# IMPACT OF CEO DUALITY ON FIRM FINANICAL PERFORMANCE

Impact of Corporate Governance Practices on Firm Performance

An Analysis on Selective Sectors From Fortune 500 Companies

From The Year 2017 - 2018

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STATEMENT OF ACADEMIC HONESTY

I hereby declare that all information in this document has been obtained and presented in accordance with academic rules and standards of ethical conduct. I also declare that, as required by these rules and standards, I have fully cited and referenced all material and results that are not original to this work.

Ahsan Habib

Signature:

# ABSTRACT

The aim of this research is to understand and investigate the impact of corporate leadership structure on firm's financial performance. In comparison to the U.S, a separation exists between the role of CEO and chairman in most countries around the world. In the light of corporate scandals like Enron, Worldcom, Healthsouth, and Freddie Mac, Corporate governance practices became a topic of interest for both researchers and corporate governance experts. The emphasis has always been on the board to ensure a check and balance on the CEO for effective oversight over firms operations. Some previous researches conducted on the subject matter showed that there is no direct evidence that there is any systematic or significant difference in valuation between different firms with a separate or combined function. The objective of this research was to investigate the impact of corporate leadership structure on firm financial performance as well as to understand the relationship between the governance structure and managerial shareholding. The study employed variables like ROA, ROE,ROIC while duality, size of the board of directors ,Age of the company, Board composition, audit committee and  number of Independent Directors are used as independent variables. Some of the undelaying reasons are the agency costs which are mitigated through higher incentive alignment of the two functions. The results determine that there is a negative relationship between duality and company's performance.

Keywords: Combined function, Corporate Governance, stewardship theory, Leadership Structure Firm Valuation; Lead Independent Director (LID), Agency theory

ÖZ

## CEO DUALİTESİNİN ŞİRKETİN FİNANSAL PERFROMANSINA ETKİSİ

Stratejik Etkiler ve Finansal Performans Üzerindeki Etkisi
Fortune 500 Şirketlerinden Seçici Sektörler Üzerine Bir Analiz, 2017 - 2018

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Bu araştırmanın amacı, kurumsal liderlik yapısının finansal performans üzerindeki etkisini anlamak ve araştırmaktır. ABD ile karşılaştırıldığında, dünyadaki çoğu ülkede CEO ve başkan fonksiyonlarının ayrılması yaygındır. Enron, Worldcom gibi skandalların ışığında, Kurumsal yönetim uygulamaları, özellikle yönetim kurulunun CEO üzerindeki dengeyi kontrol etmedeki rolünü giderek daha önemli hale getirmiştir. Konuyla ilgili yapılan önceki araştırmalar, ayrı veya birleşik işlevleri olan farklı firmalar arasında değerlemede sistematik veya önemli bir fark olduğuna dair doğrudan bir kanıt bulunmadığını göstermektedir. Bu araştırmanın amacı, kurumsal liderlik yapısının firma düzeyinde kurumsal yönetim yapısı ile ilgili olup olmadığını araştırmak ve bu yapının firma finansal performansı üzerindeki etkisini ve aynı zamanda yönetişim yapısı ile yönetimsel pay arasındaki ilişkiyi anlamaktır. Araştırmada ROA, ROE, ROIC gibi değişkenler kullanılırken, dualite, yönetim kurulu büyüklüğü, şirket yaşı ve bağımsız Yönetim Kurulu sayısı bağımsız değişkenler olarak kullanılmıştır. Temel teşkil eden nedenlerden bazıları, iki işlevin daha yüksek teşvik yaratması doğrultusunda azalan vekille yönetme maliyetleridir. Sonuçlar, dualite ile şirketin performansı arasında negatif bir ilişki olduğunu belirlemiştir.

**Anahtar Kelimeler:** Birleşik fonksiyon, Kurumsal Yönetişim, yönetim teorisi, Liderlik Yapısı Firma Değerlemesi; Lider Bağımsız Direktör (LID), vekille yönetme teorisi

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# CHAPTER 1

# INTRODUCTION

Most of the publicly listed companies in the world are required by the relevant SEC regulations to have an independent board of directors with an impartial chairman to keep an oversight on firm's activities while ensuring that the shareholders' interests are well protected. Most of the publicly traded companies in the world have a board of directors which is headed by a chairman who is responsible for making all the corporate decisions in line with firm's long term strategic goals. It is however a more common practice in the US where many companies have a unified function under the chief executive officer (CEO) who also serves as the chairman of the board. The reason often cited by industry executives is because these companies are growing so rapidly which is why they want to retain their founders in top management roles to keep the company on strong footing on corporate decision making. There has always been a debate when it comes to splitting the two roles.

One of the main responsibility as per the literature for a CEO is to initiate and implement the company's policies for achieving its strategic goals while the Board of director is responsible for ensuring that the executives are pursuing goals which benefit the shareholders in the long-term future as well an keeping an oversight over CEO and other company executives. It is recommended that the person occupying the role of the CEO should be different than the chairman of the board (Aygün and İç, 2010).

In recent years especially after the financial crisis in 2008, there has been an increasing pressure by shareholders, regulators, investors and activists alike to bring changes in the prevailing corporate governance practices. There is a settling debate revolving around the idea that whether the functions of CEO and Chairman be separated or keeping them together is better to avoid agency costs. The US is a special case in this regard where duality is more commonly observed. Duality is commonly observed in majority of the U.S

Companies included in the fortune 500. The trend has been on the decline during the period of 1978- 2010 in the study by Yang & Zhao (2014).

Adopted from Yang & Zhao (2014)

Researchers have argued that there is substantial evidence to support the fact that keeping the two roles separate strengthens the integrity of the board which in turns is good for the company. It is an understandable fact that competitive pay packages are necessary for retaining talent in the business but when CEO who is also the chairman of the board votes to increase his own compensation this could lead to conflict of interest although a legislation exist in some developed countries to induct independent directors in company's board so the chairman is unable to influence the board decisions, however as per the law the independent directors can elect a lead independent director to oversee the governance committee of the board. In most of the U.S companies the lead independent director is appointed to comfort shareholders of the transparency and accountability of the board.

This study uses the concept of CEO duality meaning that the person assumes the role of CEO as well as the chairman of the board of directors. The Literature suggests a negative relation between duality and corporate performance as per the studies conducted by

Chen et al. (2005), Ujunwa (2012) and Aygün and İç (2010).While some academic researchers concluded that there is a positive relation between duality and corporate performance while researchers like Abdullah (2004), Yu (2008), Faleye (2007) have concluded that duality does not affect corporate performance. There is a growing interest from researchers and academicians alike to investigate this area of research from wide range of angles.

Most corporations around the world argue that keeping the two functions separate is good for the company in terms of not only financial performance as well as mitigating financial risks while also retaining the trust of the shareholders and stakeholders mainly activists satisfied with company practices.

An important study on the subject matter was conducted by Harvard Law School by Mr.Noam co-editor of forum on Corporate Governance and Financial Regulation which concluded that the cost incurred by the company to pay one person who is serving under the unified role of CEO and Chairman is significantly higher than paying two separate individuals as CEO and Chairman. The study also concluded that long term shareholders return were much better for companies that has separate roles. The widely accepted model of having an executive CEO and non-executive CEO has been widely adopted in most countries around the world. *C*ompanies in the US are somewhat slow to accept this fact and sometimes are myopic.

According to statistics published by Forbes, about a three-quarters of all publicly traded companies in the Fortune 500 has a Chairman with a dual functions and about 60 companies had installed the previous CEO as the new chairman of the board given their experience in the job while 34 corporations had an independent chairman. Most studies conclude that the corporations should appoint an independent chairman by making necessary changes in the company's laws so that the decision cannot be reversed without the approval of the shareholders.

In the past, some attempts to separate the dual role especially after the financial crisis of 2008 were not successful and were not supported by the shareholders like (JPMorgan Chase, Walt Disney) case where the shareholders opposed the idea outright as they feared a decline in profits meaning shareholders in some cases link duality with stability as the chairman with a dual role seem to be more seasoned and preferred to run the affairs of the company. The corporate associations and executives argue that the unified function ensure increase in efficiency, strong and central leadership.

Several countries such as South Africa and the United Kingdom rules of corporate governance encourage the companies to separate the two roles as per the relevant SEC guidelines. As of February 2010, it was mandated for the companies to disclose their corporate structures and to provide explanation is to why the existing board is appropriate for the company. Industry leaders argue that splitting the roles does not guarantee superior oversight however unified role can provide a lot of benefits in terms of leadership and effective oversight mainly due to their extensive knowledge of the industry and the organization.

The aim of the study is to analyze the effect of CEO duality on firm financial performance. For this purpose, we used the data of all companies included in Fortune 500,except the financial sector which were active in New York stock exchange during the year 2017-2018. The study employs Return on Assets(ROA), Return on Equity (ROE) and Return on invested Capital (ROIC) as indicators of financial performance while using size of the board (SBD),Age of the company (AGE),board composition.(B.comb.), audit Committee (A.comm.) and independent directors (IND.DR) as control variables while duality as the main independent variable.

This Study consists of six sections. The first section discusses the brief overview of the subject matter related to corporate governance practices particularly duality on firm financial performance. The second section contains conceptual framework for the study while the third section includes literature review like previous empirical studies and their

results. The fourth section discusses research methodology like the employed models and different variables used in the study. The fifth section underlines the result of the empirical analysis. The last section of the study discusses the conclusion and overall assessment and future research work suggestion on the subject area.

## CHAPTER 2

## CONCEPTUAL FRAMEWORK

### 2.1 Agency theory

The importance of having an effective corporate governance structure has increased in recent years especially after the financial crisis of 2008.It is an important area as it deals with the board responsibilities for the supervision of company affairs. One of the significant theory which concern with the corporate governance is the agency theory.

Agency theory broadly deals with relationship that exists between the two parties in which the agent represents the principal in commercial transactions. The shareholders elects the board of directors to keep an oversight over the business to ensure that agents are acting in their best interests. The differences in this regard can arise in two areas i.e differences in future outlook and level of risk aversion.

The studies dealing with the subject of corporate governance are mostly based on agency theory (Armstrong and Heenetigala, 2011: 3). According to the agency theory a firm has owners and directors which are different individuals. While shareholders are in large numbers but actually hold no real power due to their distributed shareholding and therefore are represented by board of directors. The resource allocation process in a company is at management discretion therefore, it is important for the board of directors to ensure effective supervision of company affairs.

Agency theory also states that both the shareholders and the directors are interested in protecting themselves against costs (Elloumi and Gueyié, 2001: 24). These agency costs can lead conflict of interest between the shareholders and company management (Ercan and Ban, 2005: 239). The agency theory deals with mitigating the conflict of interest between the shareholders and their representatives. According to the theory the shareholders' value is maximized when a firm has maximum supervision measures in place not limited to independent directors, board committees (Heenetigala and

Armstrong, 2011) but if the position of CEO and chairman are held by the same person this effect the firm value negatively.

The theory argues that in case of unified function the CEO can use his authority to affect the decision making process and this may lead the board ineffective to assess the CEO performance in an effective way (Aygün and İç, 2010 ).

## 2.2. Stewardship theory

Stewardship theory is a theory that deals with the effect on duality on firm performance and is considered as an alternative to the agency theory.

The stewardship theory advocates that managers actively seek not just financial ends but other ends such as sense of purpose, altruism, sense of worth, and a good reputation. The managers are constantly looking for opportunities to forward shareholders' interests i.e. maximizing company profits enabling shareholders value maximization meaning the managers have a strong sense of responsibility towards the shareholders.

The theory underlines the responsibility of the board of directors who are expected to act in a rational manner because of the relation that exist between company mission and expectation of the shareholders. The shareholders expect their representatives to act in accordance with the mandate to protect shareholders interests. According to the theory, Dual role allows a CEO to effectively implement actions taken by the board which leads to an increase in corporate performance (Sheikh and Wang, 2012).

While Peng et al. (2007) concluded that CEO duality has a positive effect on firm's performance by studying 403 publicly listed companies in China for 1,202 company years. Another study by Gill and Mathur (2011a) also found a positive relationship between duality and profitability by studying companies operating in the service sector in Canada during the period of 2008-2010 while a study by Abor,Biekpe(2007) concluded that that CEO duality effects the performance of SMEs positively by studying SMEs operating in Ghana.

The stewardship theory being the alternative theory therefore, underlines that duality actually ensures better decision making and can help the firm in making better and faster decision and would decrease implementation times and thus can increase firm's financial performance.

# CHAPTER 3

# LITERATURE REVIEW

The topic of corporate governance has been widely debated over the years by researchers whether there should be a separation of responsibilities between the CEO and the Chairman. In most of the developed countries, the Securities and Exchange Commission (SEC) has issued detailed rules and guidelines to ensure that two roles are separated.

Corporate governance in as important topic especially in the developing economies as it effects the value of the firm through good corporate governance practices. There is a lot of research on the subject of corporate governance and how it tends to effect firm performance. The previous studies on the subject of corporate governance particularly CEO duality have yielded contradictory and inconsistent results. Some researchers have found positive relationship between duality and firm performance.

The history of corporate governance goes back to the 18$^{th}$ century when the Crown started granting charters to companies for the purpose of international trade in British overseas territories such companies included the East India Company, The Africa Company, Virginia company and the Huddson Bay Company.

The first form of incorporation in the Common Laws was introduced by the royal charters which introduced rights of association as well as corporate status were given by the Church or the Crown however, later on specific legislation was passed for the similar objective. Literature suggests that some grants were allocated for not only charitable purposes but also to extend the interest of the crown. (Farrar 1999)

However with the rise in cases related to the abuse of charters led to the passage of UK Bubble act of 1720 which was a major setback for the corporate legislation for some time as more businesses until the end of 19$^{th}$ century continued to be run as sole traders or partnerships. However, it became common for the investors and businesses

to use joint stock corporation idea to pool in their investment capital for their businesses. The most common example of this was the financial industry where banks in British Colonies like in Australia and New Zealand were established under limited liability by charters and later on under the company's act of respective colonies.

The term director was first used by Bank of England and in Scotland during the same time. The first legal structure for defining the corporate structure however was passed in the year 1844 which provided the businesses to be incorporated by registering their deeds of settlement and to this day many of the principles still used in the modern day structures of corporate governance. After the enactment of the law, it became increasingly facilitative for businesses to incorporate especially under the entrepreneurial capitalism which was followed shortly by New Zealand and Australia.

Most of these incorporations made their way to the banking system in the colonial era where due to the lack of capital there was a need to raise the investment capital from the given resources, taxation however was not sufficient enough so most of the capital was raised from debt finance.

The topic of Corporate Governance became a widely debatable subject worldwide in the year 1970 by investors, executives, regulators and academics. The term "corporate governance" became well-known terminology for referring to different rules and structures used by corporations to mitigate the principal agent problem. The emphasis was to ensure an effective inter-relationship between the directors and c suite executives as well as shareholders of the company to ensure management team has a clear strategic plan of action for the foreseeable future.

The Sarbanes–Oxley Act is an important piece of legislation which was passed in 2002 to ensure transparency, accountability in public limited companies. The main aim of the legislation was to ensure corporate governance reforms in U.S publicly listed companies, but this act failed to address the issue of CEO duality which is still debated as the effectiveness of board is compromised in the presence of all power CEO.

According to a study by Chen et al. (2008) concluded that there was no significant relationship between duality and company's performance. While Peng et al. (2007) study concluded that duality effect on company performance positively. In another study Lam and Lee (2008) concluded that duality has negative effect on company performance in family businesses while positive relationship for publicly held businesses.

The study aims to understand the relationship between different corporate governance practices like CEO duality, board composition, board size and audit committee on firm financial performance. The employed variables are explained below:

### 3.1. CEO Duality

CEO duality is a condition where the CEO also serves as the chairman of the board. According to the agency theory, CEO duality leads to decrease in firm performance as it tends to decrease effectiveness of the board while stewardship theory argues that duality could actually empower the CEO to effectively initiate and implement decisions in the best interest of the company (Muth and Donaldson 1998).According to two different studies by Palmon and Wald (2002) and Kiel and Nicholson (2003) proved that separate function actually reduces the CEO power and help building up board capability to implement its oversight role. The role of the CEO and the chairman should be separate because duality can lead towards a dominated board which is ineffective against assessing cases of managerial opportunities. According to another study aimed at analyzing the relationship between the board, CEO duality and company performance it was concluded that no significant relationship is present between these three factors. A Study on company structure and performance by Chen et al. (2005) concluded that there is a negative relationship between CEO duality and Tobin Q but no significant relationship was found between CEO duality and ROE and ROA. A study conducted by Gill and Mathur (2011) on services sector companies in Canada for the period 2008-2010 that there is a positive relationship between profitability and CEO duality.

A study to analyze the effect of corporate governance on firm performance was conducted by Valenti et al. (2011) for over 90 companies in USA. The study concluded that there is no relationship between duality and firms' performance. Another study conducted by Ujunwa (2013) on 122 companies during the period 1991-2008 concluded that there is negative relationship between the duality, Size of the board and gender on company performance.

Hypothesis 1 There is a significant relationship between duality and firm performance.

### 3.2. Size of the Board

The size of the board is also an important variable of corporate governance. The board of directors is primarily responsible for managing and overseeing firm operations. According to a study by Brennan (2006) the board is one of the main variable of corporate governance in a firm. There are various studies which favor both having bigger boards as well as having smaller and efficient boards filled with competent individuals (stah and Stiglitz (1991),Yermack (1996).

Previous studies like Dwivedi and Jain (2005), Ehikoya (2009) and Klein (2002) have found a positive relationship between size of the board and firm performance. While some researchers like Cheng (2008), Yermach (1996) have found a negative relationship between board size and firm performance.

Hypothesis 3 There is a significant relationship between size of the board and firm performance.

### 3.3. Board Composition

The concept of having non-executive directors is mainly to ensure an effective oversight over the decision making process. The independent directors are believed to be more competent and are believed to have more superior knowledge and expertise in assessing both the short and long term effects of various decisions on firm performance. According to a study by Fama and Jensen (1983) Independent directors are effective in monitoring firm performance. The independent directors are also more

competent because of their past experiences of serving on corporate boards (Mace, 1986).Previous studies have shown mixed results with regards to board composition. Another study by Mashayekhi and Bazaz (2008) determined a positive relationship between board composition and firm performance. Another study by Jackling and Johl (2009) determined a positive relationship between board composition and firm performance. On the other hand Coles (2001) and Ehikkioya (2009) research showed a negative relationship between board composition and firm performance.

Hypothesis There is a significant relationship between board composition and firm performance.

### 3.4. Audit Committee

The audit committee is one of the most important board committee consisting of both executive and non-executive directors responsible for overseeing firm's financial activities. According to a study by Hayes and Wang (2010) an independent audit committee is essential for good corporate governance practices. The audit committee must be effective in carrying out regular audits of firm's financial health. Some critical areas to make the committee effective is to include more non-executive directors on the board as well as not appointing the CEO as the chairman of the committee Chan and Li (2008),Kirishan (2005).

Previous studies by Kent and Stewart (2008) has shown positive relationship between audit committees and firm performance while a study Klein (2002) concluded that there is a negative relationship between earning management and the independent audit committee.

Hypothesis There is a significant relationship between audit committee and firm performance.

### Benefits and costs of combined chair

Although most corporations prefer to retain the founder or key executive in main positions to provide long term stability and vision to the corporation and although

having a strong chair is essential for an environment that supports not only collaboration but effective decision-making in the boardroom meetings.

In most of the countries around the world there is a clear legislation on the subject matter where the CEO and Chairman cannot be assumed by the same person however, In the U.S however, it is more common for the CEOs especially in large companies to also assume the role of chairman. Critics and literature suggests that with the rise in different corporate scandals and financial instability especially in the early 2000 there should be a transparent separation of power between the board members and executives where the board should be headed by lead independent director.

The Dodd–Frank act (2010) is an important legislation in this regard which stipulates that publicly held companies must have independent leadership structure. The boards however, are free to select the leadership structure according to the nature of business. The decision however must meet the disclosure requirements and must be open to shareholders scrutiny.

Experts in favor of combining the two roles argue that combining the two roles is beneficial for the company as it tends to create clear lines of command and control throughout the entire company that converge in a single figure assuming the two roles (Monks,Minow 2004 pp 197) . According to Equiler data 2017, 47% of the companies of Russell 3000 index have the chairman assuming combined function on their boards.

One of the main problem that arises with the combination is that the board itself is responsible to evaluate CEO performance as well as determining compensation and well as administrative powers to take corrective actions in case of removal of the CEO from the position which might lead to conflict of interest. In some cases, it may lead to CEOs monopoly over the board decision making. The experts do recommend that company polices should ensure an ecosystem where independent leadership should steer the board to balance the power of the CEO.

There is also pressure from the shareholders to retain the dual structure as in the case of JPMorgan Chase. Experts suggest that shareholders normally see the situation in comparison of other firms in the industry and that may leads to justification for dual role to keep the company strategically aligned and to avoid profits from plummeting.

Literature suggests (Gleason 2015) that most of the criticism stems from the fact that during the financial crisis most the big financial institutions like Lehman Brothers and Bear Stearns had a chairman with dual role. It may be tempting for the certain group of shareholders or critics to create a separation between the two roles however such separation does not guarantee superior oversight. While a chairman with the role of the CEO can be advantageous both in terms of leadership and oversight in steaming from ones knowledge and experience from their long serving years in the managerial roles.

The governance needs of a company may vary at different stages of its lifecycle which may lead the decision of combining the two roles to provide strong and dynamic leadership to the organization. However it is equally important for a company to have and engaged, independent and inquisitive board that should be actively involved in the decision making as well as to safeguard shareholders' interests.

A report titled "Report of the Conference Board Commission on Public Trust and Private Enterprise" was published in 2003 in the U.S which recommended that the Chairman and CEO functions should be separate and that the chairman position should be filled by an independent lead director.

Similarly, in the year 1992 another report titled "Bacon Report on Corporate Boards and Corporate Governance" recommended a separation of the Chairman and CEO functions. Despite the recommendation mentioned in the above mentioned reports approximately 80% of all large U.S firms has combined function (Brickley, Coles, and Jarrell (1997); and Travlos and Dahya (2000)).

Similarly, a report published in the U.K namely “Cadbury Report” recommended that the two function should be separated was issued in the year 1992. Dahya and Travlos (2000) in their research concluded that the report led to decline in the number of firms with dual functions.

Another important literature on the subject matter published in the year 2003 is namely Higgs report titled “Review of the Role and Effectiveness of non-Executive Directors” by Derek Higgs recommended that the not only should there be a separation between the chairman and the CEO but also the chairman should meet the standard of independence. Most of the recommendation outlined in the Higgs Report were incorporated in the “Combined Code of Practice” which ensured that all listed entities to comply with the code or give valid reason for their non- compliance.

The case for increasing managerial holding in a firm is also researched from an angle of aligning shareholders’ interests with those of the management for better firm performance. Many firms around the world offer stock options for their management in an attempt to align their interests with those of the shareholders. A study by Gu and Kim (2008) proved that managerial ownership is positively related to increased firm performance by studying firms operating in the restaurant industry. The results of the study showed that firms with low managerial shareholding can increase managerial holdings to enhance financial performance in terms of profitability and stock returns.

The article also underlines that “The chief executive (CEO) is responsible for the management of the Public Sector Company and for its procedures in financial and other related matters, which are subjected to the oversight and directions of the Board, in accordance with the Ordinance and these rules. The responsibilities for the CEO include effective implementation of strategies and policies approved by the Board of Directors, ensuring arrangements and allocation of funds and resources efficiently in accordance with all statutory obligations Higgs (2003).

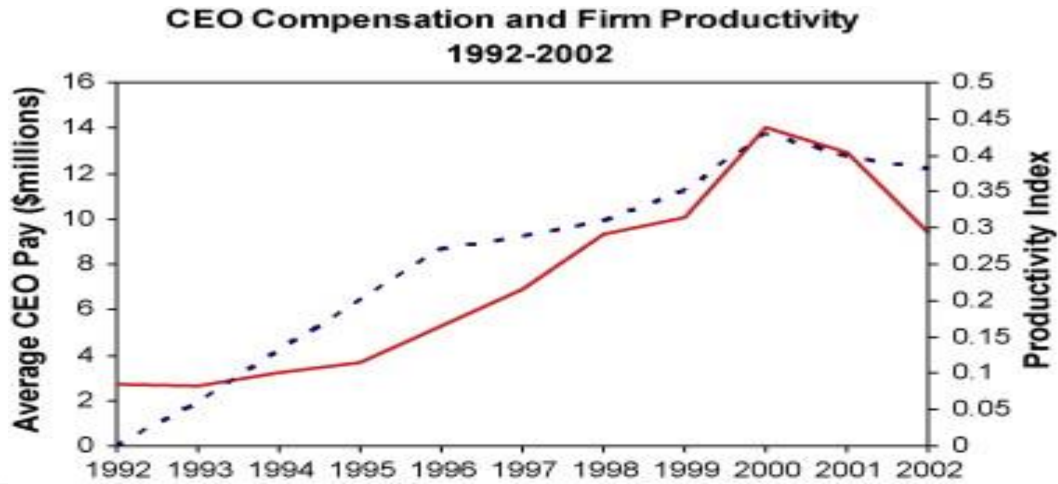
According to a study by Harvard School of Law by *Noam Noked (2012), unified function pose a greater* environmental, social and governance and accounting risks to the corporation compared to the corporation with separate functions. Combined role pose a far more risk for shareholders and may lead to lower stock returns in the long-term while having a separation is less costly and risky and is better for shareholders.

The study was conducted using 180 North American large-cap corporations with a market capitalization of $20 billion or more. The group was selected to while ensuring the relative complexity of governance in these companies. It was expected that differences between the leadership structures, cost structures, risk exposure will be more.

Some of the findings of the study were:

- Combined function Chairman earn a median salary of $16 million.
- CEOs not serving as chairman earn a total salary of $9.8 million
- Executive serving only as Chairman earn median salary of $492,259.
- The cost of having a separate CEO and a chairman cost $11 million.
- Only less than 1% companies with the unified function has an above average ESG rating compared to companies with separate roles.
- For a Five-year period under review, shareholders returns were up to 28 percent higher for companies with separate function.

The illustration given below shows the having unified role necessary doesn't affect the productivity of the company. There are some exceptions to the notion but research has shown that only 1% of the dual companies have an above average ECG ratings. The cost incurred due to having a separate role are justified on the basis of having a superior oversight on the action of the CEO with respect to company's strategy going forward.




Adopted from Bulan,Sanyal,Yan (2005)

Literature Review Table

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### 3.5. Problem statement

To understand the impact of combined function on firm's financial performance.

### 3.6. Research Objectives

The objectives of the research are the following:

- To understand the impact of duality on firms financial performance.
- To determine the nature of relationship between corporate governance practices on firms performance.

### 3.7. Purpose and Significance of Research

A lot of research has been done on the subject of corporate governance mostly related to the combined function of CEO and Chairman. The most significant contribution in this regard is by Brickley, Coles, and Jarrell (1997); Travlos and Dahya (2000) which recommends a separate leadership structure for a firm for better corporate governance. Similarly, Cadbury and Higgs report (2002) on corporate governance underline that the role of the chairman should be separate from the CEO and the positions of the chairman should be filled by a lead independent director. Based on the research already done on the topic suggests that keeping the two functions separate is better for increased firm performance. Researchers have concluded that combined functions result in conflict of interest while keeping the two functions separate results in strengthening the integrity of the board.

As per the SEC rules of corporate governance in many countries, the CEO is responsible for overseeing the firms operations while having a combined role results in chairman monitoring oneself, which may lead to abuse of the position. Most researchers have argued that a board led by an independent chair is more likely to play an effective role towards implementing board's decision in true letter and spirit.

The main aim of the research is to understand the financial impact of combined functions on firm's financial performance of selected firms from Fortune 500 list and to understand the underlying motives behind keeping the two functions combined.

### 3.8. Limitations

The research study will focus primarily on analyzing all companies included in the fortune 500 excluding the financial sector because of difference of capital structure. These companies primarily operate in capital intensive sectors like energy, tech, retail,

wholesalers, industrials etc. while relaying on secondary data such as stock filings and annual reports, Press briefings etc. undermining the fact that there are many underling factors which may urge the firm to choose one structure over the other. The data constitutes of about 76.43% of the sample.

The second limitation is that some firms may choose to enter in to a unified function phase for a while in case of economic downturn or during financial distress that may be temporary. There is already extensive cases available on such instances where firms opted to unify functions for the time being. Third limitation is that the research findings will be based on secondary data which will include the annual reports of these firms. Forth limitation is the subsequent mergers and acquisitions of the firms during the period for which data up to the year of mergers and acquisitions has been used in the study.

### 3.9. Justification

The research is justified on the basis of the analysis that will be performed on the available data of companies included in the Fortune 500. The analysis will help in determining the impact of corporate governance structures on some of the most complex and profitable companies in the world. This study will focus on studying implication for firm both operational and financial performance.

### 3.10. Scope

This study will focus on all companies from Fortune 500 excluding the financial sector. The reason for choosing the U.S was mainly to assess the impact of duality and corporate governance practices in a country with a more developed financial system to get a better understanding of how different corporate structures effect strategic decision making and what are the financial implication of them. According to a study by Harvard School of Law, Noam (2012), there is an increase of 28% in shareholders' value for companies with a separate functions. However, given the industry a firm operates, a firm needs to make

a decision about leveraging the firms existing resources, customers and capabilities to come up with the new products and services.

The study will employ multiple regression analysis and t test to identify and evaluate the risk of unified function. The research aims to use the framework to come up with a methodology to identify structure which lead to increase in shareholders' value by effectively utilizing the available resources and synergies of the company.

### 3.11. List of Abbreviations

**Advice**

Offer someone suggestions about what to do

**Agency Cost**

Costs arising due to conflict of interest in a Business setting.

**Amend**

Make changes to something.

**Appoint**

To select a person or group of people for an official job

**Articles**

Part of company's constitutions discussing or talking about a specific area.

**Business Practices**

The usual methods, procedures, systems, traditions, and rules used by a company

**Board of Directors**

A group of people who work between the executive Staff of the company and Shareholders to make decisions of the company.

**Chairman**

The executive of a company who has been appointed as the head of the Board of Directors.

**Chief Executive Officer**

The Chief Executive Officer is an executive responsible to head the operations of the company.

**Conflict of Interest**

A problem where someone can use their power wrongfully to benefit themselves to the detriment or loss of those who entrusted them with that power.

**Remuneration**

The payment or reward a person gets for doing their job.

**Shareholder**

A person or company who owns a piece or share of the company.

**Lead Independent Director**

An Independent Director which is selected by the independent directors to oversee the governance of the company.

# CHAPTER 4

# RESEARCH METHODOLOGY

The aim of the study is to assess the effect of CEO duality on firm's financial performance. Previous studies like by Muhammad et al., (2014) have shown that secondary data is best fitted for such empirical analysis. The study uses data from all companies included in the fortune 500 from sectors like energy, tech retail, industrials, wholesalers, chemicals, apparels, aerospace & defense and the airline sector except the financial sector. The companies included in the analysis were active in New York Stock Exchange (NYSE) during the year 2017-2018. The sample contains 382 companies in total and represents 76.4% of the sample size excluding the financial sector mainly due to difference in capital structure therefore this research excludes the 118 financial firms included in the fortune 500. The sample consists of 382 observations for the year 2017-2018.The data utilized in this study has been obtained from official website of Blomberg and Thomason Reuters (EIKON). The analysis employs multiple regression and t test to test the hypothesis.

## 4.1. Hypothesis proposition

The objective of this research is to understand the impact of CEO duality and corporate governance practices on firm's performance.

The Hypothesis for this research are given below:

Hypothesis 1

There is a significant relationship between duality and firm performance

Hypothesis 2

There is a significant relationship between board composition and firm performance.

Hypothesis 3

There is a significant relationship between size of the board and firm performance.

Hypothesis 4

There is a significant relationship between audit committee and firm performance.

The study uses all companies included in the Fortune 500 companies which constitutes about 76.4% of the total number of companies in the fortune 500 excluding the financial sector mainly due to the difference of capital structure for different banks and financial institutions. The sector wise classification of the samples is given in table 1.

Table 1. Industry Classification of the Sample

| **Sector** | **Number of firms** |
|---|---:|
| Energy | 125 |
| Tech | 105 |
| Retail | 20 |
| Wholesalers | 38 |
| Industrials | 20 |
| Airline | 9 |
| Aerospace and Defense | 23 |
| Apparel | 14 |
| Chemicals | 28 |
| **Total** | **382** |

The sample consists of companies from capital intensive sectors like energy, tech, retail, industrials and wholesalers etc. Table 2. Outlines the incidence of duality in the sample. These sectors are under excessive scrutiny by not just the shareholders but also by the other stakeholders. The analysis will allow us to better understand the impact of duality and corporate governance practices on these fairly complex industries included in fortune 500 list for being most profitable companies in the world.

Table 2. Incidence of CEO Duality in the sample

| Sector | No of firms in the sample | Incidence of CEO Duality | Incidence of CEO Non- Duality |
|---|---|---|---|
| Energy | 125 | 63 | 62 |
| Tech | 105 | 26 | 79 |
| Retail | 20 | 6 | 14 |
| Wholesalers | 38 | 16 | 22 |
| Industrial | 20 | 14 | 6 |
| Airline | 9 | 2 | 7 |
| Aerospace & Defense | 23 | 15 | 8 |
| Apparel | 14 | 8 | 6 |
| Chemicals | 28 | 17 | 11 |
| | **382** | **167** | **215** |

Previous studies have employed two different indicators to assess the impact of duality on corporate performance of companies. The first approach employs accounting indicators to assess financial performance of a company as used in the studies by Lam and Lee (2008) and Baptisata (2011). The second approach uses market indicators to assess financial performance of a company with dual function used in studies by Ehikioya (2009) and Chen (2005).

## 4.2. Research Models

The study employs the following models:

Model I: PERFORMANS (ROA)it= βit+ β2 CEOit+ β3 AGEit+ β4 SBDit++ β5 B.Comp.+

β6 A.comm + β7 IND .DR. iteit

Model II: PERFORMANS (ROE)it= βit+ β2 CEOit+β3 AGEit+ β4 SBDit+β5 B.Comp.iteit+ β6 A.comm + β7 IND .DR. iteit

Model III: PERFORMANS (ROIC)it= βit+ β2 CEOit+ β3 AGEit+ β4 SBDit+ β5 B.Comp.iteit+ β6 A.comm + β7 IND .DR. iteit

## 4.3. Variables Under study

### Independent variable

The study uses CEO duality as the main independent variable. The study employs four different dimensions of corporate governance namely duality, board composition, and board size and audit committee to assess the overall impact of corporate governance practices on firm performance. Board composition in this regard is treated as a dummy variable by calculating proportion of independent directors on the company's board. Similarly in cases where audit committee exists it is assigned the value of one, in cases of no audit committee it is assigned the value of zero.

Duality: In cases where CEO Duality exists CEO is defined as one and in the case of non-duality it is defined as zero.

### Dependent Variables

The aim of this study is to assess the impact of CEO duality on firm financial performance. The previous studies related to corporate governance have specifically used accounting performance as well as market valuation approach to assess firm's performance. The firm financial performance is treated as major standard to assess financial and operational efficiency of its operations. According to a study by Muhammed et al (2014) firm performance is measured by increase in profit on assets as well as increase in shareholders' value. Another study by Klein (1998) used Return on Assets (ROA) while a study Lo( 2003) used Return on equity to assess operating performance of the firm. Another study by Brown and Caylor (2005) used both ROA

and ROE as measures to assess firm performance. The study also uses Return on Invested Capital as an additional measure of firm performance as it seeks to assess the firm’s ability to earn retunes over its cost of capital.

The variables are defined as follows:

Return on Assets (ROA): Net Income /Total Assets.

Return on Equities (ROE): Net Income /Shareholders equity

Return on Invested Capital (ROIC) : NOPAT / Operating Capital

## 4.5. Control variables

The study employs Age of the company, size of the board, board composition and audit committee as the main control variables to assess the impact of corporate governance mainly CEO duality on firm performance.

Age of the Company: Number of years since the firm has been established

Size of the Board (SBD): Number of directors on the board.

Board composition: Number of independent directors/Total number of directors

Audit committee: In cases where audit committee exists is defined as one otherwise zero.

CHAPTER 5

# FINDINGS

The study aims to assess the impact of CEO duality on firm financial performance. To assess the suitability of data for the empirical analysis, correlation and descriptive statistics were assessed. Table 3. Shows that there is a negative correlation between duality and ROA, ROE & ROIC, rest of the correlation coefficients are very small (less than 0.75 or negative). Therefore all the variables can be considered for the analysis.

Table 3. Correlation between different variables under study

| | *ROA* | *ROE* | *ROIC* | *SBD* | *AGE* | *Duality* | *B. Composition* | *A. Committee* | *IND DR* |
|---|---|---|---|---|---|---|---|---|---|
| ROA | 1 | | | | | | | | |
| ROE | 0.58 | 1 | | | | | | | |
| ROIC | 0.90 | 0.61 | 1 | | | | | | |
| SBD | 0.15 | 0.16 | 0.16 | 1 | | | | | |
| AGE | 0.05 | 0.10 | 0.07 | 0.14 | 1 | | | | |
| Duality | -0.07 | -0.03 | -0.06 | -0.02 | 0.13 | 1 | | | |
| B. Composition | 0.15 | 0.11 | 0.16 | -0.03 | 0.15 | 0.24 | 1 | | |
| A. Committee | 0.00 | -0.01 | 0.00 | -0.14 | -0.04 | 0.05 | 0.11 | 1 | |
| IND DR | 0.15 | 0.16 | 0.16 | 0.65 | 0.24 | 0.18 | 0.69 | 0.06 | 1 |

The descriptive statistics of the variables are presented in table 4. It reveals that on an average there is a 43.7 percent incidence of CEO duality in the given sample. The average board size was found to be 9.28 ranging from minimum 2 directors to maximum 16 directors. The average ROA ranges from -169.87 to maximum 49.77 percent. The ROE on the other hand ranges from -472.52 to 274.34 percent while ROIC has a range of -258.34 to 84.82 percent.

**Table 4. Descriptive statistics between different variable under study**

| | Mean | SD | Min | Max | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROA | 5.5 | 12.62 | -169.87 | 49.77 | 1 | | | | | | | | |
| ROE | 13.3 | 40.28 | -472.52 | 274.34 | 0.58 | 1 | | | | | | | |
| ROIC | 8.6 | 19.15 | -258.34 | 84.82 | 0.90 | 0.61 | 1 | | | | | | |
| SBD | 9.2 | 2.09 | 2 | 16 | 0.15 | 0.16 | 0.16 | 1 | | | | | |
| AGE | 59.4 | 45.89 | 1 | 218 | 0.05 | 0.10 | 0.07 | 0.14 | 1 | | | | |
| Duality | 0.4 | 0.49 | 0 | 1 | -0.07 | -0.03 | -0.06 | -0.02 | 0.13 | 1 | | | |
| B.comb. | 0.8 | 0.22 | 0 | 3.2 | 0.15 | 0.11 | 0.16 | -0.03 | 0.15 | 0.24 | 1 | | |
| A.Comm. | 0.9 | 0.05 | 0 | 1 | 0.00 | -0.01 | 0.00 | -0.14 | -0.04 | 0.05 | 0.11 | 1 | |
| IND.DR | 7.6 | 2.46 | 0 | 16 | 0.15 | 0.16 | 0.16 | 0.65 | 0.24 | 0.18 | 0.69 | 0.06 | 1 |

This study uses multiple regression and t test for empirical analysis to assess the impact of duality on firm financial performance. The companies used in this analysis are divided in to two respective groups with respect to duality .The t test results are presented in table below.

T test Results

| Variables | Duality Firms | | | Non Duality Firms | | | Mean Difference CE | T test |
|---|---|---|---|---|---|---|---|---|
| | Observation | Mean | STD Error | Observation | Mean | STD.Error | | |
| ROA | 167 | 4.55 | 1.22 | 215 | 6.24 | 0.65 | -1.69 | 2.389 |
| ROE | 167 | 11.78 | 2.49 | 215 | 14.58 | 3.24 | -2.8 | 1.648 |
| ROIC | 167 | 7.29 | 2.04 | 215 | 9.63 | 0.80 | -2.34 | -4.088 |
| AGE | 167 | 66 | 3.78 | 215 | 54.32 | 0.13 | 11.68 | 0.016 |
| SBD | 167 | 9.23 | 0.18 | 215 | 9.32 | 0.13 | -0.09 | 0.147 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| IND DR | 167 | 8.16 | 0.21 | 215 | 7.24 | 0.15 | 0.92 | 0.312 |
| B.Comb. | 167 | 0.89 | 0.02 | 215 | 0.78 | 0.01 | 0.11 | 1.647 |
| A.Comm | 167 | 1 | 0 | 215 | 1 | 0 | 0 | 4.345 |

The results outlined in table.5.1 for dependent variable such as ROA, ROE and ROIC for companies with dual function are found to be 4.55; 11.78 and 7.29 respectively while the companies in the given sample without duality are seen as 6.24; 14.58; and 9.63 respectively.

We therefore conclude that the duality has a negative effect on firm's financial performance. Companies where CEO is not serving as the chairman of the board of directors effects firms performance in a positive way, therefore hypothesis H01 is accepted that is there is a significant relationship between duality and firms performance.

Similarly, the total number of independent directors nominated on the board in firms having duality was found to be 8.16 while for the companies having a separate function the same value was found to be 7.24 which shows that there are more independent directors on the board of the company with dual function. The results of board composition are also similar in this regard. The average age of the company having duality was found to be 66 while companies having separate function has a value of 54.32.The board composition shows that dual companies tend to have more outside directors on the board. The results of the audit committee however were found to be indifferent in both cases.

Therefore, it can be concluded that companies having separate function tend to be less experienced than their counterpart which have slightly less members on the board. The performance however was found to be greater for firms with separate function despite

having slightly less members on the board. This phenomenon can be traced back to the tendency of the shareholders which prefer the founders or key figures to be retained on key positions to ensure that stability and continuation of policies by the powerful figurehead of the company.

The categorization of the sample reveals that there is around 43.7% incidence of CEO duality. This percentage is far from the study by Braun and Sharma (2007) which duality incidence in family controlled public firms. Another study by kang and Zardkohi (2005) reported much lower incidence of duality for companies operating in japan, U.K, Italy and Belgium. The incidence of duality in this case for U.S is lower for selective sectors from the fortune 500 as per the studies of Rechner and Dalton (1991).One thing most commonly observed in the sample is the existence of more independent directors as well as inclusion of CEO as a board member.

## Regression Analysis

The study employs multiple regression analysis to assess the impact of CEO duality on firm's financial performance. Table 6 shows the model summary of Return on assets and different explanatory variables used in the study.

## Model of Return on Assets

**Model Summary[b]**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
|---|---|---|---|---|---|
| 1 | .320[a] | .102 | .088 | 12.05703 | 1.795 |

a. Predictors: (Constant), IND DR, A. Committee , Duality , AGE, SBD, B. Composition

b. Dependent Variable: ROA

The model shows R the coefficient of correlation at.320 (32%) with return on assets (ROA) when we use all predictor variables simultaneously. The model has an R2 value of .102 and the value of adjusted R square is .088 which shows that 8.8% of the variations in our dependent variable i.e return on assets (ROA) can be explained from the explanatory variables.

**ANOVA[a]**

| Model | | Sum of Squares | Df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 6198.380 | 6 | 1033.063 | 7.106 | .000[b] |
| | Residual | 54514.468 | 375 | 145.372 | | |
| | Total | 60712.848 | 381 | | | |

a. Dependent Variable: ROA

b. Predictors: (Constant), IND DR, A. Committee , Duality , AGE, SBD, B. composition

The model results for anova of the dependent variable return on assets (ROA) with all variables used in the study are highly significant at 0.000 which means the model is best fitted. The F statistics of return of return on assets (ROA) is 7.106 which reveals its relationship with the explanatory variables.

Coefficients of return on assets and explanatory variables

The table below shows the relationship between the dependent variable return on assets (ROA) with explanatory variables. The model shows that CEO duality is statistically significant and negatively related to return on assets (ROA).while board size, board composition are statically significant and positively related to return on assets (ROA) however independent director is statistically significant but negatively related to return on assets.

**Coefficients**

| Model | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|
| | | Beta | | |
| 1 | (Constant) | | -3.373 | .001 |
| | Duality | -.087 | -1.706 | .089 |
| | AGE | .046 | .904 | .367 |
| | SBD | .721 | 5.141 | .000 |
| | B. composition | .758 | 5.246 | .000 |
| | A. Committee | .071 | 1.375 | .170 |
| | IND DR | -.838 | -4.323 | .000 |

Model of Return on equity

Table 6 shows the model summary of Return on equity (ROE) and different explanatory variables used in the study.

**Model Summary[b]**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
|---|---|---|---|---|---|
| 1 | .245[a] | .060 | .044 | 39.386282414484180 | 2.004 |

a. Predictors: (Constant), IND DR, A. Committee , Duality , AGE, SBD, B. Composition

b. Dependent Variable: ROE

The model shows R the coefficient of correlation at.245 (24.5%) with return on equity (ROE) when we use all predictor variables simultaneously. The model has an R2 value of .060 and the value of adjusted R square is .044 which shows that 4.4% of the variations in our independent variable i.e return on equity (ROE) can be explained from the explanatory variables.

**ANOVA[a]**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 35180.882 | 6 | 5863.480 | 3.780 | .001[b] |
| | Residual | 550704.131 | 355 | 1551.279 | | |
| | Total | 585885.013 | 361 | | | |

a. Dependent Variable: ROE

b. Predictors: (Constant), IND DR, A. Committee , Duality , AGE, SBD, B. composition

The model results for anova of the dependent variable return on equity (ROE) with all variables used in the study are highly significant at 0.001 which means the model is

best fitted. The F statistics of return of return on equity (ROE) is 3.780 which reveals its relationship with the explanatory variables.

### Coefficients of return on equity and explanatory variables

The table below shows the relationship between the dependent variable return on equity (ROE) with explanatory variables. The model shows that CEO duality is statistically insignificant and negatively related to return on equity (ROE).while board size, board composition are statically significant and positively related to return on equity (ROE) however independent director is statistically significant but negatively related to return on assets.

**Coefficients**

| Model | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|
| | | Beta | | |
| 1 | (Constant) | | -2.038 | .042 |
| | Duality | -.055 | -1.028 | .305 |
| | AGE | .085 | 1.588 | .113 |
| | SBD | .449 | 3.088 | .002 |
| | B. Composition | .434 | 2.865 | .004 |
| | A. Committee | .041 | .745 | .457 |
| | IND DR | -.443 | -2.198 | .029 |

### Model of Return on Invested Capital

Table 6 shows the model summary of Return on Invested Capital (ROIC) and different explanatory variables used in the study.

**Model Summary[b]**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
|---|---|---|---|---|---|
| 1 | .337[a] | .114 | .099 | 18.181116325581380 | 1.784 |

a. Predictors: (Constant), IND DR, A. Committee , Duality , AGE, SBD, B. Composition

b. Dependent Variable: ROIC

The model shows R the coefficient of correlation at.337 (33.7%) with return on Invested capital (ROIC) when we use all predictor variables simultaneously. The model has an R2 value of .114 and the value of adjusted R square is .099 which shows that 9.9% of the variations in our independent variable i.e return on invested capital (ROIC) can be explained from the explanatory variables.

**ANOVA[a]**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 15137.124 | 6 | 2522.854 | 7.632 | .000[b] |
| | Residual | 118007.418 | 357 | 330.553 | | |
| | Total | 133144.542 | 363 | | | |

a. Dependent Variable: ROIC

b. Predictors: (Constant), IND DR, A. Committee , Duality , AGE, SBD, B. composition

The model results for anova of the dependent variable return on invested capital (ROIC) with all variables used in the study are highly significant at 0.000 which means the model is best fitted. The F statistics of return of return on invested capital (ROIC) is 7.632 which reveals its relationship with the explanatory variables.

### Coefficients of return on invested capital and explanatory variables

The table below shows the relationship between the dependent variable return on invested capital (ROIC) with explanatory variables. The model shows that CEO duality is statistically insignificant and negatively related to return on invested capital

(ROIC).while size of the board, board composition are statically significant and positively related to return on invested capital (ROIC) while Independent directors are statistically significant but negatively related to return on invested capital.

**Coefficients**

| Model | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|
| | | Beta | | |
| 1 | (Constant) | | -3.440 | .001 |
| | Duality | -.079 | -1.529 | .127 |
| | AGE | .064 | 1.240 | .216 |
| | SBD | .751 | 5.390 | .000 |
| | B. composition | .811 | 5.511 | .000 |
| | A. Committee | .069 | 1.310 | .191 |
| | IND DR | -.897 | -4.586 | .000 |

# CHAPTER 6

# CONCLUSION

The study aimed to measure the effect of different corporate governance structures mainly CEO duality i.e CEO serving as the chairman of the board of directors on firms financial performance. To determine this relationship, data from 382 largest companies included in the fortune 500 was used for the period 2017-2018.The most common thing observed in the data was the presence of the CEO as a board member for most of these companies as well as the presence of large number of independent directors to ensure effective decision making in the case of duality.

To determine this relationship, the empirical analysis included multiple regression and t test. The results of the empirical are same as the previous studies by Aygün and İç (2010), Chen et al. (2005), Gill and Mathur (2011b), Ujunwa (2012).However as per the literature the results were found to be in opposite direction with the studies of Lam & Lee (2008), Gill and Mathur (2011a),Yu (2008), Baptista, Klotzle and Melo (2011), Peng et al. (2007), Faleye (2007), Abdullah (2004) and Valenti et al. (2011).

The empirical analysis determines a negative relationship between CEO duality and firm's performance in all three models. To put it simply, CEO duality effects company performance negatively when we used accounting based variables like ROA,ROE and ROIC.

The three models show a negative relationship between duality and the dependent variables ROA,ROE and ROIC while size of the board and board composition are positively related to firm financial performance. The independent director however is negatively related to return on assets (ROA) while positively related to return on equity (ROE) while negatively related to return on invested capital (ROIC). The results are in line with the resource dependence theory which stipulates that boards with high level of association can lead to increased access to resources which in turn can increase firm performance. It also determine a negative relationship between ROA,ROE and ROIC as board composition decreases managers are more likely to

utilize the company's resources for their own personal gains. The negative relationship between CEO duality and firm performance is in accordance with the agency theory which stipulates that combined role can compromise decision management and control can compromise board control and therefore can negatively affect firm performance negatively.

When we assess these companies from the perspective of being listed as Fortune 500 companies, it is important to point out that duality does effects their profitability despite being listed as most profitable companies. The U.S is a specific case in this regard where duality is most commonly observed. The results of the analysis were found to be in consistent with the agency theory.

As per the results of the empirical analysis and also from an investor perceptive, return on Invested Capital (ROIC), is observed to be higher for companies without CEO duality. It is therefore important for investors looking for higher returns to invest in companies without CEO duality as the results of those investments will truly be positive. For Return on equity (ROE), the results show that for companies which have no duality seems to have better returns for shareholders compared to companies with duality meaning investor and shareholders would be able to get better returns both in terms of price and share of profit.

While this study adds to the existing body of literature on the duality and firm performance area by elaborating the relationship between duality and different variables of corporate governance on firms financial performance. The shortcoming of this study was the exclusion of the financial sector as well as the private companies included in the list whose data was not publicly available. Due to this non-observability, it can be argued that results may differ in other cases. For future research, it is important to study other determinants such as capital structure choices, managerial shareholding, corporate governance compliance as well as studying pre and post-performance of firms under different corporate structures.

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Appendices

Model Results

a) ROA Model

**Model Summary[b]**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
|---|---|---|---|---|---|
| 1 | .320[a] | .102 | .088 | 12.05703 | 1.795 |

a. Predictors: (Constant), IND DR, A. Committee , Duality , AGE, SBD, B. composition

b. Dependent Variable: ROA

**ANOVA[a]**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 6198.380 | 6 | 1033.063 | 7.106 | .000[b] |
| | Residual | 54514.468 | 375 | 145.372 | | |
| | Total | 60712.848 | 381 | | | |

a. Dependent Variable: ROA

b. Predictors: (Constant), IND DR, A. Committee , Duality , AGE, SBD, B. composition

**Coefficients**

| Model | Standardized Coefficients | t | Sig. | 95.0% Confidence Interval for B | |
|---|---|---|---|---|---|
| | Beta | | | Lower Bound | Upper Bound |
| 1 (Constant) | | -3.373 | .001 | -85.751 | -22.594 |
| Duality | -.087 | -1.706 | .089 | -4.747 | .336 |
| AGE | .046 | .904 | .367 | -.015 | .040 |
| SBD | .721 | 5.141 | .000 | 2.685 | 6.012 |
| B. Compostion | .758 | 5.246 | .000 | 26.417 | 58.096 |
| A. Committee | .071 | 1.375 | .170 | -7.540 | 42.604 |
| IND DR | -.838 | -4.323 | .000 | -6.248 | -2.341 |

## b) ROE Model

**Model Summary[b]**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
|---|---|---|---|---|---|
| 1 | .245[a] | .060 | .044 | 39.386282414484180 | 2.004 |

a. Predictors: (Constant), IND DR, A. Committee , Duality , AGE, SBD, B. composition

b. Dependent Variable: ROE

**ANOVA[a]**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 35180.882 | 6 | 5863.480 | 3.780 | .001[b] |
| | Residual | 550704.131 | 355 | 1551.279 | | |
| | Total | 585885.013 | 361 | | | |

a. Dependent Variable: ROE

b. Predictors: (Constant), IND DR, A. Committee , Duality , AGE, SBD, B. composition

**Coefficients**

| Model | Standardized Coefficients | t | Sig. | 95.0% Confidence Interval for B | |
|---|---|---|---|---|---|
| | Beta | | | Lower Bound | Upper Bound |
| 1 (Constant) | | -2.038 | .042 | -210.481 | -3.768 |
| Duality | -.055 | -1.028 | .305 | -12.956 | 4.059 |
| AGE | .085 | 1.588 | .113 | -.018 | .167 |
| SBD | .449 | 3.088 | .002 | 3.109 | 14.018 |
| B. Compostion | .434 | 2.865 | .004 | 23.692 | 127.461 |
| A. Committee | .041 | .745 | .457 | -50.913 | 113.028 |
| IND DR | -.443 | -2.198 | .029 | -13.593 | -.756 |

### c) ROIC Model

**Model Summary[b]**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
|---|---|---|---|---|---|
| 1 | .337[a] | .114 | .099 | 18.181116325581380 | 1.784 |

a. Predictors: (Constant), IND DR, A. Committee , Duality , AGE, SBD, B. Compostion

b. Dependent Variable: ROIC

**ANOVA[a]**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 15137.124 | 6 | 2522.854 | 7.632 | .000[b] |
| | Residual | 118007.418 | 357 | 330.553 | | |
| | Total | 133144.542 | 363 | | | |

a. Dependent Variable: ROIC

b. Predictors: (Constant), IND DR, A. Committee , Duality , AGE, SBD, B. composition

**Coefficients**

| Model | | Standardized Coefficients | t | Sig. | 95.0% Confidence Interval for B | |
|---|---|---|---|---|---|---|
| | | Beta | | | Lower Bound | Upper Bound |
| 1 | (Constant) | | -3.440 | .001 | -131.147 | -35.742 |
| | Duality | -.079 | -1.529 | .127 | -6.968 | .873 |
| | AGE | .064 | 1.240 | .216 | -.016 | .070 |
| | SBD | .751 | 5.390 | .000 | 4.380 | 9.413 |
| | B. Compostion | .811 | 5.511 | .000 | 43.302 | 91.358 |
| | A. Committee | .069 | 1.310 | .191 | -12.632 | 63.031 |
| | IND DR | -.897 | -4.586 | .000 | -9.895 | -3.955 |

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