Corporate Social Responsibility, Corporate Governance, and Banking Performance in the CEMAC Region

by

Fondem Divine

______________________

Doctoral Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Business Administration

______________________

Liberty University, School of Business

May 2021
Abstract

This researcher examined the effect of corporate governance (CG) and corporate social responsibility (CSR) on banking performance in the Central African Economic and Monetary Community (CEMAC) region. The data was obtained from the Worldwide Governance and the World Bank sovereign database from 2003 to 2018. This study employs the z-score to proxy the CSR factors such as labor force participation rate, population density, and renewable energy. The results reveal that the fixed effects model is superior to the pooled ordinary least square (OLS) and the random-effects model. The findings show that CSR has a significantly positive relationship, while CG has a positive but insignificant relation with banking performance in the CEMAC region. It suggests an ineffective implementation of CG strategies in the entire CEMAC region.

Keywords: Corporate Governance; the Central Africa Economic and Monetary Community; Corporate Social Responsibility; Banking Performance

JEL Classification Codes: G3, G15, G35, F3, O55, Q51.
CORPORATE SOCIAL RESPONSIBILITY, CORPORATE GOVERNANCE, AND BANKING PERFORMANCE IN THE CEMAC REGION

by

Fondem Divine

Dissertation

Submitted in Partial Fulfillment of the Requirements for the Degree of Doctor of Business Administration

Liberty University, School of Business

May 2021

____________________________________________
Fondem Divine Date

____________________________________________
[Dr. Yongli Luo, Dissertation Chair] Date

____________________________________________
[Dr. Brenda Palmore, Dissertation Committee Member] Date

____________________________________________
Edward M. Moore, Ph.D. Director of Doctoral Programs Date


Dedication

I dedicate this dissertation to my beloved mother, Monica Mayen, and her late husband George Forbekong Fondem, without them I would not have stepped my toes into college. Her constant supports, guidance, and unconditional love have inspired me toward achieving this dissertation. Mama, thank you for my strength when I have none, especially in challenging times.
Acknowledgments

First and foremost, I would like to express my sincere gratitude to my advisor professor Yongli Luo, for his constant support, guidance, patience, tolerance, and knowledge toward this journey. His timely guidance and support helped me throughout the research and writing of this thesis. Besides my advisor, I would like to thank the rest of the thesis committee members, Dr. Edward Moore, Dr. Emily Knowles, and Dr. Brenda Palmore, who took time out of her busy schedules to proofread the manuscript. Her insightful comments and encouragement during this journey inspired me in achieving this dissertation.

This doctorate dissertation could not have been realized in this critical period of the deathly pandemic of COVID-19 without God’s strength. The scriptures, in the book of (Proverb 3:5-6), encourage us to trust in the Lord with all our heart and do not lean on our own understanding. In all we do let us acknowledge Him and He will make straight our paths. The words of the Lord have been my source of strength, knowledge, and wisdom during this journey. I would also like to acknowledge my beloved family, my sister Helen Tanya, and her beloved husband Wilfred Tanya, including their children-Chrisantus, Fidel, and Karos for their prayers and encouragement throughout this journey. My special thanks are also reserved to all my family members, Fondem Armstrong, Joseph Fondem, Magdalene Toh, and Pa John Ankea, for all the sacrifices they made on my behalf. God in His infinite mercy cares about us, so He chose the love of my life, Mbakakeu Emercane, who has been very understanding throughout this journey. Your prayers for me throughout this journey serve as a source of resilience in challenging times. Finally, I would like to thank my roommate Sinajo Manneh for the nonstop advice given to me throughout my doctoral journey.
Table of Contents
Abstract .................................................................................................................. ii
Dedication ............................................................................................................ iv
Acknowledgments ............................................................................................... v
List of Tables ....................................................................................................... v
Section 1: Foundation of the Study ..................................................................... 1
  Background of the Problem ............................................................................ 5
  Problem Statement ......................................................................................... 7
  Purpose Statement ......................................................................................... 8
  Nature of the Study ......................................................................................... 11
    Discussion of Method ..................................................................................... 12
    Discussion of Design ..................................................................................... 13
    Specification of the Model ............................................................................ 14
Research Questions .............................................................................................. 15
  Hypotheses ...................................................................................................... 15
Theoretical Framework ......................................................................................... 16
  Discussion of Theory ....................................................................................... 16
  Discussion of Theory 2 ................................................................................... 16
  Discussion of Theory 3 ................................................................................... 17
Summary of the Conceptual Framework ............................................................ 21
  Definition of Terms ........................................................................................ 21
Assumptions, Limitations, and Delimitations .................................................... 23
Purp...ec Statement.................................................................66
Role of the Researcher........................................................................66
Participants............................................................... 68
Research Method and Design..................................................68
Discussion of Research Method.................................69
Discussion of the Research Design..............................70
The Pooled Ordinary Least Square Model Specification...71
Pooled OLS Model Specification.................................71
Fixed Effect Model................................................72
The Random-Effect Model...........................................73
Hausman test........................................................................74
Specification of the Model...........................................74
Research Questions..................................................................75
Hypotheses........................................................................75
Population and Sample Framework.................................76
Data Collection........................................................................77
Instruments........................................................................77
Variables Description and Measurement.....................78
The CSR Index Using the Z-Score........................................78
The Z-Score of Labor Force Score $L_t = l_t - l$................79
The Z-Score of Population Density Score $P_t = p_t - p$........79
The Z-Score for the Renewable Energy Score $E_t = e_t - e$....79
Dependent Variables..........................................................80
List of Tables

Table 1 Descriptive Statistics .................................................................88
Table 2 Shapiro-Wilk W test for Normality............................................. Error! Bookmark not defined.
Table 3 Pairwise Correlations Analysis..................................................106
Table 4 Pooled OLS, Robust St error, Fixed Effect, and Random Effect........109
Table 5 Results of Multicollinearity..........................................................116
Table 6 Robustness check Pooled OLS, Fixed Effect, and Random Effect.......119
Table 7 Definition of Variables.................................................................138
List of Figures

Figure 1: Conceptual Framework Diagram ................................................. 20
Figure 2: Box plot of ROA ........................................................................... 91
Figure 3: Histogram of ROA ................................................................. 92
Figure 4: Box plot of CG ........................................................................ 91

Error! Bookmark not defined...93

Figure 5: Histogram of CG ................................................................. 95
Figure 6: Box plot of CSR ................................................................. 96
Figure 7: Histogram of CSR ................................................................. 97
Figure 8: Box plot of ROA ................................................................. 98
Figure 9: Histogram of ROE ................................................................. 99
Figure 10: Box plot of Unemployment in the CEMAC Region ................. 100
Figure 11: Histogram of Unemployment ................................................... 101
Figure 12: Box plot of FDI ................................................................. 102
Figure 13: Histogram of FDI ................................................................. 103
Figure 14: Box plot of IF .................................................................... 104
Figure 15: Histogram of
IF .................................................................................................... Error! Bookmark not defined.
Section 1: Foundation of the Study

In 1994, six-member countries—Cameroon (CM), the Central African Republic (CF), Chad (TD), the Republic of Congo (RC), Equatorial Guinea (GQ), and Gabon (GA) established the Central African Economic and Monetary Community (CEMAC) to promote economic integration among members in the currency union (Poplawski-Ribeiro et al., 2011). The countries were heterogeneous in size and level of financial resources. Cameroon is the dominant country, with 50 % of the population and 31.5 % of Gross Domestic Capita (GDP). In contrast, Equatorial Guinea is the smallest and the wealthiest state in the CEMAC region due to its large reserve of oil and natural gas. The wealthiest countries depend highly on revenue generated from oil exports. The Bank of Central African States (BCAS) conducts the monetary policy in the CEMAC region, which has an obligatory reserve in the French treasury. As CEMAC is a member of the Central African France (CFA) Zone, the French treasury holds 50 % of the CEMAC region foreign reserve and acts as a guarantor in converting CFA France into Euro and other currencies at a fixed exchange rate (Poplawski-Ribeiro, et al., 2011).

Dramatically increasing economic developments in the CEMAC posed supply constraints in the financial sector (International Monetary Fund, 2018). The Central African Monetary Union (CAMU) has a significant role in the management of monetary transactions. The International Monetary Fund (IMF) pinpointed the CEMAC region as a zone that should strengthen its corporate governance practices and reduce systematic corruption between public and private corporations.

I seek to fill in the gap in existing literature concerning Corporate Governance (CG) and Corporate Social Responsibility (CSR) on banking performance. The
exposure of the CEMAC region to the dramatic collapse of corporate systems worldwide, because of weak CG structures, exacerbates the need to improve and reform CG practices in both developing and developed countries (Onakoya et al., 2012). For example, due to the accounting scandals, major corporations such as Enron, Global Crossing, Qwest Communications, and others around the globe, passed the Sarbanes-Oxley Act to increase transparency and accountability in financial transactions among accountants, directors, lenders, and shareholders around the world (Brealey et al., 2019).

In prior literature, Peni and Vahamaa (2012) suggested crucial components influencing change in a corporation's growth in developed and developing countries include both the concepts of sustainability and corporate governance. Studies conducted in developed countries concerning the effect of CG on banks' performance revealed robust results. For instance, an analysis performed during the 2008 financial crisis proved banks that implement healthy CG practices realized substantially higher profitability than banks with weaker CG mechanisms (Peni & Vahamaa, 2012). Additionally, researchers documented how developing countries, especially those in sub-Saharan Africa, experienced low intra-regional trade, high inflation rates, and slowed inflow of foreign direct investment because of weak CG practices (Onakoya et al., 2012; Peni & Vahamaa, 2012).

According to Onakoya et al. (2012) and Peni and Vahamaa (2012), CG referred to a system through, which the board of directors, managers, and shareholders manage a corporation's fund to maximize shareholders' value and the overall objective of the company. CG and CSR can influence management efforts in achieving the desired level of productivity in an organization. The management of firms and maximization of
shareholders’ values received more attention in developing countries because firm size continues to increase, and financial institutions' role continues to grow. Hence, the mobilization and allocation of capital have become more complex and pose challenges to businesses. Therefore, the liberalization and deregulation of financial activities increased and systematically changed the nature of competition, especially in the CEMAC region (IMF, 2018).

Moreover, CEMAC countries' high over-dependence on the supply of oil, signals the region is experiencing regional constraints leading to an adverse effect on CG and CSR (IMF, 2018). Also, a sharp decline in oil prices and civil conflicts in some parts of the region may have a negative impact on regional economic growth and development (IMF, 2018).

Peni and Vahamma (2012) conducted a study in some selected corporations in the CFA zone by examining the influence of CG on bank performance and found that country-specific characteristics have a significant impact on shareholder value maximization. However, the association between CG and CSR on bank performance within the CEMAC region remains unknown. I intended to examine the relationship between CG and banks' performance on the one hand, and on the other hand, the relationship between CSR and banking performance in the CEMAC region. The CEMAC region made tremendous efforts in the management of business activities among member countries. In the control of market distortions, the CEMAC region formed the regional banking supervision commission, known as the Commission of Bank of Central African States (COBAC), in 1990 intending to harmonize and supervise banking activities. The main objective of COBAC was to ensure that banks are compliant with financial laws that protect investors. Basically, the COBAC
oversees all banking activities within the CEMAC region (Saab & Vacher, 2008). CAMU created a common currency, the Central African France (CFA), which facilitates the buying and selling of goods within the CEMAC region.

The BCAS manages the supply and regulation of the quantity of money circulating within the CEMAC region. The region has witnessed a slow growth in foreign direct investments because shareholders are worried about the high rate of corruption, which may have a devastating effect on their short and long-term investments (IFM, 2018). CG and CSR are vital for financial stability and economic growth in the CEMAC region. Hence, evaluating the banks' performance is advantageous to the board of directors, managers, and shareholders because it provides reliable information to other investors, thereby attracting the inflow of capital to the region.

This research is an addition to the ongoing debate concerning CG and CSR on banks' performance in sub-Saharan Africa. Some studies conducted especially in Sub-Saharan Africa, such as Nigeria, Ethiopia, and South Africa, have been inconsistent. None of these studies have examined CG and CSR on banks' performance within an economic region in Sub-Saharan Africa (Tchouassi & Nosseyamba, 2011).

However, investigating how CG and CSR impact banks' performance in the CEMAC region is of crucial importance because effective CG and CSR practices increase financial performance. Moreover, this study's results may reveal insightful information on how CSR and CG can impact banking performance in the CEMAC region. The results may indicate the socio-political, socio-cultural characteristic within the CEMAC region.
Background of the Problem

The economic development in the CEMAC region that resulted from its vast natural resources is continuously changing the business environment among member countries, especially in the financial sectors. Nevertheless, an organizations’ success is highly determined by the effective implementation and execution of CG and CSR principles (Brealey et al., 2019) One of the many objectives of establishing an organization is to maximize gain and optimize shareholder values without harming its community's prosperity (Mangantar, 2019). The sustainable management of organizational and community resources is of paramount importance to the power of corporations. In the context of Africa et al. (2013) examined the structures of CG and found a weak and non-existence of strong CG legislations insignificant businesses. The majority of business entities, precisely financial institutions in the CEMAC region, Cameroon, the Central African Republic, Chad, Equatorial Guinea, Gabon, and the Republic of Congo, lack the ability to managing wealth (Ayandele & Isichei, 2013).

Moreover, according to the IMF (2018), low CG and limited CSR practices characterize the economic situation in Sub-Saharan Africa. When evaluating based on income levels, a gap emerges in the implementation and execution of CG and CSR at the regional level for public financial management (IMF, 2018). The link between firms involved in financial services and the community's perceived values determines good CSR and CG practices (Mangantar, 2019).

Banks play a crucial role in the growth of an economy because they function as a core provider of financial products such as loans to businesses. The CEMAC banks serve as a collector, delivering funds to the investors. Interested shareholders rely on managers’ abilities to maximize their shares' market value. Often, agency problems
originate because managers, the board of directors, and shareholders depend solely on their individual goals. The IMF (2018) identified this conflict of interest among the board of directors, non-governmental agencies, and foreign corporations within the CEMAC states. In conducting this research, I can provide pertinent insight involving CG and CSR practices within the region. The analysis serves as a means of recommendations about acceptable governance practices and reducing systemic corruption in the CEMAC region. Additionally, the financial sectors should monitor changes to protect the interest of consumers, shareholders, and the general public. To enhance the smooth operation of businesses in the context of the CEMAC, banks are responsible for good accountability, disclosure of information to the public, and the prosperity of the community (Mangantar, 2019).

Brealey et al. (2019) defined CG as the regulatory framework, including laws, regulations, institutions, and corporate practices that protect shareholders and other investors. The World Business Council for Sustainable Development defined CSR as a perpetual responsibility of organizations to commit and practice ethical standards that influence economic development while also improving the quality of life of employees and the local community (WBCSD, 1998). Therefore, banks within the CEMAC region may add value and gain comparative advantages through effective implementation and good CG and CSR practices.

The CEMAC states are among the richest in Africa in terms of mineral resources. They rely heavily on the resources to develop member countries (Giz Magazine, 2016). However, the indiscriminate exploitation of these mineral resources shows a weak institutional performance of the CEMAC commission (Giz Magazine, 2016). Due to poor implementation and execution of CG and CSR, the region attracted
very few foreign investments (IMF, 2018). The problem is a lack or gap in the existing literature on the relationship between CG and banking performance on the one hand and the other hand, the relationship between CSR and banking performance in the CEMAC region. Limited knowledge on the effect of CSR and CG on banking performance exists, resulting in banks poorly performing financially.

Researchers documented positive and sustainable influences on CG and banking performance. Bunea (2013) showed how CG deficiency within European banking sectors is a recipe for a financial crisis. Through the application of CG practices, the author found a positive effect of CG and sustainability in the banking sectors (Bunea, 2013). Kartika et al., (2019) also revealed the cost of capital, CG, and CSR, directly and indirectly, affecting the firm's performance in Indonesia. With a sample of 27 companies and the partial least square technique, the author found CG and CSR positively influenced banking performance (Kartika et al., 2019).

Unlike results indicating the positive and negative effect of CG and CSR on banking performance, Mahmudur and Shawkat (2014) reported CG and CSR did not affect weak economies, especially civil society groups characterized by disorganization and corruption in public agencies. However, despite the extensive literature on CG, CSR, and the banking industry's financial performance, I was unable to find studies focused on investigating how CG and CSR affect banking performance in the CEMAC region. Additionally, previous research conducted in different countries produced diverse empirical evidence (Kartika et al., 2019).

**Problem Statement**

The general problem to be addressed is that there is a distinct gap in the existing literature on the relationship between CG and banking performance on the one hand
and on the other hand, the relationship between CSR and banking performance (Jizi et al., 2014). Mangantar (2019) asserted this view when discussing the lack of research into the relationship between CSR and CG in the banking sector. This research attempts to fill the gap in the existing literature that produce varying results by examining the relationship between CG and banking performance as well as the relationship between CSR and banking performance. For example, previous researchers shared differing results of how CG and CSR are associated with banking performance. Kabir and Thai (2017) showed a significantly positive relationship between CG and banking performance as well as CSR and banking performance. Mangantar (2019) reported neutral results of CSR and CG on ROA by explaining how although positivity existed within CSR and CG, they did not demonstratively influence financial performance. Wang et al. (2015) found mediation effects between CSR and CG on ROA.

Recently, Forte (2013) claimed that culture played an ultimate role in the relationship between CSR and CG in banking sectors. These mixed results highlighted the need for additional research to further explain CSR and CG. Therefore, the specific problem I address is the relationship between CG and banking performance as well as the relationship between CSR and banking performance in the CEMAC region.

**Purpose Statement**

This quantitative research method aimed to investigate whether there is a relationship or influence between CG and banking performance on the one hand and on the other hand, the relationship between CSR and the banking performance in the CEMAC countries. I grounded the study in the conceptual framework that a well-functioning financial system, through CG and CSR mediation, is of crucial importance for business growth and community development across nations (Brealey et al., 2010).
The independent variables are CG and CSR. The identification of these variables stemmed from a study by Mangantar’s (2019) when the author examined the influence of CG and CSR on banking performance in Indonesia. Within the context of the CEMAC region, I augmented the same model with the integration of a structural regression model inclusive of variables such as foreign direct investment, inflation rate, gross domestic product per capita, and interest rate. I framed the inquiry using the sample of an annual report of specific banking financial indicators for member countries within the CEMAC region.

According to Berber et al. (2019), CSR is a concept that allows for the balance between economic, social, and environmental goals. It is a widely accepted business practice in developed countries. Similarly, Sahut et al. (2019) reflected on the Green Paper released by the European Commission in which they defined CSR as actions limiting companies by legal obligations but also broadening their scope by investing in human capital and the environment while strengthening manager's relationship with the shareholders. Similarly, Khurram and Rui (2019) described CSR as actions taken by the firm to ensure society's safety. Through an extensive literature review, I noticed the concept of CSR enabled corporations to design a business model that helps corporations become socially responsible to their stakeholders. The CSR structures reflected the internal and external components of a firm.

Elements obtained from the firm human resource department, such as training and development of employees, employee health, safety, and product information characterize the internal component of CSR mechanisms. The external component of CSR deals with the firm's ability to comply with societal rules; for example, environmental-friendly activities such as waste disposal, noise pollution, carbon
emission, and other social welfare programs. They can obtain external components from national and international databases, such as the World Bank Database.

An annual effective CEMAC member countries’ policy and institutions for environmental sustainability rating within the framework of ESG measures the CSR. The ESG includes factors such as energy consumption (percent of total final energy consumption), the share of renewable energy in final energy consumption, labor force participation rate, and population density as a proxy for CSR. Chanchal (2016) stated widely recognizes the role of ESG practices in protecting the interests of shareholders and other investors. Corporations exhibiting acceptable ESG practices enhanced their integrity, reputation, and the stability of the financial institutions along with the overall economy.

I used environmental and social pillar indicators such as labor force participation rate, population density, and energy usage as a proxy for CSR, which provides a picture of the sustainability of a country's economic performance, in conducting this study. Corporate responsibility includes addressing the basic needs of its population by reducing poverty, managing social and equity issues, and investing in human capital and productivity. Hence, efficient, and effective CSR structures may enhance demographic criteria pertinent to stable, long-term economic growth. CG extracted from the Worldwide Governance indicator captured six broad dimensions, including the voice of accountability, political stability and absence of violence/terrorism, government effectiveness, regulatory quality, the rule of law, and control of corruption. However, for this study, I used governance effectiveness as a proxy for CG and obtained secondary panel data from two databases.
The World Bank database provided the ESG data category as a proxy for CSR and I obtained the CG from the Worldwide Governance indicator database. Based on the work of Onakoya et al. (2012) and other existing literature (Peni & Vahamaa, 2012; Dedu & Chitan, 2013), I included control variables such as inflation (IF), foreign direct investment (FDI), and real GDP.

The dependent variables were the annual ROA and ROE of the selected banks in the CEMAC region. The financial and non-financial sectors within the CEMAC countries limited the scope of the study. With the specification of the multiple regression models and the regression analysis technique's application, I expected the results would reveal a relationship or influence between CG, CSR, and banking performance in the CEMAC region. However, minimal studies exist, and I was unable to locate any research performed in the CEMAC.

The goal was to investigate if a relationship existed between CSR and banking performance on the one hand and on the other hand, the relationship between CG and banking performance in the CEMAC region. To achieve this objective, I adopted a panel data analysis technique. The intention was to help policymakers attempting to implement CG and CSR practices. Such CG and CSR practices may strengthen the relationship between shareholders, the board of directors, government entities, and businesses within the CEMAC countries. The results can serve as a source of recommendation to the CEMAC Commission and the governor's board concerning insightful factors undermining the economic prosperity of the region.

**Nature of the Study**

In this section of the study, I focus on presenting the unique research method and design related to the purpose statement. However, previous researchers focused
more on investigating CSR or CG's relationship on financial performance in specific countries; a limited number examined both CG and CSR on banks' performance within an economic region. Some researchers explored CSR and CG in the context of the banking industry on a per-country basis. Nonetheless, few sought to understand CG and banking performance in Sub-Saharan Africa. Hence, I investigated the relationship between CSR, CG, and banking performance in the CEMAC region.

**Discussion of Method**

To investigate the relationship between CSR and banking performance on one hand, and on the other, the relationship between CG and banking performance in the CEMAC region, I adopted a quantitative research approach. The reason for adopting a quantitative research method rested in the explanation offered by Creswell and Poth (2014) explaining the importance of quantitative methods over the qualitative course. These authors discussed the objective and reliable outcomes of a quantitative study. Thus, the researcher's subjectivity would not influence the analysis or results compared to the qualitative method in which the researchers and participants may bring in their point of view.

I retrieved secondary panel data from 2003 through 2018 from two accredited sources. To check for the equation's robustness, I used the country-specific variables, such as the bank performance indicators measured as ROA and ROE. I choose this time frame to capture the effect of exogenous shocks such as the global financial crisis that originated from the United States in the CEMAC region.

I extracted the variable of corporate sustainability for each country within the CEMAC region and banking performance indicators such as ROA and ROE from the World Bank database. The models included control variables such as inflation (IF),
foreign direct investment (FDI), and GDP per capita. Major macroeconomic factors influencing banks' performance in the CEMAC region also considered these control variables.

The Worldwide Governance database was the source used for obtaining CG indicators such as accountability, political stability and absence of violence/terrorism, government effectiveness, regulatory quality, the rule of law, and control of corruption. There exists a dearth of literature focused on examining CSR's influence on banks' performance or CG on banks' performance. For example, Moslemanay (2017) reviewed CSR disclosure on financial performance incorporating data from only three banks within the Egyptian banking sector. However, using a narrow sample size, Jizi et al. (2014) analyzed the relationship between CSR and CG by selecting a limited number of banks in the United States. The researchers investigated CSR, CG, and banking performance within six countries belonging to an economic organization.

Researchers employ the STATA statistical package to analyze the data, and the multiple least square regressions (MLSR) technique to estimate the systemic multiple regression model to determine the effect of CSR and CG on banking performance. In determining the relationship between the dependent and the independent variables in the regression model, investigators perform the Pearson correlation test. The results reveal if there is multicollinearity within the independent variables in the model.

**Discussion of Design**

An explanatory or descriptive research design pivoted on the Pearson correlation tests and multiple linear regression analyses I incorporated into the methodology. To demonstrate the degree of association between the dependent variables and the independent variables in the structural models, I selected the
correlation design. In this study, the correlation result would reveal the degree of association between CSR, CG, and banking performance in the CEMAC region. The systemic multiple regression model specifies the achievement of these outcomes and adopts the panel data analysis. The Hausman statistical test results determined the choice of the estimates of the fixed and random effect models.

**Specification of the Model**

Mangantar’s (2019) examination of the influence of CG and CSR on financial performance in Indonesia grounded the system of multiple regression equations. To measure bank performance and test for the robustness of the model, I used the ROA and ROE as the dependent variables. In contrast, I obtained the independent variables CSR, CG, IF, I, RGDP, and FDI from the World Bank and Worldwide Governance databases.

Contrarily, results of previous studies, for example, Sharif and Rashid (2014) implemented the linear regression model and applied the ordinary least square technique (OLS) to analyze the effect of CSR and CG on financial performance in the commercial bank of Pakistan. In this study, I utilized a more complex system of multiple regression models representing the annual country’s level of secondary indicators obtained from the World Bank and Worldwide Governance indicator database. Achieving feasibility, reliability, and validity supported utilizing a quantitative approach as the best research method (Creswell & Porth, 2014).

\[
\begin{align*}
\text{ROA} &= \beta_0 + \beta_{it}CG_{it} + \beta_{it}CSRINDEX_{it} + \beta_{it}RGDP_{it} + \beta_{it}IF_{it} + \beta_{it}FDI_{it} + \epsilon_{it} \\
\text{ROE} &= \beta_0 + \beta_{it}CG_{it} + \beta_{it}CSRINDEX_{it} + \beta_{it}RGDP_{it} + \beta_{it}IF_{it} + \beta_{it}FDI_{it} + \epsilon_{it}
\end{align*}
\]

ROA is the return on assets.

ROE is the return on equity.

\(\beta_0\) to \(\beta_{it}\) is the parametric coefficient of the mode.
\(i\) denotes each of the CEMAC countries while \(t\) denotes the year.

CG is corporate governance.

CSRINDEX is corporate social responsibility.

RGDP is real GDP.

IF is the inflation rate.

FDI is a foreign direct investment as a percentage of GDP.

\(\varepsilon_{it}\) is a random variable.

**Research Questions**

Is there a significantly positive relationship between CG and banking performance in the CEMAC region?

Is there a significantly positive relationship between CSR and banking performance in the CEMAC region?

**Hypotheses**

To investigate the research questions, of whether a relationship exists between the effect of CSR, or CG, on the banking performance, I tested the following research hypotheses stated in the null forms. The linear regression and the Pearson correlation results would reveal any relationship or influence between CSRINDEX and banking performance in the CEMAC region. On the other hand, the results would show any relationship or influence between CG and banking performance in the CEMAC region.

The hypotheses of this study are:

**H1\(_{0}\):** There is no significantly positive relationship between CSRINDEX and banking performance in the CEMAC region.

**H2\(_{0}\):** There is no significantly positive relationship between CG and banking performance in the CEMAC region.
Theoretical Framework

Discussion of Theory 1

The positivist philosophy embedded in a quantitative review unveils knowledge by examining the relationship among variables, by measuring numbers and data (Creswell, 2014). Statistical procedures support the analysis process. Unlike the qualitative research approach, which focuses on exploring and understanding the meaning of an individual or group, Creswell (2014) explained how useful and effective the quantitative method of inquiring could limit research bias. To investigate the relationship between CG and ROA or ROE in the CEMAC region, I employed a quantitative and correlational research design. On the other hand, I examined the relationship between CSRINDEX and banking performance in the CEMAC region by adopting the theory developed by Faruqi et al. (2019). The researchers investigated the effect of CG on bank performance within developed and developing countries through cash mediation. The dependent variables defined as ROA or ROE measured the banking performance in the CEMAC region.

Discussion of Theory 2

Faruqi et al.'s (2019) theory of CG revealed two broad themes, accountability and transparency in the banking sector. The theory of CG depends on understanding every country's systems, standards, and CG practices as they relate to its social, political, and religious practices. Therefore, how CG influenced the banking performance in the CEMAC region emerges as an important part of a study. According to Farugi et al. (2019), their results suggested the significance of CG's influence on bank performance applied more in developed countries than in developing countries. According to the authors, the presence of CG in any organization expands and stabilizes
performance in financial sectors because CG guarantees accountability and transparency (Faruqi et al., 2019). Achieving financial performance requires holding board members, managers, and employees accountable and transparent while working to realize the organization's objectives. "The success of a company in improving its financial performance is inseparable from the application of good CG" (Mangantar, 2019, p.2019). It necessitates adequate supervision of financial activities within an organization through implementing good CG practices (Faruqi et al., 2019; Mangantar, 2019). The fundamental proposition is good CG encourages the board of directors, managers, and employees toward realizing the objective of a fair return of shareholder investments. Equally, CG principles hold employees and managers accountable for the transparent achievement of the organization's goals.

**Discussion of Theory 3**

Some researchers emphasized CG's standard and nature not only influence the development of a firm but also generally advance and improve the whole economy (Erkens, 2012; Wei-an, 2005). Faruqi et al. (2019) also defined CG as a mechanism for guaranteeing or ensuring shareholders or suppliers of funds receive fair returns on their investment. CG refers to the laws, regulations, institutions, and corporate practices that protect shareholders and other investors (Brealey et al., 2019). The CG principles associated with organizational structure support and motivated human activities that achieve value maximization and competitive advantage (Faruqi et al., 2019).

Additionally, CG also guides the rules, legal system, and regulations for an organization's management (Das, 2010). Thus, good CG and its standard principles implemented in an organizational environment could ensure effective collaboration and coordination amongst the board of directors, shareholders, managers, and employees
toward maximizing shareholders' value and enhancing competition. Brealey et al. (2019) explained how sole proprietors may not experience conflicts in financial management or reap the rewards of good decision-making and hard work. However, in big corporations, owners have limited control in the management of resources increasing the importance of CG. Hence, managers might act in their interest rather than maximizing shareholder value (Brealey et al., 2019). As revealed by Brealey et al. (2019), the effective regulation of CG in the CEMAC region could reduce agency problems and conflicts of interest among the board of directors, managers, and shareholders.

Brealey et al. (2019) supported the effective functioning of financial markets and institutions in directing funds to firms capable of investing and adding value to an economy. However, financing flows from an investor to firms occur when they protect investors and address issues such as internal problems and agency costs (Brealey et al., 2019). Thus, the need for CG becomes essential for adequate supervision and coordination of the flow of money to the right firm at the right time.

Researchers who applied CG focused on the institutional framework and nature of the relationship with the board of directors. Afolabi and Sy (2017) compared corporate governance in Ghana, Nigeria, and South Africa, by focusing on the corporate governance institutions, politics, corruption, and economics of each country. The authors found a lack of institutional shareholders in Ghana, while institutional shareholders resided in Nigeria and South Africa. Additionally, their results revealed corruption, bribery, politics, and economics influenced effective CG practices in each country. Based on this outcome, the investigators recommended the socio-political, economic culture in the Anglophone Sub-Saharan Africa countries, precisely Ghana,
Nigeria, and South Africa, to reorganize and revitalize the political, economic, and cultural background of those countries (Afolabi & Sy, 2017).

Quttainah et al. (2017) examined the effect of institutional, corporate governance on Islamic banks' financial performance through the implementation of religious supervisory boards. The researchers’ outcomes revealed that banks with religious supervisory boards integrated into their governance structures outperformed banks without such a homogenous board. Banks with religious supervisory boards were more effective in mitigating agency problems and costs than those without a holy supervisory board (Quttainah et al., 2017).

El-Kassar et al. (2018) investigated the mechanisms Lebanese banks practice CG with a greater focus on the board of directors. The authors found banks that failed to abide by international standards regarding informational transparency also lacked consistent accountability on the board of directors (El-Kassar, et al., 2018). Their results showed domestic banks could lend to central banks whereas foreign banks could not because of the ineffective accountability and transparency in the management of their board of directors.

In addition to CG, Mangantar (2019) added quality CG and CSR could improve the banks and institutions' financial performance. The principles of CSR guide accomplishing three significant outcomes: accountability, responsibility, and transparency of organizations to the community in which they operate. According to the World Business Council for Sustainable Development (WBCSD), "CSR is the continuing commitment by businesses to behave ethically and contribute to economic development while improving the quality of life of the workforce and their families, as well as of the local community and society" (WBCSD, 1998).
Along with CG, CSR also requires holding organizations accountable and responsible for how their business activity affects the community. CSR refers to adherence to ethical standards for ensuring social responsibility to an ecological community where businesses operate to gain a comparative advantage (Mangantar, 2019). Previous researchers produced varying results of the effects of CSR on banking performance. Kolisch (2015), and Fauzi and Idris (2010) suggested CSR has a significant effect on an organization's financial performance. However, the findings of other studies did not identify significant influences on financial performance (Siregar & Bukit, 2017). For example, in Africa, precisely Egypt et al. (2017) did not find a significant relationship between CSR, when measured by the community, customers, and employees on the dependent variable ROA and ROE. This study's finding contributed to my decision to investigate if a relationship existed between CSR and banks' performance in the CEMAC region.

**Figure 1**

*Conceptual Framework Diagram*
I illustrated the paths through which the independent and control variables potentially affect banking performance in the CEMAC region in figure 1. Path a, b, and c represent the various links through which CSR, CG, and the control variables affect banking performance. Hence, within the context of the CEMAC, I assumed banking performance significantly determines two major components, such as CSR and CG.

**Summary of the Conceptual Framework**

According to Brealey et al. (2019), the susceptibility of large corporations for damage based on CG issues increases as investors are mostly outsider vendors, and the managers may yield to the temptation of acting in their interest rather than maximizing shareholder values. The practices of such activities cause value destruction in the corporation because managers are agents of the shareholders.

The Sub-Saharan African region mainly depends on the extraction of its natural resources to drive economic activities within the area. According to Giz Magazine (2016), the CEMAC region heavily relies on exploiting natural resources to enhance economic growth. However, the inappropriate exploitation of these resources causes sustainable management issues and often leads to conflict across the board. To best attract an inflow of income to the CEMAC region to extract natural resources, the CEMAC region needs to improve CG and CSR within its banking sectors.

**Definition of Terms**

I defined the following terms according to the context of the concepts and theories underpinned in this research:

*Agency Cost* refers to value lost from agency problems or the cost of mitigating agency problems (Brealey et al., 2019).
Agency Problems occur when managers are agents for shareholders, but the managers are tempted to act in their interest rather than maximizing shareholder values (Brealey et al., 2019). Agency problems would negatively influence the management of finance; therefore, implementing adequate CG is essential to mitigate agency problems, leading to improved financial performance.

CEMAC: The Economic and Monetary Community of Central Africa consists of six countries-Cameroon, Chad, Central Africa Republic, Equatorial Guinea, Gabon, and the Republic of Congo. I selected this region due to the slow economic growth and a monetary regime that is highly dependent on France (IMF, 2019).

Corporate Governance (CG) refers to the laws, regulations, institutions, and corporate practices, which bind and protect shareholders and other investors within an organization in achieving value maximization (Chen, 2020).

Corporate Social Responsibility (CSR) refers to a company's duty to operate in an ethical manner such as providing the right working conditions for employees, providing reliable information to the community, and transparency with financial statements (Gamble et al., 2019). Therefore, CSR presumes to influence economic performance in the CEMAC region positively.

Foreign Investment defined in this research is the total net flow of funds from foreign nations to the CEMAC region (IMF, 2018).

Inflation is the general increase in the prices of goods and services within the CEMAC region at a given time (IMF, 2018).

Real GDP (RGDP) refers to the value of all goods and services per head produces within the region in a given year, usually one year (IMF, 2019).
Return on assets (ROA) return of support is a proxy to measure the financial performance within the CEMAC (It refers to the percentage of an organization's profit margin or institution in generating revenue (Brealey et al., 2019). It is presumed to have a significant and positive relationship between CG and CSR.

Shareholder theory Corporations can maximize shareholder investments' value (Brealey et al., 2019).

Sustainability: The concepts of sustainability explained corporations should not use more resources than they can replenish (Crowther & Aras, 2008).

Assumptions, Limitations, and Delimitations

In conducting this study, I examined the relationship between CG, CSR, and banks' performance in the CEMAC region. As the researcher, I used two reliable variables, ROA and ROE, to measure the banking performance and test the structural model's robustness within the CEMAC region. To achieve the proposed objective, I depended on possible assumptions and limitations for CG and CSR principles, which influence banks' performance in the CEMAC region.

Assumptions

Based on Forte (2013) in which the business environment influenced CG and CSR, I assumed CG and CSR principles are the same in the different countries within the CEMAC region. The Bank of Central African State (BEAC) represents the responsible agent for coordinating banking transactions in the entire CEMAC region. I assumed each bank within the region in the various states operates under the same banking regulations, which aligned with CG and CSR codes in the area.

Because the same rules, regulations, and institutions govern the BEAC's board of directors, managers, and shareholders, I assumed the local country banks operate
under the same principles of CG and CSR. This included concluding only the board of
directors could appoint top managers and approve important financial decisions within
the region (Brealey, et al., 2019).

Both CG and CSR represent significant components through which the CEMAC
region could grow and stabilize the banks' financial performance. As stated by (Faruqi
et al., 2019), CG rules have the potential to influence human behavior, which would
maximize shareholder values. According to Brealey et al. (2019), good corporate
governance depends largely on a well-designed management compensation package.

Based on the scope of the study, I assumed financial markets and institutions
have the potential to direct financing of the fund to firms capable of investing and
adding value (Beasley et al., 2019). For finance to move from investors to firms, the
study assumes that shareholders and other investors receive protection against agency
problems. The course takes a tolerable or absent agency problem and conflict of interest
within the CEMAC region firms to better guarantee the influence of CG and CSR on
banks' performance.

According to Oyerinde et al. (2014), the ROA and ROE are effective
measurements of banking performance. Hence, I also assumed ROA and ROE reflected
an accurate and efficient indicator for measuring banks' profitability in the CEMAC.
Additionally, the regulation of CG, CSR, and the financial variables could stabilize
financial performance within the region.
The structural regression models specified in this research I assumed as linear and with
a stochastic error term having a constant standard deviation and a mean of zero. I
considered the presence of the classical econometric assumptions in the model.
Therefore, I checked for heteroscedasticity and autocorrelation in the structural model.
My final assumption was the country-level data extracted from the Worldwide and the World Bank databases reflected the macroeconomic environment in which corporations operated. The data revealed how attractive or unattractive shareholders were to move their capital to the region using long-term or short-term investments.

**Limitations**

The study's first limitation is related to the use of historical accounting data for the measurement of the banking performance in the CEMAC regions. According to Brealey et al. (2019), ROA and ROE measured the banks' balance sheet's book value and not the market value. Although the ROA and ROE indicate accounting values and not market values, the ROA and ROE are theoretically useful indicators in measuring banking performance (Breasley et al., 2019). Considering the limitation of ROA and ROE used to measure banking performance, the research sources adopted the same approach by Magantar (2019) to include 2003 to 2018 data of ROA and ROE. I focused on ROA and ROE as measurements of financial performance because they show the performance of financial resources in the CEMAC region (Faruqi et al., 2019). I also relied on secondary data of specific-country variables obtained from the World Bank and the Worldwide Governance databases.

The second limitation of the proposed study recognized the augmented structural model included only internal and external macroeconomic variables, such as inflations, gross domestic product per head, and foreign direct investment. However, the limitation of gaining more variables in this research was covered by selecting major macroeconomic variables in the CEMAC region (IMF, 2019).

The third limitation of the research was the framework used for data collection. The period of data collection was from 2003 to 2018. Considering the limited data, this
study adopted a similar approach by Onakoya et al. (2012) in which the author included data from six major banks in Nigeria. In this study, the researcher covered and reviewed the relationship between CG and banking performance as well as the relationship between CSR and banking performance, in all six countries in the CEMAC region. This allows for a broad scope of cross-section data. The timeframe provided a benchmark for future studies as it captured the effect of major external shocks in the entire region.

The fourth limitation of the research was the sample size of the data retrieved from the World Bank and the Worldwide Governance indicator databases. Even though the ESG indicators were limited to population density, labor force participation rate, and renewable energy as a proxy for CSR, these ESG factors characterise the CSR framework in the CEMAC region. However, considering the sensitivity of CSR, CG, and banking performance and the limitation of gaining access to more variables, this research selected major ESG indicators and CG indicators, which addressed the continuous commitment of businesses to behave ethically and contribute to economic development as well as the life of its citizens and community (Jizi et al., 2014).

I assumed the regional level indicators' capability of measuring the dependent variables and the model's independent variables. Also, the correlational research measured the degree of association within the conditional and the independent variables.

**Delimitations**

The delimitation of the study alludes to the scope of the research. The study scope was limited to all selected banks present within the CEMAC region. The primary reason for selecting the banking industry in the CEMAC region was based on banks functioning and carries out significant roles in the local and regional economic growth.
Among the various financial institutions, banks play crucial roles in providing money to businesses and attracting local businesses within the region (Faruqi et al., 2019). The regional banks BEAC, whose headquarter is in Cameroon, regulates and offers services to commercial banks. Financial institutions' global stability, such as banks, depends on CG’s regulatory mechanism (Faruqi et al., 2019). Hence, examining the relationship between CG and banking performance on the one hand, and on the other hand, the relationship between CSR and banking performance in the CEMAC region should receive special consideration due to the enormous roles’ banks have in promoting economic growth and development within the global economy. Additionally, addressing the gap in existing literature concerning CG, CSR, and banking performance is of paramount importance to the CEMAC region and adds significant knowledge to the body of existing literature.

**Significance of the Study**

**Reduction of Gaps**

The systematic examination’s significance may be revealed through contributing to the existing literature concerned with CG and CSR's influence on bank performance. Faruqi et al. (2019) formulated a theoretical model of CG on bank performance, through the intermediation of cash flows, revealing the significant effect of CG on bank performance in developed countries as opposed to developing countries (Faruqi et al., 2019). The findings of Rahim and Alam (2014), recognized civil society groups were unorganized agencies with either ineffective or corrupt leadership. This applied to the CEMAC countries with a high dependency on monetary regimes and poor knowledge of CG and who may experience low bank performance. Also, the media and non-governmental organizations in developing countries do not reflect
corporate transparency and accountability. As a result, these countries may witness slow growth and poor corporate performance compared to companies in stronger economies with CG principles that encourage shareholder value maximization (Faruqi et al., 2019; Rahim & Alam, 2014).

A company’s transparency and accountability may promote the spirit of reliability and honesty among managers, the board of directors, and shareholders, which is necessary for a business environment that attracts investors (Brealey et al., 2019). Per the IMF annual disclosure statement, the CEMAC witnessed robust economic growth in 2014 due to the exploration of natural resources. However, the potential growth was not fully realized due to the slow investment and oil-price shock. Moreover, even though the change was estimated at the regional level, it reached 4.5% because of oil production and public investment programs. The growth rate in 2015 was projected to slow to 2.8% because of low public investment and poor bank performance. This growth rate may continue to decline if the CEMAC fails to improve policies that promote good CG and CSR principles.

Essential to the global financial stability among financial institutions, especially banks, is the effective implementation and execution of CG principles (Faruqi et al., 2019). CG’s practices ensure accountability and transparency in the banking system (Faruqi et al., 2019; Rahim & Alam, 2014). The concept of CG stated utilizing rules, power, and principles established within an organization, human behavior would be transformed toward maximizing value and accomplishing its objectives (Rahim and Alam, 2014; Faruqi et al., 2019). The concept of CG emphasizes business rules and decision-making processes via effective implementation of policies, laws, and regulations that influence how corporations direct and control achieving shareholder
values (Rahim & Alam, 2014). I investigated the influence of CG on bank performance in the CEMAC region. The measure of bank performance was determined by the ROA and the ROE using secondary data from the World Bank database.

The body of literature contains extensive research directed towards CG in developed countries (Faruqi et al., 2019; Rahim & Alam, 2014). However, limited studies exist focused on developing countries (Angahar & Mejabi, 2014; Darko et al., 2016). In Nigeria, poor corporate governance was one of the significant factors influencing banks’ financial distress (Darko et al., 2016). Additionally, the research carried out in developed and developing countries examined the influence of CG on the capital structure and the performance of firms (Krishna & Stuart, 2014; Rami, 2014; Titisari et al., 2019). Nevertheless, research on the effect of CG on banks’ performance remains limited (Faruqi et al., 2019; Mangantar, 2019). Also, the few available study results reveal inconsistent outcomes.

The use of practical CSR standards strengthens corporate ethics regarding information disclosure in financial statements. As managers and board of directors seek to ensure shareholders' value maximization, the business environment may increase in competitiveness, thereby attracting more investors and business creation. The concept of transparency and accountability in CG plays a significant role in economic globalization and the improvement of financial markets (Brealey et al., 2019).

I included the CSR index to investigate its influences on bank performance in the CEMAC. The integration of CG and CSR theoretical models was crucial because each country developed its standards and practices of CG and CSR concerning its unique social, political, and religious needs (Faruqi et al., 2019). The existing literature highlights varying results of the relationship between CSR and financial performance.
Magantar (2019) found CSR does not have a significant effect on financial performance as measured by the ROA and ROE. Other researchers reported a positive and significant impact (Buchner, 2012; Chi-Jui, 2010). CSR concepts focus on companies integrating social and environmental factors to achieve long-term value maximization in their organizations (Chi-Jui, 2010). The CSR's ideas ensure organizations embrace their responsibility for shareholder's values by effectively managing their economic, social, and ecological resources. In this research, I viewed CSR as a function of the banks when working towards achieving shareholder values by integrating social and environmental factors within the context of the CEMAC region.

Rahim and Alam (2014) recognized CSR as organizational rules, which integrate social and environmental factors in promoting shareholder needs by reducing externality that might affect other shareholders. Buchner (2012) identified CG as an integral aspect of CSR; therefore, CSR practices enhance CG, which could improve bank performance. I systematically made two significant contributions supported by existing literature by first advancing a proposition of a positive and meaningful relationship between CG, CSR, and bank performance within the CEMAC. Secondly, I contribute to filling in the existing literature gap by testing the theories of CG and CSR in the CEMAC region. However, previous researchers viewed CG and CSR independently; however, I integrated them into one structural econometric model. In disseminating the outcomes of this study, the results can inform the board of directors, managers, and shareholders at the regional and country levels about the effect of CG and CSR on the banking performance within CEMAC. The findings of this research infuse the knowledge of existing literature into the relationship between CG and
banking performance on the one hand and the other hand the relationship between CSR and bank performance in the CEMAC region.

**Implications for Biblical Integration**

The Bible explains how Christians should be engaged in creative and meaningful work to satisfy the needs and wants of everyone. Van Duze (2010) explained businesses' biblical purpose does not pursue profit-making but should operate to attract capital in service to customers and employees. To best satisfy shareholder values, companies should attend to satisfying their customers and employees, which would generate shareholder values. For businesses to address the needs and wants of those involved from a customer and employee standpoint, Van Duz (2010) explained how business intentions should not harm the environment and society. The book of Genesis 3:3 describes how God directed Adam and Eve to explore the garden and eat from any tree except the tree in the garden's middle. Philippians 2:3 states "Do nothing out of selfish ambition or vain conceit. Rather, in humility value others above yourselves," Romains 12:10 cites, "Be devoted to one another in brotherly love. Love yourselves in honoring one another." 1 Peter 4:10 reminds Christians, "Each of you should use whatever gift you have received to serve others, as faithful stewards of God's grace in its various forms." Romans 12:6 reiterated a similar statement in 1 Peter by stating, "We have different gifts according to the grace given to us. If one's gift is prophecy, let him use it in proportion to his faith;"

Associating these Biblical quotations to the practices of CG and CSR in the banking industry, managers, the board of directors, and shareholders, should use their God-given talents as an opportunity for creating meaningful works that benefit the entire community without causing harm to the environment or itself. Therefore,
managers, the board of directors, and shareholders should work as a team to achieve the corporation's objective by addressing customer’s needs and wants.

**Relationship to Field of Study**

Effective CG and CSR in the banking industry assists in creating a sustainable business environment capable of satisfying not only shareholders but also addressing the customers, employees, and manager’s desires. The financial cognate is associated with this research by examining critical concepts such as CG and CSR on banks’ performance in the CEMAC region. Studying issues related to CG could influence economic activities in the CEMAC region, which remains paramount in mitigating agency problems and conflicting interests within the entire area. The outcomes I discovered can provide essential information and add knowledge to the existing literature in finance as related to CG, CSR, and banking performance.

**Summary of the Significance of the Study**

Through conducting this study, I aimed to examine how CG and CSR affected banking performance in the CEMAC region. My findings could reveal to policymakers and investors the strength of CSR and CG practices in the CEMAC region. For example, a significant positive effect of CG on banking performance or CSR on banking performance would enable shareholders and other investors to gain confidence in the regulatory framework, such as effective governance. Also, the association of the labor force participation rate, population density, and renewable energy entice investors to invest in the CEMAC regional market. On the other hand, if the relationship between CG and banking performance or CSR and banking performance is not significant, policymakers may decide to continue improving the CG and CSR codes. The inclusion of the control variables such as inflation, unemployment, and foreign direct investment
indicated the economic conditions businesses and corporations operate within. A significant negative relationship between inflation and banking performance could contribute to the erosion of investors' confidence.
A Review of the Professional and Academic Literature

In this section, I examine current literature, which describes the relationship between corporate governance, corporate social responsibility, and banking performance in both developing and developed economies. The literature I reviewed included offered implications on the relationship between CG and banking performance on the one hand and the other hand the relationship between CSR and banking performance in the CEMAC region. Even though the CEMAC region recognized a slow improvement in economic growth, the International Monetary Fund emphasized the banking sector's outlook of remaining fragile. In the first part of this section, I discuss the concepts of corporate governance and corporate sustainability, emphasizing vital financial theories. I also included a review of literature on agency problem resolution, conflicts of interest, and macro factors, focusing on how these concepts influence a bank’s performance.

In the second part, I present existing literature regarding the relationship between CG and CSR on bank performance. In a brief review of the CG Code in the CEMAC region, I investigate if there is a significantly positive relationship between CG and banking performance on the one hand and on the other hand a significantly positive relationship between CSR and banking performance. The empirical literature reviewed was essential as it helped to provide a fundamental framework to the research prepositions of whether there is a significantly positive relationship between CG and banking performance on the one hand and on the other hand, the relationship between CSR and banking performance in the CEMAC region.
**Theories of Corporate Governance and Company Values**

I broadly examine the definition of CG in this research, with a focus on the issues related to accountability, political stability, absence of violence/terrorism, government effectiveness, regulatory quality, the rule of law, and control of corruption associated with the management of shareholder investment. The concepts of CG received attention in current business research of both developed and developing countries.

Guler and Crowther (2008) defined CG as an environment of trust that involves ethics, moral values, and confidence among all society constituents such as the stakeholders, general public, service providers, and the corporate sectors. According to these authors, CG mechanisms require participation from all parties involved in a business transaction (Guler & Crowther, 2008). The definition or measurement of CG used in this research underpins three theories: the agency theory, conflict of interest theory, and agency cost with more attention on how CG mechanisms affect business values. Researchers produced empirical evidence of the association between acceptable CG practices and improved company reputations (Georgantopoulos & Filos, 2017; Mangantar, 2019).

Mangantar (2019) defined company value as to how suppliers of funds or investors perceived the company with more attention to the stock prices. Hence, effective CG practices may increase the company through the increase in the stock prices. Additionally, Georgantopoulos and Filos (2017) emphasized how company values directly relate to CG structures as measured by board size and independent directors. The researcher revealed the generalized method of moment (GMM) as a more suitable tool for analyzing data than the ordinary least square method (OLS). The
researcher used the findings to highlight a positive effect from increasing the board size and independence of the director related to the bank values in Greece during the financial crisis. Contrarily, Idolor and Braimah (2015) found a negative relationship between CG practices and stock prices upon the release of market announcements concerning the failure of CG practices. Using the outcomes of this study, I reveal how the effect of an announcement may induce risk in the stock market, leading to an adverse effect on investors and the overall company value. I include a discussion on the importance of effective CG practices in Nigeria and the Sub-Saharan African economy.

Orazalin et al. (2016) found CG practices enhanced organizational performance and acted as a shield during turbulent economic conditions. The authors argued that CG’s methods should evolve with time, depending on the financial situation. Therefore, the investigation of CG and CSR’s influence on banking performance in the CEMAC region may generate insightful results, which can help policymakers match CG and CSR practices with the current market conditions.

**Corporate Governance Principles**

Both internal and external institutional changes influence the principles of CG (Brealey et al., 2019; Orazalin et al., 2016;). Internal corporate factors include board size, ownership structure, and CEO duality, which fluctuate. External factors such as political changes, economic variations, cultural variables, and ecological factors evolve, causing organizations to potentially lose control.

For instance, Eloundou and Djinja (2016) investigated the influence of internal mechanisms of governance, such as the size of the board of directors, foreign direct investors, and the bank’s position when bearing financial risk on 20 banks in the CEMAC region. Determining CG mechanisms, they obtained data through surveys
from the 20 banks during the years 2007 to 2013. The authors found that small size banks were more effective in managerial control than large size banks. They also found the size of the bank, public directors, and bank capitalization associated with reduced risk-bearing. Contrary to the results mentioned above, some other internal governance mechanisms such as foreign directors and ownership structures showed an insignificant effect on banks' risk-bearing in the CEMAC region. Even though the study served as a benchmark to the role internal CG mechanisms play in shielding risk CEMAC's banks, the study's main limitation was the restrictions on generalizability based on the 20 bank survey sample. The sample size was not a perfect representation of the banking industry in the entire CEMAC region. This investigation of CG focused on external mechanisms such as legal framework, freedom, protection of investors, and CSR on banking performance in the CEMAC region, including the entire regional banking industry. The research can positively change public and private businesses' operations by providing vital information about CG and CSR practices within the CEMAC region.

Moreover, the information resulting from my research may provide the board of directors, financial analysts, managers, and even investors with possible threads and risky activities, which potentially negatively influences CG and CSR practices in the CEMAC region. The findings from this study revealed current information in managing the overall resources in the CEMAC region.

Brealey et al. (2019) recognized executive compensation as one of the central internal CG practices mitigating the corporation's agency problem. Based on this view, Luo (2015) examined the determinants of the internal CG mechanisms on the executive compensation in Chinese banks. By applying panel data from 2005 to 2012, the generalized method of moment (GMM), and the two-stage ordinary least square
regression technique, the author found an insignificantly positive relationship between
the chief executive officer (CEO)'s power and pay performance. The findings revealed
excessive CEO power does not increase executive compensation in a corporation.
These findings may create an awareness of how top public officials execute CG
structures.

Moreover, the IMF identified a significantly high level of corruption due to
public authorities abusing public power in the CEMAC region. Luo's (2015) work was
relevant in the study of CG in the CEMAC region because the author revealed
excessive CEO power may reduce executive compensation and negatively affect
banking performance. I investigated the relationship between CG and CSR on banking
performance in the CEMAC region.

Kara et al. (2015) reiterated the debate regarding the inadequate formulation and
implementation of CG mechanisms in corporations. The shareholders and stakeholders’
model of CG described how corporations should balance the interest of all stakeholders
to improve financial performance. Consequently, the Organization of Economic
Corporation and Development (OECD) created a non-binding framework from member
countries' perspective that involved legal regulations and other regulatory structures in
CG activities. In this framework, the OECD first recognized the theme of time as a
significant factor influencing CG practices. Secondly, CG principles were initially
essential in publicly traded corporations and eventually instituted in private companies.

However, the CG structures act as the mechanisms, which required financial
markets and institutions to direct money or assets, which support essential businesses'
institutionalization of values (Brealey et al., 2019). The regulatory systems
conventionalization of CG defined and operated differently across the vast array of
empirical studies. For example, Busoli et al. (2015) examined CG's vision through the implication of board size and quality of loans in Italy.

Based on a large sample size of the banks, the results suggested reliable and valid implications on the influence of board size and loan quality on shareholder value maximization. By applying a multivariate ordinary least square regression method, the authors found that the board size, which handles the coordination of loan transactions, has a negative influence on the quality of loans.

The findings from this study suggested larger board sizes may create complexity and bureaucratic issues involving loan transactions, which may in turn negatively affect the company values. Similarly, Orazalin et al. (2016) examined the influence of several dimensions of CG mechanisms such as board characteristics, ownership structure, corporate disclosure, and CEOs' educational level on company values. The study, performed in Russian banks during the financial crises found all the various dimensions of CG enhanced company values during the financial crises. The results revealed how good corporate governance practices may shield or make companies resilient during a financial crisis. The protective effect of CG in a company demonstrated research may serve as a policy guide to the CEMAC-commission. The research may also provide critical information for understanding the regional regulatory framework in which the banks operate. The 2020 coronavirus pandemic outbreak may negatively influence oil and stock prices worldwide but vary depending on the strength of CG practices in the region. This study comes in a critical moment when the coronavirus pandemic dramatically affected financial markets worldwide. In this study, I sought to examine the relationship between CG and CSR mechanisms on banking performance in the CEMAC region.
A region highly dependent on income generated from the sale of oil was vulnerable to economic and other exogenous shocks. For instance, an exogenous shock such as the outbreak of Covid-19 caused a decline in the price of oil products, with more emphasis on the CEMAC region. Although researchers made an effort to produce a vaccine for the coronavirus, the effect on corporations and financial markets remains questionable. Moreover, the IMF identified the economic conditions in the CEMAC region as fragile, which means the CEMAC region was more vulnerable to exogenous shocks. The findings from this inquiry may provide decisive factors from the combination of CG and CSR mechanisms that would influence the effectiveness and efficiency of banks' performance in a period of financial crisis in the CEMAC zone.

Furthermore, business activities in the region remain extensively unmonitored; the IMF classified the region as experiencing a high level of corruption and embezzlement of public funds. My research may provide insightful information on ways to improve CG mechanisms in the CEMAC region. The results provide sensitive information on how directors can effectively monitor the financing of public and private investment projects.

Additionally, Idolor and Braimah (2015) described CG structures as to how all parties, such as shareholders and other organizational agents, rely on maximizing the profitability of a firm, and may be engaged to ensure responsible managers protect the interest of the shareholders. The authors explained how managers may prefer focusing on their self-interest rather than perform their agent's role of maximizing shareholder values. The unethical behavior of managers, contrary to increasing shareholder values, created a conflict of interest. For example, because of their self-interest, managers may decide to increase the firms' size or avoid investing in risky assets even though they
may result in higher returns (Brealey et al., 2019; Idolor & Braimah 2015). The conflict of interest revealed weak CG mechanisms created an opportunity for managers to extract profits for themselves by manipulating the board’s objectives (Brealey et al., 2019; Lou, 2015). I examined external CG mechanisms such as the legal environment, the freedom of the media, and investor protection within the CEMAC region. The business environment in the CEMAC region is characterized by a low level of regional integration policies (IMF, 2018). The standard effective tariff rate is not unanimously utilized among member countries. Each country continues to implement its tariff rate, thus creating an opportunity for directors to act in their personal best interest. The regional trade among member countries is approximately 2 to 5%, with tight public regulations, which discourage foreign investments (IMF, 2018). I intended this study would provide reliable information on how the external CG mechanisms can improve business practices within the CEMAC region. The findings of this study may be used to guide policymakers and stakeholders on a strategy, which strengthens the external CG mechanisms toward improving the effectiveness of the banking industry within the CEMAC region.

However, many researchers’ empirical studies investigated the internal CG mechanisms, but only a few studied the external CG mechanisms. Idolor and Braimah (2015) examined CG mechanisms and agency theory on stock market prices in Nigeria. The authors identified no unique CG mechanisms, which guide managers to act in the interest of shareholders consistently, along with the absence of an agreement on the failure of CG on stock market prices. Nevertheless, the authors argued that through a useful board of directors and strict guidelines for shareholders and other investors, the CG mechanism might continue to remain a solid practice for corporations.
Agency Theory

Nazim and Rene (2018) described how agency theory explained a conflicting relationship between managers and stakeholders. They emphasized how certain propositions included information asymmetry, opportunity behavior of agents, and conflicts of interest between shareholders and managers. The relevancy of the definition rests in the contribution to making towards helping companies implement a strategy to monitor the agents (managers), better associate the company's goals, reduce conflicts of interest, and maximize shareholder values. According to Brealey et al. (2019), agency theory involves the relationship between managers and shareholders in a company. The managers who represent the agent of shareholders in a business connect based on the shared purpose of maximizing shareholder values. Those who use agency theory struggled to show how good CG mechanisms may strengthen a company’s performance and capability by addressing external business shocks and internal challenges such as interest rate fluctuation and conflicts of interest within the global business environment (Nazim & Rene, 2018). Additionally, the agency theory underscores the need to implement and execute an effective CG mechanism for manager’s transparency and accountability activities.

Furthermore, Al-Hussain (2009) described agency theory as a relationship by which managers act as agents of control for others such as, shareholders and investors. I identified the concepts of control and ownership as agency theory attributes; therefore, both images illustrate that agency theory is a contract between the agents (managers) and the owners (shareholders). Hence, in the CEMAC region, an essential need exists to determine agents and owners for effective CG and CSR management. Eloundou and Djinja (2016) explained managers, acting as an agent to the shareholders, are well
informed about the firm’s general business environment. The problem of asymmetrical information urged the managers to lead the firm according to their interests, which may differ from the shareholders’ interest, resulting in problems for the agency.

Brealey et al. (2019) further explained how managers act as agents of control for shareholders, become tempted to control individual decisions in a corporation that favors their interest. They may deposit money into their private accounts without informing the shareholders. This behavior of managers creates agency costs in the organization (Brealey et al., 2019). The agency theory deals with examining executive officers, such as the board of directors and operational managers to assure effective implementation of business objectives and maximization of intrinsic company values.

Similarly, Daravseh and Chazi (2018) purported that agency theory may be deployed in banks to identify significant factors affecting the bank’s performance. The authors also explained how agency theory may reduce operational risk, which is the risk involved when bank managers perform the tasks related to financial transactions for investors. In this study, I measure the banks’ performance as ROA and ROE.

**Conflicts of Interest**

In a doctoral dissertation, Al-Hussain (2009) explained that conflicts of interest might occur among stakeholders, including managers, stockholders, and creditors, because maximizing the benefit for one of the parties may minimize the use of the others when performing business activities. The conflicts of interest among managers, shareholders, and the board of directors may be the primary cause of low CG and CSR mechanisms in a bank (Al-Hussan, 2009). According to Brealey et al. (2019), conflicts of interest originate when shareholders, managers, the board of directors, and other investors do not share the same goals and objectives as the corporation. The conflict-of-
interest problem may be inevitable if all stakeholders, managers, and board of directors do not share the exact shareholder value maximization in the market (Brealey et al., 2019). The inevitable nature of conflicts of interest inspired Mensah and Abor (2014) to investigate the influence of executive compensation, conflicts of interest, and interest rate variation in Ghanaian banks. With panel data covering the period 1999-2011, the authors found executive compensation reduced conflicts of interest and positively increased interest rate margins in Ghanaian banks. The board of directors should also implement and execute an effective CG and CSR structure that creates feasibility between each party directed toward maximizing shareholder values. It is the board of directors and managers’ responsibility to implement transparent policies and assume practices, which lead to improving the corporation’s financial performance.

**Financial Sector Characteristics in the CEMAC Region**

The debate of CG and CSR practices gained significant recognition by managers. Essentially, firms accept responsibility for the environment in which they operate, which includes human rights laws, pollution, and anti-corruption practices. There is no specific, universally applied definition of CG and CSR mechanisms throughout existing literature. The CG and CSR practices standards vary from nation to nation around the world. Gamble et al. (2019) defined CSR practices as specific sets of socially beneficial activities that are incorporated into the company goals and objectives. A company may choose to support these social factors by sacrificing time, money, and other resources to improve the socio-economic environment in which a business operates. According to the authors, the social factors include diversity, labor practices, and volunteerism.
African Financial Markets Initiative (AFMI)’s report in 2019, recommended CG and CSR practices demonstrate improvement in the CEMAC region through implementing an oversight committee. The committee would assume the responsibility of assuring effective execution of CG and CSR practices in the entire region. A strong CG and CSR system from the board level would potentially strengthen multilateral coordination and harmonization of all business activities within the region, along with enhancing their environmental and social performance. These activities include the movements of goods and persons across member countries. The harmonization of policies and legal frameworks may help to create a common market that facilitates the flow of financial resources to more important investment projects within the CEMAC region. To achieve this, a convention of Monetary Cooperation Agreement with France and the six-member states, with a common currency known as the CFA, created the Bank of Central African States (BCAS). The unique characteristic of the role of BCAS was stated as:

To define and implement the monetary policy in the region; issue banknotes and coins that are used in the region; conduct the foreign exchange policy of the CEMAC zone; manage the official foreign reserves of the Member States; and ensure the efficient operation of the regional payment and settlement systems (AMFI, 2019, p. 1).

The payment structure of the CEMAC countries, described as rudimentary, was an obstacle in the development of the financial sectors and a constraint in the regional integration and liquidity management (AMFI, 2019). Specific financial services, such as electronic banking, which enable broader access to financial resources, are not well
developed. For example, Ningaye et al. (2014) purported the capital market was in its embryonic stage and bank loans remained the primary source for financing the CEMAC economy. The fragile nature of the financial sector remains questionable. For example, Agbor (2013) suggested the CFA France's future sustainability remained uncertain due to inevitable variations and exposures of external shocks such as the real exchange rate and other economic fundamentals.

Moreover, the fixed exchange rate regime stayed resilient and depends crucially on oil exports, representing 90% of export revenues and 40% of GDP. Consequently, the high dependency on oil exports poses substantial challenges to the entire regime. For example, the government could collapse if oil exports experienced a significant level of depletion. Although the CEMAC region continues to trade with the eurozone economies, recently, the CEMAC countries began dealing increasingly with highly volatile economies, such as China and the USA (Agbor, 2013). Due to systematic risk in the CEMAC local financial markets, the region launched a regional payment reform in 2003, aiming to improve the payment system's effectiveness. However, the implementation of effective management of financial securities remains unrealized due to a poor experience, inadequate implementation capacity, and coordination within the CEMAC region (AMFI, 2019). In 2019, the CEMAC countries took a giant step to create the Security Exchange of Central Africa, which regulates security trade in the two regional stock markets: The Stock Exchange in Libreville and the Douala Stock Exchange.

Additionally, the six states created the Development Bank of Central African States (DBCAS) for the long-term capital mobilization toward financing investment projects. Recent changes in financial assets in the DBCAS currently replenish the
CEAMC's development funds, by using taxable and custom union revenues. It is, therefore, of great importance to examine the relationship of CG components on banking performance because suitable CG components can strengthen the efficiency of capital allocations to investment projects (Agbor, 2013).

The CEMAC countries benefit from stable inflation and static exchange rate regime because of the fixed convertibility of 50 CFA franc to one French franc. There is an ongoing debate about the French treasury's negative influence in guaranteeing the fixed exchange rate (Signe, 2019). In a press interview, Benin President Talon revealed that the Francophone nations in West Africa may want to take over the CFA France and move their reserve away from France (Sngne, 2019). France’s role and responsibility in controlling the reserve requirement of the CEMAC region and the West African Economic and Monetary Union (WAEMU), which consists of Benin, Burkina Faso, Côte d'Ivoire, Guinea-Bissau, Mali, Niger, Senegal, and Togo continuously remains questionable. In addition to President Talon's words, the Italian Deputy Prime Minister Luigi Di Maio discussed how the act of France printing money for 14 African States prevents economic development and growth in the region (Signe, 2019). This debate plays a critical role in the study of CG and CSR on banking performance in the CEMAC region because France, by regulating the parity rate of CFA France, significantly influences both internal and external CG mechanisms within the CEMAC member countries. The findings from this study may inform and guide policymakers in the CEMAC region to take decisive measures on reforming their CG code. The outcomes of my research may provide insightful results to clarify both France and the CEMAC member countries' knowledge concerning improving the CG framework. Nevertheless, CG mechanisms can influence banking performance in the CEMAC
region while revealing proactive details, which can strengthen CG practices along with creating manufacturing industries within member countries.

**CG and CSR Codes in the CEMAC Region**

According to the IMF (2019) report, the corporate governance framework in the CEMAC region focused more on accountability and transparency of public and private managements. The IMF (2018) defined governance as institutional mechanisms and practices through which governments exercise power. Firms direct and control the system of rules, procedures, and processes referred to as CG. They may be classified as internal and external. The internal factors include ownership, the board of directors, and management compensation, while the external factors include law, legal environment, freedom of public media, and investor protection. These definitions and the dramatic drop in commodity prices revealed three specific dimensions of CG practices in the CEMAC region, legal frameworks, investor protections, and freedom of the media.

The regional framework promoting CG practices increased in the attention it received in the CEMAC region. In the context of CEMAC, creating three regional domains would act to enforce CG practices. For example, public officials traditionally focused on the regional standards of general financial management, and the rules and regulations protecting money laundering, and economic terrorism (IMF, 2018). Additionally, the CEMAC’s board of directors succeeded in making progress on the legal framework that handles the accountability of income generated from the sale of oil resources within the region (IMF, 2019). The CEMAC-Commission could provide transparency and accountability in financial management by accessing information obtained from the public expenditures. In respect to money laundering and economic terrorism, the regulatory framework directed by the Central African Banking
Commission (COBAC), fights against public embezzlement and corruption in the CEMAC region. Finally, the oil sector, an essential resource in the CEMAC region, fosters economic growth through income generated from oil product sales. The CEMAC-Commission is responsible for the implementation of the tax code and BEAC oversees the export of oil commodities and exchange rates. However, both CEMAC-Commission and BEAC manage oil resources within the region. This regulatory framework ensures private companies effectively manage the exploitation of oil resources in the CEMAC region.

The Harmonization of Business Law in Africa (OHADA) is the legal framework that governs commercial activities within the CEMAC region since each member is a signatory. The OHADA Uniform Act instituted a uniform tax code along with business ethics to create and operate commercial companies within the CEMAC region. As mentioned in the IMF’s report, business ethics, "deal with ethical principles and standards, which consist of the actions and decisions taken by a business organization and their personnel” (Gamble et al., 2019, p. 1983). However, many companies operating in the CEMAC region heavily rely on their economic benefits, instead of social accountability to their stakeholders and the public. These companies focus more on shareholders’ value maximization rather than the environment in which they operate. Pollution and land degradation constantly lead to low economic performance in developing and developed countries (Sama-Lang & Njonguo, 2016). However, no evidence of a regulatory framework promoting good CSR standards exists in the CEMAC region. Although each country has a social, ethical, and regulatory framework for creating and operating business activities, effective execution of rules and regulations continues unenforced. The concept of CSR remains unaddressed within
corporations, especially in the banking companies in the CEMAC region. Indiscriminate exploitation of each country's natural resources persists. Giz Magazine (2016) noted how the industrial-scale extraction of mineral resources undermines sustainable development. The inappropriate exploitation of timber, oil, and other minerals often leads to cross-border conflicts. Substantial efforts from the CEMAC-Commission along with non-government organizations support the development of common standards and policies for the extraction of natural resources. The OHADA regulatory framework lacks the strength needed to implement and execute a uniform legal and judicial framework that guarantees investor’s confidence within the CEMAC region (IMF, 2018). The CEMAC region experienced a high level of corruption, but low public awareness and political instability created loopholes for rent-seeking activities and encouragement to use unethical business practices in significant corporations (IMF, 2019).

**The Relationship between CG and CSR on Banking Performance**

Many researchers debated the influence of CG and CSR on banking performance in developed countries; however, there is a distinct lack of research in the Sub-Saharan African countries (Berber et al. 2019; Sahut et al., 2019). Current researchers revealed varying results of the relationship between CG and banking performance, as well as the relationship between CSR and banking performance.

The high magnitude of uncertainty and increase in the financial crisis urged scholars' enthusiasm to investigate the relationship of various CG mechanisms on banking performance around the world. For example, Saut et al. (2019) empirically investigated whether the external CG mechanisms were more effective in regulating
banking performance than the internal CG mechanisms. The authors found a significant positive effect of CG on banking performance and CSR on banking performance.

Studying the effect of CG mechanisms on European banks, Ayadi et al. (2019) analyzed both external and internal CG mechanisms on performance and bank’s risk in the European zone. The authors collected data during 2004 and 2009 to better measure the effect of external and internal CG mechanisms on banks' performance and risk. This occurred before and after the 2008 financial crisis. The ROA or ROE measured the rate of return on assets and equities. Researchers highlighted how both internal and external CG mechanism’s dynamic management are potentially important in alleviating agency conflicts between the shareholders and managers. Also, these authors found both internal mechanisms and external capital regulatory framework complementary and significantly influential on banks' performance (Ayadi et al., 2019).

In conducting this study, I illustrated the cultural environments and socio-political frameworks' essential contribution in establishing transparency and stability in the banking sector.

Similarly, to enhance the banking performance literature of Amartey et al. (2019), importantly reported how certain CG mechanisms can strengthen the board of director’s accountability in Ghanaian banks. Generally, the board of director’s accountability can help mitigate agency costs and improve the value maximization of the banks (Schäuble, 2019). In the work of Amartey et al. (2019), the board of directors in the nine listed banks in the Ghanaian stock exchange market from 2011 to 2016 completed survey questionnaires. The results showed banks mainly used both external and internal audit committees to enhance accountability on the board and banks' performance. Contrarily, results also highlighted banks' ineffective implementation of
correct external and internal audit personnel when the financial arrangement became low. This study contributed to the literature of external and external CG mechanisms on accountability in Africa's banking sectors.

Jizi et al. (2014) examined the effect of specific internal CG mechanisms and CSR disclosure on banking performance in some central commercial banks in the United States. The study used a large sample size of commercial banks for the period 2009 to 2011. The authors found board independence and board size positively related to CSR disclosure practices and banking performance. The researchers posited if banks effectively implement acceptable CSR practices, they could enhance investor confidence and profitability in the banking industry (Jizi et al., 2019). Additionally, adequate transparency in CSR reporting may positively affect shareholders' perception of the banks' performance, values, and risk. As stated above, although several researchers investigated the relationship between CG and CSR mechanism on banking performance, the results in emerging economies remain uncertain and limited (Marias-Rodriguez et al., 2018). Marias-Rodriguez et al. (2018) collected data from 281 companies to examine the relationship between specific CG mechanisms and CSR disclosure on financial performance in the following countries, Brazil, Russia, India, China, and South Africa. The researchers found the institutional CG mechanisms positively affected CSR disclosure practices and economic performances in the companies. This empirical investigation supports the view that CG and CSR practices may positively influence banking performance in Sub-Saharan African countries. However, several studies conducted in the Sub-Saharan African countries investigated the relationship between CG or CSR and banking performance (Adeleke, 2014;
Kipruto, 2014; Nyeadi et al., 2018). Minimal literature exists on the relationship between CG and CSR on banking performance in Sub-Saharan African countries. The results of previous literature show CG and CSR mechanisms may positively and negatively influence the banking performance in developed and developing countries. However, researchers revealed a positive relationship; therefore, my research hypothesis tests to discover if there is a significantly positive relationship between CG and CSR on banking performance in the CEMAC region.

The assumption of a significantly positive relationship between CG and banking performance, or between CSR and banking performance exists, and grounds as well as justify the need for effective implementation of CSR and CG practices. The example of weak CG that happened in major companies in the United States causing substantial financial loss, can serve as a lesson to the CEMAC region. However, the BCAS has not escaped scandal (Kenton, 2019). Gabon’s new president, Bongo fired the formal governor of the BCAS, Andzembe when $28.3 million of US dollars disappeared from the bank’s Paris branch (Kenton, 2019).

I focused on investigating whether CG, as a proxy by governance effectiveness, has a positive effect on banking performance in the CEMAC region. Unlike other major financial markets worldwide, the CEMAC region has a unique financial market, which the IMF described as embryonic. Moreover, Luo (2015) reiterated the academic argument that the concept of agency theory relates to an individual’s ability to act morally and self-govern may not work in an emerging economy. Therefore, the external structure of CG mechanisms is unique in the CEMAC region. My analysis may yield valuable results on the unique challenges of the CG mechanism in the CEMAC region.
I focus this research on examining CG and CSR in the banking sectors of the CEMAC region; therefore, the findings of the study may help strengthen the current CG and CSR code in the CEMAC region. Previous researchers expressed how addressing the need for a corporation to achieve the maximization of shareholder values effectively, requires good CG and CSR practices. For example, Brealey et al. (2019) suggested gaining the unanimous agreement of shareholders’ value maximization in the banking industry; bankers should have access to well-functioning financial markets and institutions. Indeed, the uncertain nature of the stock market and the increasing force of globalization and competition have left stakeholders such as managers, stockholders, and boards of directors, to ponder the outcomes of implementing good CG and CSR mechanisms in a company. The ineffectiveness of CG and CSR mechanisms resulted from business scandals, which occurred in large worldwide companies. As a result of the scandals, the stakeholders revised CG practices, emphasizing accountability, and transparency among all parties concerned. For example, Al-Hussain (2009) and Brealey et al. (2019) described the fraudulent financial reporting by corporations that caused the United States Congress to enact laws protecting investors from malicious financial reporting.

For example, the Sarbanes-Oxley Act included the concept of CG, which came as a result of the accounting scandal that occurred to major companies such as Enron, Global Crossing, Qwest Communication, WorldCom, and Adelphia urged corporations to implement effective CG practices (Al-Hussain, 2009; Brealey et al., 2019). The companies experienced significant losses stemming from poor CG practices. It was estimated to be more than $7 trillion in stock value lost or declined in company worth (Brealey et al., 2019). Consequently, the United States Congress drastically passed the
Sarbanes-Oxley (SOX) Act in 2002 to strengthen the code of CG and revitalize investors' confidence. To regularize the principles of CG in the CEMAC region, they created the Central African Banking Commission (COBAC) structure, which diversified funds to public sector investments.

Contrary to previous findings, Miralles-Quirós, et al. (2019) examined whether the environmental, social, and governance structures had a positive influence on commercial banks' stock prices from 2002 to 2015. The authors found investors valued the environmental, social, and governance structures differently due to their effect on the stock market prices. Additionally, the authors recognized higher significant values in all three components, including the environmental, social, and governance within banks in common-law countries. My review of the literature proved useful in investigating the relationship between CG and CSR in the CEMAC region because it revealed the effectiveness of specific structures of corporate laws in the OHADA framework. Researchers documented countries with CG structures were underpinned by standard law practices and could exhibit high financial performance in the banking sector.

However, the effective implementation and execution of CG and CSR in the CEMAC region remain questionable. The CEMAC region has a highly dependable monetary regime, indicating the current CG and CSR practices may be highly rigid, making it difficult to adjust appropriately to the dynamism in the global financial market. For example, Coronavirus (COVID-19) has affected major financial markets such as the New York Stock Exchange, Nasdaq, and the London Stock Exchange. The spill-over has a staggering effect on the Libreville and Douala Stock Exchange market because of the fixed monetary regime's inability to adjust to external shock on time.
Corporate Governance and Bank Performance

Gariba et al. (2018) examined the effect of CG mechanisms on banks’ risks and returns in Ghana. The authors used panel data obtained from banks from 2000 to 2014. In this article, CG is measured by executive compensation. The authors found a significant positive relationship between executive compensation and bank returns in Ghana. However, the general implication pointed out how an improvement in CG practices, such as ensuring more transparency and accountability in the board structures and improving executive compensation, could result in a reduction in risk and an increase in returns. The literature was useful in studying CG practices and banking performance in the CEMAC region because as Gariba et al. (2018) suggested, implementing CG practices could improve bank’s profitability in Sub-Saharan Africa. However, a gap in existing literature concerning the relationship between CG and banks' performance in the entire CEMAC region. I sought to introduce new findings concerning the relationship between CG mechanisms and bank’s performance in the CEMAC region.

Nosseyamba (2012) investigated the influence of CG on shareholder value in selected countries within the CFA zone. The author collected data from 2005 to 2009 from the banks in selected countries, such as Cameroon, Burkina Faso, Cote d'Ivoire, and Gabon, and applied the OLS technique. They found a significantly positive effect of CG practices on shareholder value maximization. Also, the study identified asset allocations for the financing of oil projects within the region. Even though Nosseyamba did not examine the influence of CG practices on an economic block similar to the CEMAC region, the study was useful as it provided supplementary information on the concept of CG mechanisms and banking performance in Sub-Saharan Africa.
Ghosh (2017) examined the influence of CG reforms in the Middle East and North Africa (MENA)’s banks and found CG's reforms significantly affected banks' profitability within the MENA countries. The scope of examining the CG reforms in the Middle East and North Africa was limited to a few banks in the Middle East and North African countries. This study suggests that by investigating the relationship between CG and banking performance in the CEMAC region, the board of directors will gain from the study results for possible improvement in CG practices in the region.

Another study by Peni and Vahamaa (2012) investigated the effect of CG on banks' performance during the 2008 financial crisis. The researchers collected data from the Center of Research in Security Pricing (CRCP). They focused on large public and commercial banks with portfolios in the S&P 500. The outcomes of their study highlighted that banks with stronger CG mechanisms are significantly associated with high profits and stock prices. Peni and Vahamaa (2012) found a positive effect of CG practices on banks' profitability and stock prices increased during the financial crisis. The study’s limitation was the small sample of banks who participated in the survey. Additionally, the results of this study were limited based on the economic environment in the United States differing from the economic conditions in the CEMAC region. Although the article was not foundational to my research project; it was useful in providing supplementary information on CG practices in banking performance.

Conversely, three authors disagreed about how low CG practices might negatively influence bank performance in Africa. For example, Onakoya et al. (2012) examined CG's effect on bank performance in Nigeria. The researchers focused the study on six major listed banks in the Nigerian stock exchange market from 2005 to 2009. They applied the OLS technique to the time-series data extracted from the stock
exchange market. The authors showed CG mechanisms were not effectively implemented, and generally found a negative relationship with banking performance in the Nigerian banking industry. They recommended specific stakeholders such as the board of directors and managers, complete training courses to improve their knowledge of CG practices (Onakoya et al., 2012). However, the CEMAC region does not have an independent monetary system. The monetary policies link to regulations from its colonizing country, France. The region’s advantages included having a fixed exchange rate regime and a stable inflation rate, which potentially hedges the region from external exogenous shocks.

Nevertheless, the fixed exchange rate system may not favor good CG practice because it increases bank’s costs. The fixed exchange rate causes banks to require high reserve ratios for the pegging of the parity rate. The results of my study may help the CEMAC’s board of directors strengthen their CG mechanisms. The results may also inform both the CEMAC region and France on crucial issues concerning CG.

Based on the above syntheses and implications of the literature reviewed, I assumed a positive relationship exists between the external CG and banking performance in the CEMAC region. Moreover, researchers often applied the OLS technique (Nosseyamba, 2012; Gariba et al., 2018); however, Luo (2012) applied the general method of moment (GMM). The work of Onakoya et al. (2012) deployed the OLS technique and applied the panel data to investigate the influence of the external CG mechanism on banking performance in the CEMAC region.

**Theories of Corporate Sustainability**

In 1987, the World Commission on Environment and Development (WCED)
created the concept of sustainable development. It was defined as, "development that meets the needs of the present without compromising future generations' ability to meet their own needs" (Guler et al., 2017, p.32). Since that time, the concept of sustainability gained significant importance in the business world.

According to Mel (2003), CSR is an evolving management paradigm, which ensures the growth and profitability of a corporation through a self-regulating business model. CSR protects the reputation of a business by integrating social, environmental, and governance practices into the organization. The essential goals associated with sustainable development, include environmental protection, social justice, and economic prosperity. In addition to Mel (2003), Kak and Kunori (2018), in an attempt to examine CSR in 85 Japanese companies listed on the Tokyo Stock Exchange (TSE). The author found evidence of CSR in the business model of those listed companies.

Mel (2003) supported previous literature on CSR by detecting four main pillars, sustainable development, stakeholder theory, transparency, and accountability theory. Integrated into the service industries, the idea for companies to adopt a self-regulatory business model helps them to be socially accountable to themselves, stakeholders, and the public. Service companies utilized this initiative as a tool for promoting their brands and improving relationships with stakeholders.

However, Rakesh et al. (2017) examined CSR practices in the banking industry using the balanced scorecard. The authors aimed to explore sustainability in four specific perspectives, such as financial stability, customer relationship management, internal business process, and a friendly environmental management system in Indian commercial banks. They found banks gave more priority to social and economic factors and limited priority to environmental factors (Rakesh et al., 2017). The literature
contained pertinent information on how banks utilize the CSR model to foster relationships with stakeholders.

Similarly, Guler and Crowther (2008) argued CSR practices are fundamental for any organization's continuous operation; thus, the long-term profitability of a business depends on the effective management of CSR activities. The authors asserted the presence of a strong relationship between CSR and CG. They mentioned how researchers have not considered whether a relationship between CSR and CG exists (Guler & Crowther, 2008). In this research, I investigated the relationship by applying descriptive statistics to check for the correlation between CSR and CG. Based on the results of the descriptive statistics, I can identify if there is a problem of multicollinearity existing between the independent variables. Although Guler and Crowther's (2008) found a significantly positive relationship between CSR and ROA, they based their analysis on work with the limited sample size. However, the authors included an explanation of the four key indicators of CSR:

**Societal influence**: is defined as a measure of the impact society, has upon the corporation in terms of the social contract between stakeholders and the corporations.

**Environmental impact**: is defined as the effect of a corporation's actions upon its geophysical environment.

**Organizational culture**: is defined as the relationship between a corporation and its internal stakeholders, particularly employees.

**Finance**: is defined in terms of an adequate return of corporation investment for the level of risk undertaken by the corporation (Guler & Crowther, 2008). These authors emphasized that all these components are of equal importance.
Contrary to the work of Guler and Crowther (2008), Guler et al. (2017) reviewed existing literature on sustainability, arguing the corporate sustainability indicators, which are only linked to the environment, were not sufficient for sound maintainable practices in a company. They recommended good CG would balance the interest of senior management executives, customers, shareholders, and the community (Guler et al., 2017). Their findings revealed acceptable CG practices in a bank may increase its' survival through the mitigation of risks (Guler et al., 2017). The authors emphasized how suitable CG structures and economic, environmental, and social sustainability indicators would enhance CSR’s model in a bank. For example, acceptable corporate sustainability practices may reduce a firm's risks and create a favorable business environment, thereby potentially attracting new investors to the organization. Guler et al. (2017) explained the relevance of sanctioned CSR practices in balancing economic and social goals. For instance, implementing and executing sustainable CSR practices may enable firms to manage their available resources without harming general society.

Corporate Social Responsibility and Bank's Performance

Weber (2017) examined the relationship between CSR practices and financial performance in Chinese banks. The author identified that increases in economic performance in the Chinese economy resulted from good CSR practices. The researcher documented business activities as causing more significant emissions of greenhouse gases into the environment, which dramatically reduced corporate profit. Therefore, if CEMAC wanted to boost economic growth and banking performance, they would begin by formulating a regional framework, which would foster CSR practices for companies operating in the CEMAC region.
The findings of my research could prove beneficial for revamping weak sustainability strategies that balance the long-term growth and long-term environmental, societal, and economic resources within the CEMAC region. Weber (2017) found CSR practices improved financial performance in Chinese banks when applying the panel regression and Granger causality technique. This underscores the significant role banks play in influencing sustainability strategies and economic growth.

Weber's (2017) work revealed the need for companies wanting to establish a positive reputation and competitive advantage, should implement CSR practices, with more focus on the quality of loans, investments, and asset management. The article was useful in the CEMAC region because it provides justification for banks to reject specific investments that do not comply with CSR standards. Some activities such as deforestation, carbon emission, and land degradation have long-term harm to the environment and affect the banking profit within the CEMAC region. Moreover, not obeying rules contributes to unethical and immoral business practices prevailing in the area. Tolerating the conduct may result in significant financial costs to the CEMAC’s board of directors. Rampant abuse of power by top public officials within the CEMAC region continues (IMF, 2018). The high level of bribery and mismanagement of corporate resources in the CEMAC region affected banking performance (IMF, 2019). As a result, investors were hesitant to allocate their funds in the CEMAC region. However, my study's findings may provide insight to stakeholders such as the CEO, directors, managers, and shareholders on issues related to CSR and CG in the CEMAC region. It would help the CEMAC’s board to formulate regional CSR standards. For example, CSR’s policies can promote optimal utilization of resources without causing long-term harm to the environment.
Some empirical researchers reported a positive relationship between CSR and financial performance in the banking industry (Amin et al., 2017; Amin et al. 2019; Esma et al., 2019; Grewtsch & Kleindienst, 2017). However, other researchers argued the existence of a negative relationship between CS and financial performance within the banking industry (Mangantar, 2019; Siregar & Bukit, 2017).

Carnevale and Mazzuca (2013) evaluated the relationship between CSR and stock price variation. The authors investigated the effect of CSR practices on investors’ attitudes regarding the selling and buying of stocks (Carnevale & Mazzuca, 2013). They focused on assessing the fluctuation of stock prices cause by CSR disclosure practices to the public. Data obtained from 176 banks in the European Stock Exchange market during the year 2002 to 2011, displayed that effective CSR practices increased stock prices and improved companies’ reputations (Carnevale & Mazzuca, 2013). Based on this finding, the CEMAC’s board can assume a significantly positive relationship between CSR and banking performance within the CEMAC region exists.

**Macroeconomic Variables and Bank Performance**

The topic of financial performance in the banking industry received significant attention from researchers worldwide. Some integrated different macroeconomic variables when investigating factors influencing banks' financial performance in different worldwide variations. For example, Guruswamy and Hedo, (2014) examined the influence of macroeconomic variables on the financial performance of selected commercial banks in Ethiopia. Financial performance was the dependent variable measured as (ROA), and the macroeconomics variables were the independent variable measured as the interest rate (I), Inflation rate (IF), import (IM), and gross domestic product per capita (RGDP). They found some macroeconomic variables contributed
significantly to banking performance, while other variables did not (Guruswamy & Hedo, 2014).

The results of the descriptive statistics, correlations, and OLS technique displayed the relationship between CSR and banking performance. With the classical linear regression assumption, the authors found the RGDP significantly influences banking performance. However, other variables such as I, IM, and IF, did not exhibit a significant relationship with banking performance. Similarly, in another study, Onakoya et al. (2012) including macroeconomic variables such as RGDP, broad money supply (M2), and I, CG did not have a significant relationship with banks' performance in Nigeria. Munir and Alhaleem (2018) investigated macroeconomic determinants on the banks' profitability and liquidity in Jordan. The author applied a comparative approach by examining the influence of macroeconomic factors on Islamic and Jordanian banks from 2005 through 2015 (Munir & Alhaleem, 2018). They obtained data from only two Islamic banks and 13 Jordanian banks and measured performance by ROA or ROE, and liquidity by the cash deposit ratio (CDR). The GDP and IF were the only two macroeconomic variables in the model. The authors used the regression analysis technique and found a significant positive impact of IF on liquidity, whereas there was an insignificant effect of IF on banks' profitability.

Nguena and Tsafack (2014) applied qualitative and quantitative approaches to investigate the performance of financial sectors in the CEMAC region and found the CEMAC region was vulnerable to macroeconomic shocks (Nguena & Tsafack, 2014). The study supports the inclusion of macroeconomic variables in investigating factors such as CG and CSR on the banking performance in the CEMAC region. The incorporation of these macroeconomic shocks in the structural model of this research
may inform policymakers on pertinent factors affecting financial policy and decision-making within the board of directors in the region.

**Variables in the Study**

I deployed data extracted from the Worldwide Governance and the World Bank sovereign database from 2003 to 2018 to investigate how CG and CSR affect banking performance in the CEMAC region. The ROA and ROE were dependent variables and measured banking performance in the CEMAC region. The ROE was specifically used to check for the robustness of the model. The two major independent variables were the CSR index and CG. I deployed the z-score to scale the ESG factors, which I obtained from the World Bank database. Aggregating the labor force participation rate, population density, and renewable energy consumption proxied the CSR index while governance effectiveness proxied CG. The macroeconomic variables were unemployment, IF, and FDI. I added the control variables based on empirical literature on CG, CSR, and banking performance.

**Summary and Transition**

As a result of limited evidence from existing literature to support the effect of CSR and CG on banking performance in the CEMAC region, shareholders may lack the confidence to invest in the CEMAC region. The purpose of this study was to investigate the relationship between CSR and banking performance on one hand and the other hand the relationship between CG and the banking performance in the CEMAC region. In this section, I discuss the model specification as well as the description of the data. I adopted the multiple regression model with the dependents, independents, and control variables based on empirical literature.
Section Two: The Project

In this section, I restate the purpose of the study, my role related to data collection, and the description of the variables deployed in the research. Next, I discuss the research method, design, data analyses, and the interpretation of the results as supported by theoretical and empirical evidence. Furthermore, in Section 3 I present the research findings, the implications, and the justification of possible change and recommendations for further research.

Purpose Statement

I conducted this quantitative research study with the intention of investigating the relationship between CG and banking performance on one hand and the other hand the relationship between CSR and banking performance in the CEMAC region. The target population consisted of the sample size, which represented all variables from 2003 to 2018 within the six-member states in the CEMAC region. I extracted the data from World Band and Worldwide Governance databases. As a proxy for the CSR index, I used the integration of labor force, participation rate, population density, and renewable energy consumption. The governance effectiveness served as a proxy for CG, and IF, FDI, and unemployment as the control variables. In testing how CG and CSR affect banking performance in the CEMAC region, I deployed ROA and ROE as proxies for banking performance.

Role of the Researcher

This quantitative correlational and regressive research designs relied on secondary cross-sectional penal data analysis techniques. The purpose of the correlational method was to determine the degree of association of the dependent and the independent variables. The regressive methods address the effect of CG and CSR on
banking performance in the CEMAC region as it provides for the best method in a panel data analysis. It is an ex-post factor research for it explains issues on after the fact (Lmmers & Badia, 2005). I have no influence on manipulating the independent variables because the non-experimental research seeks to investigate the performance of the banking sector in the CEMAC region and its relationship to CG and CSR. I deployed a sample size from 2003 to 2018. All variables represent the six-member specific-country characteristic at a given time. The cross-section data defined each variable used in the research in the CEMAC region. My primary roles entailed the collection of country-level specific data from two sources. Once I extracted the data from the World Bank and Worldwide Governance database, I then organized it as panel data into an excel spreadsheet. The missing data were completed in excel through the application of the extrapolation and interpolation methods. I used the STATA statistical software to conduct preliminary descriptive tests. The descriptive tests are of paramount importance because they reveal the nature of distribution and potential outliers in each of the variables.

Moreover, my role as a researcher was strongly linked to conducting the panel data and the model specification. For example, Bassen and Kovacs (2008) discussed the emergence of ESG factors as significant for firm valuation. The authors related an examination of ESG factors could enable investors and shareholders to understand how uncertainty affects banking performance (Bassen & Kovacs, 2008). In a subsequent study, Plastun et al. (2019) deployed panel data analysis to highlight shareholders, who invested their money in companies with good CSR and CG practice earned higher dividends than those who did not. Researchers employ panel data analysis when studying the characteristics of different entities. In this study, I performed a robust
check with ROE, when linked to ROA by the deduction of company debts. Therefore, if CG and CSR had a positive effect on ROA, the momentum of influence would be greater with ROE.

**Participants**

The entire CEMAC region served as the participant in this study because I extracted survey data conducted by the World Bank and the Worldwide Governance databases. I extracted secondary data from the World Bank and Worldwide Governance databases from 2003 to 2018. The sample size was small because the data sources did not have enough data on the CEMAC region. However, though the sample size was small, it represented unique characteristics of the CEMAC region. The country-level specific variables at a given time defined the corporate climate in which the banks operate.

**Research Method and Design**

The research method was the systematic processes used to investigate the relationship between CG and banking performance on one hand, and on the other hand, the relationship between CSR and banking performance in the CEMAC region. The philosophical belief of post-positivism, which describes genuine or factual knowledge as objectivity and discoverable in the real world, undergirded the methodology. The research method involved data collection, organization, statistical tests, and the presentation of the results. It embodies the underlying beliefs a particular nature of reality and a specific approach, which guides the researcher in discovering knowledge. Utilizing a quantitative research method involved incorporating secondary panel data, which reflected country-level specific indicators. I used the STATA statistical software
to analyze the data and interpret the predicted signs with supporting theoretical evidence.

**Discussion of Research Method**

The post-positivism assumption determines the relationship between the dependent and the independent variables in the regression model. The post-positivism belief is underpinned by the theoretical assumption that CSR and CG practices improve banking performance. I employed a quantitative cross-sectional and non-experimental research design. The work of Oluwakemi (2018) supported the quantitative method as the best-suited approach for examining relationships among variables. However, I determined qualitative methodology, which involves constructing open-ended questions and a more thorough approach in examining the phenomenon under investigation, as an inappropriate approach in this research. Creswell (2014) explained that in a qualitative study, the researcher seeks to establish the meaning of an event or phenomenon based on the participants' views. Additionally, the qualitative method may require a greater time commitment. However, I did not aim to deeply explore perceptions or develop an in-depth understanding of a phenomenon. Moreover, the qualitative and mixed-method approaches would not fit into a limited time constraint (Oluwakemi, 2018). I applied a correlational research design, which involved determining relationships among variables in the models.

I collected secondary data from the World Bank and Worldwide Governance databases. As a result, I decided the experimental or quasi-experimental research designs not useful for conducting this study. The empirical research method designates random assignments to participants while the quasi-experiment uses nonrandomized tasks. Also, in the experimental and quasi-experimental research designs, the researcher
engages with participants. Therefore, because I targeted secondary data as my source, the experimental and quasi-experimental designs were also deemed not appropriate for this study.

The ESG factors included population density, labor force participation rate, and renewable energy, which I used as a proxy for the CSR index. The control variables were IF, FDI, and unemployment, which I utilized as a measure of economic performance in the CEMAC region. Governance effectiveness that measures the quality of public and private service served as a proxy for CG, which I extracted from the Worldwide Governance data. The multiple regression model developed by Mangntar (2019) tested whether CG and CSR affected banking performance in the CEMAC region. I analyzed the multiple regression model using STATA statistical software. The Hausman test results determine the superior model among pooled OLS, fixed effect, and random effect.

Discussion of the Research Design

In conducting the study, I used a quantitative correlational research design and applied regression model, which Magantar (2019) deployed to investigate whether CG and CSR affected banking performance in the CEMAC region. The quantitative research design I used involved analyzing secondary panel data from all six countries in the CEMAC region. Because the purpose of the study was to investigate whether CG and CSR affected banking performance in the CEMAC region, I extracted ESG from the World Bank and scale using a z-score to proxy CSR. The derived data on governance effectiveness from the Worldwide governance database and used it as a proxy for CG, while I integrated IF, FDI, and unemployment into the model as control variables. I began the analysis by first collecting descriptive statistics on the panel data,
which I imported to the STATA statistical software from the excel spreadsheet. Following this step, I performed other subsequent estimations such as pooled OLS, fixed effect, and random effect.

**The Pooled Ordinary Least Square Model Specification**

Magantar’s (2019) specification of the regression model justified its use in the study. In the formulation of the model, Magantar (2019) deployed dependent variables such as ROA and ROE; meanwhile, CSR and CG represented the only independent variables. Similarly, Huang (2010) developed the multiple linear regression model, with board ownership as a proxy for CG while customers, suppliers, and workers satisfaction proxied for CSR. Researchers used different independent variables as a proxy for CSR and CG, but I used ROA and ROE as a proxy for banking performance. For example, Crifo et al. (2019), Faruqi et al. (2014), and Rahim and Alam (2014) used different CG variables such as board size, age of the firm, independent audit committee, and firm size to test for banking performance.

Based on Magantar (2019) and empirical literature models, I utilized labor force participation rate, population density, and renewable energy, as a proxy for CSR, and governance effectiveness as a proxy for CG. The external CG mechanisms measured the corporate climate in which the banks operate.

**Pooled OLS Model Specification**

\[
ROA_{it} = \beta + \beta_1 CG_{it} + \beta_2 CSRINDEX_{it} + \beta_3 unemployment_{it} + \beta_4 IF_{it} + \beta_5 FDI_{it} + \epsilon_{it}
\]

• ROA is the return on assets.

• i denotes the different CEMAC countries.

• t denotes time in years.
• $\beta$ to $\beta_5$ denotes the estimated parameters.

• Unemployment is measured as unemployment over the labor force times 100.

• CSRINDEX is the sum of the score of the corporate social responsibility index.

• FDI is Foreign Direct Investment net inflow as a percentage of GDP.

• IF is Inflation as a percentage of GDP.

• CG is the Corporate Governance, proxy as governance effectiveness.

• Model for robust check

$$ROE_{it} = \beta + \beta_1 CG_{it} + \beta_2 CSRINDEX_{it} + \beta_3 unemployment_{it} + \beta_4 IF_{it} + \beta_5 FDI_{it} + \beta_6 \omega_i + \varepsilon_{it}$$

**Fixed Effect Model**

The fixed-effect model allows for the heterogeneity or individual characteristics among the six-member countries in the CEMAC region. The fixed-effect model assumes that despite the differences in the intercept value across the six-member countries, the intercept values do not change over time, meaning that it is time invariance. Omega is the fixed effect component, which illustrates unobserved time-invariant heterogeneities or cross-sectional characteristics of the different countries in the CEMAC region. The assumption of this model is investigating the effect of the independent variables on the dependent variables while considering omega ($\omega$) as constant.

$$ROE_{it} = \beta + \beta_1 CG_{it} + \beta_2 CSRINDEX_{it} + \beta_3 unemployment_{it} + \beta_4 IF_{it} + \beta_5 FDI_{it} + \beta_6 \omega_i + \varepsilon_{it}$$

• Where
• I denote 1, 2, 3……………. N is the cross-sectional dimension, which is the CEMAC countries and:
• T denotes 1, 2, 3…………….T is the time dimension.
• $ROA_{it}$ is bank performances observe for country $i$ at year $t$.
• $Governance\ effectiveness_{it}$ is Corporate Governance (CG) for country $i$ at time $t$.
• $RGDP_{it}$ is Real Gross Domestic Capita for each country on specific years.
• $CSRINDEX_t = \frac{1}{3}(p_t+E_t + L_t)$
• $IF_{it}$ is Inflation rate.
• $FDI_{it}$ is Foreign Direct Investment inflow.
• $\beta_i = Intercept$ 

The fixed-effect model depends on the hypothesis that $\beta_i$ correlates with the independent variables of the model (Khasawned & Dasougi, 2017).

$\beta_{it}, \alpha_{it} \ldots \omega_{it}$ are parameter coefficients of the independent variables in the model.

$\epsilon_{it}$ denotes error term.

The Random-Effect Model

The random effect model assumes the six countries had the same expected mean value for the intercept. However, analyzing both fixed and random effect models determined which model best fits the unique characteristic in the CEMAC region. The random-effect model assumes the unobserved $\beta_i$ is independent of the regressor variables. The model included another stochastic variable denoted by the delta symbol, which represented the unobserved components in each country within the CEMAC
region. The model assumes the error term within the whole region does not correlate with the independent variables. Therefore, researchers concluded the time invariance variables influence the dependent variable.

\[
ROE_{it} = \beta + \beta_1 CG_{it} + \beta_2 CSRINDEX_{it} + \beta_3 unemployment_{it} + \beta_4 I_{it} + \beta_5 FDI_{it} + \beta_6 \omega_i + \sigma_i + \epsilon_{it}
\]

**Hausman test.**

The Hausman test's assumption determines among the OLS, fixed effect, and random effect models, such as the pooled OLS, fixed effect, and random effect, which I deemed appropriate in explaining how CG and CSR affect banking performance in the CEMAC region. The Hausman test hypothesizes that if the probability of the chi-square statistic is less than 0.05. The fixed-effect model is accepted, while the random effect is rejected.

**Specification of the Model**

Magantar’s (2019) study grounded the use of the multiple regression equations when investigating the influence of CG and CSR on financial performance in Indonesia. I used the ROA and ROE as the dependent variables, and CSR index, CG, IF, I, RGDP, and FDI as the independent variables. I addressed the complex system of multiple regression models, with variables representing country-level specific characteristics. For example, CG and CSR are the two major variables, which describe the corporate climate where the banking companies operate. Therefore, if the CEMAC region had a comparative advantage corporate climate, FDI would have a significantly positive effect on banking performance. To achieve feasibility, reliability, and validity, I followed quantitative methods research, as supported by Creswell and Porth, (2014).
ROA = $\beta_0 + \beta_{it}CG_{it} + \beta_{it}CSRINDEX_{it} + \beta_{it}RGDP_{it} + \beta_{it}IF_{it} + \beta_{it}FDI_{it} + \epsilon_{it}$

ROE = $\beta_0 + \beta_{it}CG_{it} + \beta_{it}CSRINDEX_{it} + \beta_{it}RGDP_{it} + \beta_{it}IF_{it} + \beta_{it}FDI_{it} + \epsilon_{it}$

- ROA is a return on assets.
- ROE is a return on equity.
- $\beta_0$ to $\beta_{it}$ is the coefficient of the model.
- $i$ denotes each CEMAC country while $t$ denotes the year.
- CG is corporate governance.
- CSRINDEX is a corporate social responsibility index.
- RGDP real Gross Domestic Production.
- IF is the inflation rate.
- FDI is a foreign direct investment as a percentage of GDP.
- $\epsilon_{it}$ is a random variable.

**Research Questions**

RQ1. Is there a significantly positive relationship between CG and banking performance in the CEMAC region?

RQ2. Is there a significantly positive relationship between CSR and banking performance in the CEMAC region?

**Hypotheses**

I formulated the following hypotheses to investigate the stated research questions and stated them in alternative forms, which may either be accepted or rejected based on the significant levels. The Pearson correlation estimates served as a preliminary test because it does not capture the cross-section of the individual countries in the CEMAC region.

Hypotheses are stated in an alternative form.
H1o: There is no significantly positive relationship between CSR and banking performance in the CEMAC region.

H2o: There is no significantly positive relationship between CG and banking performance in the CEMAC region.

**Population and Sample Framework**

The population for this non-experimental research design consisted of secondary panel data on CSR, CG, IF, FDI, unemployment, and ROA and ROE within the CEMAC region, which revealed the regional level of banking performance measured by ROA and ROE in the CEMAC region. The selection of the ESG factors to represent as a proxy for CSR is supported by Chanchal's (2016) work, who suggested researchers widely recognized the role of the ESG mechanisms in protecting shareholders and other investors' interests. The CSR factors I used in this dissertation included the labor force participation rate, population density, and renewable energy. Also, I incorporated the external components of CG, such as governance effectiveness, political stability, and absence of violence/terrorism, which measures perception of political instability or politically motivated violence, including terrorism and local conflicts within the CEMAC region.

The sample consisted of a secondary panel dataset of CG, CSR, IF, FDI, unemployment, and ROA and ROE within the CEMAC region while also focusing on two significant variables, such as CSR and CG. I retrieved the unemployment rate, ROA, ROE, GDP, FDI, and IF from the World Bank database, along with CG from the Worldwide Governance database. The ROA, ROE, FDI, and inflation in their raw forms included incomplete data points. However, I predicted the need to extrapolate the missing values. In this process, I first represented the scatterplot of each data point to
better determine the nature of the relationship existing in the data. Secondly, I then determined whether a linear trend line existed and then calculated the line equation, which forecasts the incomplete data points. However, the predicted values depending on the kind of equation exhibited by each data. The two major variables CSR and CG did not have missing values in the raw form.

I noted 96 observable variables within a sample size from 2003 to 2018. This sample size represented CSR, CG, and banks' peculiarity within the financial system in the CEMAC region. Conversely, Oyerinde and Awolowo (2014) and Hatane et al. (2019) investigated how CG and CSR affected banking performance in specific developing countries with less than 56 observations. However, I investigated whether CSR and CG affected banking performance in the CEMAC region, within the sample framework from 2003 to 2018.

**Data Collection**

Throughout the data collection process, I obtained secondary data from the World Bank and Worldwide Governance databases. Specifically, I retrieved variables such as ROA, ROE, IF, FDI, unemployment rate, and labor force participation rate, population density, renewable energy consumption as a proxy for CSR from the World Bank database. Meanwhile, I accessed governance effectiveness, as a proxy for CG from the World Governance database. The data were from 2003 to 2018.

**Instruments**

The instruments I used related to financial performance, social performance, and governance. The financial performance instruments related to the ROA and ROE. It measured the profitability of banks in the CEMAC region. Previous researchers used a series of indexes as a proxy for CSR. For example, Chanchal (2016) used the ESG
index as a proxy for CSR. However, in this study, I used the CSR index and CG as independent variables. The independent variables I identified ROA and ROE as the independent variables and unemployment, FDI, and IF from 2003 to 2018 as the control variables.

Nevertheless, the following subsections describe the variables used in the research. I concluded the study did not warrant incorporating a survey as an instrument in data collection based on cost-effectiveness and convenience. Instead, I completed the data collection from extracting the needed information from the World Bank and World Governance databases.

**Variables Description and Measurement**

I investigated seven variables to determine the influence of CSR and CG's on the banking performance in the CEMAC region. The dependent variables ROA, and ROE tested the robustness of the model. Two major variables, the CSR and CG, alongside macroeconomic variables, represented the independent variables.

**The CSR Index Using the Z-Score**

The scoring methodology adopted the Investment Research (n.d) and Brogi and Lagasio (2018) approaches to scale the ESG factors. I calculated the ESG score by taking the difference of each of the ESG factors from their respective mean. Next, I analyzed the scores from each of the six countries in the CEMAC. The first step involved computing each element of the sovereign ESG data used in the study. The mean of these factors represented the average level of performance of ESG. The average values of labor force participation rate, population density, and renewable energy measure an acceptable risk level, which could increase investors' willingness to invest their capital in the region.
The Z-Score of Labor Force Score \( L_t = l_t - \bar{l} \)

\( \bar{l} \) is the mean value of the labor force participation rate, which measures the average number of people employed and unemployed as a proportion of the working-age. The difference between the observation and the mean gives the labor force score. The scores above the mean show the relative strengths of ESG while scores below the mean reflect a weak ESG score. The \( l_t \) values represent the raw data obtained from the sovereign ESG World Bank databases. I used the observations to compute the ESG score for the labor force participation rate.

The Z-Score of Population Density Score \( P_t = p_t - \bar{p} \)

The \( \bar{p} \) value is the mean value of population density, which measures the average number of people living in a square area. This average number of people signifies a level of population that is not vulnerable to land degradation and climate risk. The values above the mean represent weak CSR while those below the mean represent strong CSR. The \( p_t \) value is the raw data retrieved from the sovereign World Bank data framework.

The Z-Score for the Renewable Energy Score \( E_t = e_t - \bar{e} \)

\( \bar{e} \) denotes the mean value of renewable energy, which measures the average clean energy consumption from natural sources within the region. The average score of renewable energy indicates moderate usage of clean energy sources. The value above the mean signifies strong CSR while those below the mean indicate weak CSR. The average of the three components from the respective ESG score calculates the CSR index. The values give a snapshot of the respective countries' EGS performance in the entire region.
Hence,

\[ CSRINDEX_t = \frac{1}{3} (L_t + P_t + E_t) \]

The CSRINDEX provides the overall performance of ESG performance in the CEMAC region. It reveals the business climate in which corporations operate.

**Dependent Variables**

*Financial performance:* I used the ROA to represent the banking sector's performance in the CEMAC region. Alongside this variable, the ROE acted as a check for robustness in the model. Therefore, the ROE, which is the residual income in the banks after settling their debt obligations, should have a higher power for the estimated coefficient than ROA.

**Independent Variables**

Macroeconomic indicators, CSR, and CG affected the CEMAC banking sector. CSR and CG represented the two major independent variables of concern. To obtain the CSR I used the ESG framework, which relates to unemployment and measured by the number of unemployed people as a percentage of the labor force. Governance effectiveness, the mechanism of CG, reflects the quality of public and private service in the CEMC region. Using the macroeconomic variables, as the control variables I integrated them into the model to determine their contribution to the banking performance in the CEMAC region. IF as a percentage of GDP deflator, shows the rate of price change in the entire region. The real GDP is the ratio of GDP in current local currency to GDP in constant or based period local currency. The FDI is the net inflows of investment to acquire a lasting management interest (10% or more of voting stock) in an enterprise operating in an economy other than that of the investor. It is the sum of equity capital, reinvestment of earnings, additional long-term capital, and short-term
capital, as shown in the balance of payments. This series shows net inflows (new investment inflows less disinvestment) in the CEMAC region. The unemployment rate is the number of unemployed people divided by the labor force multiplied by 100.

Data Analysis

To investigate whether CG and CSR affected banking performance in the CEMAC region, I performed a series of tests, using the STATA software statistical package. Based on the outcome of the STATA analytical calculations of the collected data from the World Bank and World Governance databases, I answered the main research question and the dissertation's hypotheses. Fulfilling these central research questions and ideas start by importing the balanced panel data from the excel spreadsheet into the STATA Software statistical package. I then tested the descriptive statistics, Pearson correlation test, the various regression models such as pooled OLS, fixed effect, and random effect after I exported the results into word files. Also, I performed the box plot and histogram pictorial illustrations to determine the distribution of CG, CSR, FDI, IF, ROA, ROE, and unemployment in the CEMAC region. The used of ROA and ROE as a proxy for banking performance in the CEMAC region, verified ROA and ROE as good measurements of the bank’s profitability. However, the central research question focused on determining how CG and CSR affected banking performance in the CEMAC region. To best provide an answer to the research question, I stated two alternative hypotheses.

H1₀: There is no significantly positive relationship between CSR and banking performance in the CEMAC region.

H2₀: There is no significantly positive relationship between CG and banking performance in the CEMAC region.
I present the results of the study in APA formatted tables. I used the STATA statistical software package to analyze the collected data and address the research questions and hypotheses. I aimed to reject or accept the null or alternative hypothesis based on the significant probability levels. Therefore, depending on the nature of the relationship between CG and banking performance, the significant levels would reveal the progress CEMAC realized. Similarly, depending on the nature of the relationship between CSR and banking performance, the significant levels would reveal the effort and progress CEMAC accomplished with CSR practices. I measured the level of significance of each variable in the study at the p-value of 0.05. Torres-Reyna (2007) defined panel data as cross-sectional data, which provides information about an entity’s characteristics over time. Although the entities may differ, in this study, I identified the entity as the six countries in the CEMAC region. Using the specified multiple regression model, I analyze how CG and CSR affect banking performance in the target area. In a doctoral dissertation, Oluwakemi (2008) justified the multiple regression model as appropriate for analyzing data with one dependent variable regressed on various independent variables. However, I analyzed a system of multiple regression equations from 2003 to 2018, which lead to 96 total observations.

The classical econometrics Markov assumed five principles as follows. a) There is linearity of parameters in the model. b) The distributions are normally distributed. c) There is a constant variance of the error term. d) There is independence of the error terms, and e) no serial correlation between variables in the model. However, the first table presented the results of the descriptive statistics. I used the preliminary statistical tests to reveal the essential nature of the data. I documented the results of correalational
metrics in the second table. The subsequent tests served as the basis for understanding the fitness of the model and multicollinearity and autocorrelation.

**Study Validity and Reliability**

Creswell (2012) mentioned the necessity to identify the potential threats to validity and reliability when conducting research. In this section of the study, I present threats to validity and reliability in the investigation of how CG and CSR affect banking performance in the CEMAC region. Both validity and reliability threats may include internal and external validity (Creswell, 2012). A quantitative cross-sectional research study is more susceptible to external validity threats as compared to experimental research. However, I discuss the systematic processes, which validate the results in the following section.

**Study Validity**

External threats and validity because the internal threats to validity often occur in experimental research, limit quantitative research. They are often associated with testing procedures, treatments, and the participants' experiences. The experimental procedures may influence the researcher's ability to draw valid inferences from the data. Nevertheless, the threats to external validity associated with generalizability, decreasing the ability to confer the analysis to dissimilar populations. Therefore, the results of this study cannot be applicable in the entire African continent but can serve as a reference for subsequent research.

I linked the instruments in this study to previous empirical findings. Platonova et al. (2018) measured financial performance using ROA and ROE. Other researchers used ROA and ROE as proxies for banking performance. For instance, Maganter (2019) estimated a multiple regression model with ROA and ROE as the dependent variables
and CG and CSR as the independent variables. In this study, I used the ROA and ROE as proxies for banking performance. The labor force participation rate, population density, and renewable energy consumption proxied for CSR. I also employed labor force participation rates, population density, and renewable energy consumption because the millennium development goals identified these factors as crucial to increasing or decreasing economic performance in a region. The governance effectiveness, as a proxy for CG, allowed the extraction of data to determine the adequacy of governance. The Worldwide Governance database reports data by surveying enterprises and citizens across the globe. Additionally, I performed the sensitivity test with ROE as justified by Platonova et al. (2018) to verify the specified model's robustness.

**Study Reliability**

I established the reliability of the study using secondary cross-sectional data obtained from the World Bank and Worldwide Governance Indicator databases. This included extracted secondary data extracted from the same source. I did not conduct a reliability test because of the objective nature of the data (Creswell, 2012). Moreover, Creswell (2012) identified secondary data as unbiased because the researcher has limited influence on the data. This ex-post factor and non-experimental research aim to investigate the relationship between the dependent and independent variables.

**Transition and Summary of Section 2**

Section two of this study reiterates the purpose statement, research hypothesis, and a detailed description of the research method and design. This section included the researcher's data collection elements, data organization, and data analysis to ensure its perception and other biases did not influence the outcomes of the study. Because I used
a secondary dataset, individual research participants' involvement was not applicable. Instead, the quantitative correlational and non-experimental research design addressed the research question and its purpose. Researchers use the multiple linear regression model for data analysis purposes. In this model, I explored different variables to test for the robustness of the models. For example, the ROE served as a check for the robustness of the benchmark model. I calculated an index variable with factors collected from the ESG framework to proxy CSR. Section two concludes with the description of the reliability, validity, and generalization of the study. In section 3 of this study, I present the study's findings, professional practice issues, implications for social change, and recommendations for additional research.
Section 3: Application to Professional Practice and Implications for Change

In conducting this quantitative and non-experimental research, I sought to investigate how CG and CSR affect banking performance in the CEMAC region. I selected the CEMAC region based on not finding salient literature regarding how CG and CSR affect banking performances in the area. Moreover, the fact the BCAS monetary policy, influenced by France, encourages researchers to investigate how CG affects banking performance in the region. Following the IMF's (2018) report, the financial and economic outlooks in the CEMAC region continued to remain fragile. After obtaining the data from the World Bank and Worldwide Governance databases from 2003 to 2018, I use an excel spreadsheet to organize the data in a penal data format and then analyzed the relationship between CSR and CG on the banking performance. Using the ROA and ROE to proxy banking performance, I identified the independent variables as the CSR index, governance effectiveness, FDI, IF, and unemployment. I deployed the ROE to check the robustness of the benchmark model. The intention was to enable policymakers to re-evaluate the management of CG and CSR and gaps in the effectiveness of CG and CSR policies within the CEMAC region.

Overview of the Study

Empirical researchers produced results with mixed outcomes on CSR, CG, and financial performance (Jizi et al., 2014; Ueng, 2015). While some show a positive and significant relationship between CG and financial performance, others indicated negative results. I investigated if there is a significantly positive relationship between CSR and banking performance on the one hand, and on the other hand, a significantly positive relationship between CG and banking performance within the CEMAC region. The Worldwide Governance and the World Bank sovereign databases provided the data.
on specific-country variables. The various control variables such as CG, CSR, IF, FDI, and unemployment assisted in defining the corporate and macroeconomic climate the banking companies are experiencing in the CEMAC region. I deployed the panel data analysis and the STATA statistical analysis to estimate the regressions.

**Presentation of the Findings and Interpretation**

In this section, I present descriptive statistics, inferential statistics, correlational metrics, and interpretations. Using tables and diagrams or figures best illustrates the distribution of the data. This sub-section ends with conclusions and recommendations for future investigators.

Table 1 depicts the results of the descriptive statistics of all the variables used in the regression models. It also reflects the measurement of the central tendency, such as the mean, median, and mode. The mean is the average performance of the cross-sectional data of each variable in the CEMAC region from 2003 to 2018. I used the labor force participation rate, population density, and renewable energy as a proxy for CSR. To scale the population participation rate, population density, and renewable energy consumption, the z-score determined the high and low CSR practices. Jamali et al. (2008) argued the inclusion of only the social and environmental factors in a model with CG mechanism. I limited the descriptive statistics to displaying the mean, standard deviation, number of observations, along with maximum and minimum values. Also, I included the tests of normality for each variable and a visual representation of boxplot and histogram.

**Results Interpretation**

Table 1 displays the summary of the descriptive statistics of the entire dependent and the independent variables. I also illustrate the number of observations,
standard deviation, mean, minimum, and maximum values. This includes the cross-sectional variables obtained from all six countries in the CEMAC region from 2003 to 2018, and a total of 96 observations of both the dependent and independent variables. I calculated the CSR index by taking the average aggregate scores of each factor, such as population density, renewable energy consumption, and labor force. These components are from the social and environmental pillars within the ESG data framework because I previously extracted the CG from the Worldwide Governance database.

Table 1

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSRINDEX</td>
<td>-.008</td>
<td>9.877</td>
<td>-</td>
<td>17.937</td>
</tr>
<tr>
<td>CG</td>
<td>-1.217</td>
<td>.341</td>
<td>-1.85</td>
<td>-0.44</td>
</tr>
<tr>
<td>FDI</td>
<td>6.049</td>
<td>9.32</td>
<td>-4.8</td>
<td>50</td>
</tr>
<tr>
<td>IF</td>
<td>4.342</td>
<td>11.551</td>
<td>-29.7</td>
<td>59.3</td>
</tr>
<tr>
<td>unemployment</td>
<td>8.171</td>
<td>6.586</td>
<td>1.2</td>
<td>20.5</td>
</tr>
<tr>
<td>ROA</td>
<td>1.704</td>
<td>7.364</td>
<td>-25.1</td>
<td>38.4</td>
</tr>
<tr>
<td>ROE</td>
<td>22.842</td>
<td>23.38</td>
<td>-6.9</td>
<td>118.2</td>
</tr>
</tbody>
</table>

Table 1 illustrates the descriptive statistics on both the dependent and the independent variables in the model. The total number of observations is 96. ROA is the return on assets. ROE is the return on equity. FDI is the net inflow of foreign direct investment. IF is GDP Deflator (annual %). CSRINDEX is the measure of corporate social responsibility. Unemployment is the unemployment rate. CG is the governance effectiveness in the CEMAC region.

These ESG factors show how the banking sectors effectively utilizing and managing environmental and social elements within the region. The CSR index has a minimum score of -19.363 and a maximum score of 17.937. The mean score of -0.008 indicates a low performance of CSR practices concerning the various factors used. The
values below the mean score show the weak strategic implementation of the CSR practices. In contrast, values above the mean score indicate a strong desire for CSR practices in the CEMAC region. The CSR index's standard deviation of 9.877, depicts a very slide variation from the mean. The results of inflation measure the real value of the price of goods and services in the CEMAC region. Therefore, a negative value indicates a period of deflation, while a high positive value illustrates an increase in goods and services' prices. The rate of inflation ranges from negative 29.7 to positive 59.3, with an average score of 4.346, which indicates a moderate increase of 1.646 inflation rate when compared with the World Bank annual report of 2.7 percent. However, the easing of the inflation rate by monetary authorities weakened economic growth because of the high cost of capital needed to produce goods and services within the region. Inflation has a total observation of 96, with a standard deviation of 11.551, which shows widely dispersed data from the mean score. The descriptive results of the inflation rate support the annual disclosure statement of the IMF (2019) indicating the CEMAC region has a tight monetary policy, which undermined the entire region's productive capacity. CG as measured by governance effectiveness describes the perceptions of public services, the quality of the civil service, and its independence from political pressures, including the banking sectors. The score of governance effectiveness ranges from approximately -2.5(weak) to 2.5(strong). The descriptive statistic of the CG score ranges from -1.85 to -0.44, with an average performance value of -1.217. This shows a weak CG performance as described by the credibility of government commitment to the implementation of quality policies that maximize shareholders’ wealth within the CEMAC region. However, a strong CG score of 2.5 captures a business environment that promotes shareholders’ confidence within the CEMAC region. The FDI score ranges from a
score of 50% of GDP to -4.8% of GDP. The mean score of 6.049 as a percent of GDP indicates a weak flow of foreign capital to the CEMAC region. The average score of 6.049 as a percentage of GDP depicts the foreign shareholders and investors lower attracted to allocate their wealth to the CEMAC region. The unemployment rate as measured by the percentage of the labor force has maximum and minimum values of 20.5 and 1.2. The mean score of 8.171 shows a slight increase of 1.672 compared with the 6.5 unemployment rate in 2017, reported by Trading Economics (n.d).

Although Trading Economics (n.d) showed stability in the unemployment rate in the CEMAC region, the high standard deviation value of 6.586 depicts an inconsistency of the distribution of the rating from the mean score of 8.171. The after-tax return on assets measures the financial ratio in the CEMAC’s banks. The descriptive results indicate this variable's rates range from -24.1 to 38.4, with an average of 1.704, exhibiting a weak performance of the after-tax income earnings by banks from its assets. Similarly, the robustness check variable of the after-tax return on equity has a minimum and maximum value of -6.9 and 118.2, respectively. The average ratio of 22.842 conveys a weak financial performance. The ROA and ROE indicate a low average banking performance in the CEMAC region.

In addition to the numerical descriptive statistics such as the mean, standard deviation, and the maximum and minimum value, which appear to be essential to describe the nature of the variables, the graphical representation is vital for the visualization of the variables' variation.
Figure 2

Box plot of ROA

The box plot better represents the visual view of the distribution of the ROA. Figure 2 shows a box plot of ROA, which measures the net income ratio to the total assets across banks in the CEMAC region. It includes the financial performance of banks in the CEMAC region. The boxplot in figure 1 indicates a series of potential outliers and limited variation in the ROA. As depicted in Figure 1, the six box plots illustrate the ROA of the six countries in the CEMAC region. The country codes are 1, 2, 3, 4, 5, and 6, which denote CF, CM, RC, GA, GQ, and TD, respectively. There is a limited variation of ROA within the CF, CM, GA, and TD. The banks in these countries appear to hold the same ROA. Seven potential outliers scored above the maximum or above 75 percentile of the variable, and five potential outliers fell below 25 percentiles. The data clusters around the median indicate less variation on the ROA. The box plot of
GQ suggests the country had a high level of banking performance. The RC has a lower banking performance, which skews to the left, with one potential outlier. Generally, inconsistent distribution of ROA in the entire CEMAC region indicates heterogeneity of financial performance in the banking industries. However, the several outliers above maximum and minimum values reveal irregularity of banking performance in the CEMAC region.

**Figure 3**

*Histogram of ROA*

---

Figure 3: shows the histogram results of ROA, which measures the financial performance of banks in the CEMAC region. A high ratio of ROA and ROE indicates high profit in the banking industry. The graphs of ROA and ROE show a uniformity of banking performance in the CEMAC region. The majority of the data concentrates around the mean, illustrating an average level of financial performance. Although the
distribution of ROA appears to be normally distributed, few outliers may greatly influence the outcome of the distribution. As displayed in Appendix B, the ROA moderately distributes, indicating weak financial performance resulting from weak CG and France's involvement in regulating banking policies within the CEMAC region.

**Figure 4**

*Box plot of CG in the CEMAC region*

![Box plot of CG in the CEMAC region](image)

Figure 4 illustrates the CG box plot proxy as governance effectiveness. CG measures the perceptions of the quality of public services, the quality of the civil services, the degree of independence of political pressures, the quality of policy formulation and implementation, and the credibility of its commitment to such policies. This regulatory framework of CG defines the inflow of capital into the CEMAC region because effective CG boosts investor confidence, which encourages the inflow of
capital in the region. The governance effectiveness captures the CG climate in the CEMAC region. It depicts the regulatory framework that protects shareholders’ rights and investments in the CEMAC region. The minimum and maximum values of CG in the CEMAC region should approximately be -2.5 and 2.5, respectively. As displayed in Figure 4, CM, GA, and The RC achieved minimal progress of CG practices. There is a variation of CG as a proxy by governance effectiveness within the CEMAC region, and potential outliers appear in GA and TD. The box plots show varying skewness levels in each country. The data skews to the left in some countries, whereas they skew to the right in others. In countries such as the CF, GQ, and TD, CG’s score is low, indicating a weak CG performance in that area. Weak CG in a business environment encourages opportunity for embezzlement and discourages shareholders from investing in the location. Although the box plot reveals slid improvement in CG as depicted by the skewness to the right, the CG performance remains weak.
Figure 5 displays the histogram of CG, which measures governance effectiveness. The histogram illustrates an accurate representation of the distribution of numerical data. This diagram shows the distribution of CG performance from -2.5 to 2.5 as weak and strong, respectively. The chart reveals that CG skews to the right. This visual representation of the CG mechanism as a proxy by governance effectiveness is not normally distributed.
Figure 6

Box plot of CSR Index in the CEMAC region

Figure 6 represents a box plot showing the percentile distribution of CSR index as measures by calculating the average value of the z-score of the labor force, population density, and renewable energy consumption. The average CSR Index is -0.008, which indicates the desired level of CSR performance in the CEMAC region. Hence, countries with weak CSR practices such as RC, GA, and GQ, while countries with high CSR practices are CF, CM, and TD.
Figure 7

*Histogram of CSR Index*

Figure 7 illustrates a visual representation of an average distribution of CSR scores in the CEMAC region. The average CSR scores indicate normal distribution with a peak score of 32 percent. This normal distribution of average CSR scores indicates a consistent performance within the CEMAC region. Therefore, labor force participation rate, population density, and renewable energy used as a proxy for CSR reflect normally distribution in the CEMAC region. The histogram shows that the CSR index concentrates more at the center of the distribution.
Figure 8 shows the box plot of the dependent variable, the ROE, which I used to check for robustness in the model. The diagram illustrates the CEMAC countries’ banking sectors appear to hold an equal level of liquidity in their respective banks. However, the banks in GQ and the RC seem more liquid than those in the other CEMAC countries. Potential outliers appear in CM, the RC, and GQ and above the 75 percentiles. Also, there is a varying level of skewness among the different countries in the region. Generally, the ROE skews to the right, indicating the mean is greater than the median.
Figure 9

*Histogram of ROE*

Figure 9 demonstrates a visual representation of the profitability ratio of the ROE for banks in the CEMAC region. The histogram shows the ROE skewing to the right, indicating the mean is greater than the median. This also suggests that few countries have relatively large ROE scores. These results support the statement by the IMF (2018) concerning how some countries achieved financial progress while others continue experiencing fragile financial growth.
Figure 10

Box Plot of Unemployment in the CEMAC region

Figure 10 represents box plots displaying the variation of unemployment in each country in the CEMAC region. There is a high level of unemployment in the RC and GA. The distribution of unemployment in some countries skews to the right, while in others to the left. For example, the unemployment rate is relatively at the same level in CF, CM, GQ, and TD. Two potential outliers of the unemployment rate in CM may influence the results. Generally, the irregularity of the unemployment rate in the CEMAC region indicates a non-normal distribution.
Figure 11

*Histogram of Unemployment*

Figure 11 represents a histogram of the percentage of unemployed people in the CEMAC region. The diagram shows the distribution of unemployment in the entire CEMAC region skewed to the right. The skewness to the right indicates the mean value is greater than the median. Therefore, a few relatively large unemployment scores in the CEMAC region can influence the average unemployment value. The skewness to the right signifies the mode is greater than the median and the mean. The diagram reveals non-normal distribution.
Figure 12 displays box plots of FDI in each country in the CEMAC region. The different box plot reveals a variation of FDI inflow in the CEMAC region. FDI concentrates in some countries more than in others. For example, the box plots show the RC has the highest FDI inflow in the CEMAC region. I observed potential outliers in the RC, GA, GQ, and TD. Generally, the inflow of FDI in the CEMAC region shows the distribution as not normally distributed.
Figure 13

*Histogram of FDI*

Figure 13 illustrates the representation of the histogram for FDI in the CEMAC region. The histogram shows the percentage distribution of FDI in the entire CEMAC region. As depicted in the diagram, FDI skewed to the right indicates a few relatively large FDI scores can influence the mean value of FDI. The graph displays FDI as not normally distributed in the CEMAC region.
Figure 14 represents the box plots of IF in each country in the CEMAC region. The box plots of IF show a stable inflation rate in the region. There is a consistent inflation rate in the CEMAC region. Potential outliers of IF occur in the CF, CM, GQ, and TD. Also, the box plots show IF as not normally distributed.
Figure 15 shows the histogram of IF as a percentage of GDP in the CEMAC region. The histogram shows a normal distribution of IF in the region. The stable inflation rate reveals this region has a fixed exchange rate of 50 CFA to 1 French Franc. The highest average inflation rate lies in the center of the distribution. The diagram shows IF as fixed in the region.
Table 2

Shapiro-Wilk W test for Normality

<table>
<thead>
<tr>
<th>Variable</th>
<th>Sh-Wilk Statistic</th>
<th>Median</th>
<th>Z-score</th>
<th>Prob&gt;z</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSRINDEX</td>
<td>0.917</td>
<td>6.587</td>
<td>4.172</td>
<td>0.000</td>
</tr>
<tr>
<td>CG</td>
<td>0.944</td>
<td>4.465</td>
<td>3.312</td>
<td>0.000</td>
</tr>
<tr>
<td>FDI</td>
<td>0.685</td>
<td>25.106</td>
<td>7.134</td>
<td>0.000</td>
</tr>
<tr>
<td>IF</td>
<td>0.906</td>
<td>7.539</td>
<td>4.471</td>
<td>0.000</td>
</tr>
<tr>
<td>unemployment</td>
<td>0.814</td>
<td>14.839</td>
<td>5.970</td>
<td>0.000</td>
</tr>
<tr>
<td>ROA</td>
<td>0.568</td>
<td>34.481</td>
<td>7.836</td>
<td>0.000</td>
</tr>
<tr>
<td>ROE</td>
<td>0.740</td>
<td>20.758</td>
<td>6.713</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Table 2 illustrates the Shapiro-Wilk W test for normality. As described above, the same dependent and independent variables are defined below. W is the Shapiro-Wilk statistics. V is the median value; it indicates the departure from normality. The V value close to one shows the sample is drawn from a normal population, whereas a large value indicates not normal distribution. The Z score is the normality values. ROA is the return on assets. ROE is the return on equity. FDI is the net inflow of foreign direct investment. IF is GDP Deflator (annual %). CSRINDEX is the measure of corporate social responsibility. Unemployment is the unemployment rate. The total number of observations is 96. CG is the governance effectiveness in the CEMAC region.

Table 2 displays the results of the Shapiro-Wilk test, which is a test of normality for each variable in the specified pooled OLS model. Typically, small sample size graphical methods do not convey an exact distribution (Ghasemi & Zahediasl, 2012). Some distribution may appear incorrectly normally distributed. For example, the visual
representation of the histogram distribution portrays normal distribution for the ROA, CG, and CSR; however, further tests may guide the interpretation of the distribution. The Shapiro-Wilk test of normality indicates all the variables as not normally distributed. The null hypothesis of the Shapiro-Wilk test is the sample drawn from a normally distributed population. Therefore, if the probability value is less than 0.05, the null hypothesis is rejected while the alternative assumption is accepted. The results display in Table 2 indicate the variables as not normally distributed. However, I did not accept these results because the Shapiro-Wilk test did not have the power to determine the normality of cross-sectional data (Ghasemi & Zahediasl, 2012).

Table 3

<table>
<thead>
<tr>
<th>Variables</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
<th>(7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSRINDEX</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(2) CG</td>
<td>0.454***</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(3) FDI</td>
<td>-</td>
<td>0.274***</td>
<td>0.030</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(4) IF</td>
<td>-0.195*</td>
<td>-0.108</td>
<td>0.010</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(5) unemployment</td>
<td>-</td>
<td>0.304***</td>
<td>0.496***</td>
<td>0.206**</td>
<td>0.052</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>(6) ROA</td>
<td>-0.198*</td>
<td>-0.078</td>
<td>-0.167*</td>
<td>-</td>
<td>0.101</td>
<td>0.254**</td>
<td>1.000</td>
</tr>
<tr>
<td>(7) ROE</td>
<td>-</td>
<td>0.270***</td>
<td>-0.002</td>
<td>0.400***</td>
<td>0.041</td>
<td>0.037</td>
<td>0.477***</td>
</tr>
</tbody>
</table>

Table 3 illustrates the results of the Pearson correlation coefficient between all the variables used in the regression model. In this study, I investigated the efficiency of CEMAC countries' regulatory authority's implementation of good CSR and CG policies that strengthen banking performance. However, the Pearson correlation test is just a preliminary test when dealing with panel data analysis. The Pearson correlation analysis ignores the heterogeneity across the six countries in the CEMAC region. Nevertheless, the purpose of the study was to investigate how CG and CSR affect banking performance in the CEMAC region. Even though the Pearson correlation ignores the
heterogeneity among the different countries in the CEMAC region, it is vital because the coefficient helps detect whether a linear relationship exists. Additionally, the individual character of the different countries may appear similar, resulting in deeming the Pearson correlation reliable.

The results show the strength of the correlation between the model’s independent variables as slightly weak; thus, producing a small effect on the overall model. However, there a significantly negative relationship existed between ROA and CRS index. As shown in Table 3, the Pearson correlation coefficient on ROA and CSR index is -0.198, which is statistically significant at the 0.1 level. The sensitivity analysis on the ROE and CSR index shows a statistically significant negative relationship between CSR and banking performance in the CEMAC region. Conversely, these results do not determine the nature of the relationship between CSR and banking performance because they ignored the individual characteristics of the banking industry in the CEMAC region. Therefore, the fixed effect and random estimates best justify the nature of the relationship. Similarly, although CG seems to have a native relationship between ROA as shown by the Pearson correlation coefficient of -0.078, these values do not conclude the relationship, until confirming the estimates of fixed and random effect model.

These results of this study compared to Gugong et al. (2014), who documented managerial shareholder’s moderate correlation with institutional shareholders in Nigeria. Nevertheless, to effectively predict how CG and CSR affect banking performance in the CEMAC region, I deployed the pooled OLS, fixed effect, and random effect regression techniques. Although Ibe and Ugwuanyi (2017) explained the pooled OLS estimators neglect the individual characteristics, it is usually the first
estimated model in the panel data analysis. Table 4 shows the results of the pooled OLS regression.

**Table 4**

_Pooled OLS, OLS Robust Standard Error, Fixed Effect, and Random Effect_

<table>
<thead>
<tr>
<th>Dependent</th>
<th>ROA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(Pooled OLS)</td>
</tr>
<tr>
<td>CSRINDEX</td>
<td>-0.640*** (-6.46)</td>
</tr>
<tr>
<td>CG</td>
<td>15.11*** (4.95)</td>
</tr>
<tr>
<td>FDI</td>
<td>-0.203** (-2.92)</td>
</tr>
<tr>
<td>IF</td>
<td>-0.0947 (-1.75)</td>
</tr>
<tr>
<td>unemployment</td>
<td>-0.895*** (-6.46)</td>
</tr>
<tr>
<td>constant</td>
<td>29.04*** (6.08)</td>
</tr>
</tbody>
</table>

---

<table>
<thead>
<tr>
<th></th>
<th>96</th>
<th>96</th>
<th>96</th>
<th>96</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adj. R²</td>
<td>0.342</td>
<td>0.342</td>
<td>0.363</td>
<td>0.363</td>
</tr>
<tr>
<td>F</td>
<td>10.86</td>
<td>4.722</td>
<td>12.82</td>
<td>None</td>
</tr>
</tbody>
</table>

---

p-values in parentheses
* p<0.05, ** p<0.01, *** p<0.001
Hausman Test Chi Sq Statistic 40.21 Prob0.0000

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity Ho: Constant variance

Variables: fitted values of return on assets chi² is 29.55 Prob > chi² = 0.0000

Pesaran’s test of cross-sectional independence = 0.889, Prob = 0.3740.

Table 4 illustrates the pooled OLS results, robust standard error, fixed effect, and random effect models. ROA represents the return on assets and ROE the return on equity. FDI is the net inflow of foreign direct investment. Inflation is GDP Deflator.
(annual %). CSRINDEX is the measure of corporate social responsibility.

Unemployment is the unemployment rate as a financial ratio of after-tax income that measures the financial performance of the total assets in banks within the CEMAC region. ***, **, and * indicate the significance levels at 0.01, 0.05, and 0.1 respectively. N is the number of observations. The F statistic confirms the joint significance of all the independent variables. The Hausman test beneath the table determines if the fixed effect or the random effect model is appropriate. The t-stat is in parenthesis in the table. CG is the governance effectiveness in the CEMAC region.

Table 4 displays the statistical estimation of the pooled OLS model, fixed effect, random effect, and the robust standard error. I conducted the heteroskedasticity test because the Breusch Pegan test results indicated a heteroskedasticity problem. An essential need exists to perform this test because of the violation of the classical assumption of constant error term. The null hypothesis of the Breusch Pegan test of heteroskedasticity is the constant variance of the cross-sectional residuals while the alternative assumption demonstrated no residual constant variances across the different entities. The chi-square value of 29.55, with a probability value of 0.000, less than the 5% level, indicates the rejection of the null hypothesis of homoskedasticity while accepting the alternative of heteroscedasticity.

The pooled OLS regression assumes the six CEMAC countries are the same whereas the box plots and histograms show the opposite. Table 4 shows the estimated coefficient and their respective significant level of the pooled OLS model and the robust standard error estimates. The estimate indicates a statistically significant relationship between CG and banking performance in the CEMAC region. It also reveals a p-value of 0.01 therefore, per unit change in governance effectiveness score
would significantly result in a 15.15 improvement in banking performance (ROA).

Based on the pooled OLS results, there is a significant negative relationship between CSR and banking performance. I noted the consistency between these results and the Pearson correlation analysis.

The coefficient of determination indicates the model’s independent variables reflected a 34% improvement in the banking performance in the CEMAC region. The pooled OLS, fixed effect, and random effect models indicate a negative relationship between IF and ROA. The results show hedging ROA against IF because IF inversely relates to ROA. However, I did not accept these results of the pooled OLS because they neglect the specific-country characteristics. The pooled OLS technique pooled the data and ignores the heterogeneity, or the individuality illustrated on the various box plot in the CEMAC countries. Additionally, Lambert (2014) explained how the estimated coefficient of the fixed-effect model could differ from those in the pooled OLS because the pooled OLS assumes a unique characteristic within the CEMAC region. The results of this study align with the results of Ibe and Ugwuanyi’s (2017) research when they investigated the effect of CG mechanisms on the financial performance of insurance companies in Nigeria. Based on these facts, I rejected the results of the pooled OLS model. However, the panel data approach requires the regression of the fixed effect and random effect models. As Lambert (2014) revealed, the fixed effects model allows for the heterogeneity or individuality involved in the CEMAC countries. Table 4 shows the results of the fixed effects and random-effects models. The results presented on a single table clearly show the estimated coefficient and significant levels.

I conducted the Pesaran CD test checks for serial correlation among the
variables in the panel data. The cross-sectional dependence shows the interdependence existing among the CEMAC countries. The Pesaran test was performed on the fixed-effect model because the Hausman test indicates the fixed-effect models as better than the random effect model. The null hypothesis of the Pesaran test queries the absence of serial correlation among the CEMAC countries. The alternative hypothesis stated a serial correlation among CEMAC countries existed. The presence of serial correlation indicates the influence of present values on future values. This time series phenomenon does not affect the unbiased estimators but affects the efficiency of the estimators. The Pesaran's test of cross-section displayed beneath Table 4 had a score of 0.889, and Prob of 0.3740. It indicates no autocorrelation among the variables. Consistency exists between the results and the descriptive statistics of the box plots illustrated in Appendix B. Both the box plots and the Pesaran test results reveal the characteristic of heterogeneity or individuality in the CEMAC countries.

The fixed effect and random effect statistical results in Table 4 show how CG and CSR affect banking performance in the CEMAC region. The value of the coefficient of determination ($R^2$) 0.430; indicates the independent variables have a 43% influence on the models' variation of the banking performance (ROA). Unlike the pooled OLS regression, which does not distinguish the individual characteristics within the CEMAC countries, the fixed-effect model considers the countries' heterogeneity. However, I performed the Hausman test to assist in deciding whether to select the fixed effect model or the random effect model.

I investigated if there is a significantly positive relationship between CG and banking performance on the one hand and on the other hand, a significantly positive relationship between CSR index on the banking performance in the CEMAC region.
Employing country-level sustainability performance factors, governance effectiveness, and control variables, I used the Hausman test to determine the fitness of the models. The results displayed in this section supported the testing of the following hypotheses.

**H1**: There is no significantly positive relationship between CG and Banking performance (ROA) in the CEMAC region.

**H2**: There is no significantly positive relationship between CSR Index and banking performance (ROA) in the CEMAC region.

The statistical results presented in Table 4 highlighted the fixed-effect model’s of significantly positive relationship between CSR index and banking performance. The random effect model indicates a significantly negative relationship. Additionally, the fixed effect shows an insignificantly positive relationship between CG and banking performance (ROA). These therefore lead the researcher to conclude that the null hypothesis is rejected while the alternative hypothesis is accepted.

Until the Hausman test statistic confirms the best model along with the reliability of the results of the estimations. The Hausman results presented with a Chi-square of 40.21 and the probability of the Chi-square less than 5%, revealing the fixed effect models as superior to pooled OLS, and random effect models. The fixed effect model's outcome demonstrated greater reliability and dependability than the pooled OLS and random models. Therefore, based on the fixed-effect model results, CG, as a proxy by governance effectiveness, displayed an insignificant positive relationship with banking performance. This indicates the low quality of external governance practices in the CEMAC region. The findings support the view of existing literature, concerning the quality of external governance as superior in developed countries than developing countries (Faruqi et al., 2019).
Despite the extensive and inconclusive research on the investigation of the relationship between CSR and financial performance, I was unable to find research incorporating the z-score in scaling ESG factors. In conducting this study, I used three key elements, labor force participation rate, population density, and renewable energy consumption. These factors cover the social and environmental domains in the ESG data framework. Nevertheless, the findings indicate a significantly positive relationship between banking performance and the CSR index. The results provide useful insight for the board of directors in the CEMAC region to integrate CSR practices in their strategic tool kits. Siueia et al. (2019) reported similar findings, adding the discovery of a significant positive relationship between CSR and financial performance in Sub-Saharan Africa. Although researchers revealed positive, negative, and even neutral influences of CSR and financial performance, this study's results support the perception that banks should continue to integrate CSR practices in their strategic planning. The findings indicate a non-significant native relationship with banking performance and FDI. However, the results contradict the theoretical evidence that FDI generally improves economic growth in the developing economy. Herzer (2010) identified the effect of FDI on economic growth in developing countries, noting the dependency on factors such as per capita income, human capital, degree of trade openness, and the level of financial market development.

I focused on examining the inflow of FDI on banking performance in the CEMAC region. My analysis resulted in concluding the degree of trade openness and financial market development produced a non-significant negative effect on banking performance. As a result, the board of directors in the CEMAC region should review their business philosophy increasing the emphasis on improving the legal and judicial
systems. Moreover, the BCAS’s board of directors should consider adding an effective monitoring agent capable of supervising banking activities.

Macroeconomic variables such as inflation and unemployment represent important economic factors that influence economic performance in a region. The findings revealed an insignificant relationship between inflation and banking performance. Although insignificant, the results support the theoretical evidence indicating an increase in the prices of goods and services would undermine the value of money in the economy. Hence, the results may help the monetary authorities in the CEMAC region.

Similarly, the findings indicated a significantly negative relationship at a 1% probability level between unemployment and banking performance. The results underscore the increasing importance of employment in the CEMAC countries because the unemployment rate may lead to a percentage point rise in the amount of defaulted loans within the region.

Robustness Check

To check for the model's robustness, I used ROE as the dependent variable on the various independent variables, including the CG index. I aimed to empirically examine the relationship between CG and CSR index on the banking performance in the CEMAC region. I used governance effectiveness as a proxy for CG because it provided the legal, regulatory, and institutional framework in which banks and other corporations operate in the CEMAC region. The governance effectiveness defines the business environment corporations operate within.

Maqbool and Zameer (2018) used both ROA and ROE as a measurement of economic performance to justify CSR's effect. Also, Ibe and Ugwuany (2017) deployed
ROA and ROE when investigating the effect of CG on the financial performance of insurance companies in Nigeria. Based on these empirical studies, my research tests the robustness of the results using ROE. Similarly, the products of the inferential statistics justify the following hypotheses:

H1: There is no significantly positive relationship between CSRINDEX and banking performance (ROE) in the CEMAC region.

H2: There is no significantly positive relationship between CG and banking performance (ROE) in the CEMAC region.

Table 5

Results of Multicollinearity

<table>
<thead>
<tr>
<th>Variable</th>
<th>VIF</th>
<th>1/VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>CG</td>
<td>2.88</td>
<td>0.346650</td>
</tr>
<tr>
<td>CSRINDEX</td>
<td>2.54</td>
<td>0.393094</td>
</tr>
<tr>
<td>Unemployment</td>
<td>2.48</td>
<td>0.402418</td>
</tr>
<tr>
<td>FDI</td>
<td>1.12</td>
<td>0.893178</td>
</tr>
<tr>
<td>Inflation</td>
<td>1.04</td>
<td>0.959407</td>
</tr>
</tbody>
</table>

Mean VIF | 2.02

A second model specification was introduced to examine the relationship between CG and banking performance in the CEMAC region. The model also looks at the relationship between CSRINDEX and banking performance in the CEMAC region. A second model specification is introduced. ROA is regressed on the various independent variables. The specification of the second model allows for a robustness
check in the first model specification. CG is the governance effectiveness in the CEMAC region.

Table 5 displays the results of multicollinearity among the different independent variables in the model. The variance inflated factor (VIF) indicates the associated degree among the various independent variables. \(1/VIF\) is reciprocal. Though the Pairwise correlation Metrix reveals a weak degree of association between the independent variables, I conducted the VIF. These VIF, however, shows the inflation of the standard errors of the estimated coefficient. It occurs when the independent variables are correlated to each other in the model. The rule of thumb is the variance, which is the standard error's square root, should be small. Hence, for this to be possible, the VIF values must be less than 4. Based on the VIF values represented in table 5, there is no multicollinearity between the model's independent variables. I introduced a second model specification to examine the relationship between CG and banking performance in the CEMAC region. Using the model, I reviewed the relationship between CSRINDEX and banking performance in the CEMAC region incorporating a second model specification. The various independent variables regressed the ROA. The specification of the second model allows for a robustness check in the first model specification. CG reflects the governance effectiveness in the CEMAC region.

Table 5 displays the pooled OLS's statistical estimations, fixed effect, and random effect models using banking performance measurement as ROA. The pooled regression results in Table 5 indicate CG, as a proxy by governance effectiveness, had a significantly positive relationship with the banking performance as measured by ROE. The CSR index, as measured by the regional level sustainability performance with the use of ESG scores of factors such as population density, labor force, and renewable
energy consumption, has a significantly negative relationship with ROE. Also, the pooled regression estimates show control variables such as unemployment and FDI, significantly influence ROE. However, I did not accept the pooled regression results because the results assume homogeneity among member countries, which seems not the case as shown by the variations of each variable in the CEMAC region.

I conducted the Hausman test results to determine if the fixed effect results represented as more dependable than those of the random effect model. The Hausman specification test showed a p-value of 0.0002, which is less than the probability of 0.05; therefore, I concluded the fixed effect results as superior to the random effect model. Hence, the results of the fixed effect model were more reliable. The fixed effect regression results show CG, as measured by the regional governance effectiveness, had a positive but insignificant influence on the banking performance (ROE). These results are comparable to those obtained when using the ROA. They indicated the CEMAC regional authorities or policymakers inadequate in improving CG practices that could encourage the inflow of capital to the region. CSR index had a significantly positive relationship with the ROE. The model shows a positive relationship between IF and ROE in the pooled OLS, fixed effect, and random effect models. The results support theoretical evidence regarding shareholders’ expectation of a high return on owner’s equity when the IF rate increased.

In section two of this study, I reiterate the purpose statement, research hypothesis, and provide a detailed description of the research method and design. This section includes how my perception and other biases did not influence data collection elements, data organization, and data analysis. In this study, individual research participants' involvement was not applicable because I used a secondary panel dataset
obtained from public sources such as the World Bank and Worldwide Governance databases. In conducting this quantitative correlational and non-experimental research design I addressed the research question and the purpose of the study. I used the multiple linear regression models to analyze the collected data. In these models, I employed a mixture of different variables to test for the model's robustness. In concluding this section, I describe the reliability, validity, and generalizability of the study.

In Section 3 of this study, I present the study's findings, influences on professional practice, implications for social change, and the recommendation for additional research. In addition to the results displayed in Table 4 and Table 5, Table 6 illustrates the robustness check with ROE.

Table 6

*Pooled OLS, OLS robust standard error, fixed effect, and random effect*

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>ROE</th>
<th>(Pooled OLS)</th>
<th>(OLS robust std error)</th>
<th>(Fixed effect)</th>
<th>(Random effect)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSRINDEX</td>
<td>-1.060***</td>
<td>-1.060*</td>
<td>6.342***</td>
<td>-1.060**</td>
<td>(-3.06)</td>
</tr>
<tr>
<td>CG</td>
<td>25.03*</td>
<td>25.03*</td>
<td>18.60</td>
<td>25.03*</td>
<td>(2.34)</td>
</tr>
<tr>
<td>FDI</td>
<td>0.848***</td>
<td>0.848</td>
<td>0.478</td>
<td>0.848***</td>
<td>(3.48)</td>
</tr>
<tr>
<td>IF</td>
<td>0.0157</td>
<td>0.0157</td>
<td>0.184</td>
<td>0.0157</td>
<td>(0.08)</td>
</tr>
<tr>
<td>Unemployment</td>
<td>-1.244*</td>
<td>-1.244*</td>
<td>-1.908</td>
<td>-1.244*</td>
<td>(-2.42)</td>
</tr>
<tr>
<td></td>
<td>_cons</td>
<td>_cons</td>
<td>_cons</td>
<td>_cons</td>
<td></td>
</tr>
<tr>
<td>------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
<td></td>
</tr>
<tr>
<td></td>
<td>58.27***</td>
<td>58.27***</td>
<td>57.43**</td>
<td>58.27***</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(3.49)</td>
<td>(2.81)</td>
<td>(2.71)</td>
<td>(3.49)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>N</th>
<th>N</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>96</td>
<td>96</td>
<td>96</td>
<td>96</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Adj. R²</th>
<th>Adj. R²</th>
<th>Adj. R²</th>
<th>Adj. R²</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.200</td>
<td>0.200</td>
<td>0.207</td>
<td>None</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>F</th>
<th>F</th>
<th>F</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5.764</td>
<td>3.560</td>
<td>6.953</td>
<td>None</td>
</tr>
</tbody>
</table>

P-values in parentheses
* p<0.05, ** p<0.01, *** p<0.001

Hausman test chi² 12.3 Prob>chi² = 0.0304

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
Ho: Constant variance
Variables: fitted values of return on equity

\[ \chi^2(1) = 44.02 \text{ Prob } \chi^2 = 0.0000 \]

Pesaran's test of cross-sectional independence = -0.917, Pr = 0.3593

Table 6 illustrates the results of the Pairwise correlation for both the dependent and the independent variables. ROA is the return on assets. ROE is the return on equity. FDI is the net inflow of foreign direct investment. IF is Inflation as GDP Deflator (annual %). CSRINDEX is the measure of corporate social responsibility. Unemployment is the unemployment rate. ***, **, and * indicate the significance levels at 0.01, 0.05, and 0.1 respectively. N is the number of observations. The F statistic confirms the joint significance of all the independent variables. Adj R-s is the coefficient of determination. The Hausman test beneath the table determines if the fixed effect or the random effect model is appropriate. The t-stat is in parenthesis in the table. CG is the governance effectiveness in the CEMAC region.

**Applications to Professional Practice**

I examined how CG and CSR affect banking performance in the CEMAC region. Utilizing the panel data analysis, I investigated CG and CSR's effect on banking performance in the CEMAC region. Deploying the z-score on ESG factors such as labor force participation rate, population density, and renewable energy as a proxy for CSR index the results revealed the fixed effect model as the best among the pooled OLS and random effect models. As indicated in the statistical test, I found a
significantly positive relationship between CSR and banking performance. While CG insignificantly influenced banking performance. The results presented in this study demonstrated consistency with the findings from existing literature on CSR, CG on financial performance proxied by ROA or ROE. I can use the outcomes of this study to shed light on issues related to CG and CSR to the board of directors in the CEMAC region.

Based on the findings I suggest boards of directors in the CEMAC region strengthen certain practices such as promoting the corporation’s values, transparency, and accountability along with monitoring the effective functioning of business operations. Wang and Lee (2014) recommended using an external board committee for the evaluation of CG and CSR practices.

**Recommendations for Action**

Using the results of this study, I share the views of ongoing research indicating the need for the incorporation of CG and CSR in determining banking performance, which in turn contributes to improving the economic growth in developing countries. This research has some limitations. First, there was a small sample size deployed, which may have influenced how CG and CSR affected banking performance along with the likelihood of skewed distributions. This might also reduce the reliability of the results. I recommend future researchers expand the sample size, scope, and include West African Economic and Monetary Union countries. The enlargement of the scope and sample size will help to mitigate the variations and skewness of the distribution and overall results.

Second, the recommendation to increase the indicators of CG from the Worldwide Governance database reflects a good proxy of CG because increasing the
CG indicators will assist in uncovering broad attributes of CG mechanisms in the CEMAC region. Also, limiting the margin of errors involved in extrapolation and interpolation necessitates extracting complete raw data.

Third, available literature on CG and CSR only focuses on the internal component of CG on banking performance limited to the CEMAC region. I was unable to find studies examining CG and CSR's performance on banking performance within the CEMAC region. This study adds to the body of knowledge of existing literature on CG and CSR on banking performance in Sub-Saharan Africa. Hence, I recommend conducting extensive research in CG and CSR in the CEMAC region.

**Recommendations for Further Study**

The recommendation for future research is strongly related to the sample size, CG and CSR measurements, and the scope of the research. First, prospective researchers should increase the sample size to provide for a more robust population and reliable results. A large sample size produces a more accurate generalization of the research outcomes related to the population size under investigation. Secondly, as the purpose of the quantitative research was to investigate how CG and CSR affected banking performance in the CEMAC region, future research can increase the effect of CSR and CSR on banking performance by expanding the governance and ESG factor when proxying CG and CSR.

Thirdly, it is essential to enlarge the research scope through the integration of the entire Sub-Saharan African countries. Future researchers should also perform heteroscedasticity tests and serial correlation tests after conducting the fixed effect and random effect models. The heteroscedasticity and serial correlation tests determine the
effect of changes in the standard deviation errors and the error term of the succeeding period, making them incredibly relevant.

**Reflections**

The sample size began in 2003 and extended to 2018 which could influence the skewness of the various distributions. I found the variables in the models not normally distributed. The estimated parameters of the regression models along with the cross-sectional heteroscedasticity of the series could bias the estimated parameters’ efficiency because of the nature of the panel data and small sample size. I recommend future researchers expand their sample size.

**Summary and Study Conclusions**

I examined if there is a significantly positive relationship between CG and banking performance and if there is a significantly positive relationship between CSR and banking performance in the CEMAC region. The study rejected the null hypothesis of no significantly relationship between CG and banking performance as well as a significantly positive relationship between CSR and banking performance, and it accepted the alternative hypothesis of a significantly positive relationship between both variables and banking performance. I extracted data from the Worldwide Governance and the World Bank sovereign databases from 2003 to 2018 and performed the statistical analysis within a strongly balanced panel data framework. Based on the findings and the synthesis of empirical evidence, I concluded the fixed-effect model’s results superior to the pooled OLS, random effect, and correlation analysis. The results indicated a significant positive effect of CSR on banking performance while CG demonstrated a positively insignificant relationship with banking performance. The results of this research can emphasize the importance of strengthening the CG policy
within the CEMAC region. Therefore, I suggest revising the code of CG in the CEMAC region for effective implementation and execution of CG practices in the region. Such improvement may strengthen financial performance and economic growth within the CEMAC region.

Similarly, the IMF asserted the CEMAC region must strengthen its code of good governance and transparency in public resources management. The IMF identified fundamental principles to ensure reasonable control and effective civil society participation in fiscal policy and budget formulation and execution. Moreover, the narrow level of trade openness and low financial market development influenced the non-significant negative relationship between FDI and banking performance. The improvement of CG policies may play a crucial role in attracting and improving FDI for a strong capital market, restoring investors’ confidence in the CEMAC region. They could improve banking performance, thereby achieving shareholder goals of wealth maximization. The agency theory undergirded the need to address weak CG practices, which serve as an incentive for managers to protect their interests rather than the value of their owners. However, the results I reveal can help the CEMAC board of directors pursue suitable CG structures and avoid weak CG structures to increase banking performance and economic growth within the region.

On the other hand, using the results, researchers can develop sustainable and improved CSR policies to strengthen banking performance and economic growth in the CEMAC region. Nevertheless, although this research is beneficial to the board of directors and managers in the banking sectors, I encourage future investigators to include larger sample sizes.
References

Adeleke, J. C. (2014). *Corporate social responsibility in the Nigerian Banking sectors*  
*Doctoral* dissertation, Warden University.  
https://pdfs.semanticscholar.org/700e/31afb79411a95a543e28df62039d38985ce.pdf

Afolabi, A. A., Sy, A. (2017). Corporate governance practices as a reflection of the institutions, economics, and political environment in Sub-Saharan Africa Anglophone countries. *International Journal of Critical Accounting, 8*(6),  
https://doi.org/10.1504/IJCA.2016.081613


https://doi.org/10.1016/j.jclepro.2019.04.208

https://core.ac.uk/download/pdf/234624585.pdf


https://doi.org/10.1007/978-3-658-16205-4_66


1146. https://doi.org/10.1007/s10551-018-3866-6


https://doi.org/10.1111/j.1467-9396.2012.01029.x


and Economic Development, 5(1).

https://www.researchgate.net/publication/321964143


https://doi.org/10.1504/AJAAF.2012.048419


https://doi.org/10.1504/AJAAF.2012.048071


https://s3.amazonaws.com/academia.edu.documents/31024427/644-1974-1-
PB.pdf?


https://doi.org/10.1504/IJBGE.2017.086479


### Appendix A: Tables

#### Table 7

Definition of variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>Definitions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ROA</strong></td>
<td>It is a financial ratio defined as net income over total assets in the banking industry. It measures the financial performance of the total assets in banks within the CEMAC region (IMF, 2018).</td>
</tr>
<tr>
<td><strong>ROE</strong></td>
<td>It is a financial ratio defined as net income over average shareholders’ equity in the banking industry. It measures the efficiency of management of shareholders’ equity in the banking sector within the CEMAC region (IMF, 2018).</td>
</tr>
</tbody>
</table>
CG

It is the governance effectiveness, which reflects perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies. The estimate of governance ranges from approximately -2.5(weak) to 2.5(strong). It depicts the external components of CG via the legal environment and investors' protection within the region (Worldwide Governance Indicators, 2019).

<table>
<thead>
<tr>
<th>Inflation GDP deflation (annual %)</th>
<th>shows the overall rate of price change in the CEMAC region (IMF, 2019)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FDI</td>
<td>It is the net inflow of capital by either non-resident or foreign company to another location such as the CEMAC region. The unit of measurement of FDI is the percentage of GDP. It does not include capital raise in the domestic economy, its captures only cross-border investment into the CEMAC region (IMF, 2019).</td>
</tr>
<tr>
<td>Unemployment (% of total labor force)</td>
<td>It measures the share of the labor force that is without work.</td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>---------------------------------------------------------------</td>
</tr>
<tr>
<td>CSR</td>
<td>It is a broad concept that can be defined in different forms. According to this study, CSR is measured by applying the Z-score in the calculation of three components, which were obtained from the ESG framework. Renewable energy consumption, population density, and labor force participation rate were scale by the Z-score. The mean value indicates the average performance of the CSR index; however, values below the mean indicate low CSR performance while values above the mean signify high CSR performance (ESG data, 2019).</td>
</tr>
</tbody>
</table>
Appendix B: Data Sources and Analytical Codes

The variables such as FDI, unemployment, IF, a proxy for CSR, ROA, ROE, were retrieved from the following listed weblink. http://datatopics.worldbank.org/esg/framework.html.

While variables that were deployed as a proxy for CG were retrieved from https://info.worldbank.org/governance/wgi/

The following listed commands and were used for the estimation techniques. The output was exported to the word document files.

Xtset cemmacountries, years set cemmacountries years

panel variable: cemmacountries (strongly balanced)

time variable: years, 2003 to 2018

delta: 1 unit

ssc install. asdoc: The commands are used to install the programs

ssc install. estout

asdoc, (variables to be estimated), asdoc

eststo for store estimate

esttab, using Mnr.doc r2 ar2 p scalar (F d_r, d_m) title (pooled ols, fixed effect, and random effect)
Appendix C: List of Abbreviations

BCAS Bank of Central African States
CAMU Central African Monetary Union
CEMAC Central African Economic and Monetary Community
CF Central African Republic
CFA Central African France
CG Corporate governance
CM Cameroon
COBAC Commission of Bank of Central African States
CSR Corporate social responsibility
ESG Environmental, social, and Governance
FDI Foreign Direct Investment
GA Gabon
GDP Gross Domestic Production
GQ Equatorial Guinea
IF Inflation
IMF International Monetary Fund
MLSR Multiple Least Square Regression
OECD Organization of Economic Corporation and Development
OHADA Harmonization of Business Law in Africa
RC The Republic of Congo
RGDP Real Gross Domestic capita
ROA Return on Assets
**ROE** Return on Equity

**TD** Chad