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# Global Journal

## of Management and Business Research: C

## Finance



Relationship in Banking Sector

Influence of Financial Leverage

Highlights

Value Creation Risk Management

Bank Holding Company Governance

**Discovering Thoughts, Inventing Future**

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## Finance

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# Value Creation, Risk Management and US Bank Holding Company Governance

By William C. Handorf
*The George Washington University*

*Abstract-* The role and responsibilities of a corporate board of directors changed dramatically since the failure of Penn Central in the US in 1970 and the release of the Cadbury Report in Britain in 1992. We study the board structure of large, systemically important US bank holding companies after the crisis of 2007/09 to determine if the number and composition of directors or the number and mix of committees provide value for shareholders and enhance credit ratings. The US retains a rules-based system of corporate governance whereby publicly-traded banks must comply with laws and operate with both an audit and an enterprise risk committee. There are no formal rules applicable to the number of directors, diversity or leadership of the board or formation of other committees.

Holding company boards composed of more independent or female directors achieve better credit ratings consistent with adopting more conservative financial policies. Bank holding companies forming more committees, especially a finance/capital committee, retain a better credit rating and trade with a higher price/book valuation. Committee specialization enhances performance. An executive committee comprising a small subset of the board's leadership may create an atmosphere of "elitism." Yet, holding companies with such committees were priced with higher price/book valuations given the time and commitment of a small group chaired by the CEO to craft and implement a coherent business plan structured to increase return on equity and support future earnings growth.

*Keywords:* *corporate governance, board structure, banking, regulation.*

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# Value Creation, Risk Management and US Bank Holding Company Governance

William C. Handorf

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## I. Introduction

As concisely defined by the *Cadbury Report* in 1992, corporate governance is the system by which companies are directed and controlled.[1] Under current best practices, the board of directors establishes the direction of an enterprise by approving appropriate policies and business plans, and recruiting, compensating, and monitoring executive management and operations to ensure shareholders, among other competing stakeholders, are treated fairly and provided appropriate risk-adjusted returns on capital invested. The board of directors of a regulated bank or bank holding company conducts its business by committee. Some committees for US financial institutions, such as audit and enterprise risk, are required by the Securities and Exchange Commission and the institution's relevant primary regulator. All regulated institutions must comply with the rules. Other committees, such as finance, capital, credit, public relations or technology, are unique to each institution and have been created to respond to specific operating, financial, regulatory or reputational risk problems previously encountered by the organization.

As holding companies create new committees in response to growth, operational complexity or financial troubles, time demands on directors increase and encourage the board to add new directors. Regulators, consistent with what is believed to be accepted best corporate governance practices, encourage banks to add additional directors that are not only independent of management but also promote diversity to provide new perspectives to monitor management and operations, control risk, and create value. Diversity may be narrowly defined, such as by gender or race, or more broadly characterized by characteristics that promote a board that retains varied business, academic, military and governmental experience.

Corporate governance and board structure in the banking industry is a topic that attracted limited attention until the *Great Recession* of 2007/09. Rosenstein and Wyatt evaluated the ability of independent directors to add value to banking organizations in an early study dated 1990, which is before the release of the *Cadbury Report*.[2]

> *"Management plays a dominant role in selecting outside directors, inviting skepticism about outsiders' ability to make independent judgments on firm performance. Our examination of wealth effects surrounding outside director appointments finds significantly positive share-price reactions. We find no evidence that outside directors of any particular occupation are more or less valuable than others. Outside directors are chosen in the interest of shareholders."*

Corporate governance now commands scholarly interest. Researchers evaluate how and why the leadership and composition of a board impact executive compensation and retention, financial performance, failure and related topics. Investigations of corporate governance and board structure within the banking industry provide mixed results regarding whether the number and mix of the board directors add value. Adams and Mehran assess a long time-series analysis of performance and governance.[3]

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*"We do not find that large boards add more value as BHC [bank holding company] complexity grows. We argue that one reason for this may be that some directors are more suited than others to help the BHC's management deal with complexity.*

*Increases in board size due to additions of directors who also sit on subsidiary [i.e., banks owned by the BHC] boards appear to be important. There is no literature documenting that subsidiary directorships are common in non-financial firms."*

Erkens et al. studied the performance of almost 300 financial firms during the financial crisis and their research did not support the often-stated corporate governance objective and benefit of adding independent directors to a board.[4]

*"We find that firms with more independent boards and higher institutional ownership experienced worse stock returns during the crisis. Firms with more independent boards raised more equity capital during the crisis, which led to a wealth transfer from existing shareholders to debt holders."*

Board size and composition dominate recent research. Alonso and Vallelado evaluated a large sample of international commercial banks to test hypotheses related to the dual role of directors (i.e., monitoring and advising).[5]

*We find an inverted U-shaped relation between bank performance and board size, and between the proportion of non - executive directors and performance. Our results show that bank board composition and size are related to directors' ability to monitor and advise management, and that larger and not excessively independent boards might prove more efficient in monitoring and advising functions.*

Other related governance studies later discussed assess the benefit, if any, of board gender, compensation policy and organizational structure applicable to bank performance and risk management.

This research updates and expands how and why corporate governance affects the ability of a financial company to create value and control risk. Do companies with more directors or more independent directors or more female directors retain better credit ratings and sell at higher price/book ratios? Do companies with more committees or certain types of committees not mandated by law and regulation perform better or operate with an enhanced level of safety and soundness? Our analytical period follows the *Panic of 2008* to allow the large US banking firms sampled an opportunity to rectify managerial and planning errors earlier committed before the crisis. We add three dimensions to the empirical and conceptual record of corporate governance applied to the banking sector: 1) explicit consideration of credit risk rather than focusing on commonly addressed share value, 2) unequivocal assessment of committee structure by which most boards conduct business, and 3) a post-crisis assessment period to provide ample time for the frequently maligned financial firms to have responded to regulatory demands and shareholder criticism. Any analysis of corporate governance that does not consider committee structure ignores the very framework by which financial companies manage board activities and meet legal and fiduciary responsibilities. Many studies do not evaluate committee structure.

Principles of good corporate governance change over time. Current standards differ from a half-century ago and likely will be at variance to principles espoused in the future. It is, therefore, useful to understand the evolution of governance over time. Consequently, we first briefly review the historical evolution of the duties of the board of directors and distinguish differences in corporate structure between countries that operate with rules v. principles. Corporate governance is not static and any study of company behavior should reflect the evolutionary process by the study of historical antecedents.

## II. Historical and Cultural Perspective

Because all US bank holding companies, similar to those in the UK, Australia and South Africa, operate with a unitary board, we do not address whether unitary or two-tier board structures impact performance. Many companies in continental Europe adopt a two-tier board organization separating one group responsible for operations and the other for supervision of the enterprise and oversight of the operating board. US bank holding companies do possess two sets of directors; one group is responsible for the parent and the other for the subsidiary bank(s). However, this structure differs from the two-tier system of governance whereby the same legal entity is directed by two boards with distinct responsibilities. Similarly, we do not evaluate the separation of duties between the chairperson of the board and the chief executive officer (CEO) because virtually every large US bank holding company is led by one person who is both CEO and board chair. US holding companies have not yet adopted accepted global principles of good governance that separates the responsibilities of the head of the board of directors from the leader of the executive team.

The US is a rules-based country regarding corporate governance. Banks must adhere to laws that require certain standards and detailed legal requirements, such as established by the Sarbanes-Oxley Act or the Dodd-Frank Act.[6] Other countries predominantly adopt a principles-based approach to governance and establish an inclusive set of "best practices" that companies are expected to adhere. Organizations that elect to not adopt certain components of "best practice" are expected to publicly



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disclose the fact to shareholders, and provide a rationale. Because this research is limited to US bank holding companies subject to the same laws and regulatory expectations, the analysis does not distinguish between rules-based governmental standards and principles-based values. Corporate governance will continue to evolve in response to periodic episodes of corporate wrong-doing, managerial fraud, and financial and banking panics.

The current financial system can be traced to the creation of the joint stock company, the development of public markets and the *Industrial Revolution* in the 16th century.[7] Five hundred years ago large-scale businesses typically were not yet governed by a board as chronicled within an excellent historical perspective of the role of the board of directors by Gevurtz:[8]

> *"Large Italian banking companies, such as the Peruzzi and Medici companies, lacked a board. Instead, these were operated under the domination of a family leader or trusted manager. Corporate boards developed as a governance mechanism for merchant societies and merchant cartels, and only later evolved into the governance mechanism for large business ventures with passive investors.*
>
> *The development of corporate boards arose out of problems with direct governance by groups that have large members. The origins of the corporate board also provide some support in the superiority of groups in making decisions involving judgment or adjudicating disputes.*
>
> *The rationale for corporate boards most favored by modern scholars – that boards exist to monitor management on behalf of passive investors – is the rationale that finds the least support in the historical origins of the board. The joint stock companies inherited such boards when it evolved out of regulated companies in which members conducted their own businesses and hardly needed the protection of a board to monitor the managers. The role of the board in these earliest trading companies was regulating the membership and hearing disputes involving the members.*
>
> *Boards provide political legitimacy. The unifying theme behind medieval parliaments, town councils and the boards of the trading companies is that they provided the means to comply with the "corporate law" rule that "what touches all shall be consented to by all" in circumstances when consent by the entire group was impractical."*

The role and responsibilities of a corporate board of directors have developed. Centuries ago, the board existed to determine who could be a member of a trading company and to resolve disputes between and among those members. Today, the board of directors approves policies and business plans, monitors operations, and evaluates management. Directors in regulated banking enterprises are subject to additional scrutiny.

Directors of banks in the US are subject to legal action by the Federal Deposit Insurance Corporation (FDIC) if their institution does not adhere to regulatory rules, operate in a safe and sound manner or it fails. The FDIC will not bring civil suits against directors and officers who fulfill their responsibilities, including the duties of loyalty and care, and who make reasonable business judgments on a fully informed basis and after proper deliberation. Lawsuits brought by the FDIC against former directors and officers of failed banks are instituted on the basis of detailed investigations. The FDIC has brought suit (or settled claims) against former directors and officers with respect to 24 percent of the banks that have failed since 1985.[9] Most suits involve evidence showing problems within one or more of the following categories:

- *"Cases where the director or officer engaged in dishonest conduct or approved or condoned abusive transactions with insiders.*
- *Cases where a director or officer was responsible for the failure of an institution to adhere to applicable laws and regulations, its policies or an agreement with a supervisory authority, or where the director or officer otherwise participated in a safety or soundness violation.*
- *Cases where directors failed to establish proper underwriting policies and to monitor adherence thereto, or approved loans that they knew or had reason to know were improperly underwritten, or, in the case of outside directors, where the board failed to heed warnings from regulators or professional advisors, or where officers either failed to adhere to such policies or otherwise engaged in improper extensions of credit. Examples of improper underwriting have included lending to a borrower without obtaining adequate financial information, where the collateral was obviously inadequate, or where the borrower clearly lacked the ability to pay."*

The FDIC distinguishes actions against inside (i.e., management) and outside (i.e., independent) directors. According to the FDIC, legal actions against outside directors either involve insider abuse or situations where the directors failed to heed warnings from regulators, accountants, attorneys or others that there was a significant problem in the bank requiring correction. If the directors fail to take steps to implement corrective measures and the problem continues, the directors may be held liable for losses incurred after being warned. Each director or prospective director of a



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regulated financial institution must determine whether the fees received and prestige accorded being a director are consistent with the legal exposure incurred.

We focus on the structure of the board of directors in bank holding companies within the United States and assess whether firms with more directors, independent directors or female directors are able to achieve superior financial results. In addition, we evaluate whether bank holding companies operating with more committees or certain non-mandated committees are viewed as being more credit-worthy by the nationally-recognized credit rating agencies and create additional value for investors represented.

## III. Corporate Board Structure

*Holding Company Sample* We appraise the 20 largest, publicly-traded bank holding companies in the United States as of 2016. The sample of financial companies comprises almost 60 percent of the assets controlled by the 6,000 plus banks in the US. Each company retains a long-term issuer credit rating from Moody's Investors Service. Table 1 illustrates financial characteristics of the sample.

*Table 1:* Bank Holding Company Sample Characteristics (2016)

| Metric | Average | High | Low |
|---|---|---|---|
| Bank Asset Size (USD Billion) | $472.7 | $1,983.0 | $68.3 |
| Credit Rating | Aa3 | Aa1 | A3 |
| Price/book Ratio | 1.07 | 1.45 | 0.68 |

*Source: Federal Financial Institutions Examination Council, Moody's Investor Service and Yahoo Finance*

- The average asset size of the key subsidiary bank of the holding company sample is USD 473 billion and range from USD 68 billion to USD 2.0 trillion. These companies are systemically-important institutions subject to additional regulatory scrutiny regarding capital, liquidity and risk management. About one-third of the sample exceeds assets of USD 250 billion and must adhere to even more stringent oversight than the smaller, but by no means small, financial institutions.
- The average long-term issuer rating of the sample is "Aa3" and ranges from "Aa1" to "A3." Ratings are opinions of the relative credit risk of fixed-income obligations with an original maturity exceeding one year. The ratings address the possibility that a financial obligation will not be honored. Ratings reflect both the likelihood of default and any financial loss suffered in the event of default. All of the holding companies are considered to be investment grade (i.e., rated "Baa3" or better). Approximately one-third of the bank holding companies sampled are rated medium-grade (i.e., "A") while the remaining two-thirds are high-grade (i.e., "Aa"). The credit rating of all surviving banks and bank holding companies improved dramatically after the *Panic of 2008* and the devastatingly long and severe *Great Recession* between 2007 and 2009 endured by the United States and other regions of the world. Almost 500 US banks failed during this tumultuous period and many large banks within our sample received or were forced to accept investment in primary and secondary capital provided by the government. A board of directors is concerned about their organization's credit rating because it affects the cost of uninsured deposits and unsecured borrowed money. A credit rating, especially if lower medium-grade or low-grade, can also influence the willingness of customers to conduct business with a financial institution considered speculative unless the risk exposure is mitigated. Low-grade credit ratings expose a bank to well known "agency risk" and "bankruptcy risk" depicted within the capital structure literature.
- The average price/book ratio of the publicly-traded holding companies is 1.07, which is a small market price premium to accounting book value. The pricing information is derived from *Yahoo Finance*. Price/book ratios of the sample range from 1.45 for institutions creating substantial value for shareholders to .68 for institutions destroying value. By definition, a company's price/book ratio equals return on equity (ROE) times their price-earnings (PE) ratio. Companies creating progressively more value provide shareholders a strong current return and generate expectations of exceptional potential growth in earnings. About half of the sample create value and trade with a premium to book value while the other half trade at a discount and destroy value. The premium or discount adjusts return on equity derived from financial statements such that return on equity based on share value or $ROE_{market}$ aligns more closely with required returns or cost of equity of investors: $ROE_{market} = ROE_{book}$/Price/book ratio. A premium reduces $ROE_{market}$ while a discount increases $ROE_{market}$ relative to $ROE_{book}$. Bank holding companies are under pressure to retain and incentivize qualified executive management able to effectively develop and implement a coherent business plan to enhance return on equity and provide expectations of earnings growth.



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The bank holding companies sampled offer a range of asset sizes, credit ratings and price/book ratios by which to assess the importance, if any, of board structure and corporate governance metrics on performance and financial condition. We next review the structure of the sample's board of directors regarding number of directors, independent directors and female directors.

*Board of Directors* There are no prescribed rules or laws in the US that indicate a bank should be governed by a given number of directors. This is a decision retained by each board to determine how they can meet their legal and fiduciary responsibilities. Government regulators direct weak banks or holding companies to add independent directors with more experience and ability. If the board is too small, the institution may be unable to parcel out areas of specialization and focus to a given committee. As Bainbridge suggests, the argument for boards lies in the superiority of groups making decisions involving judgment.[10] If the board is too large, the group becomes unwieldy and unable to carry out its duties effectively. It is important to remember that council structures initially developed five centuries ago due to problems of "direct governance" when a group retains a very large number of members and supports the "central management" rationale.[8] Table 2 reviews the board structure of the bank holding company sample.

*Table 2:* Bank Holding Company Board of Director Structure (2016)

| Metric | Average | High | Low |
|---|---|---|---|
| # Directors | 13.5 | 18 | 10 |
| # Independent | 11.6 | 17 | 8 |
| % Independent | 86% | 94% | 63% |
| # Female | 3 | 6 | 1 |

*Source: Morningstar*

- The average size of the board is 13.5 directors and ranges between ten and 18. The information is compiled from *Morningstar*. As discussed later, larger banks, whether expressed by asset size or the natural logarithm of asset size, retain a larger board consistent with most academic studies. Larger banks still enjoy the benefit of "too big to fail" and tend to retain a better credit rating than smaller institutions *ceteris paribus*. Larger bank holding companies tend to trade at lower price/book ratios given additional complexity and an inability to achieve sufficient profits to offset incremental regulatory risk management and compliance rules in spite of economies of scale and scope. Bank holding companies, regardless of asset size, operating with larger boards are able to select and nominate, and shareholders elect a larger number of independent directors and female directors supportive of diversity in experience and gender.
- The average number of independent directors (i.e., not members of executive management) is 11.6 and ranges between eight and 17. The "managerial model" of corporate governance dominated in the United States in the first half of the twentieth century by which the board was mostly comprised of executives while independent directors were identified by, beholden to, and supportive of the CEO. Baum succinctly evaluated what precipitated the rise of the "monitoring board" in the 1970s in the US and in the 1990s in the UK.[11]

*"First, the sudden collapse of the major railway company Penn Central in 1970. Second, Eisenberg's influential book "The Structure of the Corporation" published in 1976. According to Eisenberg, the board's essential function was to monitor the company's management by being independent from it. The reliance on independent directors as a panacea for various corporate governance ills has reached its zenith in the US.*

*As in the US, the typical British board of the 1950s was an advisory board dominated by insiders. It was only in the 1990s, with the beginning of the British corporate governance movement subsequent to the publication of the Cadbury Report, that the concept of independent directors was embraced in the UK. Since the early 2000s independent directors have dominated on the boards of listed companies."*

- The percentage of independent directors on a board of the holding company sample is 86 percent and ranges from 94 to 63 percent. Every company's board is represented by at least one member of executive management. The CEO is always a member of the board and invariably the chairperson of the board, which is contrary to evolving practice of good corporate governance that separates the role and duties of the CEO and board chairperson.
- The average number of female directors is three and ranges from six to one. The percentage of directors that are female is about 22 percent, which is comparable to the Standard & Poors 500 average. Boards with at least two female directors allow these directors to discuss and deliberate privately with other women and avoid isolation in a male-dominated culture. Two bank holding companies



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sampled have only one female member on the board and about half have only two women. Research shows the US lags Europe regarding board gender diversity.[12]

*"More than a decade ago, countries in Europe began to take measures to increase the gender diversity of their corporate boards. Norway was the first to adopt a quota for female board members and other nations followed suit. The imposition of quotas and goals has resulted not just in greater diversity but to a more professional and formal approach to board selection.*

*The US is one of the few Western developed economies with neither voluntary nor mandatory targets. Interviews with both men and women directors express fears that quotas will lead to less qualified directors. US board selection still relies heavily on social networks and the lack of board diversity is part of a general lack of rigor in succession planning."*

Pathan and Faff conducted a longitudinal study of large US bank holding companies prior to and after the rules of Sarbanes-Oxley were introduced and focused on the composition of boards.[13]

*"Although gender diversity improves bank performance in the pre-Sarbanes-Oxley Act (SOX) period (1997-2002), the positive effect of gender diminishes in both the post-SOX (2003-2006) and the crisis periods (2007-2011)."*

The results are comparable to those expressed by Adams and Ferreira who studied the benefit of gender diversity on bank boards.[14]

*We find that female directors have better attendance records than male directors and more likely to join monitoring committees. These results suggest that gender-diverse boards allocate more effort to monitoring. However, the average effect of gender diversification on firm performance is negative. The negative effect is driven by companies with fewer takeover defenses.*

Not all studies show efforts to promote gender diversity are misplaced or without merit. Fernandes et al. evaluated the performance of supervisory boards during the recent crisis.[15]

*"Using a sample of 72 publicly listed European banks, we find that banks with more independent and busy boards experienced worse stock returns during the crisis. Conversely, the better-performing banks had more banking experts serving as supervisory directors. Additionally, we find that gender and age diversity improved banks' performance during the crisis; hence, diversity matters."*

The later results are consistent with a multi-dimensional analysis of companies in the non-financial sector by Bernile et al. except during times of financial or economic volatility.[16]

*"We find that greater board diversity leads to lower volatility and better performance. The lower risk levels are largely due to diverse boards adopting more persistent and less risky financial policies. Diverse boards do come with some cost. In particular, the response times of diverse groups tends to be slower than more homogeneous groups. We find the benefits of board diversity are lower during times of high aggregate volatility."*

We do not discuss other attributes of diversity, such as race, disability or veterans' status, given lack of reliable and consistent information published in public documents. Regardless, it is obvious that the US is a laggard on evolving and globally-accepted corporate governance practices applicable to both gender diversity and the separation of the CEO and chairperson's position.

We later determine if the number of directors, independent directors and female directors impacts share performance and credit risk. We first present information applicable to committee structure within the bank holding company sample. The majority of recent governance research ignores board committee composition, which is *the* most common framework adopted by companies to formulate corporate decisions prior to being presented to the full board for approval.

*Committee Structure* Bank holding companies in the US are subject to rules and regulation regarding the creation and staffing of certain committees. Just as millions of "passive" individual and institutional investors delegate their rights to ten or twenty directors, boards delegate certain areas of monitoring and advising to a subset of directors arrayed by committee. The average number of board committees within the large bank holding companies sampled is 5.6 and range between four and eight. Table 3 illustrates the relative importance of various committees adopted by the bank holding companies sampled.

*Table 3:* Bank Holding Company Committee Structure (2016)

| Committee | Percent of Holding Companies |
|---|---|
| Audit | 100% |
| Risk | 100% |
| Governance | 100% |
| Executive | 47% |
| Public Relations | 32% |
| Finance/Capital | 26% |
| Technology | 21% |
| Credit | 11% |

*Source: Morningstar*

- All bank holding companies have an audit committee consistent with law. The Sarbanes-Oxley Act of 2002 prohibits the listing of any security on a



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national exchange that is not in compliance with the Act.[17]

*"These requirements relate to: the independence of audit committee members, the audit committee's responsibility to select and oversee the issuer's independent accountant, procedures for handling complaints relating to accounting practices, the authority of the committee to engage advisors and funding for the independent auditor and any outside advisors engaged."*

The law not only requires directors serving on the audit committee to be independent of management but requires at least one member of the committee to be a "financial expert" based on comprehensive knowledge and experience with accounting and financial topics.

- All bank holding companies have an enterprise risk committee consistent with regulation and law. The Dodd-Frank *Wall Street Reform and Consumer Protection Act of 2010* establishes prudential risk management requirements for all bank holding companies with total consolidated assets of US 50 billion or more comparable to those institutions within our sample.[18] The standards include rules applicable to risk-based and leverage capital, liquidity and overall risk management procedures to include financial modeling in periods of stress and the formation of a risk committee. Aebi et al. focused on risk management and corporate governance during the crisis.[19]

*"Our results indicate that banks in which the chief risk officer (CRO) directly reports to the board of directors and not to the CEO or other corporate entities exhibit significantly higher (i.e., less negative) stock returns and return on equity during the crisis. In contrast, standard corporate governance variables are mostly insignificant or even negatively related to the banks' performance during the crisis."*

- All of the bank holding companies have a governance/compensation committee. While not mandated, this committee is responsible for compensating executive management to include salary, incentives and perquisites, overseeing the development of a comprehensive succession planning process, developing the firm's core business plan, and identifying prospective individuals to be nominated for election to the board. Kirkatrick studied corporate governance lessons from the financial crisis and noted significant issues regarding poorly developed compensation strategies adopted by banks.[20]

*"The report analyzes the impact of failures and weaknesses in corporate governance on the financial crisis, including risk management systems and executive salaries. Remuneration systems have in a number of cases not been closely related to the strategy and the risk appetite of the company and its longer term interests. The remuneration of boards and senior management remains a highly controversial issue in many OECD countries."*

- Almost half of the companies have an executive committee, which comprises the chair and vice chair of the board, the CEO and chairs of each subsidiary committee of the board. Research applicable to the existence and usefulness of an executive committee has identified the potential advantages and inherent problems of what can be considered an "elite" subgroup of the whole:[21]

*"There are two types of executive committees: those that meet regularly and those that meet only as needed. The more often the full board meets the less it needs an executive committee. As the size of the board increases, it becomes more difficult to schedule unplanned meetings that can be more expeditiously handled by a smaller group of directors. Boards with members living far apart tend to meet less often and tend to find executive committees useful for managing routine matters.*

*The biggest misuse of executive committees occurs when they become too powerful and promote a sense of elitism by those not on the committee. Regardless of the existence of an executive committee it is good governance for all board committees to have written charters that describe their responsibilities, membership, meeting frequency and information responsible to review."*

- About one-third of the holding company sample has developed a public relations or social responsibility committee. Invariably, these companies have experienced a well known problem affecting their reputation risk. For example, Wells Fargo, JPMorgan Chase and Citigroup all suffered embarrassing episodes from illegal consumer sales activities, fraudulent trading or equity ownership by the government. These problems can and do precipitate poor repute among customers and other stakeholders. Reputation risk invariably originates from the consequence of credit, operational, liquidity or regulatory problems. Reputation risk has begun to be subject to rigorous study that otherwise suffers from a lack of comparable data to measure the financial consequence.[22]

*"One analysis by Perry and Fontnouvelle before the crisis found that losses driven by internal fraud tend to have a bigger reputational hit on a firm – as measured in market value decline – than losses driven by external factors such as a cyber attack on a bank customer database. Reputational problems can amplify when the market is surprised by a negative outcome from an otherwise well-governed firm.*



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*Reputational events can have tangential costs. Direct and indirect costs from lost or reduced business opportunities, regulatory penalties and litigation expenses compound the pain of a reputational risk event."*

The Basel Committee on Banking Supervision has long been concerned about banks addressing reputational exposure when determining capital adequacy.[23]

*"Reputational risk can lead to the provision of implicit support arising from operational risk events and therefore should form part of banks' internal capital adequacy assessment requirement and stress testing for liquidity contingency plans."*

Reputation risk is not yet subject to any specific capital charge. The Basel Committee, however, does expect bank management to address all material risks beyond credit, market, liquidity and operational issues when evaluating the adequacy of capital.[24]

- Only one-quarter of the bank holding companies have established a finance and/or capital committee. Subsidiary banks of bank holding companies with a capital committee operate with lower levels of Tier One Leverage Capital; the relationship is significant as measured by a correlation coefficient at the five percent level of confidence. Earlier research cited noted that bank holding companies are more likely to create value when more directors serve on a subsidiary bank board given the importance of the bank to the performance of the holding company. Holding companies owing a subsidiary bank operating with a lower level of equity capital are more likely to establish a finance/capital committee to ensure capital remains adequate and avoid resultant regulatory sanctions when capital ratios become too low. However, by operating with lower levels of equity capital (i.e., Tier One Capital), an organization can increase return on equity and create shareholder value if a higher leverage multiplier (asssets/equity) more than offsets a lower return on assets (net income/assets).
- Approximately 20 percent of the sample created a technology committee. Every such bank holding company suffered a cyber attack well publicized in the press and experienced or endured subsequent reputational risk. The technology committee is often established to deal with cyber issues, migration to the Cloud, regulatory concerns with model risk, and ballooning operating expenses applicable to information systems.
- Only ten percent of the sample possesses a credit committee. Credit risk is the most common reason banks generate losses and subsequently fail. Subsidiary banks of holding companies that have created a credit committee at the board level operate with a greater proportion of non-accrual loans and loans 90+ days slow in payment; the correlation is significant at the one percent level. The finding again supports the benefit or potential advantage of holding company directors serving on the parent board also sitting on the board of a subsidiary bank. Bank holding companies owning a subsidiary bank exposed to more problem loans are more likely to establish a credit committee to ensure that loan losses do not escalate further to levels that could threaten profitability, impair capital, depress share value, and encourage incremental regulatory scrutiny and sanctions.

Other than mandated committees applicable to audit and enterprise risk, it is evident that holding companies respond to reputational, capital, technology and credit risk exposure at subsidiary banks by forming a board level committee to more closely monitor applicable information and guide responsible management to optimize value and control risk exposure.

Several dated academic empirical analyses evaluated the impact of committee structure on firm performance. Hayes et al. examined cross-sectional variations on the committee structure of boards of directors for the Standard & Poors 500 during 1997 and 1998 and found little benefit applicable to the existence of a specific committee.[25]

*"Number of committees is positively related to the number of directors. Number of committees is also positively related to firm size. Firms that pay dividends have more committees. Firms with a higher CEO ownership have fewer committees performed by the board. We do not find that performance is related to the presence of committee or to the fraction of outside directors serving on each committee."*

Klein studied the linkage between firm performance and board composition and his research casts doubt on the positive contribution of independent or outside directors v. inside directors serving on certain committees.[26]

*"I find little association between firm performance and overall board composition. I am able to find significant ties between firm performance and how boards are structured. First, a positive relation is found between the percentage of inside directors on finance and investment committees and accounting and stock market performance measures. These findings are consistent with Fama and Jensen's assertion that inside directors provide valuable information to boards about the firms' long-term investment decisions."*

Overall, board committee structure has been omitted in the preponderance of academic studies of



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corporate governance. Yet, boards manage organizations by delegating key areas of oversight to smaller groups of knowledgeable directors tasked with serving on a limited number of committees (e.g., audit, finance, compensation, risk, credit, etc.).

## IV. Implications of Corporate Governance and Board Structure

*Univariate Analysis and Financial Performance*

Large bank holding companies and their subsidiary banks are subject to considerable oversight by governmental, accounting and market participants. Regulatory supervisors establish prudential standards and evaluate institutional compliance with rules applicable to risk, capital adequacy and liquidity. Institutions unable to meet or exceed regulatory thresholds are subject to additional governmental oversight, operating restrictions and higher deposit insurance fees. Accountants opine on the adequacy of controls, compliance with generally accepted accounting principles (GAAP), existence of potential fraud, and assessment of "going concern" status. The market assesses the probability a bank or holding company will be able to honor contractual obligations in a timely manner. Weaker banks are penalized with lower credit ratings or higher credit spreads on debt and wider credit default swap (CDS) spreads. Although we use credit ratings to assess the safety and soundness of a bank holding company, the opinions correlate closely with CDS spreads derived from the market.

Credit ratings provide a backward-looking perspective of risk while CDS spreads provide a forward-looking framework. Although the implied default rates between the two metrics differ, the relative perception of credit risk is comparable. The board of directors and specific subsidiary committees are charged with the responsibility to monitor information applicable to financial performance, and evaluate the ability of management to operate in a safe and sound manner. As established within the banking literature, the correlation coefficient between letter credit ratings of bank holding companies and CDS spreads is almost 60 percent, which is statistically significant at the one percent level.[27] Firms retaining a lower or worse long-term issuer credit rating assigned by Moody's are priced by the market with a higher CDS spread.

By custom, relative bank value is measured by price/book (P/B) ratios rather than the customary price/earnings ratios common to other industries. The price/book ratio includes recognition of both return on equity ($ROE_{book}$) derived from financial records and the price/earnings ratio. Return on equity reflects the ability of a holding company to create value currently as measured by net income or earnings per share (EPS) divided by accounting equity or book value per share. The P/E ratio reveals expectations of growth in earnings by the market and equals market price per share divided by EPS. A bank holding company commanding a higher price/book ratio is generating a strong return on equity and pursuing a business plan that projects robust growth in earnings. Empirical analysis from the literature shows that return on equity and price-earnings ratios are able to explain more than 90 percent of holding company price/book ratios.[28] A high price/book ratio can reflect expectations of a merger premium applicable to an acquisition and other random factors. The board of directors represents shareholders. Investors will not remain passive for those companies unable to craft a business plan successfully implemented by knowledgeable and competent management.

Price/book Ratio = Return on Equity x Price/Earnings

Price/book Ratio = EPS/Book Value per Share x Price per Share/EPS

We initially employ correlation analysis to study the impact of corporate board structure on credit risk measured by letter credit ratings converted to a numerical score (i.e., one is "Aaa", two is "Aa1", three is "Aa2" and so forth) and on price/book multiples. Correlation analysis merely provides a measure of the relative, not absolute, relationship between variables and does not suggest causality. The correlation coefficient between the number of directors and the number of independent directors is a positive 77 percent, which is significant at the one percent confidence level given sample size and a one-tail test. Larger companies, based on either asset size or the natural logarithm of asset size, have more independent directors than smaller firms. Both results are consistent with existent studies. The number of independent directors proves important to controlling credit risk. Table 4 illustrates the correlation coefficients for previously reviewed metrics of corporate structure, credit ratings and price/book multiples. We later expand the introductory analysis with multiple regression models given the ability of the later to better account for residuals that correlation analysis can ignore.



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*Table 4:* Correlation Analysis: Governance Metrics, Credit Risk and Valuation (2016)

| Metric | Credit Rating | Price/Book Ratio |
|---|---|---|
| # Directors | -.221 | -.024 |
| # Independent Directors | -.328*** | .078 |
| # Female Directors | -.199 | -.116 |
| # Committees | -.368** | .380** |
| Executive | -.280 | .307*** |
| Finance/Capital | -.373** | .549* |
| Public Relations | -.256 | .251 |
| Technology | .060 | -.166 |
| Credit | -.100 | -.098 |

** Significant @ 1%; ** Significant @ 5%; *** Significant @ 10%*

- Although companies with more directors have an enhanced credit rating, the relationship is not significant statistically. And, more directors, *per se*, convey no ability to craft a business plan or retain executive management able to create value based on price/book multiples. These results are generally consistent with the banking literature reviewed. What proves important from a governance perspective is the number of independent directors, not total directors.
- Companies with more independent directors are better able to effectively discharge their ability to monitor the affairs of the company and achieve a superior credit rating. The correlation coefficient between the credit rating and the number of independent directors is a negative 33 percent, which is significant at the ten percent level given sample size and a one-tail test. Stronger banks assigned a better credit rating governed by more independent directors command a lower numerical score consistent with the negative correlation coefficient. Other research provides mixed support regarding the benefit of independent directors to monitor and control risk as companies in the US, the UK and other developed countries shifted strategy from the "managerial model" to the "monitoring model."[11]

*"The empirical support for staffing boards with independent directors, however, remains surprisingly shaky given the ubiquitous reliance on independent directors. The global financial crisis of 2008 has added further doubts."*

- Firms with more independent directors are better represented by female directors. The correlation between the two metrics is a positive 38 percent, which is significant at the five percent level. Based solely on simplistic correlation analysis, however, having more women on a board does not convey enhanced share value or superior credit ratings.

While the analysis of the number of directors and their mix is informative regarding the ability to manage credit risk, the results are not persuasive regarding the talent of larger boards or boards comprised of more independent directors or female directors to create value. The analysis of committee structure is more instructive.

- Firms with more committees are able to achieve both better credit ratings (correlation coefficient of negative 37 percent) and higher price/book ratios (correlation coefficient of positive 38 percent). Both relationships are significant at the five percent level of confidence. Holding companies that designate a smaller group of directors to focus on specialized topics achieve enhanced market performance and a solid financial position predicated on more conservative financial policies than those companies being governed by a larger committee of the whole.
- Companies with an executive committee, despite charges of elitism, create value for shareholders. The correlation between the existence of an executive committee, measured as a dummy variable (one for those holding companies that possess the committee and zero otherwise), and the price/book ratio is a positive 31 percent, which is significant at the ten percent level.
- Most importantly, bank holding companies with a committee dedicated to finance and/or capital, again measured by a dummy variable, achieve better credit ratings (correlation of negative 37 percent significant at the five percent level) and higher valuations (correlation of positive 55 percent significant at the one percent level). As noted earlier, such firms tend to operate with lower levels of Tier One Capital at the primary subsidiary bank. Although lower levels of capital can lead to deleterious results for credit ratings, the resultant higher leverage multiplier is critical to enhancing return on equity and, by extension, share value.
- Finally, the existence of public relations, technology and credit committees do not correlate with the effective management of enterprise risk or creation of value.

Bank holding companies operating with more committees provide an opportunity for an executive committee and a finance/capital committee to digest



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and monitor bank and market information, and evaluate management more effectively than the entire board. Our findings should not be used to indicate that audit, enterprise risk or governance committees provide no value. The statistical analysis is unable to assess the unique contribution of each committee given the existence of these three committees for each institution sampled. Since all of the companies tested retain an upper medium-grade or high-grade credit rating (at least in a favorable economic environment), there must be some merit to the ubiquitous and mandated audit and enterprise risk committees. Correlation analysis can mask underlying relationships that multiple regressions may better judge.

*Multi-Factor Analysis and Financial Performance*

To determine more definitively whether price/book multiples or credit risk are related to combinations of several corporate structure metrics, it is instructive to analyze the question by either statistical multiple regression or probit/logit analysis. Multiple regressions can characterize the relationship between and among variables by enhanced accounting for residuals within the model than the illustrative but simplistic correlation analysis presented. Panel regression analysis does not provide any incremental insight given the data is cross-sectional. We would like to reject the null hypothesis of no relationship between performance or condition and corporate governance factors in favor of an alternative hypothesis that varies by metric.

We first evaluate credit risk of bank holding companies measured by a long-term issuer rating assigned by Moody's Investors Service. The credit rating results are comparable to those obtained by numerical CDS spreads. Although credit ratings are categorical in nature, board members invariably focus on their organization's credit rating – not their CDS spread – when assessing risk from an external perspective. Only two metrics of the wide number presented and discussed – the number of independent directors (or the number of female directors) and the company's price/book ratio – proved to be statistically significant and combined provide a coefficient of determination or R-squared of 63.5 percent, which is significant at the one percent level based on the F-statistic. There was no evidence of multi-co linearity between the final independent variables selected based either on the correlation coefficient or the variance inflation factor, and the absence of a large change in coefficients or significance for any variables when added or deleted. While the R-square or coefficient of determination increases to 67.8 percent when bank asset size is added, the resultant model suffers from multi-correlation between variables. The majority of recent academic studies focus on share value rather than credit risk and few analyses show that independent directors convey more value than inside or managerial directors except during a crisis or economic contraction and even those results are mixed.

$$\text{Credit Rating} = B_0 + B_1(\text{Price/book ratio}) + B_2(\text{Number of Independent Directors})$$

$$R^2 = .635 \text{ and F-statistic @ } 13.90^*$$

$$\text{Credit Rating} = 9.96 - 3.86(\text{Price/book})^* - 0.17(\#\text{ Independent Directors})^{**}$$

$^*$ Significant @ 1% Confidence; ** Significant @ 5% Confidence

The empirical results with the number of female directors are comparable to the number of independent directors but both governance metrics cannot be used simultaneously given correlation issues. No other corporate governance metrics enhanced the statistical ability to explain relative credit ratings.

$$\text{Credit Rating} = B_0 + B_1(\text{Price/book ratio}) + B_2(\text{Number of Female Directors})$$

$$R^2 = .644 \text{ and F-statistic @ } 14.48^*$$

$$\text{Credit Rating} = 9.14 - 4.14(\text{Price/book})^* - 0.28(\#\text{ Female Directors})^{**}$$

$^*$ Significant @ 1% Confidence; ** Significant @ 5% Confidence

Correlation analysis is not always fully informative. The earlier simplistic correlation statistical analysis suggested no substantive financial benefit accruing to organizations adding women to the board. Multiple regressions or probit/logit analysis better characterize the true relationship between and among variables by enhanced accounting for residuals within the model; women directors do add value. These results are consistent with Bernile et al. in periods other than economic volatility and by Fernandes. Although characteristics of the board to include the number of independent directors and female directors is important to control risk, committee structure reveals information given the process boards adopt to make decisions to enhance valuation.

Several governance metrics when combined prove useful to distinguish relative price-book ratios of the sample. First, the holding company's credit rating is constructive. Second, the existence of a finance and/or capital committee, as measured by a dummy variable, is important. Third, the number of independent directors is likewise able to explain price/book valuation metrics.



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The last two variables – the existence of a finance/capital committee and the number of independent directors – correlate highly and cannot enter the same regression given problems of multi-co linearity.

Price/book multiples when regressed against both credit ratings and the existence of a finance/capital committee generated a coefficient of determination or R-squared of 64.6 percent, which is significant at the one percent level of confidence based on the F-statistic. Price/book ratios improve with better credit ratings significant at the one percent level and the existence of a finance/capital committee significant at the five percent level. There was no evidence of multi-co linearity between the final independent variables selected based either on the correlation coefficient matrix or the variance inflation factor, and the absence of a large change in coefficients or significance for any variables when added or deleted. Other corporate metrics showed high multi-co linearity and were not included in the final model.

$$\text{Price/book Ratio} = B_0 + B_1(\text{Credit Rating}) + B_2(\text{Finance/Capital Committee})$$

$$R^2 = .646 \text{ and F-statistic @ } 14.58^*$$

$$\text{P/B Ratio} = 1.49 - 0.12(\text{Credit Rating})^* + 0.18\ (\text{Finance or Capital Committee})^{**}$$

* Significant @ 1% Confidence; ** Significant @ 5% Confidence

The importance of a credit rating to price/book ratios or price/book ratios to credit ratings is not surprising given similar financial factors impact both financial attributes. For example, Moody's assigns more weight to solvency (65 percent) than liquidity (35 percent) when assessing risk. The solvency metric is based on asset quality (25 percent), capital adequacy (25 percent) and profitability (15 percent). The liquidity metric is predicated on funding structure (20 percent) and liquid resources (15 percent).[29] The ability of any financial institution to generate a sufficient return on equity critical to improving the price/book ratio is dependent upon posting strong and consistent profitability equally important to credit risk. Net income of a bank is heavily affected by asset quality, the allowance for loan losses and the provision for loan losses and these factors are critical to a credit rating. The capability to grow earnings and generate a favorable P/E ratio is dependent upon retaining sufficient capital and attractive funding sources to support new activities and achieve economies of scale and scope critical to improving profits and price/book valuations. Credit risk exposure and share values are closely linked and are interdependent as supported by the statistical analysis.

Another regression that recognizes the number of independent directors along with credit ratings also showed statistical significance when explaining relative valuation multiples. The coefficient of determination or R-squared of 61.2 percent is significant at the one percent level of confidence based on the F-statistic. Price/book ratios improve with better credit ratings significant at the one percent level and the number of independent directors significant at the ten percent level. There was no evidence of multi-co linearity between the final independent variables selected based either on the correlation coefficient matrix or the variance inflation factor, and the absence of a large change in coefficients or significance for any variables when added or deleted. Other corporate metrics showed high multi-co linearity and were not included in the final model.

$$\text{Price/book Ratio} = B_0 + B_1(\text{Credit Rating}) + B_2(\text{Number of Independent Directors})$$

$$R^2 = .612 \text{ and F-statistic @ } 12.64^*$$

$$\text{P/B Ratio} = 1.50 - 0.12(\text{Credit Rating})^* + 0.38\ (\text{Number of Independent Directors})^{***}$$

* Significant @ 1%; *** Significant @ 10% Confidence

## V. Summary

Under currently accepted principles of good governance, the board of directors of an enterprise establishes the direction of a firm by approving appropriate policies and business plans, and recruiting, compensating and monitoring executive management and operations. The board must ensure shareholders, among other stakeholders, are treated fairly and provided appropriate risk-adjusted returns on capital invested. The board of directors of a regulated bank or bank holding company conducts its business by committee. Some committees for US financial institutions, such as audit and enterprise risk, are required by the Securities and Exchange Commission and the institution's relevant primary regulator. All regulated institutions must comply with the governing laws consistent with a rules-based environment. Other committees, such as finance/capital, credit, public relations or technology, are unique to each institution and often are created to respond to specific operating, financial, regulatory or reputational risk problems previously encountered.

We evaluate the board structure of 20 systemically-important bank holding companies in the US that comprise almost 60 percent of industry assets



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and determine if the number of directors, independent directors or female directors has any impact on credit ratings or valuation. While there are large differences, the average board of directors is comprised of 14 directors of whom 12 are independent of management and include three women. Similarly, we assess whether holding companies retaining committees not mandated by law facilitate better performance. On average, the holding companies operate with six committees to always include audit, enterprise risk and governance; the first two are mandated by law and codified by regulation. We find that board structure does influence bank holding company credit ratings and price/book valuations. The US is at the inflection point between the last financial crisis and the next banking debacle that invariably occurs every 20 to 25 years despite managerial and regulatory protestations to the contrary. The real test of the effectiveness of governance and board structure will be determined during the next period of economic contraction and financial market distress.

- Holding company boards comprised of either more independent or female directors achieve better credit ratings. Diversity of experience allows bank holding company boards to make better decisions, formulate superior plans and policies, and improve monitoring of operations and executive management. There is a subtle degree of tension between managerial and independent directors regarding the importance of safety and soundness v. value creation. Independent or outside directors are especially concerned with a bank holding company being judged investment-grade given the potential legal liability that can occur with a speculative credit rating and subsequent failure. Managerial or inside directors are particularly motivated to enhance share value given the value of incentive compensation schemes or bonus plans related to share value and the importance of vested stock options. Holding companies with more independent and female directors on the board err on the side of safety. These results are generally contrary to most prior empirical studies and those differ during periods of economic and market volatility.
- Bank holding companies forming more committees, especially a finance/capital committee, are able to retain a better credit rating and achieve a higher price/book valuation. Committee specialization and focus enhance performance. Smaller groups are able to make better decisions requiring judgment and a finance/capital committee is able to navigate capital structure policy tradeoffs to have sufficient capital to retain a investment-grade credit rating but not too much equity to impair return on equity. Few recent governance studies evaluate committee structure.
- Finally, while an executive committee comprised of a small subset of the board's leadership creates an atmosphere of "elitism," holding companies with such committees are priced with higher price/book valuations given additional scrutiny by a small number of directors holding leadership positions within the board focused on executive management's ability to implement business plans able to increase return on equity and sustain future growth. Given that almost all US bank holding companies are chaired by the organization's CEO, the relative importance of the CEO/chair's perspective increase in weight within the smaller executive committee.

Our work suggests independent directors, female directors and committee structure all convey useful corporate governance information applicable to both valuation and risk. However, it is important to remember that the principles of accepted governance change over time and current best practices will evolve.

As the literature on bank governance and board structure expands, there are important areas to explore. For example, from a cross-cultural perspective, how does a rules-based governance structure compare to a principles-based arrangement? Does a more diverse board in terms of race, disability or industry/government/military experience convey additional benefits to those applicable to the number or proportion of independent and/or female directors? Limited empirical work cited suggests that independent directors steeped in banking and boards with more female directors or directors representing different age cohorts convey value. Corporate governance and board structure provide a fertile area to expand research and promote scholarship within the banking industry. The topic remains relevant to regulators and investors.

US bank regulators have proposed regulations that challenge the *status quo* within corporate governance and leadership. The Comptroller of the Currency recently indicated the Office of the Comptroller of the Currency (OCC) was considering whether to mandate the separation of the chair of the board from the CEO at national and federal savings banks. The proposal was quickly challenged by work advanced by Larcker and Tayan affiliated with Stanford's *Rock Center for Corporate Governance*.[30]

"Most research finds that the independence status of the chairman is not a material indicator of firm performance or governance quality."

Although there is no empirical evidence in the banking sector within the US that shows financial institutions with a separate CEO and board chair promote long-term profits or ensure the organization



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operates more safely, the topic is no longer confined to academic interest and enquiry. In the absence of regulatory guidance, each board must determine for itself how best to create value for millions of "passive" investors represented and to remain a safe and sound institution. Clearly, "M" or management within the regulatory CAMELS (i.e., capital, asset quality, management, earnings, liquidity and sensitivity) banking paradigm is garnering increased attention from regulators.

Investors are no longer "passive" regarding governance. The *Investor Stewardship Group* has endorsed a governance framework to go into effect in 2018.[31] Among other expectations: 1) directors' performance should be evaluated through a company's long-term financial performance, 2) companies should disclose sufficient information about their governance and board practices, 3) independent leadership of a board is essential, 4) a majority of directors should be independent, and 5) directors need to make the substantial time commitment required to fulfill their duties to the company and shareholders. Corporate governance and board structure are indisputably of concern to bankers, investors, regulators and scholars.

## References Références Referencias


1. Cadbury, Adrian, committee chair, Committee on the Financial Aspects of Corporate Governance in the UK (1992), "The Financial Aspects of Corporate Governance."
2. Rosenstein, Stuart and Wyatt, Jeffery G (1990), "Outside Directors, Board Independence and Shareholder Wealth," *Journal of Financial Economics*, Vol. 26 (2), 175-191.
3. Adams, Renee, and Mehran, Hamid (2012), "Bank Board Structure and Performance," *Journal of Financial Intermediation*, Vol. 21(2), 243-267.
4. Erkens, David H.; Hung, Mingyi and Matos, Pedro, "Corporate Governance in the 2007-2008 Financial Crisis: Evidence from Financial Institutions Worldwide," *Journal of Corporate Finance*, Vol. 18 (2), 389-411.
5. Alonso, Pablo de Andres, and Vallelado, Eleuterio (2008), "Corporate Governance in Banking: The Role of the Board of Directors," *Journal of Banking and Finance*, Vol. 32 (12), 2570-2580.
6. Association of Chartered Certified Accountants *Technical Article* (2012), "Corporate Governance: the Board of Directors and Standing Committees.
7. Reamer, Norton and Downing, Jesse (2016), *Investment: A History*, Columbia Business School Publishing.
8. Gevurtz, Franklin A. (2004), "The Historical and Political Origins of the Corporate Board of Directors," *Hofstra Law Review*, Vol. 33 (1), 1-66.
9. Federal Deposit Insurance Corporation Law, Regulation, Related Acts, (5000) *Statement of Policy: the Responsibility of Bank Directors and Officers.*
10. Bainbridge, Stephen, M. (2002), "Why a Board? Group Decision-making in Corporate Governance," *Vanderbilt Law Review*, Vol. 55, 1-55.
11. Baum, Harald (2016), "The Rise of the Independent Director: A Historical and Comparative Perspective," *Max Planck Private Law Research Paper* 16/20.
12. Wiersema, Margarethe and Mors, Marie Louise (2016), "What Board Directors Really Think of Gender Quotas," *Harvard Business Review* Digital Article.
13. Pathan, Shams, and Fall, Robert (2013), "Does Board Structure in Banks Really Affect their Performance?" *Journal of Banking and Finance*, Vol. 37 (5), 1573-1589.
14. Adams, Renee, and Ferreira, Daniel (2009), Women in the Boardroom and their Impact on Governance and Performance," *Journal of Financial Economics*, Vol. 94 (2), 291-309.
15. Fernandes, Catarina; Farinha, Jorge; Martins, Francisco Vitorino; and Mateus, Cesario (2017), "Supervisory Boards, Financial Crisis and Bank Performance: Do Board Characteristics Matter?," *Journal of Banking Regulation*, Vol. 18 (4), 310-317.
16. Bernile, Gennaro; Bhagwat, Vineet; and Yonker, Scott (2018), "Board Diversity, Firm Risk, and Corporate Policies," *Journal of Financial Economics*, Vol. 127 (3), 588-612.
17. Securities and Exchange Commission, *17 CFR Parts 228, 229, 240, 249 and 274*, "Standards Relating to Listed Company Audit Committees."
18. Federal Reserve System, *12 CFR Part 252*, "Enhanced Prudential Standards for Bank Holding Companies and Foreign Banking Organizations."
19. Aebi, Vincent; Sabato, Gabriele; and Schmid, Markus (2012), "Risk Management, Corporate Governance and Bank Performance in the Financial Crisis," *Journal of Banking and Finance*, Vol. 36 (12), 3213-3226.
20. Kirkpatrick, Grant (2009), "The Corporate Governance Lessons from the Financial Crisis," *OECD Journal: Financial Market Trends*, Vol. 2009 (1), 61-87.
21. Bader, Barry, S. (2009), The Executive Committee: Roles, Uses, and Abuses," Governance Institute. com.
22. Rossi, Clifford (2016), "Headlines from Recent Bank Scandals Are Their Own Problem," *American Banker* (4 November).
23. Dey, Sumit, K. (2013), Reputational Risk in Banking – The Current Approach and a Way Ahead," *TCS Research Journal*, Vol. 2 (3), 37-45.
24. Banyon, David (2009), "Basel Committee Releases Basel II Capital Enhancements," *Risk.net Daily News Headlines*.




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25. Hayes, Rachel; Mehran, Hamid; and Schaefer, Scott (2004), "Board Committee Structures, Ownership, and Firm Performance, Working Paper.
26. Klein, April (1998), "Firm Performance and Board Committee Structure," *The Journal of Law and Economics*, Vol. 41 (1), 275-304.
27. Handorf, William, C. (2016), "Regulatory Ratios, CDS Spreads and Credit Ratings in a Favorable Economic Environment," *Journal of Banking Regulation* (advanced on-line).
28. Handorf, William, C. (2015), "Bank Holding Company Dividend Policy, Regulatory Guidance and the Great Recession," *Journal of Banking Regulation* (advanced on-line).
29. Moody's Investors Service (2015), "Rating Methodology: Banks," (16 March).
30. Baris, David (2017), "Let Board Decide if Chair and CEO should be Separate," *American Banker* (9 February).
31. Chiu, Ning 2017), "Major Institutional Investors Adopt Corporate Governance Framework," *Davis Polk Briefing: Governance* (31 January).



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# Real Interest Rate and Investment Nexus: The Case of Ghana

By Daniel Ofori & George Asumadu
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*Abstract-* This study examines variations in interest rate and investment determination in Ghana. The study is necessitated by the fact that previous studies only examined the effect of interest rate on investment determination without assessing the bi-casual relationship between these macroeconomic variables. Investment decision is seen as demand for credit in an economy and this study calculated the annual time series for the period 1990-2014 and examined the determinants of interest rate variation and its impact on investment. Unit roots and co-integration tests were conducted. Data for the study were extracted from the World Development Indicators Database. The study revealed that variation in interest rate played a negative and highly significant role in investment decision in the economy and demand for credit also had negative and significant influence on interest rate variations in both the short run and long run. Although, the study deduced that investment has an indirect relationship with interest rate variation, other variables such as debt burden, economic stability, foreign exchange, shortage and lack of infrastructure affect gross domestic investment. Improvement in these key macro-economic variables is a necessary condition towards promoting investment. The findings and recommendations provide vital information relevant for policy formulation and implementation aimed at boosting investment in Ghana.

*Keywords:* *investment, interest rate, inflation.*

*GJMBR-C Classification:* *JEL Code: G11*

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# Real Interest Rate and Investment Nexus: The Case of Ghana

Daniel Ofori [α] & George Asumadu [σ]

*Abstract-* This study examines variations in interest rate and investment determination in Ghana. The study is necessitated by the fact that previous studies only examined the effect of interest rate on investment determination without assessing the bi-casual relationship between these macroeconomic variables. Investment decision is seen as demand for credit in an economy and this study calculated the annual time series for the period 1990-2014 and examined the determinants of interest rate variation and its impact on investment. Unit roots and co-integration tests were conducted. Data for the study were extracted from the World Development Indicators Database. The study revealed that variation in interest rate played a negative and highly significant role in investment decision in the economy and demand for credit also had negative and significant influence on interest rate variations in both the short run and long run. Although, the study deduced that investment has an indirect relationship with interest rate variation, other variables such as debt burden, economic stability, foreign exchange, shortage and lack of infrastructure affect gross domestic investment. Improvement in these key macro-economic variables is a necessary condition towards promoting investment. The findings and recommendations provide vital information relevant for policy formulation and implementation aimed at boosting investment in Ghana.

*Keywords: investment, interest rate, inflation.*

## I. Introduction

The role of investment in economic growth can hardly be overemphasized in any economy (Chhibber 2016). Both economic theories as well as empirical work have concluded that there is a positive relationship between investment and economic growth (Blanchard and Summers, 1984; Hansen & Seshadri, 2013). As a result, policy makers and economists are often concerned with the factors that determine the level of investment in an economy. One of such factors that exert greater influence on investment is the real interest rate.

The relationship between investment and the real interest rate has generated interesting discussions in economic theory. As much as real interest rate plays a crucial role in the monetary policy transmission mechanism, the relationship between the real interest rate and investment is of great importance to policy makers.

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According to the neoclassical theory of investment, there is a negative relationship between investment and the real interest rate. Thus, a rise in the real interest rate raises the real cost of capital and as a result reduces investment level. However, a reduction in the real interest rate lowers the real cost of capital and hence raises investment level (Haavelmo, 1960 and Jorgenson, 1963).

There are two conflicting views of the effect of the real interest rate on the level of private investment. A high interest rate level raises the real cost of capital and therefore dampens the private investment level. On the other side, poorly developed financial markets in less developing countries (LDCs) and inadequate access to foreign financing for most private projects; both imply that private investment is constrained largely by domestic savings. These in theory, are expected to respond positively to higher real interest rates.

In Ghana, investment growth has often been linked with the real rate of interest. Like in many other countries, the Central Bank (i.e. Bank of Ghana) fixes the prime rate and the commercial banks compete with each other in determining the level of interest rate on loanable funds.

In an interview organized by Joy FM, an Accra-based radio station, about *my Business 2010*, Alhaji Asuma Banda, an astute entrepreneur in Ghana lamented over the high interest rate charged by the commercial banks in Ghana. He said "the slow growth of the private sector is a result of the high interest rate" (www.myjoyonline.com).

Ghana's persistently high interest rates have awful consequences for sustainability and long term prospect for the country's economy. In fact, high – interest rate, high cost of credit translate into high cost of doing business. High cost of doing business translates into the cost of production for industries which are then passed on to consumers in the form of higher prices of goods and services. The overall consequence is that high cost of credit affects the national growth potentials.

The objective of this paper is therefore to investigate the links or impact of interest rate on the level of investment in Ghana, using data covering periods 1990 to 2014.

The paper is structured into five sections namely, the introduction, reviewed literature, econometric methodology, discussion of results and the conclusion.



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## II. Reviewed Literature

Investment decisions follow certain determinants as they are the precursor of real interest rates just as opined in the introduction of this paper. Macroeconomic variable like inflation, exchange rate, unemployment, interest rate, etc affects investment through productivity or economic growth. Many studies have investigated the relationships of these variables on GDP in both advanced and developing countries (Kiichi, 2012, Gokal and Hanif 2004, Mckinnon and Shaw, 1973, Mundell, 1963). Mckinnon (1973) and Shaw (1973) posit that letting market forces determine the real interest rate leads to increase in savings that spur economic growth through higher interest rate by inducing savings. They predicted positive relationship between real interest rate and economic growth. In emerging market like India, Kiichi (2012) found negative impact of higher real interest rate on corporate investment with macroeconomic data. On the firm level variables like profitability, liquidity and leverage were considered as key determinants of corporate investment *ibid*. Many studies on interest rates have been done in Asian countries with contrasting results Fry (1978) and Giovannini (1983).

Price of loanable funds do not come cheap and the market forces has a role to play in line with classical dogma, that is, demand and supply in such market (Mishkin, 1986).

The work of Onwumere et al (2012) about interest rate liberalization on savings and investment in Nigeria, using data from 1976 to 1999 concluded that there was negative non significant impact on savings but at the same time, negative significant impact on investment in Nigeria.

In the Ghanaian scene, Mensah and Okyere's study (2015) about the impact of interest rate, inflation and GDP on real economic growth rate in Ghana concluded that interest rate has a negative influence on real growth rate, using data for the period 1980 – 2012.

## III. Empirical Strategy

The study used annual time series data for the period 1990 – 2014 obtained from published sources. The major sources of data included World Bank's World Development Indicators, 2008 CD-ROM and IMF International Financial Statistics, 2006. Other sources included annual reports of Bank of Ghana and Ghana Macroeconomic Review by Centre for Policy Analysis (CEPA). All estimations as well as the various econometric tests were carried out using the Microfit 4.1 econometric software.

The dependent variable in this study is represented by Gross Domestic fixed investment which includes plants, machinery and equipment. It also includes the construction of roads, railways, and others such as schools, offices, hospitals, private residential dwellings, and commercial and industrial buildings and it is used as a proxy for investment. It refers to real capital calculated using 2000 constant prices.

The explanatory variables include real interest rate (R), inflation (INFL) and real Gross Domestic Product (Y). Interest rate here refers to the real interest rate and measures the annual percentage increase in the real value of a financial asset. It is calculated by making adjustments for increase in price (or inflation). In this study, the Bank of Ghana's prime rate is used as a proxy for interest rate. Inflation as measured by the consumer price index reflects the annual percentage change in the cost to the average consumer of acquiring a fixed basket of goods and services that may be fixed or changed at specified intervals, such as yearly.). Gross Domestic Product is the total value of goods and services produced within the borders of an economy or a country during a given period of time measured in market prices. It is calculated using 2000 constant prices.

### a) *Model Specification*

According to neoclassical economic theory, the level of investment mainly depends on interest rate. This is expressed as:

$$I_t = f(R_t) \quad (1)$$

Where,

$I_t \rightarrow$ The Level of Investment

$R_t \rightarrow$ Rate of Interest

$t \rightarrow$ Time

However, there are several other variables that determine the level of investment. Thus, in this study we will introduce the level of income as well as inflation as other variables that affect the level of investment.

Consequently, eqn (1) becomes

$$I_t = f(R_t, INFL_t, Y_t) \quad (2)$$

Where,

$INFL \rightarrow$ Inflation

$Y_t \rightarrow$ The Level of Income

Eqn (2) can be expressed as

$$I_t = \beta_0 + \beta_1 R_t + \beta_2 INFL_t + \beta_3 Y_t + \varepsilon_t \quad (3)$$

Where $\varepsilon_t$ is the error term. All the other variables have already been defined.

From eqn (3) the specific model for the level of investment for the Ghanaian economy in log-linear form is given as:

$$\ln I_t = \beta_0 + \beta_1 \ln R_t + \beta_2 \ln INFL + \beta_3 \ln Y_t + \varepsilon_t$$

Where the $\beta_s$ represent the elasticity coefficients

## IV. Empirical Results

### a) *Test for Stationarity*

The stationary test is based on the DF-GLS[1]. The results of the unit root test are presented in Table 1.

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The DF-GLS test involves testing the null hypothesis of non-stationarity of the variables against the alternative hypothesis of stationarity. The test regression included both an intercept and a linear trend for the log levels as well as intercept with no linear trend for the first differences of the variables.

*Table 1:* Results of the Stationarity Test

| Log Level | | | First Difference | | |
|---|---|---|---|---|---|
| Variable | Lags | DF-GLS stat | Variable | Lag | DF-GLS Stat |
| LI | 3 | -1.0647 | ΔLI | 1 | -5.6974** |
| LR | 3 | 0.1032 | ΔLR | 1 | -3.8842** |
| LINFL | 3 | -1.3271 | ΔLINFL | 1 | -3.3271** |
| LY | 3 | -1.6410 | ΔLY | 1 | -3.0901** |

*** denotes the rejection of the null hypothesis of non-stationarity at 1% significance level. Results were obtained from Microfit 4.1*

The results from the table indicate that all the variables are integrated of order 3 (i.e. I(3)). However, all the variables become stationary after the first difference as they are integrated of order 1 (i.e. I(1)). Thus, the null hypothesis of non-stationarity can be rejected and the alternative hypothesis of stationarity accepted.

*b) Test for Multicollinearity*

There is multicollinearity when two or more independent variables have a log-linear relationship, or correlation, with one another. There are two important consequences associated with multicollinearity. First, standard errors of the coefficients would be very large thus, increasing the probability of type two error (failing to reject a false null hypothesis). Secondly, the most important consequence of perfect multicollinearity is that the Ordinary Least Squares method of estimation will not run. A correlation coefficient matrix is usually used to show correlation (multicollinearity) between independent variables. With absolute values greater than |0.70| on the correlation matrix, multicollinearity is present. Sensing the possibility of some correlation between the individual explanatory variables, the model was tested for multicollinearity and found no indication of significant problem of multicollinearity. A set of Pearson correlation matrix showing the correlation between the explanatory variables are given below:

*Table 2:* Correlations matrix

| | | Interest | Inflation | GDP |
|---|---|---|---|---|
| Interest | Pearson Correlation | 1 | -.376** | .417** |
| | Sig. (2-tailed) | | .000 | .006 |
| | N | 18 | 18 | 18 |
| Inflation | Pearson Correlation | -.376** | 1 | -.283** |
| | Sig. (2-tailed) | .000 | | .000 |
| | N | 18 | 18 | 18 |
| GDP | Pearson Correlation | .417** | -.283** | 1 |
| | Sig. (2-tailed) | .006 | .000 | |
| | N | 18 | 18 | 18 |

***Correlation is significant at the 0.01 level (2-tailed). Results were obtained from Microfit 4.1*

Spearman's correlation coefficient was used to test the regression model for the presence of heteroskedasticity. It was discovered that heteroskedasticity was not a problem as none of the correlation coefficient was more than the |0.70| threshold. This is shown in the table below.

*Table 3:* Spearman's Rank Correlation coefficient for model

| | | GDFCF |
|---|---|---|
| Interest | Correlation Coefficient | 0.467 |
| | Sig (2-tailed) | .000 |
| | N | 200 |
| Inflation | Correlation Coefficient | .189 |
| | Sig (2-tailed) | .007 |
| | N | 200 |
| National Income | Correlation Coefficient | .467 |
| | Sig (2-tailed) | .000 |
| | N | 200 |



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The stability of model specification test was carried out using Cumulative Sum of Residuals Squares (CUSUMQ) and the results indicated that the model was stable and correctly specified at 5% error level. This is represented in the figure 1 below:

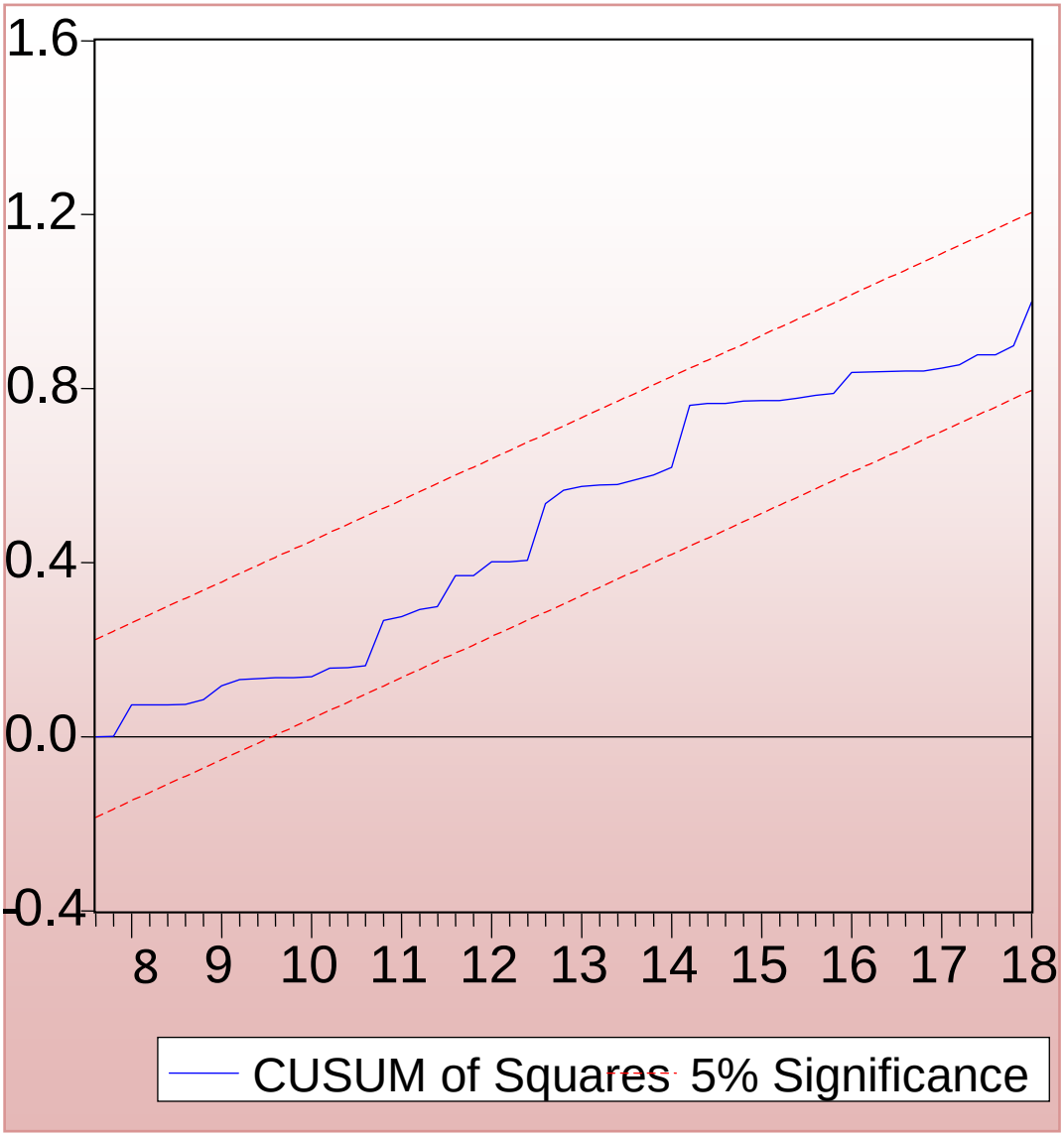



*Figure 1:* Cumulative Sum of Residuals Squares (CUSUMQ)

*Results were obtained from Microfit 4.1*

*c) Regression Results*

The table 4 lists the OLS estimates of investment expenditure on interest rate, inflation and GDP.

*Table 4:* The regression estimate of investment function

| Variable | Coefficient | P–Value |
|---|---|---|
| Constant | 28.787 | 0.000 |
| Ln Interest Rate | -3.442 | 0.001 |
| Ln Inflation | -0.319 | 0.051 |
| LnGDP | 0.209 | 0.046 |

*Dependent Variable: Gross Domestic fixed capital formation*

R Square = 0.650 Adjusted R Square = 0. 575
F – Statistics = 8.661 P-Value = 0.002 N =17

*Results were obtained from Microfit 4.1*



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*Hypotheses Results*

- $H_o$ hypothesis is rejected in favour of $H_1$ which state that investment expenditure in does vary with interest rate.
- $H_o$ hypothesis is accepted which state that investment expenditure rate does not vary with inflation.
- $H_o$ hypothesis is rejected in favour of $H_1$ which state that investment expenditure does vary with National income.

*d) Interest Rate*

Estimates from table 4 suggest that there is a negative relationship between gross domestic fixed capital formation and interest rate level and this is statistically significant. The sign of the estimated coefficient is consistent with prior expectation. As domestic interest rate increases by one percent, real fixed capital formation decreases 3.44 percent. This is because interest rate serves as a cost of investment through capital formation, and so higher interest rate increases the opportunity cost of investment expenditure hence increases in domestic interest rate reduces real domestic fixed capital formation.

*e) Inflation*

Estimate from the regression results indicated however that inflation was not significant with real domestic fixed capital formation. The basic reason is that investors do not matter the level of inflation before undertaking investment expenditures.

*f) Gross Domestic Product*

The table 4 also shows that there is a positive relationship between real domestic fixed capital formation and the real national income and this is statistically significant. The sign of the estimated coefficient is consistent with prior expectation. As real national income increases by 1%, real domestic fixed capital formation increases 0.21%.

From table 4, $R^2$ is 0.650 which indicates that the independent variables together explain 65.0% of the variation in the Gross Fixed capital formation. The model as a whole is statistically significant (F – Statistics = 8.661, P - value = 0 .002).

## V. Conclusion

It was found in the study that interest rate robustly determines investment expenditures in Ghana and that expected marginal propensity to invest is negatively related to interest rate. In other words higher interest rate makes the cost of borrowing to finance domestic fixed capital formation expensive to undertake. On the other hand, lower interest decreases the cost of borrowing and hence stimulates expenditures on domestic fixed capital formation.

The study found out that the gross domestic fixed capital formation is not affected by domestic price level. The reason may be that government often is seen to initiate measures with the aim of controlling inflation and that been the target of the government in her budget presentations - inflationary target budgets. Thus, price level has been fairly stable for a while; its effect on domestic fixed capital formation is almost negligible.

Further, the results also revealed that there is a positive relationship between gross domestic fixed capital formation and National income level. As National income increases, more monies are available for investment expenditure. This comes about as a result of increases in both households and corporate savings thus, making more loanable funds available to investors for investment purposes. The findings of the study send signal to policy makers and stakeholders involved in the management of the macro economy especially, where the primary objective is to increase investment level.

## References


1. Ajay Chhibber (2016) Reviving Private Investment is Key. http://www.business-standard.com/article/opinion/ajay-chhibber-reviving-private-investment-is-key-116051400709_1.htm
2. Alhaji Asuma Banda, (2010) *My Business 2010* on (www.myjoyonline.com).
3. Badawi, A., (2004) *Private Capital Formation and Macroeconomic Policies in Sudan: Application of a Simple Co integrated Vector Autoregressive Model*," Department of Economics, University of Khartoum.
4. Blanchard Olivier and Lawrence Summers (1984) Perspectives on High World Real Interest Rates, *Brookings Papers on Economic Activity*: 2: 273-334.
5. Dickey, D.A and Fuller, W.A (1981) The Likelihood ratio statistics for autoregressive time series with a unit root, *Econometrica*, 1981 Vol. 49, pp. 1057 – 72.
6. Engle and Granger, C. (1987) Co-integration and Error Correction; Representation, Estimation Testing. Econometrica, 1987, vol. 55, pp 251- 76.
7. Fry M. J. (1978) Money and Capital or Financial Deepening in Economic Development. *Journal of Money, Credit and Banking*, Vol. 10 No. 4.
8. Giovannini A. (1983) the Interest Rate Elasticity of Savings in Developing Countries: The Existing Evidence. World Development, Vol 11 No. 7.
9. Gokal and Hanif (2004) Relationship between Inflation and Economic Growth, Reserve Bank of Fuji Press. Vol. 2004/04.
10. Hansen Bruce E. & Seshadri Ananth (2013) Uncovering the Relationship between Real Interest Rates and Economic Growth. Working Paper, WP 2013-303, Retirement Research Center, University of Michigan.
11. Haavelmo Trygve (1960) A Study in the Theory of Investment. University of Chicago Press.
12. ISSER (2010), the State of the Ghanaian Economy.




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13. Investor words (2011) Real Interest Rate on line viewed 13th February, 2011 from http;//www. investorwords.com.
14. Jorgensen D. (1963) Capital Theory and Investment Behaviour. American Economic Review 53 No. 2, PP. 247-259.
15. Mckinnon R. I. (1973) Money and Capital in Economic Development. Washington D. C.: Brookings Institution.
16. Mensah, Alice C. and Okyere Ebenezer (2015) Real Economic Growth Rate in Ghana: The Impact of Interest Rate, Inflation and GDP. *Global Journal of Research in Business & Management, Vol. 4 No. 1,* pp 206 – 212.
17. Mishkin S. F. (1986) Money, Banking and Financial Markets, Boston USA.
18. Mundell, R. (1963) Inflation and Real Interest Rate. *Journal of Political Economy*, 71: 280-283.
19. Onwumere J. U. J; Okore Amah O.; Imo G. Ibe (2012) the Impact of Interest Rate Liberalization on Savings and Investment: Evidence from Nigeria. *Research journal of Finance and Accounting,* Vol. 3 No. 10. PP 130 – 136.
20. Shaw E. (1973) Financial Deepening in Economic Development. New York: Oxford University Press.
21. Tokuoka Kiichi (2012) Does the Business Environment Affect Corporate Investment in India? IMF Working Paper, WP/12/70.
22. Wang and Yu (2007) examined the role of interest rate in investment decisions for firms in Taiwan.
23. World Bank's World Development Indicators, 2008 CD-ROM and IMF International Financial Statistics, 2010.

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# The Influence of Financial Leverage, Customer Deposit and Capital Adequacy on the Financial Sustainability of Some Selected Nigerian Micro Finance Banks

By Aza, Ibrahim Eyigege
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*Abstract-* How to attain financial sustainability of microfinance banks in Nigeria today is one of the main problems bedeviling our microfinance banks. Several Scholars have investigated the determining factors affecting financial sustainability of Microfinance Institutions in various countries using large and well developed Microfinance Institutions. In consideration of some factors that may impact on the sustainability of microfinance banks in Nigeria, this study aims to examine the influence of financial leverage, customer deposit and capital adequacy on financial sustainability of some selected microfinance banks in Nigeria. This study utilizes secondary data sourced from the certified annual reports of the selected microfinance banks. The data for the study were analyzed using OLS regression and fixed effect regression and it was observed that there is no statistical evidence to suggest that financial leverage, customer deposit and capital adequacy has significant influence on both financial and operational sustainability. The study found insignificantly positive influence of financial leverage and insignificantly negative influence of customer deposit and capital adequacy on financial sustainability of MFBs. Capital adequacy shows significantly positive influence and financial leverage and customer deposit indicates negative influence on operational sustainability of MFBs in Nigeria.

*Keywords:* *financial sustainability, operational sustainability, financial leverage, customer deposit, capital adequacy.*

*GJMBR-C Classification:* *JEL Code: G19*




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*Keywords: financial sustainability, operational sustainability, financial leverage, customer deposit, capital adequacy.*

## I. Introduction

The concern of corporate financial managers is to boost up shareholders wealth and minimize the cost of capital. Financial managers are always deeply concern on decision making most of which are taken with regards to investment, dividend policy and financing. According to Raza (2013), investment decisions relate to three areas such that either the manager has to take decision about opening a new venture or decision may relate specifically to expansion of current business venture or it may be to replace current assets or machinery because of technological improvements. Once the investment decision is done, the next important and critical decision is how to finance the investment decision that has been taken by corporate financial managers. Some of these investment decisions can be financed by debts, either long term or short term. According to Pandey (1999: 633) assets of a company can be financed either by increasing the owners claims or the creditors' claims. The owners claim increases when the firm raises funds by issuing ordinary shares or by retaining earnings while the creditors claim increases by borrowing. The various means of financing represent the financial structure of an enterprise. The concept of leveraged buy-out relates to an acquisition of a company in which the acquisition is substantially financed through debt. The use of the term trade on equity is derived from the fact that it is the borrowers' equity that is used as a basis to raise debt, that is, the equity that is traded upon. According to Pandey (1999: 1123) debt typically forms 70 to 90 percent of purchase price and it may have a low credit rating. Assets can be financed through different options of capital structure. A firm can use different mixes of debts, equity or other financial arrangements. According to Raza (2013) for enhancement of high market value, a firm can go for different combinations of bonds, lease financing, bank loans or many other options. Decision taken with respect to capital structure is a crucial decision particularly in the area of corporate finance.

The way in which assets are financed has several implications. Firstly finance between debt and equity, debt is more risky compare to equity from the point of view of firms. Firm has a legal obligation to pay interest to debt holders irrespective of the profits made or loss incurred by the firm. If the firm fails to pay to debt holders in time, debt holder can take legal action and in extreme cases, force the firm into liquidation. Secondly, the use of debt has two advantages for shareholders. 1. Shareholders can retain control of the firm with a limited stake and 2. Their earnings can be magnified when the firm earns a rate of return on the total capital employed higher than the interest rate on the borrowed funds. The process of magnifying the shareholders returns through the use of debt is called "financial leverage" or "financial

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gearing" or "trading on equity". However, leverage can work in opposite direction as well. If the cost of debt is higher than the firms overall rate of return, the earnings of shareholders will be reduced. There is also threat of insolvency. If the firm is actually liquidated for nonpayment of debt holder's dues, shareholders being the residual owners will be the worst sufferers. Therefore use of debts magnifies shareholders earnings as well as increases their risk. Thirdly, a high debt burden firm will find difficulty in raising funds from creditors and owners in future. The owner's equity is treated as margin of safety by creditors such that if the equity base is thin, the creditor's risk will be high. Leverage ratio is therefore calculated to measure the financial risk and the firm's ability of using debt to shareholders advantages (Pandey, 1999:117). Whichever way the debt ratio is calculated, it show the extent to which debt financing has been used in the business. High ratio signifies that claims of creditors are greater than those of the owners while a low debt – equity ratio signifies a greater claim of owners than creditors (Pandey, 1999:121).

Microfinance bank operation in Nigeria is significant to the country's socio-economic development as it plays a fundamental role in financial inclusion. Despite its role, the sector has been facing numerous challenges threatening their growth and expansion. The facts that all the microfinance banks in Nigeria are deposit taking, an operating system in line with that of deposit money banks, they also give out loan to their customers signifying that they also rely heavily on debt and possibly retain earnings and according to Waweru and Wanyoike (2016) this is a huge challenge due to inadequacies of retain earnings and exorbitant interest rates charged by conventional deposit money banks when lending to microfinance banks. Therefore when microfinance banks lacks sufficient funds to advance to customers in form of loans, it means profit forgone, consequently leading to losses and ultimate collapse of the banks.

Several studies have been conducted in various countries on the issue of sustainability and profitability of microfinance institutions and there are a lot of inconsistencies in their findings. In Nigeria, such studies include the study of Anyanwu (2004), Achalkechukwu (2012), Adekunle (2011) Muhammed and Hassan (2008) and Mejeha and Nwachukwu (2008). A major criticism of these studies conducted in Nigeria is that some of the studies were exploratory as they only try to explore the challenges and prospect for microfinance sustainability. Subsequently, the empirical studies conducted on effect of equity capital and debt capital on profitability of MFIs used primary sources data which findings cannot be heavily relied upon due to its subjectivity. This study is therefore unique from existing studies as it tries to source for documentary evidence which are certified by professional auditors to conduct the study. Though, documentary source of data from MFIs are hardly accessible. This study was able to have access to certified financial statements of microfinance banks selected for the study by which reliable and objective findings can be achieved.

Hence, this study is designed to examine the influence of financial leverage, customer deposit and capital adequacy on financial sustainability of some selected Nigerian microfinance banks. The major objective of this study is to examine the degree of influence of financial leverage, customer deposit and capital adequacy on the financial sustainability of some selected Nigerian microfinance banks.

*The specific objectives of this study are;*

i. To examine the degree of influence of financial leverage, customer deposit and capital adequacy on financial sustainability of some selected Nigerian microfinance banks.
ii. To investigate the degree of influence of financial leverage, customer deposit and capital adequacy on operational sustainability of some selected Nigerian microfinance banks.

*The following hypotheses are formulated;*

$H_{0i}$: Financial leverage, customer deposit and capital adequacy have no significant influence on financial sustainability of Nigerian microfinance banks.

$H_{0ii}$: Financial leverage, customer deposit and capital adequacy have no significant influence on operational sustainability of Nigerian microfinance banks.

This study focuses on financial leverage as independent variables proxied by (total debt to total equity, total debt to total asset), customer deposit proxied by (deposit to equity and deposit to asset) and capital adequacy proxied by equity to total asset. Dependent variables are financial sustainability (FSS) and operational sustainability (OSS).

Period of the study is seven years (2010 - 2016) because this period is their first seven years of existence, expansion and growth.

## II. Literature Review

*a) Concept of Financial Leverage*

Financial leverage is the degree to which debt is used by companies' in order to finance the operations of an entity. In other words, financial leverage is the amount of debt an enterprise uses to fund operations. The more a company uses debt to finance business operations, the higher its financial leverage. If the degree of financial leverage is high it implies high interest payments, consequence of which negatively affects the company's corporate earnings (earnings per share). An increase in debt financing causes financial risks to stockholders because as company increases debt, interest payment increases thereby reducing corporate earnings resulting to increase in the risk to stockholder returns. Financial leverage is the borrowing

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of funds to increase volume of production and it is the financial risk an entity employs. According to Peavler (2017) leverage, as a business term, refers to debt or to the borrowing of funds to finance the purchase of inventory, equipments and other company assets. An entity can use either debt or equity to finance or buy the company's assets. The use of debt or leverage increases the company's risk of bankruptcy and also increases the company's return on equity because if debt financing is used instead of equity financing, then the owners equity is not diluted by issuing more shares of stock (Peavler, 2017).

In finance, financial leverage is any technique involving the use of borrowed funds in the purchase of an asset, with the expectation that the after tax income from the asset and asset price appreciation will exceed the borrowing cost. According to Brigham (1995), leveraging enables gains and losses to be multiplied. While leverage magnifies profit when the return from the asset is more than offset the cost of borrowing, leverage may also magnify losses. A corporation that borrows too much money might face bankruptcy or default during a business downturn, while a less leveraged corporation might survive (Bodie et al, 2008).

*b) Concept of Financial and Operational Sustainability*

Sustainability of an organization is its ability to operate profitably as a going concern without relying solely on external funds. It is the ability of bodies responsible for administering the affairs of organizations to maintain its operation over a long term. It is an ability of organization for being able to exist for the beneficiaries in the long term without ceasing activities as a result of poor financial performance. According to Thapa et al (1992) financial sustainability is the ability of microfinance institutions to cover all its costs from its own generated income from operations without depending on external support or subsidy. This definition according to Kinde (2012) implies that a loss making microfinance institutions (microfinance institutions with poor financial performance) will not be classified as financially sustainable. Again, a profit making microfinance institutions whose profitability is determined after covering some of the operating costs by subsidized resources or funds will also not be considered as financially sustainable.

Operational sustainability according to Meyer (2002) is the ability of microfinance institutions to cover its operational costs from its operating income regardless of whether it is subsidized or not.

*c) Concept of Corporate Earnings*

Earnings conceptually refers to after tax net income and they are the core determinants of stock price, because earnings and the issues leading to the earnings can indicate whether the business will be profitable and successful in the long run. They are the amount of profit that a company produces during a specific period and represent a direct link to the company performance. Earnings per share is a commonly cited ratio used to show the company's profitability on a per share basis. According to Mulama (2014) earnings retained are defined as the portion of net profit after tax which is kept by the firm instead of distributing it as dividends.

*d) Concept of Microfinance Bank*

According to Hartarska (2005) microfinance is the provision of small scale financial services to low income or unbanked people. According to Ledgerwood (1999) microfinance has evolved as an economic development approach intended to benefit low income women and men. The term refers to the provision of financial services to low income clients, including the self employed. According to Central Bank of Nigeria (2012) "a microfinance bank (MFB) unless otherwise stated shall be construed to mean any company licensed by central bank of Nigeria to carry on the business of providing financial services such as savings and deposits, loans, domestic fund transfers, other financial and non financial services to micro clients".

## III. Empirical Review

*a) Effect of Leverage on Sustainability*

There has been mixed result of studies on the effect of debt on returns ranging from those supporting a positive relationship hypothesis to those with the contrary view. Some studies found that capital structure have relationship with the returns of firms. Wambugu and Ngugi (2012) empirically examined the factors influencing financial sustainability of microfinance institutions in Kenya and found a positive association between capital structure and financial sustainability of microfinance institutions in Kenya. This study therefore seeks to establish relationship between financial leverage, customer deposit and capital adequacy and financial sustainability of some selected Nigerian microfinance banks. Abor (2005) empirically examined the effect of debt on performance of firms in Ghana and confirmed a significantly positive relationship between total debt and total assets and return on equity thereby indicating a positive leverage. A firm's debt level and its value will be positively related especially when shareholders have absolute control over the business of the firm and it will be negatively related when debt holders have the power to influence the course of the business. The impact of debt on value of firms therefore, depends on the balance of power within a firm. If shareholders have more power, a positive leverage will prevail and if debt holders have more power, a negative leverage would take place (Belkovitch and Isreal, 1996).

Tauseef, Lohano and Khan (2015) examined empirically the effect of debt financing on firms financial performance, measured as return on equity, using panel data of 95 textile companies in Pakistan and finds a non



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linear relationship between return on equity and debt to asset ratio. Kyereboah (2007) also examined the impact of capital structure on the performance of microfinance institutions and the finding of the study indicates that highly leveraged microfinance institutions have higher ability to deal with moral hazards and adverse selection than their counterparts with lower leverage ratios.

Ganka (2010) empirically examined the determinants of financial sustainability of rural microfinance institutions in Tanzania and finds that equity financing is the cheaper option and as such improves the performance of microfinance institutions. The study also noted that how capital of microfinance is structured determines the performance of the institution and not having different sources of capital structure. Kipkoech and Muturi (2014) conducted an empirical study to establish the relationship between capital structure and financial performance of microfinance institutions sampling 52 respondents from selected microfinance institutions in Nakuru town. The study found that the capital structure had the greatest influence and enhances the performance of microfinance institutions. Waweru and Wanyoike (2016) also examined the effect of equity capital and debt capital on profitability of microfinance institutions adopting a cross-sectional survey research design targeting 171 employees within the institutions using SPSS to facilitate the analysis. The study found equity capital not significantly influencing profitability but debt capital had a significant influence on profitability. Raza (2013) in his study of effect of financial leverage on firm performance using panel data analysis found negative relationship between leverage and performance. Ahmed, Salman and Shamsi (2015) studied a stochastic relationship between financial leverage and profitability of cement sector operating in Pakistan using 18 cement manufacturers out of 21as sample size for the period of six years (2005-2010) and the study found that financial leverage has a statistically significant inverse impact on profitability.

*b) Debt Capital and Performance of Microfinance Banks*

Kaloo (2015) also examined the determinants of financial performance of microfinance banks in Kenyan coast in the model using descriptive research design with a target population of 65 members of Nanimo and Jumbe MFIs in Jomvu Kuu from which a sample of 60 members was identified. Questionnaires were used to collect primary data. The data collected was analyzed using descriptive statistics to determine the mean, standard deviation, minimum and maximum of the various variables. The findings indicated that loan and savings portfolio affects the performance of MFIs, this was because savings ensured liquidity of the MFIs and prudent allocation of loans Group lending, effective loan portfolio management and diversification of loan portfolio enhances the performance of MFIs.

*c) Customer Deposit and Performance of Microfinance Banks*

Okun (2012) in a bid to investigate the gradual rise in customer deposits and consequently boosting the profitability of banking sector conducted a study on the effect of level of deposits on financial performance of commercial banks in Kenya. His study adopted a causal research design using secondary data from 2004 to 2011 employing the use of SPSS found that there exist a positive and significant relationship between deposit ratio and return on equity. The result also indicates a positive and significant relationship between deposit ratio and return on asset. Tuyishime et al (2015) investigated the effect of deposit mobilization on financial performance of commercial banks in Rwanda and the research used a census to study a population of 27 staff. The main source of data was the primary and secondary data. The documentary method, the questionnaire as research instruments were used to get the data needed for the research. Data were processed by the use of descriptive statistics after editing have been done. The computer software SPSS version 20 was used as a device to accommodate analysis. Pearson and Spearman's correlation analysis was used to test the nature of relationship. The findings indicated that a positive change in deposits interest rate affects the level of deposits received and later on the profitability of the bank.

Jenyo and Adebayo (2015) investigated the performance appraisal of microfinance banks in Nigeria and the method of data collected was based on the use of both descriptive survey and analytical presentation. The study revealed that generally, the liquidity position of MFB was weak and the debt equity ratio revealed that these banks rely heavily on borrowed capital; hence, if for any reason the creditors withdraw their funds, the banks would be faced with a situation of imminent collapse. Similarly, there are strong relationships between their capital base, liquidity stability and relative income.

*d) Equity Capital (Capital Adequacy) and Performance of Microfinance Banks*

Ngumo, Collins and David (2017) examined the determinants of financial performance of microfinance banks in Kenya and among the independent variables in his model is capital adequacy measured by equity to total asset (eta). The study found a positive and statistically significant relationship between capital adequacy (eta) and financial performance of microfinance banks in Kenya.

The study of Waweru and Wanyoike (2016) determined the relationship that exist between equity capital and profitability in MFIs and finds a weak, positive and statistically significant relationship between equity capital and profitability of MFIs.



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Olusuyi and Felix (2017) examined the relationship between capital structure and financial performance using panel data, variables of return on assets and returns on equity were used to measure the financial performance, also variables of debt-equity ratio, asset turnover and age of firm were used to measure capital structure of the sampled manufacturing firms. This study observed that debt-equity ratio has a negative but statistically significant effect on financial performance of manufacturing firms in Nigeria.

## IV. Theoretical Framework

This research study will utilize the three theories to explain the capital structure of firms. These theories are the pecking order theory, the trade off theory and the Modigliani and Miller theory.

*a) Pecking Order Theory*

The pecking order asserts the empirical fact that firms show preferences of internally generated funds to external funds (equity finance preference to debt finance). If equity finance falls short of financing an investment opportunities, firms may or may not acquire external finance (debt financing, share financing, deposit taking etc) and if that decision is taken, firms will choose among the different external finance sources in a way that will minimize cost. The resulting pecking order of financing is as follows: internally generated funds first, followed by respectively low-risk debt financing and share financing (Muturi & Githire, 2015).

*b) Trade-off Theory*

Trade-off theory affirms that firms determine their optimal capital structure by trading off the costs against the benefits of the use of debt and equity. According to Luigi and Visinescu (2009) the trade-off theory predicts that firms target their capital structure in such a way that if the actual leverage ratio deviates from the optimal one, the firm will adapt its financing behavior in such a way that brings the leverage ratio back to its optimal level.

*c) Modigliani and Miller Theory*

Modigliani and Miller propounded a theory that assumes a perfect market and states that the value of the firm is independent of its capital structure. It states that the value of the firm remains unchanged irrespective of the structure a firm uses to finance the operation. The theory propounded shows conditions under which capital structure is irrelevant and the following assumptions were made: A world without taxes, no bankruptcy costs, no transaction costs, no growth and all earnings were paid out as dividends and all individuals in the market are homogenous.

## V. Methodology

This study adopts a descriptive research design using OLS regression and fixed effect regression analysis covering seven years (2010 - 2016).

Population and sample of the study comprises of Microfinance banks (MFBs) referred to as large and well developed microfinance banks in Nigeria selected for the study as follows;

1. NPF Microfinance banks plc
2. FORTIS Microfinance banks plc
3. Nasarawa Microfinance Bank ltd
4. Amba Microfinance Bank ltd
5. FPN Microfinance Banks ltd
6. Keffi Microfinance Bank ltd

The selection is based on their performances and the study therefore employ the use of OLS regression and fixed effect regression analysis to examine the effect of independent variables (dte, dta, depte depta and eta) on the dependent variables (Financial Sustainability proxied by Total revenue divided by total expenses, operational sustainability measured by Total Revenue divided by (financial expense plus operating expense plus loan loss provision expense).

*a) Model Specifications*

$$FSS=\beta_0 + \beta_1 dte + \beta_2 dta + \beta_3 depte + \beta_4 depta + \beta_5 eta + \varepsilon$$

$$OSS=\beta_0 + \beta_1 dte + \beta_2 dta + \beta_3 depte + \beta_4 depta + \beta_5 eta + \varepsilon$$

Where;

FSS = Financial Self Sufficiency
OSS = Operational Self Sufficiency
Dte = Debt to Total Equity
Dta = Debt to Total Asset
Depte = Deposit to Equity
Depta = Deposit to Asset
Eta = Equity to Total Assets
$\beta_0$ = Constant
$\varepsilon$ = Error Term

## VI. Discussion of Findings

*Table A1:* Descriptive Statistics for fss, dte, dta, depte, depta, eta

| Variable | Obs | Mean | Std. Dev. | Min. | Max. |
|---|---|---|---|---|---|
| fss | 42 | 1.277619 | .519727 | .05 | 2.46 |
| dte | 42 | 2.135 | 2.158905 | .11 | 7.99 |
| dta | 42 | .6709524 | .785201 | 0 | 5.44 |
| depte | 42 | 1.938095 | 1.781537 | .11 | 6.46 |
| depta | 42 | .4711905 | .2248816 | .02 | .81 |
| eta | 42 | .3602381 | .1524193 | .11 | .7 |

*Source: Researcher's computation using STATA V.12*



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Table A1 presents descriptive statistics for the variables of the study. It describes the mean, standard deviation, minimum and maximum value. The average value of financial sustainability (FSS) recorded in the period of the study is 1.278. The minimum is 0.05 and the maximum reached is 2.46. In the case of leverage proxied by debt to equity (dte) the average value stood at 2.135 with minimum of 0.11 and the maximum reached is 7.99. Leverage proxied by debt to asset (dta) average stood at 0.671 with minimum of 0 and maximum reached is 5.44. Customer deposit proxied by deposit to equity (depte) average value stood at 1.938 with min. of 0.11 and max. reached is 6.46. Customer deposit proxied by deposit to asset (depta) average value stood at 0.471 with minimum value of .02 and maximum reached is 0.81 In the case of capital adequacy proxied by equity to total asset, the average value stood at .360 with minimum value of .11 and the maximum reached is 0.7

*a) Correlation Analysis*

*Table A2:* Correlation Result

| | fss | dte | dta | depte | depta | eta |
|---|---|---|---|---|---|---|
| Fss | 1.0000 | | | | | |
| Dte | 0.4664 | 1.0000 | | | | |
| Dta | 0.0998 | 0.0555 | 1.0000 | | | |
| Depte | 0.4277 | 0.7309 | 0.0822 | 1.0000 | | |
| Depta | 0.0345 | 0.0328 | -.0837 | 0.5459 | 1.0000 | |
| eta | -0.4651 | -0.7389 | 0.0191 | -0.8080 | -0.3288 | 1.0000 |

*Source: Researcher's computation using STATA V.12*

The correlation result indicates that leverage proxied by (debt to equity and debt to asset) and customer deposit proxied by (deposit to equity and deposit to asset) have positive influence on financial sustainability of Nigerian microfinance banks. It is alternatively found that capital adequacy proxied by equity to asset negatively influences financial sustainability of microfinance banks in Nigeria. The cases above respectively indicate the significance of the relationship given by 1.0000.

*b) Regression Analysis*

*Table A3:* Regression Result

| Ind. Var. | Coefficient | Std. Error | T | p>/t/ | Coefficient | Std. Error | T | p>/t/ |
|---|---|---|---|---|---|---|---|---|
| Constant | 1.562391 | .5010529 | 3.12 | 0.004 | 1.751195 | .4585886 | 3.82 | 0.001 |
| dte | .0278084 | .0688177 | 0.40 | 0.689 | .086801 | .0656172 | 1.32 | 0.196 |
| dta | .0434004 | .0978753 | 0.44 | 0.660 | .1222792 | .0768472 | 1.59 | 0.122 |
| depte | .0653163 | .107004 | 0.61 | 0.545 | -.0378282 | .0861281 | -0.44 | 0.664 |
| depta | -.3933397 | .5229369 | -0.75 | 0.457 | -.6036059 | .3702569 | -1.63 | 0.113 |
| eta | -.8730718 | .8979784 | -0.97 | 0.337 | -1.063774 | .9263139 | 3.82 | 0.260 |
| F | 2.65 | | | | | | | |
| P-Value | 0.0384 | | | | | | | |
| R-Squared | 0.2694 | | | | | | | |
| Wald Chi2 P- Value | 0.0927 | | | | | | | |
| R- Squared: Within | 0.2526 | | | | | | | |
| Between | 0.1758 | | | | | | | |
| Overall | 0.1953 | | | | | | | |

*Source: Researcher's Computation Using STATA V, 12.*

Table A3 depicts the result of both the OLS and fixed effect regression. The OLS shows the F-value of 2.65 and its P-value is 0.0384. Both the OLS and the random effect show the value of R2 as 0.2694 which is the multiple coefficient of determination that gives the proportion or percentages of the total variation in the dependent variable jointly explained by the explanatory variables. Hence, it signifies that approximately only 27% of total variation in financial sustainability (FSS) of selected MFBs in Nigeria can be explained by financial leverage, customer deposit and capital adequacy (dte, dta depte, depta & eta).

The regression result as shown in table A3 indicates that financial leverage (dte and dta) in both the OLS and fixed effect regression insignificantly positively influences financial sustainability. This implies that as the financial leverage increases the financial sustainability improves. This finding corroborate with the



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findings of Kereboah (2007) and Wambugu and Ngugi (2012) and others. In addition, customer deposit measured by deposit to equity in OLS regression insignificantly positively influences financial sustainability which implies that increase in customer deposit leads to improvement positively in financial sustainability. This finding corroborate with the finding of Tuyishime et al (2015) and Okun (2012). On the other hand, customer deposit measured by depta in OLS influences insignificantly negatively to financial sustainability but both OLS and fixed effect regression indicates insignificantly negative influence of capital adequacy on financial sustainability, the finding which is inconsistent with that of Ngumo et al (2017) while fixed effect regression indicate insignificantly negative influence of customer deposit in the two measurements to financial sustainability.

Hausman Specification test was carried out to decide between fixed or random effect models. The result of the hausman test for the model revealed that it is not correlated because of the chi-square probability of 0.0001 which is significant and hence fixed effect was chosen for the interpretation. This is because in Samaila (2014) as cited by Aza (2017) an important assumption of the fixed model is that those time - invariant characteristics are unique to individual firms and should not be correlated with other firm's characteristics.

Therefore fixed effect regression line fss = 1.751195 + .086801dte + .1222782dta - .0378282depte - .6036059depta - 1.063774eta indicates that the financial sustainability increases as financial leverage increases and decreases as customer deposit and capital adequacy increases but there is no statistical evidence to suggest that the effect is significant since their p-values are greater than the significant level of 0.05. These findings are consistent with the findings of Abor (2005) and others but contradict the findings of Okun (2012) and others.

c) *Post Residual Diagnostic Test*

i. *Multicolonearity Test*

*Table A4:* Variance Inflation Factor (VIF)

| Variables | VIF | I/VIF |
|---|---|---|
| depte | 6.63 | 0.150850 |
| dte | 4.03 | 0.248352 |
| eta | 3.42 | 0.292633 |
| depta | 2.52 | 0.396396 |
| dta | 1.08 | 0.928171 |
| Mean VIF | 3.53 | |

*Source: Researcher's Computation using STATA V. 12*

The vif for depte, dte, eta, depta and dta are 6.63, 4.03, 3.42, 2.52 and 1.08 respectively. This indicate that all vifs are less than 10 respectively. This gives this study a conclusion that there is no problem of multicolonearity as multicolonearity exist only when the vif is greater than 10.

ii. *Heteroskedasticity Test*

*Table A5:* Heteroskedasticity

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

Ho: Constant Variance

Variables: Fitted Values of Fss

chi2 (1) = 0.72

Prob > chi2 = 0.3946

*Source: Researcher's Computation using STATA V. 12*

The Breusch – Pagan/ Cook- Weisberg test for heteroskedasticity on depte, dte, eta, depta and dta given the chi2 prob. Of 0.3946 indicating that the data are homoskedasticity. Thus the p-value of 0.3946 which is greater than 0.05 significant levels makes the study to accept the hypothesis that the residuals are not heteroskedasticity but homoskedasticity and is desirable.



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## VII. Discussion of Findings

*Table B1:* Descriptive Statistics for Oss, dte, dta, depte, depta, eta

| Variable | Obs. | Mean | Std. Dev. | Min. | Max. |
|---|---|---|---|---|---|
| oss | 42 | 2.71 | 4.000082 | -1.04 | 12.84 |
| dte | 42 | 2.135 | 2.158905 | .11 | 7.99 |
| dta | 42 | .6709524 | .785201 | 0 | 5.44 |
| depte | 42 | 1.938095 | 1.781537 | .11 | 6.46 |
| depta | 42 | .4711905 | .2248816 | .02 | .81 |
| eta | 42 | .3602381 | .1524193 | .11 | .7 |

*Source: Researcher's computation using STATA V.12*

Table B1 presents descriptive statistics for the variables of the study. It describes the mean, standard deviation, minimum and maximum value. The average value of operational sustainability (OSS) recorded in the period of the study is 2.71. The minimum is -1.04 and the maximum reached is 12.84. In the case of leverage proxied by debt to equity (dte) the average value stood at 2.135 with minimum of 0.11 and the maximum reached is 7.99. Leverage proxied by debt to asset (dta) average stood at 0.671 with minimum of 0 and maximum reached is 5.44. Customer deposit proxied by deposit to equity (depte) average value stood at 1.938 with min. of 0.11 and max. reached is 6.46. Customer deposit proxied by deposit to asset (depta) average value stood at 0.471 with minimum value of .02 and maximum reached is 0.81 In the case of capital adequacy proxied by equity to total asset, the average value stood at .360 with minimum value of .11 and the maximum reached is 0.7.

*a) Correlation Analysis*

*Table B2:* Correlation Result

| | Oss | dte | dta | depte | depta | eta |
|---|---|---|---|---|---|---|
| oss | 1.0000 | | | | | |
| dte | -0.1135 | 1.0000 | | | | |
| dta | -0.0138 | 0.0555 | 1.0000 | | | |
| depte | 0.3044 | 0.7309 | 0.0822 | 1.0000 | | |
| depta | 0.4553 | 0.0328 | -0.0837 | 0.5459 | 1.0000 | |
| eta | -0.2602 | -0.7389 | 0.0191 | -0.8080 | -0.3288 | 1.0000 |

*Source: Researcher's computation using STATA V, 12*

The correlation result indicates that financial leverage proxied by (debt to equity and debt to asset) and capital adequacy proxied by equity to asset shows negative influence on financial sustainability. On the other hand, customer deposit proxied by (deposit to equity and deposit to asset) has positive influence on financial sustainability of Nigerian microfinance banks. The cases above respectively indicate the significance of the relationship given by 1.0000.

*b) Regression Analysis*

*Table B3:* Regression Result

| OSS | OLS | | | | Fixed Effect | | | |
|---|---|---|---|---|---|---|---|---|
| Ind. Var. | Coefficient | Std Error | T | p>/t/ | Coefficient | Std Error | T | p>/t/ |
| Constant | 6.904373 | 3.537486 | 1.95 | 0.059 | -.3683785 | 2.045234 | -0.18 | 0.858 |
| dte | -1.492543 | .48586 | -3.07 | 0.004 | -.0156521 | .2926424 | -0.05 | 0.958 |
| dta | -.0048151 | .6910097 | -0.01 | 0.994 | -.7080228 | .3427265 | -2.07 | 0.047 |
| depte | 1.205631 | .7554593 | 1.60 | 0.119 | .4268149 | .3841182 | 1.11 | 0.275 |
| depta | .9963808 | 3.69199 | 0.27 | 0.789 | -2.198556 | 1.651289 | -1.33 | 0.193 |
| eta | -10.57821 | 6.339823 | -1.67 | 0.104 | 10.5363 | 4.131216 | 2.55 | 0.016 |
| F | 4.51 | | | | | | | |
| P. Value | 0.0027 | | | | | | | |
| R-Squared | 0.3852 | | | | | | | |
| Wald Chi2 P- Value | | | | 0.1006 | | | | |
| R- Squared: Within | | | | 0.2474 | | | | |
| Between | | | | 0.2510 | | | | |
| Overall | | | | 0.0916 | | | | |

*Source: Researcher's computation using STATA V, 12*



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Table B3 depicts the result of both the OLS and fixed effect regression. The OLS shows the F-value of 4.51 and its P-value is 0.0027. Both the OLS and the random effect show the value of $R^2$ as 0.3852 which is the multiple coefficient of determination that gives the proportion or percentages of the total variation in the dependent variable jointly explained by the explanatory variables. Hence, it signifies that approximately only 39% of total variation in operational sustainability (OSS) of selected MFBs in Nigeria is caused by financial leverage, customer deposit and capital adequacy (dte, dta depte, depta & eta).

The regression result as shown in table B3 indicates that financial leverage (dte) significantly negatively influences operational sustainability in the OLS regression and in fixed effect regression; (dte) insignificantly negatively influences operational sustainability. Financial leverage measured by dta insignificantly negatively influences operational sustainability in OLS and significantly negatively influences operational sustainability in fixed effect regression. This implies that as the financial leverage increases the operational sustainability decreases. This finding corroborate with the findings of Tausef et al (2015) and olusuyi and Felix (2017) but disagree with the finding of Abor (2005) Ganka (2010), kipkoech and Muturi (2014), Waweru and Wanyoike (2016). In addition, customer deposit in both proxies in OLS regression significantly positively influences operational sustainability and in fixed effect regression, deposit to asset insignificantly negatively influences operational sustainability which implies that increase in customer deposit leads to improvement positively in operational sustainability. This finding corroborate with the finding of Tuyishime et al (2015) and Okun (2012). Capital adequacy have insignificantly negatively influence in OLS regression while in fixed effect regression capital adequacy have significantly positive influence on operational sustainability. Hausman Specification test was carried out to decide between fixed or random effect models. The result of the hausman test for the model revealed that it is not correlated because of the chi-square probability of 0.0001 which is significant and hence fixed effect was chosen for the interpretation. Therefore fixed effect regression line oss = -.3683785 -.0156521dte -.7080228dta + .4268149depte -2 .198556depta + 10.5363eta indicates that the operational sustainability decreases as financial leverage increases and increases as customer deposit and capital adequacy increases but there is no statistical evidence to suggest that the effect is significant since their p-values are greater than the significant level of 0.05. These findings are consistent with the findings of Olusuyi and Felix (2017) and Tausef et al (2015 and others but contradict the findings of Kipkoech and Muturi (2014) and others.

c) *Post Residual Diagnostic Test*

i. *Multicolonearity Test*

*Table B4:* Variance Inflation Factor (vif)

| Variables | VIF | I/VIF |
|---|---|---|
| depte | 6.63 | 0.150850 |
| dte | 4.03 | 0.248352 |
| eta | 3.42 | 0.292633 |
| depta | 2.52 | 0.396396 |
| dta | 1.08 | 0.928171 |
| Mean VIF | 3.53 | |

*Source: Researcher's Computation using STATA V. 12*

The vif for depte, dte, eta, depta and dta are 6.63, 4.03, 3.42, 2.52 and 1.08 respectively. This indicates that all vifs are less than 10 respectively. This gives this study a conclusion that there is no problem of multicolonearity as multicolonearity exist only when the vif is greater than 10.

ii. *Heteroskedasticity Test*

*Table B5:* Heteroskedasticity

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

Ho: Constant variance

Variables: fitted values of Oss

$chi^2(1)$ = 0.69

Prob > $chi^2$ = 0.4052

The Breusch – Pagan/Cook- Weisberg test for heteroskedasticity on depte, dte, eta, depta and dta given the $chi^2$ prob. Of 0.4052 indicating that the data are homoskedasticity. Thus the p-value of 0.4052 which is greater than 0.05 significant levels makes the study to accept the hypothesis that the residuals are not heteroskedasticity but homoskedasticity and is desirable.

## VIII. Conclusion and Recommendation

This study has examined the influence of financial leverage, customer deposit and capital adequacy on the financial and operational sustainability of some selected microfinance banks in Nigeria. This study has provided empirical evidence that there is no statistical evidence to suggest that financial leverage, customer deposit and capital adequacy has significant influence on the financial and operational sustainability of the selected microfinance banks in Nigeria.

Based on the findings of the study where the study observed that financial leverage, customer deposit and capital adequacy have insignificantly positive influence on financial and operational sustainability. It is therefore recommended that Nigerian microfinance Banks can source funds from financial leverage taking cognizance of the cost of debt, mobilize customer deposits for fear of eminent collapse and optimize



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equity capital in order to attain financial and operational sustainability.

## References Références Referencias


1. Abor, J. (2005) The effect of capital structure on profitability. An empirical analysis of listed firms in Ghana. Journal of Risk Finance, 6(5), 438-445.
2. Ahmad, N., Salman, A. and Shamsi, AF. (2015) Impact of financial leverage on firms profitability: An investigation from cement sector of Pakistan. Research journal of financé and accounting. ISSN 2222-1697(paper) ISSN 2222-2847 (Online) vol.6, No.7, 2015.
3. Berkovitch, E. and Isreal, R. (1996) The design of internal control and capital structure. The review of financial studies, volume 9, Issue 1, 1 January 1996, pages 209 – 240.
4. Bodie, Z. Alex k. and Alan, J.M. (2008) Investments. Mc Graw – Hill/Irwin.
5. Brigham, E.F. (1995) Fundamentals of financial management.
6. Central Bank of Nigeria, (2012) Revised regulatory and supervisory guidelines for microfinance Banks (MFBs) in Nigeria.
7. Ganka, DN. (2010) Financial sustainability of rural microfinance institutions in Tanzania. PhD thesis, university of Greenwich, Australia.
8. George, OA and Esther, AB (2014) Are microfinance banks important in deposit mobilization in Nigeria? Research journal of finance and accounting ISSN 2222-1697 (Paper) ISSN 2222-2847 (Online) Vol. 5, No. 9, 2014.
9. Hartarska, V. (2005) "Government and performance of microfinance institutions in Central and Eastern Europe", World development, Vol 33, pp.1627 – 43.
10. Jenyo, GK and Adebayo, O. (2015) Performance appraisal of microfinance banks in Nigeria: case study of selected microfinance banks (in Kwara state).
11. Kaloo, FJ (2015) Financial determinants of micro finance performance in kenyan coast: a case of micro finance community based organisations in jomvu kuu. A Research Project Submitted In Partial Fulfillment for the Degree of Master of Business Administration (Finance) of Technical University of Mombasa.
12. Kinde, BA. (2012) Financial sustainability of microfinance institutions in Ethiopia. European Journal of business management. ISSN 2222–1905 (paper) ISSN 2222 – 2839 (online) Vol 4 No 15 2012.
13. Kipkoech, BJ. and Muturi, W. (2014) Determinants of financial performance of microfinance institutions in Kenya: a case of microfinance institutions in Nakuru town. International
14. Kyereboah, A. (2007) The impact of capital structure on the performance of microfinance institutions. Journal of risk finance, 8, 56-71.
15. Journal of accounting and finance management research (IJAFMR) ISSN(P): 2249-6882; ISSN(E) 2249-7994 VOL. 4 Issue 6 Dec, 2014.
16. Ledgerwood, J. (1999) "Microfinance Handbook. An institutional and financial perspective". The world bank publications, USA.
17. Luigi, P. & Visinescu, S. (2009) A review of the capital structure theories. Annals of faculty of economics, 3(1), 315-320.
18. Meyer, J. (2002) "Track record of financial institutions in assessing the poor in Asia". ADB research institute paper, No 49 [online] (September 30 2011).
19. Muchugia, LM. (2013) The effect of debt financing on firm profitability of commercial banks in Kenya. A business research submitted in partial fulfillment of the requirement of the degree of masters of business administration of the university of Nairobi.
20. Mulama, LW. (2014) Determinants of retained earnings in companies listed at Nairobi securities exchange. A research project submitted in partial fulfillment of the requirement for the award of the degree of masters of business administration, school of business university of Nairobi.
21. Muturi, W. and Githire, C. (2015) Effect of capital structure on financial performance of firms in Kenya: Evidence from firms listed at the Nairobi securities exchange. International journal of Economics, commerce and management. UK Vol. 111, issue 4, April 2015. ISSN 2348-0386.
22. Ngumo, KOS, Collins, KW and David, SH (2017) Determinants of financial performance of microfinance banks in Kenya. Research journal of finance and accounting. ISSN 2222-1697 (Paper) ISSN 2222-2847 (Online) Vol.8 No.6, 2017.
23. Okun, D.M. (2012) The effect of level of deposits on financial performance of commercial banks in Kenya. A research project submitted in partial fulfillment of the requirement for the degree of masters of business administration, University of Nairobi.
24. Olusuyi, A.E. and Felix, A.E. (2017) The effect of capital structure on the financial performance of manufacturing firms in Nigeria. Journal of accounting and financial management ISSN 2504-8856 Vol. 3 No. 3 2017.
25. Pandey, I.M. (1999) Financial management. Eight edition. Vikas publishing house, PVT ltd, India.
26. Peavler, R. (2017) What is leverage? The meaning operating, financial and combined leverage. Journal of business finance.
27. Raza, MW. (2013) Effect of financial leverage on firm performance. Empirical evidence from Karachi Stock Exchange.
28. Tauseef, S. Lohano, HD. and Khan, SA. (2015) Effect of debt financing on corporate financial




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Performance: Evidence from Textile firms in Pakistan.
29. Thapa, B., Chalmers, J., Tailor, W. and Conroy, J. (1992), "Banking with the poor, report and recommendations prepared by lending Asian banks and non-governmental organizations" Brisbane, Australia.
30. Tuyishime, R., Memba, F., Mbera, Z. (2015) The effect of deposit Mobilisation on financial Performance of commercial banks in Rwanda. International Journal of small business and entrepreneurship research. Vol. 3 No. 6, pp. 44-71, November, 2015.
31. Wambugu, F. & Ngugi, J. (2012). Factors influencing sustainability of microfinance institutions in Kenya. A case of Kenya Women Finance Trust, International Journal of Innovative Research and Development. 1(11), 519-537.
32. Waweru, MW. and Wanyoike, D. (2016) Effect of capital structure on profitability of microfinance institutions in Nakuru town, Kenya. International journal of Economics, commerce and management, vol. iv, issue 10, October, 2016. ISSN 2348 – 0386. U.K.



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# Empirical Evidences on Structure-Conduct-Performance Relationship in the Banking Sector-A Systematic Review of Literature

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*Abstract-* A detailed and systematic review of existing literature on the Structure-Conduct-Performance (SCP) relationship indicates that the empirical divergence between SCP and competing hypothesis is still not conclusive which is attracting a lot of research works across the world and recently in Africa. studies on SCP by large are dominated by quantitative analysis with exclusion of non-quantifiable variables such as related to conduct and/or those lack data (regulation). The majority of studies employ a multiple linear regression model where a measure of bank performance (mostly profit) is regressed on market concentration variables (such as k-firm, HHI etc) along with some control variables. Studies that used the structure model have also limited focus on other key variables like regulation, macroeconomic and industry factors. They have also applied a quantitative approach and assumed conduct as being a derivative of the market structure. Hence, there was no attempt to explore the behavior of banks within the given structure, banking and macro environment. Few studies have explicitly considered Ethiopia's banking performance using the structural approach (SCP or ESH). Nevertheless, the existing bank performance studies were not analyzed incorporating big banks in the industry with long period observation of banks using parametric and non - parametric methods which are scarce in the Ethiopian context.

*Keywords:* *structure, conduct, performance, bank, ethiopia.*

*GJMBR-C Classification:* *JEL Code: E50*

EMPIRICALEVIDENCESONSTRUCTURECONDUCTPERFORMANCERELATIONSHIPINTHEBANKINGSECTORASYSTEMATICREVIEWOFLITERATURE

*Strictly as per the compliance and regulations of:*

Research | Diversity | Ethics

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# Empirical Evidences on Structure-Conduct-Performance Relationship in the Banking Sector- A Systematic Review of Literature

Tesfaye Boru Lelissa [α] & Abdurezak Mohammed Kuhil [σ]

*Abstract-* A detailed and systematic review of existing literature on the Structure-Conduct- Performance (SCP) relationship indicates that the empirical divergence between SCP and competing hypothesis is still not conclusive which is attracting a lot of research works across the world and recently in Africa. studies on SCP by large are dominated by quantitative analysis with exclusion of non-quantifiable variables such as related to conduct and/or those lack data (regulation).The majority of studies employ a multiple linear regression model where a measure of bank performance (mostly profit) is regressed on market concentration variables (such as k-firm, HHI etc) along with some control variables. Studies that used the structure model have also limited focus on other key variables like regulation, macroeconomic and industry factors. They have also applied a quantitative approach and assumed conduct as being a derivative of the market structure. Hence, there was no attempt to explore the behavior of banks within the given structure, banking and macro environment. Few studies have explicitly considered Ethiopia's banking performance using the structural approach (SCP or ESH). Nevertheless, the existing bank performance studies were not analyzed incorporating big banks in the industry with long period observation of banks using parametric and non-parametric methods which are scarce in the Ethiopian context.

*Keywords: structure, conduct, performance, bank, ethiopia.*

## I. Introduction

The SCP framework, which originated from the works of Mason (1939) and Bain (1951) as methods of analyzing industry concentration, has made its focus in the manufacturing sector (Sathye, 2005). It was later (in 1961) introduced into the banking industry following the work of (Schweiger and Mcgee; Atemnken and Joseph, 1999). It has, therefore, remained as a commonly used model to test the casual link between industry concentration and bank performance (Berger and Hannan, 1998). Consequently, several studies intended to explore the link between market power, efficiency and performance of banks were conducted in several countries (Claeys and Vennet, 2008, Deltuvaite et. el, 2007, Flamini et. el, 2009, to mention but only a few). In other words, the studies focus mainly relied on testing the validity of the basic proposition of the traditional SCP paradigm that the industry concentration lowers the cost of collusion between firms and results in higher than normal profits. The communalities among the studies tend to encircle around testing the two contrasting market paradigms, the SCP and the efficient market hypothesis. The two competing views are based on the concept of market power, structure conduct, performance and relative market power (RMP) on one hand, and efficiency-based explanations on the other (Chortareas, 2009). The market power hypotheses are based on the premise that banks with a higher market share might earn superior profits due to their market power (Shepherd, 1986). A disintegration of concepts has also been observed in the efficient structure proposition. The relative X-efficiency (ESX) hypothesis states that more X-efficient banks (due to better management or better technology) have lower costs of operation, higher profits and bigger market shares which may result in greater concentration (Demsetz, 1998). Therefore, banks operating at optimal economies of scale will better reduce their unit costs which result in higher unit profits. This in turn may be translated to gain in market share and/or greater concentration. Therefore, concentration remains the result of efficiency rather than market power as presumed in market power theories. Nevertheless, the studies result shows a mixed and inconclusive empirical evidence to point out the supremacy of one model over the other (Gilbert, 1984; Goddard et al., 2001).

## II. Evidences on a Positive Link Between Structure and Performance

The theory surrounding the SCP hypothesis is that certain industry structures are suitable to monopolistic conduct allowing firms to augment prices beyond marginal costs thereby making unusual profits (Bain, 1951). The direct effect of this conduct is a reduced competition and imperfect market structure (Shepherd, 1985). SCP pointed out that changes in industry concentration may have a positive pressure on a firm's financial performance (Goldberg and Rai, 1996). Therefore, the resultant positive link between industry concentration and performance emanates from the anti-

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competitive behavior of firms with large market share (Berger and Hannan, 1998).

Empirical studies also put forward a positive and statistically significant connection among market structure and bank performance. The basic conclusion from the evidences appears that more concentrated markets attract less degree of competition. The SCP hypothesis, therefore, reigns in situations where the impact of market concentration was found to be significantly positively related to firms' profitability. There are many empirical studies of SCP relationships in the banking industry that support this hypothesis. For instance, Gilbert (1984) survey on 44 studies depicted that thirty-two of the studies were in line with the fact that market concentration significantly and positively related with bank performance. Moreover, a positive link between bank concentration and profitability measure (ROE) was found by Short (1979) in a study which was based on a sample of banks from Canada, Western Europe and Japan. Similarly, Moore (1998) explored the casual link between concentration ratio and profitability using both univariate and multivariate regression tests and found that the bank concentration had positively affected performance. He has added technology variable to the model and found that the positive relationship doesn't altered even when technology variable varies. In addition, the results by Berger and Hannan (1989), and Pilloff and Rhoades (2002) are in line with the SCP predictions of a significant effect of industry concentration on performances.

## III. Studies Supporting the Efficient Market Hypothesis

The SCP supporters' empirical test is challenged by a thought from the efficient market theorists and mainly of Demsetz (1973) and Peltzman (1977). They argue that banks are able to maximize profits and gain market share by being efficient. Consequently, market concentration increases following a rise in market share, which is a gain from the superior efficiency of the leading banks (Simrlock 1985). Smirlock (1985) and Evanoff and Fortier (1988) attempted to demonstrate that a relationship exists between bank market share and bank profitability but not between concentration and profitability.

As discussed in previous sections, Berger and Hannan (1998) has laid down a methodology to assess impact of such relationship (efficiency-profitability) including direct measures of inefficiencies (X-and scale inefficiencies). The addition of two efficiency measures therefore has resulted in four competing hypotheses. Two market power theories (SCP, RMP) which are based on industry concentration and market share measures and two efficiency theories (ESX and ESS) that are based on managerial and scale efficiency elements. The study of Berger and Hannan (1998) finds that a positive and statistically significant relationship exists between the market share and X-efficiency variables with bank profits. More recent studies (Seelanatha, 2010; Prasad and Radhe, 2011) have followed the Berger and Hannan methodology by explicitly including the efficiency measures in their estimations.

## IV. Methodology and Approaches

The SCP approach uses a model that can examine whether a highly concentrated market causes collusive behavior among large banks and whether it improves market performance. Usually literature applied a multiple linear regression model to test the SCP hypotheses (Berger et. el, 2003). Studies use the formulation shown in equation 1 to postulate statistically the performance of the profit concentration relationship.

$$Pi = f(CR, Xi) \quad (3.1)$$

Where Pi is some measure of performance of the $i^{th}$ bank, CR is the banking industry's index of concentration and Xi denotes a set of control variables that are firm specific or industry specific characteristic.

While a positive correlation between banks' performance and market concentration was frequently found, the interpretation of this result, and hence the policy implication, varied among the studies. Bain (1956) interpreted it as support for the SCP hypothesis, which asserts that banks in a concentrated market are more likely to engage in some form of non-competitive behavior such as collusion, consequently setting less favorable prices to customers and earning higher profits. Others (Demetsz, 1973) viewed it as support for the ES hypothesis, increase in market share and size of big firms is result of efficiency than concentration. Therefore, such ambiguity in interpreting the result of same regression result might be a reflection of the significant limitation of the approach.

To resolve such ambiguities, Simrlock (1985) revisited the above model in his study of concentration and profitability. The approach used is to incorporate both market share and concentration measures so as to test the relationship between concentration and profitability. Most importantly, the model provides strong emphasis on testing the relationship between market share and bank performance. The empirical model is constructed as follows:

$$Pi = f(b1MS , b2CR , MSCR + Z) \quad (3.2)$$

Where Pi represents the performance, MS is the market share of the bank, CR is the concentration ratio, MSCR is MS multiplied by CR (representing an interaction term), and Z is a vector of additional control variables.

The above model is very useful in evaluating the two competing hypotheses. If $b1 > 0$ and $b2 = 0$, the



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efficient structure hypothesis is supported. If b1=0 and b2>0, the profits are not affected by market share but are influenced by market concentration, supporting the SCP hypothesis. If both b1 and b2 are greater than zero, then the results could be subject to different interpretations. The supporters of the SCP hypothesis would view the results as showing *that 'all firms in concentrated markets earn monopoly rents from collusion*.' (Smirlock, 1985, p. 74). The monopoly rent from concentration will goes to the largest firms not the most efficient firms. The supporters of the ES hypothesis would see the results as evidence "*that leading firms are more efficient than their rivals*"(Smirlock, 1985, p.74) In order to interpret the findings correctly, therefore additional variable is introduced (MSCR) as an additional regressor. If the coefficient for MSCR is positive, then collusion is present. However, if it is less than zero, then collusion is not present. Still however, the controversies related to the interpretation of similar regression results is far to get a final solution (Berger et.el 2003). For instance, a positive coefficient estimate for market share along with an insignificant value for concentration is interpreted as a support for market power hypothesis (Shepherd (1986), Rhoades (1985) and Kurtz and Rhoades (1991). Same result however is looked to support the efficiency hypothesis (Smirlock (1985) and Evanoff and Fortier (1988)) other authors construe a positive link between market share and profitability favors the efficiency hypothesis in industrial organization (such as Gale and Branch (1982), and Stevens (1990)).

Berger and Hannan (1998) tackled the problem by explicitly incorporating two efficiency indicators which measure the X-efficiency and scale efficiency of banks as explanatory variables in the regression equations. In addition, two market structure indicators, which are proxied by banks' market concentration and market share, are included in their model. Four testable hypotheses are specified (instead of the usual two), SCP, RMP, ESX and ESS. The traditional SCP hypothesis remains unchanged, i.e. higher profits are the result of anti-competitive price settings in concentrated markets (Bain, 1951). A related hypothesis is the relative market power hypothesis (RMP) which claims that firms with large market shares are able to exercise market power to earn higher profits. The difference between SCP and RMP is that the latter need not occur in concentrated markets. The remaining two hypotheses relate to the efficient-structure hypothesis which posits that the larger market share is the result of efficient operations of the firms. Efficiency, however, is broken into two components. Under the X-efficiency hypothesis (ESX), the firms with superior management or production processes operate at lower costs and subsequently reap higher profits. The resulting higher market shares may also lead to higher market concentration. The scale-efficiency hypothesis (ESS) states that firms have similar production and management technology but operate at different levels of economies of scale. Firms operating at optimal economies of scale will have the lowest costs and the resulting higher profits will lead to higher market concentrations.

Both versions of the efficient- structure hypothesis provide an alternative explanation for the positive relationship between profit and market structure. To determine which of the four hypotheses is valid, Berger and Hannan (1998) used the following model:

$$Pi = f(X\text{-}EFFi, S\text{-}EFFi, CONCm, MSi, Zi) + ei \qquad (3.3)$$

Where P, is a measure of performance, X-EFFi is a measure of X-efficiency, reflecting the ability of banks to produce a given bundle of output at minimum cost through superior management or technology, S-EFFI is a measure of scale-efficiency, reflecting the ability of banks to produce at optimal output levels (economies of scale), given similar production and management technology, CONC. is a measure of concentration in market m, MSi is market share of bank i in market m, Zi is a set of control variables for each bank i, and ei is an error variable for each bank i.

After resolving such interpretation difference through methodological innovation, the succeeding research has evolved in several directions. Studies using the SCP approach are now are incorporating several variables from the environment such as bank risks, regulation, the quality of banking services, and the ownership and size of banks (Berger et al. 2003). Other studies have applied non-structural approach basing on factors firm specific factors to find out the situation in the market structure. For instance, Panzar and Rosse applied H-statistics to observe the competition situation of the banking industry (Casu and Girardone, 2006). Others use the Lerner Index of monopoly power (Guerrero et. al., 2005) and recently the Boone Indicator is also used in the competition analysis.

The majority of studies, however, still rely on tests of market power and/or efficiency as analytical models of bank competition (the reviews of Gilbert and Zaretzky, 2003; Northcott 2004, Punt and Rooij, 2001; Vennet, 2002; Hahn, 2005 and Yu and Neus 2005, etc). More recent studies are also being conducted in Africa (Nabieu, 2013, Simbanegavi et. el, 2012) and others. Nevertheless, the theme of the studies remained to explore the role of different factors in explaining the competitive conditions in banking markets. The difference appears to be between the structuralists that claim to begin from the industry concentration to study the conduct of firms as well as others who opt to start from the conduct of firms to study the industry structure.



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## V. Critics on the Approach/ Methodologies

The SCP model has been challenged on both grounds, theoretical and empirical. The criticism on SCP originated against background of mixed empirical evidences questioning the robustness of the model (Molyneux et. el., 1996).The lack of consistent results has led some researchers to argue that the literature contains too many inconsistencies and contradictions to establish a satisfactory SCP relationship in banking (Mooslechner and Schnitzer, 1994). More specifically, in banking study, the model is challenged by the difficulty to define a meaningful market area and set a reasonable measure of industry concentration. In addition, setting performance standard is problematic as banks are multi-product firms. Overall, the paradigm has several criticisms which can be classified into three categories, i.e. those related to measurement, econometric and interpretation problems.

Concerning the interpretation problems, a theoretical challenge was initially set by the efficiency theorists, Demsetz (1973) and later by Berger (1995). They hypothesize that unlike the claim of the SCP, the large market share which causes a high level of industry concentration emanates from superior efficiency performances rather than a lower level of competition. As discussed in the previous section, the controversy over the interpretation is commonly cited as the 'market power' versus 'efficiency' debate. Besides such debate, Molyneux (1999) argues that due to increase in type and number of financial service providers, concentration in the banking markets is becoming less and less relevant in terms of competition policy. Others, however, (e.g. Dermine, 2002) emphasized that in certain areas of banking, the dominance of banks has not yet been broken and hence concentration remains a big challenge need to be addressed.

With regard to measurement problems, originally the debate focused on the relative merits of alternative accounting measures of profitability. More fundamentally, it has been questioned whether accounting measures can be used at all as proxies for market power (price over marginal cost) (Mullineux and Sinclair, 2000). If this is not the case market power has to be estimated since marginal cost is not observable. Other arguments are against the use of concentration as a measure of the level of market structure. For instance, Mullineux and Sinclair (2000) argue that even though concentration may result in higher prices, lowering the demand for services does not necessarily cause higher profits performance for a highly concentrated banking sector. The SCP paradigm assumes that each bank profits from high prices caused by collusion among market participants. Thus, profitability depends to some extent on concentration (Bain,1956). The concentration ratios, the most frequently employed in empirical analyses Bikker (2002a) are:

- The CRk index, which sums the market shares held by the k largest banks, place equal emphasis on leading banks and ignoring the rest;
- The Herfindhal index, which places greater emphasis on larger market players and allows for each bank, adopts a calculation method that automatically excludes the competitive conduct of banks as a diminishing factor.

Regarding econometric problems, a limitation of this paradigm is that it assumes the causation to be unidirectional (Goldberg and Rai, 1996). For example, market performance can have feedback effects into market structure. In addition, the linkage between structure and conduct remained uncertain and the direction of causality is also problematic. In addition, there appears a dispute over the structure-performance relationship due to the possibility of a non-linear relationship. Jackson (1997) has found a negative relationship between concentration and deposit rates in markets with low concentration. The negative correlation ceases to exist in middle levels of concentration and becomes positive in highly concentrated markets. This suggests the existence of a U-shaped relationship between market concentration and prices. The non-linear nature of the profit (price)–concentration relationship has been cited by Berger and Hannan (1992) (for U.S. markets) as well as (Goldberg and Rai, 1996).

Other critics that include the empirical studies employing the SCP model fail to allow for banks' market conduct explicitly (Bikker and Haaf, 2002a). Instead, in effect, they treat it as being determined by structure. In addition, empirical studies often fail to consider factors that may be important in terms of assessing an actual relationship between structure and performance. For instance, Gilbert (1984) argues that a serious shortcoming of earlier SCP studies in the United States is that they ignore the impact of regulations on concentration and performance.

## VI. Variables Used

*a) Performance*

The literature on bank performance has closely tied bank performance with both price and profitability measures. The price measures includes net interest margin, spread and profit measures consists of Return on Assets, Return on Equity and Net interest margin. However, both measures rely on the accounting measures. This is because the data sources of the studies are mainly of publicly available bank specific data, which are reported following certain accounting procedures and rules. Adjustment to economic variables might be difficult due to unavailability of data.

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Regarding the price-profit performance measure debate, some scholars argue that bank profit is an appropriate measure of bank performance and criticize price measures as poor measures of bank performance (Civelec and Al-Almi, 1991). He argued that, the use profit measure helps to capture the banks major objective, profit maximization, by including both cost and revenue elements.

On the other front, some studies prefer to measure performance in terms of bank prices rather than bank profitability (Smirlock, 1985). This is because of the use of price-concentration relationship enable to observe the noncompetitive behavior of the industry in relation to high levels of concentration. In other words, the price effect implies the market discrimination power of the leading firm i.e. whether concentration has resulted in lower interest rates given to depositors and/or higher lending rates to borrowers (Chirwa, 2001). However, such argument is criticized for the fact that price measures of performance create problems of cross subsidization of multi-product firm like banks (Molynex and Forbes, 1995). Therefore, the profit measure is the preferred performance indicator in banking studies. The accounting profitability measures mainly of the ROA provide indications about how the bank's assets are effectively utilized to generate profits (Chirwa, 2001). However, other measures such as return on equity used by Short (1979) and Bourke (1989) or profits margin are generally utilized.

*b) Efficiency*

Efficiency can be measured using parametric and non-parametric techniques. The applications of non-parametric techniques exceeds the usage of the parametric ones (Berger and Humphrey, 1997).

The Data Envelopment Analysis (DEA) models are the widely used non-parametric techniques among others. The DEA in banks are estimated using the assumption of both Constant Return to Scale (CRS) and Variable Returns to Scale (VRS). However, there is a controversy as to rely on which of the two approaches. Supporters of VRS argue that CRS is only appropriate when all firms are operating at an optimal scale (Fiorentino et al., 2006). Therefore, it might be unrelastic to expect perfection in bank operation all the time. Nevertheless, other studies argue in favor of CRS because the CRS allows the comparison between small and large banks (Miller and Noulas, 1997).

Studies in banking obtain efficiency score estimates under the input-oriented approach. This is most likely due to the fact that banks output can possibly determined considering the level of its input. For instance, a bank mobilizing deposits can generate more loans. In addition, it's assumed that banks have higher control over inputs rather than outputs There are also some studies that adopt the output-oriented approach (Ataullah and Le, 2006). The input-oriented and output-oriented measures always provide the same value under CRS. There might be variation when they are computed under VRS assumption (Coelli et al., 2005). Therefore, in many instances, the choice of orientation has only a limited influence upon the DUM scores obtained (Coelli et. el, 1999).

With regard to the approach used, Berger and Humphrey (1997) argue that the intermediation approach is the one favored in the literature. The production approach is criticized for the difficulties in collecting the detailed transaction flow information required in the production approach. As a result, the intermediation approach is the one favored in the literature.

The commonly used inputs in DEA computation are deposits, fixed assets and personnel (Casu and Girardone, 2004). However, some studies use branches (Chen, 2001), loan loss provisions (Drake et al., 2003) and equity (Sturm and Williams, 2004) as additional or alternative inputs. Several studies use two outputs, usually, loans and other earning assets (Casu and Molyneux, 2003). Canhoto and Dermine (2003) use the number of branches as an additional output under the assumption that it represents an additional value for retail customers. Finally, recent studies include non-interest income or off-balance-sheet items as additional outputs (Weil, 2004).

*c) Concentration*

The Herfindahl-Hirschman Index (HHI) is one of the commonly used measure of bank concentration in both the theoretical literature and empirical studies. In addition, it often provides as a yardstick to appraise the application of other concentration indices (Bikker, 2002a). Similarly, the k-bank concentration ratio is comparatively used to measure the level of industry concentration (Molyneux et al. 1996). As reported in Molyneux, 37 out of 73 US SCP of the banking sector, 37 studies have used the 3-bank deposit concentration measure, whereas, 18 studies employed the Herfindahl–Hirschman Index (HHI). On the other hand, for highly concentrated market, some studies also used a single bank concentration ratio (Beighley and McCall, 1975 and Kaufoman). There are also instances on the usage of two-bank concentration ratio (Ware, 1972). However, as stated above the three-bank concentration ratio based on the deposit market has been the most widely used (Edwards and Heggestad, 1973). The four-bank ratio also extensively employed due to its merit of addressing the problem of data confidentiality and also its high weight to provide weight on smallness which is an attribute of some industry structures (Kinsella, 1981).

An exhaustive study mixed use of both Herfindahl - Hirschman index and the k-bank concentration ratios, for k = 3, 5 and 10 is also done by Bikker and Haaf (2002a). He has computed the indices based on market shares in terms of total assets of



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banks taking 20 countries. He has concluded that the differences across countries in the HHI relate most profoundly to the variation in the number of banks. Furthermore, the variation in k-bank concentration ration is mainly a result of the difference in the skewness of the bank-size distribution rather than the number of banks. Overall, apart from a few exceptions, the rankings of countries based on the various indicies have witnessed homogeneity for the various indices considered. Therefore, the indices are practically tested for their appropriateness to measure bank concentration. Astonishingly, the result in the rankings of the HHI and the 3-bank concentration ratio bear the closest similarity (with a correlation of 0.98), while the ranking based on the 5 and the 10-bank concentration ratios slight differ more from the HHI (with, respective, correlations of 0.94 and 0.86). This examination provided an empirical insight on the long stayed concern in the literature regarding the selectiveness of the k bank indices (only considers big banks) as compared to the HHI, which incorporates all banks in its market share computation.

*d) Regulations*

Literature is not also conclusive on the impact of regulation on bank performance. Some authors consider that effective regulation of bank entry can promote stability and enhances prudent risk behavior (Keeley, 1990). Others consider regulation as a barrier to hinder competition therefore allowing for inefficiencies (Shleifer and Vishny, 1998). Therefore, countries with greater regulatory restrictions on bank activities are associated with lower banking sector efficiency (Barth, et. el, 2001). Worsening the scenario, regulations like restrictions on bank entry are associated with greater bank fragility (Allne and Gale, 2004) and lower bank margins (Demirgüc-Kunt et. el, 2003).

The usually used variable to mediate the effect of regulation on bank performance is the capital level. However, there appears variation on the empirical result. Those supporting its positive impact justify its service as a buffer against losses and hence failure (Dewatripont and Tirole, 1994a). On the other front, negative news related to capital may cause banks to reduce lending Brealey (2001) and may encourage banks to take more credit risk.

Studies also consider bank ownership type as a variable to represent regulatory freedom. Claessens and Laeven (2003) find that banking systems with greater foreign bank entry, fewer entry and activity restrictions are more competitive. La Porta et. al., (2002) examine the extent of government ownership to represent the degree of regulatory involvement. Claessens et. al., (2001) show in a cross-country study that foreign bank entry makes domestic banking systems more efficient by reducing margins.

On the other front, studies consider the degree of liberalization of the banking system. The impact of financial deregulation is typically assessed either through a dummy variable Salas and Saurina (2003) or simply examining the behavior of banks during periods of financial deregulation (Das and Ghosh, 2006). The findings indicate that the impact of deregulation on bank behavior depends, among others, on the state of the banking system and differs significantly across bank ownership.

*e) Control Variables*

Studies have used either or all of bank specific, industry specific and macroeconomic related factors to explain bank performance (Nissanke and Aryeetey, 2006). Panayiotis (2005) showed that bank profitability is a function of internal and external factors. Internal factors include bank-specific, while external factors include both industry-specific and macroeconomic factors. According to this literature, there are six standard key bank-specific indicators that are widely used to study banks. These include profitability, capital adequacy, asset quality, operational efficiency and growth in bank assets and earnings. However, the most widely used variables and framework is the CAMEL rating framework (Barr, 2002). Barr (2002) showed that CAMEL rating criteria has become a concise tool for examiners as well as regulators and found that there is a significant relationship between CAMEL ratings and efficiency scores.

Another strand of literature emphasizes the importance of industry and macroeconomic variables in explaining performance heterogeneities across banks. This literature is based on the structure-conduct-performance (SCP) paradigm and is also applicable to contestable markets, firm-level efficiency, and the roles of ownership and governance in explaining bank performance (Berger, 1995; Berger and Humphrey, 1997; Bikker and Hu, 2002; Goddard et al., 2004). In terms of variables used, industry–specific factors include ownership, bank concentration index, financial deepening. In addition, bank size and economies of scale are used as industry specific variables. Bank size is measured as banks total deposits (assets) or as an average measure based on total assets takes into account differences brought about by size such as economies of scale (Molyneux and Forbes. 1995). Conversely, Evanoff and Fortier (1988) established that any positive influence on profits from economies of scale may be partially offset by greater ability to diversify assets resulting in a lower risk and a lower required return. Therefore, the empirical results on the performance of bank size variables are mixed.

The macroeconomic factors include interest rate, interest rate spread, inflation and levels of economic growth represented through either GDP or GDP per-capita (Panayiotis, 2005).



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*f) Studies by Region*

From the side of developed economies, SCP theories have been tested widely alongside its counterpart, the efficiency theory for the US and European banking sectors. Recently, similar studies are also moving in the developing nations' banking environment as well. The studies have two variants in terms of region classification: some studies focus on single countries while others are done considering cross-countries. The literature focusing on single country include, for instance, Colombia (Barajas et al., 1999), Malaysia (Guru et al., 1999), Italy (Girardone et. al.. 2004), UK (Kosmidou et al., 2005), Korea (Park and Weber, 2006), etc.

Some other studies consider a large number of countries and most of them use extensive number of countries under limited period of observations. For example, Beck et al. (2003) explored the link between industry concentration and performance for 364 banks operating in 8 Central and Eastern European Countries for the period 1998 to 2001. The result rejected the SCP theory, but accepted one of the market power variant, the Relative Market Power hypothesis. In the same manner, Gonzalez (2005) investigates the efficiency-structure of the banking sectors considering 69 countries over 1996-2002, hence, having around 2,592 observations. The study's findings support the efficient structure hypothesis and acknowledge bank regulation, supervision, financial structure and financial development are statistically significant relationship with bank profitability. Claessens et al. (2001) study considers 80 countries from 1988 to 1995 and explores the variation in profits, net interest margins, overhead, and taxes between different bank ownership types (domestic and foreign banks).

A separate evaluation on specific countries shows that results are mixed. For instance, studies done at the US banking sector has resulted in contrasting outcome among the SCP and the ES hypotheses. For example, as discussed before, Smirlock (1985) rejects the SCP by exploring a statistically positive relationship between market share and profitability and an statically insignificant relationship between concentration and profitability. The result supports the argument that banks in the US are more profitable because of their high efficiency performances. Rhoades (1985), on the other hand, finds a strong relationship between profitability and concentration as well as also between market share and profitability in the US. He suggests that a positive relationship between market share and profitability does not reflect product differentiation advantages such as allowing banks to charge higher prices. He thus accepts both the SCP and RMP hypotheses although allocates more importance to the latter one due to a higher coefficient. Evanoff and Fortier (1988) compare the collusion and efficiency hypotheses in the US. They find a strong relationship between market share and profitability. They conclude that the concentration index is insignificant, thus, rejecting the SCP. However, having found a positive relationship between market share and profitability they accept the RMP hypotheses. They explain this result by stating that there is some evidence supporting the efficiency hypothesis since controlling for market growth, they found a negative result between market share and profitability. Berger and Hannan (1989) analyzed the relationship between concentration and price through a direct measure of profitability for the deposit market in the US. Moreover, they use three types of concentration ratios to model for the concentration index. They find a negative relationship between concentration and price, which is indicative of accepting the SCP explained by banks paying lower deposit rates to consumers. In a recent study on US banking, Tregenna (2006) analyzed the effects of structure on profitability for the period of 1994-2005. Bank level panel data are used to test the effects of concentration, market power, bank size and operational efficiency on profitability. The author observed that efficiency is a strong determinant of profitability, whereas there was robust evidence for positive concentration-profitability relation.

There are a number of studies focusing on Europe analyzing the SCP hypotheses. Bourke (1989) analyzes a set of European countries and although he finds a positive relationship between the concentration index and profitability, the explanatory variable of the concentration index is too small. Molyneux and Forbes (1995) test the SCP and RMP hypotheses for a group of European countries and find insignificant values for the concentration index thus rejecting the RMP and accepting the SCP hypothesis. Molyneux and Thornton (1992) also study a group of European countries and find evidence supporting the SCP. Nevertheless, they did not test the RMP hypothesis. Results in Molyneux (1993) study in selected countries like Portugal, Spain, Sweden, United Kingdom and Turkey appear in line with the SCP model. Vennet (1993) also accepted the SCP hypothesis in Portugal, Spain, Ireland and Belgium.

Goldberg and Rai's (1996) study accepts the relative market power rather than the SCP hypothesis for some European countries. Moreover, their study also supports the efficient market hypothesis establishing a positive relationship with performance. A study in Spain by Maudos (1998) test finds a similar result supporting both the efficiency and relative market power hypothesis. A test on the aforementioned models by Punt and Van Rooij (2001 for a group of European countries overwhelming supports the X-efficiency version of the efficiency theory and claims for nonexistence of collusion behavior among banks in Europe. Unlike the above study's findings, Vennet (2002) research findings on a group of European countries partially support the SCP and convincingly the X-efficiency model. In addition, Hahn (2005) tests the



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structure and efficiency theories for Austrian banks and finds empirical evidence that supports the SCP. Some studies also find a result supporting both the efficiency and SCP theories. For instance, Yu and Neus (2005) find evidence supporting both efficient and SCP hypotheses for the German banking sector. Therefore, the study results in previous research seems to vary in their conclusions. Studies done at European banking, for instance, show that the level of market power in the European banking industry is considerable (Molyneux et al., 1994; Molyneux and Forbes, 1995; Bandt and Davis, 2000). On the other hand, others witness the reduction in collusive behavior in Europe. For example, Neven and Roller (1999) taking seven European countries (France, Denmark, Germany, Spain, UK, Belgium and Netherlands) concluded that there is a significant increases of competition over time in the mortgage market and the conduct of banks is growing being less collusive over time. Some authors associate the change in such bank conduct to the various deregulation and reform measures in the banking sector. For instance, Cerasi et al., (2001) argues that the increase in the degree of competition within the European retail banking sector associates with deregulation. Similarly, Bandt and Davis (2000) find that the Italian banking system, which is being deregulated, is operating at an increased competition level. Nevertheless, some authors like Gual (1999) claim that market integration and enlargement appear one of the significant causes to witness a diminished concentration level in the European banking market.

As observed in the developed nations, the empirical evidences from the studies done in developing and emerging banking markets witnessed a mixed result regarding the structure-efficiency debate. For instance, a study of Claessens et al., (2001), which consists of 80 developing countries from 1988 to 1995, did not reject the collusion theory. The result shows foreign investment relates positively with profitability and high interest rates, whilst they have increased overhead costs contradicting the hypothesis that foreign bank profitability is driven by higher efficiency. Berstain and Fuentes' (2005) study on the link between banking concentration and price rigidity in Chile for the period of 1995 to 2002 finds that high concentration generates more rigidity in the deposit rates. Their findings are interpreted as being broadly aligned with the SCP theory. Unlike such findings, a cross country analysis on developing nations market by Gonzalez (2005) results in an outcome supporting efficiency hypothesis. A study in emerging market by Park and Weber (2006) from a sample of Korean banks evidenced that bank efficiency rather than collusion is a cause of improved bank in Korea. Samad (2008) tests the validity of these two hypotheses (SCP and ESH) for the Bangladesh banking industry by using pooled and annual data for the period 1999–2002; he finds support for ESH as an explanation for market performance in Bangladesh. The most recent studies on emerging banking markets that have found support for the efficient structure hypothesis are Seelanatha's (2010) on Sri Lanka and Chortareas' et al. (2011) on Latin America. Other studies in developing nations are also in line with some of the variants of the structure-efficiency hypothesis. For instance, Guerrero et al., (2005) study on the Mexican banking industry find evidence in support of the relative market power hypothesis.

In Africa, Fosu (2013) has concluded that despite record levels of new entry and foreign penetration, very high levels of concentration characterized African banking sectors. The average Herfindahl-Hirschman Index (HHI) is as high as 2059, whilst the five-bank concentration ratio stands at 77.29% for the whole African region. On the positive side, concentration assumed a downward trend across all the sub regions over the past few years. The Herfindahl-Hirschman Index (HHI) shows dramatic and consistent downward trend in all sub regional banking sectors except West Africa, where the trend is moderate. The decline is associated with African governments' willingness to embark on financial sector restructuring involving deregulation and a relaxation of entry barriers to foreign investment (Beck and Cull, 2014). The financial sector reforms include: reducing credit controls and reserve requirements, removing interest rate controls, reducing entry barriers to foreign banks; state ownership, developing securities markets, strengthening prudential regulation and supervision. These developments appear to have improved the financial soundness of African banks (Amidu 2013). However, the high concentration level is a describing attribute of African banks. Fosu (2013) witnessed the aforesaid scenario using the five-bank concentration ratios. Therefore, consistent with other emerging economies, the study result suggested that African banks generally demonstrate monopolistic competitive behavior.

Country specific studies in Africa also witnessed the prevalence of a high level of banking market concentration. For instance, studies in the South African banking sector show that the banking industry exhibited a high concentration feature (Falkena et. al. 2004; Okeahalam, 2001). Therefore, the African banking market still remains with a structural problem to ensure a competitive market as the high share of the banking market is still controlled by few large banks. Studies also show structural rigidities, evidenced by high interest rate spread, remain major impediment to achieving competitiveness in the banking sector in Africa (Beck and Fuchs, 2004). Sanya and Gaertner (2012), Mwega (2011) and Mugume (2010) in separate studies, empirically assess bank competition in four countries, Kenya, Uganda, Tanzania and Rwanda. Sanya and Gaertner (2012) studied the four countries jointly, whereas, Mwega (2011) and Mugume (2010) studied Kenya and Uganda, respectively. The study's results

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show that competition in the banking sector in the four countries is fairly low. The socio-economic and structural factors are given as being behind the lack of competition in the four countries. Studies also suggested that market concentration is a major determinant of bank profitability in Africa (Nonye, 2012 for Nigeria, Nabieu, 2013 for Ghana).

In general, the international evidence on competition presented in Africa includes a small number of large African countries (Schaeck et al., 2009). Furthermore, studies do not account for the regulatory and institutional factors that are likely to shape competition in countries characterized by a variety of imperfections (caused by a lack of development, weak institutions, governance and barriers to entry) (Classesns and Laeven, 2004).

## VII. Studies Conducted in the Ethiopian Banking Sector

Muir (2012) referred Ethiopia's banking system as' weird' and it's like a throwback to an earlier Africa, the Africa of the 1970s or 1980s. The reason cited by him was related to the high concentration and, hence, the structure of the sector. He stated that the banking system is dominated by two big state owned banks accounting more than 50% of all lending. Muir's argument also extends towards the ownership structure of Ethiopian banks. He cited that the dominant state ownership revealed in Ethiopia is 'weird' phenomenon as compared the scarce existence of banks all over Africa.

In the Ethiopian context, the high concentration aspect seems a more general truth than a research topic inviting further investigations. Bank and financial sector related studies usually cite the concentration of the Bank industry as the area deserves attention. However, very limited studies instituted to provide in-depth analysis on the extent of concentration and its impact on bank performances. A notable attempt in such regard is by Lelissa 2007) who has measured the banking concentration using HHI and k-bank (K1,2,). He has found that the Ethiopian banking system is highly concentrated and dominated by the state owned bank. However, the study lacks to test the impact of such result on the performance of banks.

On the other front, the empirical works in foreign countries reviewed above have supported either the SCP or Efficiency or both paradigms. However, there is lack of such studies in the context of Ethiopia. Bank related studies in Ethiopia can be classified into: performance assessment related, related to the financial liberalization and focused on efficiency analysis.

Performance related studies witnessed the positive trend in bank performance indicators. Study of such a kind includes (Jenber, 2001), who assessed developments in market share, balance sheet, capital adequacy and profitability using data for 1997/97-1999/00. The study pointed out that profitability of the banking industry in general was high in the study period and profitability of most private banks in particularly was encouraging. The other variant of study with regard performance is the attempt to segregate variables impacting bank performances. For instance, studies of Kapur (2009), Benti (2007), Abera (2011) and Nigussie (2012), examined either of the bank-specific, industry-specific, macro-economic or all of the three factors affecting bank profitability in Ethiopia. In terms of variable selection, the studies have used capital strength, bank size and gross domestic product, operational efficiency and asset quality. Some of the studies, however, are focused on private banks and the public banks, which constitute the high share of the industry, were not in the domain of the study. Methodologically, the studies have used multiple linear regression techniques to assess impact of selected variable on the profitability of banks. An exception in such regard is Benti (2007), who has used panel data GMM estimator, to assess the impact of the stated variables on private banks' profitability performance. Nonetheless, the analysis is done excluding the stated owned bank.

Bank reform related studies seem to have similar concerns with regard to the gradualism and incomprehensive liberalization measures of the 1990's. Therefore, most of them are intended to indicate for a great need for additional market oriented reforms to further enhance the sector's role. For instance, Geda (2006) assessed empirically the pre and post reform performance of the commercial banks in Ethiopia. He showed that the financial sector reform has brought lot of changes to the Ethiopian banking industry and criticized the slower pace at which the reform is moving on. Bezabeh and Desta (2014) also suggested the additional policy initiatives to be undertaken by the government to activate the sector. These include: a) reversing the decision prohibiting foreign banks from investing in the country, b) fully privatizing the state-owned commercial banks, c) allowing market forces to determine interest rates and the exchange rate of the Ethiopian currency, Birr (ETB), and d) upgrading the regulatory and supervisory capacity of the National Bank of Ethiopia to facilitate efficiency in the banking market. However, methodologically, the studies are qualitative descriptions supported by trend or point in time data on selected indicators like deposit, loans etc.

On the efficiency front, studies are focused on commonly used efficiency measures like expense management or overhead control etc. ADB (2011) report shows that the traditional method of approaching the efficiency measurement issue of financial firms such as banks is the financial ratio analysis which has some major drawbacks. For instance, Berger (2009) mentioned that ratio analyses do not control for



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individual bank outputs, input prices, or other exogenous factors facing banks in the way that studies using modern efficiency methodology do, may give misleading results. Therefore, the report recommends for managers of banks and policy maker to search alternative tools (such as DEA) that compensate for the drawbacks in financial ratio analysis (ADB, 2011). A breakthrough in such front was the study of Rao and Lakew (2012) who examined the cost efficiency and ownership structure of commercial banks in Ethiopia using data envelopment analysis (DEA) and Tobit models. The study found that the average cost efficiency of state-owned commercial banks over the period 2000-2009 is 0.69 while that of the private commercial banks is 0.74. The aggregate cost efficiency of Ethiopian commercial banks is found to be 0.73. In addition, the study found little statistical evidence to conclude that the state-owned commercial banks are less cost efficient than the private commercial banks. Thus, ownership structure has no significant influence on the cost efficiency of commercial banks in Ethiopia. Similarly, Lelissa (2014) explored the efficiency level of Ethiopian Banks for the period 2008-2012 using the DEA model and finds a notable variation among banks in terms of level of efficiency.

## VIII. Snapshot on the Recent Trends of the Empirical Studies

Empirical investigation of the SCP follows a similar methodological framework across the various studies in different countries. Recent publications around the globe following similar methodological approach as in this research continue to result in mixed outcomes. For instance, Pawłowska (2016) find no evidence of the SCP hypothesis in the Polish Banking system while Çelik and Kaplan (2016) find a result supporting the modified efficient structure hypothesis in the Turkish banking sector. In Africa, a study by Ebenezer and Oladipo( 2016) for the Nigerian Banking sector estimated a positive relationship between the bank performance (profitability) and market concentration supporting SCP. A similar study in Malysia by Ab-Rahim and Chiang (2016) offers support to the efficient hypothesis. There was also attempt to test the competition in the banking sector applying the Panzar-Rosse approach. Simatele (2015) using bank level data for the period 1997 to 2014 explored the competitive environment in the South African banking industry and finds that South African banks operate in a monopolistically competitive market structure. Other studies also attempted to link market structure with industry growth. A study in such path includes Khan.H. et.al., (2016) whose results indicate that higher bank concentration may slow down the growth of financially dependent industries and recommends for regulatory cautions while pursuing a consolidation policy for the banking sector in emerging Asian economies. Likewise, some of the studies in developed countries like US investigated the impact of competition on cost and technical efficiency. The study by Bayeh et.el., (2016) finds that market power, as measured by the Lerner index, increases U.S. banks overall cost and technical efficiency. A contrasting study by Chen et.el., (2016) evidenced that an increase in the degree of bank competition leads to weaken the industry performance, especially. during non-crisis period in the Tiwan banking sector. Integrating competition /market structure with efficiency, Alhasen and Asare (2016), estimated the technical and cost-efficiency scores of the Gahanian banks and find that competition exerts a positive influence on cost efficiency. A recent attempt, while this study is on progress, in the Ethiopian banking sector is done by Lera and Rao (2016) that explored the effect of concentration on the performances. Their study has focused on testing the four structural theories that results in support of the managerial efficiency version. Nevertheless, they still have used the quantitative approach and assumed that conduct of banks is a derivative of the industry structure. In addition, they have used limited control variables and most importantly ignored the regulatory factors in their models.

In sum, in spite of the level of economic development, studies in industry concentration are being widely conducted across the world. Studies methodologically follow the original SCP as well as alternative industry competitiveness assessment models. Nevertheless, the objectives in the studies remain closer.

## IX. Summary

The overall results of studies related to concentration-profitability relationship have been far from being indisputably conclusive. In other words, no unique conclusion can be drawn from the results of the existing studies since favorable empirical evidence produced by some studies has strongly been challenged by the opposite type of evidence of others. However, the discipline has enriched from the opposite or supplementary ideas coming from various scholars. The originators of the SCP hypothesis argue that better performance by large firms in an industry is a result of market concentration. This hypothesis faced a strong attack from those trusting efficiency as a source of better performance. Followers of the efficient structure hypothesis claim that market concentration is not accidental event but is the result of superior efficiency of firms. Therefore, efficient firms managed to obtain a large market share. Hence, the positive and significant relationship between concentration and bank profitability should be considered from the efficiency point of view. This is due to the fact that there no relationship between concentration and performance, but rather between market share and bank profitability.

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On the other hand, the quiet life hypothesis has brought a new dimension via taking in to consideration the impact of market structure upon bank management's risk-return preferences. According to this explanation bank management in concentrated market is highly sensitive about showing high profits and, therefore, has high tendency for a quite life, the failure of explicit recognition of such behavior may produce weak or statistically insignificant relationship between the concentration and bank profitability evidences. Still, others like contestable market theory claims that barriers to market entry and exit are not prelude (if market is contestable), then, there is no basis for assessing a significant value to the market concentration variable in determining bank profitability. According to them, it is quite possible to have outcomes approximating those of perfect competition even though the number of actual competitors is quite small or concentration is quite high provided that the market is contestable.

With an attempt to change the direction of focus of the profit-concentration relationship, the NEIO's claim that individual industries offers the best opportunity to understand the competitive mechanisms at work. Unlike the empirical literature on SCP, which was primarily based on cross-section studies, the NEIO focuses on econometric testing of particular aspects of conduct in single industries with the objective of detecting market power or changes in the collusive-competition behavior of firms.

However, a detailed review of existing literature on the SCP relationship indicates that:

- The majority of studies employ a multiple linear regression model where a measure of bank performance (mostly profit) is regressed on market concentration variables (such as k-firm, HHI etc) along with some control variables.
- The empirical divergence between SCP and competing hypothesis is still not conclusive which is attracting a lot of research works across the world and recently in Africa.
- Studies on SCP by large are dominated by quantitative analysis with exclusion of non-quantifiable variables such as related to conduct and/or those lack data (regulation).
- Few studies have explicitly considered Ethiopia's banking performance using the structural approach (SCP or ESH). Nevertheless, the existing bank performance studies were not analyzed incorporating big banks in the industry with long period observation of banks using parametric and non-parametric methods which are scarce in the Ethiopian context. Studies that used the structure model have also limited focus on other key variables like regulation, macroeconomic and industry factors. They have also applied a quantitative approach and assumed conduct as being a derivative of the market structure. Hence, there was no attempt to explore the behavior of banks within the given structure, banking and microenvironment.

## References Références Referencias


1. Ab-Rahim R. and Chiang S. (2016). Market structure and performance of Malaysian banking industry, Journal of Financial Reporting and Accounting, Vol. 14 Iss: 2, pp. 158 – 177.
2. Alhassan. A. Asare. K. (2016).Competition and bank efficiency in emerging markets: empirical evidence from Ghana, African Journal of Economic and Management Studies, Vol. 7 Iss: 2, pp. 268– 288.
3. Bain, J. (1951). The Relation of profit Rate to Industry Concentration, American Manufacturing, 1936-1940, Quarterly Journal of Economics, vol. 65 (3), pp. 293-324.
4. Bain, J. (1956). Barriers to New Competition, Harvard University Press, Cambridge, MA.
5. Bandt, O. and Davis, E. (2000). Competition, Contestability and Market Structure in European Banking Sectors on the Eve of EMU, Journal of Banking and Finance, 24, pp. 1045-66.
6. Barth, J., Caprio, G. and Levine, R. (2001). The regulation and supervision of banks around the world, a new Database, in Litan, R., and Herring, R., eds, Brookings-Wharton Papers on Financial Services.
7. Bayeh. A, Burlacu R. Bitar M. and Walker T. (2016) Competition, Securitization, and Efficiency in U.S. banks: available online http://febs2016malaga.Com/wp-content/uploads/2016/06/2Competition Securitization.pdf accessed on January 2016.
8. Benti. Y. (2007). Determinants of Private Bank Profitably: Determinants of Private Banks' Profitability in Ethiopia: Panel Data Evidence, Ethiopia.
9. Berger, A. (1995). The profit–structure relationship in banking, Tests of market-power and efficient-structure hypotheses. Journal of Money, Credit and Banking, 27(2), 404–431.
10. Berger, A., and Hannan, T. (1989). The Price-Concentration Relationship In Banking, Review of Economics and Statistics, 71, pp. 291-299.
11. Berger, A., and Hannan, T. (1992). The Price-Concentration Relationship In Banking - a reply, Review of Economics and Statistics 74, pp. 376-379.
12. Berger, A., and Hannan, T. (1993). Using Efficiency Measures to Distinguish among Alternative Explanations of the Structure - performance Relationship in Banking, Federal Reserve Board Working Paper.
13. Berger, A., and Humphrey, D., (1997). Efficiency of financial institutions, international survey and directions for future research, European Journal of Operational Research, Vol. 98, pp. 175-212.




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14. Berstain, S. and Fuentes, R. (2005). Concentration and Price Rigidity: Evidence from the Deposit Market in Chile. Central Bank of Chile Working Papers, No. 311.
15. Bezabeh A. and Desta A. (2014). Banking Sector Reform in Ethiopia, International Journal of Business and Commerce, Vol. 3, 8, pp. 25-38.
16. Bikker, J. and Haaf, K. (2002a). Measures of Competition and Concentration in the Banking Industry: a Review of the Literature. Economic and Financial Modelling, pp. 1–46.
17. Bikker, J. and Haaf, K. (2002a). Measures of Competition and Concentration in the Banking Industry: a Review of the Literature. Economic and Financial Modelling, pp. 1–46.
18. Bourke, P. (1989). Concentration and Other Determinants of Bank Profitability in Europe, North America and Australia, Journal of Banking and Finance, Vol. 13, pp. 65–79.
19. Casu, B. and Molyneux, P. (2003). A comparative study of efficiency in European banking, Applied Economics, Vol. 35, pp. 1865-76.
20. Casu, B., Cirardone, C. and Molyneus, P. (2004). Productivity change in European banking: a comparison of parametric and non-parametric approaches, Journal of Banking and Finance, Vol. 28 No. 10, pp. 2521-40.
21. Çelik. T and Kaplan. M (2016) Testing the Structure-Conduct-Performance Paradigm for the Turkish Banking Sector: 2008-2013; International Journal of Economics and Financial Issues, 2016, 6(4), 1625-1631.
22. Chen. H, Chuo. Y, Chang. J and Yu. S. (2016) Does Banking Competition Improve Industry Performance? Evidence from Taiwan, Journal of Informatics and Data Mining, Vol. 1 No. 3: 16.
23. Chirwa, E. (2001). Market Structure, Liberalization and Performance in the Malawian Banking Industry, AERC Research Paper 108, Nairobi, African Economic Research Consortium.
24. Chortareas, G. Garza-Garcia, J. and Girardone, C. (2009). Banking Sector Performance in Latin America: Market Power versus Efficiency, Centre for Global Finance, Working Paper Series No. 01/09.
25. Civelek, M. and Al-Alami, M. (1991). An Empirical investigation of the Concentration-Profitability Relationship in the Jordanian Banking System, Savings and Development, 15, pp. 247 – 59.
26. Claeys, S., and R. Vander Vennet, (2008). Determinants of Bank Interest Margins in Central and Eastern Europe: A Comparison with the West, Economic Systems, 32, pp. 197–216.
27. Coelli, T., Rao, D., O' Donnell, C. and Battese, G. (2005). An Introduction to Efficiency and Productivity Analysis, Springer, New York.
28. Demsetz, H. (1973). Industry Structure, Market Rivalry and Public Policy, Journal of Law and Economics, Vol. 16, No. 1, pp. 1-9.
29. Ebenezer and Oladipo (2016). Relevance of Structure, Conduct and Performance Paradigm in the Nigerian Banking Industry, Journal of Economics and Sustainable Development Vol. 7, No. 19, 2016.
30. Evanoff, D. and Fortier, D. (1988). Reevaluation of the Structure-Conduct-Performance Paradigm in Banking, Journal of Financial Services Research, 1(3), pp. 277–94.
31. Fosu. S. (2013). Banking competition in Africa: sub-regional comparative studies, Working paper: 12/13, University of Leicester, UK.
32. Gale, B., and Branch, B. (1982). Concentration Versus Market Share: Which Determines Performance and Why Does it Matter?, The Antitrust Bulletin, 27 (Spring), 83-103.
33. Geda, A. (2006). The Structure and Performance of Ethiopia's Financial Sector in the Pre-and Post-Reform Period with a Special Focus on Banking UNU-WIDER, Research Paper No. 2006/112, united nations university.
34. Gilbert, R. (1984). Bank Market Structure and Competition - A Survey, Journal of Money, Credit and Banking, 16, pp. 617-45.
35. Goddard, J., Molyneux, P. and Wilson, J. (2001). European Banking. Efficiency, Technology and Growth, John Wiley and Sons, England.
36. Goldberg, L., and Rai, A. (1996). The Structure-Performance Relationship in European Banking, Journal of Banking and Finance, 20, pp-745-71.
37. Gonzalez, F. (2005). Determinants of Bank Market Structure: Efficiency and Political Economy Variables. Fundacion de las Cajas de Ahorros, Working Paper No. 219.
38. Gual, J. (1999). Deregulation, integration and market structure in European banking.
39. Hahn, F. (2005). Testing for Profitability and Contestability in Banking. Austrian Institute of Economic Research, WIFO Working Paper, No. 261.
40. Jenber (2001) "Banking Sector: Recent Developments in Market Share, Balance Sheet, Capital Adequacy and profitability " BIrritu No. 75.
41. Lelissa, T. (2007). The Impact of Financial Liberalization on the Ownership, Market Structure and Performance of the Ethiopian Banking Industry (Masters Thesis, Addis Ababa University).
42. Lera D. and Rao. P. (2016). Market Structure, Efficiency, and Performance of the Ethiopian Banking Sector; India Journal of Research, Volume: 5, Issue: 1, January 2016.
43. Mason, E. (1939). Price and Production Policies of Large-Scale Enterprise. American Economic Review, 29(1), pp. 61–74.




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44. Maudos, J. (1998). Market Structure and Performance in Spanish Banking Using a Direct Measure of Efficiency", Applied Financial Economics, 8, 2, pp. 191-201.
45. Molyneux P. (1993). Structure and performance in European banking. Doctoral Dissertation, University of Wales, Bagnor.
46. Molyneux, P. and Forbes, W. (1995). Market Structure and Performance in European Banking, Applied Economics, 27, pp. 155 – 59.
47. Molyneux, P., and Thorton, J. (1992). Determinants of European Bank Profitability, A Note. Journal of Banking and Finance 16, pp.1173-78.
48. Moore, R. (1998). Concentration, Technology, and Market Power in Banking, is Distance Dead? Federal Reserve Bank of Dallas Financial Industry Studies, December 1998, pp. 1-10.
49. Muir D. (2012). A short primer on the Ethiopian banking system, online article: http://noelmaurer.typepad.com/aab/2012/01/a-short-primer-on-the-ethiopian-banking-system.html
50. Negussie. H. (2012). Determinants of Banks Profitability: An Empirical Study on Ethiopian Private. Commercial Banks, Master's Thesis unpublished, Addis Ababa University, 2012.
51. Neven, D., and Röller, L. H. (1999). An aggregate structural model of competition in the European banking industry. International Journal of Industrial Organization, 17, 1059–1074.
52. Panzar, J. and Rosse, J. (1987). Testing for "Monopoly" Equilibrium, the Journal of Industrial Economics, 35, 443–456.
53. Park, K. and W. Weber (2006). Profitability of Korean Banks: Tests of Market Structure versus Efficient Structure. Journal of Economics and Business, Vol. 58 (3), pp. 222-239.
54. Pawłowska. M (2016). Determinants of Profitability of Polish Banks: The Role of Foreign Banks, Econometric Research in Finance, Vol 1(No 1) 2016.
55. Peltzman, S. (1977). The Gains and Losses from Industrial Concentration, Journal of Law and Economics 20 (October), pp. 229-63.
56. Pilloff, S., and Rhoades, S. (2002). Structure and Profitability in Banking markets, Review of Industrial Organization, Vol. 20, N°.1, pp. 81- 98.
57. Punt, L. and M. van Rooij (2001). The Profit-Structure Relationship and Mergers in the European Banking Industry. DNB Staff Reports, No. 58, De Nederlandsche Bank.
58. Sathye, M. (2005). Market Structure and Performance in Australian Banking, Review of Accounting and Finance, Vol. 4, N°2, pp. 107-122.
59. Shepherd, W. (1986). Tobins'q and the Structure-Performance Relationship: Comment, The American Economic Review, Vol.76, No. 5, pp. 1205-1210.
60. Short, B., (1979). The relation between commercial bank profit rates and banking concentration in Canada, Western Europe and Japan, Journal of Banking and Finance 3, pp. 209-219.
61. Simatele (2015). Market Structure and Competition in the South African Banking Sector, Procedia Economics and Finance Volume 30, 2015, Pages 825-835.
62. Smirlock, M. (1985). Evidence on the (Non) Relationship between Concentration and Profitability in Banking, Journal of Money, Credit and Banking, Vol. 17, N°1, pp. 69-83.
63. Yu, P., Neus, W. (2005).Market Structure, Scale Efficiency, and Risk as Determinants of German Banking Profitability, University of Tubingen, 294.




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# Impact of Capital Structure on Islamic Banks Performance: (Evidence from Asian Country)

By M. Moshin Hafeez, Hafiz Haroon Khan, Fouzia Majeed & Amara Azeem
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*Abstract-* *Purpose:* The purpose of this paper investigates the impact of capital structure on Islamic banks performance in Asian country (Pakistan, Jordan, Egypt, and Bahrain) over the period of 2007 to 2016.

*Design/Methodology/Approach:* The impact of capital structure on Islamic banks performance is calculated through regression analysis. ER, EM, DR and DE treated as regrassors and ROA and ROE as regressand in this research. Eviews Software used for analysis the time serious data over the period of 2007 to 2016.

*Findings:* According to the findings, there is a positive and significant relation EM and DR with ROA while ER has negative and significant relation with ROA.

*Originality/Value:* The empirical findings of this research play a vital role for banking performance.

*Keywords:* *banking sector, capital structure, return on asset, equity ratio, islamic bank.*

*GJMBR-C Classification:* *JEL Code: G20*




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## I. Introduction

In reaching a return on equity (ROE), firms can use a different of strategies and techniques. One approach is capital structure. The connection between capital structure and ROE is indeed of great importance to all firms. The purpose of this paper checks the impact of capital structure on Islamic banks performance in Asian country. The best way for investigate the performance of any bank through the financial statement. Because the financial statement directly links with banking performance. Few researchers construct that financial statements have the admirable impact on banking performance. Few researcher arguments the capital structure and banking performance have the admirable relationship. Some researchers give the argument on the variable which use in capital structure for measuring the banking performance like DEBT RATIO, EQUITY RATIO, EQUITY MULTIPLIER RATIO AND DEBT EQUITY RATIO etc.

For Islamic banks, Capital structure is not the same: Islamic banks operate in line with the principles of Sharia. Shariah prohibits, among other things, payment and receipt of riba (interest). This means that Islamic banks cannot pay or earn interests on their financial instruments. The consequence is that the banks mobilize and utilize funds using Shariah-compliant instruments or contracts that are not used by their conventional counterparts'. Moreover, according to the Shariah rules, Islamic banks should share their profits and losses with investors. The mudaraba contract transforms the relationship between the bank and its depositors into a partnership. This implies that the lower leverage may induce bank to gain a higher profit. This can impact Islamic banks capital structure.

For show the admirable results of capital structure and banking performance give different theories. Capital structure is the most necessary topic in finance. The method for the judgment of capital structure is most difficult for any bank. Modigliani and Miller (1958) give the arguments capital structure is most necessary in the area of finance. For conclusive the optimal capital structure, financial manager face the difficulties. The purposes of optimal capital structure gain the maximum value of organization through the minimum cost. Because run the company smoothly business appropriate many form of financing. The financial tool is the most important point for measuring the financial SWOT (Strength, weakness, opportunities, and threat).on the other hand capital structure is most important decision for the firms. *Mujahid, Zuberi et al. (2014)*. Capital structure is the mixture of debt and equity capital that compound the financing asset. Because financing is the method for producing the capital which use for acquiring the asset or growth. Due to this capital structure summarizing into net worth, preferred stock and long term debt .the capital structure is the most important decision which influences the return on investment. *Nasimi (2016).*

The most popular approaches of the capital structure is Modigliani and miller. The MM theory base on two dimensions. According to the first capital structure and firm value have no correlation because company performance base on the future return. According to the second grow the future return and not company value. *Modigliani and Miler (1958)* firstly gave the concept of capital structure .They argued that capital structure has power to change the value of a firm. This theory based on some assumptions: No taxes, no transaction cost, no bankruptcy cost and symmetric market information. MM expand their theory in 1963 and release the assumption of no tax. As the result of *MM theory (1958)* trade off theory was develop which elaborated those firms which focus on debt financing and save the firms from taxes. *Myers (1977)* present pecking order theory. This theory believes that firms take

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finance from equity instead of external source like debt. *Jensen and Meckling (1976)* designed the agency cost theory in which explained both debt and equity .this theory investigate ratio of debt in capital structure.

Due to lackness in capital structure banking area disturbed. Through the equity ratio, equity multiplier ratio, debt ratio, and debt equity ratio determines the performance of Islamic banks in Asian country. *Akhtar.* In the last paper divide into five sections. In the first section explain the introduction, second literature review, third methodology and data collection and fourth analysis of data and fifth conclusion and recommendation.

*a) Objective of the Study*

- Identify the relationship between capital structure and performance.
- Capture the relationship between the capital structure and debt equity ratio.
- Determine the relationship between capital structure and Equity ratio.
- Investigate the relationship between the capital structure and Equity Multiplier ratio. *Akhtar, Bano et al. (2016).*

*b) Research Question*

1. What is the relationship between capital structure and performance?
2. What is the relationship between capital structure and equity ratio?
3. What is the relationship between capital structure and debt equity ratio?
4. What is the relationship between capital structure and debt ratio?
5. What is the relationship between capital structure and equity multiplierratio? Akhtar

*c) Research Significant*

The importance of this study check the impact of capital structure on Islamic banking performance in Asian country i.e. Pakistan, Jordan, Bahrain and Egypt. In this study check how capital structure impact on banking area and how increase the performance through the debt ratio, debt equity ratio, equity ratio and equity multiplier ratio take edge.

## II. Literature Review

In this section, we have featured the past specialists' feelings and theory about the variable that are incorporated. The literature review part includes the real variable of this study. Profitability of bank measure the efficiency and effectiveness of the operations of the bank and poor performance might be due to lack of control over expenses which lead to low profit. The impact of capital structure on financial institutions has been a subject of a decent debate. Modigliani and Miller who firstly present that the firms could change their value through its capital structure. The basic Modigliani and Miller proposition is based on key assumptions: no taxes, no transaction cost, no bankruptcy cost and symmetric market information.

*Siddik, Kabiraj et al. (2017)* conclude the data of 22 banks over a period of 2005-2014 and observed capital structure have negative effect on return on equity, for data analysis used the least square technique. The other researcher conducted same nature study *Birru (2016)* using the data of 5 commercial banks over the period (2011-2015). For the multiply regression model use the panel data and show the negative relation between return on asset and capital structure in Ethiopia commercial bank.

*Zafar, Zeeshan et al. (2016)* examined that capital structure strongly effect on profitability of banking industry. The data collected from25 listed banks of Karachi stock exchange and measuring the relationship used the regression technique. *(Meero (2015)* suggested that financial leverage have indirectly impact on ROA and direct link with equity to asset ratio. For the result used the 16 gulf countries data over the period of 2005 to 2014. They analysis the positive interaction between performance and size of Islamic bank and Commercial bank.

*Nikoo (2015)* investigated the relationship between capital structure and banking performance in Karachi Stock Exchange. Tehran use model has a measurement of capital structure on the profitability of banks during period 2009-2014. They suggested that the results are high correlate capital structure on ROA, ROE and Earning per share. *Tarek Al-Kayed, Raihan Syed Mohd Zain et al. (2014)* used the 85 Islamic banks covering 19 countries to find out the relationship between capital structure and profitability through least square method. The study concluded that capital structure directly influence the profitability of Islamic banks.

The other researcher similar *Rajha and Alslehat (2014)* used the multiple regression model and sample size of two Islamic banks (Jordan Islamic bank and International Arab bank) over the period of 1998-2012. The result analyses show that capital structure has a positive influence on banks profitability and have no effect on bank's profitability (Liquidity assets of total assets). *Mujahid, Zuberi et al. (2014)* investigate the relationship between capital structure and bank profitability because capital structure directly impact on bank profitability. Researcher measured the performance use the data from 2008 to 2012. Mubeen Mujahid suggested that following points can be improved profitability good technology, employee skill, and time management.

*Saeed, Gull et al. (2013)* conducted the relationship between capital structure and bank performance. The researcher includes the data of Karachi stock exchange listed banks over the period of 2007 to 2011. Researcher suggests that the direct relationship



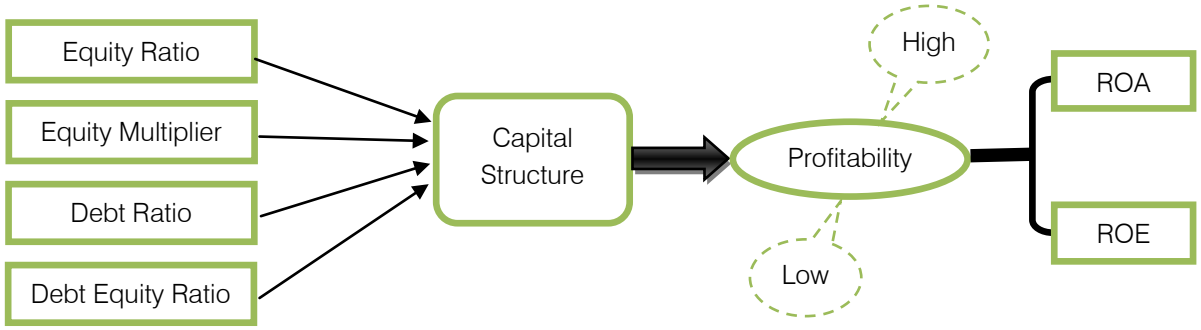
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between long term debt to capital ratio , short term debt to capital ratio ,total debt to capital ratio and profitability of banking industry (ROA, ROE EPS) through use the regression models. *Choong, Thim et al. (2012)* aimed provide guidance for bank's profitability and determinants which is used in performance. Data collected form 11 local Islamic bank in Malaysia for this study. They conclude that two variables are highly correlated size and concentration.

*Al-Farisi and Hendrawan (2011)* the researcher investigates the effect of capital structure on profit efficiency of Islamic bank and commercial bank. Data collected from 102 conventional and Islamic banks and use the unit root test for analysis. Result based on two stages. First stage suggested Islamic banks in Indonesia have top 20% highest performance score. And another concluded that capital ratio of banks negatively influence on the performance. *Shoaib (2010)* discovered the agency cost hypothesis of financial institution in Pakistan and use panel data of 22 banks over the period 2002-2009 .The result show that size of bank positively influence on financial performance of banking sector and similar the other researcher.

*Pratomo and Ismail (2006)* conducted capital structure has impact on profit efficiency of the Islamic banks in Malaysia. They have positive relationship between leverage and profitability. They argue that agency cost will be low if the debt capital wills high. Bank size has inversely relationship with profitability of banks.

a) *Therotical Model*




i. *Research Model*

$$ROA = \beta 0 + \beta 1ER + \beta 2EM + \beta 3DR + \beta 4DER + \varepsilon \quad (1)$$

$$ROE = \beta 0 + \beta 1ER + \beta 2EM + \beta 3DR + \beta 4DER + \varepsilon \quad (2)$$

*Where: β0= Coefficient of Intercept β1 – β2 = Slope of Intercept*

*Here is clearly defined the research Model:*

| Variables | Notations |
|---|---|
| Equity Ratio | ER |
| Equity Multiplier | EM |
| Debt Ratio | DR |
| Debt equity Ratio | DER |
| Return on Asset | ROA |

ii. *Research Hypothesis*

*H1:* There is positive relationship between capital structure and equity ratio.

*H2:* There is positive relationship between capital structure and Equity Multiplier.

*H3:* There is positive relationship between capital structure and Debt ratio.

*H4:* There is positive relationship between capital structure and Debt equity ratio.

## III. Methodology

*Research Design:* Positivism, critical and interpretive these are three types of research which are used in research process. positivisim type used in this paper because it is a quantitative research which is based on numerical data.

*Population and Sample Design:* The targeted population of our research was Islamic banking sector of Asian country. The most important reason targeting the Islamic banks has been evaluating the impact of capital structure in Asian countries. Sample of our study Pakistan, Jordan, Egypt, and Bahrain (16 Islamic banks of four countries over the period 2007 to 2016).

*Data Analysis Techniques:* Eviews-10 student versions are used for perform tests Descriptive, correlation, and regression on data.

*Table 1:* Name of banks and Country

| Sr# | Country Name | Banks Name |
|---|---|---|
| 1 | Pakistan | Dubai Islamic Bank , Meezan Bank, Emirates Islamic bank ,Albaraka bank |
| 2 | Jordan | Capital bank, Islamic international Arab bank, Jordan Kuwait bank, Jordan Ahli bank |
| 3 | Bahrain | ABC Islamic bank Bahrain ,Bahrain Islamic bank, Al- baraka bank Bahrain ,Ithmaar bank Bahrain |
| 4 | Egypt | Audi Islamic bank, AL- baraka bank, ADIB, National bank of Kuwait-Egypt |



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Variable Measurement

| SR# | VARIABLE | NOTION | MEASUREMENT |
|---|---|---|---|
| | *DEPENDENT VARIABLE* | | |
| 1 | RETURN ON ASSET | ROA | NET INCOME/AVERAGE TOTAL ASSET |
| 2 | RETURN ON EQUITY | ROE | NET INCOME/SHAREHOLDER EQUITY |
| | *INDEPENDENT VARIABLE* | | |
| 3 | EQUITY RATIO | ER | TOTAL EQUITY/TOTAL ASSET |
| 4 | EQUITY MULTIPLIER RATIO | EMR | TOTAL ASSET/SHAREHOLDER EQUITY |
| 5 | DEBT TO EQUITY RATIO | DER | TOTAL LIABILITY/TOTAL EQUITY |
| 6 | DEBT RATIO | DR | TOTAL LIABILITY/TOTAL ASSET |

## IV. Data Analysis

*Table 1:* Summary of Statistics used in Descriptive

| | Mean | Max | Min | SD |
|---|---|---|---|---|
| ROA | 0.122 | 1.11 | 0.08 | 0.11 |
| ER | 2.56 | 91.90 | 0.06 | 9.26 |
| EM | 12.38 | 588.3 | 0.07 | 47.16 |
| DR | 73.05 | 1.17 | 0.05 | 92.41 |
| DE | 72.50 | 1.16 | 1.59 | 91.71 |

*Source: Authors' Calculations using E-Views software*

The researcher used the mean and Std. Deviation check the impact of capital structure on Islamic banks performance in Asian country. Table 1 show the Descriptive analysis. In ROA, mean 0.122 maximum value 1.11, minimum value 0.08 and standard deviation 0.11. In ER, mean 2.56, maximum value 91.90, minimum value 0.06 and standard deviation 9.26. In EM, mean 12.38, maximum value 588.3 minimum value 0.07 and standard deviation 47.16. In DR, mean 73.05, maximum value 1.17, minimum value 0.05 and standard deviation 92.41. In DE, mean 72.50, maximum value 1.16, minimum value 1.159 and standard deviation 91.71.

*Table 2:* Results of Correlation

| | ROA | ER | EM | DR | DE |
|---|---|---|---|---|---|
| ROA | 1 | | | | |
| ER | 0.046 | 1 | | | |
| EM | 0.067 | 0.537 | 1 | | |
| DR | 0.039 | 0.020 | 0.014 | 1 | |
| DE | 0.048 | 0.013 | 0.009 | 0.00 | 1 |

*Source: Authors' Calculations using E-Views software*

To check the relationship between two variables uses the correlation method. In this check the positive and negative relation of the variable. ROA has strong relation 1 with ROA. Table 2 show ER value is 0.046% So, ER has positive relation with ROA. EM value is 0.067%. EM has positive relation with ROA. DR value is 0.039%. and has positive relation with ROA.DE value is 0.048% and positive relation with ROA. So, in the data no multicolinarity exist its means no value more than 0.7.

*Table 3:* Regression

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| ER | -7.04 | 0.000231 | -0.304409 | 0.0112 |
| EM | 7.10 | 4.56 | 1.556993 | 0.1215 |
| DR | 1.000 | 1.97 | 5.07 | 0.000 |
| DE | -1.05 | 1.99 | -0.052726 | 0.9580 |
| R-Squared | 1.0000 | | | |

*Source: Authors' Calculations Using E-Views software*

The R-Square value 1.00 means 100%. The R-square value shows that dependent variable ROA has strong relation with independent variable ER, EM, DR and DE. So we accept the H1 Hypothesis and HO Rejected. The level of signification use 5%, 10% and 15%. According to the level of signification ER has signification and negative relation with ROA at the level of 5%. There is signification and positive relation with



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ROA at the level of 15%. DR has the significant and positive relation with ROA at the level of 5%. DE has the negative and insignificant relation with ROA.

## V. Conclusion

This research was examining the impact of capital structure on Islamic bank performance of Asian country. It describe how variable ER, EM, DR and DE connected to capital structure of banking sector in Asian country. This research use the 16 banks financial statement and annual reports over the period of 2007 to 2016. This research show that capital structure has the effect on Islamic banks performance. In this study used the regression correlation and descriptive techniques for data analysis. According to result of the study conclude that ER has significant and negative relation with ROA and EM and DR has positive and significant relation with ROA. In the regression model value of r-square is 1.00 means 100% that show dependent variable has strong relation with independent variable .The finding of this study show that capital structure effect on the Islamic banking performance like ER, EM, DR and DE.

## VI. Recommendations

This study base only 10 years data. For future research take the next year data. This research base on Asian country, it is optional apply same variables in another countries. It is propose that in ER, EM, DR and DE dealings others formulas and methods. It also optional that studies should carries by other factors.

## References Références Referencias


1. Akhtar, N., et al. (2016). "Capital Structure Impact on Banking Sector Performance in Pakistan International Review of Management and Business Research 5 (2): 519.
2. Al-Farisi, A. S. and R. Hendrawan (2011). "Effect of capital structure on banks performance: a profit efficiency approach Islamic and conventional banks case in Indonesia."
3. Birru, M. W. (2016). "The Impact of Capital Structure on Financial Performance of Commercial Banks in Ethiopia." Global Journal of Management and Business Research.
4. Choong, Y. V., et al. (2012). "Performance of Islamic commercial banks in Malaysia: An empirical study." Journal of Islamic Economics, Banking and Finance 8 (2): 67-79.
5. Meero, A. A. (2015). "The relationship between capital structure and performance in gulf countries banks: a comparative study between Islamic banks and conventional banks." International Journal of Economics and Finance 7 (12): 140.
6. Mujahid, M., et al. (2014). "Impact of capital structure on banking performance." Research Journal of Finance and Accounting 5 (19): 99-104.
7. Nasimi, A. N. (2016). "Effect of Capital Structure on Firm Profitability (An Empirical Evidence from London, UK)." Global Journal of Management and Business Research.
8. Nook, S. F. (2015). "Impact of Capital Structure on Banking Performance: Evidence from Tehran Stock Exchange." International Research Journal of Applied and Basic Sciences9 (6): 923-927.
9. Pratomo, W. A. and A. G. Ismail (2006). "Islamic bank performance and capital structure."
10. Rajha, K. S. and Z. A. F. Alslehat (2014). "The Effect of capital structure on the performance of Islamic banks." Interdisciplinary Journal of Contemporary Research in Business 5 (9): 144.
11. Saeed, M. M., et al. (2013). "Impact of capital structure on banking performance (A case study of Pakistan)." Interdisciplinary Journal of Contemporary Research in Business 4 (10): 393-403.
12. Shoaib, A. (2010). "Measuring performance through capital structure: Evidence from banking sector of Pakistan."
13. Siddik, M. N. A., et al. (2017). "Impacts of capital structure on performance of banks in a developing economy: Evidence from Bangladesh." International journal of financial studies 5 (2): 13.
14. Tarek Al-Kayed, L., et al. (2014). "The relationship between capital structure and performance of Islamic banks." Journal of Islamic Accounting and Business Research 5 (2): 158-181.
15. Zafar, M. R., et al. (2016). "Impact of Capital Structure on Banking Profitability." International Journal of Scientific and Research Publications 6 (3): 186-193.




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# Determinants of the Financial Performance of Private Commercial Banks in Ethiopia: Bank Specific Factors Analysis

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*Abstract-* The main purpose of this paper is to investigate the bank specific factors which can affect the financial performance of private commercial banks in Ethiopia. A total of 6 private commercial banks (those having well organized financial data till 2017) were purposefully taken & their audited annual financial reports were analyzed for the period of 2011-2017. For this purpose, descriptive statistic, Pearson Correlation Coefficient and Multiple Linear Regression Analytical approaches were applied. In this study, return on equity, return on asset and net interest margin as the dependent variables and bank specific factors like banks size, liquidity management, asset quality, management efficiency and capital adequacy as independent variables were used. Any autocorrelation problem was checked. The results indicated that capital adequacy, management efficiency and size of banks have positive and statistically significant effect on financial performance of private commercial banks of Ethiopia measured by ROA, ROE and NIM. But, liquidity management has negatively significant impact on financial performance of the banks (ROE). Finally, the study also depicted that asset quality was not statistically significant determinant of sound financial performance of private commercial banks in Ethiopia. Therefore, due attention should be given in ensuring adequate capital, optimum liquidity, efficient expense management system and adequate size of assets by commercial banks for better performance and profitability in their own area of business.

*Keywords:* *private commercial banks; financial performance; ethiopia; bank specific factors.*

*GJMBR-C Classification:* *JEL Code: G10*




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# Determinants of the Financial Performance of Private Commercial Banks in Ethiopia: Bank Specific Factors Analysis

Abdu Mohammed Assfaw

*Abstract-* The main purpose of this paper is to investigate the bank specific factors which can affect the financial performance of private commercial banks in Ethiopia. A total of 6 private commercial banks (those having well organized financial data till 2017) were purposefully taken & their audited annual financial reports were analyzed for the period of 2011-2017. For this purpose, descriptive statistic, Pearson Correlation Coefficient and Multiple Linear Regression Analytical approaches were applied. In this study, return on equity, return on asset and net interest margin as the dependent variables and bank specific factors like banks size, liquidity management, asset quality, management efficiency and capital adequacy as independent variables were used. Any autocorrelation problem was checked. The results indicated that capital adequacy, management efficiency and size of banks have positive and statistically significant effect on financial performance of private commercial banks of Ethiopia measured by ROA, ROE and NIM. But, liquidity management has negatively significant impact on financial performance of the banks (ROE). Finally, the study also depicted that asset quality was not statistically significant determinant of sound financial performance of private commercial banks in Ethiopia. Therefore, due attention should be given in ensuring adequate capital, optimum liquidity, efficient expense management system and adequate size of assets by commercial banks for better performance and profitability in their own area of business.

*Keywords: private commercial banks; financial performance; ethiopia; bank specific factors.*

## I. Introduction

### a) Background of the Study

Financial institutions play a dynamic role in economic resource distribution of countries. They channel funds from depositors to investors continuously, that is effectively realized when income is generated enough to cover operation cost. For sustainable mediation functions, financial institutions need to be profitable. Financial performance also has critical implication for economic growth of countries. Good financial performance rewards investment, while poor financial performance can lead to institutional failure and crisis which affects economic growth. Financial performance of a firm can be affected by internal and external factors, while internal factors are individual characteristics; external factors are macroeconomic to the institutions. Financial performance is the reflection of efficiency and effectiveness of the management in making use of the resources of the company as expressed in the form of sales turnover, employment, or sock prices. Financial performance also plays a crucial role for organizational performance. (Okumu and Oyugi, 2016)

According to Dakito (2015), the growth and stability of the financial condition of a country depends on the soundness of its banking sector. The decisiveness of the banking system is an important concern for regulatory authorities, bank customers and shareholders. To avert the financial disaster of the banking activity is profoundly controlled all over the world. This involves controlling of bank risk taking and ensuring compliance with set of prudential regulations set by central banks such as the liquidity requirement, capital adequacy rules and risk management tools. Ongore and Gemechu (2013) also stated that the role of commercial banks in the resource allocation of the country is indispensable. They cannel funds from depositors to investors continuously. For this purpose, banks have to generate sufficient income that can cover their operational costs they incur in the due course. On the other hand, poor banking performance can lead to banking failure and crisis which have negative consequence on the economic growth of the country.

Proclamation No. 84/1994 permitted the private sector to involved in the banking sector. This marked the opening of a new era in the Ethiopian banking sector. Subsequent to this proclamation, Ethiopia witnessed an expansion of domestic private banks. Currently, the number of private commercial banks reached fourteen with a total of 394 branches. Private bank in Ethiopia recorded very strong advancement in 2010 in all three banking operations: mobilizing deposit, providing loans and dealing in foreign exchange. (Admassu and Asayehgn, 2014)

### b) Statement of the Problem

A sound financial system is indispensable for a healthy and thrilling economy. The performance of any economy is to largest extent dependent on the performance of the banking sector (Ermias, 2016).The African banking system and regulation relative to other parts of the world shows that the banking environment

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(encompassing depth, efficiency, penetration, innovation and competition), as well as regulation and supervision standards is relatively shallow and less penetrated. The difficulties in creating borrowers' ability and willingness to repay, and lack of legal support for creditor rights limit banks' lending schemes, which contributes to shallow financial development. For example, in East and West Africa, the percentage of adults in public credit registry remains low on average, accounting for less than 1% and 3% of adult population respectively. Besides, in Africa, there is also low financial penetration. Less than a quarter of sub-Saharan Africa's population has access to a formal bank account. This indicates that (i) there is less financial inclusion particularly in low income communities and (ii) the degree to which private individuals can access financial services is limited. In sub-Saharan Africa, only 21% of the adult population has bank account which is the lowest level of financial penetrations. (Eugene and Mouhamadou, 2015).

Admassu and Asayehgn (2014) stated that at present-day, Ethiopian banking sector is in a rudimentary and fragile state. It is relatively underdeveloped, small, closed and characterized by a huge share of state ownership. The commercial banks owned by the state account around two-third of the banking sector assets. The financial intermediation level in Ethiopia is very low, partially due to the public's lack of confidence in the banking sector. Besides, the problem of non-performing loan was wide spread among state owned banks in the early 1990s that contributed for their insolvency. It was also identified that the major determinants that led banks to insolvency were ineffective supervision, mismanagement and political interference with credit decisions.

To date, though different reforms have been made by the government, the banking sector, yet is not competitive and efficient, nor is it capable of accelerating the economic growth of the country which remains marginal. In the Ethiopian banking sector, loans are not priced competitively by taking into consideration the risk of the borrower and the return of the loan to the lending bank. This practice inevitably denies capital to efficient firms and contributes to the build-up of non-performing loans in the state owned bank's portfolio. (Admassu and Asayehgn, 2014)

According to Nada Dreca (2012) cited in Muhabie (2015), the banking sector is affected by the global financial crisis. He argued that this crisis produces many adverse effects towards banks. Some to mention, 'stagnation of the sector, decline in profitability, increase of the non-performing assets and loans, past due receivables, loan loss provision and deterioration of other key indicators of banks` performance'.

Furthermore, the financial performance analysis was made by different previous researchers on long aged banks by giving less attention for of the banks that were emerged on latter periods. So, this study tried to give equal attention for newly emerged and long aged banks. Evaluation of financial performance of banks generally in the world particularly in Ethiopia has attracted augmented attention over the past periods. Meanwhile, little has been done. (Muhabie, 2015). In the Ethiopia, however, existing literatures did not show accurately what the financial performance and determinant factors influence performance of private commercial banks. It was still arguing issue among different researchers. This study, therefore, aimed at evaluating the firm specific factors that can affect selected private commercial banks of Ethiopia.

*c) The Study Objectives*

In this study, the following objectives were attained:

1. To depict the effect of capital adequacy on the financial performance of private commercial banks of Ethiopia.
2. To evaluate the influence of asset quality on the financial performance of private commercial banks of Ethiopia.
3. To analyze the influence of management efficiency on the financial performance of private commercial banks of Ethiopia.
4. To analyze the influence of size of banks onthe financial performance of private commercial banks of Ethiopia.
5. To depict the effect of liquidity management on the financial performance of private commercial banks of Ethiopia.

## II. Empirical Review of Literatures

Căpraru and Ihnatov (2014) tried to assess main determinants of banks' profitability in five selected Central and Eastern European Countries over the period from 2004 to 2011. They used return equity (ROE) as proxy measuring the profitability of banks calculated as a ratio of the net profit to total equity; the return on assets (ROA) calculated as a ratio of the net profit to the total bank assets and net interest margin (NIM) computed as a ratio of the difference between interest income and interest expense to the total assets of the bank. They also considered three determining factors of banks' profitability: bank-specific factors (bank size, financial structure, credit risk taken, liquidity risk, business mix, structure of income expenditure and capital adequacy); industry specific (market concentration, financial intermediation etc.) and macroeconomic elements (e.g. economic growth and inflation). The results showed that the management efficiency and capital adequacy growth influence the bank profitability for all performance proxies, while credit risk and inflation determine only the ROA and ROE.

Okumu and Oyugi (2016) studied on the factors influencing financial performance of saving and credit cooperative Societies (SACCOs) in Kisumu County, Kenya using CAMEL approach (i.e. capital adequacy,

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asset quality, corporate management efficiency and liquidity management) as independent variable and ROA as proxy for measuring the financial performance of the selected institutions as a dependent variable. The result showed that financial performance of SACCOs in Kisumu County is influenced by capital adequacy, asset quality, management efficiency and liquidity management.

There are many factors that can be customized to measure performance of banks in a typical developing economy and from which is profitability. Echekoba et.al (2014) tried to identify the determinants of Bank's performance using Profitability as a proxy in Nigeria: Using Camel Rating Model (2001-2010) using ordinary least square estimation method. The result of this study indicates that liquidity management has significant effect on the profitability of banks. But, capital adequacy, assets quality, management efficiency and earning did not. The study of Dawit (2016) also tried to evaluate important factors of financial performance of Ethiopian private commercial banks using the random effect model on both firm specific and external factors. The internal factors used in this study include capital adequacy, asset quality, earning ability, liquidity management and bank size, whereas, the external factor is foreign exchange rate. Moreover, ROA, ROE and NIM were used as dependent variable to measure the financial performance. Based on the regression result; asset quality, earning ability and bank size have a significant influence on the financial performance of Ethiopian commercial banks measured by return on asset, return on equity and net interest margin.

Melaku (2017) sought to analyze the overall performance of six sampled private commercial banks in Ethiopia using CAMEL rating approach with panel regression model to measure the impact of CAMEL elements (asset quality in terms of fixed assets / total assets, loan loss provision/ total loans; capital adequacy through total capital/total asset and total debt/total equity; liquidity management using liquid asset/total deposit, and management efficiency measured by non-interest expense/ gross expense and net profit/ employee) as predictors on bank performance using ROA (net income / total assets) and ROE (net income / total capital) as dependent variables.

Ongore and Gemechu (2013) depicted the determinants of financial performance of commercial banks in Kenya using explanatory study based on secondary data obtained from published statements of accounts of all commercial banks in Kenya for ten years (2001 to 2010). They used ROA, ROE and NIM as dependent variable and bank specific factors such as capital adequacy, asset quality, management efficiency and liquidity management and macroeconomic variables like GDP growth rate and inflation rate as explanatory variable. The study showed that capital adequacy, asset quality and management efficiency significantly affect the performance of commercial banks. However, the effect of liquidity on the performance of commercial banks is not strong.

*a) Indicators and Financial Performance Determinants of the Banks*

i. *Indicators of Financial Performance of Commercial Banks.*

The main goal of commercial banks is mostly the profit that they generate. All the strategies designed and activities performed thereof are meant to realize this magnificent objective though they have other goals. There are different ratios that can be adopted to measure the profitability of commercial banks of which return on asset, net interest margin and return on equity are the major ones (Murthy and Sree, 2003; Alexandru et al., 2008 as cited on the study of Ongore and Gemechu (2013).

Tigist (2014) examined the factors that can affect ethipian commercial banks' using panel data of the banks for the period of 2002-2013 using the fixed effect regression model ROA and NIM were used as the performance measure. Andebet (2016) studied the performance of private commercial banks in Ethiopia using bank profitability as dependent variable which in turn measured using return on assets (ROA) measured by net profit/total assets, return on equity (ROE) measured by net profit/ total equity, and net interest margin (NIM) measured by interest income- interest expense/total loans and advances.NIM is also measured by net interest income/Total loan and advances (Tigist, 2014). Mulualem (2015) analyzed the financial performance of fourteen Ethiopian commercial banks using fixed effect multiple linear regression model for two profitability measures: ROE which reflects the profit earned per birr of capital invested and measured by net profit after tax/total shareholders' equity, and ROA which reflects the ability of banks management to generate profits from the bank's assets and measured through net profit after tax/total asset of banks.

The study of Dawit (2016) also employed ROA (Net income after tax to its total asset), ROE (Net Income after Taxes divided by Total Equity Capital) and NIM (Interest Income) minus the interest paid on borrowed funds (Interest Expense) divided by the average amount earning assets (Loans and Advances)) as dependent variables to measure the financial performance of commercial banks in Ethiopia. Muhabe (2015) also depicted that profitability is the most common method of financial ratios which is used to measure the performance of banks. Profitability enables to evaluate how well the bank is performing in terms of profit. It is mostly measured using return on asset, return on equity and net interest margin. According to his study, the ROA reflects the ability of a bank's management to generate profits from the bank's assets. It shows the profits earned per birr of assets. It also



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indicates how effectively the bank's assets are managed to generate revenues, although it might be biased due to off-balance-sheet activities. It can be computed as: ROA equals to net profit after tax/total assets. The other measure of profitability is ROE that indicates the profitability to shareholders of the firm after all expenses and taxes are satisfied. It can be computed as: ROE equals to net profit after tax / shareholders' equity. The last measure of financial performance of banks is NIM which is the difference between interest income and interest expenses as a percentage of total loans and advances which includes deposits with foreign banks, treasury bills and other investments. It can be computed as NIM equals to (interest income – interest expense)/total assets.

ii. *Financial Performance Determining Factors of Commercial Banks*

1. Capital Adequacy (CA)

Capital is one of the important determinant of financial performance of banks. It is evaluated through debt to equity ratio and indicates the bank's financial leverage. There is no standard norm for goodness of debt to equity ratio in the case of commercial banks. (Srinivas an and Saminathan, 2016). Capital adequacy comprises different crucial components such as capital adequacy ratio, debt equity ratio, total advances to total assets ratio (Muralidhara and Lingam, 2017). Mulualem (2015) also measured it using gross capital or shareholders' capital/total assets and the higher the ratio indicates the bank is relatively better than the other banks having lower ratio. As it was reflected on the study of Mulualem (2015), capital adequacy ratio is positively correlated with return on asset and return on equity and statistically significant at 10%. Thus, it implies that banks with larger capital have potential of spreading their business operations by strengthening their ability to assume risk and attract low cost, which in turn will enhance their liquidity position (Ermias, 2016). But, Dawit (2016) evaluated it using total capital to total asset and it shows a negative relationship with return on equity of sampled Ethiopian commercial banks. This is because when the assets of the banks are more financed by capital in return the income expected form each birr in banks share is decreased. It has positive and statistically significant effect on NIM indicating that a bank with high capital adequacy ratio has high finical performance (NIM).Samuel (2015) and Dakito (2015) identified as there exists positive relationship between capital adequacy and banks performance. But, no asset quality indicators were significant in determining the profitability ratios in the study of Melaku (2017). This implies that there is inconsistency among researchers.

2. Asset Quality (AQ)

The quality of assets is significant aspect to assess the degree of financial strength of a bank. The principal purpose of measuring the assets quality is to determine the composition of non-performing assets (NPAs) as a percentage of the total assets (Aspal and Dhawan, 2016). Thus, lowest non-performing loan shows that the good health of the portfolio of asset at banks. The lower the ratio the better the bank performing (Sangmi and Nazir, 2010). It is a method of measuring the banks' financial performance using Non-Performing Assets / Net advances (the lower the better) and standard advances (net of total advances and gross NPAs) / total advances (the higher the better) (Srinivasan and Saminathan, 2016). Muralidhara and Lingam (2017) also measured asset quality in terms of institution's total non-performing asset and their ratio to total net asset: net NPA to net advances, net NPA to net assets and owners total investment to total assets. In addition, Mulualem (2015) measured it by the ratio of provisions of loan to total loan provided and the lower the loan loss provision to total loan ratio indicate the quality of the asset of the bank is relatively better than the other banks. As Mulualem (2015) clearly showed, asset quality has positive correlation with return on equity and return on asset. Tadios (2016) stated that the prime objective of measuring the assets quality is to ascertain the component of nonperforming assets (NPAs) as percentage of the total assets. Tadios (2016) measured it by total loans and advances to total assets ratio (loans and advances/ total assets) and total investments to total assets ratio (total investment/total asset).

Asset quality assesses the perils linked with the bank's asset portfolio i.e. the quality of loans issued by the bank. Quality of asset of banks will be measured using loan reserve (provision) to total loans ratios (Andebet,2016).According to the study of Ermias (2016), asset quality has a negative but statistically significant effect on bank's profitability (ROA). This implies that management can enhance its profitability by carefully watching the health status of its assets (loans and advances). Dawit (2016) measured it by non-performing loans to total loans and the result indicated as it has a negative effect on ROA signifying that that a bank which has high non-performing loans has low finical performance (ROA) and indicating that a bank which has high non-performing loans has low finical performance (ROE) and it has insignificant but negative impact on NIM indicating that the collectivity of disbursed loans is very small with their interest income according to the schedule in Ethiopian commercial banks. It is similar with the result of Iheanyi (2017) and Yiregalem (2015) which means assets quality has a negative impact on that profit of the bank.

3. Management Efficiency

It is another method of determining the financial well-being of banks. It is related with the capability of the management to use its resources efficiently, income intensification, decreasing operating costs that can be measured by different financial relationships or ratios. It

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is also used to find out whether a bank is relatively over or under staffed. In addition, it checks efficiency of bank in maximizing profits per employee. It is also measured using total advances/total deposit, total advances and total deposits /no of employees and profit / no of employees (Srinivasan and Saminathan, 2016). Though there are not confined parameters to evaluate the management efficiency, the CAMEL approach gives insight a few ratios which can show the management efficiency of banks such as business per employee, Profit per Employee and Net Interest Income. (Muralidhara and Lingam, 2017). Tadios (2016) measured the management efficiency by total interest expenses to total deposits ratio (interest expense/total deposit), total loans and advances to total deposits ratio (loans and advances, deposits) and return on net worth (profit after tax /net worth).

As depicted by Mulualem (2015), the management efficiency ratio is the highest negatively correlated variable with return on asset and return on equity. Management efficiency is another vital component of the CAMEL model that ensures the survival and growth of a bank. So as to see better picture in this regard, non-interest expense to gross expense ratio, total advances to total deposits ratio, and interest income over total assets ratios are considered. (Ermias, 2016). It can also be measured by total advances to total deposits and interest income to total advance (Aspal and Dhawan, 2016). It can also be measured through total advances to total deposits (TA/TD) ratio that measures the efficiency and ability of the bank's management in converting the deposits available with the bank into high earning advances (include the receivables) (Reddy and Prasad, 2011). Managerial efficiency of the banks has statistically significant and positive relationship with banks' profitability as depicted on the study of Yiregalem, (2015).Even though different researchers used different ratios to measure it, the most important method of ratio used as a proxy of management efficiency is expense to asset ratio. The ratio of operating expenses to total asset has negative effect on performance of banks (Athanasoglou et al. (2005) as cited by Mohammed (2015)). This indicates that different types of financial ratios are used to study the asset quality of banks by different scholars.

4. Liquidity Management

Liquidity for a bank is an important facet which represents its capacity to satisfy its financial requirements. It designates potential of banks to satisfy their deposit liabilities with available liquid funds. Different scholars used different measurements in measuring liquidity ratios. For example, Mulualem (2015), Ongore and Gemechu (2013) and (Dawit, 2016) measured it by total loan/total customers deposit, and the higher this ratio indicates that bank has relatively better liquidity position than the other competitor bank. Another scholar (Ermias, 2016) measured liquidity of banks using liquid assets to total assets, liquid assets to total deposits, and liquid assets to demand deposits. Srinivasan and Saminathan (2016) also evaluated liquidity position of banks by the ratio of cash to total asset and the ratio of total liquid assets to total deposit. In addition, Muralidhara and Lingam (2017) evaluated the liquidity of banks through current ratio/ quick ratio and liquid assets to total assets. Liquidity also be evaluated by liquid assets to deposit ratio (liquid asset/total deposit), loans to total asset ratio (loans/total assets) and loans to deposit ratio (loans/total deposits)(Mulualem, 2015). But,the most common financial ratios that reflect the liquidity position of a bank according to Samad (2004) as cited on the study of Ermias (2016)are customer deposit to total assets and total loans to customer deposits.

As it was reflected on the study of Samuel (2015), Tesfaye (2013) and Mulualem (2015), liquidity ratio is negatively correlated with return on asset. This is in line with the result depicted by Dawit (2016) that indicated as there is insignificant negative relationship between liquidity management and return on asset of sampled Ethiopian commercial banks but negative and significant relationship with ROE, and it has a positive and statistically insignificant effect on the computed net interest margin of these sampled banks. Yiregalem (2015) and Ongore and Gemechu (2013) tried to depict that liquidity management represented by liquidity ratio which was found to have no significant effect on the banks.

5. Bank size

The bank size is an important determinant of profitability. It is a natural logarithm of total assets (Khaled Mahmud, et.al, 2016) and (Dawit, 2016). It is used to assess whether the bank's size is related to their performance. It has positive relationship with ROA that could be accredited to that in Ethiopian banking industry with the large bank size performs better than the smaller banks due to the existence of economies of scale and it has significant positive impact on ROE and NIM(Dawit, 2016). But, Tigist (2014), Tesfaye (2013) and Khaled Mahmud, et al. (2016) depicted as the size of the banks is a statistically significant variable that negatively affects the performance of banks. It implies that due to management inefficiencies, the large banks are facing diseconomies of scale which reduces the performance. This study is supported by the study of Mohammed (2015) that revealed as bank size has a negative and significant effect on profitability in terms of ROA and ROE at 1% and 10% significant level respectively suggesting that larger banks tend to earn lower profits.

*b) Formulation of Hypothesis*

Based on literatures reviewed above, the following hypotheses have been formulated:



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1. *H1:* Adequacy of Capital has statistically significant and positive impact on the financial performance of private commercial banks in Ethiopia.
2. *H2:* Asset quality has statistically significant and positive influence on the financial performance of private commercial banks in Ethiopia.
3. *H3:* Banks size has statistically significant and positive impact on the financial performance of private commercial banks in Ethiopia.
4. *H4:* Management efficiency has positive and statistically significant effect on the financial performance of private commercial banks in Ethiopia.
5. *H5:* Liquidity management of banks has statistically significant and negative effect on the financial performance of private commercial banks in Ethiopia.

## III. Methodology of the Study

*a) Research Design*

This study employed explanatory type of research design with quantitative data analysis research approach.

*b) Sources of Data and Methods of Data Collection*

The source of data was totally secondary that was obtained particularly from the seven years (2011-2017 (G.C)) of bank's annual audited financial reports. Therefore, there was critical review of the secondary data obtained from annual audited financial statements of banks of the seven years' periods as well as different researches related to the current study.

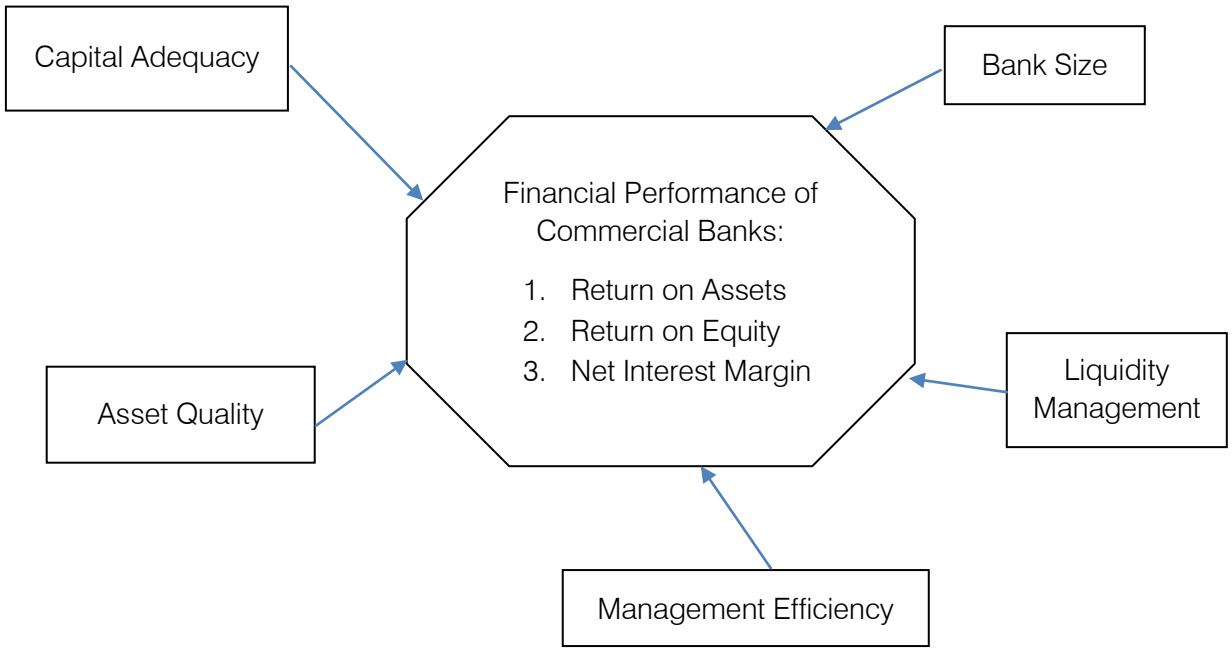
*c) Sample Size and Sampling Techniques*

The Seven Years (2011- 2017 (G.C)) of data was selected from audited financial reports of six purposively selected private commercial banks (Berhan Bank (BB), Dashen Bank (DB), Wegagen Bank (WB), Abay Bank (AB), Zemen Bank (ZB) and Oromia International Bank (OIB)). These banks were purposively selected from 16 private commercial banks of Ethiopia because of presence of well-organized audited financial statement in these selected study periods.

*d) Methods of Data Analysis and Interpretation*

After the data collection process has been accomplished, descriptive statistic, linear multiple regression model and Pearson correlation analytical methods were adopted. SPSS version 21 software was used for processing and analyzing the data. F-test and multicollinearity tests were performed for testing the statistical significance power of the factors at 5 percent level of significance.

*e) The Conceptual Structure of the Study*




*Source: Researcher's Own formulation (2018)*

*Figure 1.1:* Bank specific factors that can affect financial performance of Private Commercial Banks



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*Table 1:* Definition of variables and their expected sign

| | Independent Variables | | | |
|---|---|---|---|---|
| S. No | Explanatory Variables | Description of Measurement (proxies) | Conception | Expected sign |
| 1 | Capital Adequacy | shareholders' equity/ total assets | CA | + |
| 2 | Asset Quality | Provision for doubtful debts and advances/Net loans and advances | AQ | + |
| 3 | Management efficiency | Operating expenses/net operating income. | MGTE | + |
| 4 | Liquidity Management | Loan deposit ratio (Total loan/total customers deposit) | LQTM | - |
| 5 | Bank size | Natural logarithm of Total Assets (log of assets) | BS | + |
| Dependent Variables : related to financial performance (Profitability) | | | | |
| 1 | Return on Assets | Net profit/Total asset | ROA | |
| 2 | Return on Equity | Net profit/ Shareholders equity | ROE | |
| 3 | Net interest margin | Interest income – interest expense/Total assets of the bank or NIM= net interest income/Total loan and advances | NIM | |

*Source: Researcher own formulation (2018)*

*f) Regression Model Specification*

In order to evaluate the financial soundness of private commercial banks in Ethiopia, three models have been developed and each of them has one dependent variable and five alike independent variables as illustrated below. As presented below, Multiple regression analysis was adopted to show the bank's specific factors affecting the profitability of banks;

Model: $Y = \beta 0it + \beta 1X1it + \beta 2X2it + \beta 3\ X3it + \beta 4\ X4it + \beta 5\ X5it + \epsilon it$

$ROA_{it} = \beta 0 + \beta 1\ CA_{it} + \beta 2\ AQ_{it} + \beta 3\ MGTE_{it} + \beta 4\ LM_{it} + \beta 5\ BS_{it} + \epsilon_{it}$------1

$ROE_{it} = \beta 0 + \beta 1\ CA_{it} + \beta 2\ AQ_{it} + \beta 3\ MGTE_{it} + \beta 4\ LM_{it} + \beta 5\ BS_{it} + \epsilon_{it}$------2

$NIM_{it} = = \beta 0 + \beta 1\ CA_{it} + \beta 2\ AQ_{it} + \beta 3\ MGTE_{it} + \beta 4\ LM_{it} + \beta 5\ BS_{it} + \epsilon_{it}$-----3

Where:

$ROA_{it}$ = Represents Return on Asset of the bank i at time t, $ROE_{it}$ = Return on Average Equity of Bank i at time t and $NIM_{it}$ = Net interest margin of Bank i at time t

$\beta 0$= Constant, Y intercept

$\epsilon it$ =Error term where *i* is cross sectional at *t* time period.

$\beta 1$, $\beta 2$, $\beta 3$ and $\beta 4$ Coefficient indicating rate of change of financial performance as of the independent variables.

$CA_{it}$=Capital adequacy for bank *i* in year *t*

$AQLTY_{it}$ =Asset quality for bank *i* in year *t*

$MGTE_{it}$=Management efficiency for bank *i* in year *t*

$BS_{it}$=Bank's size for bank *i* in year *t*

$LM_{it}$=Liquidity management for bank *i* in year *t where t=2011-2017*

## IV. Result and Discussion

This part of the study depicts the inferential analysis that shows the empirical evidence on the bank's specific financial performance determinants of private commercial banks in Ethiopia.

*a) Descriptive Statistic Analysis*

This section depicts the number of the observation based on the data that was being collected and the result of descriptive statistic of the tested variables involved which were return on asset, return on equity, net interest margin, banks size, liquidity management, capital adequacy and management efficiency of the data that being run over the entire time period from 2011 to 2017.

*Table 2:* Result of Descriptive Statistics

| | ROA | ROE | NIM | BS | LM | CA | MGTE | AQLTY |
|---|---|---|---|---|---|---|---|---|
| Observation | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 |
| Minimum | -0.0241 | -0.0241 | 0.0083 | 8.6598 | 0.1172 | 0.0955 | -3.5381 | 0.0048 |
| Maximum | 0.3109 | 0.3567 | 0.4109 | 10.539 | 8.1924 | 1.6734 | 3.7828 | 0.0969 |
| Mean | 0.05047 | 0.18563 | 0.04637 | 9.73756 | 0.69092 | 0.21135 | 1.23057 | 0.0235 |
| Std. Deviation | 0.05874 | 0.07483 | 0.07939 | 0.4648 | 1.19878 | 0.27076 | 1.03774 | 0.02092 |

*Source: Researcher own computation, 2018*

As the table above depicts, all the dependent and explanatory variables are having range of 42 observations. The average value of return on asset is 0.05047 which shows that percentage of ROA is 5 % which is very low having -0.0241 of minimum and 0.3109 maximum values with 0.05874 standard deviation. The ROE has a mean value of 0.18563 (18.5 %) with -0.0241 of minimum and 0.3567 maximum value and 0.07483



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standard deviation. The Net Income Margin (NIM) is 0.04637 on average, which shows that percentage of NIM is 4.6 % with 0.0083 minimum and 0.4109 maximum value with the standard deviation of 0.07939. Further, Bank size (BS) measured as Ln of total assets has very high mean of 9.73756 this shows that percentage is more than 100 with a range of 8.6598 minimum and 10.539 maximum values while standard deviation is 0.4648.

The mean of Liquidity management (LM) is 0.6909 this shows that percentage of LM is 69 % which is slightly high and the standard deviation is also very high 1.19878 which shows that percentage is more than 100. The mean value of Capital Adequacy (CA) is 0.21135 that shows that percentage of CA is 21 % with a minimum value of 0.0955 and maximum value 1.6734 and 0.27076 value of standard deviation. While the mean for Management Efficiency (MGTE) 1.23057; this shows that percentage of MGTE is 123% which is very high and more than 100 and ranging between -3.5381 of maximum and 3.7828 of minimum value with high standard deviation of 1.03774. On average, Asset Quality (AQLTY) is 0.0235; this shows that percentage of MGTE is 2.35 % which is very low and its standard deviation is 0.02092 and ranging between 0.0048 minimum value to 0.0969 maximum values.

*b) Test of Multi Collinearity*

The test of multi-collinearity problems of explanatory variable of private commercial banks in Ethiopia (asset quality, capital adequacy, management efficiency, bank size and liquidity management effectiveness of banks) was made using VIF and Tolerance. As explained by Addisu (2015), tolerance is an indicator of how much of the variability of the specified explanatory variables is not explained by the other independent variable in the model formulated and it is computed using the formula of 1-$R^2$ for each independent variable. Accordingly, to him, if this value is very small (less than .10), it indicates that the multiple correlation with other variables is high, suggesting the possibility of multicollinearity. Similarly, Addisu also stated that the value given for the VIF (Variance inflation factor) is just the inverse of the tolerance value (1 divided by Tolerance). If the value of VIF is above 10, it indicates existence of multicollinearity.

*Table 3:* Collinearity statistics

| Variables | Tolerance | VIF |
|---|---|---|
| BS | .728 | 1.374 |
| LM | .986 | 1.014 |
| CA | .832 | 1.202 |
| MGTE | .833 | 1.201 |
| AQLTY | .936 | 1.069 |

*Source: Researcher's own computation, 2018*

As table 3shows, since the tolerance limit is greater than 0.10, and the variance inflation factor is below 10 (cut off VIF), multi-collinearity problem doesn't exist. Therefore, the model if free from multicollinearity problems.

*c) Correlation Matrix of the Study*

Pearson correlation coefficients show whether dependent and independent variables are correlated and how much they are correlated each other.

*Table 4:* Correlation Statistics

| Variables | ROA | ROE | NIM | BS | LM | CA | MGTE | AQLTY |
|---|---|---|---|---|---|---|---|---|
| ROA | 1 | | | | | | | |
| ROE | -.045 | 1 | | | | | | |
| NIM | .781** | -.010 | 1 | | | | | |
| BS | -.291 | .436** | -.264 | 1 | | | | |
| LM | .049 | -.311* | .012 | -.005 | 1 | | | |
| CA | .791** | -.104 | .930** | -.402** | -.009 | 1 | | |
| MGTE | .170 | .196 | .148 | .341* | .030 | -.063 | 1 | |
| AQLTY | -.051 | .148 | -.055 | .048 | -.116 | -.020 | -.194 | 1 |
| **. Correlation is significant at the 0.01 level (2-tailed). | | | | | | | | |
| *. Correlation is significant at the 0.05 level (2-tailed). | | | | | | | | |

*Source: Researcher's own computation, 2018*

As is observed on table 4, ROA has negative relationship with ROE, banks size and asset quality of banks while it has positive correlation with NIM, adequacy of capital, liquidity management and management efficiency of banks. This implies that with increase in NIM, liquidity management, capital adequacy and management efficiency, the efficiency of banks in generating ROA on their asset invested will be boosted. The result also showed that when the rest of the variables are decreasing, ROA will be increased. Moreover, ROE has negative relationship with ROA, NIM, liquidity management and capital adequacy of banks while it has positive correlation with that of size of banks, asset quality and management efficiency of banks. This designates that with decrease in ROA, net interest margin, liquidity management and capital adequacy, the efficiency of banks in generating return on their equity will be enhanced. The results also show that when the rest of the variables are increasing, there can be increase in ROE.

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Furthermore, NIM has negative relationship with ROA, size of banks and asset quality of banks and it has positive correlation with ROE, capital adequacy, management efficiency and liquidity management of Ethiopian private commercial banks. This shows that as with increase in ROA, net interest margin, liquidity management and capital adequacy, the efficiency of generating net of the interest margin of banks will be improved. The result also shows that with increasing of the rest of the variables, there can be increase in NIM.

*d) Regression Analysis of the Study*

This section depicts the regression model analysis of financial soundness determinants of private commercial banks of Ethiopia.

A. Analysis of Regression of ROA

1. Model Fit test of ROA

As depicted below, R square and adjusted R square were addressed to evaluate whether the formulated model can fit, overall, in measuring financial soundness of the banks.

*Table 5:* Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .824[a] | .679 | .634 | .0355121 |
| a. Predictors: (Constant), AQLTY, CA, LM, MGTE, BS | | | | |

*Source: Researcher's own computation (2018)*

As depicted in table 5 above, the adjusted R-square value is 63.4 % and from this it is concluded that 63.4 % of the variation in the dependent variable (ROA) of commercial banks is explained by the independent variables (asset quality, capital adequacy, management efficiency bank size and liquidity management efficiency). This indicates the regression model can strongly explain the dependent variables.

The outcomes of the model, as whole, which was depicted by analysis of variance (ANOVA) also indicated that it has a significant good degree of prediction of the dependent variable (ROA).

*Table 6:* ANOVA[a] Analysis

| Model | | Sum of Square | Df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | .096 | 5 | .019 | 15.233 | .000[b] |
| | Residual | .045 | 36 | .001 | | |
| | Total | .141 | 41 | | | |
| a. Dependent Variable: ROA | | | | | | |
| b. Predictors: (Constant), AQLTY, CA, LM, MGTE, BS | | | | | | |

*Source: Researcher's own computation (2018)*

As it was portrayed on table 6 above, the value of F-statistics is 15.23 and is significant as the level of significance is less than 5%. The result indicated that the developed regression model is statistically significant that it can be relied upon to describe the influence of the specific factors on performance of the private commercial banks. That means, asset quality, capital adequacy, liquidity management, management efficiency and size of the banks are significant measures of financial well-being of Ethiopian private commercial banks appraised by return on asset (ROA).

2. Regression Coefficients of ROA

It is observed in the table below that the coefficients of the repressors showed how much ROA changes as a change in quality of asset, capital adequacy, management efficiency, banks size and liquidity management of the banks.

*Table 7:* Analysis of Regression Coefficients[a] of ROA

| Model | | Unstandardized Coefficients | | Unstandardized Coefficients | T | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | .068 | .135 | | .503 | .618 |
| | BS | -.008 | .014 | -.060 | -.541 | .592 |
| | LM | .003 | .005 | .051 | .540 | .593 |
| | CA | .170 | .022 | .783 | 7.563 | .000 |
| | MGTE | .014 | .006 | .242 | 2.344 | .025 |
| | AQLTY | .059 | .284 | .020 | .207 | .837 |
| a. Dependent Variable: ROA | | | | | | |

*Source: Researcher's own computation (2018)*

The regression result shown on table 7 above showed as capital adequacy and management efficiency of the banks are significant measures of the financial welfare of Ethiopian private sector commercial banks evaluated by return on asset (ROA) of banks. Accordingly, keeping other factors constant, a unit increase in capital adequacy and management efficiency of the banks led to 0.170 and 0.014 increase in ROA of banks respectively over the study periods of 2011-2017 which was consistent with the hypothesis.

B. Analysis of Regression of ROE

1. Model Fit Test of ROE

It was illustrated below that R square and adjusted R square were addressed to evaluate whether the formulated model can fit, overall, in measuring financial soundness of Ethiopian private sector commercial banks.

*Table 8:* Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .552[a] | .305 | .208 | .0665761 |
| a. Predictors: (Constant), AQLTY, CA, LM, MGTE, BS | | | | |

*Source: Researcher's own computation (2018)*

Table 8 above depicted that the adjusted R-square value is 20.8 % and from this it is concluded that 20.8 % of the variation in the dependent variable (ROE) of commercial banks is explained by the independent variables (asset quality, capital adequacy, management



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efficiency, bank size and liquidity management efficiency). This indicates that it has not a strong explanatory power of the regression model.

The result of analysis of variance (ANOVA) also indicated whether the model, overall, results in a significant good degree of prediction of the outcome variable (ROE).

*Table 9:* ANOVA[a] Analysis

| Model | | Sum of Square | Df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | .070 | 5 | .014 | 3.158 | .018[b] |
| | Residual | .160 | 36 | .004 | | |
| | Total | .230 | 41 | | | |
| a. Dependent Variable: ROE | | | | | | |
| b. Predictors: (Constant), AQLTY, CA, LM, MGTE, BS | | | | | | |

*Source: Researcher's own computation (2018)*

As it was described on table 9 above, the value of F-statistics is 3.158 and is significant at the level of significance less than 5%. The result indicated that the developed regression model is statistically significant that it is possible to relied upon to describe the effect of the bank specific factors the financial reliability of private commercial banks. That means, asset quality, management efficiency, adequacy of capital, size of the bank and liquidity management efficiency are significant measures of the financial performance of the banks denoted by return on equity (ROE).

2. Regression Coefficients of ROE

As it is observed in the table below, the coefficients of the repressors indicate how much ROE changes when there is a change in the asset quality, management efficiency, adequacy of capital, size of the bank and liquidity management efficiency.

*Table 10:* Regression Coefficients[a] of ROE

| Model | | Unstandardized Coefficients | | Unstandardized Coefficients | T | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | -.497 | .254 | | -1.958 | .058 |
| | BS | .069 | .026 | .429 | 2.637 | .012 |
| | LM | -.019 | .009 | -.297 | -2.125 | .040 |
| | CA | .020 | .042 | .073 | .479 | .635 |
| | MGTE | .006 | .011 | .085 | .555 | .582 |
| | AQLTY | .412 | .533 | .111 | .772 | .445 |
| a. Dependent Variable: ROE | | | | | | |

*Source: Researcher's own computation (2018)*

Table 10 above revealed that banks size and liquidity management of banks have a statistically significant negative and positive impact of the financial soundness of private commercial banks measured by return on equity respectively. Accordingly, keeping other factors constant, a unit increase in size of banks led to 0. 069 increase in ROE. But, a unit increase in liquidity management of banks, keeping other factors constant, directed to a decrease in ROE of banks by 0.019 over the study periods of 2011-2017 which is consistent with the hypothesis.

C. Analysis of Regression of NIM

1. Model Fit Test of NIM

The table below presented that R square and adjusted R square were used to evaluate whether the formulated model can fit, overall, in measuring the financial performance of Ethiopian private commercial banks.

*Table 11:* Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .954[a] | .911 | .898 | .0253337 |
| a. Predictors: (Constant), AQLTY, CA, LM, MGTE, BS | | | | |

*Source: Researcher's own computation (2018)*

As depicted in table 11above, the value of adjusted R-square is 89.8 % and from this it is concluded that 89.8 % of the deviation in the dependent variable (NIM) of commercial banks is explained by the independent variables (asset quality, capital adequacy, management efficiency bank size and liquidity management efficiency). This indicates descriptive robust descriptive power of the regression model.

The result of ANOVA (analysis of variance) also indicated whether the model, overall, results in a significant good degree of prediction of the outcome variable (NIM).

*Table 12:* ANOVA[a] Analysis

| Model | | Sum of Squares | Df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | .235 | 5 | .047 | 73.323 | .000[b] |
| | Residual | .023 | 36 | .001 | | |
| | Total | .258 | 41 | | | |
| a. Dependent Variable: NIM | | | | | | |
| b. Predictors: (Constant), AQLTY, CA, LM, MGTE, BS | | | | | | |

*Source: Researcher's own computation (2018)*

As it was illustrated on table 12 above, the value of F-statistics is 73.323 and is significant at the level of significance less than 5%. This implies that the developed regression model is statistically significant that it can be reliant upon to describe the outcome of the bank specific factors on the financial soundness of the banks. That means, capital adequacy, asset quality, bank size, management efficiency and liquidity management efficiency are significant measures of the financial performance Ethiopian private commercial banks evaluated by NIM.

2. Regression Coefficients of NIM

The table below portrayed the coefficients of the repressors which indicated how much NIM changes when there is a change in the capital adequacy, asset quality, management efficiency, bank size, and liquidity management of the banks.



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*Table 13:* Regression Coefficients[a] of NIM

| Model | | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | -.133 | .097 | | -1.373 | .178 |
| | BS | .010 | .010 | .061 | 1.037 | .307 |
| | LM | .001 | .003 | .015 | .305 | .762 |
| | CA | .283 | .016 | .966 | 17.687 | .000 |
| | MGTE | .014 | .004 | .188 | 3.439 | .001 |
| | AQLTY | -.001 | .203 | .000 | -.005 | .996 |
| a. Dependent Variable: NIM | | | | | | |

*Source: Researcher's own computation (2018)*

As observed from table 13 above, capital adequacy and management efficiency of the banks have positive and statistically significant impact on the financial efficiency of the commercial banks of Ethiopia measured by net interest margin (NIM) of the banks. Accordingly, keeping other factors constant, a unit increase in capital adequacy of banks led to 0. 283 rise in NIM. In addition, a unit increase in management efficiency of banks, keeping other things remain constant, led to an increase in NIM of banks by 0.014over the periods of 2011-2017 which is consistent with the hypothesis.

*Table 14:* Summary results for determinants of financial performance of private commercial banks in Ethiopia

| Variables | ROA | | | ROE | | | NIM | | |
|---|---|---|---|---|---|---|---|---|---|
| | +significant | -significant | Insignificant | +significant | -significant | Insignificant | +significant | -significant | Insignificant |
| BS | | | √ | √ | | | | | √ |
| LM | | | √ | | √ | | | | √ |
| CA | √ | | | | | √ | √ | | |
| MGTE | √ | | | | | √ | √ | | |
| AQLTY | | | √ | | | √ | | | √ |

*"+Significant" designates that the variable is statistically significant and positively affect the bank's profitability; "–Significant" shows that the variable is statistically significant and negatively affect the bank's profitability; "insignificant" represents that the variable is statistically not significant affect the bank's profitability; ROA: Return on Asset, ROE: Return on equity, NIM: Net interest margin, CA: Capital adequacy, AQLTY: Assets quality, BS: Bank size, LM: Liquidity Management, MGTE: Management Efficiency".*

*Source: Researcher's own computation (2018)*

## V. Conclusion and Recommendations

The study was intended to investigate the bank specific factors of the financial performance of commercial banks in Ethiopia by using secondary data of 2011-2017. The multiple regression analysis was made using three dependent variables (ROA, ROE and NIM) and five independent variables (asset quality, capital adequacy, management efficiency bank size and liquidity management efficiency). The regression result clearly showed that size of banks is statistically significant determining factor that positively boost the financial soundness of the selected commercial banks in Ethiopia as it can help banks to realize economic scale. It was also indicated that capital adequacy is statistical and positively affect the financial performance of the banks. That means, the higher equity capital the banks have, the more the banks become financially sound.

Further, the study showed that liquidity management of banks has statistically negative impact on the financial soundness of private commercial banks of Ethiopia, i.e, the higher liquid the banks are the lesser their ability they generate profit. Management efficiency of banks has positive and statistically significant impact on the financial efficiency of the privet commercial banks. That means operational expenses inefficiency shrinks the return on asset and interest margin of the banks in Ethiopia. The result also depicts as quality of assets of banks is statistically insignificant factor for the financial performance of private commercial banks in Ethiopia.

Therefore, the commercial private banks in Ethiopia should create enough capital through issuance of shares, investment, and retained earnings to run their business in healthy way since greater capital reduces the chance of distress and it boasts their profit. The banks should also increase their size to certain extent by increasing their asset level to achieve economies of scale which in turn reduces the costs of operation so that their financial performance (ROE) will be induced. Moreover, managerial efficiency should be given due consideration in order to minimize operating expenses, deploy their resources efficiently and intensify their income to enhance their profitability so as to stay competitive and more resilient to economic tremors. Lastly, the liquidity of private commercial banks should be managed wisely to obtain optimal amount of liquid assets to avoid mismatch between profitability and risk of short term insolvency since it has reverse movement with profitability. Liquidity management should aim at a tradeoff between profit and risk of insolvency.

## References Références Referencias

1. Addisu, A. N. (2015). Non-performing Assets and Their Impact on Financial Performance of Commercial Banks in Ethiopia. Master's thesis, Addis Ababa University, Addis Ababa, Ethiopia.
2. Abdi, D. (2010). Financial Performance Evaluation: A Case Study of Awash International Bank. A



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Research project, department of Accounting and Finance, college of Business and Economics, Mekelle University, Mekelle, Ethiopia.
3. Admassu, B. and Asayehgn, D. (2014). Banking Sector Reform in Ethiopia. International Journal of Business and Commerce, 3 (8), 25-38, ISSN: 2225-2436.
4. Albulescu, C. (2014). Banks' Profitability and Financial Soundness Indicators: A Macro Level Investigation in Emerging Countries. Science Direct, Procedia Economics and Finance, 23 (2015) 203-209.
5. Andebet, M. (2016). Performance of private commercial banks in Ethiopia, pre and post National Bank of Ethiopia bill periods. Thesis, department of Management, college of Business and Economics Addis Ababa University, Ethiopia.
6. Aspal, P. K. and Sanjeev, Dh. (2016). Camels Rating Model for Evaluating Financial Performance of Banking Sector: A Theoretical Perspective. International Journal of System Modeling and Simulation, 1(3).
7. Capraru, B. and Ihnatov, I. (2014). Banks' Profitability in Selected Central and Eastern European Countries. Procedia Economics and Finance, ELSIVIE, 16 (2014), 587-591.
8. Dakito, A. (2015). Assessment of Banking Performance Using Capital Adequacy in Ethiopia. Journal of Economics, 4(6): 106-111; ISSN: 2376-6603 (Online). DOI: 10.11648/j.eco. 20150406.12.
9. Dawit, F. (2016). Determinants of commercial banks financial performance in Ethiopia. A thesis. Department of Accounting and Finance College of Business and Economics Addis Ababa University, Addis Ababa, Ethiopia.
10. Ermias, M. (2016). Financial Performance of Private Commercial Banks in Ethiopia: A CAMEL Approach. A Thesis. Department of Accounting and Finance Addis Ababa University, Addis Ababa, Ethiopia.
11. Eugene, B. and Mouhamadou, S. (2015). The Banking System in Africa: Main Facts and Challenges. Africa Economic Brief, Chief Economist Complex AEB, 6 (5).
12. Iheanyi, I., H. (2017). Assessing the Performance of Nigeria's Bank through Camel Model. Journal of Accounting and Financial Management, 3 (1), ISSN 2504-8856.
13. Khaled, M, Avijit, M., Farhan, I. Md. and Nazia, T. Dr. (2016). The Bank-Specific Factors Affecting the Profitability of Commercial Banks in Bangladesh: A Panel Data Analysis. International Journal of Managerial Studies and Research (IJMSR) Volume 4, Issue 7, PP 67-74, ISSN 2349-0349 (Online)
14. Kumar, V. & Sayani, H. (2015). Application of CAMEL model on the GCC Islamic Banks: 2008-2014. Journal of Islamic Banking and Finance, 3 (2), 1-14, ISSN 2374-2666.
15. Maheshwara, R. D. and Prasad, K.V.N. (2011). Evaluating Performance of Regional Rural Banks: An Application of Camel Model. Journal of Arts, Science & Commerce, ISSN 2231-4172.
16. Melaku, A. (2017). Financial Performance Analysis of Private Commercial Banks of Ethiopia: Camel Ratings. International Journal of Scientific and Research Publications, 7 (10), ISSN 2250-3153.
17. Muhabie, M. (2015). Evaluation of Financial Performance of the Banking Sectors in Ethiopia: The Case of Zemen Bank. European Journal of Business and Management, 7 (25), ISSN 2222-2839 (Online).
18. Mulualem, G. (2015). Analyzing Financial Performance of Commercial Banks in Ethiopia: CAMEL Approach. Thesis, department of Accounting and Finance, Addis Ababa University, Addis Ababa, Ethiopia.
19. Muralidhara, P. and Lingam, Ch. (2017). CAMEL Model as an Effective Measure of Financial Performance of Nationalized Banks. International Journal of Pure and Applied Mathematics, 117 (7), 255-262, ISSN: 1314-3395 (on-line version).
20. Okumu, O., J. and Oyugi, L. (2016). Factors Influencing Financial Performance of Savings and Credit Cooperative Societies in Kisumu County, Kenya. International Journal of Current Research, 8 (5), 31293-31310, SSN: 0975-833.
21. Olweny, T. and Shipho, T. M. (2011). Effects of Banking Sectoral Factors on the Profitability of Commercial Banks in Kenya. Economics and Finance Review, 1(5), 1-30.
22. Ongore, V. O. and Gemechu, B. K. (2013). Determinants of Financial Performance of Commercial Banks in Kenya. International Journal of Economics and Financial Issues, 3 (1), 237-252, ISSN: 2146-4138.
23. Samuel, A. (2015). Determinants of Commercial Banks Profitability: The Case of Ethiopian Commercial Banks. Thesis, Addis Ababa University, Addis Ababa, Ethiopian.
24. Sangmi, M. and Nazir, T. (2010). Analyzing Financial Performance of Commercial Banks in India: Application of CAMEL Model. Journal of commercial social sciences.
25. Srinivasan, Dr. and Saminathan, Y., P. (2016). A CAMEL Model Analysis of Public, Private and Foreign Sector Banks in India. Pacific Business Review International, 8(9).
26. Tadios, M. (2016). A Comparative Study on the Financial Performance of Commercial Banks in Ethiopia-An Application of CAMEL Model. Thesis, Department of Project Management, Addis Ababa University, Addis Ababa, Ethiopia.



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27. Tesfaye, K. (2013). Determinants of Commercial Banks' Performance in Ethiopia. Thesis, St. Mary's University, Addis Ababa, Ethiopia.
28. Tigist, A. (2014). Determinants of Financial Performance: An Empirical Study on Ethiopian Commercial Banks. Thesis. Department of Accounting and Finance College of Business and Economics, Jimma University, Jimma, Ethiopia.
29. Yiregalem, N. (2015). Determinants of Profitability in Ethiopian Commercial Banks: The Case of Private Commercial Banks (2001-2013). Thesis: State Mary's University, Addis Ababa, Ethiopia



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The Board can also play vital role by exploring and giving valuable suggestions regarding the Standards of "Open Association of Research Society, U.S.A (OARS)" so that proper amendment can take place for the benefit of entire research community. We shall provide details of particular standard only on receipt of request from the Board.




The board members can also join us as Individual Fellow with 40% discount on total fees applicable to Individual Fellow. They will be entitled to avail all the benefits as declared. Please visit Individual Fellow-sub menu of GlobalJournals.org to have more relevant details.

We shall provide you intimation regarding launching of e-version of journal of your stream time to time. This may be utilized in your library for the enrichment of knowledge of your students as well as it can also be helpful for the concerned faculty members.




After nomination of your institution as "Institutional Fellow" and constantly functioning successfully for one year, we can consider giving recognition to your institute to function as Regional/Zonal office on our behalf.
The board can also take up the additional allied activities for betterment after our consultation.

**The following entitlements are applicable to individual Fellows:**




Open Association of Research Society, U.S.A (OARS) By-laws states that an individual Fellow may use the designations as applicable, or the corresponding initials. The Credentials of individual Fellow and Associate designations signify that the individual has gained knowledge of the fundamental concepts. One is magnanimous and proficient in an expertise course covering the professional code of conduct, and follows recognized standards of practice.

Open Association of Research Society (US)/ Global Journals Incorporation (USA), as described in Corporate Statements, are educational, research publishing and professional membership organizations. Achieving our individual Fellow or Associate status is based mainly on meeting stated educational research requirements.



Disbursement of 40% Royalty earned through Global Journals : Researcher = 50%, Peer Reviewer = 37.50%, Institution = 12.50% E.g. Out of 40%, the 20% benefit should be passed on to researcher, 15 % benefit towards remuneration should be given to a reviewer and remaining 5% is to be retained by the institution.

We shall provide print version of 12 issues of any three journals [as per your requirement] out of our 38 journals worth $ 2376 USD.

**Other:**

**The individual Fellow and Associate designations accredited by Open Association of Research Society (US) credentials signify guarantees following achievements:**

- The professional accredited with Fellow honor, is entitled to various benefits viz. name, fame, honor, regular flow of income, secured bright future, social status etc.

- In addition to above, if one is single author, then entitled to 40% discount on publishing research paper and can get 10%discount if one is co-author or main author among group of authors.
- The Fellow can organize symposium/seminar/conference on behalf of Global Journals Incorporation (USA) and he/she can also attend the same organized by other institutes on behalf of Global Journals.
- The Fellow can become member of Editorial Board Member after completing 3yrs.
- The Fellow can earn 60% of sales proceeds from the sale of reference/review books/literature/publishing of research paper.
- Fellow can also join as paid peer reviewer and earn 15% remuneration of author charges and can also get an opportunity to join as member of the Editorial Board of Global Journals Incorporation (USA)
- • This individual has learned the basic methods of applying those concepts and techniques to common challenging situations. This individual has further demonstrated an in–depth understanding of the application of suitable techniques to a particular area of research practice.

**Note :**

"

- In future, if the board feels the necessity to change any board member, the same can be done with the consent of the chairperson along with anyone board member without our approval.
- In case, the chairperson needs to be replaced then consent of 2/3rd board members are required and they are also required to jointly pass the resolution copy of which should be sent to us. In such case, it will be compulsory to obtain our approval before replacement.
- In case of "Difference of Opinion [if any]" among the Board members, our decision will be final and binding to everyone.

"

# Preferred Author Guidelines

**We accept the manuscript submissions in any standard (generic) format.**

We typeset manuscripts using advanced typesetting tools like Adobe In Design, CorelDraw, TeXnicCenter, and TeXStudio. We usually recommend authors submit their research using any standard format they are comfortable with, and let Global Journals do the rest.

Alternatively, you can download our basic template from https://globaljournals.org/Template.zip

Authors should submit their complete paper/article, including text illustrations, graphics, conclusions, artwork, and tables. Authors who are not able to submit manuscript using the form above can email the manuscript department at submit@globaljournals.org or get in touch with chiefeditor@globaljournals.org if they wish to send the abstract before submission.

## Before and during Submission

Authors must ensure the information provided during the submission of a paper is authentic. Please go through the following checklist before submitting:

1. Authors must go through the complete author guideline and understand and *agree to Global Journals' ethics and code of conduct,* along with author responsibilities.
2. Authors must accept the privacy policy, terms, and conditions of Global Journals.
3. Ensure corresponding author's email address and postal address are accurate and reachable.
4. Manuscript to be submitted must include keywords, an abstract, a paper title, co-author(s') names and details (email address, name, phone number, and institution), figures and illustrations in vector format including appropriate captions, tables, including titles and footnotes, a conclusion, results, acknowledgments and references.
5. Authors should submit paper in a ZIP archive if any supplementary files are required along with the paper.
6. Proper permissions must be acquired for the use of any copyrighted material.
7. Manuscript submitted *must not have been submitted or published elsewhere* and all authors must be aware of the submission.

**Declaration of Conflicts of Interest**

It is required for authors to declare all financial, institutional, and personal relationships with other individuals and organizations that could influence (bias) their research.

## Policy on Plagiarism

Plagiarism is not acceptable in Global Journals submissions at all.

Plagiarized content will not be considered for publication. We reserve the right to inform authors' institutions about plagiarism detected either before or after publication. If plagiarism is identified, we will follow COPE guidelines:

Authors are solely responsible for all the plagiarism that is found. The author must not fabricate, falsify or plagiarize existing research data. The following, if copied, will be considered plagiarism:

- Words (language)
- Ideas
- Findings
- Writings
- Diagrams
- Graphs
- Illustrations
- Lectures

- Printed material
- Graphic representations
- Computer programs
- Electronic material
- Any other original work

## Authorship Policies

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1. Substantial contributions to the conception and acquisition of data, analysis, and interpretation of findings.
2. Drafting the paper and revising it critically regarding important academic content.
3. Final approval of the version of the paper to be published.

**Changes in Authorship**

The corresponding author should mention the name and complete details of all co-authors during submission and in manuscript. We support addition, rearrangement, manipulation, and deletions in authors list till the early view publication of the journal. We expect that corresponding author will notify all co-authors of submission. We follow COPE guidelines for changes in authorship.

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**Appealing Decisions**

Unless specified in the notification, the Editorial Board's decision on publication of the paper is final and cannot be appealed before making the major change in the manuscript.

**Acknowledgments**

Contributors to the research other than authors credited should be mentioned in Acknowledgments. The source of funding for the research can be included. Suppliers of resources may be mentioned along with their addresses.

**Declaration of funding sources**

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## Preparing your Manuscript

Authors can submit papers and articles in an acceptable file format: MS Word (doc, docx), LaTeX (.tex, .zip or .rar including all of your files), Adobe PDF (.pdf), rich text format (.rtf), simple text document (.txt), Open Document Text (.odt), and Apple Pages (.pages). Our professional layout editors will format the entire paper according to our official guidelines. This is one of the highlights of publishing with Global Journals—authors should not be concerned about the formatting of their paper. Global Journals accepts articles and manuscripts in every major language, be it Spanish, Chinese, Japanese, Portuguese, Russian, French, German, Dutch, Italian, Greek, or any other national language, but the title, subtitle, and abstract should be in English. This will facilitate indexing and the pre-peer review process.

The following is the official style and template developed for publication of a research paper. Authors are not required to follow this style during the submission of the paper. It is just for reference purposes.

***Manuscript Style Instruction (Optional)***

- Microsoft Word Document Setting Instructions.
- Font type of all text should be Swis721 Lt BT.
- Page size: 8.27" x 11'", left margin: 0.65, right margin: 0.65, bottom margin: 0.75.
- Paper title should be in one column of font size 24.
- Author name in font size of 11 in one column.
- Abstract: font size 9 with the word "Abstract" in bold italics.
- Main text: font size 10 with two justified columns.
- Two columns with equal column width of 3.38 and spacing of 0.2.
- First character must be three lines drop-capped.
- The paragraph before spacing of 1 pt and after of 0 pt.
- Line spacing of 1 pt.
- Large images must be in one column.
- The names of first main headings (Heading 1) must be in Roman font, capital letters, and font size of 10.
- The names of second main headings (Heading 2) must not include numbers and must be in italics with a font size of 10.

***Structure and Format of Manuscript***

The recommended size of an original research paper is under 15,000 words and review papers under 7,000 words. Research articles should be less than 10,000 words. Research papers are usually longer than review papers. Review papers are reports of significant research (typically less than 7,000 words, including tables, figures, and references)

A research paper must include:

a) A title which should be relevant to the theme of the paper.
b) A summary, known as an abstract (less than 150 words), containing the major results and conclusions.
c) Up to 10 keywords that precisely identify the paper's subject, purpose, and focus.
d) An introduction, giving fundamental background objectives.
e) Resources and techniques with sufficient complete experimental details (wherever possible by reference) to permit repetition, sources of information must be given, and numerical methods must be specified by reference.
f) Results which should be presented concisely by well-designed tables and figures.
g) Suitable statistical data should also be given.
h) All data must have been gathered with attention to numerical detail in the planning stage.

Design has been recognized to be essential to experiments for a considerable time, and the editor has decided that any paper that appears not to have adequate numerical treatments of the data will be returned unrefereed.

i) Discussion should cover implications and consequences and not just recapitulate the results; conclusions should also be summarized.
j) There should be brief acknowledgments.
k) There ought to be references in the conventional format. Global Journals recommends APA format.

Authors should carefully consider the preparation of papers to ensure that they communicate effectively. Papers are much more likely to be accepted if they are carefully designed and laid out, contain few or no errors, are summarizing, and follow instructions. They will also be published with much fewer delays than those that require much technical and editorial correction.

The Editorial Board reserves the right to make literary corrections and suggestions to improve brevity.



## Format Structure

***It is necessary that authors take care in submitting a manuscript that is written in simple language and adheres to published guidelines.***

All manuscripts submitted to Global Journals should include:

**Title**

The title page must carry an informative title that reflects the content, a running title (less than 45 characters together with spaces), names of the authors and co-authors, and the place(s) where the work was carried out.

**Author details**

The full postal address of any related author(s) must be specified.

**Abstract**

The abstract is the foundation of the research paper. It should be clear and concise and must contain the objective of the paper and inferences drawn. It is advised to not include big mathematical equations or complicated jargon.

Many researchers searching for information online will use search engines such as Google, Yahoo or others. By optimizing your paper for search engines, you will amplify the chance of someone finding it. In turn, this will make it more likely to be viewed and cited in further works. Global Journals has compiled these guidelines to facilitate you to maximize the web-friendliness of the most public part of your paper.

**Keywords**

A major lynchpin of research work for the writing of research papers is the keyword search, which one will employ to find both library and internet resources. Up to eleven keywords or very brief phrases have to be given to help data retrieval, mining, and indexing.

One must be persistent and creative in using keywords. An effective keyword search requires a strategy: planning of a list of possible keywords and phrases to try.

Choice of the main keywords is the first tool of writing a research paper. Research paper writing is an art. Keyword search should be as strategic as possible.

One should start brainstorming lists of potential keywords before even beginning searching. Think about the most important concepts related to research work. Ask, “What words would a source have to include to be truly valuable in a research paper?” Then consider synonyms for the important words.

It may take the discovery of only one important paper to steer in the right keyword direction because, in most databases, the keywords under which a research paper is abstracted are listed with the paper.

**Numerical Methods**

Numerical methods used should be transparent and, where appropriate, supported by references.

**Abbreviations**

Authors must list all the abbreviations used in the paper at the end of the paper or in a separate table before using them.

**Formulas and equations**

Authors are advised to submit any mathematical equation using either MathJax, KaTeX, or LaTeX, or in a very high-quality image.

**Tables, Figures, and Figure Legends**

Tables: Tables should be cautiously designed, uncrowned, and include only essential data. Each must have an Arabic number, e.g., Table 4, a self-explanatory caption, and be on a separate sheet. Authors must submit tables in an editable format and not as images. References to these tables (if any) must be mentioned accurately.

**Figures**

Figures are supposed to be submitted as separate files. Always include a citation in the text for each figure using Arabic numbers, e.g., Fig. 4. Artwork must be submitted online in vector electronic form or by emailing it.

## Preparation of Eletronic Figures for Publication

Although low-quality images are sufficient for review purposes, print publication requires high-quality images to prevent the final product being blurred or fuzzy. Submit (possibly by e-mail) EPS (line art) or TIFF (halftone/ photographs) files only. MS PowerPoint and Word Graphics are unsuitable for printed pictures. Avoid using pixel-oriented software. Scans (TIFF only) should have a resolution of at least 350 dpi (halftone) or 700 to 1100 dpi (line drawings). Please give the data for figures in black and white or submit a Color Work Agreement form. EPS files must be saved with fonts embedded (and with a TIFF preview, if possible).

For scanned images, the scanning resolution at final image size ought to be as follows to ensure good reproduction: line art: >650 dpi; halftones (including gel photographs): >350 dpi; figures containing both halftone and line images: >650 dpi.

Color charges: Authors are advised to pay the full cost for the reproduction of their color artwork. Hence, please note that if there is color artwork in your manuscript when it is accepted for publication, we would require you to complete and return a Color Work Agreement form before your paper can be published. Also, you can email your editor to remove the color fee after acceptance of the paper.

## Tips for writing a good quality Management Research Paper

Techniques for writing a good quality management and business research paper:

***1. Choosing the topic:*** In most cases, the topic is selected by the interests of the author, but it can also be suggested by the guides. You can have several topics, and then judge which you are most comfortable with. This may be done by asking several questions of yourself, like "Will I be able to carry out a search in this area? Will I find all necessary resources to accomplish the search? Will I be able to find all information in this field area?" If the answer to this type of question is "yes," then you ought to choose that topic. In most cases, you may have to conduct surveys and visit several places. Also, you might have to do a lot of work to find all the rises and falls of the various data on that subject. Sometimes, detailed information plays a vital role, instead of short information. Evaluators are human: The first thing to remember is that evaluators are also human beings. They are not only meant for rejecting a paper. They are here to evaluate your paper. So present your best aspect.

***2. Think like evaluators:*** If you are in confusion or getting demotivated because your paper may not be accepted by the evaluators, then think, and try to evaluate your paper like an evaluator. Try to understand what an evaluator wants in your research paper, and you will automatically have your answer. Make blueprints of paper: The outline is the plan or framework that will help you to arrange your thoughts. It will make your paper logical. But remember that all points of your outline must be related to the topic you have chosen.

***3. Ask your guides:*** If you are having any difficulty with your research, then do not hesitate to share your difficulty with your guide (if you have one). They will surely help you out and resolve your doubts. If you can't clarify what exactly you require for your work, then ask your supervisor to help you with an alternative. He or she might also provide you with a list of essential readings.

***4. Use of computer is recommended:*** As you are doing research in the field of management and business then this point is quite obvious. Use right software: Always use good quality software packages. If you are not capable of judging good software, then you can lose the quality of your paper unknowingly. There are various programs available to help you which you can get through the internet.

***5. Use the internet for help:*** An excellent start for your paper is using Google. It is a wondrous search engine, where you can have your doubts resolved. You may also read some answers for the frequent question of how to write your research paper or find a model research paper. You can download books from the internet. If you have all the required books, place importance on reading, selecting, and analyzing the specified information. Then sketch out your research paper. Use big pictures: You may use encyclopedias like Wikipedia to get pictures with the best resolution. At Global Journals, you should strictly follow here.



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***6. Bookmarks are useful:*** When you read any book or magazine, you generally use bookmarks, right? It is a good habit which helps to not lose your continuity. You should always use bookmarks while searching on the internet also, which will make your search easier.

***7. Revise what you wrote:*** When you write anything, always read it, summarize it, and then finalize it.

***8. Make every effort:*** Make every effort to mention what you are going to write in your paper. That means always have a good start. Try to mention everything in the introduction—what is the need for a particular research paper. Polish your work with good writing skills and always give an evaluator what he wants. Make backups: When you are going to do any important thing like making a research paper, you should always have backup copies of it either on your computer or on paper. This protects you from losing any portion of your important data.

***9. Produce good diagrams of your own:*** Always try to include good charts or diagrams in your paper to improve quality. Using several unnecessary diagrams will degrade the quality of your paper by creating a hodgepodge. So always try to include diagrams which were made by you to improve the readability of your paper. Use of direct quotes: When you do research relevant to literature, history, or current affairs, then use of quotes becomes essential, but if the study is relevant to science, use of quotes is not preferable.

***10. Use proper verb tense:*** Use proper verb tenses in your paper. Use past tense to present those events that have happened. Use present tense to indicate events that are going on. Use future tense to indicate events that will happen in the future. Use of wrong tenses will confuse the evaluator. Avoid sentences that are incomplete.

***11. Pick a good study spot:*** Always try to pick a spot for your research which is quiet. Not every spot is good for studying.

***12. Know what you know:*** Always try to know what you know by making objectives, otherwise you will be confused and unable to achieve your target.

***13. Use good grammar:*** Always use good grammar and words that will have a positive impact on the evaluator; use of good vocabulary does not mean using tough words which the evaluator has to find in a dictionary. Do not fragment sentences. Eliminate one-word sentences. Do not ever use a big word when a smaller one would suffice.
Verbs have to be in agreement with their subjects. In a research paper, do not start sentences with conjunctions or finish them with prepositions. When writing formally, it is advisable to never split an infinitive because someone will (wrongly) complain. Avoid clichés like a disease. Always shun irritating alliteration. Use language which is simple and straightforward. Put together a neat summary.

***14. Arrangement of information:*** Each section of the main body should start with an opening sentence, and there should be a changeover at the end of the section. Give only valid and powerful arguments for your topic. You may also maintain your arguments with records.

***15. Never start at the last minute:*** Always allow enough time for research work. Leaving everything to the last minute will degrade your paper and spoil your work.

***16. Multitasking in research is not good:*** Doing several things at the same time is a bad habit in the case of research activity. Research is an area where everything has a particular time slot. Divide your research work into parts, and do a particular part in a particular time slot.

***17. Never copy others' work:*** Never copy others' work and give it your name because if the evaluator has seen it anywhere, you will be in trouble. Take proper rest and food: No matter how many hours you spend on your research activity, if you are not taking care of your health, then all your efforts will have been in vain. For quality research, take proper rest and food.

***18. Go to seminars:*** Attend seminars if the topic is relevant to your research area. Utilize all your resources.

***19. Refresh your mind after intervals:*** Try to give your mind a rest by listening to soft music or sleeping in intervals. This will also improve your memory. Acquire colleagues: Always try to acquire colleagues. No matter how sharp you are, if you acquire colleagues, they can give you ideas which will be helpful to your research.

***20. Think technically:*** Always think technically. If anything happens, search for its reasons, benefits, and demerits. Think and then print: When you go to print your paper, check that tables are not split, headings are not detached from their descriptions, and page sequence is maintained.

***21. Adding unnecessary information:*** Do not add unnecessary information like "I have used MS Excel to draw graphs." Irrelevant and inappropriate material is superfluous. Foreign terminology and phrases are not apropos. One should never take a broad view. Analogy is like feathers on a snake. Use words properly, regardless of how others use them. Remove quotations. Puns are for kids, not grunt readers. Never oversimplify: When adding material to your research paper, never go for oversimplification; this will definitely irritate the evaluator. Be specific. Never use rhythmic redundancies. Contractions shouldn't be used in a research paper. Comparisons are as terrible as clichés. Give up ampersands, abbreviations, and so on. Remove commas that are not necessary. Parenthetical words should be between brackets or commas. Understatement is always the best way to put forward earth-shaking thoughts. Give a detailed literary review.

***22. Report concluded results:*** Use concluded results. From raw data, filter the results, and then conclude your studies based on measurements and observations taken. An appropriate number of decimal places should be used. Parenthetical remarks are prohibited here. Proofread carefully at the final stage. At the end, give an outline to your arguments. Spot perspectives of further study of the subject. Justify your conclusion at the bottom sufficiently, which will probably include examples.

***23. Upon conclusion:*** Once you have concluded your research, the next most important step is to present your findings. Presentation is extremely important as it is the definite medium though which your research is going to be in print for the rest of the crowd. Care should be taken to categorize your thoughts well and present them in a logical and neat manner. A good quality research paper format is essential because it serves to highlight your research paper and bring to light all necessary aspects of your research.

## Informal Guidelines of Research Paper Writing

***Key points to remember:***

- Submit all work in its final form.
- Write your paper in the form which is presented in the guidelines using the template.
- Please note the criteria peer reviewers will use for grading the final paper.

**Final points:**

One purpose of organizing a research paper is to let people interpret your efforts selectively. The journal requires the following sections, submitted in the order listed, with each section starting on a new page:

*The introduction:* This will be compiled from reference matter and reflect the design processes or outline of basis that directed you to make a study. As you carry out the process of study, the method and process section will be constructed like that. The results segment will show related statistics in nearly sequential order and direct reviewers to similar intellectual paths throughout the data that you gathered to carry out your study.

**The discussion section:**

This will provide understanding of the data and projections as to the implications of the results. The use of good quality references throughout the paper will give the effort trustworthiness by representing an alertness to prior workings.

Writing a research paper is not an easy job, no matter how trouble-free the actual research or concept. Practice, excellent preparation, and controlled record-keeping are the only means to make straightforward progression.

**General style:**

Specific editorial column necessities for compliance of a manuscript will always take over from directions in these general guidelines.

**To make a paper clear:** Adhere to recommended page limits.

*Mistakes to avoid:*

- Insertion of a title at the foot of a page with subsequent text on the next page.
- Separating a table, chart, or figure—confine each to a single page.
- Submitting a manuscript with pages out of sequence.
- In every section of your document, use standard writing style, including articles ("a" and "the").
- Keep paying attention to the topic of the paper.



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- Use paragraphs to split each significant point (excluding the abstract).
- Align the primary line of each section.
- Present your points in sound order.
- Use present tense to report well-accepted matters.
- Use past tense to describe specific results.
- Do not use familiar wording; don't address the reviewer directly. Don't use slang or superlatives.
- Avoid use of extra pictures—include only those figures essential to presenting results.

**Title page:**

Choose a revealing title. It should be short and include the name(s) and address(es) of all authors. It should not have acronyms or abbreviations or exceed two printed lines.

**Abstract:** This summary should be two hundred words or less. It should clearly and briefly explain the key findings reported in the manuscript and must have precise statistics. It should not have acronyms or abbreviations. It should be logical in itself. Do not cite references at this point.

An abstract is a brief, distinct paragraph summary of finished work or work in development. In a minute or less, a reviewer can be taught the foundation behind the study, common approaches to the problem, relevant results, and significant conclusions or new questions.

Write your summary when your paper is completed because how can you write the summary of anything which is not yet written? Wealth of terminology is very essential in abstract. Use comprehensive sentences, and do not sacrifice readability for brevity; you can maintain it succinctly by phrasing sentences so that they provide more than a lone rationale. The author can at this moment go straight to shortening the outcome. Sum up the study with the subsequent elements in any summary. Try to limit the initial two items to no more than one line each.

*Reason for writing the article—theory, overall issue, purpose.*

- Fundamental goal.
- To-the-point depiction of the research.
- Consequences, including definite statistics—if the consequences are quantitative in nature, account for this; results of any numerical analysis should be reported. Significant conclusions or questions that emerge from the research.

**Approach:**

- Single section and succinct.
- An outline of the job done is always written in past tense.
- Concentrate on shortening results—limit background information to a verdict or two.
- Exact spelling, clarity of sentences and phrases, and appropriate reporting of quantities (proper units, important statistics) are just as significant in an abstract as they are anywhere else.

**Introduction:**

The introduction should "introduce" the manuscript. The reviewer should be presented with sufficient background information to be capable of comprehending and calculating the purpose of your study without having to refer to other works. The basis for the study should be offered. Give the most important references, but avoid making a comprehensive appraisal of the topic. Describe the problem visibly. If the problem is not acknowledged in a logical, reasonable way, the reviewer will give no attention to your results. Speak in common terms about techniques used to explain the problem, if needed, but do not present any particulars about the protocols here.

*The following approach can create a valuable beginning:*

- Explain the value (significance) of the study.
- Defend the model—why did you employ this particular system or method? What is its compensation? Remark upon its appropriateness from an abstract point of view as well as pointing out sensible reasons for using it.
- Present a justification. State your particular theory(-ies) or aim(s), and describe the logic that led you to choose them.
- Briefly explain the study's tentative purpose and how it meets the declared objectives.

**Approach:**

Use past tense except for when referring to recognized facts. After all, the manuscript will be submitted after the entire job is done. Sort out your thoughts; manufacture one key point for every section. If you make the four points listed above, you will need at least four paragraphs. Present surrounding information only when it is necessary to support a situation. The reviewer does not desire to read everything you know about a topic. Shape the theory specifically—do not take a broad view.

As always, give awareness to spelling, simplicity, and correctness of sentences and phrases.

**Procedures (methods and materials):**

This part is supposed to be the easiest to carve if you have good skills. A soundly written procedures segment allows a capable scientist to replicate your results. Present precise information about your supplies. The suppliers and clarity of reagents can be helpful bits of information. Present methods in sequential order, but linked methodologies can be grouped as a segment. Be concise when relating the protocols. Attempt to give the least amount of information that would permit another capable scientist to replicate your outcome, but be cautious that vital information is integrated. The use of subheadings is suggested and ought to be synchronized with the results section.

When a technique is used that has been well-described in another section, mention the specific item describing the way, but draw the basic principle while stating the situation. The purpose is to show all particular resources and broad procedures so that another person may use some or all of the methods in one more study or referee the scientific value of your work. It is not to be a step-by-step report of the whole thing you did, nor is a methods section a set of orders.

**Materials:**

*Materials may be reported in part of a section or else they may be recognized along with your measures.*

**Methods:**

- Report the method and not the particulars of each process that engaged the same methodology.
- Describe the method entirely.
- To be succinct, present methods under headings dedicated to specific dealings or groups of measures.
- Simplify—detail how procedures were completed, not how they were performed on a particular day.
- If well-known procedures were used, account for the procedure by name, possibly with a reference, and that's all.

**Approach:**

It is embarrassing to use vigorous voice when documenting methods without using first person, which would focus the reviewer's interest on the researcher rather than the job. As a result, when writing up the methods, most authors use third person passive voice.

Use standard style in this and every other part of the paper—avoid familiar lists, and use full sentences.

**What to keep away from:**

- Resources and methods are not a set of information.
- Skip all descriptive information and surroundings—save it for the argument.
- Leave out information that is immaterial to a third party.

**Results:**

The principle of a results segment is to present and demonstrate your conclusion. Create this part as entirely objective details of the outcome, and save all understanding for the discussion.

The page length of this segment is set by the sum and types of data to be reported. Use statistics and tables, if suitable, to present consequences most efficiently.

You must clearly differentiate material which would usually be incorporated in a study editorial from any unprocessed data or additional appendix matter that would not be available. In fact, such matters should not be submitted at all except if requested by the instructor.



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**Content:**

- Sum up your conclusions in text and demonstrate them, if suitable, with figures and tables.
- In the manuscript, explain each of your consequences, and point the reader to remarks that are most appropriate.
- Present a background, such as by describing the question that was addressed by creation of an exacting study.
- Explain results of control experiments and give remarks that are not accessible in a prescribed figure or table, if appropriate.
- Examine your data, then prepare the analyzed (transformed) data in the form of a figure (graph), table, or manuscript.

**What to stay away from:**

- Do not discuss or infer your outcome, report surrounding information, or try to explain anything.
- Do not include raw data or intermediate calculations in a research manuscript.
- Do not present similar data more than once.
- A manuscript should complement any figures or tables, not duplicate information.
- Never confuse figures with tables—there is a difference.

**Approach:**

As always, use past tense when you submit your results, and put the whole thing in a reasonable order.

Put figures and tables, appropriately numbered, in order at the end of the report.

If you desire, you may place your figures and tables properly within the text of your results section.

**Figures and tables:**

If you put figures and tables at the end of some details, make certain that they are visibly distinguished from any attached appendix materials, such as raw facts. Whatever the position, each table must be titled, numbered one after the other, and include a heading. All figures and tables must be divided from the text.

**Discussion:**

The discussion is expected to be the trickiest segment to write. A lot of papers submitted to the journal are discarded based on problems with the discussion. There is no rule for how long an argument should be.

Position your understanding of the outcome visibly to lead the reviewer through your conclusions, and then finish the paper with a summing up of the implications of the study. The purpose here is to offer an understanding of your results and support all of your conclusions, using facts from your research and generally accepted information, if suitable. The implication of results should be fully described.

Infer your data in the conversation in suitable depth. This means that when you clarify an observable fact, you must explain mechanisms that may account for the observation. If your results vary from your prospect, make clear why that may have happened. If your results agree, then explain the theory that the proof supported. It is never suitable to just state that the data approved the prospect, and let it drop at that. Make a decision as to whether each premise is supported or discarded or if you cannot make a conclusion with assurance. Do not just dismiss a study or part of a study as "uncertain."

Research papers are not acknowledged if the work is imperfect. Draw what conclusions you can based upon the results that you have, and take care of the study as a finished work.

- You may propose future guidelines, such as how an experiment might be personalized to accomplish a new idea.
- Give details of all of your remarks as much as possible, focusing on mechanisms.
- Make a decision as to whether the tentative design sufficiently addressed the theory and whether or not it was correctly restricted. Try to present substitute explanations if they are sensible alternatives.
- One piece of research will not counter an overall question, so maintain the large picture in mind. Where do you go next? The best studies unlock new avenues of study. What questions remain?
- Recommendations for detailed papers will offer supplementary suggestions.

**Approach:**

When you refer to information, differentiate data generated by your own studies from other available information. Present work done by specific persons (including you) in past tense.

Describe generally acknowledged facts and main beliefs in present tense.

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|---|---|---|---|
| | **A-B** | **C-D** | **E-F** |
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| ***References*** | Complete and correct format, well organized | Beside the point, Incomplete | Wrong format and structuring |

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