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**THE RELATIONSHIP BETWEEN BOARD OF DIRECTOR'S  
CHARACTERISTICS AND INDUSTRIAL FIRMS FINANCIAL  
PERFORMANCE LISTED AT AMMAN STOCK EXCHANGE**

**By**

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**UUM**  
**Universiti Utara Malaysia**

**MASTER OF SCIENCE (INTERNATIONAL ACCOUNTING)  
UNIVERSITI UTARA MALAYSIA  
2016**

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**Thesis submitted to**

**Othman Yeop Abdullah Graduate School of Business**

**Universiti Utara Malaysia**

**In Fulfillment of the Requirement for the Degree of Master of Science**

**(International Accounting)**

## **DECLARATION**

I declare that the substance of this project paper has never been submitted for any degree or postgraduate program and qualifications.

I certify that all the support and assistance received in preparing this project paper and the entire source abstracted have been acknowledged in this stated project paper.



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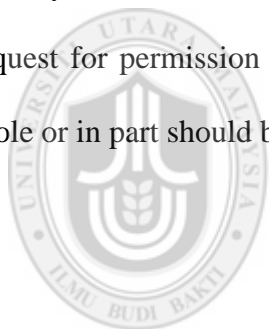
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## ABSTRACT

The purpose of this study is to empirically examine the relationship between board size, CEO duality, independence of the board of director's, frequency of board meeting and firm financial performance. About, 64 industrial listed firms are chosen from Amman Stock Exchange for the year 2013. Multiple regressions analysis is utilised in this study in order to achieve the research objectives. The findings show that board size, CEO duality, independence of the board of director's and frequency of board meeting have a relationship with firm financial performance. The findings also show that board size has a positive relationship with firm financial performance, and CEO duality has a negative relationship with firm financial performance. Moreover, independence of the board of directors has a positive relationship with firm financial performance. Eventually, the frequency of board meeting has no relationship with firm financial performance. It should be noted that the findings established in this study could be useful to regulators, especially the industrial firms listed in Amman Stock Exchange (ASE), Jordanian Securities Commission (JSC) and Jordan Investment Commission (JIC) to improve Corporate Governance (CG) practices. This study proposes that listed firm should put more emphasis on enhancing the role and the quality of the board of directors, as they are involved in the decisions that improve firm financial performance.

**KEY WORDS:** Corporate Governance, Board of Director's, Firm Financial Performance.

## ABSTRAK

Tujuan kajian ini adalah untuk menguji secara empirikal perhubungan di antara bilangan lembaga pengarah, dualiti ketua pegawai eksekutif, kebebasan lembaga pengarah, kekerapan mesyuarat lembaga dan prestasi kewangan syarikat. Sebanyak 64 syarikat industry tersenarai dipilih dari Bursa Saham Amman bagi tahun 2013. Multiple regression analisis di gunakan di dalam kajian ini untuk mencapai objektif kajian. Hasil kajian menunjukkan bilangan lembaga, duality ketua pegawai eksekutif, kebebasan lembaga pengarah mempunyai hubungan dengan prestasi kewangan syarikat. Hasil kajian juga menunjukkan bilangan lembaga mempunyai hubungan positif dengan prestasi kewangan syarikat dan dualiti ketua pegawai eksekutif mempunyai hubungan negatif dengan prestasi kewangan syarikat. Tambahan pula, kebebasan lembaga lembaga pengarah mempunyai hubungan positif dengan prestasi kewangan syarikat. Manakala, kekerapan mesyuarat pengarah tidak mempunyai hubungan dengan prestasi kewangan syarikat. Hasil dapatan kajian ini adalah berguna kepada pihak pengubal undang-undang, terutamanya syarikat yang tersenarai di Bursa Saham Amman, Suruhanjaya Sekuriti Jordan, Suruhanjaya pelaburan Jordan untuk menambah baik pentadbiran korporat. kajian ini mencadangkan penekanan perlu diberi kepada peranan dan kualiti lembaga pengarah kerana mereka adalah pihak yang terlibat dalam membuat keputusan bagi meningkatkan prestasi kewangan Syarikat.

**KATA KUNCI:** Pentadbiran Korporat, Lembaga Pengarah, Prestasi Kewangan Syarikat

## ACKNOWLEDGMENT

In the name of ALLAH, the most gracious, the most merciful. Praise be to ALLAH, the creator and custodian of the universe. Salawat and Salam to our **Prophet Muhammad**, peace and blessings of **ALLAH** be upon him and to his family members, companions and followers.

First and foremost, I would like to express my heartfelt thanks and gratitude to Allah S.W.T for His blessing and allowing me to complete this thesis. In completing this thesis, I would like to acknowledge the intellectual sharing of many great individuals.

My foremost gratitude goes to my supervisor, **Associate Professor Dr. Syed Soffian Bin Syed Ismail**, for his professional guidance and devoting his expertise and precious times to guide me to reach this level. To his, I owe an intellectual debt and a deep gratitude for sharing his knowledge. I will always remember his with deep appreciation. To my Mom, **Associate Professor Dr. Faudziah Hanim bt Fadzil** who shared with me her great knowledge and offered a great deal of guidance and advice which enabled me to complete my thesis. Her constant encouragement and patience undoubtedly contributed to the speedy progress of the study.

I would like to convey my gratitude to my family. This thesis could not have been performed without whole-hearted support from them. My father **Abdallah Mohammad Qadorah** to my beloved mother **Nawal Mohammad Al-fadel** to my uncle **Yusef Qadorah** for their fullest support, encouragement, sacrifices. Thank you very much for your constant prayers. They are my finest goal, source of energy, and the motivation of my life. This thesis is dedicated to them. May Allah bless and reward them all in this world and the hereafter. Thanks also go to my brothers (**Ma'an Qadorah, Bakor Qadorah, Anas Qadorah & Mohammad Diabat**), sisters (**kholod & Wa'ad**) for their support and prayers.

NASR QADORAH



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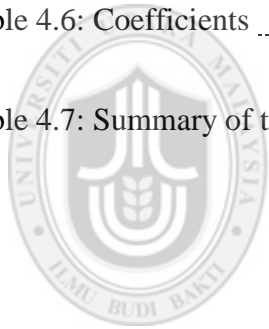
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## CHAPTER ONE

### INTRODUCTION

#### 1.0 Background of The Study

In the current global business environment, business organisations increase their continued struggle to achieve a high record of growth so as to attract investors who will be willing to finance the future investment projects of their corporations. In today's competitive business environment stability and profitability are key factors influencing the decision to invest in corporations (Mallin, 2007). This justifies the inability of deteriorating businesses to raise funds for their investment projects. This situation can affect not only the specific business organisations but also the overall economic performance. To ensure safeguarding and protecting the corporate business environment, governments throughout the world have been enhancing effort for the implementation of corporate governance mechanisms. According to the Organization for Economic Cooperation and Development (OECD, 2004), "good corporate governance is essential for the economic growth led by the private sector and for the promotion of the social welfare".

In fact, many theorists have explored and tested in investigating the link that connects corporate governance and the overall organisational performance. Given that, corporate is a vital issue to the overall organizational performance; it is considered as one of the major variables that may influence the economic growth and expansion. An example of the study that examined the link between corporate governance and firm's performance is the work carried out by Brown and Caylor (2004) that confirmed the positive link between factors such as the composition and characteristics of the board's members. The main role of the board's members is to foresee the anticipated performance of the firm

and formulate the long-term strategic plans that enhance the overall firm performance towards achieving its objectives.

To ensure a good projection and governance of the future direction of a firm, Chief Executive Officers (CEOs) together with members of the board of director's emphasizes more on the corporate governance mechanisms. Generally, corporate governance has been considered as an important set of procedures employed by the CEO and the members of the board of directors that watch the practices being carried out within a firm to ensure effective decision-making that will direct the firm to achieve its goals for the maximization of the shareholders' benefits. Hence, efficient and effect governance of the corporation is essential for the protection of the interest of various stakeholder such as shareholders, employees, customers, suppliers, as well as ensuring the government's effectiveness in assuring the accountability of firms (Vinten, 1998).

For the purpose of measuring the corporate governance, both internal and external measures are used. Internal measures of corporate governance comprised of members of the board of directors, individual holding bulk of shares and institutional shareholders. It also covers debt and dividend policies, compensation packages for executives and insider ownership (Farinha, 2003). On the other hand, the external measures are mainly referred to as mutual monitoring by managers, the legal environment takeover threats, managerial labor market, product market competition, security analysts and the role of reputation (Farinha, 2003).

It is said that, companies employing effective governance measures are less likely to fall into conflicts that need the intervention of the legal system. In this regard, Klapper and Love (2004) concluded that even though the legal system in which the company operates is not attractive to customers, companies can still provide investors with the needed protection. This in turn can attract the investors and enhance the company's value and



position. In a similar flow of research, Claessens (2003) reviewed the relevant literature in the field of corporate governance and identified two ways through which the corporate governance mechanisms can affect firm's financial performance. First, it can broaden the access to financial resources that enhance company's profitability and growth through new project investments. Second, it can help the company to minimise the cost of capital and enhance the overall company value.

### **1.1 Problem Statement**

Both academicians and practitioners have acknowledged the relevance of corporate governance particularly regarding the performance of companies in the developed countries. The attention given to corporate governance was due to the severe impacts of the financial crisis that occurred in the different regions of the world due to foreign investors' retraction from some countries causing their collapse. The financial crisis in East Asian countries and the Latin America's meltdown occurred of 1997 were clear examples that could have been avoided if these countries were excellent in implementing corporate governance mechanisms.

In fact, investors worldwide lost their confidence in investment opportunities especially after the drastic collapse of well-known global corporations such as Enron crisis in the U.S. in 2001 and the WorldCom in 2002. These crises were said to occur due to the absence of effective and efficient corporate governance systems (Becht, Marco & Patrick, 2002). The case of Sunbeam in the U.S. in 2001 is another example of inefficient corporate governance mechanism and its disastrous effect on overall corporate performance. In the case of Enron, the former Executive Director of the company was accused of illegal activities with the involvement of Arthur Anderson which caused the

company to incur civil penalties that swept away the confidence of investors and other stakeholders in the corporate financial system (Rice & Alabama, 2006).

It was stated by Ahmed (2010) that most Arab studies were concentrated on local and regional on the investigation of the current corporate governance mechanisms and only discuss the governance structure of corporate system design of companies. However, few researchers have conducted that addressed the impact of corporate governance mechanisms on financial reporting, thus it was stressed that thorough studies regarding the mechanisms that affect firm financial performance should be conducted. Therefore, the Jordanian government issued the Corporate Governance Code in 2009 by Amman Stock Exchange (ASE), and Jordanian companies have to comply to the requirements of the governance code since 2009 (Alkhatib & Al Bzour, 2011). However, the World Bank (2004) and the International Monetary Fund (IMF) had evaluated the status of corporate governance in Jordan. They concluded that the corporate governance of Jordanian companies remains at a relatively late stage. This can be attributed to the performance of the board of directors' work and the weak independency of their members (Abdullatif & Al-Khadash, 2010; Ajeela & Hamdan, 2011; Bawaneh, 2011).

On the other hand, Abed, Al-Badainah & Serdaneh (2012) showed that there is a weakness in the monitoring function of the board of directors among Jordanian firms. They attributed the result to the existence of more than 14 members of the board and existence the duality between CEO/Chairman roles. These results are contrary to the Corporate Governance Code (2009) issued by ASE, which recommended that the members of the board should not exceed 13 members, and separating roles between CEO/chairman. These results refer that the Jordanian companies fail to comply with the rules within the Code of Corporate Governance issued by Amman Stock Exchange, which indicates that there are quite low penalties in the case of violation of regulation (Abed et al., 2012). Interestingly, the shareholders and investors in Jordan has faced too many

business risks, particularly because of poor corporate governance structures, weak control systems and non-existent or unclear corporate strategies and objectives (Abdullatif & Al-Khadash, 2010).

Furthermore, it has also been evidenced that capitalistic governments' lack of confidence in the corporation often times results in crisis. Hence, although the board of directors possesses the power to scrutinise issues, it is still imperative for shareholders to oversee the decisions of the BODs. However, many instances remain impractical for the fact that decisions are often carried out in privacy. Eventually, the shareholders lose their power of control over the Board of Directors (BODs). Thus, the BODs carry out their tasks for their own advantage.

Generally, the main aim of this study is to offer more empirical evidence into the relationship between board of director's size, CEO duality, the board of director's independence and board of director's meeting as independent variables, and a firm performance in Jordan which is the dependent variable. Hence, the study's research questions as well as the research objectives are enumerated as follows:

## **1.2 Research Questions**

1. What is the relationship between board of director's size and industrial firm financial performance of listed companies in Amman Stock Exchange?
2. What is the relationship between CEO duality and industrial firm financial performance of listed companies in Amman Stock Exchange?
3. What is the relationship between independence of the board of director's and industrial firm financial performance of listed companies in Amman Stock Exchange?
4. What is the relationship between frequency of board meetings and industrial firm financial performance of listed companies in Amman Stock Exchange?

### **1.3 Research Objectives**

The general objective of this present research is to investigate if board characteristics have any effect on firm financial performance. The specific objectives of this research are set to answer the four research questions with the scope of sample limited to industrial firms listed at ASE in 2013. The aim is to establish whether the board characteristics (board size, CEO duality, independence of the board of director's and frequency of board meetings) have positive, negative or no relationships with firm financial performance.

The objectives are to:

1. Investigate the relationship between board of director's size and industrial firm financial performance of listed companies in Amman Stock Exchange.
2. Investigate the relationship between CEO duality and industrial firm financial performance of listed companies in Amman Stock Exchange.
3. Investigate the relationship between independence of the board of director's and industrial firm financial performance of listed companies in Amman Stock Exchange.
4. Investigate the relationship between frequency of board meetings and industrial firm financial performance of listed companies in Amman Stock Exchange.

### **1.4 Significance of The Study**

This study has both theoretical and practical significance. From the perspective of theory, the findings of this study offer more empirical insights in the domain of agency theory, more especially on the effect of the board of director's characteristic on firm financial performance. Quite a lot of studies have been conducted in the developed countries (Gompers, Ishii & Metrick, 2003; Kang & Zardkoohi, 2005; Klapper & Love, 2004) and developing countries (Ahmadu, Aminu & Taker, 2005; Limpaphayom & Comelly, 2006) which investigated the influence of corporate governance mechanisms and corporate

financial performance. However, there is still empirical evidence lacking from number of countries on the effect of corporate governance and companies' financial performance. From the practical perspective to the best of the researcher's knowledge, empirical literature is still lacking which examine the relationship between corporate governance mechanisms (i.e., the board of directors' characteristics) and firm financial performance among listed companies in Amman Stock Exchange. Moreover, this study is conducted under the Jordanian business environment, which is to some great extent is different from other studies conducted in other business settings. So, the practical contribution offered by the findings of this study is great benefits for many stakeholders including regulators, investors, companies and even employers.

### **1.5 Scope of The Study**

Three aspects are vital in the discussion of a scope of study. These are duration, variables, and samples. In this current study, a cross-sectional data for the year 2013 was used, which is the latest available data that was showing in the ASE. For independent variables this study only covers the board of director characteristics (board size, CEO duality, independence of the board of director's and frequency of board meetings) while the dependent variable is firm financial performance. It's measured by Return on Asset (ROA). The study used regression analysis to determine the overall efficiency scores derived from the pooled sample consisted of 64 industrial sector firms from the listed firms in Amman Stock Exchange (ASE) in the Kingdom of Jordan for the year 2013.

## **1.6 Definition of Terms**

### **1.6.1 Firm Financial Performance**

The firm performance of this study is derived by Return on Asset (ROA) that is earnings before tax divided by total assets of the company (Ali & Nasir, 2014).

### **1.6.2 Corporate Governance Mechanisms**

#### **1.6.2.1 Board of Director's Size**

Board size is the number of executive and non-executive directors on company's board (Khan, Nemati & Iftikhar, 2011).

#### **1.6.2.2 CEO Duality**

It is where the Chief Executive Officer (CEO) and the chairman of the firm is the same person (Khan et al. 2011).

#### **1.6.2.3 Independence of The Board of Director's**

It is defined as the number of independent non-executive members positioned in the board relative to the total number of members (Liang, Xu, & Jirapom, 2013).

#### **1.6.2.4 Frequency of Board Meeting**

The board meeting represents the number of meetings the board has during a year (Sahu & Manna, 2013).

### **1.6.3 Agency Theory**

Agency theory has been defined as “a contract under which one or more persons (the principal[s]) engage another person (the agent) to perform some service on their behalf, which involves delegating some decision-making authority to the agent” (Jensen & Meckling, 1976).

### **1.7 Organisation of The Study**

This study is organized into five chapters. The first chapter contains the background of the study, problem statement, research questions, and research objectives, significance of study, scope of study, definition of terms and organization of the remaining chapters.

The next chapter, chapter two, contains the literature review and prior research that are related to this study. The review presented in this chapter includes the overview of firm financial performance, corporate governance (board characteristics) and firm financial performance, and finally the summary of the chapter.

Furthermore, the third chapter describes the research methodology, research framework, hypotheses development, research design, data collection, operational definition and measurement of the variables, and method of data analysis.

The fourth chapter deals with analysis; the chapter provides the reader with data analysis, which includes descriptive statistics, correlation analysis, multiple regressions, multiple linear regression analysis, discussions of the results and finally, the last section discusses the summary of the chapter.

Chapter five discusses the overall findings and concludes the research. The chapter presents the summary of the study, implication, limitation and recommendation for future research.

## CHAPTER TWO

### LITERATURE REVIEW

#### 2.0 Introduction

This chapter presents a review of the previous study related to this topic under study. It provides the understanding of research works undertaken by previous researchers. This chapter also reviews the studies on firm financial performance and corporate governance mechanism that have been conducted previously.

#### 2.1 Firm Financial Performance

Iswatia and Anshoria (2007) defined firm financial performance as the functional ability of the corporation to obtain and manage different forms of resources in different ways so as to gain a competitive advantage over other corporations. Firm's financial performance has been categorised into three classes by Thomas (2007); these are firm effectiveness, firm financial performance, and firm operational performance. With respect to firm financial performance, Duncan and Elliott (2004) argue that two ways exist through which firms can improve their financial performance. These can be either by improving their operational efficiency or through improved service delivery to their customers. In another study, Haniffa and Hudaib (2006) argue that corporate performance is seemingly reflected manners and procedures through which the firms are managed as well as the effectiveness of the governance structure of the firms. Similarly, Abdullah (2004) argues that the firm's value is anticipated to rise and shareholder wealth will also be optimised, if the board performs its duties effectively. In addition, Beiner, Drobetz, Schmid and Zimmermann (2004) argue that the financial performance of firms is a reflection of both



the action taken by the outgoing directors and other factors that influence the selection of the incoming directors.

Many methods of measuring financial performance exist in the literature. The well-known methods include profitability level, return on equity (ROE), Return on Investment (ROI), Return on Assets (ROA), Earning after Taxes (EAT), Economic Value Added (EVA), Residual Income (RI) among others. Several of the aforementioned measures have been applied to measure financial performance in governance studies. For instance, Bhagat and Black (2001) employed Tobin's Q, market-adjusted stock price returns, ratio of sales to assets and ROA to measure firm's financial performance. Similarly, Ahmadu et al. (2005) applied Tobin Q, ROE and ROA in measuring the financial performance of firms. Moreover, Limpaphayom and Connelly (2006) use ROA and ROI. Mustafa (2006) use ROA, MBV and the Tobin's Q, while Krivogorsky (2006) employed market -to- book value, ROA and ROE, whereas Lefort and Urzua (2008) adopted ROA, market -to- book value and Tobin's Q to measures firm financial performance.

The relationship between firm financial performance and governance variables were assessed by using Tobin's q. It had been used as a measure of performance by most US studies. It was defined by Jackling and Johl (2009) as the market value of common stocks and book value of total debt divided by the book value of total assets. The result for their study showed positive and marginally significant relationship between the percentages of outside directors and board size to the Tobin's q. Rashid, Fairuz and Husein (2010) studied also used Tobin's q as their measures of firm performance. They defined Tobin's q as the sum of market value of common equity and total debt, divided with total assets. They found a positive correlation between outside independent directors and Tobin's q. In this study, firm's financial performance is the dependent variable which is defined as financial performance indicators which in this study are ROA. Following the assertion of Haniffa and Hudaib (2006), when a company has a higher ROA, this indicator that such

firm is highly effective in using its assets for the economic benefits of the shareholders. ROA is used as an important indicator of measuring firms' profitability. It compares firm's profitability with a benchmark, which is the ratio of the rate of return to the risk-adjusted weighted average cost of capital. It is also considered by researchers as a measure of firms operating and financial performance (Klapper & Love, 2004). ROA is also a measure of overall efficiency by assessing the extent to which firm's assets are used in producing net income from business activities (Miller, Boehlje & Dobbins, 2001). Moreover, Miller et al. (2001) further argued that ROA is an indicator management's effectiveness in deploying capital. The reality is that there is difference in asset and capital efficiency. Asset can be efficiently managed but capital can be poorly utilized in acquiring the assets.

The link between corporate governance and firm's financial performance has been highlighted in the literature. Specifically, Khan et al. (2011) highlighted the strong and positive influence of corporate governance mechanisms including the concentration of ownership, the duality of CEO and the independence of board on firm's performance. The results and the findings are considered as the empirical evidence to highlight and support the relationship between independent variables and dependent variable. Furthermore, the results support the current study in many perspectives.

Finally, ROA has been used as a measure of firm's financial performance in corporate governance studies including Ahmadu et al. (2005), Bebczuk (2005), Krivogorsky (2006) Lefort and Urzua (2008) and Limpaphayom and Connelly (2006).

## **2.2 Corporate Governance**

Board of directors is one of the important elements used in internal mechanisms of corporate governance. According to Lefort and Urzua (2008), the board of directors is the

main organ in the internal governance mechanisms of a corporation. It offers supervisory and controlling roles for solving agency problem mostly experienced in the management of corporations (Hermalin & Weisbach, 2003). It was argued by Fama and Jensen (1983) that through exercising the power bestowed on the board of directors for controlling and monitoring the management, the board can minimise the inherent agency conflict. This is due to the perception that managers may put their interest above that of the shareholders. Thus, the need for monitoring functions by the board of directors (Limpaphayom & Connelly, 2006). In addition, being a corporate governance mechanism, the board of directors will have a vital role to ensure that the shareholders obtain adequate returns (Weir, Laing & McKnight, 2002). The fact is that optimisation of shareholder value is one of the board of director's duties (Coles, McWilliams & Sen, 2001).

The effectiveness of the board of directors have a great impact on firms' financial performance. The effectiveness of the board relies on two important aspects which are leadership structure and independence of the board. According to Abdullah (2004) and Fama and Jensen (1983) argued that the leadership structure and independence of the board are crucial characteristics which indicate its effectiveness. Therefore, in line with the above arguments the board characteristics covering board of director's size, CEO duality, independence of board of director's and board of director's meeting are discussing in the following sections.

### **2.2.1 BOD Size and Firm Financial Performance**

The size of the BOD is measured using the number of directors which is a crucial indicator of its effectiveness. Increase in the size of the BOD will likely enhance to BOD's effectiveness in offering adequate support in reducing agency cost that results from inefficient management of the firm which will eventually improve the financial results of the firm (Jensen & Meckling, 1976). Kyereboah-Coleman and Biekpe (2005) argued that

the larger the BOD size increases firm's performance. The possible explanation of this could be that the BOD may compose of members with are more expert and capable in supporting to undertake vital decisions, and will be harder for a powerful CEO to dominate the decisions of the BOD. The outcome could be improving governance, more especially in improving efficiency in firm's management and enhancing its financial performance. The argument has been made by Dalton and Dalton (2005) that apart from getting networking opportunities and access to business resources, larger boards could benefit the company through advice and counsel. The diversity of the BOD can also be ensured through the enlargement of the BOD's so that the BOD can be composed of varieties of members with experience, skill sets, gender, and race.

Contrarily, it was argued by Jensen (1993) that BOD's with larger composition will likely be ineffective due to the possibility that it will be difficult for CEO to control the activities of the BOD. He further argued that if the BOD gets too big, the difficulty in coordinating it activities will increase and this might cause problems. The smaller BOD's is that reduces the possible occurrence of free riding by individual directors and increases their decision-making participation. Thus, De Andres, Azofra & Lopez (2005) opined that the benefits could possibly drive from better management control by the larger board this can be offset by the impending problems relating coordination, communication, and decision-making. The argument of De Andres et al. (2005) was further sustained by Hermalin and Weisbach (2003) who stressed that smaller board size leads to better firm performance. Gill and Mathur (2011) argue larger size is negatively related to firms' profitability. Abdul Rahman and Haneem Mohamed Ali (2006) considered the degree of BOD efficiency in supervising the function of the board of directors and reducing firm financial performance. The result showed the positive influence of firm financial performance on board size. They further suggest higher boards are inefficient in supervising duties than lesser boards. Conyon (2014) suggesting an inverse relationship. Cheng and Courtenay

(2006) suggest firm with larger board size have a lower variability of corporate value, and as such board sizes are negatively related to firm financial performance. Contrarily, Lin (2007) argues that a company with a high degree of diversification and debt leverage is positively related to board size. Thus, inconsistent findings have been documented in the effect of board size on firm financial performance measures of firms.

### **2.2.2 CEO Duality and Firm Financial Performance**

Separation of the CEO and Chairman of the board's duties offers a separate leadership structure. According to Yusoff and Alhaji (2012), a CEO will be more powerful in optimising his benefit at the expense of the shareholders if the CEO and the chairman of the board is one and the same person than the likelihood of other people to control his own power is more apparent. The separation of leadership composition is preferred in order to control the CEO impartially and efficiently. Nonetheless, the point when the same individual stands the twofold "control" of a Chairman of the board and CEO, such that the mastery of the board is generally proclaimed, the chairman is more inclined with the management interest than the shareholders (Mak & Li, 2001).

In their work, Kyereboah-Coleman and Biekpe (2005) investigate the influence of CEO duality and basic measures of performance covering ROA, Tobin's Q and Growth in sales of companies listed on Ghana Stock Exchange. Their finding revealed that the separation of the chairman and CEO positions reduces the anticipated the tension between managers and board members, thereby having a positive impact on the performance of non-financial firms in Ghana.

In his study, Imhoff (2003) contends that the governance of a board is greatly compromised if incumbent CEO also serve as chairman of the board. The implication from this is that it is the same person that will frequently set the agenda for the board and still control the issues brought during the meetings of the board. Additionally, where

CEO serve as chairman of the board, she/he may influence nomination and appointment of candidates for board seats, which eventually, increase the possibility that new board appointees to be dependent on management despite that they are “outsiders”, hence lacking independence of the board. Furthermore, one of the important roles of the board is to decide who will be appointed as CEO. Hence, if there is a duality of the role of CEO and chairman, the board will not make an effective decision in replacing poorly performing managers. This is for the fact that the poor performance of those managers may be linked to their connivance with the CEO.

### **2.2.3 Independence of BOD's and Firm Financial Performance**

Board independence or the degree to board members is dependent on the firm is seen as a primary incentive that is a key to board monitoring. Christopher (2005) suggests that independent of the board of directors is an added value to a firm as it increase the responsibility, provide judgment of self-governance, increase business network connections between the board and executive, and moderating the power of the CEO and chairman of the board which in many companies is an adequately powerful. Thus, when the non-executive or outside directors are independent from the management, there could be the possibility of providing superior benefits to the firm financial performance.

On the other hand, a negative effect of high BOD independence on firm value was found by Erickson, Park, Reising and Shin (2005). Primarily, their work was conducted on the investigation into the influence of board composition of firm value with the integration of significant ownership concentration among listed Canadian firms covering the period of 1993 to 1997. It was revealed by their study that firms that increase the proportion of outside in the following year's director performed poorly compared to others. Thus, the suggestion has been made that inclusion of outside directors who are officers in financial institutions will likely increase the value of firms.

Board independence is the level to which board members do not depend on the CEO/Management owing to its composition. External board members are not involved in the daily firm operations, but they are more likely to cogitate more independent when it comes to the financial performance of the firm. Moreover, their experiences assist in generating novel perspectives and ideas regarding earning performance (Swamy, 2011). Sharing the same thought, the principal role of non-executive directors is to protect shareholders' interests when the company makes decisions (Fernandes, 2008).

The agency theory is based upon the notion that an inherent conflict exists between the interests of the firm's owner and its manager (Fama & Jensen, 1983). With regards to corporate governance, the agency theory indicates that sufficient monitoring mechanisms should be laid down to safeguard shareholders from management's selfish behaviors. Thus, the majority of external directors on the board are considered to have a positive effect on firm financial performance (Fama & Jensen, 1983; Jensen & Meckling, 1976). Few researches (Chin, Vos & Casey, 2004; Fosberg, 1989; Klein, Shapiro & Young, 2005) do not show any relationship between the presence of non-executive directors on the board and firm performance. However, there are also a number of researches that do not show any improvement in the performance due to outside directors of the board, for instance, (Bhagat & Black, 2001; De Andres et al. 2005) found no significant relationship between the composition of the board and the value of the firm. Bhagat and Black (2001) also provided evidence that low-profitability firms respond to their business troubles by following conventional wisdom and increasing the proportion of independent directors on their board.

#### **2.2.4 Frequency of Board Meeting and Firm Financial Performance**

Due to the importance of board effectiveness on firm performance, numerous studies were carried out in various settings in developed as well as developing countries with regards to this relationship. Finding from developed countries confirmed that the relationship between BOD meetings and firm performance was positive (Gavrea & Stegorean, 2012; Khanchel, 2007; Liang et al., 2013; Lin & Hu, 2002). Likewise, in the developing countries studies such as Sahu and Manna (2013), Khan and Javid (2011), Kang and Kim (2011), Hsu and Petchsakulwong (2010) and Kamardin (2009) also confirmed such positive relationship. Contrarily, some studies such as Garcia-Sanchez (2010) and Wu, Wang & Yin (2007) revealed the negative influence of the board meeting on firm performance in developed countries. Such negative influence was also discovered in developing countries (Danoshana & Ravivathani, 2014; Kamardin, 2009; Noor, 2011). Nevertheless, some studies document the insignificant relationship between board meetings and performance of firms (Gavrea & Stegorean, 2012; Kyereboah-Coleman, 2007; Noor, 2011).

#### **2.3 Underlying Theory**

The present study employs agency theory to underpin the examination into the influence of corporate governance on the performance of firms listed in Amman Stock Exchange in Jordan. The theory explains that agency problem exists in the governance of corporation on asymmetric and incomplete information. Another issue that can be explained by the theory is a relationship that subsists between employers and employees, where shareholders as employers recruit senior executives for managing their companies,



thus, different mechanisms can be used to reconcile the agent's interests with that of the principal.

### **2.3.1 Agency Theory**

Addressing the contractual link between the agent (BOD firm) and the principals (shareholders of the firm) is what agency theory covered. In a typical agency relationship, the principals who are often the shareholders will delegate their responsibilities to an agent who are mostly the managers to manage their businesses. It has been highlighted by the theory that in a situation where both of the parties intend to maximise their benefits from the business, there is a high possibility that the agent (BOD) may engage in self-benefit attitude at the detriment of the principals (shareholders) (Jensen & Meckling, 1976).

The main assumption of agency theory is that individuals maximise their own utilities. In addition, this conflict arises from the possibility that the directors are maximising their wealth, whereas shareholders tend to maximise their own profits (Reis & Stocken, 2007).

Conflicts could also occur among the company and auditors (Goldman & Barlev, 1974).

Abdullah and Valentine (2009) showed that agency theory can be used to explore the relationships among the management structure and ownership. However, separation can be applied to the agency model in aligning the objectives of the management with that of the owners of the firms.

The role of corporate governance in agency theory is to guarantee the quality of financial information (Cohen, Krishnamoorthy & Wright, 2004). For example, Bonazzi and Islam (2007) showed that the board controlling the CEO will improve and enhance the performance of the CEO and avoid possible conflict between the interests of the two parties. Bushmana and Smith (2001) found a relationship between corporate governance mechanisms and quality of accounting information. In this context, Bhat (2008) found

that corporate governance affects the quality of estimates of assets and liabilities by many ways. For instance, it limits the measurement bias by ensuring that directors follow the good disclosure policy. Ben-Nasr, Boubakri & Cosset (2009) also showed that institutional ownership is related with active controlling of management performance. On the other hand, Firth, Fung & Rui (2007) found that foreign shareholders placed pressure on firms to enhance the financial reporting quality.

#### **2.4 Summarise of Literature Review**

Table 2.1 presents a brief summarized overview of prominent studies examining the relationship between GOD's characteristics and firm financial performance.



**Table 2.1**  
**Summary of Some Previous Studies**

No	Author & year	Independent variable	Dependent variable	Sample	Theory	Finding
1	Haniffa & Hudaib (2006)	Board size, board composition, board leadership or role duality, multiple directorships, top five shareholders, managerial shareholdings	Firm performance	347 companies listed on the Kuala Lumpur Stock Exchange between 1996 and 2000	Agency theory	They found board size and top five substantial shareholdings to be significantly associated with both market and accounting performance measures.
2	Abdullah (2004)	Board independence and CEO Duality	Firm performance	All companies listed on the Main Board of the Kuala Lumpur Stock Exchange for the period between 1994 and 1996	Agency theory	It was suggested by the findings that neither leadership structure and board independence, nor their effect jointly influences firm performance. It was also understood from the findings that boards of Malaysian listed companies are continued to be dominated nonexecutive directors, with many companies abandoning the practice dual leadership structures.
3	Kyereboah-Coleman & Biekpe (2005)	board size, board composition and CEO duality	Firm performance	16 listed non-financial firms on the Ghana Stock Exchange for the period from 1990 to 2001	Agency theory	It was revealed by the study that the size of the board of the companies in their sample is positively related the performance of the companies as measured using ROA and the Tobin's Q. But the negative relationship was established with sales growth rate. Furthermore, it was also discovered that the composition of the board and the duality of CEO have a negative effect on firms' performance among the Ghanaian listed companies.

4	Conyon (2014)	board control and remuneration committees	Firm performance	94 companies from the U.K. Financial Times top 100 companies between 1991 and 1994	Agency theory	Findings revealed the alignment of companies having more outside non-executive director with the influence of top management pay and corporate performance.
5	Erickson et al. (2005)	board composition and firm value	Firm performance	66 firms using the twelve Toronto Stock Exchange industry classifications from 1993 to 1997	Agency theory	It was found that even when board independence is greater it is not possible to have increased firm value. In fact, poorly performing firms were found to have increased the size of their board using outside directors in succeeding periods.
6	Liang et al. (2013)	board meeting, independent directors, board size, and bank boards' political connection	Firm performance	50 largest banks in China covering the period of 2003–2010	Agency theory	It was found that frequency of board meetings and a number of independent directors have a significant and positive influence on both bank performance and asset quality. Contrarily, it was also discovered that size of the board has a significant but negative relationship with the performance of banks in China. It was further found new evidence that the extent of boards' political connection is negatively correlated performance of the banks and its quality of the asset.
7	Sahu & Manna (2013)	Size of the Board, proportion of executive directors, Independence of the boards and Chairman's Identity	Firm performance		Agency theory	It was suggested from the findings that board's size and meetings are positively related to corporate performance, but its independence and presence of non-executive chairman in it could have negative impact corporate performance.

8	Khan, Nemati & Iftikhar (2011)	Ownership concentration, CEO duality, and Board's Independence	Firm performance	Data from three listed firms in Pakistan Tobacco industry covering Khyber Tobacco, Lakson Tobacco, and Pakistan Tobacco for the period of 2004-2008	Agency theory	Finding showed a positive and strong influence of corporate governance mechanisms performance of firms.
9	Azofra & Lopez (2005)	Board size and board composition	Firm performance	Non-financial Companies listed in USA 450, from ten Western Europe and North America.	Agency theory	Two major findings were documented. First, a negative effect of board size on firm, and second an insignificant effect of board composition of the on firms' performance.
10	Krivogorsky (2006)	Board composition ownership concentration	Firm performance	87 listed companies from 9 countries in Europe (foreign U. S. registrants)	Agency theory	A significant positive relationship was found between the level of relational investor's ownership, the number of independent directors on the board and firms' performance ratios. However, no significant relationship was discovered between the portion of inside directors and profitability in the sampled European companies.
11	Mustafa (2006)	Board size, CEO duality and Large shareholder	Firm performance	Sample 85 non-financial listed firms in Egypt	Agency theory	Findings were made on the significant positive influence of large shareholdings on companies' financial performance. But negative and significant influence size of the board and duality of CEO on financial performance.

12	Ahmadu et al. (2005)	Board size, CEO duality, Outside directors, and Ownership concentration	Firm performance	A sample of 93 listed companies in Nigerian stock exchange	Agency theory	The results revealed a significant positive relationship between large shareholdings and on financial performance. But a negative relationship between CEO duality and financial performance.
13	Lefort & Urzua (2008)	Board composition	Firm performance	A sample of 160 companies in Chile, using a four-year panel data.	Agency theory	The major finding was that only the number of outside directors is positively correlated firm's financial performance measured using Tobin's Q.
14	Limpaphayom & Connelly (2006)	Board size and board composition	Firm performance	A sample of 24 life insurance firms in Thailand,	Agency theory	It was found that the board composition was positively related with firm's profitability. But a negative relationship was found for risk-taking behavior, and insignificant effect of board size on firm performance was also discovered.

## 2.5 Chapter Summary

From the prior literature that has examined the relationship between board characteristics and firm's financial performance, it can be concluded that there is a lack of uniformity in the findings made by researchers about the trend of the relationship between BOD size, CEO duality, independence of the BOD and BOD meeting and firm financial performance. Some characteristics of the board indicate a positive relationship with performance, but quite a number of studies resulted in negative relationships. Considering that empirical evidences are lacking in Jordanian context especially relating to the firms in industrial sector listed in Amman Stock Exchange, this study will examine the relationship between BOD size, CEO duality, independence of the BOD and BOD meeting and firm financial performance in the new environment. The following chapter discusses the research framework and methodology of the study.



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## CHAPTER THREE

### RESEARCH FRAMEWORK AND METHODOLOGY

#### 3.0 Introduction

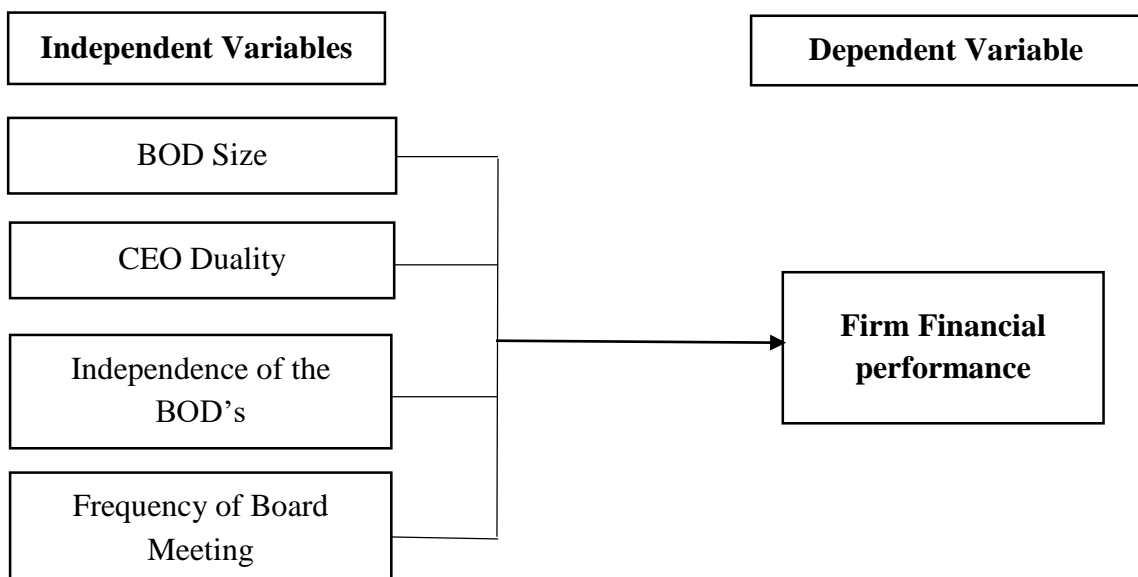
This methodology is divided into three sections. The first section presents a theoretical framework to examine the relationship between BOD's characteristics (i.e. BOD Size, CEO duality, independence of the BOD's and frequency of board meeting) and firm financial performance. In section two, the hypotheses were developed. Lastly, in the third section, the main research methodology was discussed.

#### 3.1 Theoretical Framework

The framework shown in Figure 3.1 below explains the association among the independent variables and the dependent variable, based on what have been mentioned in Chapter Two. This study was undertaken to investigate the relationship of BOD's characteristics (BOD Size, CEO duality, independence of the BOD's and frequency of board meeting) on firm's financial performance.

**Figure 3.1**

#### Research Framework





## **3.2 Hypothesis Development**

A hypothesis is a report of the relationship between two or more variables, which are always in the form of the sentence serves as a guide for the investigation in the entire process of the research endeavor (Rudestam & Newton, 2014). In this section, four main hypotheses were developed for testing the relationships between BOD's characteristics (i.e. BOD Size, CEO duality, independence of the BOD and frequency of board meeting) and firm financial performance among firms listed in Amman Stock Exchange. These relationships are explained below:

### **3.2.1 BOD Size and Firm Financial Performance**

It was commonly argued in the literature that BOD size influences the ability of directors to monitor the top management with larger boards often believed to have high monitoring ability than smaller board (Abdullah, 2004). Notwithstanding this fact, Jensen (1993) who opined that board may become less efficient as its members become above 7 or 8. Empirically, mixed findings were documented in the literature on the influence of board size on the financial performance of firms.

The studies by Dalton and Dalton (2005) and Yasser, Entebang & Mansor (2011) reported a significant positive relationship between BOD size and firm financial performance. Other studies such as that of Ahmadu et al. (2005), De Andres et al. (2005) and Mustafa (2006) discovered large BOD size is linked to the poorer performance of the firms in their samples. In a study in the Jordanian banks, the boards with many members lead to problems of coordination in decision making. So, there is a significant negative relation between board size and banks performance as measured by ROE and EPS but insignificant negative association of board size with ROA (Al-Manaseer, Al-Hindawi,

Al-Dahiyat & Sartawi, 2012). On the other hand, studies of Beiner et al. (2004), Bhagat and Black (2001) and Limpaphayom and Connelly (2006) documents lack of relationship between BOD size and firm financial performance. Thus, the inconsistent and mixed results existing in literature highlight the need for further investigation especially in a new environment such as Jordan where studies on relationship between BOD size, CEO duality, independence of the BOD's and frequency of board meeting and firm financial performance are lacking.

Therefore, this study responds by examining the relationship between BOD size and firm financial performance as hypothesised bellow:

*H1: There is a positive relationship between BOD size and firm financial performance.*

### **3.2.2 CEO Duality and Firm Financial Performance**

Duality is said to exist when the same person assumes the roles of the CEO and the chairman of the board at the same time (Fama & Jensen, 1983). It was argued by Jensen and Meckling (1976) that a person occupying the two position simultaneously may create strategies for increasing his/her personal gains at the expense of the firms and its shareholders. Similarly, Rechner and Dalton (1991) reported that agency theory suggests the split of the role chairman from that of CEO in order to facilitate more effective and efficient control and monitoring of the CEO. They argued also that firms may underperform if fail to split the two top positions. It assertion was also supported by Jensen (1993) to opined that when positions of the CEO and chairman are separated it may ensure the board's effectiveness, which will eventually improve the firm value (Yermack, 1996). However, the empirical literature on the influence of duality on several measures of firm's performance reported conflicting findings. For instance, in their studies Ahmadu et al. (2005), Feng, Ghosh & Sirmans (2005), Judge, Naoumova &

Koutzevol (2003) and Mustafa (2006) report negative impact of CEO duality and firm financial performance. In contrast, others studies found an insignificant variation of firm's performance with regards to dual and separated CEO/chairman positions (Carapeto, Lasfer & Machera, 2005; Schmid & Zimmermann, 2007; Wan & Ong, 2005). Studies by (Desoky & Mousa, 2012; Makhoulf, Laili & Basah, 2008) found a negative relation between firm performance and CEO dual, they explain that when there is a separation between the chairman and CEOs the performance will be better. Kyereboah-Colemn and Biekpe (2005) reported that separation of the two roles by firms consistently ensures higher accounting returns than when the roles combined. Following the above discussion, this hypothesis is formulated:

*H2: There is a negative relationship between CEO duality and firm financial performance.*

### **3.2.3 Independence of The BOD's and Firm Financial Performance**

Boards normally compose of inside and outside directors. Outside directors otherwise known as non-executive directors are those members of the board who do not act in any form of executive capacity. Jensen and Meckling (1976) asserted that boards composed of outsiders or non-executive directors (NEDs) will likely assist in overcoming agency problems by through ensuring effective control and monitoring of management's opportunistic behaviour. This independence is considered as a crucial feature of the board which determines its effectiveness in control and monitoring of managerial activities (Fama & Jensen, 1983).

The reported findings of previous researchers on the relationship between the independence of directors and firm financial performance are inconsistent. Finding from

Krivogorsky (2006), Lefort and Urzua (2008), Limpaphayom and Comelly (2006) documented a significant positive effect of the proportion of independent directors on the board and firm's financial performance. On the other hand, Erickson et al. (2005) reported a negative but significant effect of strong board independence and firm value. However, insignificant effect portion of an independent director on board on firm's value was reported by Bhagat and Black (2001) and De Andres et al. (2005).

Based on the arguments regarding board independence, this study leads to the following hypothesis:

*H3: There is a positive relationship between independence of the BOD and firm financial performance.*

#### **3.2.4 Frequency of Board Meeting and Firm Financial Performance**

Due to the effect of BOD meetings on firm financial performance was found to be positive in the developed countries (Gavrea & Stegorean, 2012; Khanchel, 2007; Liang et al., 2013; Lin & Hu 2002) and in the developing countries as documented in studies such as Sahu & Manna (2013), Khan and Javid (2011), Kang and Kim (2011), Hsu and Petchsakulwong (2010) and Kamardin (2009).

Firms in still lack experiences in managing and supervising, the expected benefits of frequent meetings outweigh the costs. So, board meeting frequency is positively related to firm performance (Tong, Junarsin & Davidson, 2013). Frequency of board meetings is considered as a measure of monitoring power and effectiveness of board of directors. Boards of directors that have higher number of meetings through the year their performance will be higher (Ntim & Osei, 2013). Where the frequently meetings of board of directors considered one of monitoring procedures that lead to increase firm value (Brick & Chidambaran, 2007).

There isn't any effect of the frequency of board meetings on firm performance (Horváth & Spirollari, 2012). Firms with a higher number of Board meetings exhibit the lowest price to book value because the big number of meetings is an indicator to the lower efficient of the board of directors and maybe are because the weakness in communication matters between board members is available (Vafeas, 1999). Based on the above discussion, the following hypothesis is formulated:

*H4: There is a positive relationship between frequency of board meeting and firm financial performance.*

### **3.3 Research Design**

This section highlights the design of the study. The first section shows the process of collecting the data and the second section discusses the operational definition and variables' measurements. The types of analysis used to analyse the data were also discussed in this section.

#### **3.3.1 Sample**

The Jordanian listed firms are divided into three main sectors. These sectors are financial, industrial and services sector, divided into 107, 64 and 54 firms, respectively (ASE, 2013). Only one sector (industrial firm) is chosen for the purposes of this study. This sector makes up of 64 firm or 28.4% of the Jordanian listed companies that contribute significantly to 22% of Jordanian GDP in 2014 (JIC, 2014). Besides, the industrial sector is suitable to provide better indicators of the relationships between the application of corporate governance and firm financial performance.

### 3.3.2 Data Collection

The population for this study is the Jordanian industrial firms listed at Amman Stock Exchange (ASE), which are divided into 10 sub-sectors that comprised of 64 firms. Secondary data using annual report was utilised for the purpose of the study for the industrial firms listed on ASE for the year 2013.

The selection of 64 firms as a sample in this study is expected to give the clear and comprehensive result. Furthermore, these listed companies would provide information about compliance with the CCG. It is expected that these companies would have good practices of corporate governance as they are required to disclose compliance with CCG in their financial reporting.

Table 3.1 presents the Jordanian industrial firms listed at ASE for the year 2013.

**Table 3.1**

***Industrial sector firms***

No	Industrial sectors	Name of Firms
1	Pharmaceutical and Medical Industries	Dar Al Dawa Development and Investment Arab Center for Pharm & Chemicals Middle East Pharma. & Chmical Ind. & Medical Appliances. The Jordanian Pharmaceutical Manufacturing Hayat Pharmaceutical Industries Co. Philadelphia Pharmaceuticals
2	Chemical Industries	The Industrial Commercial & Agricultural Premier Business And Projects Co.Ltd Jordan Chemical Industries Universal Chemical Industries National Chlorine Industries Jordan Industrial Resources Comprehensive Multiple Project Company The Arab Pesticides & Veterinary Drugs Mfg. Co. Intermediate Petrochemicals Industries Co. Ltd.
3	Paper and Cardboard Industries	Arab Company for Investment Projects Jordan Paper and Cardboard Factories Pearl- Sanitary Paper Converting
4	Printing and Packaging	Al-Ekbal Printing and Packaging

5	Food and Beverages	Jordan Poultry Processing & Marketing Jordan Dairy General Investment Al-Qaria Food & Vegetable Oil Industries Co. P.L.C Universal Modern Industries National Poultry The Arab International Food Factories Nutri Dar Jordan Vegetable Oil Industries First National Vegetable Oil Industries Co. Siniora Food Industries
6	Tobacco and Cigarettes	Al-Eqbal Investment Company Ltd Union Tobacco & Cigarette Industries
7	Mining and Extraction Industries	General Mining Company Plc Arab Aluminium Industry /Aral National Steel Industry Jordan Phosphate Mines The Jordan Cement Factories The Arab Potash Jordan Steel National Aluminium Industrial Investments and Integrated Industries Co. Plc (Holding Co) International Silica Industrial Travertine Company Ltd National Oil and Electricity Production Frpm Oil Shale Company United Iron & Steel Manufacturing Co. P.L.C Jordan Marble Company P.L.C. Sheba Metal Casting Northern Cement Co.
8	Engineering and Construction	The Jordan Pipes Manufacturing Jordan Wood Industries / Jwico Ready Mix Concrte and Construction Supplies Arabian Steel Pipes Manufacturing Al-Quds Ready Mix Assas For Concrete Products Co.Ltd
9	Electrical Industries	National Cable & Wire Manufacturing Middle East Specialized Cables Company/Mesc_Jordan Plc Arab Electrical Industries United Cable Industries
10	Textiles, Leathers and Clothings	Century Investment Group The Jordan Worsted Mills Akary for Industries and Real Estate Investments El-Zay Ready Wear Manufacturing Arab Weavers Union Company P.L.C Jordan Clothing Company P.L.C

### **3.3.3 Data Collection Procedures**

The collection of data was made from annual reports downloaded from the internet; the link for the published annual reports can be accessed at Amman Stock Exchange website.

The study is cross-sectional in nature as it focuses on the year 2013. Data on dependent variable was extracted from the statements of financial position, cash flow, and comprehensive income while data for independent variables were gathered from corporate governance report.

### **3.3.4 Operational Definition and Measurement of the Variables**

#### **3.3.4.1 Firm Financial Performance**

The measurement of financial performance of firms that form the sample of the study was made using return on assets (ROA). ROA has been described as the company's earnings before tax divided by its total assets (Ali & Nasir, 2014).

#### **3.3.4.2 BOD Size**

The measurement of board size was performed using the total number of directors on the board of each of the companies that form the sample of the study. It covers executive directors, outside directors, and non-executive directors as well as the CEO and the Chairman (Sahu & Manna, 2013; Anderson, Mansi & Reeb, 2004; Piot et al., 2007).

#### **3.3.4.3 CEO Duality**

CEO duality implies that the same person acts as the CEO and also the chairman of the BOD. In testing the influence of CEO duality as the independent variable and the dependent variable which is firm financial performance, the CEO duality was measured



using a dummy variable, where “1” is applied when CEO and chairman of Board positions are combined, and “0” if they are separate. A similar measurement was used by Davidson, Goodwin–Stewart & Kent (2005) and Hashim and Devi (2008).

#### **3.3.4.4 Independence of The BOD’s**

Board independence has been considered as extent to which board members are free from been control by the management. In most empirical studies BOD’s independence is measured using the percentage of independent directors on the board (% indep) or a number of independent directors as a proportion of the entire number of the directors on board (Anderson et al., 2004; Piot et al., 2007).

#### **3.3.4.5 Frequency of Board Meeting**

The BOD meeting was measured using the number of meetings held by BOD’s during a year. Similar measurement was used in previous studies such as Danoshana and Ravivathani (2014), Liang et al (2013) and Sahu and Manna (2013).

#### **3.3.5 Data Analysis**

Under this subsection, description of data used in the current study is presented. The analysis of the data was conducted in three stages. First, descriptive statistics was used in describing the data using minimum, maximum, mean and standard deviation. Second, correlation analysis was also conducted to understand the direction of correlation between dependent and independent variables. Lastly, Linear Regression Analysis was conducted for testing the hypotheses of the study. All the aforementioned three stages are hereunder explained.

### **3.3.5.1 Descriptive Statistics**

This is the initial analysis used in describing the data. This analysis is normally conducted to understand the descriptive nature of information obtain from the data that will enable better understanding and interpretation of the data (Zikmund, 2003). Mean, minimum, maximum, and standard deviation were computed and interpreted for both dependent and independent variables used in this study.

### **3.3.5.2 Correlation Analysis**

Correlation analysis using Pearson correlation is the second analysis conducted in this study to aid in the understanding of the direction of the correlation between dependent and independent variables. Correlation analysis is an interdependent approach which explains the degree of linear relationship between two variables (Genser, Cooper, Yazdanbakhsh, Barreto & Rodrigues 2007). Thus, a correlation matrix was employed to observe the correlation of one variable with another. Moreover, the outcome of this analysis provides an explanation on direction, nature and the significance of the correlation among the variables used in this study.

### **3.3.5.3 Regression Model**

Multiple linear regression analysis was applied in the current study for testing the hypotheses of the relationship between the four independent variables relating to boards of directors' characteristics (BOD size, CEO duality, independence of the BOD and BOD meeting) and the dependent variable that is firm financial performance. The regression equation below is used to explain the association:

$$ROA = \alpha_0 + \beta_1 SIZE + \beta_2 CEO + \beta_3 IND + \beta_4 FBMET + \varepsilon$$

Where: ROA = Return on Asset.  $\alpha_0$  = Intercept. SIZE = BOD Size. CEO = CEO Duality. IND = Independence of the BOD's. FBMET = Frequency of Board Meeting.  $\epsilon$  = Error term.

### **3.4 Chapter Summary**

In this chapter, the framework of the study was presented which depicts that the chosen BOD's characteristics including the BOD size, CEO duality, independence of the BOD's and frequency of Board meeting will influence the firm performance of industrial firms listed at Amman Stock Exchange. The hypotheses proposed that these board characteristics will influence firm performance Jordanian industrial firms listed at Amman Stock Exchange. This chapter also includes the sources of the data that is being collected from the annual reports of companies listed at (ASE) for the year 2013. It includes the definition and measurement of all variables. Therefore, this chapter discusses the analysis employed in this study, which are the descriptive analysis, the correlation analysis, and the linear regression analysis.

## CHAPTER FOUR

### ANALYSIS AND FINDINGS

#### 4.0 Introduction

In this chapter, the results of the study based on the research objectives and the hypotheses were highlighted. The results comprised of descriptive statistics, correlations, and multiple regressions that are employed to determine the relationships between the variables (independent and dependent). The data is based on annual reports and is analysed using SPSS software version 18.

#### 4.1 Descriptive Statistics

The descriptive analysis is conducted in order to provide a clear information about the sample which lead to easy and better interpretation of data (Genser et al., 2007). Table 4.1, illustrate the minimum, maximum, mean and standard deviation of the main variables of this study.

**Table 4.1**

*Summary of Descriptive Statistics*

Variables	No	Minimum	Maximum	Mean	Std Deviation
Return on Asset	64	-.29	.30	.03	.10
BOD Size	64	4.00	13.00	7.52	1.96
CEO Duality	64	.00	1.00	.81	.39
Independence of the BOD's	64	.40	1.00	.87	.16
Frequency of Board Meeting	64	6.00	12.00	7.14	1.36

Based on the descriptive analysis as summarised in Table 4.1, the mean value of ROA is .03 with companies that have maximum and a minimum level of ROA .30 and -.29

respectively, and a standard deviation of .10. It can be deduced that a high difference of ROA exists across firms used as samples for this study.

However, the mean value of BOD size for Industrial firms listed in Jordan are 8 members with 13 as maximum and 4 minimum and the standard deviation is 1.96. On average, Jordan listed firms chose their number of BOD's closer to average of 8 to 9 members as opined by Jensen (1993) who provided evidence that the average (or optimal) board size for U.S. firms is between 8 to 9 directors.

This study shows 19% of the firm are having non duality in the role of CEOs and Board chairman. This indicated that about 81% of the firms consider CEOs and Board chairman as combined position. Thus, it highlights the possibility of agency problem to emanate the conflict of interest between CEO and Chairman. Hence, the need for separating those roles to reduce the agency problem.

The mean of BOD independence is about 87%, suggesting that Jordan firms contain a mixture of inside and outside directors. This is essentially good for the effectiveness of a board according to Fama and Jensen (1983) who argued that the mixture of inside and outside director will enhance the effectiveness of a BOD's.

Frequency of board meeting had a mean of 7.14 with a minimum and maximum of 6 and 12 respectively; indicating that the higher number of BOD meeting leads to better firm financial performance. These results indicate improving governance measures that will enhance companies' management and its financial performance.

#### **4.2 Correlation Analysis**

Table 4.2 shows the Pearson correlations for this study. From this correlation analysis, we can know the relationship between the two variables. The value of Pearson correlation (r) is a measure of strength as well as the direction of the association between two

variables. For this study, the relationship between firm financial performance (as measured by ROA) with four independent variables which are BOD size (SIZE), CEO duality (CEO), independence of the BOD (IND) and Frequency of Board Meeting (FBMET).

**Table 4.2**

*Table of Correlations for Return on Asset (ROA)*

Variables	ROA	Size	CEO	IND	Met
Return on Asset	1				
BOD Size	.24	1			
CEO Duality	-.25*	.13	1		
Independence of the BOD's	.15	.03	.23	1	
Frequency of Board Meeting	-.02	-.08	.14	-.06	1

Table 4.2 shows the correlations between the independent variables and firm financial performance which ROA as the dependent variable. From the output, it can be seen that two of the four independent variables that is BOD size (SIZE) and independence of the BOD's (IND) are positively correlated with (ROA), while the other two (CEO duality (CEO) and Frequency of Board Meeting (FBMET) are negatively correlated. From Table 4.2, the correlation coefficient between BOD size (SIZE) and ROA is .24. It shows a positive relationship between BOD size and ROA where ROA will increase as the BOD size increases. This is consistent with the finding of Jackling and Johl (2009) where the correlation between BOD size and ROA was positive. However, BOD size and ROA are not strongly correlated because the value of correlation (.24) is very low, indicating that it is not significant at .05 using the 2-tailed test. Thus, showing no significant correlation between BOD size (SIZE) and ROA.

The correlation coefficient between CEO duality and ROA is -.25, depicting a negative (-.25) relationship between CEO duality and ROA at .05 using 2-tailed test. This is consistent with Ujunwa, Salami & Umar (2013) and Fooladi (2012).

The value for correlation between independence of the BOD's (IND) and ROA is a positive .18. The positive sign means that ROA increases as the number of independent directors increases, and vice versa. To see the strength of the relationship between ROA and independence of the BOD's (IND), the value of correlation is assessed using the 2-tailed test. Based on the value of .18, it can be concluded that there is a weak relationship between independence of the BOD's (IND) and ROA at .05 using the 2-tailed test. Other studies such as Honeine and Swan (2010) and Masulis, Wang & xie (2012) also found a positive relationship between the number of independent BOD's and ROA.

The last variable, frequency of board meeting (FBMET), shows an insignificant negative (-.02) correlation with ROA at .05 using the 2-tailed test. Thus, it implies there is no significant correlation between the frequency of board meeting and firm financial performance as measured by ROA. The past studies which also revealed negative relationship between a board meeting and the firm financial performance are Garcia-Sanchez (2010) and Danoshana & Ravivathani (2014).

### **4.3 Normality**

This study uses the kurtosis and skewness values to check the normality of all the variables. Skewness and kurtosis are among the most common statistical methods in describing normality of distribution of a dataset. As evidenced in Table 4.3, all kurtosis values of all the variables are lower than 10; and skewness values of all the variables are lower than 3. Therefore, the data has no serious violation of the normality assumption. In addition, the normality of all variables of this study can be seen from the histogram as shown in Figure 4.1.

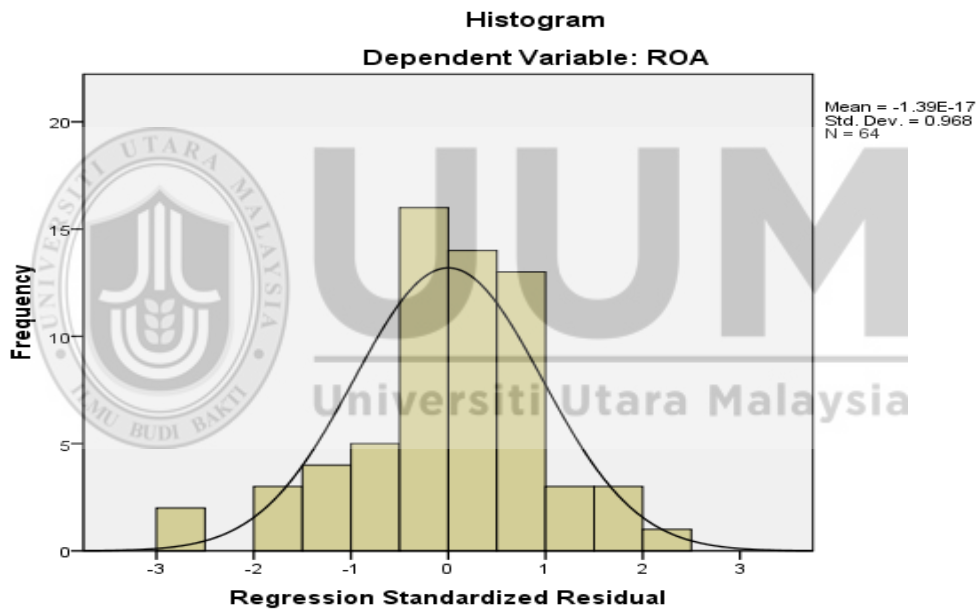
**Table 4.3**

*Skewness and Kurtosis for Normality*

Variable	N	Skewness		Kurtosis	
		Statistics	Std. Error	Statistics	Std. Error
Size	64	.505	.299	.262	.599
CEO	64	-1.640	.299	.711	.599
IND	64	-1.483	.299	1.614	.599
Met	64	1.514	.299	2.614	.599
ROA	64	-.610	.299	3.086	.599

**Figure 4.1**

*Histogram (DV: ROA) for Normality Test*



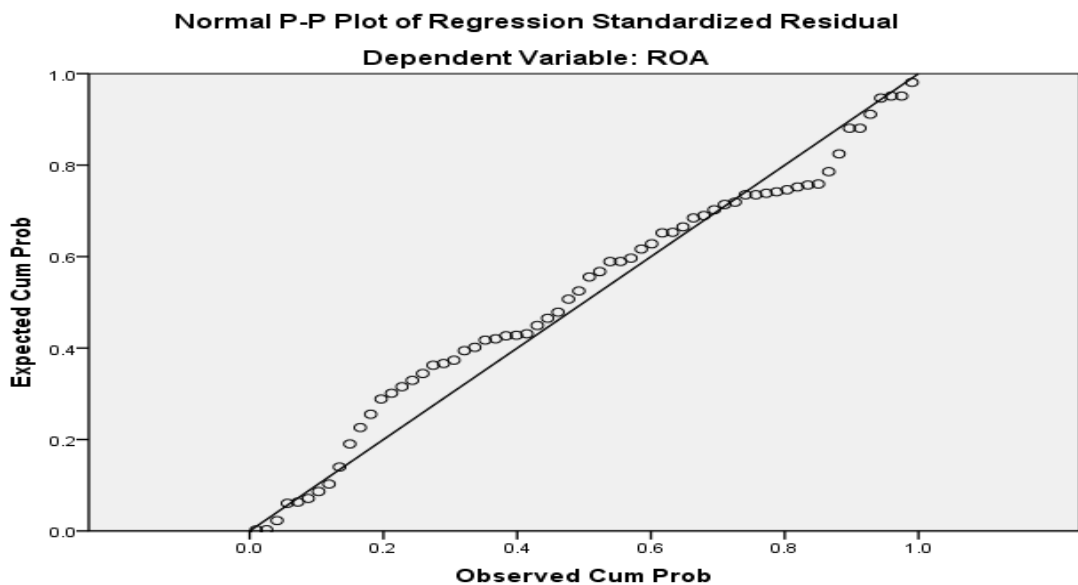
**4.4. Linearity**

In common usage, the linearity assumption indicates a relationship between all variables which can be graphically depicted by a straight-line passing through the data cloud (Tabachnick, Fidell & Osterlind, 2001). In this study, the assumption of linearity was checked by the scatterplot of the residuals as presented in Figure 4.2.



**Figure 4.2**

*Normal P-P Plot for Linearity Test*



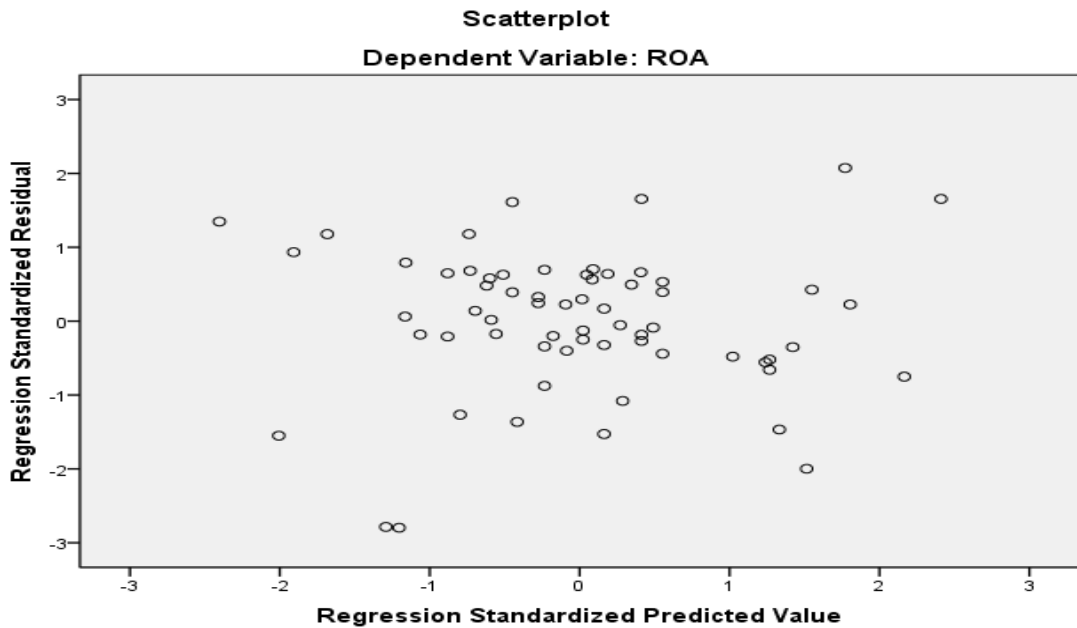
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**4.5 Heteroscedasticity**

In this study, the independence of error terms was examined to test the homoscedasticity with the help of a scatter plot of the dependent variable residual which is ROA. The scatter plot in Figure 4.3 does not reveal a clear relationship between the residual and the predicted value.

**Figure 4.3**

*Scatter Plot of the Residuals (DV: ROA)*



#### 4.6 Assumption of Multiple Regressions

Table 4.4 shows the output of the summary for the multiple regression models with firm financial performance which ROA as the dependent variable. This table showed the value of R Square and adjusted R Square for the regression model.

$$ROA = \alpha_0 + \beta_1 SIZE + \beta_2 CEO + \beta_3 IND + \beta_4 FBMET + \varepsilon$$

**Table 4.4**

*Table of Model Summary for Multiple Regression*

Model	R	R Square	Adjusted R Square	Std. Error of Estimates
1	.451 <sup>a</sup>	.204	.150	.092

Table 4.4 shows the summary of the multiple regression model with firm financial performance which ROA as the dependent variable. From the table, it showed that the

value for adjusted R Square is .150 indicating 15% strength of the relationship between firm financial performance and BOD size, CEO duality, independence of the BOD's and frequency of board meeting. R square statistically measure coefficient of multiple determination for multiple regression.

**Table 4.5**

*Table of ANOVA*

Model	Sum of Squares	df.	Mean Square	F	Sig.
Regression	.128	4	.032	3.771	.008 <sup>a</sup>
Residual	.502	59	.009		
Total	.631	63			

Another measure to see if the model is good in predicting firm financial performance is the significance of the value of F. Based on Table 4.5, the value is 0.008. Since the value is less than 0.05, the whole regression is said to have a good fit.

**Table 4.6**

*Table of Coefficients*

Model	Unstandardized Coefficients			t	Sig.
	B	Std. Error			
Constant	-.192	.130		-1.861	.068
SIZE	.015	.006		2.428	.018
CEO	-.090	.031		-2.908	.005
IND	.160	.074		2.155	.035
FBMET	.006	.009		.727	.470

From the equation of firm financial performance (ROA) found in Table 4.6, it is noted that if the BOD size increases by 1%, then the firm financial performance (ROA) will increase by about 1.5%. If CEO duality increases by 1% then the firm financial performance (ROA) will decrease by about 9%. If independence of the BOD's increase by 1% also the firm financial performance (ROA) increases by about 16%.

In Table 4.6, the result of the influence of BOD characteristics on firm financial performance (ROA) is presented. The output indicates mixed results between the BOD characteristics and firm financial performance (ROA) where the BOD size on this occasion has a positive impact on firm financial performance (ROA). This result is similar to what has been found in other studies such as Kyereboah-Coleman and Biekpe (2005), and Haniffa and Hudaib (2006).

In terms of CEO duality, the result shows that there is a significant negative relationship between CEO duality and firm financial performance measured using ROA. This finding is in line with Kyereboah-Coleman and Biekpe (2005).

Regarding the independence of the BOD's, the result shows that it is significantly related to firm financial performance measured using ROA. This result is consistent with prior studies such as Bhagat and Black (2001), De Andres et al. (2005) and Haniffa and Hudaib (2006) who argued that in developing nations some directors may not likely contribute to reducing the agency conflicts associated with possible misallocation of excess resources, due to the fact that they were not elected based on their skills and experience, rather it is mostly due to political reasons, for legitimating business activities and for contacts and contracts. Also, few researches such as Chin et al. (2004), Fosberg (1989) and Klein et al. (2005) do not show any relationship between independence of the BOD's and firm financial performance.

In addition, Table 4.6 shows that there is no relationship between a frequency of board meeting and firm financial performance. This is consistent with prior empirical studies such as Gavrea & Stegorean (2012), Kyereboah- Coleman (2007) and Noor (2011).

#### 4.7 Summary of Hypotheses Testing Results

Table 4.7 below present the summary of the findings from hypotheses testing.

**Table 4.7**

*Summary of the Hypothesis Testing*

Number	Hypothesis	Result
H1	There is positive relationship between BOD size and firm financial performance.	<b>Supported</b>
H2	There is negative relationship between CEO duality and firm financial performance.	<b>Supported</b>
H3	There is positive relationship between independence of BOD's and firm financial performance.	<b>Supported</b>
H4	There is positive relationship between BOD meeting and firm financial performance.	<b>Not Supported</b>

#### 4.8 Chapter Summary

This chapter elaborates the results of the analysis that is conducted by using SPSS software version 18. The normality and linearity tests show that the data meets the assumptions of multiple regressions and there is no multicollinearity problem. The analyses provided evidence that BOD size and independence of the BOD's significantly positive related to firm financial performance. However, this study failed to find any significant relationship between a BOD meeting and firm financial performance and the study found that the relationship between the CEO duality and firm financial performance variable is significantly negative. The following chapter contains the discussion, conclusion, and recommendation.

## CHAPTER FIVE

### DISCUSSIONS AND CONCLUSIONS

#### 5.0 Introduction

This chapter presents the summary of findings, discussions and conclusions of the study. The chapter is organised into four sections covering a summary of findings, discussions, study's limitation, recommendation for future research and the conclusions.

#### 5.1 Summary of Findings

This study examines the relationship between BOD's characteristics and the firm financial performance for firms listed on ASE for the year 2013. In order to find out the relationships between the BOD's characteristics and firm financial performance, the study examined BOD size, CEO duality, independence of the BOD's, and frequency of board meeting. These variables were selected based on the past studies such as Abdullah (2004), Kyereboah-Coleman and Biekpe (2005), Sahu and Manna (2013) and Ahmadu et al. (2005). The total number of industrial firms in the sample was 64 and the data used was for the year 2013.

Based on the results, it was found that the average number of BOD are eight persons. The ASE firms showed a high percentage of CEO duality of 81 percent. The independent of the BOD's of the firms listed on ASE are 86 percent of the average total directors on the board of 8 persons. This indicates that the proportion of independent directors on the board of the ASE firms is almost 67 percent of the total directors on boards. The study also shows that the average frequency of the board meeting for the firms are 7 times in year 2013.

For the multiple regression model with firm financial performance (ROA) as the dependent variable, BOD size shows a positive relationship with ROA. CEO duality has a negative relationship with ROA. The relationship between independent of the BOD's and ROA is positive while frequency of board meeting has a positive relationship with ROA but it is not significant. A general finding of this study was consistent with previous studies and agency theory which show relationship between agent and principle where both parties tend to maximise their benefit. BOD size is a form of control between agent and principle but CEO duality is not since it has conflict of interest between agent and principle.

## **5.2 Discussions**

### **5.2.1 BOD Size and Firm Financial Performance**

The first objective was to investigate the influence of BOD size on firm financial performance. The achievement of this objective was based on the hypotheses that “there is positive relationship between the BOD size and firm financial performance”. Thus, this study found a positive relationship between the BOD size and firm financial performance (ROA). Consequently, this finding supported the hypothesis and fully achieved the objective and clearly answered the related research question. Furthermore, based on the finding, BOD size has an important role in enhancing the firm financial performance especially in ASE for industrial firms. Moreover, this is consistent with the previous studies such as Dalton and Dalton (2005) and Kyereboah-Coleman and Biekpe (2005) which found a positive relationship between the BOD size and firm financial performance. In line with that, the larger BOD size, the better performance can be achieved, and would provide extra board monitoring and subsequently corporate players could perform their duties effectively and efficiently in enhancing shareholders value.

Therefore, higher number of BOD may increase the number of potential solution strategies, increase the range of perspectives, provide an increased pool of expertise, provide better networking, and be more capable of monitoring the actions of top management. It can be concluded that a higher number of BOD size will enhance firms' financial performance.

### **5.2.2 CEO Duality and Firm Financial Performance**

The second objective was to examine the influence of CEO duality on firm financial performance. In order to achieve this objective, hypothesis which stated that “there is a negative relationship between CEO duality and firm financial performance” was tested. The result shows that there is a negative relationship between the financial performance of firms in terms of CEO duality and ROA. Thus, this finding support the hypotheses, and is also in line with previous studies such as Schmid & Zimmermann, (2007) and Wan and Ong, (2005) that found that CEO duality is negatively associated with firm financial performance. In regards to that, when one personality is holding two important positions; he/she are likely to pursue strategies which advance his/her own personal interests over those of the firm. This is confirmed by the agency theory which believes that the separation of the two roles is crucial for the monitoring of the effectiveness of the board over management, by providing cross checking evidence against the possibility of over-ambitious plans by the CEO. In conclusion, the separation of power of individuals holding the position of chairman and CEO is important for enhancing the firms' financial performance.



### **5.2.3 Independence of The BOD's and Firm Financial Performance**

The third objective was to determine the influence of independence of the BOD's on firm financial performance. In order to accomplish this objective, hypothesis was affirmed as “there is a positive relationship between independence of the BOD's and firm financial performance”. Accordingly, the regression analysis result showed that independence of the BOD's had positive relationship with firm financial performance (ROA). As a result, this finding supported the hypotheses. This result is consistent with previous studies such as Krivogorsky (2006); Lefort & Urzua (2008); Limpaphayom & Comelly (2006). The findings from this study are is backed by the agency theory that contends the idea of the association of independent directors on the firm board serves to be one of the important means that aims to minimise agency predicaments. Therefore, it can be concluded that a high level of independence of the BOD's will enhance firms' financial performance.

### **5.2.4 Frequency of Board Meeting and Firm Financial Performance**

The fourth objective was to determine the influence of frequency of board meeting on firm financial performance. In order to accomplish this objective, hypothesis was affirmed as “there is a positive relationship between frequency of board meeting and firm financial performance”. Accordingly, the regression analysis result showed that frequency of board meeting had no significant relationship with firm financial performance (ROA). As a result, this finding does not support the hypotheses. This result is consistent with the previous studies such as Gavrea & Stegorean, (2012), Kyereboah-Coleman, (2007) and Noor, (2011). Therefore, it can be concluded that a lower number of board meeting will enhance firms' financial performance.

This finding can be justified based on many reasons such as differences in corporate law, capital markets, internal capital structure of the firm, and structure of company ownership.

The aforementioned factors are different as applied in Amman Stock Exchange compared to developed countries, which may have had a hand in influencing the relationship. Moreover, the present study has been conducted in 2015 relying on 2013 data for ASE industrial listed firms. Owing to early stage of implementation of corporate governance in Jordan, the rules for governance and control mechanisms have still not been effectively enforced, which that may affect the relationship between frequency of board meeting and firm financial performance.

### **5.3 Limitations of the Study**

Despite that the findings of this study may be beneficial to many stakeholders such as researchers, shareholders, government, capital markets institutions, and financial analysts; still it has some limitations.

Firstly, this study has concentrated only on Jordanian listed industrial firms for the year 2013. So, the validation of the conclusion might not hold for commercial and service companies and other companies outside those lists. Thus, the generalisation of findings is only limited to the Jordanian listed industrial firms.

Secondly, this study used only one financial measure that is ROA for measuring firm's financial performance, while other measurements are ignored. The ROA highlights the overall efficiency of assets utilisation by the firm in terms of improving the wealth of shareholders. Nevertheless, if there are low revenues, ROA will also be low; this will also be the case if booked assets are unproductive or expenses are high. The study ignored other methods of performance measurement reflecting market phenomenon such as return on equity (ROE), Tobin's Q and return on investment (ROI).

Thirdly, the study only examined certain variables to determine the board's effectiveness such as BOD size, CEO duality, independence of the BOD's and BOD meeting and its

relationship to firm financial performance. There might be some other factors such as board process and variability which are ignored here. This is another limitation since not all measures of board's effectiveness were used. However, this limitation cannot be avoided because the data collection relied on the disclosures in annual reports from Amman Stock Exchange in which such other variables are not available.

#### **5.4 Recommendation for Future Research**

The findings in this study will serve as a starting point upon which future researchers will further explore in empirical way the importance of BOD's characteristics in Jordan. As long as the implementation of the Code of Corporate Governance is at its early stage in Jordan, the gap leads to vague explanations and requires further studies. Therefore, this study can encourage and highlights some recommendations for future studies to be conducted in the area of interest, and to overcome the limitation encountered by this study. The recommendations are highlighted as follows:

1. Include other listed firms either the industrial firms by making use of a different method such as financial and services firms.
2. Consider other performance measures such as return on equity (ROE), Tobin's Q and return on investment (ROI).
3. Extend the period of using data for more than one year, through time-series or panel data analyses.
4. Consider other aspects of BOD's characteristics variables that are not included in the current study to further examine firm financial performance. Such variables may include remuneration and nominating committees, the board of director's frequency and experience of the board of directors.

## 5.5 Conclusion

In 2013, Jordanian Code of Corporate Governance has been amended in order to strengthen the roles and responsibilities of the board of directors, audit committee and internal audit functions. To determine the effectiveness of the BOD's characteristics, this study is carried out for investigating the relationships between BOD's characteristics and the firm financial performance. BOD's characteristics used as the independent variables are BOD size, CEO duality, independence of the BOD's, and BOD meeting. Firm financial performance which is measure by ROA is dependent variable. Results show that BOD size has a positive relationship with the ROA. CEO duality shows a negative relationship with ROA. Independence BOD's has a positive relationship with ROA. Result for BOD meeting has a positive relationship with ROA. Lastly, of all the independent variables used in the study, only BOD meeting had no significant relationship with ROA while BOD size, CEO duality and independence of BOD's showed a significant relationship with firm financial performance (ROA). This is supported by the agency theory used as underpinning theory for this study. Agency theory explain the phenomena of the overall framework for this study related to agency and principle relationship. The finding of this study supported this theory.

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