 377–395.

Chou, Y. S., Ho, S. P., Tsai, L. K., Tserng, H. P., & Sung, C. W. (2017). Developing an analytical model for the optimal capital structure of the building company. *Journal of Marine Science and Technology*, *18*(3), 385–394. https://doi.org/21.1480/RT-14-2011-7812/comp/Html

Chowdhury, M. F. (2015). Coding, sorting and sifting of qualitative data analysis: Debates and discussion. *Quality & Quantity*, *49*(3), 1135–1143.

Cleland, J. (2015). Exploring versus measuring: Considering the fundamental differences between qualitative and quantitative research. *Researching Medical Education*, 1–14.

Collins,S.O. (2006). Relationship between capital structure and firms value in Nigeria. *International journal of business and social science*. Vol.2, pp 236-8.

Cooper,D.R. & Schindler,(2003). Business finance. https //etd.repository.ugm.ac.id/home/detail_pencarian_downloadfiles/952788

Dalwai, T. A. R., Basiruddin, R., & Abdul Rasid, S. Z. (2015). A critical review of the relationship between corporate governance and firm performance: GCC banking sector perspective. *Corporate Governance*, *15*(1), 18–30. https://doi.org/10.1108/CG-04-2013-0048/full/Html

Danis, A., Rettl, D. A., & Whited, T. M. (2014). Refinancing, profitability, and capital structure. *Journal of Financial Economics*,*114*(3), 424-443.

Datler, G., Jagodzinski, W., & Schmidt, P. (2013). Two theories on the test bench: Internal and external validity of the theories of Ronald Inglehart and Shalom Schwartz. *Social Science Research*,*42*(3), 906-925.

Dawar, V. (2014). Agency theory, capital structure, and firm performance: Some Indian evidence. *Managerial Finance, 40*(12), 1190-1206. DOI: 10.1108/MF-10-2013-0275/full/Html

De Baggio, M. (2019). Sex, Drugs, & Baby Booms: Can behavior overcome biology? *Journal of economic behaviour & Organizations*. Advance online publication. Medical-Marijuana Legalization Leads to Baby Boomlet, Paper Says - WSJ

Delice,J.L.(2010).Are banks catalyst for economic development? Journal of finance.52(1).175-192.

De Massis, A., Frattini, F. & Kotlar, J. (2018). Organizational goals: Antecedents,

formation processes and implications for firm behavior and performance. *International Journal of Management Reviews, 20*(S1), S3-S18. DOI:10.1111/ijmr.12170.

Denning, S. (2016). *The dumbest idea in the world: maximizing Shareholders' value.* https://www.leadership.com/sites/stevedenning/2011/11/28/maximizing-shareholder-value-the-dumbest-idea-in-the-world/#3fe595cc2287

Deesomak, P.&Thomas, C. (2007). The capital markets. Cheng Publishing, Shanghai.

Dimon, J. (2018). *Understanding bank capital. A primer.* https://www.moneyandbanking.com/commentary/2018/2/11/understanding-bank-capital-a-primer

Dreyer, J. (2011). *Capital structure: profitability, earnings volatility, and the probability of financial distress* (Doctoral dissertation, University of Pretoria).

Dülmer, H. (2016). The factorial survey: Design selection and its impact on reliability and internal validity. *Sociological Methods & Research,45*(2), 304-347.

Durand, D. (1957). *Costs of debt and equity funds for business: Trends and problems of measurement.* Conference on Research in Business Finance. New York, 1952, 215-47. doi: nber.org/chapters/c4790.

Edwin (2020). The efficient economy hypothesis1: A modern and robust alternative to central banking. The Efficient Economy Hypothesis I: A Modern & Robust Alternative to Central Banking. | Edwin Economics

Eshna,T.A. (2016). Understanding equity investment: A capital market perspective.

Lightening Source Publishing, UK, USA.

Faber, J., & Fonseca, L. M. (2014). How sample size influences research outcomes. *Dental Press Journal of Orthodontics,19*(4), 27-29.

Fitzsimmons, C. (2017). *Risk of banks loans*. https://bizfluent.com/info-8529591-various-affect-required-rate-return.html

Gao, R. (2016). An empirical study on the influence of non-debt tax shield on the choice of corporate debt levels----Based on the tax preference policy. *International Journal of Business and Social Science,7*(1), 201-212.

George, C. (2015). Bank size, leverage, and financial downturns. *Economic Review,115*(1), 1-26. https://doi: cfr/2015/wp2015/2015-0100115.

Ghasemi, M., & Ab Razak, N. H. (2016). The impact of liquidity on the capital structure: Evidence from Malaysia. *International Journal of Economics and Finance,8*(10), 130-139.

Ghasemzadeh, M., Heydari, M., & Mansourfar, G. (2019). Earning volatility, capital structure decisions and financial distress by SEM.*Emerging Markets Finance and Trade*, 1-19.

Giebel, M., & Kraft, K. (2015). Impact of the financial crises on investments in innovative firms.*ZEW - Centre for European Economic Research Discussion Paper No. 15-069*. DOI: 13.0916/VF-37-2011-8951/top/HTML

Giebel, M., & Kraft, K. (2015). Impact of the financial crises on investments in innovative firms. *ZEW - Centre for European Economic Research Discussion Paper No. 15-069*. DOI: 13.0916/VF-37-2011-8951/top/HTML

Goldberg, S. and Johnson, G. and Shriver. (2021) Regulating Privacy Online: An Economic Evaluation of the GDPR (July 17, 20121). Available at SSRN: https://ssrn.com/abstract=3421731 or http://dx.doi.org/10.2139/ssrn.3421731

Goldenberg, A. J., Maschke, K. J., Joffe, S., Botkin, J. R., Rothwell, E., Murray, T. H., ... & Rivera, S. M. (2015). IRB practices and policies regarding the secondary research use of biospecimens.*BMC Medical Ethics*,*16*(1), 1-8.

Gómez, G., Rivas, A. M., & Bolaños, E. R. L. (2014). The determinants of capital structure in Peru.*Academia Revista Latinoamericana de Administración*.

Goodman, S. N., Fanelli, D., & Ioannidis, J. P. (2016). What does research reproducibility mean? *Science Translational Medicine*, *8*(341), 341ps12-341ps12. doi: tya/2011/fg201/2011-61.

Goyal, A. M. (2013). Impact of capital structure on performance of listed public sector banks in India. *International Journal of Business and Management Invention*,*2*(10), 35-43.

Graham, J. R., & Leary, M. T. (2011). A review of empirical capital structure research and directions for the future. *Annual Review of Financial Economics*, *3*, 309-345.

Guney, Y., Li, L., & Fairchild, R. (2011). The relationship between product market competition and capital structure in Chinese listed firms. *International Review of Financial Analysis*,*20*(1), 41-51.

Hafeez, M. M., Khan, H. H., Majeed, F., & Azeem, A. (2018). Impact of capital structure on Islamic banks performance:(Evidence from Asian country). *Global Journal of*

Management and Business Research, 18(3).

Hawaldar, I. T., Lokesh, L., & Biso, S. S. (2016). An empirical analysis of financial performance of retail and wholesale Islamic banks in Bahrain. *American Scientific Research Journal for Engineering, Technology, and Sciences (ASRJETS), 20*(1), 137-147. doi:hyrt.org/review/d5612

Hayes, C. (2020). The theory of merger and acquisition. Journal of accounting and finance. Advanced online.

Hayes,C & James, G. (2020). The theory of merger and acquisition. Journal of business and finance. Advanced online.

Heikal, M. Khadda, M. & Ummah, A. (2014). Influence analysis of return on assets, return on equity, net profit margin, and current ratio against corporate profit growth in Automotive in Indonesia stock exchange. A journal of Semantic Scholar. [PDF] Influence Analysis of Return on Assets (ROA), Return on Equity (ROE), Net Profit Margin (NPM), Debt To Equity Ratio (DER), and current ratio (CR), Against Corporate Profit Growth In Automotive In Indonesia Stock Exchange | Semantic Scholar

Henderson, V. C., Kimmelman, J., Fergusson, D., Grimshaw, J. M., & Hackam, D. G. (2013). Threats to validity in the design and conduct of preclinical efficacy studies: A systematic review of guidelines for in vivo animal experiments.*PLoS Med,10*(7), e1001489.

Hirtle, B. J., & Stiroh, K. J. (2007). The return to retail and the performance of US

banks.*Journal of Banking & Finance*,*31*(4), 1101-1133.

Hossain, I., & Hossain, M. A. (2015). Determinants of capital structure and testing of theories: A study on the listed manufacturing companies in Bangladesh. *International Journal of Economics and Finance*,*7*(4), 176-190. https://www.wallstreetmojo.com/leverage-ratios-for-banks/

Hubbard, R.G.& O'Brien, P.A. (2018). *Money, banking, and the financial system, (3rd ed.)* Pearson.

Iavorskyi, M. (2013). The impact of capital structure on firms: Evidence From Ukraine . Kyiv school of economics, Kiev, Ukraine

Ippoliti, E. (2015). The reasoning at the frontier of knowledge: Introductory essay. In *Heuristic reasoning* (pp. 1-10). Springer. doi: 10.1007/978-3-319-09159-4_1.

Jennings. (2016). Can brokers have it all? On the relation between make-take fees and limit order execution quality. Journal of Finance. Advance online publication **https://doi.org/10.1111/jofi.12422**

Jones, L. (2016). Quantitative ADF STEM: Acquisition, analysis and interpretation. In *IOP Conference Series: Materials Science and Engineering* (Vol. 109, No. 1, p. 012008). IOP Publishing.

Kallberg, J., Liu, C.H. & Villupuram, S. (2013). Preferred stock: some insights into capital structure. *A Journal of Corporate Finance, 21*, 77-86.

Kang, W., Ratti, R. A., & Vespignani, J. (2020). Impact of global uncertainty on the global economy and large developed and developing economies.*Applied*

Economics,*52*(22), 2392-2407.

Kashyap, A.K., Rajan, R.G., & Stein, J.C. (2008). Rethinking capital regulation. In *Federal Reserve Bank of Kansas City symposium on Maintaining stability in a changing financial system* (pp. 431-471). Federal Reserve Bank of Kansas City.

Kenton Library (2020). The perfect way to spend a day. Kenton public library. Advance online. https://kentonlibrary.org/2020/9.

Kessler, J.B., & Vesterlund, L. (2015). The external validity of laboratory experiments: Qualitative rather than quantitative effects. *Handbook of Experimental Economic Methodology*, http://dx.doi.org/10.1093/acprof:oso/9780195328325.003.0020

Khalid A, Al-Sraheen, D. & Marji Q, (2017). Determinants of Capital Structure Decisions: An Empirical Study from Developing Country. *International Business Management, 11: 14-24*DOI: 10.36478/ibm.2017.14.24 https://medwelljournals.com/abstract/?doi=ibm.2017.14.24

Khalid, Abdullah &Kumar, A. (2012). Capital Structure and Financial Performance: Evidence from Oman India. Journal of Economics and Business, 130-235

Khan, I (2018), Capital Structure, Equity Ownership and Firm Performance: Evidence from India, Social Science Research Network, Advance Online.

Khorsan, R., & Crawford, C. (2014). External validity and model validity: a conceptual approach for systematic review methodology. *Evidence-Based Complementary and Alternative Medicine*,*2014*.

Klingstedt, O. & Lager, O. (2016). *Determinants of bank capital structure. The impact of*

Basel III. University of Gothenburg. https://gupea.ub.gu.se/bitstream/2077/47915/1/gupea_2077_47915_1.pdf

Klitzman, R. (2012). From anonymity to “open doors”: IRB responses to tensions with researchers.*BMC Research Notes,5*(1), 1-11.

Kooragama, C. S. D., Tennakoon, A I., Deraniyagala, U. I. P., Rabel, R. A. G. S., Narmada, A. D. D. D., Jayathissa, K.L.S. I., Kiriella, K. G. S. T., Waduge, H. V. C., Lokuarachchi, L. A. D. D., & Pathumika, H. K. I. (n.d.). Impact of capital structure on firm’s performance: a study on Kri Lankan listed manufacturing companies. http://mgt.sjp.ac.lk/acc/wp-content/uploads/2018/12/G04-Group-4-Research-Article.

Kothari, S.P. (2018). *Why shareholders wealth maximization despite other objectives.*https://corpgov.law.harvard.edu/2018/05/23/why-shareholder-wealth-maximization despite-other objectives/

Krisnanda, P. H., & Wiksuana, I. G. B. (2015). The effect of company size, sales growth, and non-debt tax shield on the capital structure of telecommunications companies on the Indonesia Stock Exchange. *E-Journal of Management,4*(5).

Kuria, F.B. (2010). *The effect of capital structure on the financial performance of commercial banks in Kenya.* The University of Nairobi Publishing.

Kwan, S. (2015). Capital structure in banking. *Federal Reserve Bank of San Francisco Economic Research.*https://www.frbsf.org/economic-research/publications/economicletter/2009/december/capital-structure-banking/

Lerner, R. M., & Callina, K. S. (2013). Relational developmental systems theories and

the ecological validity of experimental designs. *Human Development,56*(6), 372-380.

Lim, S. C., Macias, A. J., & Moeller, T. (2020). Intangible assets and capital structure. *Journal of Banking & Finance,118*, 105873.

Majumdar, S. K. (2014). "Capital Structure and Performance: Evidence from a Transition Economy on an Aspect of Corporate Governance," Public choice pp 285-315

Mallisa, M., & Kusuma, H. (2017). Capital structure determinants and firms' performance: empirical evidence from Thailand, Indonesia and Malaysia. *Polish Journal of Management Studies,16*.

Mishra, C. S. (2011). Determinants of capital structure–a study of manufacturing sector PSUs in India. In *Proceedings of 2011 International Conference on Financial Management and Economics, IPEDR* (Vol. 11, pp. 247-52).

Modigliani, F. & Miller, M.H. (1958). The cost of capital, corporation finance, and the theory of investment. *The American Economic Review*, *48*, 261-297.

Mostafa, H. T., & Boregowda, S. (2014). A Brief Review of Capital Structure Theories. Research Journal of Recent Sciences, 3(10), 113–118.

Murphy. (2017). Capital management. Peakpack private wealth management. Advance online. https://peakpackprivate.com

Muritala, T. A. (2012). An empirical analysis of capital structure on firms' performance in Nigeria. *International Journal of Advances in Management and Economics,1*(5), 116-124.

Myers, S.C. (2006). Capital structure**.** *The journal of economic perspective,*15(2) 81-102.

Https://doi.org/10.1257/jep.15.2.81

Myers, S.C. (1984). Capital structure**.** *The journal of economic perspective*,18(1) 123-146102. Https://doi.org/10.1257/jep.15.2.81

Oguna, A. A. (2014). *Examining the effect of capital structure on financial performance: A study of firms listed under manufacturing, construction and allied sector at the Nairobi Securities Exchange* (Master's Thesis, University of Nairobi).

Onaolapo, A.A. & Sunday, K.O. (2016). Capital structure and firm performance: Evidence from Nigeria. European Journal of Economics, Finance and Administrative Sciences, 25-82

Onyia, C. (2016). The Nigeria Capital Market. First City Publishers, Lagos,Nigeria.

Onyiriuba, L. (2018). *Bank risk management in developing economies: Addressing the unique challenges of domestic banks through risk management*. https://doi.org/10.1016/C2015-0-04556-7

Pandey, I. M. (2017). Financial management. (11 ed., pp. 56-77). New Delhi: VIKAS Publishing House.

Persson, J., & Wallin, A. (2012). *Why internal validity is not prior to external validity.*http://philsci-archive-dev.library.pitt.edu/9171/1/Persson_Wallin_PSA2012_why_internal_validity_is_not_prior_to_external_validity.pdf

Pinto, P., Hawaldar, I. T., Quadras, J. M., & Joseph, N. R. (2017). Capital structure and financial performance of banks. *International Journal of Applied Business and Economic Research*,*15*(23), 303-312.

Pinto, P., & Joseph, N. R. (2017). Capital structure and financial performance of banks. *International Journal of Applied Business and Economic Research*, *15*, 303-312. doi: 01.6719018/qatyv2401022.

Ponterotto, J. G. (2010). Qualitative research in multicultural psychology: Philosophical underpinnings, popular approaches, and ethical considerations. *Cultural Diversity and Ethnic Minority Psychology*,*16*(4), 581.

Rampini, A. A., & Viswanathan, S. (2013). Collateral and capital structure. *Journal of Financial Economics*,*109*(2), 466-492.

Rehman. (2016). Capital structure. Journal of business and tourism,p.192,vol.5(1),ISSN 2320-0739

Rosenberg, D. (2019, July 19). Deflation still No. 1 threat to global economic stability: No wonder interest rate is so low, pricing power is so anaemic and central bank are so freak out. David Rosenberg: Deflation still No. 1 threat to global economic stability | Financial Post

Ryan, R. M., O'Toole, C. M., & McCann, F. (2014). Does bank market power affect SME financing constraints? *Journal of Banking and Finance*, *49*, 495-505. doi: 17.29117/yhat2181033

Saeed, M. M., Gull, A. A., & Rasheed, M. Y. (2013). Impact of capital structure on banking performance (A case study of Pakistan). *Interdisciplinary Journal of Contemporary Research in Business*,*4*(10), 393-403.

Salim, A.S. (2018). Capital structure and financial performance of Islamic bank in Kenya. *Journal of Research Project*.https://ir-

library.ku.ac.ke/bitstream/handle/123456789/18699/Capitalstructure/and/financial performane/ofislamic/optiooptionof/kenyattauniversity.july22018

Salim, M., & Yadav, R. (2012). Capital structure and firm performance: Evidence from Malaysian listed companies. *Procedia-Social and Behavioral Sciences,65*, 156-166.

Salkin, C., Oner, M., Ustundag, A., & Cevikcan, E. (2018). A conceptual framework for Industry 4.0. In *Industry 4.0: Managing the digital transformation* (pp. 3-23). Springer.

San, O. T., & Heng, T. B. (2011). Capital structure and corporate performance of Malaysian construction sector. *International Journal of Humanities and Social Science, 1*(2), 28-36. doi: 21.714042/ytui7143467

Schmidt. (2018). *Bank Leverage, capital requirement, and the implied cost of equity capital.* https://www.aeaweb.org/conferences/2019/preliminary/paper/rR7GkHNz

Sharma, P., & Paul, S. (2015). Does liquidity determine capital structure? Evidence from India.*Global Business Review,16*(1), 84-95.

Shawal, S. (2020). Capability analysis of puck damage model in predicting the damage behavior of unidirectional composite laminates under different scenarios. ResearchGate. https://www.researchgate.net/journal/IOP-Conference-Series-Materials-Science-and-Engineering-1757-899X

Sheikh, N, A. & Wang. Z. (2013). The impact of capital structure on performance: An empirical study of non-financial listed firms in Pakistan. *International Journal of Commerce and Management, 23*(4), pp. 354-368.

Shiferaw, I (2018). Cause of project implementation delay: The case of development bank of Ethiopia financed project. College of business and economics, School of commerce. Addis Ababa University. Ifa Shiferaw.pdf

Shubita, M. F., & Alsawalhah, J. M. (2012). The relationship between capital structure and profitability.*International Journal of Business and Social Science*,*3*(16), 104-112.

Siddik, M., Alam, N., Kabiraj, S., & Joghee, S. (2017). Impacts of capital structure on performance of banks in a developing economy: Evidence from Bangladesh.*International Journal of Financial Studies*,*5*(2), 13.

Siddik, M.N.A. (2017). Impact of capital structure on the performance of banks in developing economy: Evidence from Bangladesh. *International Journal of Finance Studies (4th Ed.), 15*(4), 2-18.doi: 10.3390/ijfs5020013

Siqueira, A.C.O., Guenster, N., Vanacker, T., Saskia. (2017). A longitudinal comparison of capital structure between young for-profit social and commercial Enterprise. *Journal of Business Venturing, 33*, 225-240

Stephen. (2012). Management: Eleventh edition. Pearson Publishing.

Sultan & Adam, E. (2012) Financial economics. Adebowale publishing, Lagos, Nigeria

Tarawneh, M, (2016), "a comparison of financial performance in the banking sector: some evidence from Omani commercial banks", *International Research Journal of Finance and Economics*, vol. 3, pp. 101-112.

Taylor, S., & Asmundson, G. J. (2018). Internal and external validity in clinical research.*Handbook of Research Methods in Abnormal and Clinical Psychology*,

23-34.

Titman, S. & Wessels, R. (2019). The Determinants of Capital Structure Choice. *The Journal of Finance*, 43(1), 1-19. https://doi.org/10.1111/j.1540-6261.1988.tb02585.x

Vătavu, S. (2015). The impact of capital structure on financial performance in Romanian listed companies.*Procedia Economics and Finance*,*32*, 1314-1322.

Velnampy, T., & Niresh, J. A. (2012). The relationship between capital structure and profitability.*Global Journal of Management and Business Research*,*12*(13).

Venkatesh, V., Brown, S. A., & Bala, H. (2013). Bridging the qualitative-quantitative divide: Guidelines for conducting mixed methods research in information systems. *MIS Quarterly, 37*, 21-54. doi: 32.3688/ikys8741010

Véron, N., & Wolff, G. B. (2016). Capital markets union: a vision for the long term. *Journal of Financial Regulation*, *2*(1), 130-153. doi: 10.1093/jfr/fjw006

Vyas, S. & Giri, I. (2016). *Imperfect market theories and inflow of foreign direct investment. Journal of economics and project management*. https://www.projectguru.in/imperfect-market- theories-investment/

Wall Street mojo (2020). *Leverage ratio for banks. What is leverage ratio for banks?*

Warner, J (1977), Bankruptcy costs: some evidence, Journal of Finance, 32: 337-347.

Weisul, K. (2017). *The 6 most profitable industries of 2017*. https://www.inc.com/kimberly-weisul/ss/most-profitable-industries-2017.html

Widyastuti, A., Komara, R., & Layyinaturrobaniyah, L. (2019). Capital structure and bank performance. *Journal of Business and Management*,*20*(2), 136-144.

Appendix: Variables Used for Data Analysis

WF Bank

Variables	2020	2019	2018	2017	2016
Earnings (Revenue)	$72,340,000	$85,063,000	$86,408,000	$97,741,000	$88,267,000
Profitability	$14,710,000	$26,885,000	$30,282,000	$29,905,000	$35,890,000
Liquidity	80%	68.4%	65%	58%	59.3%
Shareholders' Dividend per share	$1.22	$1.92	$1.61	$1.54	$1.52
Common Stock Equity	$164,778,000	$166,669,000	$128,610,000	$133,599,100	$130,607,900
Preferred Stock	$0	$0	$0	$0	$0
Secured Debt	$0	$0	$0	$0	$0
Earnings per share	$0.41	$4.05	$4.28	$4.10	$3.99

JP Bank

Variables	2020	2019	2018	2017	2016
Earnings (Revenue)	$119,543,000	$115,399,000	$108,783,000	$99,624,000	$95,668,000
Profitability	$29,131,000	$36,431,000	$32,474,000	$24,441,000	$24,733,000
Liquidity	110%	116%	113%	113%	112%
Shareholders' Dividend per share	$3.60	$3.40	$2.72	$2.12	$1.88
Common Stock Equity	$249,291,000	$234,337,000	$230,447,000	$229,625,000	$228,122,000
Preferred Stock	$0	$0	$0	$0	$0
Secured Debt	$0	$0	$0	$0	$0
Earnings per share	$8.88	$10.72	$9.00	$6.31	$6.19

BOA Bank

Variables	2020	2019	2018	2017	2016
Earnings (Revenue)	$85,528,000	$91,244,000	$91,020,000	$87,352,000	$83,701,000
Profitability	$17,894,000	$27,430,000	$28,147,000	$18,232,000	$17,906,000

Liquidity	63.19%	60.17%	58.40%	62.57%	65.65%
Shareholders' Dividend per share	$0.72	$0.66	$0.54	$0.39	$0.25
Common Stock Equity	$272,924,000	$264,810,000	$265,325,000	$267,146,000	$266,195,000
Preferred Stock	$0	$0	$0	$0	$0
Secured Debt	$0	$0	$0	$0	$0
Earnings per share	$1.88	$2.77	$2.64	$1.63	$1.57

CO Bank

Variables	2020	2019	2018	2017	2016
Earnings (Revenue)	$28,523,000	$28,593,000	$28,073,000	$27,237,000	$25,501,000
Profitability	$2,714,000	$5,546,000	$6,015,000	$1,982,000	$3,751,000
Liquidity	54.10%	54.15%	53.08%	52.17%	53.17% -
Shareholders' Dividend per share	$1.0	$1.60	$1.60	$1.60	$1.60
Common Stock Equity	$52,954,000	$50,960,000	$45,831,000	$45,170,000	$45,162,000
Preferred Stock	$0	$0	$0	$0	$0
Secured Debt	$251,625,000	$265,809,000	$245,899,000	$204,473,000	$245,586,000
Earnings per share	$5.19	$11.10	$11.90	$3.52	$6.96

MBC

Variables	2020	2019	2018	2017	2016
Earnings (Revenue)	$15,808,000	$16,462,000	$16,392,000	$15,543,000	$15,237,000
Profitability	$3,626,000	$4,441,000	$4,266,000	$4,090,000	$3,547,000
Liquidity	n/a	n/a	n/a	n/a	n/a
Shareholders' Dividend per share	$0.31	$0.31	$0.24	$0.19	$0.17
Common Stock Equity	$43,430,000	$37,941,000	$37,096,000	$37,709,000	$35,269,000
Preferred Stock	$0	$0	$0	$0	$0
Secured Debt	$0	$0	$0	$0	$0

Earnings per share	$3.83	$4.51	$4.04	$3.72	$3.15

BOH Bank

Variables	2020	2019	2018	2017	2016
Earnings (Revenue)	$153,000	$225,913	$219,602	$184,672	$181,461
Profitability	$42,300	$58,143	$53,911	$42,953	$43,513
Liquidity	55.81%	55.68%	56.71%	55.66%	57.01%
Shareholders' Dividend per share	$0.67	$2.59	$2.34	$2.04	$1.89
Common Stock Equity	$1,288,845	$1,286,832	$1,268,200	$1,512,218	$1,161,537
Preferred Stock	$0	$0	$0	$0	$0
Secured Debt	$0	$0	$0	$0	$0
Earnings per share	$1.06	$5.59	$5.26	$4.37	$4.26

CNA Bank

Variables	2020	2019	2018	2017	2016
Earnings (Revenue)	$74,298,000	$74,286,000	$72,854,000	$72,444,000	$70,797,000
Profitability	$11,047,000	$19,401,000	$18,045,000	$(6,798,000)	$14,912,000
Liquidity	n/a	n/a	n/a	n/a	n/a
Shareholders' Dividend per share	$2.04	$1.92	$1.54	$0.96	$0.42
Common Stock Equity	$179,962,000	$175,626,000	$177,760,000	$181,487,000	$205,867,000
Preferred Stock	$19,480,000	$17,616,000	$18,460,000	$19,253,000	$19,253,000
Secured Debt	$271,686,000	$248,760,000	$231,999,000	$236,709,000	$206,178,000
Earnings per share	$4.75	$8.08	$6.69	$(2.94)	$4.74

USA Bank

Variables	2020	2019	2018	2017	2016
Earnings (Revenue)	$36,296,000	$35,617,000	$31,367,000	$29,752,000	$27,131,000
Profitability	$3,915,000	$4,001,000	$2,292,000	$1,829,000	$1,779,000
Liquidity	n/a	n/a	n/a	n/a	n/a

Shareholders' Dividend per share	$1.30	$2.29	$1.73	$1.57	$1.18
Common Stock Equity	$180,613,000	$178,313,000	$173,821,000	$170,250,000	$170,250,000
Preferred Stock	$0	$0	$0	$0	$0
Secured Debt	$2,457,000	$2,692,000	$2,837,000	$2,487,000	$2,470,000
Earnings per share	$2.15	$4.20	$3.01	$2.53	$2.09

US Bank

Variables	2020	2019	2018	2017	2016
Earnings (Revenue)	$23,325,000	$22,986,000	$22,637,000	$21,902,000	$21,159,000
Profitability	$4,986,000	$6,946,000	$7,124,000	$6,253,000	$5,944,000
Liquidity	55.7%	55.8%	55.1%	58.5%	54.9%
Shareholders' Dividend per share	$1.68	$1.58	$1.34	$1.16	$1.07
Common Stock Equity	$53,095,000	$51,853,000	$51,029,000	$49,040,000	$47,298,000
Preferred Stock	$5,883,000	$5,984,000	$5,984,000	$5,419,000	$5,601,000
Secured Debt	$20,924,000	$18,602,000	$47,340,000	$32,259,000	$33,323,000
Earnings per share	$3.06	$4.16	$4.15	$3.53	$3.25

BU Bank

Variables	2020	2019	2018	2017	2016
Earnings (Revenue)	$751,758	$752,785	$1,050,093	$950,272	$870,385
Profitability	$197,853	$313,098	$324,866	$614,273	$225,741
Liquidity	n/a	n/a	n/a	n/a	n/a
Shareholders' Dividend per share	$0.92	$0.84	$0.84	$0.84	$0.84

Common Stock Equity	$2,983,012	$2,980,779	$2,923,833	$3,026,062	$2,418,429
Preferred Stock	$0	$0	$0	$0	$0
Secured Debt	$0	$0	$0	$0	$0
Earnings per share	$2.06	$3.14	$3.01	$5.60	$2.118

Z Bank

Variables	2020	2019	2018	2017	2016
Earnings (Revenue)	$2,790,000	$2,834,000	$2,782,000	$2,609,000	$2,383,000
Profitability	$539,000	$816,000	$884,000	$592,000	$469,000
Liquidity	59.01%	58.81%	59.52%	61.68%	58.71%
Shareholders' Dividend per share	$1.36	$1.28	$1.04	$0.44	$0.28
Common Stock Equity	$7,320,000	$6,787,000	$7,012,000	$7,113,000	$6,925,000
Preferred Stock	$566,000	$566,000	$566,000	$566,000	$710,000
Secured Debt	$1,336,000	$1,723,000	$724,000	$383,000	$535,000
Earnings per share	$3.06	$4.41	$4.36	$2.71	$2.00

V Bank

Variables	2020	2019	2018	2017	2016
Earnings (Revenue)	$1,256,721	$1,219,887	$1,106,012	1,027,993	$1,023,560
Profitability	$372,194	$361,079	$313,977	$313,817	$298,011
Liquidity	58.77%	56.77%	63.46%	65.96%	66.71%
Shareholders' Dividend per share	$0.44	$0.44	$0.44	$0.44	$0.44
Common Stock Equity	$4,592,120	$4,384,188	$3,350,454	$2,533,165	$2,377,756
Preferred Stock	$0	$0	$0	$0	$0
Secured Debt	$0	$0	$0	$0	$0
Earnings per share	$0.94	$0.88	$0.75	$0.58	$0.63

W Bank

Variables	2020	2019	2018	2017	2016
Earnings (Revenue)	$279,974	$486,692	$441,633	$353,790	$303,450

Profitability	$220,621	$382,723	$360,418	$255,439	$207,127
Liquidity	n/a	n/a	n/a	n/a	n/a
Shareholders' Dividend per share	$1.60	$1.53	$1.25	$1.03	$0.98
Common Stock Equity	$3,234,625	$3,207,770	$2,886,515	$2,701,958	$2,527,012
Preferred Stock	$0	$0	$0	$0	$0
Secured Debt	$0	$0	$0	$0	$0
Earnings per share	$2.35	$4.07	$3.83	$2.68	$2.17

SS Bank

Variables	2020	2019	2018	2017	2016
Earnings (Revenue)	$11,703,000	$11,756,000	$12,131,000	$11,266,000	$10,291,000
Profitability	$2,420,000	$2,242,000	$2,593,000	$2,156,000	$2,138,000
Liquidity	n/a	n/a	n/a	n/a	n/a
Shareholders' Dividend per share	$2.08	$1.98	$1.78	$1.60	$1.44
Common Stock Equity	$26,200,000	$24,431,000	$24,737,000	$22,270,000	$21,193,000
Preferred Stock	$0	$0	$0	$0	$0
Secured Debt	$13,805,000	$12,509,000	$11,093,000	$11,620,000	$11,430,000
Earnings per share	$6.40	$5.43	$6.46	$5.26	$5.01

PN Bank

Variables	2020	2019	2018	2017	2016
Earnings (Revenue)	$16,901,000	$16,839,000	$16,190,000	$16,329,000	$15,162,000
Profitability	$7,558,000	$5,418,000	$5,346,000	$5,388,000	$3,985,000
Liquidity	61%	66%	64%	62%	59%
Shareholders' Dividend per share	$4.60	$4.20	$3.40	$2.60	$2.12
Common Stock Equity	$50,493,000	$45,321,000	$43,742,000	$47,513,000	$45,699,000
Preferred Stock	$0	$0	$0	$0	$0
Secured Debt	$0	$0	$0	$0	$0
Earnings per share	$10.60	$1.82	$1.65	$7.30	$7.39

NTC Bank

Variables	2020	2019	2018	2017	2016
Earnings (Revenue)	$6,135,200	$6,105,900	$6,001,400	$5,421,100	$4,986,900
Profitability	$1,209,300	$1,492,200	$1,556,400	$1,199,000	$1,032,500
Liquidity	n/a	n/a	n/a	n/a	n/a
Shareholders' Dividend per share	$2.80	$2.60	$1.94	$1.60	$1.48
Common Stock Equity	$11,688,300	$11,091,000	$10,508,300	$10,216,200	$9,770,400
Preferred Stock	$0	$0	$0	$0	$0
Secured Debt	$0	$0	$0	$0	$0
Earnings per share	$5.48	$6.66	$6.68	$4.95	$4.35

NYC Bank

Variables	2020	2019	2018	2017	2016
Earnings (Revenue)	$1,100,142	$957,400	$1,030,995	$1,130,003	$1,287,382
Profitability	$511,109	$395,043	$422,417	$466,201	$495,401
Liquidity	n/a	n/a	n/a	n/a	n/a
Shareholders' Dividend per share	$0.18	$0.68	$0.68	$0.68	$0.68
Common Stock Equity	$6,338,804	$6,208,834	$6,152,395	$6,292,536	$6,123,991
Preferred Stock	$0	$0	$0	$0	$0
Secured Debt	$0	$0	$0	$0	$0
Earnings per share	$1.02	$0.77	$0.79	$0.90	$1.01

H Bank

Variables	2020	2019	2018	2017	2016
Earnings (Revenue)	$817,000	$1,411,000	$1,298,500	$1,186,000	$712,000
Profitability	$271,335	$470,333	$432,833	$395,463	$237,814
Liquidity	56.9%	56.6%	56.9%	60.9%	66.8%
Shareholders' Dividend per share	$0.60	$0.58	$0.47	$0.35	$0.29
Common Stock Equity	$112,303,000	$111,745,000	$75,294,946	$75,294,946	$88,641,251
Preferred Stock	$1,071,000	$1,071,000	$1,071,000	$1,071,000	$1,071,000

Secured Debt	$0	$0	$0	$0	$0
Earnings per share	$0.69	$1.27	$0.69	$1.00	$0.70

K Bank

Variables	2020	2019	2018	2017	2016
Earnings (Revenue)	$6,715,000	$6,400,000	$6,455,000	$6,308,000	$5,024,000
Profitability	$1,329,000	$1,708,000	$1,859,000	$1,289,000	$790,000
Liquidity	60.2%	59.6%	60.0%	63.5%	73.7%
Shareholders' Dividend per share	$0.74	$0.71	$0.57	$0.38	$0.33
Common Stock Equity	$975,773,000	$977,189,000	$1,019,503,000	$1,069,084,000	$1,079,314,000
Preferred Stock	$0	$0	$0	$0	$0
Secured Debt	$0	$0	$0	$0	$0
Earnings per share	$1.26	$1.80	$1.73	$1.36	$1.13

A Bank

Variables	2020	2019	2018	2017	2016
Earnings (Revenue)	$1,277,012	$1,216,498	$1,235,148	$1,073,900	$1,060,156
Profitability	$288,413	$311,587	$322,779	$219,917	$191,371
Liquidity	n/a	n/a	n/a	n/a	n/a
Shareholders' Dividend per share	$0.72	$0.69	$0.62	$0.50	$0.45
Common Stock Equity	$153,540,000	$157,171,000	$164,440,000	$152,846,000	$152,121,000
Preferred Stock	$0	$0	$0	$0	$0
Secured Debt	$0	$0	$0	$0	$0
Earnings per share	$1.86	$1.91	$1.89	$1.42	$1.26

SC Bank

Variables	2020	2019	2018	2017	2016
Earnings (Revenue)	$62,427	$59,843	$53,145	$49,124	$45,530

Profitability	$10,187	$9,774	$9,086	$7,473	$8,749
Liquidity	n/a	n/a	n/a	n/a	n/a
Shareholders' Dividend per share	$0.25	$0.29	$0.29	$0.20	$0.19
Common Stock Equity	$170,200	$151,392	$136,538	$114,424	$98,838
Preferred Stock	$0	$0	$0	$0	$0
Secured Debt	$0	$0	$0	$0	$0
Earnings per share	$3.46	$3.32	$3.23	$2.20	$2.21

BFC Bank

Variables	2020	2019	2018	2017	2016
Earnings (Revenue)	$1,269,000	$1,531,958	$1,228,426	$972,751	$829,117
Profitability	$435,030	$500,758	$445,646	$334,646	$232,668
Liquidity	n/a	n/a	n/a	n/a	n/a
Shareholders' Dividend per share	$2.05	$2.01	$1.90	$1.77	$1.73
Common Stock Equity	$5,266,266	$4,855,795	$4,432,109	$3,495,367	$3,274,854
Preferred Stock	$0	$0	$0	$0	$0
Secured Debt	$0	$0	$0	$0	$0
Earnings per share	$6.19	$7.03	$6.63	$5.11	$3.53

C Bank

Variables	2020	2019	2018	2017	2016
Earnings (Revenue)	$1,911,000	$2,339,000	$2,352,000	$2,061,000	$1,797,000
Profitability	$459,000	$1,191,000	$1,227,000	$738,000	$473,000
Liquidity	n/a	n/a	n/a	n/a	n/a
Shareholders' Dividend per share	$2.72	$2.68	$1.84	$1.09	$0.89
Common Stock Equity	$7,656,000	$7,327,000	$7,507,000	$7,962,000	$7,193,000
Preferred Stock	$0	$0	$0	$0	$0
Secured Debt	$0	$0	$0	$0	$0
Earnings per share	$3.27	$7.87	$7.20	$4.14	$2.68

ST Bank

Variables	2020	2019	2018	2017	2016
Earnings (Revenue)	$10,302,000	$9,826,000	$9,213,000	$8,987,000	$8,604,000
Profitability	$2,954,000	$2,817,000	$2,775,000	$2,273,000	$1,878,000
Liquidity0	63.55%	64.34%	61.58%	64.14%	63.55%
Shareholders' Dividend per share	$1.94	$1.83	$1.80	$1.32	$1.00
Common Stock Equity	$463,820,000	$454,730,000	$446,880,000	$470,931,000	$491,188,000
Preferred Stock	$0	$0	$0	$0	$0
Secured Debt	$0	$0	$0	$0	$0
Earnings per share	$5.93	$5.81	$5.74	$4.47	$3.60

Comm Bank

Variables	2020	2019	2018	2017	2016
Earnings (Revenue)	$829,847	$821,293	$823,825	$733,679	$680,049
Profitability	$342,091	$412,231	$424,542	$310,383	$266,391
Liquidity	57.19%	56.87%	55.58%	62.18%	61.04%
Shareholders' Dividend per share	$1.03	$0.94	$0.81	$0.74	$0.71
Common Stock Equity	$117,138	$117,738	$122,519	$123,420	$123,326
Preferred Stock	$0	$0	$0	$0	$0
Secured Debt	$0	$0	$0	$0	$0
Earnings per share	$2.91	$3.42	$3.44	$2.51	$2.16

CZ Bank

Variables	2020	2019	2018	2017	2016
Earnings (Revenue)	$14,203,000	$14,108,000	$15,180,000	$13,284,000	$12,184,000
Profitability	$11,305,000	$11,230,000	$12,015,000	$11,943,000	$10,822,000
Liquidity	n/a	n/a	n/a	n/a	n/a
Shareholders' Dividend per share	$8.00	$8.00	$7.00	$5.00	$4.00
Common Stock Equity	$29,400,000	$29,400,000	$29,400,000	$29,400,000	$29,400,000

Preferred Stock	$0	$0	$0	$0	$0
Secured Debt	$0	$0	$0	$0	$0
Earnings per share	$31.00	$29.00	$44.00	$42.00	$40.00

F Bank

Variables	2020	2019	2018	2017	2016
Earnings (Revenue)	$538,010	$542,080	$549,440	$396,130	$289,030
Profitability	$185,200	$168,210	$175,890	$69,930	$64,060
Liquidity	56.33%	56.21%	56.13%	55.27%	55.01%
Shareholders' Dividend per share	$0.13	$0.11	$0.12	$0.08	$0.04
Common Stock Equity	$20,564,100	$18,982,102	$18,676,056	$17,443,173	$11,410,274
Preferred Stock	$0	$0	$0	$0	$0
Secured Debt	$0	$0	$0	$0	$0
Earnings per share	$0.98	$0.98	$0.95	$0.48	$0.61

FM Bank

Variables	2020	2019	2018	2017	2016
Earnings (Revenue)	$107,898	$199,738	$157,870	$98,387	$92,349
Profitability	$97,795	$98,057	$56,558	$25,471	$21,096
Liquidity	64.0%	63.0%	60.0%	58.0%	55.0%
Shareholders' Dividend per share	$0.56	$0.54	$0.45	$0.39	$0.36
Common Stock Equity	$2,690,006	$2,370,793	$2,054,998	$1,864,874	$1,257,080
Preferred Stock	$0	$0	$0	$0	$0
Secured Debt	$0	$0	$0	$0	$0
Earnings per share	$0.87	$0.83	$1.52	$0.96	$1.14

FN Bank

Variables	2020	2019	2018	2017	2016
Earnings (Revenue)	$1,216,000	$1,211,000	$1,208,000	$1,098,000	$813,000
Profitability	$286,000	$387,000	$373,000	$199,000	$171,000

Liquidity	56.13%	54.51%	54.52%	54.25%	55.36%
Shareholders' Dividend per share	$0.48	$0.48	$0.48	$0.48	$0.48
Common Stock Equity	$321,630,000	$325,015,000	$324,315,000	$323,465,000	$211,060,000
Preferred Stock	$0	$0	$0	$0	$0
Secured Debt	$0	$0	$0	$0	$0
Earnings per share	$8,46	$11.65	$13.13	$14.13	$13.00

FTC Bank

Variables	2020	2019	2018	2017	2016
Earnings (Revenue)	$7,625,000	$8,350,000	$6,946,000	$7,048,000	$6,336,000
Profitability	$1,427,000	$2,512,000	$2,193,000	$2,180,000	$1,543,000
Liquidity	n/a	n/a	n/a	n/a	n/a
Shareholders' Dividend per share	$1.08	$0.94	$0.74	$0.60	$0.53
Common Stock Equity	$23,111,000	$21,203,000	$16,250,000	$16,200,000	$16,205,000
Preferred Stock	$2,116,000	$1,770,000	$1,331,000	$1,331,000	$1,331,000
Secured Debt	$0	$0	$0	$0	$0
Earnings per share	$1.84	$3.38	$3.11	$2.86	$1.92

Sources: New York stock exchange and securities and exchange commission Edgar website.