

DOES ECONOMIC FREEDOM HELP OR HURT THE EMERGING MARKETS?  
THE MODERATING EFFECT OF ECONOMIC FREEDOM ON THE  
CORPORATE GOVERNANCE - FINANCIAL PERFORMANCE  
RELATIONSHIP: A CROSS-COUNTRY STUDY

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## **ABSTRACT**

### **DOES ECONOMIC FREEDOM HELP OR HURT THE EMERGING MARKETS? THE MODERATING EFFECT OF ECONOMIC FREEDOM ON THE CORPORATE GOVERNANCE - FINANCIAL PERFORMANCE RELATIONSHIP: A CROSS-COUNTRY STUDY**

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This study investigates the relationship between corporate governance and financial performance of firms from distinct perspectives. First, the governance-performance relationship is examined by using three different types of financial performance indicators, which include accounting-based, valuation-based, and market-based performance indicators. Second, the study examines the governance-performance relationship in the emerging economies., while a sample of G-7 economies is also used to provide a comparison between the emerging and the developed economies. Third, the moderating effect of economic freedom on the association between corporate governance and financial performance is examined. Using data from 27 countries (including 20 emerging economies and 7 developed economies), we find that corporate governance is positively associated with the accounting-based financial performance in the emerging economies. For the developed economies, there is a significantly positive association between corporate governance and valuation-based financial performance. Also, the moderating effect

of economic freedom is significant on the governance-performance relationship. However, the moderation effect diminishes as the level of economic freedom rises.

The findings indicate that corporate governance is an important determinant of financial performance. Also, the economic and legal environment, including economic liberties, has a crucial role in the effectiveness of corporate governance. The outcomes are important for both business professionals and governmental authorities since the sole efforts of managers are not sufficient for effective corporate governance practices. The governmental institutions and agents are also responsible for providing the optimal environment in order for firms to implement the best corporate governance practices.

**Keywords:** Corporate Governance, Financial Performance, Economic Freedom, Moderation Effect, Emerging Markets

## ÖZ

### EKONOMİK ÖZGÜRLÜK GELİŞMEKTE OLAN ÜLKELERE YARDIM MI EDER YOKSA ZARAR MI VERİR? EKONOMİK ÖZGÜRLÜĞÜN KURUMSAL YÖNETİM - FİNANSAL PERFORMANS İLİŞKİSİ ÜZERİNDEKİ İKİ TARAFLI ETKİSİ: ULUSLARARASI BİR ÇALIŞMA

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Bu çalışma, kurumsal yönetim ile firmaların finansal performansı arasındaki ilişkiyi farklı açılardan incelemektedir. İlk olarak, kurumsal yönetim-performans ilişkisi, muhasebe temelli, değerlendirme temelli ve piyasa temelli performans göstergelerini içeren üç farklı finansal performans göstergesi kullanılarak incelenmiştir. İkinci olarak, çalışma geliştirmekte olan ekonomilerdeki kurumsal yönetim-performans ilişkisini incelemektedir. Ayrıca, geliştirmekte olan ekonomiler ile gelişmiş ekonomiler arasında bir karşılaştırma yapmak için, G-7 ekonomileri örnekleme çalışmaya dahil edilmiştir. Üçüncüsü, ekonomik özgürlüğün kurumsal yönetim ve finansal performans arasındaki ilişki üzerindeki iki yönlü (moderating) etkisi incelenmiştir. 27 ülkeden (20 geliştirmekte olan ve 7 gelişmiş ekonomi) elde edilen verileri kullanarak, kurumsal yönetimin geliştirmekte olan ekonomilerdeki muhasebe temelli finansal performansla pozitif ilişkili olduğu gözlemlenmiştir. Diğer taraftan, gelişmiş ekonomiler için kurumsal yönetim ile değerlendirme temelli finansal performans arasında önemli bir pozitif ilişki gözlemlenmiştir. Ayrıca, ekonomik



özgürlüğün iki taraflı etkisi yönetim-performans ilişkisi üzerinde önemlidir. Bununla birlikte, ekonomik özgürlük düzeyi arttıkça iki yönlü etki azalmaktadır.

Bulgular, kurumsal yönetimin finansal performansın önemli bir belirleyicisi olduğunu göstermektedir. Ayrıca, ekonomik özgürlükler dahil olmak üzere ekonomik ve hukuki çevrenin kurumsal yönetimin etkinliğinde çok önemli bir rolü olduğu gözlemlenmiştir. Çalışmadan elde edilen bulgular, şirketlerin tekil çabalarının, etkili kurumsal yönetim uygulamalarının hayata geçirilmesi için yeterli olmadığına; hem iş dünyasının profesyonelleri hem de devlet otoritelerinin bu konudaki rol ve sorumluluklarına işaret ettiği için önemlidir. Çalışmadan elde edilen bulgulardan çıkarılacak en önemli sonuç; devlet kurum ve aktörlerinin, firmaların en iyi kurumsal yönetim uygulamalarının hayata geçirilmesi için mümkün olan en uygun ortamı sağlamaktan da sorumlu olmalarıdır.

**Anahtar Kelimeler:** Kurumsal Yönetim, Finansal Performans, Ekonomik Özgürlük, İki Taraflı Etki, Gelişmekte Olan Ekonomiler

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## **LIST OF ABBREVIATIONS**

**AR (1):** Autoregressive Disturbance at 1<sup>st</sup> level

**BC:** Business Combination Laws

**CEO:** Chief Executive Officer

**FDI:** Foreign Direct Investment

**FTSE:** Financial Times Stock Exchange

**G-7:** Group of Seven

**GEM:** Global Economic Monitor (World Bank)

**GLS:** Generalized Least Squares

**ICB:** Industrial Classification Benchmark

**IFRS:** International Financial Recording System

**MSCI:** Morgan Stanley Capital International

**OECD:** Organization for Economic Cooperation and Development

**SIC:** Standard Industry Classification

**S&P:** Standard and Poor's

**SOX:** the Sarbanes-Oxley Act

**U.A.E.:** The United Arab Emirates

**U.K.:** The United Kingdom

**U.S.:** The United States of America

**U.S. GAAP:** The United States Generally Accepted Accounting Principles

## **CHAPTER 1**

### **INTRODUCTION**

Corporate governance is one of the most frequently argued topics in the current literature. Especially, corporate scandals in the last decade reveal a need for the development of corporate governance practices. This necessity was formally indicated with the ‘Sarbanes-Oxley Act’ (SOX) in 2002. Although the SOX includes governmental regulations on corporate governance, the role of corporations and the benefits of corporate governance practices need to be revealed. The empirical studies which focus on the link between corporate governance and firm dynamics are among the best options to develop an understanding of the concept of corporate governance for both scholars and business professionals.

While its theoretical background is provided by some widely-accepted theories such as the agency theory (Coase, 1937; Jensen and Meckling, 1976; Fama and Jensen, 1983) and the stewardship theory (Davis, Schoorman, and Donaldson, 1997; Clarke, 2004), the effect of corporate governance on firms’ financial performance is still a question for the empirical research. Some studies focus on the determinants of good corporate governance practices (Aguilera and Jackson, 2003; Linck, Netter, and Yang, 2008), while a significant number of researches point out the positive financial outcomes of the corporate governance applications.

The financial outcomes of corporate governance practices are investigated with different perspectives. Some studies adopt a general look of corporate governance practices (Gompers, Ishii, and Metrick, 2003; Bebchuk, Cohen, and Ferrell, 2009; Aggarwal, Erel, Stulz, and Williamson, 2009; Amman, Oesch, and Schmid, 2011). Other researches prefer to focus on the effect of different dimensions of corporate governance on financial performance. Among these different dimensions, there are internal dynamics of firms which affect financial performance,

such as ownership structure (Shleifer and Vishny, 1997; La Porta, Lopez-De-Silanes, and Shleifer, 1999; Mitton, 2002), shareholder rights (Johnson, Boone, Breach, and Friedman, 2000; La Porta, Lopez-De-Silanes, Shleifer, and Vishny, 2002; Durnev and Kim, 2005), executive compensation (Zajac, 1990; Mehran, 1995; Core, Holthausen, and Larcker, 1999), and board structure (Hermalin and Weisbach, 1991; Yermack, 1996; Cohen and Wang, 2013). In addition, the external environment also has a significant role on the governance-performance relationship (Lambert and Larcker, 1985; Chen, Chen, and Wei, 2009; Giroud and Mueller, 2010; Cain, McKeon, and Solomon, 2017).

The purpose of this study is to provide empirical evidence on the positive relationship between corporate governance and financial performance in emerging economies. While most of the empirical studies on corporate belong to the developed economies, there are relatively few studies that focus on the emerging markets (Young, Peng, Ahlstrom, and Bruton, 2002; Singh, 2003; Fan and Wong, 2004; Oehmichen, 2018). Accordingly, studies that examine the positive effect of corporate governance on financial performance in the emerging markets (Klapper and Love, 2004; Balasubramanian, Black, and Khanna, 2010; Claessens and Yurtoglu, 2013) is limited.

In addition to investigating the direct effect of corporate governance on firms' financial performance in the in emerging economies, this study also considers the moderating effect of economic freedom on the governance-performance relationship. While a few studies investigated the enhancing effect of economic freedom on firm performance (Henry, 2000; Smimou and Karabegovich, 2010; Chortareas, Girardone, and Ventouri, 2013; Blau, Brough, and Thomas, 2014; Chen, Chen, and Jin, 2015), according to our knowledge, there are no studies that focus on the effect of economic freedom on the association between corporate governance and financial performance. In this regard, this research contributes to the related literature by providing empirical evidence on the moderating effect of economic freedom on the governance-performance relationship.

In order to provide a robust examination of the corporate governance practices in emerging economies, the countries included in this study are chosen from

‘Bloomberg’s 20 Best Performing Emerging Markets in 2018’ list. In addition to the emerging economies, we also collect data for G-7 countries, to represent developed economies. The purpose behind the inclusion of developed economies in the analysis is to provide a comparison between the emerging and developed economies. A variety of financial performance indicators are selected in order to demonstrate different perspectives on financial performance, namely accounting-based, valuation-based, and market-based perspectives. Instead of investigating single dimensions of governance, we use the corporate governance score developed by Thomson-Reuters database, in order to evaluate the governance of firms from a broader perspective. For the same reasons, economic freedom is represented by a general index. The representation of the moderation effect is provided by an interaction variable of corporate governance score and economic freedom index. We also control the models for firm, industry, and country effects. The methodology of empirical research is chosen according to the construction of the best fitting model for this cross-sectional analysis. We use Generalized Least Square (GLS) random effects regression method. The data of firms and countries in the study cover 2008 - 2018 period for three different models (one for each different performance perspective; accounting-based, valuation-based, and market-based) for each sample (emerging and developed economies).

The regression results show that corporate governance and economic freedom have significantly positive effects only on the accounting-based financial performance in the emerging economies. Additionally, the results also show that economic freedom has a moderating effect on governance - performance relationship when accounting-based performance measure is used. However, this moderation effect diminishes as the level of economic freedom increases. For the developed economies, the results show that the interaction of corporate governance and economic freedom significantly affects performance only when valuation-based performance measure is employed. Similar to the emerging economies, the moderating effect of economic freedom on governance - performance relationship exists when valuation-based performance measure is used, but it diminishes as the level of economic freedom rises. Possible reasons behind the unexpected results for

both the emerging (valuation-based and market-based performance) and the developed (accounting-based and market-based performance) economies samples are discussed in the results and conclusion sections.

As a robustness check, we also perform some additional analyses. Although using three different types of performance measures already provide a robustness check to the study, we also re-estimate the models while excluding financial firms from the analyses. This method is usually applied in sample building, rather than as a robustness test. However, the data we collect includes a significant number of financial firms. Consequently, an initial exclusion of these firms may damage the integrity of the dataset. The test results show that the models are robust for the industrial effect of financial firms. In addition to this, we also use different country-level control variables for a validity check. Using different country-specific controls show that the regression models are also robust for different country-specific effects.

In addition to contributing to the academic literature of corporate governance, this study provides some important implications for managers and governments as well. The importance of corporate governance is best described with its enhancing effect on financial performance. In this matter, managers should focus on mitigating possible agency problems as it improves firms' performance and ensures the sustainability of corporations. From the governmental side, providing legal and institutional infrastructure for the effective corporate governance practices not only enhances firm value and efficiency but also empowers the business sector and aids to increase the level of economic development of countries.

After a brief introduction of the study, in Chapter 1, Chapter 2 provides a conceptual framework and hypothesis development. The empirical research part is explained in Chapter 3, which includes the sources of data, variables of interest, methodology, summary statistics, regression results, and robustness checks. The study is concluded with discussion and limitations sections in Chapter 4.

## CHAPTER 2

### CONCEPTUAL FRAMEWORK AND HYPOTHESIS DEVELOPMENT

#### 2.1. The Definition and Theoretical Background of Corporate Governance

Corporate governance is one of the contemporary topics in the last decades. The concept of corporate governance has become more important according to some major corporate scandals recently, such as Enron and WorldCom. Following these scandals, the famous “Sarbanes-Oxley Act” (SOX) was signed in 2002. The aim of the act is to determine new standards and improve the existing ones for the boards, managers, and the auditors of the public corporations. These standards also cover corporate governance procedures (Murdock, 2018).

There are various but quite similar definitions of corporate governance from different perspectives. Broadly, corporate governance can be defined as the systems and their applications which provide direction and control to the companies (International Finance Corporation, 2018). According to OECD, corporate governance is:

*Procedures and processes according to which an organization is directed and controlled. The corporate governance structure specifies the distribution of rights and responsibilities among the different participants in the organization – such as the board, managers, shareholders and other stakeholders – and lays down the rules and procedures for decision-making (OECD, 2005).*

Gompers et. al. (2003) describe corporations as republics. As republics, the corporations have voters (shareholders), elected proxies (directors), and appointed officials (managers). In such a scenario, the term corporate governance can be seen as the legislation, which ensures the utility maximization and the protection of the rights of voters.

From a financial perspective, corporate governance can be seen as an assurance to the suppliers of finance. The corporate governance practices provide proper monitoring of the demanders of finance. This monitoring helps the suppliers of finance to make sure that their investment is put in good use and they will get a return from their investments (Shleifer and Vishny, 1997).

Based on the literature, in this study, we adopt corporate governance as the structure of systems, which aims to define and apply the best possible practices of transparency, accountability, and sustainability for all levels of companies.

The background of corporate governance relies upon some theories. Among these theories, we mainly focus on “Agency Theory”. The agency theory has its roots back to Coase (1937), but development and application of the theory for the modern business world are taken place in the late ’70s and ’80s (see Jensen and Meckling, 1976; Fama, 1980; Fama and Jensen, 1983).

The fundamental concept of the theory is the relationship between “owners” and “agents” (Eisenhardt, 1989). This “agency relationship” can be defined as the owner employs the agent to perform tasks which possibly includes “decision-making”. Since both the owner and the agent aim to maximize their utilities, the agent may not seek the interest of the owner (Jensen and Meckling, 1976). The possible conflict of interests that causes problems between the agent and the owner, is called “Agency Problems”. The main purpose of the Agency Theory is to solve the possible problems between agents and owners (Eisenhardt, 1989).

The fundamental reason for the agency problems is the separation of “ownership” and “control” mechanisms (Fama and Jensen, 1983). This separation can be inspected from different perspectives. Mostly, the problems are caused by the “information asymmetry” and the “risk perception” between owners and agents. For the information asymmetry, an agent has more information about his/her task than an owner. So, the owner cannot be certain about whether the agent acts on the interest of the owner. For the risk perception, on the other hand, agents and owners have different risk tolerances. Different risk tolerances cause agents and owners to act differently regarding the same event (Eisenhardt, 1989).



Both asymmetric information and the different risk perceptions induce agents to behave differently than the interests of owners. This type of behaviors of agents can be categorized under two titles. The first one is “adverse selection”. Adverse selection refers to the uncertainty of the skills of an agent. An agent may misrepresent his/her skill for the task which he/she employed for. The second one is “moral hazard”. Moral hazard takes place when an agent does not show adequate performance for his/her task (Eisenhardt, 1989).

In order to prevent adverse selection and moral hazard, owners aim to converge their interests with agents. To achieve that, an owner can use incentives or information systems for monitoring an agent. In addition, an owner can employ compensation systems based on the outcomes of the work of an agent. These applications, however, create a cost burden to an owner, which is called “Agency Costs” (Jensen and Meckling, 1976).

To sum up, the agency theory describes people as “homo economicus”. Both owners and agents are utility maximizers. Their behaviors, as well as the theory, depends on the individualistic perspective. In this perspective, the purpose of corporate governance practices is to mitigate individualistic behaviors.

Other theories on the agent-owner relationship depict alternatives to individualistic behaviors. For instance, “Stewardship Theory” visualizes agents as stewards, who protect the interest of owners to maximize their utility. The interests of a steward converge to the interests of an owner. Even when the interests diverge, a steward chooses cooperation rather than self-interest because the value of cooperative behavior is more beneficial for a steward than acting for his/her self-interest (Davis et. al. 1997).

The agency theory and the stewardship theory seem to be contradicting. In practice, however, they should be combined rather than separated. Especially for the CEO and shareholder relationship, a combined approach is empirically proven to be beneficial for firm performance (see Donaldson and Davis, 1991).

## **2.2. Corporate Governance - Financial Performance Relationship**

As mentioned in the previous section, the sole purpose of corporate governance practices is to mitigate agency problems. Theoretically, when the interests of agents converge to the interests of owners, the effectiveness and performance of firms are expected to increase. The related literature provides empirical evidence on this matter. In the literature, a significant number of researches is focused on corporate governance - financial performance relationship. Points of view for this governance-performance relationship vary since corporate governance includes many types of practices for different disciplines.

Performance, on the other hand, is a relatively subjective term. Firms, especially modern corporations have different types of measures for financial performance, such as stock returns, accounting ratios, or overall firm valuation. Different corporate governance indicators are used to explain different types of financial performance. Every combination in the literature provide different points of view and enrich the understanding of the governance-performance relationship.

As an example of the different perspectives of corporate governance, the effect of ownership structure is widely studied in the literature. Shleifer and Vishny (1997), for instance, adopt the most basic view of agency theory to study ownership structure. They use the separation of ownership and control as a starting point. La Porta et. al. (1999), on the other hand, investigate the ultimate control power in companies.

Among various studies about ownership structures, many empirical studies focused on the effect of ownership structure on financial performance. For instance, Mitton (2002) interprets that higher ownership concentration results in higher stock returns. His empirical findings indicate that an increase in shareholdings of largest shareholders increases stock returns. Lemmon and Lins (2003) also study the effect of ownership structure on stock returns in the Asian Financial Crisis. Distinctively, they focus on the effect of separation of cash flow and control ownership on stock returns. They find that the firms with separated cash flow and control ownership have lower stock returns.

Similar to Mitton (2002) and Lemmon and Lins (2003), Cremers and Nair (2005) examine the effect of ownership structure on equity returns. However, they approach corporate governance under two titles: “Internal and External Governance”. Internal governance refers to institutional ownership. External governance refers to takeover vulnerability. They interpret that the combination of internal and external governance mechanisms increases portfolio returns. They also find that internal and external governance mechanism are complements rather than substitutes. Other studies also focus on the separation of cash flow and control ownership and find that most of the firms which have separated the ownership and control are family or state controlled in the countries with weak investor protection (see La Porta et. al., 1999 and Claessens, Djankov, and Lang, 2000a).

Related to ownership structure, shareholder rights are also studied by many scholars. The protection of shareholders and other investors (e.g. creditors) is an important issue. When the investor protection practices are in place and effective, investors tend to fund firms since they are assured that they generate a return from their investments (La Porta et. al., 2002). Protection of shareholder rights, however, is not solely an internal corporate governance activity. The legislation of a country also specifies and enforces shareholder protection. La Porta, Lopez-de-Silanes, Shleifer, and Vishny (1998), for instance, interpret that the legal system (e.g. common-civil law) of a country is effective on the level of shareholder protection.

In addition, the protection of shareholder rights, particularly the rights of minority shareholders, effects not only individual corporations but also the economy of a country. Johnson et. al. (2000) study the effect of minority shareholder protection in the Asian Financial Crisis. They find that the protection of minority shareholder rights explains the factors of crisis, such as the downward stock market and currency movements, better than the macroeconomic indicators.

The related literature on investor (both shareholder and creditor) rights also shows that the higher the investor protection, the higher the financial performance. For instance, La Porta et. al. (2002) show that the firms in countries which have higher minority shareholder protection by law have a higher valuation. More specifically, legal systems and related legislation enhance firms’ Tobin’s Q values. Gompers et.

al. (2003) construct a “Governance Index” from 24 governance rules which are related to shareholder rights. They find that firms with the strongest shareholder rights generate higher stock returns.

Durnev and Kim (2005) provide a relatively multidimensional study about the governance-valuation relationship. Similar to La Porta et. al. (2002), they investigate the individual shareholder protection and firm valuation relationship, in addition to a composite index of corporate governance. Their empirical findings imply that Tobin’s Q of the firms in their sample is significantly and positively related to shareholder protection. On the other hand, Core, Guay, and Rusticus (2006) study shareholder protection and financial performance relationship employing an accounting-based performance indicator, industry-adjusted return on assets. Their findings suggest that strong shareholder rights result in a higher return on assets.

Another point of view which is considered as corporate governance practice is compensation plans. Executive remuneration is widely studied among scholars. Theoretically, good incentive mechanisms, including the compensation plans, encourage agents to act in accordance with the interest of owners (Jensen and Meckling, 1976). Therefore, it can be stated that an effective compensation plan is expected to increase executive efforts. Consequently, firm performance is expected to increase.

The concept of executive compensation is acknowledged by many scholars. The empirical studies are conducted to investigate the topic from different aspects, such as the relationship between CEO compensation and board structure (see Chhaochharia and Grinstein, 2009) and the effect of shareholders on compensation plans (see Armstrong, Gow, and Larcker 2013). Among these various aspects of the compensation, the relationship between compensation plans and firm performance is also frequently focused. For instance, Zajac (1990) studies the relationship between CEOs’ compensation/wealth and firm performance. He observes that the perception of CEOs regarding a positive relationship between his/her personal wealth and firm wealth affects the firm performance positively. Gomez-Mejia (1992) investigates the compensation-performance relationship under the moderating effect of corporate

diversification practices. His findings suggest that the compensation plans are more effective on firm performance if the firms are efficiently diversified.

Mehran (1995) studies the compensation-performance relation from the aspect of compensation type. He interprets that the type of compensation encourages executive managers to increase firm performance rather than the amount of compensation. Particularly, equity-based compensation plans (e.g. stock options) effects firm performance positively. Baber, Janakiraman, and Kang (1996) show that there is a positive significant effect of compensation plans on the performance of firms which have higher investment opportunities. Core et. al. (1999) approach the compensation-performance relationship with a different perspective than previous studies. They interpret that the ownership and board structure are negatively related to the amount of CEO compensation. Furthermore, they interpret that firms with weaker corporate governance mechanisms tend to have higher CEO compensations and lower performance.

Board of directors is also considered a field of corporate governance practices. Especially, later studies on corporate governance practices focus on the board of directors. The studies in the literature focus on several characteristics of boards. For instance, some studies examine the effect of board structure on firm value (see Black and Kim, 2012; Cohen and Wang, 2013), while some studies focus on the relationship between the board structure and executive compensation (see Kerr and Bettis, 1987; Boyd, 1994; Chhaochharia and Grinstein, 2009). Likewise, the empirical studies about the relationship between the board of directors and firm performance are based on different dimensions of the board. For instance, Hermalin and Weisbach (1991) study the effect of board and ownership structure on firm performance. Their findings suggest that there is no significant relationship between board structure and firm performance. Yermack (1996) examines the effect of board size on firm value. His findings show that firms with smaller boards tend to have higher firm values. Sundaramurthy, Mahoney, and Mahoney (1997) examine the effect of board structure on the relationship between antitakeover provisions and market performance. They find that the separation of CEO and chairman mitigates the negative effect of antitakeover provisions on firm performance.

Bebchuk and Cohen (2005) study the effect of staggered board structure on firm performance. Their findings suggest that the firms with staggered boards have lower values of Tobin's Q. In line with Yermack (1996), Cheng (2008) also finds evidence on the board size - performance relationship. He indicates that firms with larger boards tend to have lower firm values, lower accounting profitability, and lower stock performance. Distinctively, Brick and Chidambaran (2010) focus on the effect of the board activity and the structure of board committees (e.g. audit committee) on firm value. They interpret that the number of board and board committee meetings is positively associated with firm value.

Liu, Miletkov, Wei, and Yang (2015), on the other hand, study the effect of board independence on firm performance in China. They show that firms with a higher number of independent directors have a higher return on assets and return on equity. Similar to Liu et. al. (2015), Fauver, Hung, Li, and Taboada (2017) examine the effect of board reforms, such as board independence, on firm performance. Their findings are consistent with the literature that board independence enhances firm performance. Other similar studies (see Klein, 2002; Black and Kim, 2012; Wintoki, Linck, and Netter, 2012) also examine the relationship between the features of the board and firm performance. Their findings are also in line with the statement that the board of directors is effective on firm performance.

In addition to these internal dynamics of the firm, the effect of the external world is considered as a corporate governance mechanism. As mentioned before, some certain corporate governance practices do not depend only on internal governance mechanisms. According to Jensen (1993), the standard internal governance mechanisms lose their ability to control firm dynamics in the last decades because of the changing business environment. The legal and economic environments also play a significant role in the application of corporate governance. The external governance mechanisms can be examined under two titles: the legal environment and market for corporate control.

Many studies in the literature consider the legal regulations as corporate governance practices. Sarbanes-Oxley Act provides a significant example of such legal regulations. In the act, some important dimensions of corporate governance,

such as the responsibilities of the boards of directors and disclosure requirements of the companies are determined and legislated (Murdock, 2018). Other than the individual regulations of corporate governance, general legislation systems are also considered effective in corporate governance systems.

The legal issues are studied as an effective determinant of corporate governance practices. For instance, Shleifer and Vishny (1997) remark the significance of legal protection of investors. They interpret that the legal protection of investors is important for external financing. La Porta et. al. (1998) investigate the legal systems as the origin of investor protection practices. Their findings indicate that the countries with the common-law system have higher protection of investors than the countries with civil-law system. Chen et. al. (2009) study the effect of investor-protecting laws on the relationship between internal governance and the cost of equity. They show that the negative influence of firm-level governance practices on the cost of capital is larger in countries with weak investor protection.

The market for corporate control, on the other hand, can be defined as the takeover market in which commodity is the control rights of firms. On this perspective, control rights of a firm refer to the authority to manage a firm's resources. In the takeover market, different parties, which are called "bidders", compete for the control of majority seats of other boards of directors, hence the resources of that company are called "targets" (Jensen and Ruback, 1983).

There are two different perspectives on the effect of competition for the control of corporate resources on firms and the business world. In one perspective, the takeover threat creates pressure on managers to perform better, in other words, it decreases managerial slack (Bebchuk and Fried, 2003). From a different standpoint, hostile takeovers cause a wealth transfer from stakeholders of the target company to bidders, hence, hostile takeovers can cause damage to the economic and cultural integrity of corporations (see Shleifer and Summers, 1988; Herzel and Shepro, 1990).

Hostile takeovers can be prevented by both internal actions of firms and government regulations. Firms use some governance dynamics as antitakeover provisions, such as staggered board structures, golden parachutes or poison pills. The purpose of these applications is to prevent a major change in the boards of directors

or executive management (Bebchuk, Cohen, and Wang, 2013). For example, the golden parachute applications require bidders to pay excessive compensation to executives or directors who are attempted for a replacement. The purpose is to make takeover costlier, therefore less attractive for any potential hostile bidder. (Singh and Harianto, 1989). Government regulations, on the other hand, include some regulations on transactions, such as mergers and acquisitions. For example, business combination (BC) laws prevent the acquisition of shares of a target firm more than a certain level for a determined period (Cain et. al., 2017).

In the literature, many studies focus on the effect of the market for corporate control on firm performance from different perspectives. For instance, Lambert and Larcker (1985) investigate the effect of the golden parachute applications on shareholders wealth. Their findings suggest that golden parachute applications cause positive stock market reactions. Giroud and Mueller (2010), analyze the effect of BC laws on operating performance of the firms with the moderating effect of competition. They find that the adoption of BC laws weakens internal governance dynamics but reduces the operating performance only in non-competitive industries. Cohen and Wang (2013) use a natural experiment on the effect of the staggered board structure on firm value. They present evidence that staggered board structures decrease firm value.

In addition to the studies that focus on the different dimensions of corporate governance practices, some scholars on governance-performance relationship adopt a more general point of view. Instead of investigating the relationship between financial performance and a single element of corporate governance, such as board structure or executive compensation, a general index or score of corporate governance is used in these studies.

To describe the level of corporate governance practices, an available index or score is used, or the researchers construct the index according to their own methodology or area of research. Some of these indexes include all aspects of corporate governance, while others focus more on specific dimensions. For instance, Gompers et. al. (2003) construct their own “Governance Index” by using 24 governance tools which are related to shareholder rights. They investigate the impact



of shareholder rights on stock returns. Their findings suggest that firms with stronger shareholder rights tend to have a higher level of stock returns.

Bebchuk et. al. (2009) also construct their own governance index which is based on six antitakeover provisions. Unparallel with Gompers et. al. (2003), their governance index is negatively related to the firm value and stock returns. In addition, Aggarwal et. al. (2009) construct their governance index by using 44 corporate governance provisions which are provided by Institutional Shareholder Services. They find that stronger governance improves the condition of minority shareholders. They also conclude that this improvement is strongly moderated by the country-level legislation on shareholder protection.

The related literature widely investigates whether the firms which invest in corporate governance practices ensure higher financial performance. Some studies argue that some governance practices do not have any influence or even have a negative effect on performance. For instance, Bebchuk et. al. (2009), Giroud and Mueller (2010), and Cohen and Wang (2013) provide evidence that antitakeover provisions have a negative effect on firm performance. Their findings contradict with the view on the positive effect of corporate governance practices on financial performance. However, antitakeover provisions mitigate the hostile takeover pressure on boards and executives. The reduction of hostile takeover threat causes managerial slack, especially when there is no other disciplinary mechanism, such as the product market competition (Giroud and Mueller, 2010).

The studies on the governance-performance relationship remark that the approach of the scholars to the topic varies depending on the perspectives on governance they adopt. In these researches, scholars use different dimensions of governance practices and different types of performance measurements. Even though there are contradictory studies, a great majority of the studies on the relationship between corporate governance and the financial performance conclude that corporate governance practices enhance financial performance. Based on past studies in the related literature, we develop the first hypothesis as follows:

**H1:** *Firms with stronger corporate governance have higher financial performance.*

The hypothesis about the governance-performance relationship is one of the three main arguments which lay a foundation of this study. Subsequently, we explain the other points of focus, the concept of economic freedom and the relationship between economic freedom and financial performance.

### **2.3. The Definition of Economic Freedom**

Another point of focus in this study is economic freedom and the effect of the level of economic freedom in a country on the financial performance of the firms. Initially, a definition of economic freedom is needed. According to The Heritage Foundation, the definition of economic freedom is as follows:

*Economic freedom is the fundamental right of every human to control his or her own labor and property. In an economically free society, individuals are free to work, produce, consume, and invest in any way they please. In economically free societies, governments allow labor, capital, and goods to move freely and refrain from coercion or constraint of liberty beyond the extent necessary to protect and maintain liberty itself (The Heritage Foundation, 2018).*

In other words, the concept of economic freedom refers to the freedom of individuals to decide what to do with their properties, without interfering the rights of other individuals. This freedom is supposed to be protected by governments and other related institutions in order to build a dynamic economy and civilized society (Miller and Kim, 2016).

Gwartney, Lawson, and Block (1996) explain that there are three pillars which lay a foundation to economic freedom. These are the freedom to make independent choices and have property, the security of individuals and property rights, and the exchange rights of individuals on their properties. Being independent on the decision-making of individuals on themselves is the most basic concept of all types of liberties, which includes economic freedom as well. People are free to decide what to do for themselves without violating the rights of other people (Gwartney and Lawson, 2003).

On the other hand, the governments and other relevant institutions are responsible for preserving this liberty of people on making economic choices and

having property. Without proper security, economic freedom is vulnerable to be violated by malevolent units. Also, this security on economic rights must be provided without governmental interference, since any restriction or claim on the rights and properties without a sound reason is also a violation of economic liberties. In order to achieve the preservation of economic liberties, governments enforce the application of relevant legislation on the economic activities of individuals without limiting the rights of individuals for a certain level (De Haan and Strum, 2000).

In parallel with the Gwartney et. al. (1996), The Heritage Foundation determine the main aspects of economic freedom for the Index of Economic Freedom. These main aspects are categorized according to their relatedness under four main titles, which are 'Rule of Law', 'Government Size', 'Regulatory Efficiency', and 'Market Openness'. The 'Rule of Law' refers to the power of the legislation of a country on both individuals and governmental authority. It includes property rights, government integrity, and judicial effectiveness. 'Government Size' is related to the fiscal policies of governments and the effect of governmental policies on individuals. It includes government spending, tax burden, and fiscal health. 'Regulatory Efficiency' means the effect of regulatory activities on the economic life of a country. It includes business freedom, labor freedom, and monetary freedom. 'Open Markets' refers to the degree of freedom, which the markets of a country have for internal and external activities. It includes trade freedom, investment freedom, and financial freedom. An equally weighted combination of these aspects is considered as the measurement of economic freedom of a country (The Heritage Foundation, 2018).

The meaning of economic freedom for economic life is another issue to discuss. In the literature, the effect of economic freedom is widely studied. Particularly, the majority of the studies focus on the effect of economic liberty on the macroeconomic condition of a country. The measure of the economic condition varies, depending on the perception or point of focus of researchers. Many scholars argue that whether the economically free countries experience a higher level of gross domestic product (GDP), GDP growth rate, foreign direct investment (FDI), or entrepreneurial activities. For instance, Cole (2003) interprets that there is a significant relationship between the level of economic freedom and GDP growth rate.

Contrarily, De Haan and Strum (2000), indicate different results. They imply that the components of economic freedom are related to GDP growth rate. However, they also interpret that there is no significant relationship between the overall level of economic freedom and GDP growth rate.

Kreft and Sobel (2005) investigate the cause and effect relationship between entrepreneurship activities and economic growth. One of the objective questions of this study is whether the relationship between economic growth and entrepreneurial activities is stimulated by the level of economic freedom. Their findings suggest that the entrepreneurial activities boost economic growth, while the entrepreneurship is altered by the level of economic freedom of a country. Angulo-Guerrero, Pérez-Moreno, and Abad-Guerrero (2017) investigate the effect of the components of economic freedom on different types of entrepreneurship. They categorize entrepreneurship activities as ‘opportunity’ and ‘necessity’ entrepreneurship. Their findings indicate that while economic freedom enhances opportunity entrepreneurship as it imposes higher ‘rule of law’ and ‘regulatory efficiency’, it also impairs necessity entrepreneurship because of ‘open markets’.

For another view on the effect of economic freedom on the macroeconomic values of a country, Bengoa and Sanchez-Robles (2003) study the causal relationship between economic freedom, foreign direct investments (FDI), and economic growth. Their findings indicate that while there is a parallel movement between FDI and economic growth, the level of economic freedom encourages FDIs. Herrera-Echeverri, Haar, and Estévez-Bretón (2014), on the other hand, use a more complex approach to the matter. They investigate the causal link between economic freedom, FDIs, and entrepreneurial activities in developed, emerging, and underdeveloped economies separately. They indicate that the regulatory side of economic freedom, especially the quality of institutions, is significantly related to the entrepreneurial activities for all three levels of economic development. Additionally, they observe that entrepreneurs from underdeveloped economies benefit more from trade freedom than developed economies. Emerging economies also show a significant causal link between FDI and entrepreneurial activities.

## **2.4. Relationship Between Economic Freedom and Financial Performance**

The general idea of the related literature indicates that economic freedom fosters the macroeconomic dynamics of a country. On the other hand, the effect of economic freedom on economic units is still a question to investigate. For common sense, if economic freedom has a positive effect on an economy as a whole, it can be assumed that it also has an influence on the units of that economy as well. Since the subjects of this study are the firms as economic units, we investigate the effect of economic freedom on firm performance.

As mentioned before, the previous studies provide evidence on the positive effect of economic freedom on the GDP growth level, entrepreneurial activities, and the level of FDI. In order to provide a solid link between economic freedom and firm performance, we initially focus on FDI activities. The firms involve FDI activities because their growth and sustainability depend on not only their success in the domestic markets but also their ability to involve in global markets. Consequently, FDI has a crucial role to be competitive internationally (Moon, Rugman, and Verbeke, 1998). Parallel with the previous section, being international also requires ‘open markets’, which is a critical aspect of economic freedom. In this sense, if FDI activities have an effect on the financial performance of firms, it can be concluded that economic freedom has an influence on financial performance by enhancing FDI activities.

The previous research on FDI-performance relationship reinforces this view. The related literature shows that the altered level of FDI has an enhancing effect on firm performance. Lu and Beamish (2001) study the effect of internationalization on the performance of small and medium enterprises. They interpret that internationalization has an enhancing effect on firm performance. They also show that this effect is mostly linked to the level of FDI that firms achieve.

In line with this, Chang and Rhee (2011) investigate the relationship between internationalization and firm performance under the moderating effect of global competition. Their findings indicate that financial performance has a significantly positive relationship with the FDI in the globally competitive industries. Other studies which focus on the relationship between the internationalization and financial

performance strengthen the view that the level of FDI and financial performance is positively related (see Buckley, Clegg, and Wang, 2002; Lu and Beamish, 2004).

The theory on an indirect effect of economic freedom on firm performance sounds reasonable. Other studies which are related to economic liberties support this idea. La Porta, Lopez-de-Silanes, Shleifer, and Vishny (1997), for instance, investigate the effect of investor protection on capital markets. Specifically, they focus on the legal environment and the rule of law in a country. They interpret that the countries with a weak application and enforcement of law tend to have smaller capital markets. They also show that less protection on investors results in smaller capital markets. From the economic freedom side, the weaker the investor protection, the less freedom on the economic decision. Consequently, the lower the economic freedom, the smaller the capital markets.

On the other hand, some researches aim to prove a direct relationship between economic freedom and firm performance. Henry (2000) conducts a study on the effect of stock market liberalization on equity prices. He defines stock market liberalization as the permission for buying and selling of stocks of a domestic market by foreign investors. The conclusion of the study indicates increasing stock index returns in domestic capital markets after the liberalization.

Smimou and Karabegovich (2010) investigate the straightforward impact of the level of economic freedom on stock returns in the Middle East and North Africa emerging markets. In line with Henry (2000), their findings indicate the positive effect of economic freedom on stock returns. Blau et. al. (2014), on the other hand, study the influence of economic freedom on stock price volatility. They interpret that economies with higher freedom tend to have more stable stock markets.

Chen et. al. (2015) approach to the matter from a different perspective. They investigate the effect of investment flexibility on equity valuation. They consider economic freedom for its enhancing effect on institutions. They indicate that economic freedom has an institutional impact, which provides a wider range of investment and growth options to firms. With more options on investment and growth strategies, firms tend to have higher equity values.

Other than the freedom-equity relationship, some empirical studies focus on the effect of economic freedom on bank performance. For instance, Demirgüç-Kunt, Laeven, and Levine (2004) conduct research on the complex effect of regulatory, institutional, and structural conditions on bank performance. Apart from the studies which are mentioned before, they choose net interest margin and overhead expenditure ratio as performance indicators for banks. They claim that both of these ratios focus on the efficiency of banking operations. They consider economic freedom and property rights as controlling variables for their effect on institutional conditions. Related to the economic freedom side, their findings suggest that industrial regulations are strongly affected by the level of economic freedom and property rights. In other words, the significant impact of industrial regulations on the performance of banks is depended to the level of economic freedom and property rights.

Chortareas et. al. (2013) study the effect of economic freedom on bank efficiency. Different from Demirgüç-Kunt et. al. (2004), they observe the direct effect of economic freedom. In addition to this, they also investigate the distinct effect of financial freedom as well. Their composition of economic freedom includes the ordinary economic freedom index and some different components of economic freedom, such as financial freedom and property rights. Their findings indicate that financial freedom has a positive impact on bank efficiency. They also show that this impact is observed more clearly in countries with higher government quality.

Gropper, Jahera Jr., and Park (2015), on the other hand, investigate the effect of economic freedom and political affiliations on bank performance. They consider the return on assets as the performance indicator. Their initial finding is that political connections of a bank enhance its performance. However, this enhancing effect is negatively related to the level of economic freedom. According to their research, economic freedom is more beneficial than political connections for bank performance.

Similar to Chortareas et. al. (2013), some empirical studies use the components of economic freedom. Approaching the subject with different perspectives enrich the understanding of the matter since the concept of economic

freedom cannot be limited by only commercial and financial activities. It also has strong and deep connections with the social, political, and legal environment. Especially, the legal environment of a country plays a crucial role in providing economic liberties. The health of the legal environment is depended to institutional conditions. Institutional effectiveness and quality for the legal environment can only be provided by independent jurisdiction and consequently, protection of rights and judicial effectiveness. In this sense, the freedom of legal institutions is the keystone of economically free societies (La Porta, Lopez-De-Silanes, Pop-Eleches, and Shleifer, 2004).

Many empirical studies address the role of institutions in economic freedom and the freedom-performance relationship. For example, Chhibber and Majumdar (1999) investigate the relationship between foreign ownership and firm profitability for Indian firms. For the economic freedom side, they consider property rights as an indicator of the institutional condition. Their findings indicate that the performance of firms is boosted by foreign ownership if property rights are in place.

Similarly, Chan, Isobe, and Makino (2008) demonstrate the role of institutional development in foreign-affiliated firm performance. They take economic freedom into account for the level of development in social institutions. Additionally, intellectual property rights are considered as the measure of the development level of political institutions. However, their findings interpret that the level of institutional development is negatively associated with the performance of foreign affiliates. Yasar, Paul, and Ward (2011) also address the role of institutions in firm performance. They consider property rights and their trust in the protection of property rights by legal authorities as to the indicators of institutional quality. Their results interpret that firm performance benefits from the ‘protected property rights’ perception.

Another approach to the possible impacts of economic freedom is the effects of privatization movements. As mentioned before, making independent economic choices is one of the principal concepts of economic freedom (Gwartney et. al. 1996). In the central decision-making systems, for example, government decision-making includes every type of intervention to the markets, individuals, and corporations. In



liberal economies, however, both individuals and firms are free to decide on their resource allocation, financing activities, and competitive behaviors. Eliminating any type of governmental influence on these decisions is the main idea behind the concept of privatization. In terms of optimal resource allocation and efficiency in operations of firms, privatization is essential (Boycko, Shleifer, Vishny, Fischer, and Sachs, 1993). In this sense, liberalizing the economic decisions and accordingly, privatizing the economic system are the first steps to achieve economic freedom.

Related literature provides a significant number of empirical studies on the effect of privatization movements on firm performance. For instance, D'Souza and Megginson (1999) conduct comparative research on firm performance before and after the privatization. Their approach to the matter is multidimensional, which means they do not focus only on financial performance. They also consider the reaction of capital structures, employment levels, efficiency, and many other indicators of firm performance to privatization movements. Their findings indicate that privatization is positively effective on overall firm performance.

Perotti and Van Oijen (2001) prefer a broader point of view on the matter. They demonstrate the impact of privatization on emerging equity markets while considering the role of the political environment. Their conclusions suggest that privatization movements tend to stable political environments. Accordingly, the mitigation of political risk increases market capitalization and overall stock returns.

Boubakri, Cosset, and Guedhami (2005) also question the effect of privatization on firm performance. They also consider the effect of corporate governance practices on privatized firms. Their findings indicate several conclusions. In line with D'Souza and Megginson (1999), they show that privatization boosts the performance of the companies. Additionally, corporate governance practices, commercial freedom, financial freedom, stock market development, and governmental conditions are strong influencers on the performance of privatized firms. For governmental conditions, especially the protection of property rights is remarkably effective on performance.

D'Souza, Megginson, and Nash (2005) provide evidence on the positive effect of privatization on firm performance. They compare this effect in terms of the

level of development of countries. In line with the previous studies, they indicate a positive impact of privatization on firm performance. They also interpret that ownership structures, the level of economic freedom and market development enhance the performance of privatized firms. Their final conclusion on the matter suggests that the underlying factors on privatized firms' performance change for emerging and developed markets.

The review of the literature provides a rich documentary on the determinants of firm performance. Although many of these determinants do not represent the direct effect of economic freedom, some of them are strongly related. For instance, Wan and Hoskisson (2003) study the influence of corporate diversification on firm performance. While conducting research on this relationship, they consider the effect of the economic environment of countries. Other than physical factors, such as capital or human resources, they consider the institutional factors. Especially, bureaucratic processes, legal effectiveness, and judicial quality are considered for their role in the effectiveness of diversification strategies. Accordingly, they conclude that an institutional environment has a significant impact on the diversification-performance relationship.

Similarly, Goerzen and Beamish (2003) address the geographic distinctness on the performance of multinational firms. They describe geographic differences as the total of 'dispersion of assets' and 'environmental diversity'. They consider the level of economic freedom as a component of the environmental diversity of a country. Their findings suggest that the performance of firms is the highest when asset dispersion is high in a diverse environment.

Su and Si (2015), on the other hand, conduct a study which analyzes the concept of 'financial innovation'. Financial innovation refers to producing new derivative instruments. They demonstrate the relationship between the level of financial innovation and the gap between 'performance objective' and 'realized performance'. In their study, economic freedom is considered as a moderator on this relationship. Their results show that the level of economic freedom boosts financial innovation while the gap between 'aspiration' and 'realized' performance widens.

The related literature presents various empirical studies which tackle the connection between firm performance and economic freedom. As mentioned before, the effect of economic freedom can be addressed both directly and indirectly. The indirect effect is mostly related to the influence of economic freedom on macroeconomic environments and the effect of the economic environment on firm performance. For the direct effects, several studies empirically investigate the relationship between economic freedom and various types of firm-level performance indicators. In addition, a significant number of studies consider some components of economic freedom or the practices which are strongly related to it.

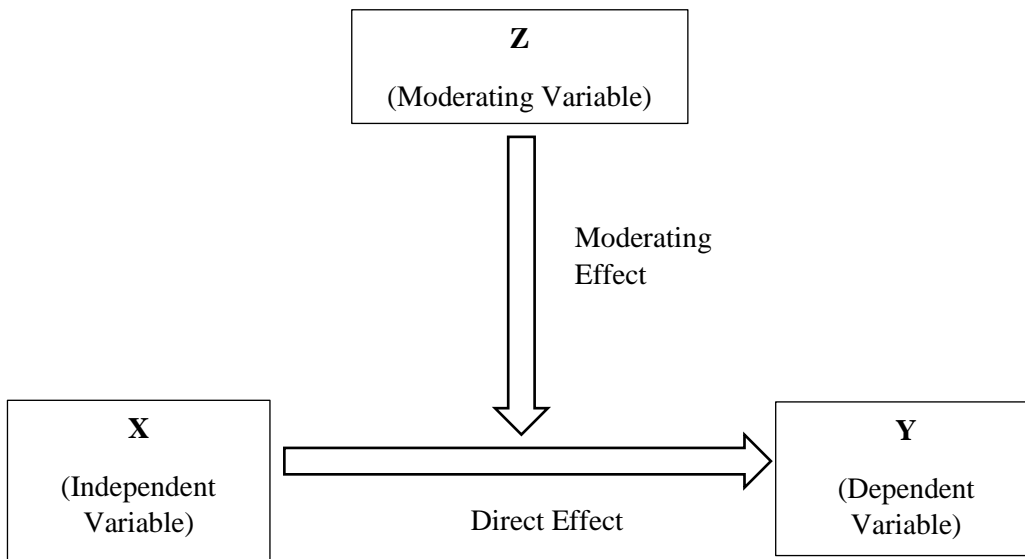
Consequently, the general idea that is presented by the previous endeavors points out that the existence of economic freedom enhances firm performance. In line with the related literature, we define the second hypothesis as follows:

**H2:** *Firms have higher financial performance when the economic freedom of the country in which they operate is higher.*

In the following section, we explain the third argument of this study, which is the moderating effect of economic freedom on the relationship between corporate governance and financial performance.

## **2.5. The Moderating Effect of Economic Freedom on the Relationship Between Corporate Governance and Financial Performance**

In order to explain the moderating effect of economic freedom, initially, a brief introduction to “moderating effect” concept is needed. The moderating effect can be described as the positive or negative effect of a variable on the relationship between two variables. The variable which affects the relationship is called ‘moderator’ or ‘moderating variable’. In most of the regression models, the moderator is a focus of interest for whether it has an influence on the relationship between the dependent variable on the independent variable. This influence can strengthen or weaken the explanatory power of the dependent variable or even affect the direction of the relationship (Dawson, 2014).



**Figure 1.** The Visual Representation of the Moderating Effect

Source: Adapted from Andersson, Cuervo-Cazurra, and Nielsen, 2014.

The moderating effect is tested by creating an interaction variable of the independent variable and moderating variable. For example, a simple linear regression model is given as follows:

$$Y_i = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \epsilon_i,$$

where  $Y_i$  is the dependent variable,  $X_{1i}$  is the independent variable,  $X_{2i}$  is the moderating variable, and  $\epsilon_i$  is the error term.  $\beta_0$  is the intercept.  $\beta_1$  and  $\beta_2$  are the slopes. An interaction variable is created by the multiplication of the independent variable and the moderating variable. For the example above, the model that includes the interaction variable is represented as follows:

$$Y_i = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \beta_3 (X_{1i} X_{2i}) + \epsilon_i,$$

where  $(X_{1i} X_{2i})$  represents the interaction of the independent variable and the moderator.  $\beta_3$  is the slope of the interaction variable. Any statistical significance of  $\beta_3$  demonstrates that  $X_{2i}$  has a significant influence on the relationship between  $Y_i$  and  $X_{1i}$  (Dawson, 2014).

The analyses on the moderating effect are widespread in every scientific research area. Especially in studies on business, management, finance, or economics, many scholars aim to observe a certain impact of moderation. For instance, Brockner, Siegel, Daly, Tyler, and Martin (1997) demonstrate the impact of the outcomes of managerial decisions on the relationship between organizational trust and employee support. They find that the outcomes of managerial decisions moderate the trust-support relationship. Zahra and Garvis (2000), on the other hand, examine the moderating effect of the hostility of the global environment on the relationship between corporate entrepreneurship and profitability. Their findings suggest that the environment hostility has a moderating effect on the relationship between corporate entrepreneurship and profitability.

The moderating effect of economic freedom, however, is acknowledged in a limited number of empirical studies. For example, De Clercq, Danis, and Dakhli (2010) conduct research on moderation of institutions on the effect of the networking activities on the new business creation. They demonstrate that the positive impact of associational activities on business creation becomes stronger when a country has a higher level of institutional regulations.

Shinkle and McCann (2014) conduct a study on the factors which encourage new product and service development. They investigate the concept regarding the moderation of institutional and economic development level. Their findings indicate several highlights related to the institutional development level. According to the study, the effect of institutional development weakens in transitional economies.

Roy and Goll (2014), on the other hand, investigate the effect of the national culture on national sustainability. They define national culture under three cultural dimensions, which are the performance, social supportiveness, and gender equality. They also describe the national sustainability under three concepts, which are freedom from corruption, environmental performance, and human development. Regarding economic freedom, they also measure the moderating effect of the level of economic freedom on national culture. They interpret that economic freedom boosts the positive effect of gender equality on environmental performance.

As mentioned before, Su and Si (2015) study the moderating effect of economic freedom on the relationship between financial innovation and the ‘target-achieved’ performance gap. Their findings indicate the positive effect of economic freedom on this relationship. Crum, Sherony, and Rayome (2015) demonstrate the relationship between human capital and entrepreneurship activities. They consider the level of human capital as a combination of the level of education and entrepreneurial skills. Economic freedom is considered for its positive effects on entrepreneurial activities (see Baumol, 1996; Kreft and Sobel, 2005). Their results suggest that the different components of economic freedom have different effects. For example, the influence of property rights is strong on the entrepreneurial skill - entrepreneurship activities relationship, while business freedom has a relatively weaker influence.

Bjørnskov (2016) conducts a study, which focuses on the effects of income inequality on economic growth. His description of income inequality consists of several different measurements, including the Gini Index and income deviation. Specifically, he investigates whether the level of economic freedom influences the effect of inequality on economic growth. His findings suggest that there is a positive effect of income inequality on economic growth where the level of economic freedom is higher.

In other respects, Lucas and Bordeaux (2018) provide evidence on the relationship between regulative activities and job creation, regarding the moderation of economic freedom. First, they argue that national regulations and restrictions reduce the number of jobs created (see Bertrand and Kramarz, 2002). Afterward, they contribute the literature with the effect of economic freedom on the regulation-job creation relationship. They show that while the number of jobs created is reduced by national regulations and restrictions, this reduction is mitigated in economically free states.

While the literature provides significant studies on the moderating effect of economic freedom on various types of social and economic relationships, according to our knowledge the point of interest in this study has not been investigated yet: Does economic freedom moderate the relationship between corporate governance and

financial performance? The review of related literature shows no significant studies on the matter. However, some theoretical connections can be constructed between economic freedom and corporate governance in the light of earlier studies.

As mentioned before, one of the main aspects of economic freedom is the security of private properties. In economically free countries, property rights are secured by the governments and other related institutions (Gwartney et. al., 1996). Corporate governance, on the other hand, is a whole of applications and procedures of controlling and monitoring. One of the fundamental purposes of corporate governance practices is to ensure utility maximization and the protection of the rights of shareholders and other investors (Gompers et. al., 2003). This protection, however, is not limited by managerial or controlling shareholders' expropriation. It also covers political and governmental interference (Milhaupt, 1998).

The possible link between corporate governance and property rights, and consequently economic freedom, lies in the fact that the effect of country-level property rights is crucial for the level of investor protection. Milhaupt (1998) studies the effect of property rights on corporate governance practices. He claims that countries are different in terms of property rights adoption. Accordingly, the allocation of control and ownership varies in terms of private and public units. Thereby, the structural differences emerge from the different adaptation of these rights. Regarding the control and ownership of firms, corporate governance structures are also affected by the differences in the adaptation of property rights.

La Porta, Lopez-de-Silanes, Shleifer, and Vishny (2000b) conduct an empirical study on the effects of the legal environment on corporate practices. Specifically, they compare the laws and their effectiveness across the countries and investigate how the legal structures are effective on the corporate governance strategies. They conclude that the existence of sound property rights provides a basis for effective investor protection.

According to Milhaupt (1998) and La Porta et. al. (2000b), property rights are considered significant determinants of corporate governance practices. Logically, the protection of investor rights cannot be provided in an economy where there is no basic protection of private property. On the other hand, more effective corporate

governance practices improve financial performance. As mentioned in the previous section, the related literature provides various evidence on this matter. Since property rights are among the fundamental aspects of economic freedom and they determine the effectiveness of the corporate governance practices, it is possible that higher level of economic freedom boosts the positive influence of corporate governance on financial performance.

The most significant contribution of this study to the literature is to provide empirical evidence on the moderating effect of economic freedom on the relationship between corporate governance and financial performance. Since there is no significant study on this issue, we aim to find evidentiary results, which are consistent with the theoretical literature. In this regard, we define the following hypothesis:

**H3:** *The economic freedom level of a country positively moderates the relationship between corporate governance and financial performance of a firm.*

Since the concepts and related literature is provided, we continue the study with the empirical section. The empirical section starts with the data sources. Following that, we explain the variable selection and model methodology. Finally, in this section, we demonstrate the regression results and provide robustness checks for the main model.



## CHAPTER 3

### EMPIRICAL ANALYSIS

#### 3.1. Sources of Data

The main source of data of this study is the Thomson-Reuters Database. Thomson-Reuters Eikon Database application, DataStream has access to several databases, such as MSCI, Worldscope, and ASSET4. ASSET4 Database is crucial, in terms of availability of comprehensive data on corporate governance. ASSET4 Database uses several indexes like Bovespa, S&P and Russell 3000. However, ASSET4 does not cover every firm in these indexes in terms of corporate governance ratings. The number of firms which it covers is limited. Since the corporate governance rating is one of the main measurements for this study, our samples are accordingly limited to ASSET4 coverage. In addition to this, we use other databases, especially for macroeconomic variables. Most of the country-specific data are gathered from the World Bank Database. The economic freedom data is obtained from the Heritage Foundation, and the corruption index data is provided by Transparency International Database.

In order to achieve an empirical comparison between emerging and developed economies, two representative samples are needed. The first sample is built with data from 20 emerging economies. The countries in the emerging economies sample are selected from Bloomberg Top 20 Emerging Economies of 2018 list, which is consistent with our research for their economic status and having data availability of these countries in DataStream. The selected countries are Brazil, Chile, China, Colombia, Czech Republic, Hungary, India, Indonesia, Korea (South), Malaysia, Mexico, Peru, Philippines, Poland, Russia, South Africa, Taiwan, Thailand, Turkey and United Arab Emirates (UAE). The data which are gathered from DataStream

about these emerging economies consist of cross-country sample of 1,062 firms and 11,682 observations for the period from 2008 to 2018.

The second sample is built to represent developed economies to compare the effect of economic development on the governance-performance relationship. The developed economies are selected as G-7 countries (Canada, France, Germany, Italy, Japan, the United Kingdom, and the United States). The G-7 countries represent best the developed countries, not only because of their economic size or power but also their level of market development. The developed markets are especially unique for providing adequate data. The cross-country sample of G-7 countries includes 3,738 firms and 41,118 firm-year observations.

The sizes of both samples are reduced due to the missing data points and excluding of outliers for two-tail and  $p = 0.005$  significance level. The number of firm-year observations and firms for both emerging and developed economies samples are given in Table 1. In emerging economies sample, the firms in the Czech Republic, Indonesia, Malaysia, and UAE are excluded from emerging economies sample. Finally, the final samples are reduced to 3,271 firm-year observations for 758 firms for emerging economies, and 11,275 firm-year observations for 3,137 firms for developed economies. Table 1 shows that for emerging economies, most firms are acquired from Taiwan, with 113, and the fewest number of firms is from Hungary, with 3. For developed economies, the United States has the most firms, with 1,882, and Italy has the fewest firms, with 44.

**Table 1.** Number of Firm-Year Observations and Firms for Emerging and Developed Economies

<b>Panel A: Emerging Economies</b>		
<b>Country</b>	<b>Number of Firm-Year Observations</b>	<b>Number of Firms</b>
Brazil	381	84
Chile	106	33
China	342	74
Colombia	37	13
Hungary	15	3

**Table 1.** Number of Firm-Year Observations and Firms for Emerging and Developed Economies (cont'd)

<b>Panel A: Emerging Economies</b>		
<b>Country</b>	<b>Number of Firm-Year Observations</b>	<b>Number of Firms</b>
India	352	80
Korea	425	96
Mexico	120	30
Peru	33	25
Philippines	90	19
Poland	81	19
Russia	140	30
South Africa	428	92
Taiwan	523	113
Thailand	108	27
Turkey	90	20
<b>Total</b>	<b>3,271</b>	<b>758</b>
<b>Panel B: Developed Economies</b>		
<b>Country</b>	<b>Number of Firm-Year Observations</b>	<b>Number of Firms</b>
Canada	1,250	291
France	445	94
Germany	391	84
Italy	201	44
Japan	1,939	407
United Kingdom	1,447	335
United States	5,602	1,882
<b>Total</b>	<b>11,275</b>	<b>3,137</b>

## 3.2. Variables

### 3.2.1. Financial Performance

To measure financial performance, three different indicators are used. To measure accounting-based financial performance, industry-adjusted return on assets (ROA) is chosen. It is suitable for our research for demonstrating short-term profitability and ignores tax effects and capital structure changes (Kang and

Shivdasani, 1995). Data of return on assets are gathered from Worldscope. Generally, it is calculated as Net Income divided by Total Assets. For industry-adjustment, return on assets is calculated as follows:

- For Industrials:  

$$\frac{((\text{Net Income} - \text{Bottom Line} + ((\text{Interest Expense on Debt-Interest Capitalized}) \times (1 - \text{Tax Rate}))) / \text{Average of Last Year's and Current Year's Total Assets}) \times 100$$
- For Banks:  

$$\frac{((\text{Net Income} - \text{Bottom Line} + ((\text{Interest Expense on Debt-Interest Capitalized}) \times (1 - \text{Tax Rate}))) / \text{Average of Last Year's (Total Assets - Customer Liabilities on Acceptances) and Current Year's (Total Assets - Customer Liabilities on Acceptances)}) \times 100$$

(Customer Liabilities on Acceptances only subtracted when included in Total Assets)
- For Insurance Companies:  

$$\frac{((\text{Net Income} - \text{Bottom Line} + ((\text{Interest Expense on Debt-Interest Capitalized}) \times (1 - \text{Tax Rate}))) + \text{Policyholders' Surplus}) / \text{Average of Last Year's and Current Year's Total Assets}) \times 100$$
- For Other Financial Companies:  

$$\frac{((\text{Net Income} - \text{Bottom Line} + ((\text{Interest Expense on Debt-Interest Capitalized}) \times (1 - \text{Tax Rate}))) / \text{Average of Last Year's (Total Assets - Custody Securities) and Current Year's (Total Assets - Custody Securities)}) \times 100$$

The calculation of ROA is given in percentage rate.

The second performance indicator is Tobin's Q. According to the prior studies, Tobin's Q is a useful indicator for reflecting the valuation of a firm. La Porta et. al. (2002) say that it is an appropriate choice of firm valuation since it is not only bounded by internal financial structure but it also reflects the perspective of the market. There are many different methods to calculate Tobin's Q ratio. We use one of the most common methods, which is as follows:

- $$\frac{(\text{Market Value of Equity} + \text{Market Value of Liabilities}) / (\text{Book Value of Equity} + \text{Book Value of Liabilities})$$

The third performance indicator is Price to Book Value of the common stocks. It is calculated as follows:

- $$\text{Year - End Market Price of Common Stocks} / \text{Book Value of Common Stocks}$$

This is a market-based performance indicator since it gives a clue about how a firm performs on financial markets. Fich and Shivdasani (2005) claim that the market to book ratio is positively related to the existence of stock option compensation plans, a proxy for internal governance mechanisms. Market-based performance indicators have some bias in comparison to accounting-based indicators, because they are not only affected by internal (firm – based) dynamics, but also by industrial, financial and macroeconomic environments. However, using three different financial performance indicators provides robustness check to our study since analyzing the impact of corporate governance on financial performance requires the investigation of the subject from different perspectives.

### **3.2.2. Corporate Governance Score**

Prior studies show different methods for calculation of corporate governance. Gompers et al. (2003) construct a governance index from 24 governance rules that are associated with shareholders' rights. La Porta et al. (2002) use the legal protection of minority shareholders, and Lemmon and Lins (2003) use ownership structure as a proxy for corporate governance. To measure corporate governance, we use ASSET4 Corporate Governance General Score. ASSET4 Database provides a variety of different aspects of corporate governance. In the database, corporate governance is interpreted under 5 major subtitles, which are "Board Structure", "Board Function", "Compensation Policy", "Shareholder Rights", and "Vision and Strategy" Under these subtitles, there are 278 different variables (binaries, values, and scores) which focus on some significant part of the related subtitle. The list of all 'corporate governance score' variables is presented in Appendix A. We prefer to use the Corporate Governance General Score, which is a more likely general index of corporate governance application of the chosen firm.

There are several reasons for this choice. First, this study aims to create a general outlook for the subject. On that point, using a general index seems more suitable, since it seems more synchronized with other variables, especially with macroeconomic indicators. Second, these corporate governance variables under these

subtitles have a significant amount of missing data. Using these variables possibly render our research. Third, many of these variables are irrelevant to this study. Their usage in the study may cause biased results. Corporate Governance General Score is derived from the variables under the subtitles which are labeled as “Score”. It is calculated as an average of these scores. The general score is calculated at a rate of 0 to 100.

### **3.2.3. Economic Freedom Index**

Greater economic freedom provides firms opportunity for new investments, profitability and enhancing equity value (Chen et. al., 2015). Using economic freedom as the moderating variable for our study aims to explain how financial performance and corporate governance relation varies with this is a country – level variable. The data on economic freedom are gathered from the Heritage Foundation Database. Heritage Foundation develops annual reports of economic freedom for 186 countries around the world. The economic freedom index covers 12 different freedom – related subjects, which are Property Rights, Government Integrity, Judicial Effectiveness, Tax Burden, Government Spending, Fiscal Health, Business Freedom, Labor Freedom, Monetary Freedom, Trade Freedom, Investment Freedom, and Financial Freedom. In order to preserve the consistency of the study, we use the overall index, which is the average of all of these 12 subjects. As all these subjects, the overall index is scaled from 0 to 100. The higher the index score, the more economic freedom that the country has.

### **3.2.4. Interaction of Corporate Governance Score and Economic Freedom Index**

Using a variable that represents the mutual effect between corporate governance practices and freedom of economic activity is beneficial for understanding the effect of economic freedom on the relationship between financial

performance and corporate governance practices. It is calculated as the multiplication of corporate governance score and economic freedom overall index.

### **3.2.5. Firm-Level Control Variables**

Previous studies show that there are some important firm characteristics that need to be considered in the analysis. One of these characteristics is the financial risk. To describe financial risk, we choose stock price volatility. It is calculated as the average annual changes from an average annual price of a firm's common stock. Stock prices can be described as an indicator of financial performance (Dechow, 1994). The volatility of such proxy is a measurement of financial risk (Himmelberg, Hubbard, and Palia, 1999). Also, there is some significant evidence about that there is a causality between corporate governance practices and equity prices (see Gompers et. al., 2003; Cremers and Nair, 2003), and some studies suggest "stock return volatility" as a financial risk indicator (Bushee and Noe, 2000). However, price volatility of stocks provides a clearer view of financial risk since it shows the market's reaction to both internal and external dynamics more rapidly.

The second firm characteristic is the firm size. Firm size is correlated with earnings and profitability (Fama and French, 1995; Core et. al., 2006). In parallel with the literature, we use the natural logarithm of a total asset in USD. Total assets are calculated as the sum of current assets, long-term receivables, investment in unconsolidated subsidiaries, other investments, net property plant and equipment and other assets (Thomson Reuters, 2018). It is an industry-adjusted measurement. According to the Thomson Reuters Eikon DataStream, the adjustment on particular industries are as follows:

*Banks: Total assets represent the sum of cash & due from banks, total investments, net loans, customer liability on acceptances (if included in total assets), investment in unconsolidated subsidiaries, real estate assets, net property, plant and equipment, and other assets.*

*Insurance Companies: Total assets represent the sum of cash, total investments, premium balance receivables, investments in unconsolidated subsidiaries, net property, plant and equipment, and other assets.*

Other Financial Companies: *Total assets represent the sum of cash & equivalents, receivables, securities inventory, custody securities, total investments, net loans, net property, plant and equipment, investments in unconsolidated subsidiaries and other assets.*

The last firm-level control variable is the leverage ratio. Generally, it is addressed as total debt to total asset ratio. In more detail, the Worldscope Database calculates the leverage ratio as:

- $((\text{Short-Term Debt} + \text{Current Portion of Long-Term Debt} + \text{Long-Term Debt}) / \text{Total Assets}) \times 100$

Worldscope leverage ratio calculation methods have also adjustments for particular industries, which are as follows:

- Banks:  $((\text{Short-Term Debt} + \text{Current Portion of Long-Term Debt} + \text{Long-Term Debt}) / (\text{Total Assets} - \text{Customer Liabilities on Acceptances})) \times 100$  (Customer Liabilities on Acceptances only subtracted when included in Total Assets)
- Other Financial Companies:  $((\text{Short-Term Debt} + \text{Current Portion of Long-Term Debt} + \text{Long-Term Debt}) / (\text{Total Assets} - \text{Custody Securities})) \times 100$

The inclusion of the leverage ratio to the analysis is important. Financial leverage has a tax advantage, it increases profitability (Kraus and Litzenberger, 1973), while Mitton (2002) argues that higher debt levels can lead to lower stock returns. Additionally, Garvey and Hanka (1999) claim that there is a causal relationship between corporate governance practices and leverage ratio. Specifically, they say the threat of hostile takeover increases debt financing. In addition to that, they imply that legal barriers on takeovers may cause managerial slack. The ratio is a scale between 0 and 100.

### **3.2.6. Industry-Level Control Variables**

The firms in both samples (emerging and developed economies) are classified according to their industry that they are operating in. Garvey et. al. (1999) and Gompers et. al. (2003) use industry means and medians as proxies for industry effects on firm performance indicators. Khanna and Palepu (2000a) use Standard Industrial Classification (SIC) codes to build industry dummies. Similar to Khanna and Palepu



(2000), we use the Industry Classification Benchmark (ICB) codes of the related industries to build industry dummies. ICB is a classification standard, which is maintained by Financial Times Stock Exchange (FTSE), that categorizes firms as 10 industries, 19 supersectors, 41 sectors and 114 subsectors (ICB, 2014). In this study, the classification is applied by industry level, because of the lack of data from some certain sectors, especially in the emerging economies sample. The industry names with ICB Codes and number of firms in the industries are described in Table 2.

**Table 2.** Number of Firms by Industry

<b>ICB Industry Code</b>	<b>ICB Industry Name</b>	<b>Number of Firms (Developed)</b>	<b>Number of Firms (Emerging)</b>
1	Oil & Gas	192	43
1000	Basic Materials	236	114
2000	Industrials	603	176
3000	Consumer Goods	316	122
4000	Health Care	247	32
5000	Consumer Services	416	77
6000	Telecommunications	39	35
7000	Utilities	110	59
8000	Financials	718	42
9000	Technology	260	58
	<b>Total</b>	<b>3,137</b>	<b>758</b>

To measure industry effects on the model, we use ten dummy variables for defined industries. The value of one of these variables is equal to 1 if the firm operates in that particular industry represented by the dummy variable, and other industry dummies are equal to 0.

### **3.2.7. Country-Level Control Variables**

Measuring country-level effects on firm performance is crucial for our study because the analyses are not only limited by internal corporate dynamics but also, they aim to interpret the effect of the macroeconomic environment. Especially, using

economic freedom index requires more involvement of macroeconomic indicators to the analyses.

The involvement of country-level indicators requires to develop multiple perspectives on both the sample characteristics and model integrity. The aim of this study is to analyze the subject in a more general extent. Therefore, parallel with the literature, we choose the general economic indicators. Besides, the fundamental differences between emerging and developed economies need to be considered. On these purposes, we try to use macroeconomic indicators which reflect the dynamics and structures for both samples.

For instance, we use both GDP per capita and GDP growth rate. La Porta et al. (1999) address that GDP per capita can be used as a proxy for economic development level. Per capita GDP is a suitable indicator for macroeconomic performance since it interprets the economic size factor. We also add the GDP growth rate. Vassalou (2003) says that the GDP growth rate is associated with equity returns. For emerging economies, GDP growth rate seems like a more reasonable indicator because GDP per capita tends to be lower in emerging economies than developed ones. They are in the “development” process, so they cannot be compared with developed economies based on their GDP size. All data of GDP growth rate and per capita are obtained from World Bank World Development Indicators (WDI) Database except Taiwan. Taiwan GDP data is obtained from the National Statistics Bureau of the Republic of China. GDP per capita is given as current USD.

Another tool for a country-based comparison is the price index. General price level and inflation rates are widely used indicators in macroeconomic analyses. They provide an implication about the health of the monetary policies, the real economy and the financial system of economies. Fama (1981) suggests that there is a negative relationship between inflation and stock returns. On the other hand, Flannery and Protopapadakis (2002) preferred consumer price index to explain this relationship. To measure the price effect, we use the Core Consumer Price Index (CPI) with no seasonal adjustment to measure the effect of the price level. Data are collected from the Global Economic Monitor (GEM) Database The base year of the index is 1987.

To measure the effect of labor markets, we use the unemployment rate. Unemployment rate provides significant information about the real economy, public policies, and overall macroeconomic condition. A change in the unemployment rate implies the return on human capital, and that return affects the overall market (Flannery and Protopapadakis, 2002). The unemployment rate is given as a percentage and the data is obtained from the GEM Database.

Other than general macroeconomic indicators, we use two additional variables. One of these is the corruption index. Pinkowitz, Stulz, and Williamson (2006) show that higher corruption reduces the effect of cash holdings and non-cash assets on firm value. Jiang and Nie (2014) say that corruption has a positive effect on firm profitability. In this study, we use the corruption index which is made by Transparency International. The aim of Transparency International is to destroy corruption in the world. In that purpose, they build the corruption index which measures and interprets the level of corruption in more than 100 countries. The index is scaled from 0 to 100. The higher the score, the lower the corruption that the country has. The corruption is also quite related to our two independent variables: Corporate governance and economic freedom. Economic freedom is partially associated with corruption since these two subjects counter one another. More specifically, corruption reduces judicial effectiveness and government integrity, thereby prevents economic freedom. From the perspective of corporate governance, corruption reduces the effect of external governance mechanisms.

The last country-level control variable is the legal system. The legal system is an important indicator of country-level corporate governance practices. La Porta et. al. (1998) suggest that the level of investor protection is associated with the legal system of that country. In this study, we consider two general legal system applications, common and civil law. The legal system is represented as a dummy variable which is equal to 1 if the country uses civil law systems, otherwise 0, which means that the country uses common law systems.

### 3.3. Methodology

In order to explain financial performance and corporate governance relationship, and the effect of economic freedom on this relationship, we employ 3 regression models. Every model is applied to both emerging and developed economies sample to explain the differences between emerging and developed economies. The first model is the principal (ROA) model. Other two models are constructed to validate the robustness of the study. In the (ROA) model, we use return on assets as the dependent variable to measure the effect of corporate governance and economic freedom on the accounting-based performance of firms. The equation for the first model is described as follows:

$$\text{(ROA)} \quad ROA_{it} = \beta_0 + \beta_1 CGS_{it} + \beta_2 EFI_{it} + \beta_3 (CGS_{it} * EFI_{it}) + \text{Firm-Level Controls}_{it} + \text{Industry Dummies} + \text{Country-Level Controls}_{it},$$

where ROA represents return on assets, CGS is the corporate governance score, EFI is the economic freedom index. In the second model, Tobin's Q is employed as the dependent variable to observe the effect of corporate governance and economic freedom on firm valuation. The equation of the second model is:

$$\text{(Q)} \quad Q_{it} = \beta_0 + \beta_1 CGS_{it} + \beta_2 EFI_{it} + \beta_3 (CGS_{it} * EFI_{it}) + \text{Firm-Level Controls}_{it} + \text{Industry Dummies} + \text{Country-Level Controls}_{it},$$

where Q represents Tobin's Q value. In the last model, we use the market to book ratio of common stocks as a proxy for financial performance to measure on market perspective. The model that uses the market to book value as the dependent variable is as follows:

$$\text{(P/B)} \quad P/B_{it} = \beta_0 + \beta_1 CGS_{it} + \beta_2 EFI_{it} + \beta_3 (CGS_{it} * EFI_{it}) + \text{Firm-Level Controls}_{it} + \text{Industry Dummies} + \text{Country-Level Controls}_{it},$$

where P/B represents price to book value of a common stock.

Another important work for creating suitable regression models is to understand the data. As mentioned before, the type of data we use in this study is panel or longitudinal data. One of the possible problems with the panel data is the

serial or autocorrelation. In order to detect any serial correlation in the samples, we use Wooldridge Test for autocorrelation. The test results are represented in Table 3.

The test results interpret that there is a significant serial correlation in every model for both samples. In order to eliminate autocorrelation, we use two-step Generalized Least Square (GLS) Random Effects with first-order autoregressive disturbance (AR (1)). The GLS method is commonly used for analyzing cross-sectional time series because of its simplicity and estimation capacity of serial correlation (Baltagi and Wu, 1999). We apply a two-step approach to measure the effect of time-invariant and unobservable variables without entailing the random effects of these variables (Halaby, 2004)

**Table 3.** Wooldridge Autocorrelation Test Results

<b>Panel A: Emerging Economies</b>	<b>Panel B: Developed Economies</b>
ROA	ROA
H0: no first-order autocorrelation	H0: no first-order autocorrelation
F (1, 652) = 16.090	F (1, 1943) = 6.415
Prob > F = 0.0001	Prob > F = 0.0114
Q	Q
H0: no first-order autocorrelation	H0: no first-order autocorrelation
F (1, 789) = 37.804	F (1, 1972) = 201.619
Prob > F = 0.0000	Prob > F = 0.0000
P/B	P/B
H0: no first-order autocorrelation	H0: no first-order autocorrelation
F (1, 788) = 5.932	F (1, 1971) = 7.776
Prob > F = 0.0151	Prob > F = 0.0053

In this table, ROA represents the return on assets, Q represents Tobin's Q, and P/B represents the price to book ratio.

### 3.4. Summary Statistics

Summary statistics for emerging economies and developed economies samples are given in Table 4. Correlation matrices of both samples are shown in Table 4. The summary statistics interprets that accounting-based performance indicator (ROA) is higher in emerging economies. On the contrary, valuation, and market-based performance indicators (Tobin's Q and Market to Book Ratio) are slightly higher in developed economies. Also, developed economies have significantly higher corporate governance score than emerging economies, and the economic freedom level is slightly higher in developed economies. The level of financial risk (stock price volatility) and economic size (total assets) are similar for both samples. However, financial leverage (debt to assets) ratio is significantly higher in emerging economies. In line with the literature, emerging economies have a higher GDP growth rate, consumer price index, unemployment rate, and corruption. Also, the GDP per capita is lower in emerging economies.

Table 5 shows that in Panel A (Emerging Economies), return on assets and price to book ratio are significantly correlated at 1% level with both corporate governance score and economic freedom index. Tobin's Q is also significantly correlated with economic freedom index, but not with corporate governance score. For the price to book ratio and Tobin's Q, the correlation coefficient is negative with the economic freedom index. Panel B (Developed Economies) shows that all financial performance indicators are significantly correlated with both corporate governance score and economic freedom index. However, for return on assets, the correlation coefficient is negative with the economic freedom index.

Table 6 shows the mean values for every variable by the country for both samples. The values show that on an accounting basis, the best performing emerging economy is Hungary (ROA = 48.13) and the worst performing country is Brazil (ROA = 6.26). On the other hand, India seems to be the best-performing country on market and valuation basis (Q = 2.89; M/B = 4.91), and Hungary is the worst (Q = 1.08; M/B = 1.05). Corporate governance scores show that South Africa is the country with the best corporate governance practices (CGS = 66.14), and Chile has the worst

corporate governance practices (CGS = 10.05). On the economic freedom side, Chile has the most freedom (EFI = 78.30), and Russia has the least freedom (51.24).

On the developed economies side, United Kingdom is the best-performing country on accounting basis (ROA = 6.91), and the United States is the best-performing economy on valuation and market basis (Q = 2.07; M/B = 3.52). On accounting basis, Canada (ROA = 0.95); on market and valuation basis, Italy (Q = 1.23; M/B = 1.4) are the worst performing countries. On the corporate governance side, the United Kingdom has the best (CGS = 77.31), and Japan has the poorest (CGS = 10.57) corporate governance practices. Economic freedom indexes show that Canada has the most (EFI = 72.80), and Italy has the least (EFI = 61.30) freedom on their economic activities.

**Table 4.** Summary Statistics of Samples

<b>Panel A: Emerging Economies</b>						
<b>Variable</b>	<b>N</b>	<b>Mean</b>	<b>Std. Dev.</b>	<b>p25</b>	<b>Median</b>	<b>p75</b>
ROA	3,271	32.092	18.687	17.900	31.840	44.900
Q	3,271	1.713	1.342	0.990	1.230	1.880
P/B	3,271	2.599	3.162	0.944	1.541	3.000
CGS	3,271	30.394	25.317	8.990	22.690	48.420
EFI	3,271	63.304	8.100	56.200	62.600	71.500
CGS*EFI	3,271	1,854.592	1,524.180	578.435	1,409.760	2,883.507
VOL	3,271	29.809	8.352	23.930	28.810	35.130
TA	3,271	15.420	1.424	14.432	15.443	16.361
D/A	3,271	61.447	19.338	49.890	66.100	75.410
GRW	3,271	3.157	2.849	1.608	2.790	5.456
GDP	3,271	9.150	0.841	8.754	9.141	9.995
CPI	3,271	121.338	15.517	109.700	115.140	130.030

**Table 4.** Summary Statistics of Samples (cont'd)

<b>Panel A: Emerging Economies</b>						
<b>Variable</b>	<b>N</b>	<b>Mean</b>	<b>Std. Dev.</b>	<b>p25</b>	<b>Median</b>	<b>p75</b>
U	3,271	8.292	7.062	3.960	5.520	8.500
COR	3,271	46.067	10.860	38.000	43.000	55.000
LEG	3,271	0.762	0.426	1.000	1.000	1.000
<b>Panel B: Developed Economies</b>						
<b>Variable</b>	<b>N</b>	<b>Mean</b>	<b>Std. Dev.</b>	<b>p25</b>	<b>Median</b>	<b>p75</b>
ROA	11,275	4.531	9.472	1.590	4.470	8.040
Q	11,275	1.788	1.278	1.057	1.370	2.010
P/B	11,275	2.866	5.773	1.145	1.929	3.392
CGS	11,275	58.200	30.225	34.250	66.650	84.280
EFI	11,275	74.698	3.578	73.800	75.500	76.200
CGS*EFI	11,275	4,378.890	2,305.605	2,538.220	4,977.715	6,375.070
VOL	11,275	26.565	9.021	20.100	25.040	31.310
TA	11,275	15.656	1.666	14.563	15.535	16.655
D/A	11,275	25.842	20.104	9.990	23.400	37.780
GRW	11,275	1.782	0.770	1.485	1.677	2.370
GDP	11,275	10.786	0.160	10.649	10.848	10.941
CPI	11,275	108.096	3.616	105.957	109.253	110.762
U	11,275	5.947	1.779	4.850	5.258	7.325
COR	11,275	75.075	5.341	74.000	74.000	76.000
LEG	11,275	0.264	0.441	0.000	0.000	1.000

In this table, ROA means Return on Assets by percentage. Q means Tobin's Q ratio, P/B means Price to Book Value of Common Stock, CGS means Corporate Governance General Score, EFI represents Economic Freedom Overall Index, CGS\*EFI is the interaction variable of Corporate Governance Score and Economic Freedom Index, VOL represents Stock Price Volatility by percentage, TA is the natural logarithm of Total Assets, D/A is the Leverage (Debt to Assets) Ratio, GRW is the GDP Growth Rate by percentage, GDP is the natural logarithm of GDP per Capita as USD, CPI is the Consumer Price Index with no seasonal adjustment, U is the Unemployment Rate as percentage, COR is the Corruption Perceptions Index, and LEG is the dummy variable of the Legal System.



**Table 5.** Correlation Matrices

<b>Panel A: Emerging Economies</b>								
	<b>ROA</b>	<b>Q</b>	<b>P/B</b>	<b>CGS</b>	<b>EFI</b>	<b>CGS*EFI</b>	<b>VOL</b>	<b>TA</b>
<b>ROA</b>	1.000							
<b>Q</b>	-0.068*	1.000						
	0.000							
<b>P/B</b>	-0.035*	0.821*	1.000					
	0.001	0.000						
<b>CGS</b>	0.067*	0.022	0.050*	1.000				
	0.000	0.069	0.000					
<b>EFI</b>	0.171*	-0.098*	-0.109*	-0.201*	1.000			
	0.000	0.000	0.000	0.000				
<b>CGS*EFI</b>	0.076*	0.012	0.043*	0.988*	-0.088*	1.000		
	0.000	0.328	0.000	0.000	0.000			
<b>VOL</b>	-0.069*	-0.063*	-0.086*	-0.196*	-0.305*	-0.241*	1.000	
	0.000	0.000	0.000	0.000	0.000	0.000		
<b>TA</b>	-0.019	-0.371*	-0.261*	0.016	-0.127*	-0.002	-0.130*	1.000
	0.087	0.000	0.000	0.196	0.000	0.866	0.000	

**Table 5.** Correlation Matrices (cont'd)

<b>Panel A: Emerging Economies</b>								
	<b>ROA</b>	<b>Q</b>	<b>P/B</b>	<b>CGS</b>	<b>EFI</b>	<b>CGS*EFI</b>	<b>VOL</b>	<b>TA</b>
<b>D/A</b>	0.054*	0.101*	-0.024	0.018	0.120*	0.027	-0.019	-0.388*
	0.000	0.000	0.014	0.138	0.000	0.028	0.063	0.000
<b>GRW</b>	0.077*	0.096*	0.087*	-0.043*	-0.324*	-0.079*	0.140*	0.125*
	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000
<b>GDP</b>	-0.047*	-0.190*	-0.192*	-0.292*	0.661*	-0.224*	-0.141*	0.079*
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>CPI</b>	-0.060*	0.077*	0.078*	0.269*	-0.264*	0.224*	-0.145*	0.069*
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>U</b>	0.088*	0.023	0.064*	0.510*	-0.162*	0.521*	-0.117*	-0.255*
	0.000	0.033	0.000	0.000	0.000	0.000	0.000	0.000
<b>COR</b>	0.106*	-0.106*	-0.120*	-0.270*	0.798*	-0.185*	-0.182*	-0.049*
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>LEG</b>	-0.127*	-0.191*	-0.195*	-0.462*	0.262*	-0.456*	0.053*	0.199*
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

**Table 5.** Correlation Matrices (cont'd)

<b>Panel A: Emerging Economies</b>							
	<b>D/A</b>	<b>GRW</b>	<b>GDP</b>	<b>CPI</b>	<b>U</b>	<b>COR</b>	<b>LEG</b>
<b>D/A</b>	1.000						
<b>GRW</b>	0.005 0.620	1.000					
<b>GDP</b>	-0.044* 0.000	-0.367* 0.000	1.000				
<b>CPI</b>	-0.009 0.335	-0.085* 0.000	-0.201* 0.000	1.000			
<b>U</b>	0.01 0.342	-0.211* 0.000	-0.271* 0.000	0.150* 0.000	1.000		
<b>COR</b>	0.008 0.552	-0.214* 0.000	0.681* 0.000	-0.497* 0.000	-0.148* 0.000	1.000	
<b>LEG</b>	-0.101* 0.000	-0.096* 0.000	0.590* 0.000	-0.224* 0.000	-0.748* 0.000	0.258* 0.000	1.000

**Table 5.** Correlation Matrices (cont'd)

<b>Panel B: Developed Economies</b>								
	<b>ROA</b>	<b>Q</b>	<b>P/B</b>	<b>CGS</b>	<b>EFI</b>	<b>CGS*EFI</b>	<b>VOL</b>	<b>TA</b>
<b>ROA</b>	1.000							
<b>Q</b>	-0.005 0.338	1.000						
<b>P/B</b>	0.049* 0.000	0.383* 0.000	1.000					
<b>CGS</b>	0.088* 0.000	0.075* 0.000	0.077* 0.000	1.000				
<b>EFI</b>	-0.034* 0.000	0.056* 0.000	0.018* 0.001	0.370* 0.000	1.000			
<b>CGS*EFI</b>	0.087* 0.000	0.078* 0.000	0.077* 0.000	0.994* 0.000	0.458* 0.000	1.000		
<b>VOL</b>	-0.280* 0.000	0.127* 0.000	-0.001 0.836	-0.018 0.011	0.173* 0.000	-0.007 0.360	1.000	
<b>TA</b>	0.177* 0.000	-0.380* 0.000	-0.110* 0.000	0.087* 0.000	-0.302* 0.000	0.065* 0.000	-0.396* 0.000	1.000

**Table 5.** Correlation Matrices (cont'd)

<b>Panel B: Developed Economies</b>									
	<b>ROA</b>	<b>Q</b>	<b>P/B</b>	<b>CGS</b>	<b>EFI</b>	<b>CGS*EFI</b>	<b>VOL</b>	<b>TA</b>	<b>D/A</b>
<b>D/A</b>	-0.021*	-0.094*	-0.067*	0.068*	-0.022*	0.063*	0.008	0.144*	1.000
	0.000	0.000	0.000	0.000	0.000	0.000	0.189	0.000	
<b>GRW</b>	0.021*	0.097*	0.059*	0.140*	-0.127*	0.131*	-0.083*	-0.032*	-0.001
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.859
<b>GDP</b>	-0.061*	0.178*	0.092*	0.299*	0.334*	0.322*	0.029*	-0.184*	0.051*
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>CPI</b>	0.005	0.140*	0.093*	0.248*	-0.184*	0.223*	-0.158*	-0.009	0.041*
	0.395	0.000	0.000	0.000	0.000	0.000	0.000	0.077	0.000
<b>U</b>	0.021*	-0.004	-0.01	0.493*	0.197*	0.478*	0.170*	-0.132*	-0.015*
	0.000	0.494	0.071	0.000	0.000	0.000	0.000	0.000	0.005
<b>COR</b>	0.009	-0.006	0.001	0.125*	0.671*	0.184*	0.007	-0.110*	-0.034*
	0.169	0.379	0.836	0.000	0.000	0.000	0.336	0.000	0.000
<b>LEG</b>	0.027*	-0.158*	-0.085*	-0.653*	-0.726*	-0.694*	-0.107*	0.325*	-0.022*
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

**Table 5.** Correlation Matrices (cont'd)

<b>Panel B: Developed Economies</b>						
	<b>GRW</b>	<b>GDP</b>	<b>CPI</b>	<b>U</b>	<b>COR</b>	<b>LEG</b>
<b>GRW</b>	1.000					
<b>GDP</b>	0.402* 0.000	1.000				
<b>CPI</b>	0.535* 0.000	0.379* 0.000	1.000			
<b>U</b>	-0.118* 0.000	-0.053* 0.000	-0.345* 0.000	1.000		
<b>COR</b>	0.382* 0.000	0.120* 0.000	0.277* 0.000	-0.337* 0.000	1.000	
<b>LEG</b>	-0.169* 0.000	-0.594* 0.000	-0.277* 0.000	-0.322* 0.000	-0.286* 0.000	1.000

In this table, \* denotes statistical significance at the level of 0.01.

**Table 6.** Mean Values of Variables by Country

<b>Panel A-1: Emerging Economies (Number of Observations, Dependent, Independent, and Interaction Variables)</b>							
<b>Country</b>	<b>N</b>	<b>ROA</b>	<b>Q</b>	<b>P/B</b>	<b>CGS</b>	<b>EFI</b>	<b>CGS×EFI</b>
<b>Brazil</b>	381	6.26	1.53	2.48	28.11	57.08	1,605.43
<b>Chile</b>	106	42.76	1.4	1.89	10.05	78.29	786.89
<b>China</b>	342	34.05	1.35	2.05	32.49	52.09	1,692.63
<b>Colombia</b>	37	39.31	1.27	1.51	36.83	70.28	2,588.12
<b>Hungary</b>	15	48.13	1.08	1.05	41.78	66.84	2,792.65
<b>India</b>	352	38.19	2.89	4.91	38.00	55.29	2,102.53
<b>Korea</b>	425	40.19	1.44	1.83	11.97	70.97	848.97
<b>Mexico</b>	120	35.57	2.09	3.36	13.8	66.14	912.08
<b>Peru</b>	33	44.28	1.14	1.31	10.81	67.56	732.47
<b>Philippines</b>	90	27.73	1.88	3.15	33.76	60.3	2,047.03
<b>Poland</b>	81	40.45	1.28	1.56	24.85	67.3	1,672.75
<b>Russia</b>	140	30.27	1.42	1.63	33.20	51.24	1,700.18
<b>South Africa</b>	428	39.51	1.72	2.72	66.14	62.3	4,120.26
<b>Taiwan</b>	523	28.65	1.55	2.06	14.72	73.69	1,087.44
<b>Thailand</b>	108	28.08	2.42	4.71	50.65	63.61	3,219.76
<b>Turkey</b>	90	33.89	1.65	2.75	32.15	63.18	2,028.37
<b>Total</b>	<b>3,271</b>	<b>32.09</b>	<b>1.71</b>	<b>2.6</b>	<b>30.39</b>	<b>63.3</b>	<b>1,854.59</b>

In this table, N denotes the number of firm-year observations. ROA means Return on Assets by percentage. Q means Tobin's Q ratio, P/B means Price to Book Value of Common Stock, CGS means Corporate Governance General Score, EFI represents Economic Freedom Overall Index, CGS \* EFI is the interaction variable of Corporate Governance Score and Economic Freedom Index.

**Table 6.** Mean Values of Variables by Country (cont'd)

<b>Panel A-2 Emerging Economies (Control Variables)</b>									
<b>Country</b>	<b>VOL</b>	<b>TA</b>	<b>D/A</b>	<b>GRW</b>	<b>GDP</b>	<b>CPI</b>	<b>U</b>	<b>COR</b>	<b>LEG</b>
<b>Brazil</b>	31.63	15.72	34.01	-0.55	9.26	133.52	8.24	41.1	1
<b>Chile</b>	19.87	15.58	74.41	2.82	9.59	116.61	6.32	69.84	1
<b>China</b>	33.97	16.47	58.23	7.28	8.92	114.69	4.07	38.35	1
<b>Colombia</b>	21.25	16.02	74.65	3.34	8.83	118.36	9.4	36.68	1
<b>Hungary</b>	21.36	15.63	71.68	2.05	9.49	113.4	8.16	52.4	1
<b>India</b>	32.45	15.38	63.57	6.97	7.35	142.17	8.56	37.74	0
<b>Korea</b>	30.78	15.87	63.56	2.84	10.19	110.18	3.46	54.53	1
<b>Mexico</b>	26.2	15.72	72.19	2.48	9.16	117.52	4.54	32.66	1
<b>Peru</b>	31.95	14.27	73.47	3.99	8.72	120.84	6.63	35.64	1
<b>Philippines</b>	26.59	15.53	72.11	6.57	7.94	115.24	6.51	35.67	1
<b>Poland</b>	28.99	15.09	62.58	2.75	9.49	110.1	11.42	61.07	1
<b>Russia</b>	35.4	16.6	73.89	0.56	9.4	141.24	5.44	28.23	1
<b>South Africa</b>	26.49	14.1	62.96	1.57	8.75	127.01	25.38	43.63	0
<b>Taiwan</b>	29.28	14.88	64.78	2.1	10.01	105.74	4.01	61.21	1
<b>Thailand</b>	28.27	15.34	69.07	3.21	8.69	111.65	0.84	36.6	1
<b>Turkey</b>	27.99	15.65	63.75	5.5	9.36	140.26	9.78	45.13	1
<b>Total</b>	<b>29.81</b>	<b>15.42</b>	<b>61.45</b>	<b>3.16</b>	<b>9.15</b>	<b>121.34</b>	<b>8.29</b>	<b>46.07</b>	<b>0.76</b>

In this table, VOL represents Stock Price Volatility by percentage, TA is the natural logarithm of Total Assets, D/A is the Leverage (Debt to Assets) Ratio, GRW is the GDP Growth Rate by percentage, GDP is the natural logarithm of GDP per Capita, CPI is the Consumer Price Index with no seasonal adjustment, U is the Unemployment Rate as percentage, COR is the Corruption Perceptions Index, and LEG is the dummy variable of the Legal System.



**Table 6.** Mean Values of Variables by Country (cont'd)

<b>Panel B-1: Developed Economies Sample (Number of Observations, Dependent, Independent, and Interaction Variables)</b>							
<b>Country</b>	<b>N</b>	<b>ROA</b>	<b>Q</b>	<b>P/B</b>	<b>CGS</b>	<b>EFI</b>	<b>CGS*EFI</b>
<b>Canada</b>	1,250	0.95	1.47	2.14	72.8	79.26	5,769.68
<b>France</b>	445	4.17	1.5	2.12	64.93	63.1	4,095.13
<b>Germany</b>	391	4.71	1.64	2.41	37.98	73.12	2,777.66
<b>Italy</b>	201	1.9	1.23	1.44	54.11	61.3	3,317.32
<b>Japan</b>	1,939	3.79	1.32	1.57	10.57	72.46	766
<b>United Kingdom</b>	1,447	6.91	1.81	3.27	77.31	75.27	5,818.12
<b>United States</b>	5,602	5.08	2.07	3.52	67.52	75.82	5,119.71
<b>Total</b>	<b>11,275</b>	<b>4.53</b>	<b>1.79</b>	<b>2.87</b>	<b>58.2</b>	<b>74.7</b>	<b>4,378.89</b>

In this table, N denotes the number of firm-year observations. ROA means Return on Assets by percentage. Q means Tobin's Q ratio, P/B means Price to Book Value of Common Stock, CGS means Corporate Governance General Score, EFI represents Economic Freedom Overall Index, CGS \* EFI is the interaction variable of Corporate Governance Score and Economic Freedom Index

**Table 6.** Mean Values of Variables by Country (cont'd)

<b>Panel B-2 Developed Economies (Control Variables)</b>									
<b>Country</b>	<b>VOL</b>	<b>TA</b>	<b>D/A</b>	<b>GRW</b>	<b>GDP</b>	<b>CPI</b>	<b>U</b>	<b>COR</b>	<b>LEG</b>
<b>Canada</b>	29.51	14.94	25.20	1.81	10.77	108.74	7.04	82.18	0.00
<b>France</b>	24.40	16.72	27.21	0.80	10.59	106.48	9.81	69.98	1.00
<b>Germany</b>	25.97	16.31	23.79	1.35	10.70	107.26	4.86	79.64	1.00
<b>Italy</b>	27.80	16.92	29.59	-0.51	10.46	108.00	11.46	44.01	1.00
<b>Japan</b>	26.08	16.07	21.66	1.21	10.59	101.88	3.68	74.19	1.00
<b>United Kingdom</b>	26.07	15.11	21.38	2.14	10.67	112.89	6.30	78.25	0.00
<b>United States</b>	26.37	15.64	28.49	2.07	10.92	109.06	5.97	74.18	0.00
<b>Total</b>	<b>26.57</b>	<b>15.66</b>	<b>25.84</b>	<b>1.78</b>	<b>10.79</b>	<b>108.10</b>	<b>5.95</b>	<b>75.08</b>	<b>0.26</b>

In this table, VOL represents Stock Price Volatility by percentage, TA is the natural logarithm of Total Assets, D/A is the Leverage (Debt to Assets) Ratio, GRW is the GDP Growth Rate by percentage, GDP is the natural logarithm of GDP per Capita, CPI is the Consumer Price Index with no seasonal adjustment, U is the Unemployment Rate as percentage, COR is the Corruption Perceptions Index, and LEG is the dummy variable of the Legal System.

### **3.5. Regression Results**

As mentioned before in the Data Section, there are two representative samples for emerging and developed economies. The emerging markets sample includes 758 firms and 3,271 firm-year observations for (ROA) model. The developed markets sample, on the other hand, includes 3,137 firms and 11,275 firm-year observations. In the regressions, industry dummy 10 (IND10) is omitted from the model because of collinearity.

The regression results of the models are presented in Table 7 and Table 8. Table 7 shows the results for the emerging economies; Table 8 demonstrates results for the developed economies. In both panels, the first column (ROA) represents the results from the return on assets model. The second columns (Q) represent the model that uses Tobin's Q value (Q) as a financial performance indicator. For emerging economies, the estimated model has 3,978 firm-year observations for 924 firms, and for developed economies, it includes 11,389 firm-year observations for 3,147 firms. The third columns (P/B) represent the results from the model that uses the price to book value as a performance measure. The model uses the price to book value as the dependent variable includes 3,973 firm-year observations of 923 firms for emerging economies and 11,383 firm-year observations of 3,147 firms. As described in the previous section, all other variables are the same for every model.

#### **3.5.1. Emerging Economies**

Table 7 presents the results of regressions for emerging economies. The coefficient of corporate governance score (CGS) for the (ROA) model is 0.308 with a significance level of 10%. The coefficient indicates that 10 points increase in corporate governance score results in an increase of 3.08 points in return on assets. The results from the other two models, however, shows that corporate governance score has no significant relationship with Tobin's Q and market to book values. The coefficient of corporate governance score is 0.142 for (Q) model, and -0.171 for the (P/B) model. In line with the literature, the (ROA) model results suggest that corporate governance has a positive significant effect on financial performance.

**Table 7.** The Main Regression Results for the Emerging Economies Sample

	<b>(ROA)</b>	<b>(Q)</b>	<b>(P/B)</b>
<b>CGS</b>	0.308* (0.071)	0.142 (0.303)	0.017 (0.916)
<b>EFI</b>	0.279*** (0.000)	-0.137*** (0.000)	-0.097** (0.023)
<b>CGS*EFI</b>	-0.315* (0.069)	-0.121 (0.386)	-0.007 (0.967)
<b>VOL</b>	-0.023 (0.328)	-0.043** (0.033)	-0.083*** (0.000)
<b>TA</b>	-0.040 (0.211)	-0.520*** (0.000)	-0.347*** (0.000)
<b>D/A</b>	-0.041* (0.084)	-0.006 (0.760)	-0.208*** (0.000)
<b>GRW</b>	0.121*** (0.000)	0.106*** (0.000)	0.080*** (0.000)
<b>GDP</b>	-0.030 (0.541)	0.073* (0.066)	-0.012 (0.785)
<b>CPI</b>	0.030 (0.140)	0.061*** (0.000)	-0.011 (0.578)
<b>U</b>	0.028 (0.513)	-0.287*** (0.000)	-0.216*** (0.000)
<b>COR</b>	-0.037 (0.319)	0.002 (0.942)	-0.036 (0.295)
<b>LEG</b>	-0.411*** (0.001)	-0.547*** (0.000)	-0.520*** (0.000)
<b>Constant</b>	0.477*** (0.000)	0.342*** (0.002)	0.350*** (0.003)
<b>Industry Dummies</b>	Included	Included	Included
<b>N</b>	3271	3978	3973
<b>d.f.</b>	22	22.	22
<b>r2_b</b>	0.23	0.35	0.32
<b>chi2</b>	285.5	926.4	558.1

In this table, CGS represents Corporate Governance General Score, EFI represents Economic Freedom Overall Index, CGS\*EFI is the interaction variable of Corporate Governance Score and Economic Freedom Index, VOL represents Stock Price Volatility by percentage, TA is the natural logarithm of Total Assets, D/A is the Leverage (Debt to Assets) Ratio, GRW is the GDP Growth Rate by percentage, GDP is the natural logarithm of GDP per Capita, CPI is the Consumer Price Index with no seasonal adjustment, U is the Unemployment Rate as percentage, COR is the Corruption Perceptions Index, and LEG is the dummy variable of the Legal System. Column titles represent different models. (ROA) is the model which uses Return on Assets, (Q) is the model with Tobin's Q, and (P/B) is the model with the Price to Book ratio. The bracketed values are p-values. \*, \*\*, and \*\*\* denotes statistical significance at 0.1, 0.05, and 0.01 levels

On the economic freedom side, all financial performance indicators are strongly related to economic freedom index. Estimation results show that the coefficients of the economic freedom index are 0.279 for the (ROA) model, -0.137 for (Q) model, and -0.097 for the price to book ratio model. The significance levels are 1% for the (ROA) model and (Q) model, and 5% for the (P/B) model. Additionally, the interaction of corporate governance score and economic freedom index (CGS\*EFI) is statistically significant only for the (ROA) model, with the coefficient of -0.315 at 10% significance level. Parallel with Chen et. al. (2015), higher economic freedom results in higher financial performance in the (ROA) model.

For firm-specific variables, (ROA) model interprets that return on assets has a significant relationship only with the leverage ratio (D/A). The coefficient is -0.041 at 10% significance level. The second model shows that Tobin's Q is significantly related to the stock price volatility (VOL) and the natural logarithm of total assets (TA). The coefficients are -0.043 for stock price volatility at a 5% significance level, and -0.520 for and the natural logarithm of total assets at 1% significance level. The (P/B) model interprets that all firm-level variables are significantly related with a price to book ratio. The coefficients are -0.083 for stock price volatility, -0.347 for the natural logarithm of total assets, and -0.208 for leverage ratio. All coefficients are significant at 1% level. For (ROA) and price to book ratio models, the results of the (ROA) model interpret that the relationship between financial performance and the leverage ratio is in line with the findings of Mitton (2002). The negative significances of the stock price volatility in Tobin's Q and price to book ratio models are also correlated with the literature.

For country-specific measures, return on assets is significantly related only with the GDP growth rate (GRW), with the coefficient of 0.121 at 1% significance level. Tobin's Q shows a significant relationship with all country-specific variables, except the corruption perceptions index (COR). The coefficients are 0.106 for GDP growth rate at 1% significance level, 0.073 for the natural logarithm of GDP per Capita (GDP) at 10% significance level, 0.061 for Consumer Price Index (CPI) at 1% significance level, -0.287 for unemployment rate (U) at 1% significance level, and -

0.547 for legal system (LEG) at 1% significance level. Price to book ratio is significantly related to GDP growth rate, unemployment rate, and the legal system. The coefficients are 0.080 for GDP growth rate, -0.216 for the unemployment rate, and -0.520 for the legal system. All three coefficients are significant at 1% level. In line with the literature, the GDP growth rate has a significantly positive effect on financial performance. Additionally, both Tobin's Q and price to book ratio models have significant relationships with the GDP per capita and the unemployment rate, which are parallel with findings of La Porta et. al. (1999) and Flannery and Protopapadakis (2002).

The results interpret that for accounting-based performance, the corporate governance effects financial performance positively. It is also interpreted that for emerging economies, higher economic freedom results in higher financial performance. However, there are no significant relationships between valuation or market-based financial performance and corporate governance. The statistical insignificance is observed only when the market-related financial performance indicators are used. Besides, it is observed that economic freedom has negatively significant relationships with financial performance when valuation and market-based performance indicators are used. The possible explanation for this is the underdeveloped financial markets, especially stock markets of emerging economies. The reason is that both market-related financial performance indicators, Tobin's Q and price to book ratio, include the stock price.

Stock market development can be described as the level of effective functioning of the market. A developed stock market contributes economic growth by alleviating ownership trade and providing portfolio diversifications to the agents of the economy (Levine, 1991). It also provides sufficient external capital to domestic firms. A certain level of the market development can be achieved by providing safety of trade, symmetric information, legal protection, and liquidity to the market agents. Hasbrouck (1991) interprets that asymmetric information has a persistent effect on stock prices. Additionally, Miller and Rock (1985) say that the price effect of information asymmetry and may turn to be a loss for optimal investments. On the other hand, La Porta et. al. (1997) show that without legal protection of investors'

and shareholders' rights, it might be difficult for firms to raise external capital. Other than market-specific conditions and legislation, the macroeconomic environment plays a significant role in financial market development. Garcia and Liu (1999) find that real income level, national saving rate, financial intermediary development, and stock market liquidity are significant to stock market development. Considering prior research, it can be concluded that financial market development is a multi-dimensional subject which is crucial for real sector growth by facilitating to reach external funds.

However, most of the stock markets of emerging economies are under that certain level of development. There are several possible explanations for the cause of underdevelopment. For instance, most of the emerging economies are relatively younger than developed economies. Founded in later decades, many transition economies could not achieve a proper legislation system, especially for investor and shareholder protection (see La Porta et. al., 1997, 1999). Without proper legislation, the development of stock markets is not possible. Related to this, privatization and liberalization are relatively new concepts for most emerging economies. For instance, Russia accomplishes the ownership transfer of companies from state to private parties in the early '90s. Depoliticization of firms in Russia is aimed to increase the efficiency of equity governance mechanisms and opens a path to improving financial market structures (Boycko et. al. 1993). However, political pressure is not easy to be dismissed and still, Russia cannot achieve a certain development level of financial markets.

As mentioned before, the macroeconomic environment plays an important role in stock market development. Since the emerging economies tend to have weaker economies than developed ones, their stock markets are also correlated with their macroeconomic conditions. Additionally, the rule of law and political stability are important determinants for improving stock market development. Perotti and Van Oijen (2001) demonstrate that political risk has a strong effect on stock market development in emerging economies. Higher political instability tends to result in capital outflow and excessive volatility of equity prices, which is devastating for any emerging economy.

The regression results interpret that the emerging economies sample shows the effects of underdeveloped stock markets. As an indicator of the situation, stock price volatility is negatively significant for both Tobin's Q (-0.043 at 0.05 significance level) and price to book ratio (-0.083 at 0.01 significance level). Additionally, emerging economies have higher stock price volatility, lower corruption perception index (which means higher corruption), and lower economic freedom than developed economies on average. Considering this information, it can be interpreted that stock markets in the emerging economies sample are underdeveloped. The data from underdeveloped markets do not represent the true valuation of the equities in the market since the information asymmetry disturbs prices to be over or undervalued from their true equilibrium levels. The more difference of information between insiders and outsiders of the firm, the higher price disturbance, therefore the higher price volatility. Consequently, it is expected that the financial performance indicators which are related to stock prices may not be able to imply the real effect of corporate governance practices on financial performance. In addition, the reason behind that the coefficient of economic freedom index is significantly negative is the same "fuzzy" information caused by the effect of stock prices.

### **3.5.2. Developed Economies**

The regression results of developed economies sample are demonstrated in Table 8. The results show that corporate governance is significantly related to financial performance in (Q) model (2). The coefficient of corporate governance score is 0.548 at 1% significance level. The results show that 10 points rise in corporate governance score increases Tobin's Q value by 5.48 units. The results also interpret that there are no significant relationships between corporate governance score and return on assets or price to book ratio. The coefficients of return on assets and price to book ratio are 0.301 and 0.296. The results from (Q) model are in line with literature since there is a positive significant relationship between Tobin's Q and



**Table 8.** The Main Regression Results for Developed Economies Sample

	<b>(ROA)</b>	<b>(Q)</b>	<b>(P/B)</b>
<b>CGS</b>	0.301 (0.173)	0.548*** (0.003)	0.296 (0.347)
<b>EFI</b>	0.064** (0.046)	0.070*** (0.005)	0.0113 (0.817)
<b>CGS*EFI</b>	-0.302 (0.186)	-0.550*** (0.003)	-0.231 (0.477)
<b>VOL</b>	-0.241*** (0.000)	-0.017 (0.147)	-0.044*** (0.005)
<b>TA</b>	0.005 (0.737)	-0.402*** (0.000)	-0.093*** (0.000)
<b>D/A</b>	-0.167*** (0.000)	-0.012 (0.158)	-0.064*** (0.000)
<b>GRW</b>	0.021 (0.178)	0.005 (0.591)	0.030 (0.248)
<b>GDP</b>	0.003 (0.726)	0.038*** (0.000)	0.016 (0.279)
<b>CPI</b>	-0.020 (0.388)	0.135*** (0.000)	0.022 (0.544)
<b>U</b>	0.044*** (0.002)	0.015 (0.213)	-0.023 (0.268)
<b>COR</b>	-0.034*** (0.006)	-0.032*** (0.002)	-0.028 (0.116)
<b>LEG</b>	-0.081 (0.287)	0.122* (0.060)	-0.114 (0.307)
<b>Constant</b>	0.195*** (0.000)	0.318*** (0.000)	0.155*** (0.005)
<b>Industry Dummies</b>	Included	Included	Included
<b>N</b>	11275	11389	11383
<b>df_m</b>	22	22	22
<b>r2_b</b>	0.20	0.26	0.06
<b>chi2</b>	1397.9	1734.4	262.1

In this table, CGS represents Corporate Governance General Score, EFI represents Economic Freedom Overall Index, CGS\*EFI is the interaction variable of Corporate Governance Score and Economic Freedom Index, VOL represents Stock Price Volatility by percentage, TA is the natural logarithm of Total Assets, D/A is the Leverage (Debt to Assets) Ratio, GRW is the GDP Growth Rate by percentage, GDP is the natural logarithm of GDP per Capita, CPI is the Consumer Price Index with no seasonal adjustment, U is the Unemployment Rate as percentage, COR is the Corruption Perceptions Index, and LEG is the dummy variable of the Legal System. Column names represent different models. (ROA) is the model which uses return on assets as the dependent variable, (W) is the model with Tobin's Q and (P/B) is the model with price to book ratio. The bracketed values are p-values. \*, \*\*, and \*\*\* denotes statistical significance at 0.1, 0.05, and 0.01 levels.

the corporate governance score. The analysis also shows that economic freedom is positively related to return on assets and Tobin's Q. The coefficient of economic freedom index in the (ROA) model is 0.064 at 5% significance level. The (Q) model denotes that the economic freedom index has a coefficient of 0.070 at 1% significance level. However, no significant relationship is observed in the price to book ratio model. The coefficient of economic freedom index in price to book ratio model is 0.011. Similar to the corporate governance score, the interaction variable of corporate governance score and economic freedom index is significant only in (Q) model. The coefficient of the interaction variable is -0.550 at 1% significance level. The results from the (ROA) and (Q) models show a positive significant relationship between economic freedom and financial performance, which is parallel to the literature.

For firm-level control variables, it is observed that the (ROA) model has significant relationships with stock price volatility and leverage ratio. The coefficient of stock price volatility is -0.241, and of the leverage ratio is -0.167. Both variables are significant at 1% level. (Q) model interprets that financial performance is significantly related only to the natural logarithm of total assets. The coefficient is -0.402 at 1% significance level.

The results from the (P/B) model show that the price to book ratio is significantly related to every firm-specific variable. The coefficients are -0.044 for stock price volatility, -0.093 for the natural logarithm of total assets, and -0.064 for the leverage ratio. All three variables are significant at 1% level. From the firm-level variables' perspective, the results are similar to the literature, especially for the (ROA) and (Q) model.

For country-specific measures, the (ROA) model demonstrates that only the unemployment rate and corruption perceptions index show a significant relationship to return on assets. The coefficients are 0.044 for the unemployment rate, and -0.081 for corruption perceptions index. Both variables are significant at 0.01 level. The results from (Q) model show that Tobin's Q has significant relationships with the natural logarithm of GDP per capita, consumer price index, corruption perceptions index, and the legal system dummy. The coefficients are 0.038 for the natural logarithm of GDP per capita, 0.135 for consumer price index, -0.032 for the

corruption perceptions index, and 0.122 for the legal system. All variables are significant at 1% level, except the legal system. The coefficient of legal system dummy is at 10% significance level. From the perspective of country-level variables, the findings are in line with the literature, especially for (Q) model.

The results are, especially for the (ROA) model, are not in line with the hypotheses. The possible reasons behind these results are going to be investigated in the Robustness Checks Section.

### **3.5.3. The Moderating Effect of Economic Freedom on Financial Performance and Corporate Governance Relationship**

Another important issue is the moderating effect of economic freedom on financial performance-corporate governance relationship. As mentioned before, we use an interaction variable of corporate governance score and economic freedom index in every model to measure this effect. The results from the (ROA) model demonstrate that the interaction of corporate governance and economic freedom has a significantly negative effect on financial performance in emerging economies. In line with this, (Q) model of the developed economies sample denotes a negatively significant interaction variable. Considering this finding, it can be interpreted that the higher economic freedom, the lower the effect of corporate governance on financial performance. However, this issue cannot be concluded considering only the estimation results. Despite the fact that the interaction variable is significant, it is not possible to know the extent of the marginal effect of economic freedom. The effect may change for different levels of freedom, or even it may be insignificant to some extent. In order to explain the moderating effect of economic freedom, further analyses need to be made.

I started the analyses of the interaction variable with understanding the variable types. Two variables of interest, the corporate governance score and the economic freedom index, are both continuous variables. In a linear regression model, a significant interaction of two continuous variables means that the slope of the independent variable (corporate governance score) changes as any alteration in the

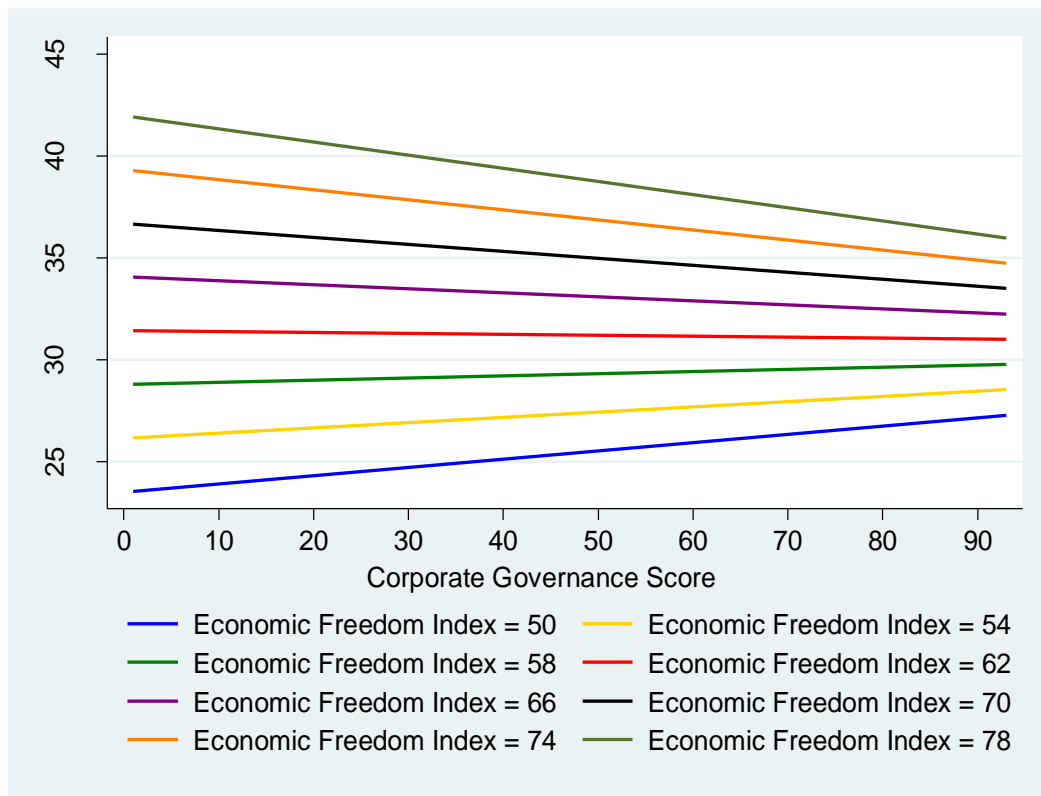
moderating variable (economic freedom index) (UCLA, 2018). There are several methods to demonstrate this effect. We use graphical representation since visualization makes much easier to understand the linear relationship. In order to create a visual representation, we begin with defining proper intervals for values of both corporate governance score and economic freedom index. The intervals are the same for both variables. Then we start to calculate the different slopes of corporate governance - financial performance line for different values of economic freedom defined in this interval. Subsequently, we repeat the previous action, but this time we use only the first and the last values of corporate governance score in order to characterize the regression lines. Finally, we plot the regression lines according to the defined slopes.

The visualized results from the emerging and developed economies samples are presented in Figure 2. and Figure 3. In both graphs, X-axis represents the values of corporate governance score and Y-axis represents the values of the financial performance indicator. The financial performance indicator is a return on assets for emerging economies and Tobin's Q for developed economies. As mentioned before, the reason is that the only significant interaction variables are observed in these models. The legend part represents the constant values of the economic freedom index. Every line in the graphs represents a different regression line for different values of economic freedom.

Figure 2 visualizes the moderating effect of economic freedom on the governance-performance relationship for the emerging economies sample. The graph indicates that the slopes of regression lines are positive for the economic freedom index between 50 and 62. However, higher freedom index values result in lower or even negative slopes. This means that for lower levels of economic freedom, the marginal effect of corporate governance score on return on assets is positive. But the higher the economic freedom, the lower the marginal effect of corporate governance on financial performance.

Figure 3 demonstrates the marginal effect of economic freedom on the governance-performance relationship for the developed economies. The graph indicates similar results to the emerging economies. In environments in which

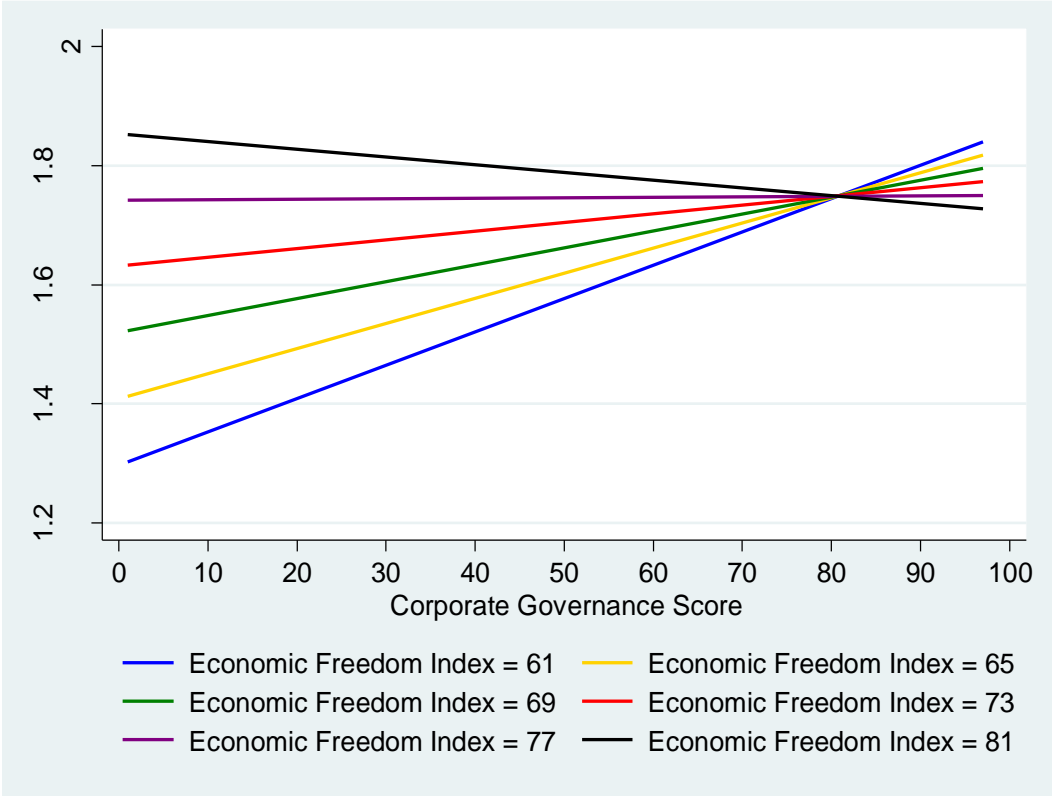
economic freedom is relatively lower, corporate governance enhances financial performance considerably. Also, the marginal effect of economic freedom on governance-performance relationship diminishes in higher levels of economic freedom. However, the effect of corporate governance on financial performance is relatively higher than the emerging economies.



**Figure 2.** The Moderating Effect of Economic Freedom Index (Emerging Economies Sample)

The results show that economic freedom enhances the effect of corporate governance on financial performance at a certain level. However, if economic freedom increases in the environment, then this effect diminishes subsequently. Related literature shows a possible explanation for this outcome. Economic freedom is an effective indicator of the economic development of a country, especially from the perspective of institutions. Economic freedom enhances the institutional

development of a country (Chen et. al., 2015). The institutional development is effective on one of the most important factors in firm efficiency, the product market competition (Miller and Kim, 2015). The higher institutional development, the higher market competition. The market competition, on the other hand, a disciplinary force for firms to achieve higher efficiency. On this point, corporate governance and market competition are substitutes.



**Figure 3.** The Moderating Effect of Economic Freedom Index (Developed Economies Sample)

For the firms which are in a highly competitive environment, the effect of corporate governance on firm performance is significantly lower (Giroud and Mueller, 2010). Consequently, in countries with high economic freedom, the marginal impact of the moderation diminishes because of the market competition.

In line with this approach, the shareholder anticipation on firm performance may also imply these results. The concept of economic freedom is to provide more economic opportunities to the people while making sure the rule of law is in place (Miller and Kim, 2015). The rule of law is the main step of the existence of shareholder protection and corporate disclosure (see Murphy, Shleifer, and Vishny, 1992; Jaggi and Low, 2000; La Porta et. al., 2002; Archambault and Archambault, 2003; Berggren, 2003). The higher the level of shareholder protection and public disclosure, the higher monitoring of managers by shareholders (Hope and Thomas, 2008). When economic freedom is relatively low, the effect of corporate governance practices is higher since they can provide a controlling mechanism on managers to the shareholders. On the contrary, when economic freedom is relatively high, the legal protection and public disclosure help shareholders to monitor, and as a result, anticipate the outcomes of the actions of the managers. Since economic freedom provides shareholders such a controlling mechanism, the effect of corporate governance practices is relatively lower than the environments in which economic freedom is relatively low.

### **3.6. Robustness Checks**

In order to measure the robustness of the study, we use several methods which are prevalent in the literature. For instance, the main methodology provides a validity check for the study. In addition to the (ROA) model, we make two additional estimations. The dependent variables are Tobin's Q for the (Q) model and price to book ratio for the (P/B) model. We choose Tobin's Q to interpret the relationship between corporate governance and financial performance in the valuation perspective. On the other hand, price to book ratio indicates this relationship in the market perspective. Different types of financial performance measurements provide more insight into the governance-performance relationship. Also, using different measures helps to prove the existence of this relationship.

However, the regression results are not in line with the hypotheses for all models. For the emerging economies sample, the estimation results show that there

is no significant relationship between financial performance and corporate governance for the second and third models. Additionally, the (ROA) and third models denote no significant governance-performance relationship either for the developed economies sample. The possible reason for the results of emerging economies sample is explained in the Results Section. Underdeveloped markets of the emerging economies do not represent the true values of stocks. Since both Tobin's Q and price to book ratio are strictly related to common stock prices, using them as financial performance indicators disturbs the results. The possible explanations for the results of the developed economies sample are discussed in this section.

The results of the developed economies sample suggest that there is no significant relationship between corporate governance and return on assets or price to book ratio. However, Tobin's Q is significantly related to corporate governance score at 1% level. The results, particularly from the (ROA) model, are not expected. To determine the possible explanations behind the results, we examine the dataset. After a brief examination, we detect one possible justification which is overlooked in initial analyses. The number of firm-year observations of the United States is dramatically higher than in other countries. In fact, the firms in the United States have 5,602 firm-year observations for 1,882 firms, which constitutes approximately 50% of total observations in the sample. This may create a bias since, especially for the (ROA) model, there are some certain differences in accounting systems between the United States and the other G-7 countries. The United States use U.S. Generally Accepted Accounting Principles (US GAAP), but other countries in the sample mainly use International Financial Recording System (IFRS). Bratton and Cunningham (2009) say that there are some methodological differences in inventory accounting between US GAAP and IFRS. They interpret that US GAAP permits companies to choose between first-in-first-out (FIFO) and last-in-first-out (LIFO) order regimes, while IFRS strictly requires FIFO. Additionally, they also demonstrate that the research and development (R&D) expenses are shown in the operating section of cash flow statement under US GAAP, while IFRS treats R&D expenses as an asset and show them as investment cash flow. The methodology differences between US GAAP and IFRS affects the calculation of some certain accounts,



including net income. Since net income is the numerator in the calculation of return on assets, it is possible that the differences in accounting application have an influence on the results.

In order to eliminate this effect, we modify the models. This modification is done by making two additional estimations for each model (ROA, Q, and P/B). Initially, we exclude the firms from the United States from the model and make the estimations accordingly. The aim is to get rid of the possible confliction caused by the high number of the United States. Thus, the estimations may be able to show the undisturbed result for the firms in every remaining country (Canada, France, Germany, Italy, Japan, and the United Kingdom). Afterward, we make other estimations by using only the firms from the United States. While estimating “the U.S.-only” subset of the sample, all country-level control variables are excluded since they are the same for all observations in the sample and their unnecessary usage may create a collinearity problem. The U.S.-only estimations can be determined as a verification for the previous estimation. If results are parallel to “the US-excluded” estimations, it can be concluded that the initial results are caused by the confliction of accounting principles between the United States and the other countries in G-7. The results of the reduced estimations are presented in Table 9, 10 and 11. Table 9 denotes the results of the (ROA) model. Table 10 represents the results of the reduced estimations of (Q) model. Finally, Table 11 presents the results of the price to book ratio (P/B) model. The initial models are denoted as (1). The estimations in which the firms of the United States are excluded are denoted as (2). The estimations which are made with the United States firms only are denoted as (3) The reduced estimations of the (ROA) model interpret that exclusion of the firms from the United States from the estimation changes the results substantially. When the estimation is made with non-U.S. firms; the corporate governance score has a positive significant effect on return on assets. The coefficient is 0.446 at 5% significance level. This means that 10 points increase in the corporate governance score increases return on assets by 4.46 units. However, there is no significant relationship observed between economic freedom index and return on assets. As expected, the interaction term of corporate governance score and the economic freedom index shows negative significance. The

coefficient is -0.482 at 5% significance level. Nonetheless, all firm-specific control variables are significant at 1% level. The coefficient of the stock return volatility is -0.164. For the natural logarithm of total assets and leverage ratio, the coefficients are -0.059 and -0.194.

For country-specific control variables, GDP growth rate, the natural logarithm of GDP per capita, unemployment rate, and the legal system show a significant relationship with return on assets. The coefficients are 0.027 at 5% significance level for GDP growth rate, 0.053 at 1% significance level for GDP growth rate, -0.036 at 10% significance level for the unemployment rate, and -0.189 at 5% significance level for the legal system.

**Table 9.** The Reduced Estimation Results for (ROA) Model

<b>DV: ROA</b>	<b>(1)</b>	<b>(2)</b>	<b>(3)</b>
<b>CGS</b>	0.301 (0.173)	0.446** (0.025)	1.071** (0.018)
<b>EFI</b>	0.064** (0.046)	-0.020 (0.519)	0.159*** (0.004)
<b>CGS*EFI</b>	-0.302 (0.186)	-0.481** (0.021)	-1.068** (0.020)
<b>VOL</b>	-0.241*** (0.000)	-0.164*** (0.000)	-0.235*** (0.000)
<b>TA</b>	0.005 (0.737)	-0.059*** (0.000)	0.033* (0.087)
<b>D/A</b>	-0.167*** (0.000)	-0.194*** (0.000)	-0.166*** (0.000)
<b>GRW</b>	0.021 (0.178)	0.053*** (0.009)	
<b>GDP</b>	0.003 (0.726)	0.027** (0.018)	
<b>CPI</b>	-0.020 (0.388)	0.014 (0.541)	
<b>U</b>	0.044*** (0.002)	-0.036* (0.064)	
<b>COR</b>	-0.034*** (0.006)	-0.018 (0.136)	
<b>LEG</b>	-0.081 (0.287)	-0.189** (0.017)	

**Table 9.** The Reduced Estimation Results for (ROA) Model (cont'd)

<b>Constant</b>	0.195*** (0.000)	0.175*** (0.005)	0.162*** (0.000)
<b>Industry Dummies</b>	Included	Included	Included
<b>N</b>	11283	5674	9163
<b>d.f.</b>	22	22	16
<b>R2_b</b>	0.20	0.21	0.21
<b>Chi2</b>	1397.9	667.0	909.3

In this table, CGS represents Corporate Governance General Score, EFI represents Economic Freedom Overall Index, CGS \* EFI is the interaction variable of Corporate Governance Score and Economic Freedom Index, VOL represents Stock Price Volatility by percentage, TA is the natural logarithm of Total Assets, D/A is the Leverage (Debt to Assets) Ratio, GRW is the GDP Growth Rate by percentage, GDP is the natural logarithm of GDP per Capita, CPI is the Consumer Price Index with no seasonal adjustment, U is the Unemployment Rate as percentage, COR is the Corruption Perceptions Index, and LEG is the dummy variable of the Legal System. Column numbers represent different estimations. (1) is the initial model, (2) is the estimation of non-U.S. firms, and (3) is the estimation of the firms from the United States only. For all estimations, the dependent variable is Return on Assets (ROA). The bracketed values are p-values. \*, \*\*, and \*\*\* denotes statistical significance at 0.1, 0.05, and 0.01 levels.

The U.S.-only estimation results support the non-U.S. results. For firms of the United States, corporate governance is significantly related to return on assets at 5% significance level with a coefficient of 1.071. Additionally, the economic freedom index is positively significant at 1% level. The coefficient of the economic freedom index is 0.159. In parallel with the non-U.S. estimation, the interaction variable of corporate governance score and economic freedom index has a negatively significant effect on return on assets. The coefficient is -1.068 at 5% significance level.

The reduced estimations of (Q) model indicate that corporate governance is significantly related to financial performance. For non-U.S. firms, the coefficient of corporate governance score is 0.379 at 5% significance level. Additionally, both the economic freedom index and the interaction variable are significantly related to Tobin's Q. The coefficients are 0.103 at 1% significance level for economic freedom index and -0.3914 at 5% significance level for the interaction variable. For firm-level control variables, the natural logarithm of total assets and the leverage ratio show a significant relation to Tobin's Q. The coefficients are -0.2856 for the natural logarithm of total assets and -0.0329 for the leverage ratio. Both variables are significant at 1% level. For country-level control variables, only the corruption

perceptions index does not show any significance. The coefficients are 0.0126 for the GDP growth rate, 0.0359 for the natural logarithm of GDP per capita, 0.1147 for the consumer price index, 0.0704 for the unemployment rate, and 0.3299 for the legal system dummy. All coefficients are significant at 1% level, except the GDP growth rate. The GDP growth rate is significant at 5% level.

The estimation of U.S.-only subset interprets similar results to non-U.S. estimation. The results show that the corporate governance score is significantly related to Tobin's Q with a coefficient of 1.5734 at 1% significance level. The interaction variable is also significantly related to Tobin's Q. The coefficient of the interaction variable is -1.5304 at 1% significance level. However, no significant relationship is observed between the economic freedom index and Tobin's Q. In parallel with the non-U.S. estimation, it is observed that only the natural logarithm of total assets and the leverage ratio are significantly related to financial performance.

**Table 10.** The Reduced Estimation Results for (Q) Model

<b>DV: Q</b>	<b>(1)</b>	<b>(2)</b>	<b>(3)</b>
<b>CGS</b>	0.548*** (0.003)	0.379** (0.017)	1.573*** (0.000)
<b>EFI</b>	0.070*** (0.005)	0.104*** (0.000)	-0.010 (0.821)
<b>CGS*EFI</b>	-0.550*** (0.003)	-0.391** (0.019)	-1.530*** (0.000)
<b>VOL</b>	-0.017 (0.147)	-0.020 (0.155)	-0.003 (0.851)
<b>TA</b>	-0.402*** (0.000)	-0.286*** (0.000)	-0.508*** (0.000)
<b>D/A</b>	-0.012 (0.158)	-0.033*** (0.003)	-0.019* (0.076)
<b>GRW</b>	0.005 (0.591)	0.036*** (0.001)	
<b>GDP</b>	0.038*** (0.000)	0.013** (0.043)	
<b>CPI</b>	0.135*** (0.000)	0.115*** (0.000)	
<b>U</b>	0.015 (0.213)	0.070*** (0.000)	

**Table 10.** The Reduced Estimation Results for (Q) Model (cont'd)

<b>COR</b>	-0.032*** (0.002)	0.007 (0.485)	
<b>LEG</b>	0.122* (0.060)	0.330*** (0.000)	
<b>Constant</b>	0.318*** (0.000)	-0.047 (0.561)	0.491*** (0.000)
<b>Industry Dummies</b>	Included	Included	Included
<b>N</b>	11389	5737	9217
<b>d.f.</b>	22	22	16
<b>R2_b</b>	0.26	0.20	0.27
<b>Chi2</b>	1734.4	528.5	1366.6

In this table, CGS represents Corporate Governance General Score, EFI represents Economic Freedom Overall Index, CGS \* EFI is the interaction variable of Corporate Governance Score and Economic Freedom Index, VOL represents Stock Price Volatility by percentage, TA is the natural logarithm of Total Assets, D/A is the Leverage (Debt to Assets) Ratio, GRW is the GDP Growth Rate by percentage, GDP is the natural logarithm of GDP per Capita, CPI is the Consumer Price Index with no seasonal adjustment, U is the Unemployment Rate as percentage, COR is the Corruption Perceptions Index, and LEG is the dummy variable of the Legal System. Column numbers represent different estimations. (1) is the initial model, (2) is the estimation of non-U.S. firms, and (3) is the estimation of the firms from the United States only. For all estimations, the dependent variable is Tobin's Q (Q). The bracketed values are p-values. \*, \*\*, and \*\*\* denotes statistical significance at 0.1, 0.05, and 0.01 levels.

The coefficients are -0.5078 at 1% significance level for the natural logarithm of total assets and -0.0188 at 10% significance level for the leverage ratio.

The results from the reduced estimations of price to book ratio model indicate that, for non-U.S. firms, corporate governance shows no significant relationship with financial performance. Also, no significant relationship is observed between the price to book ratio and economic freedom index or the interaction variable. However, the results show another story when the U.S. firms' subset is used. For the firms from the United States, the corporate governance score is significantly related to price to book ratio. The coefficient of the corporate governance score is 2.4969 at 1% significance level. The interaction variable is also significantly related to price to book ratio with a coefficient of -2.4583 at 1% significance level. The results also interpret that economic freedom shows no significant relationship with financial performance. Additionally, the natural logarithm of total assets and the leverage ratio show a significant relationship with the price to book ratio. The coefficients are -0.0914 for

the natural logarithm of total assets and -0.0902 for the leverage ratio. Both coefficients are significant at 1% level.

**Table 11.** The Reduced Estimation Results for the (P/B) Model

<b>DV: P/B</b>	<b>(1)</b>	<b>(2)</b>	<b>(3)</b>
<b>CGS</b>	0.296 (0.347)	0.124 (0.555)	2.497*** (0.003)
<b>EFI</b>	0.011 (0.817)	-0.005 (0.874)	0.147 (0.142)
<b>CGS*EFI</b>	-0.231 (0.477)	-0.075 (0.733)	-2.458*** (0.004)
<b>VOL</b>	-0.044*** (0.005)	-0.038** (0.011)	-0.020 (0.321)
<b>TA</b>	-0.093*** (0.000)	-0.117*** (0.000)	-0.091*** (0.000)
<b>D/A</b>	-0.064*** (0.000)	-0.016 (0.265)	-0.090*** (0.000)
<b>GRW</b>	0.030 (0.248)	0.030 (0.166)	
<b>GDP</b>	0.016 (0.279)	0.010 (0.389)	
<b>CPI</b>	0.021 (0.544)	0.058** (0.017)	
<b>U</b>	-0.023 (0.268)	-0.015 (0.467)	
<b>COR</b>	-0.028 (0.116)	0.005 (0.705)	
<b>LEG</b>	-0.114 (0.307)	0.032 (0.700)	
<b>Constant</b>	0.154*** (0.005)	0.003 (0.969)	0.217*** (0.000)
<b>Industry Dummies</b>	Included	Included	Included
<b>N</b>	11383	5736	9202
<b>d.f.</b>	22	22	16
<b>R2_b</b>	0.06	0.13	0.05
<b>Chi2</b>	262.0	202.9	172.1

In this table, CGS represents Corporate Governance General Score, EFI represents Economic Freedom Overall Index, CGS \* EFI is the interaction variable of Corporate Governance Score and Economic Freedom Index, VOL represents Stock Price Volatility by percentage, TA is the natural logarithm of Total Assets, D/A is the Leverage (Debt to Assets) Ratio, GRW is the GDP Growth Rate by percentage, GDP is the natural logarithm of GDP per Capita, CPI is the Consumer Price Index with no seasonal adjustment, U is the Unemployment Rate as percentage, COR is the Corruption Perceptions Index, and LEG is the dummy variable of the Legal System. Column numbers represent

different estimations. (1) is the initial model, (2) is the estimation of non-U.S. firms, and (3) is the estimation of the firms from the United States only. For all estimations, the dependent variable is Price to Book (P/B). The bracketed values are p-values. \*, \*\*, and \*\*\* denotes statistical significance at 0.1, 0.05, and 0.01 levels.

Consequently, the results of reduced estimations of the model demonstrate that, for both non-U.S. and the U.S. firms, corporate governance is effective on financial performance. The estimation of the initial model is proven to be biased since the accounting methods of the United States (US GAAP) and the other countries in the G-7 (IFRS) are considerably different. With the help of the additional estimations, it can be interpreted that the effect of corporate governance on financial performance supports the hypothesis. Furthermore, the estimation results of Tobin's Q state a similar implication with the (ROA) model: corporate governance is significantly effective in valuation-based financial performance. However, only the firms from the United States show a significant relationship between corporate governance and market-based financial performance. The possible reasons may be the fuzzy information caused by stock prices or the size differences of stock markets between the United States and the other countries in the sample. Especially, some developed European economies, such as Germany, mostly rely on debt financing rather than equity financing (see Edwards and Fischer, 1994). The exact answer remains for further research.

### **3.6.1. The Exclusion of Financial Firms**

In addition to the main methodology, we perform other validity checks for the estimations. For instance, we re-estimate the regressions while excluding financial firms (ICB Industry Code: 8000). In literature, this method is quite common. There are several reasons for this. For instance, valuation methods and ratios of financial firms are quite different from those of non-financial firms (La Porta et. al. 2002). In addition to this, the calculation methods of return on assets and total assets for this study are given in the Variables Section. For banks, insurance companies and other financial firms, there are some substantial differences in calculation methods of these

two variables (especially in return on assets calculation) in comparison to non-financial firms. As a result, excluding financial firms provides a robustness check to the study.

The test results for the emerging economies sample are presented in Table 12. In Table 12, the column (1) represents the (ROA) model, column (2) represents the (Q) model, and column (3) represents the (P/B) model. The estimations show that the results are in line with the main estimations when the financial firms are excluded from the sample. For the (ROA) model, the coefficient of the corporate governance score is 0.287 at 10% significance. The economic freedom index, on the other hand, has a coefficient of 0.243 at 1% significance level. The interaction term also shows parallel results with the main regression results. The coefficient of the interaction variable is -0.292 at 10% significance level.

**Table 12.** The Test Results of the Emerging Economies Sample (Financials are Excluded)

	(1)	(2)	(3)
<b>CGS</b>	0.287* (0.098)	0.128 (0.451)	-0.082 (0.669)
<b>EFI</b>	0.243*** (0.000)	-0.180*** (0.000)	-0.116** (0.023)
<b>CGS*EFI</b>	-0.292* (0.097)	-0.113 (0.514)	0.088 (0.654)
<b>VOL</b>	-0.027 (0.273)	-0.033 (0.171)	-0.073*** (0.005)
<b>TA</b>	-0.050 (0.131)	-0.676*** (0.000)	-0.402*** (0.000)
<b>D/A</b>	-0.047* (0.058)	0.054** (0.026)	-0.229*** (0.000)
<b>GRW</b>	0.118*** (0.000)	0.122*** (0.000)	0.088*** (0.000)
<b>GDP</b>	0.003 (0.960)	0.119** (0.015)	-0.005 (0.927)
<b>CPI</b>	0.032 (0.124)	0.086*** (0.000)	0.014 (0.550)
<b>U</b>	0.018 (0.676)	-0.381*** (0.000)	-0.299*** (0.000)
<b>COR</b>	-0.029 (0.453)	-0.006 (0.878)	-0.031 (0.450)



**Table 12.** The Test Results of the Emerging Economies Sample (Financials are Excluded) (cont'd)

<b>LEG</b>	-0.436*** (0.001)	-0.828*** (0.000)	-0.663*** (0.000)
<b>Constant</b>	0.489*** (0.000)	0.511*** (0.000)	0.436*** (0.001)
<b>Industry Dummies</b>	Included	Included	Included
<b>N</b>	3106	3117	3117
<b>d.f.</b>	21	21	21
<b>R2_b</b>	0.18	0.37	0.34
<b>Chi2</b>	207.6	847.3	494.3

In this table, CGS represents Corporate Governance General Score, EFI represents Economic Freedom Overall Index, CGS \* EFI is the interaction variable of Corporate Governance Score and Economic Freedom Index, VOL represents Stock Price Volatility by percentage, TA is the natural logarithm of Total Assets, D/A is the Leverage (Debt to Assets) Ratio, GRW is the GDP Growth Rate by percentage, GDP is the natural logarithm of GDP per Capita, CPI is the Consumer Price Index with no seasonal adjustment, U is the Unemployment Rate as percentage, COR is the Corruption Perceptions Index, and LEG is the dummy variable of the Legal System. Column numbers represent different estimations. (1) is the (ROA) model, (2) is Tobin's Q (Q) model, and (3) is the price to book ratio (P/B) model. For all estimations, financial firms (ICB Industry Code: 8000) are excluded. The bracketed values are p-values. \*, \*\*, and \*\*\* denotes statistical significance at 0.1, 0.05, and 0.01 levels.

For firm-level controls, the results are also in line with the main estimations. Again, the only significant relationship is observed from the leverage ratio. The coefficient is -0.047 at 10% significance level. The country-specific variables also show similar results. In line with the main estimations, the GDP growth rate and the legal system show a significant relationship with return on assets. The coefficients are 0.119 for the GDP growth rate and -0.436 for the legal system. Both variables are significant at 1% level.

The test result from (Q) model is also parallel with the main estimations. There is still no significant relationship between Tobin's Q and the corporate governance score. The coefficient is 0.128. The economic freedom index also shows the same statistical significance. The coefficient is -0.180 at 1% significance level. In addition to this, the interaction term interprets a similar relationship with the main estimation results. The coefficient is -0.113 without any statistical significance.

The firm-level controls, on the other hand, show some differences from the main estimations. The stock price volatility, for instance, shows no statistical

significance when the financial firms are excluded. However, there is a qualitative similarity in the coefficients. The coefficient is -0.033. On the other hand, the leverage ratio shows significance in the test results. The coefficient is 0.054 at 5% significance level. It is -0.006 with no significance in the main results. The natural logarithm of total assets shows similar results to the main estimations. The coefficient is -0.676 at 1% significance level.

Also, the test results are in parallel with the main results for the country-level variables. The GDP growth rate has a coefficient of 0.123. The coefficient is significant at 1% level. The coefficients of the consumer price index, the unemployment rate, and the legal systems are also significant at 1% level in both robustness tests and main estimations. The coefficients are 0.086 for the consumer price index, -0.381 for the unemployment rate, and -0.828 for the legal system in the test results. For the natural logarithm of GDP per capita, however, the coefficient is 0.119 at 5% significance level.

The test results of price to book model show significant similarity to the main estimations. However, the coefficients of the corporate governance score and the interaction variable are not qualitatively similar. The coefficient of the corporate governance score is -0.082, while it is 0.017 in the main results. In both cases, no statistical significance is observed. The interaction term has a coefficient of 0.088, while it is -0.007 in the main results. Again, there is no statistical significance in both cases. On the other hand, the economic freedom index is negatively significant in both test and main results. The coefficient is -0.116. The coefficient is significant at 5% level.

For the firm-level controls, all test results are qualitatively and quantitatively similar to the main results. The coefficients are -0.073 for the stock price volatility, -0.402 for the natural logarithm of total assets, and -0.229 for the leverage ratio. All coefficients are significant at 1% level. The country-specific variables are also in line with the main results. The coefficient of the unemployment rate is -0.299. The level of significance is 1%. In addition to this, the legal system has a coefficient of -0.663. This coefficient is also significant at 1% level.

For the developed economies sample, we make 3 additional estimations for each model since there are 3 estimations for each main model (the main, non-U.S., and U.S.-only). Table 13 shows the test result for the (ROA) model. The estimations are denoted as (1) for the main estimation, (2) for the non-U.S. estimations, and (3) for the U.S.-only estimations. All three estimations are made excluding the financial firms. The results interpret that the coefficients of the corporate governance score qualitatively and quantitatively similar to the main and the non-U.S. results. The coefficients are 0.372 for the Model (1), without any statistical significance. In the Model (2), the coefficient of the corporate governance score is 0.472 at 10% significance level. It is 0.446 at 5% significance level in the Model (3). In the U.S.-only estimations, however, only the qualitative similarity is observed. The coefficient is 0.698 without any statistical significance for the Model (6), while it is 1.072 at 5% significance level for the Model (5).

On the economic freedom side, the non-U.S. estimations interpret no similarity. For the Model (1), the coefficient is 0.079, with statistical significance at 5% level. The coefficients in both Model (3) and Model (4) are statistically insignificant. The coefficients are 0.005 for the Model (4), while it is -0.020 for the Model (3). The coefficient is 0.124 at 10% significance level for the Model (3). The interaction term also shows similar results. The coefficient is -0.418 for the Model (1). No statistical significance is observed. For the non-U.S. estimations, however, the coefficients are significant at 5% level. The coefficient is -0.551 for the Model (2). The coefficients of the U.S.-only estimations show qualitative similarity. They are -1.068 at 5% significance level for the initial estimation and -0.729 for the Model (3) without any statistical significance.

For firm-specific variables, the stock price volatility and leverage ratio show significance at 1% level in all estimations. The coefficients of the stock price volatility are -0.247 for the Model (1), -0.159 for the Model (2), and -0.267 for the Model (3). The coefficients of the leverage ratio, on the other hand, are -0.234 for the Model (1), -0.270 for the Model (2), and -0.228 for the Model (3). However, the natural logarithm of total assets interprets different results for some cases. For the main model (which includes U.S. firms), the coefficient of the natural logarithm of

**Table 13.** The Reduced Model of the Developed Economies Sample for the (ROA)

– Excluding the Financial Firms

<b>DV: ROA</b>	<b>(1)</b>	<b>(2)</b>	<b>(3)</b>
<b>CGS</b>	0.372 (0.173)	0.472* (0.052)	0.698 (0.235)
<b>EFI</b>	0.079** (0.037)	0.005 (0.880)	0.124* (0.086)
<b>CGS*EFI</b>	-0.418 (0.138)	-0.551** (0.031)	-0.729 (0.219)
<b>VOL</b>	-0.247*** (0.000)	-0.159*** (0.000)	-0.267*** (0.000)
<b>TA</b>	0.119*** (0.000)	0.045** (0.038)	0.138*** (0.000)
<b>D/A</b>	-0.234*** (0.000)	-0.270*** (0.000)	-0.228*** (0.000)
<b>GRW</b>	0.009 (0.612)	0.057** (0.016)	
<b>GDP</b>	0.006 (0.599)	0.019 (0.147)	
<b>CPI</b>	-0.012 (0.677)	0.021 (0.433)	
<b>U</b>	0.048*** (0.005)	-0.007 (0.767)	
<b>COR</b>	-0.047*** (0.002)	-0.022 (0.124)	
<b>LEG</b>	-0.207** (0.020)	-0.256*** (0.005)	
<b>Constant</b>	0.216*** (0.000)	0.197*** (0.004)	0.179*** (0.000)
<b>Industry Dummies</b>	Included	Included	Included
<b>N</b>	8966	4669	7025
<b>d.f.</b>	21	21	15
<b>R2_b</b>	0.23	0.20	0.25
<b>Chi2</b>	1419.2	652.7	896.2

In this table, CGS represents Corporate Governance General Score, EFI represents Economic Freedom Overall Index, CGS \* EFI is the interaction variable of Corporate Governance Score and Economic Freedom Index, VOL represents Stock Price Volatility by percentage, TA is the natural logarithm of Total Assets, D/A is the Leverage (Debt to Assets) Ratio, GRW is the GDP Growth Rate by percentage, GDP is the natural logarithm of GDP per Capita, CPI is the Consumer Price Index with no seasonal adjustment, U is the Unemployment Rate as percentage, COR is the Corruption Perceptions Index, and LEG is the dummy variable of the Legal System. Column numbers represent different estimations. (1) is the initial model, (2) is the estimation of non-U.S. firms, and (3) is the estimation of the firms from the United States only. For all estimations, the dependent variable is Return on Assets (ROA) and the financial firms (ICB Industry Code: 8000) are excluded. The

bracketed values are p-values. \*, \*\*, and \*\*\* denotes statistical significance at 0.1, 0.05, and 0.01 levels.

total assets is 0.119 at 1% significance level for the Model (1). It is 0.005 for the initial estimation. The non-U.S. estimations, on the other hand, show no qualitative or quantitative similarity. The coefficient is 0.045 at 5% significance level for the Model (2), while it is -0.059 for the initial estimation. The U.S.-only estimations interpret similar results for the natural logarithm of total assets. The coefficient is 0.138 at 1% significance level for the Model (3).

For country-specific controls, no results are interpreted for the U.S.-only estimations since all country-level variables are excluded from these estimations. For the main model, the unemployment rate and corruption perception index interpret similar results. The coefficient of the unemployment rate is 0.048 at 1% significance level for the Model (1). The corruption perception index has a coefficient of -0.047 at 1% significance level. However, the legal system dummy interprets different results. The coefficient is -0.207 at 5% significance level for the Model (1), while it is -0.081 without any statistical significance for the initial estimation.

The non-U.S. estimations, on the other hand, indicate similar results for the GDP growth rate and legal system. The coefficient of the GDP growth rate is 0.057 at 5% significance level for the Model (2). The legal system has a coefficient of -0.256 at 1% significance level for the Model (2). Even though there are qualitative similarities for the coefficients of the natural logarithm of GDP per capita and the unemployment rate, the test results show that excluding financials for the non-U.S. subset interprets insignificant results for these variables. The coefficient of the natural logarithm of GDP per capita is 0.0187 for the Model (2), while it is 0.027 at 5% significance level for the initial estimation. The unemployment rate has a coefficient of -0.007 for the Model (2). It is -0.036 at 10% significance level in the initial estimation.

The (Q) model shows quite similar results among all cases. The results are presented in Table 14. The coefficients of the corporate governance score are 0.676 for the Model (1), 0.556 for the Model (2), and 1.470 for the Model (3). All

coefficients are significant at 1% level. The economic freedom index has coefficients of 0.077 at 5% significance level for the Model (1), 0.109 at 10% significance level for the Model (2), and -0.037 without any statistical significance for the Model (3). Qualitative and quantitative similarities are observed also in the interaction term. The coefficients are -0.708 for the Model (1), -0.606 for the Model (2), and -1.432 for the Model (3). All coefficients are significant at 1% level.

For firm-level controls, a qualitative similarity exists for all estimations. However, there are some differences in particular cases. The stock price volatility, for instance, is significant at 1% level for the Model (1) and (2) when the financial firms are excluded. No statistical significance is observed for their initial estimations. The coefficients of the stock price volatility are -0.054 for the Model (1), -0.063 for the Model (2), and -0.012 for the Model (3). The natural logarithm of total assets shows consistent results for all models. The coefficients are -0.472 for the Model (1), -0.389

**Table 14.** The Reduced Model of the Developed Economies Sample for the (Q) – Excluding the Financial Firms

<b>DV: Q</b>	<b>(1)</b>	<b>(2)</b>	<b>(3)</b>
<b>CGS</b>	0.676*** (0.002)	0.556*** (0.004)	1.470*** (0.001)
<b>EFI</b>	0.077** (0.010)	0.109*** (0.000)	-0.037 (0.507)
<b>CGS*EFI</b>	-0.708*** (0.002)	-0.606*** (0.003)	-1.432*** (0.002)
<b>VOL</b>	-0.054*** (0.000)	-0.063*** (0.000)	-0.012 (0.493)
<b>TA</b>	-0.472*** (0.000)	-0.389*** (0.000)	-0.553*** (0.000)
<b>D/A</b>	-0.006 (0.562)	-0.026** (0.046)	-0.019 (0.130)
<b>GRW</b>	0.002 (0.895)	0.039*** (0.002)	
<b>GDP</b>	0.041*** (0.000)	0.017** (0.019)	

**Table 14.** The Reduced Model of the Developed Economies Sample for the (Q) – Excluding the Financial Firms (cont'd)

<b>CPI</b>	0.151*** (0.000)	0.137*** (0.000)	
<b>U</b>	0.019 (0.186)	0.074*** (0.000)	
<b>COR</b>	-0.030** (0.017)	0.014 (0.248)	
<b>LEG</b>	0.065 (0.388)	0.291*** (0.001)	
<b>Constant</b>	0.313*** (0.000)	-0.041 (0.635)	0.484*** (0.000)
<b>Industry Dummies</b>	Included	Included	Included
<b>N</b>	9028	4710	7051
<b>d.f.</b>	21	21	15
<b>R2_b</b>	0.25	0.22	0.23
<b>Chi2</b>	1391.8	502.7	950.7

In this table, CGS represents Corporate Governance General Score, EFI represents Economic Freedom Overall Index, CGS \* EFI is the interaction variable of Corporate Governance Score and Economic Freedom Index, VOL represents Stock Price Volatility by percentage, TA is the natural logarithm of Total Assets, D/A is the Leverage (Debt to Assets) Ratio, GRW is the GDP Growth Rate by percentage, GDP is the natural logarithm of GDP per Capita, CPI is the Consumer Price Index with no seasonal adjustment, U is the Unemployment Rate as percentage, COR is the Corruption Perceptions Index, and LEG is the dummy variable of the Legal System. Column numbers represent different estimations. (1) is the initial model, (2) is the estimation of non-U.S. firms, and (3) is the estimation of the firms from the United States only. For all estimations, the dependent variable is Tobin's Q (Q) and the financial firms (ICB Industry Code: 8000) are excluded. The bracketed values are p-values. \*, \*\*, and \*\*\* denotes statistical significance at 0.1, 0.05, and 0.01 levels.

for the Model (2), and -0.553 for the Model (3). All coefficients are significant at 1% level. The leverage ratio, on the other hand, interprets significant results only for the Model (2). The coefficient is -0.026 at 5% significance level.

For country-specific variables, the results are in line with the initial estimations. The GDP growth rate is still significant for the Model (2). The coefficient is 0.039 at 1% significance level. The natural logarithm of GDP per capita interprets significant results for both Model (1) and (2). The coefficients are 0.041 at 1% significance level for the Model (1) and 0.017 at 5% significance level for the Model (2). The consumer price index is also significant in both estimations. The coefficients are 0.151 for the Model (1) and 0.137 for the Model (2). Both coefficients are at 1% significance level. The unemployment rate and corruption index also show parallel

results with the initial estimations. The coefficient of the unemployment rate is 0.074 at 1% significance level for the Model (2). The corruption perceptions index has a coefficient of -0.030 at 5% significance level for the Model (1). One exception to these similarities is that the legal system dummy interprets no significant result for the Model (1) when the financial firms are excluded. The coefficients are 0.065 for the Model (1) and 0.291 at 1% significance level for the Model (2).

The results from the price to book ratio models are presented in Table 15. The results interpret that excluding financial firms does not cause any significant change in the models. The coefficient of the corporate governance score is 0.324 for the Model (1), 0.219 for the Model (2), and 2.469 for the Model (3). Only the Model (3) denotes significance for the corporate governance score, which is at 5% level. On the economic freedom side, the only difference observed is in the main estimations. The coefficient is -0.003 for the Model (1), while it is 0.011 for the initial estimation. The interaction term, on the other hand, shows significance only in the Model (3). The coefficient is -2.462 at 5% significance level.

For the firm-specific variables, all results are in line with the initial estimations, except for the U.S.-only estimations. The coefficient of the natural logarithm of total assets shows no significance in Model (3), while it is significant at 1% level in the initial estimation. The coefficients are -0.064 at 5% significance level for the Model (1), -0.145 at 1% significance level for the Model (2), and -0.038 for the Model (3). The coefficients of the stock price volatility, on the other hand, are -0.050 for the Model (1) and -0.064 for the Model (2). Both coefficients are significant 1% level. The leverage ratio indicates significance in Model (1) and (3). The coefficients are -0.095 for the Model (1) and -0.131 for the Model (3). Both coefficients are significant at 1% level. Even though results are quite similar, the only significance for the country-specific variables is observed in the non-U.S. estimations. The consumer price index has a coefficient of 0.079 at 1% significance level for the Model (2).



**Table 15.** The Reduced Model of the Developed Economies Sample for the (P/B) – Excluding the Financial Firms

<b>DV: P/B</b>	<b>(1)</b>	<b>(2)</b>	<b>(3)</b>
<b>CGS</b>	0.324 (0.417)	0.219 (0.394)	2.469** (0.022)
<b>EFI</b>	-0.003 (0.960)	-0.027 (0.474)	0.130 (0.326)
<b>CGS*EFI</b>	-0.290 (0.483)	-0.196 (0.470)	-2.462** (0.025)
<b>VOL</b>	-0.050*** (0.009)	-0.064*** (0.000)	-0.014 (0.585)
<b>TA</b>	-0.064** (0.010)	-0.145*** (0.000)	-0.038 (0.258)
<b>D/A</b>	-0.095*** (0.000)	-0.025 (0.138)	-0.131*** (0.000)
<b>GRW</b>	0.038 (0.227)	0.029 (0.253)	
<b>GDP</b>	0.013 (0.464)	0.016 (0.254)	
<b>CPI</b>	0.047 (0.269)	0.079*** (0.005)	
<b>U</b>	-0.025 (0.318)	-0.034 (0.153)	
<b>COR</b>	-0.021 (0.332)	0.012 (0.428)	
<b>LEG</b>	-0.209 (0.112)	-0.062 (0.524)	
<b>Constant</b>	0.152** (0.012)	0.021 (0.774)	0.221*** (0.000)
<b>Industry Dummies</b>	Included	Included	Included
<b>N</b>	9022	4709	7037
<b>d.f.</b>	21	21	15
<b>R<sup>2</sup><sub>b</sub></b>	0.05	0.15	0.04
<b>Chi<sup>2</sup></b>	198.2	192.7	113.3

In this table, CGS represents Corporate Governance General Score, EFI represents Economic Freedom Overall Index, CGS \* EFI is the interaction variable of Corporate Governance Score and Economic Freedom Index, VOL represents Stock Price Volatility by percentage, TA is the natural logarithm of Total Assets, D/A is the Leverage (Debt to Assets) Ratio, GRW is the GDP Growth Rate by percentage, GDP is the natural logarithm of GDP per Capita, CPI is the Consumer Price Index with no seasonal adjustment, U is the Unemployment Rate as percentage, COR is the Corruption Perceptions Index, and LEG is the dummy variable of the Legal System. Column numbers represent different estimations. (1) is the initial model, (2) is the estimation of non-U.S. firms, and (3) is the estimation of the firms from the United States only. For all estimations, the dependent variable is the price to book ratio (P/B) and the financial firms (ICB Industry Code: 8000) are excluded. The bracketed values are p-values. \*, \*\*, and \*\*\* denotes statistical significance at 0.1, 0.05, and 0.01 levels.

Consequently, the test results indicate that there are no significant differences in the models when the financial firms are excluded from the samples. It can be interpreted that the regression models are robust to the industrial effects. In the literature, this method is applied to the samples before the analysis rather than as a robustness check. However, especially for the developed economies sample, the number of financial firms are quite high. For this reason, we anticipate being hazardous to exclude financial firms initially.

### **3.6.2. Using Different Country-Level Controls**

Another validity check is made with using different country-specific control variables in estimations. The price level, for instance, has several different measures. As mentioned in the Variables Section, Fama (1981) uses the inflation rate to explain the price level effect on financial performance, while Flannery and Protopapadakis (2002) use price index. In order to analyze the effect of the different country-based indicators, we make four additional estimations for every model of both samples. The first estimations (1) employ the inflation rate on consumer prices (INF) as an indicator of the price level. The second estimations (2) use seasonally adjusted consumer price index (CPIS), the third models (3) employ the consumer price index with no seasonal adjustment and year-over-year (y-o-y) method (CPYNS). In the fourth models (4), we test the main models with using GDP per capita growth rate (GRWP) instead of the GDP growth rate. Using different country-level controls tests the consistency and robustness of the models

The test results from the (ROA) model of the emerging economies sample are presented in Table 16. The results indicate that the corporate governance score is statistically significant for every different country-specific variable. The coefficient of corporate governance score is 0.336 at 5% significance level for the model which employs the inflation rate (1). The model which includes the seasonally-adjusted consumer price index (2) has a coefficient of 0.306 at 10% significance level. The model which uses the consumer price index (3) with the year-over-year method has

a coefficient of 0.342 at 5% significance level. The last model which employs the GDP per capita growth rate (4) has a coefficient of 0.290 at 10% significance level.

The economic freedom index is also statistically significant for all estimations. All coefficients are significant at 1% level. The coefficients are 0.275 for the Model (1), 0.279 for the Model (2), 0.278 for the Model (3), and 0.297 for the Model (4). In addition to this, the interaction term also preserves its significance. The Model (1) has a coefficient of -0.343 at 5% significance level. The Model (2) has a coefficient of -0.312 at 10% significance level. The Model (3) has a coefficient of -0.347 at 5% significance level. Finally, the coefficient is -0.293 at 10% significance level in the Model (4). The firm and country-level control variables also show similar results. The leverage ratio, GDP growth rate, and the legal system are significant for all estimations. The coefficients of the leverage ratio are -0.043 for the Model (1), -0.041 for the Model (2), -0.043 for the Model (3), and -0.042 for the Model (4). All coefficients are significant at 10% level. The GDP growth rate has coefficients of 0.104 for the Model (1), 0.121 for the Model (2), 0.108 for the Model (3). In the Model (4), on the other hand, the GDP per capita growth rate is 0.138. The coefficients of the legal system dummy are -0.347 for the Model (1), -0.414 for the Model (2), -0.374 for the Model (3), and -0.427 for the Model (4). All coefficients of the GDP growth rate, GDP per capita growth rate, and the legal system are significant at 1% level.

**Table 16.** The Test Results of (ROA) Model for the Emerging Economies

<b>DV: ROA</b>	<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>
<b>CGS</b>	0.336** (0.048)	0.306* (0.073)	0.342** (0.043)	0.290* (0.089)
<b>EFI</b>	0.275*** (0.000)	0.279*** (0.000)	0.278*** (0.000)	0.297*** (0.000)
<b>CGS*EFI</b>	-0.343** (0.046)	-0.312* (0.072)	-0.347** (0.043)	-0.293* (0.091)
<b>VOL</b>	-0.029 (0.221)	-0.023 (0.337)	-0.030 (0.204)	-0.022 (0.351)
<b>TA</b>	-0.038 (0.227)	-0.040 (0.208)	-0.038 (0.225)	-0.034 (0.282)
<b>D/A</b>	-0.043* (0.069)	-0.041* (0.085)	-0.043* (0.072)	-0.042* (0.079)

**Table 16.** The Test Results of (ROA) Model for the Emerging Economies (cont'd)

<b>GRW</b>	0.104*** (0.000)	0.121*** (0.000)	0.108*** (0.000)	
<b>GRWP</b>				0.138*** (0.000)
<b>GDP</b>	-0.066 (0.150)	-0.028 (0.567)	-0.061 (0.179)	-0.035 (0.465)
<b>CPINS</b>				0.028 (0.156)
<b>INF</b>	-0.015 (0.410)			
<b>CPIS</b>		0.032 (0.117)		
<b>CPIYNS</b>			-0.006 (0.732)	
<b>U</b>	0.042 (0.316)	0.027 (0.525)	0.040 (0.340)	0.033 (0.435)
<b>COR</b>	-0.035 (0.351)	-0.037 (0.321)	-0.034 (0.360)	-0.051 (0.178)
<b>LEG</b>	-0.374*** (0.003)	-0.414*** (0.001)	-0.374*** (0.003)	-0.427*** (0.001)
<b>Constant</b>	0.458*** (0.000)	0.479*** (0.000)	0.460*** (0.000)	0.481*** (0.000)
<b>Industry Dummies</b>	Included	Included	Included	Included
<b>N</b>	3271	3271	3271	3271
<b>d.f.</b>	22	22	22	22
<b>R<sup>2</sup><sub>b</sub></b>	0.23	0.23	0.23	0.23
<b>Chi<sup>2</sup></b>	283.8	285.8	283.2	298.6

In this table, CGS represents Corporate Governance General Score, EFI represents Economic Freedom Overall Index, CGS \* EFI is the interaction variable of Corporate Governance Score and Economic Freedom Index, VOL represents Stock Price Volatility by percentage, TA is the natural logarithm of Total Assets, D/A is the Leverage (Debt to Assets) Ratio, GRW is the GDP Growth Rate by percentage, GRWP is the GDP per capita growth rate, GDP is the natural logarithm of GDP per Capita, CPINS is the Consumer Price Index with no seasonal adjustment, INF is the inflation rate, CPIS is the seasonally adjusted consumer price index, CPIYNS is the consumer price index with no seasonal adjustment for year-over-year (y-o-y) method, U is the Unemployment Rate as percentage, COR is the Corruption Perceptions Index, and LEG is the dummy variable of the Legal System. Column numbers represent different estimations. (1) uses the inflation rate, (2) employs the seasonally adjusted consumer price index, (3) uses the consumer price index with no seasonal adjustment and year-over-year (y-o-y) method, and (4) employs the GDP per capita growth rate. For all estimations, the dependent variable is the return on assets (ROA). The bracketed values are p-values. \*, \*\*, and \*\*\* denotes statistical significance at 0.1, 0.05, and 0.01 levels.

The test results of (Q) model are presented in Table 17. The results are also in parallel with the main regression results. The coefficients of the corporate governance score are 0.200 for the Model (1), 0.142 for the Model (2), 0.202 for the

Model (3), and 0.135 for the Model (4). No statistical significance is observed. The economic freedom index, on the other hand, has coefficients of -0.142 for the Model (1), -0.137 for the Model (2), -0.141 for the Model (3), and -0.133 for the Model (4). All coefficients are significant at 1% level. Additionally, the interaction term has similar results for every estimation. The coefficients are -0.178 for the Model (1), -0.121 for the Model (2), -0.181 for the Model (3), and -0.111 for the Model (4). Similar to the corporate governance score, no statistical significance is observed.

The firm-specific control variables are observed to be in line with the main estimations. The stock price volatility has coefficients of -0.054 for the Model (1), -0.043 for the Model (2), -0.054 for the Model (3), and -0.044 for the Model (4). The coefficients are significant at 1% level, except for the Model (2) and (4). The coefficient of the Model (2) and (4) is at 5% significance level. The of the natural logarithm of total assets is -0.520 for the Model (2) and -0.516 for the Model (1), (3), and (4). All coefficients are significant at 1% level.

For the country-level controls, the GDP growth rate has coefficients of 0.078 for the Model (1), 0.106 for the Model (2), and 0.078 for the Model (3). All coefficients are at 1% significant. Additionally, the coefficient of the GDP per capita growth in the Model (4) is 0.104 at 1% significance level. The unemployment rate and the legal system also show quite similar results. For the unemployment rate, the coefficients are -0.262 for the Model (1), -0.287 for the Model (2), -0.261 for the Model (3), and -0.294 for the Model (4). All coefficients are significant at 1% level.

**Table 17.** The Test Results of (Q) Model for the Emerging Economies

<b>DV: Q</b>	<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>
<b>CGS</b>	0.200 (0.146)	0.142 (0.305)	0.202 (0.140)	0.135 (0.330)
<b>EFI</b>	-0.142*** (0.000)	-0.137*** (0.000)	-0.141*** (0.000)	-0.133*** (0.001)
<b>CGS*EFI</b>	-0.178 (0.200)	-0.121 (0.388)	-0.181 (0.193)	-0.111 (0.427)
<b>VOL</b>	-0.054*** (0.006)	-0.043** (0.033)	-0.054*** (0.006)	-0.044** (0.028)

**Table 17.** The Test Results of (Q) Model for the Emerging Economies (cont'd)

<b>TA</b>	-0.516*** (0.000)	-0.520*** (0.000)	-0.516*** (0.000)	-0.516*** (0.000)
<b>D/A</b>	-0.008 (0.664)	-0.006 (0.758)	-0.008 (0.660)	-0.005 (0.789)
<b>GRW</b>	0.078*** (0.000)	0.106*** (0.000)	0.078*** (0.000)	
<b>GRWP</b>				0.104*** (0.000)
<b>GDP</b>	0.008 (0.837)	0.073* (0.065)	0.007 (0.851)	0.070* (0.078)
<b>CPINS</b>				0.055*** (0.001)
<b>INF</b>	-0.021 (0.152)			
<b>CPIS</b>		0.061*** (0.000)		
<b>CPIYNS</b>			-0.021 (0.143)	
<b>U</b>	-0.262*** (0.000)	-0.287*** (0.000)	-0.261*** (0.000)	-0.294*** (0.000)
<b>COR</b>	0.008 (0.797)	0.003 (0.925)	0.008 (0.803)	-0.003 (0.926)
<b>LEG</b>	-0.481*** (0.000)	-0.550*** (0.000)	-0.480*** (0.000)	-0.586*** (0.000)
<b>Constant</b>	0.311*** (0.006)	0.344*** (0.002)	0.311*** (0.006)	0.360*** (0.001)
<b>Industry Dummies</b>	Included	Included	Included	Included
<b>N</b>	3978	3978	3978	3978
<b>d.f.</b>	22	22	22	22
<b>R<sup>2</sup>_b</b>	0.35	0.35	0.35	0.35
<b>Chi<sup>2</sup></b>	913.2	926.6	913.4	919.8

In this table, CGS represents Corporate Governance General Score, EFI represents Economic Freedom Overall Index, CGS \* EFI is the interaction variable of Corporate Governance Score and Economic Freedom Index, VOL represents Stock Price Volatility by percentage, TA is the natural logarithm of Total Assets, D/A is the Leverage (Debt to Assets) Ratio, GRW is the GDP Growth Rate by percentage, GRWP is the GDP per capita growth rate, GDP is the natural logarithm of GDP per Capita, CPINS is the Consumer Price Index with no seasonal adjustment, INF is the inflation rate, CPIS is the seasonally adjusted consumer price index, CPIYNS is the consumer price index with no seasonal adjustment for year-over-year (y-o-y) method, U is the Unemployment Rate as percentage, COR is the Corruption Perceptions Index, and LEG is the dummy variable of the Legal System. Column numbers represent different estimations. (1) uses the inflation rate, (2) employs the seasonally adjusted consumer price index, (3) uses the consumer price index with no seasonal adjustment and year-over-year (y-o-y) method, and (4) employs the GDP per capita growth rate. For all estimations, the dependent variable is Tobin's Q (Q). The bracketed values are p-values. \*, \*\*, and \*\*\* denotes statistical significance at 0.1, 0.05, and 0.01 levels.

The legal system dummy has coefficients of -0.481 for the Model (1), -0.550 for the Model (2), -0.480 for the Model (3), and -0.586 for the Model (4). Additionally, the GDP per capita and the seasonally adjusted consumer price index have significant coefficients in some cases. The GDP per capita has coefficients of 0.073 for the Model (2) and 0.070 for the Model (4). The coefficients of the GDP per capita are at 10% significance level. The seasonally adjusted consumer price index in the Model (2) has a coefficient of 0.061 at 1% significance level.

The results from the price to book model tests are presented in Table 18. The results indicate that corporate governance shows no significant relationship in any case. However, the coefficients are qualitatively similar. The corporate governance score has coefficients of 0.010 for the Model (1), 0.017 for the Model (2) 0.007 for the Model (3), 0.008 for the Model (4). The economic freedom index interprets parallel results in all cases. The coefficients are -0.092 for the Model (1), -0.097 for the Model (2), -0.094 for the Model (3), and -0.091 for the Model (4). All coefficients are significant at 5% level. On the other hand, the direction of the relationship between the interaction variable and financial performance changes in some cases without any statistical significance. The coefficients are 0.003 for the Model (1) and (4), -0.007 for the Model (2), and 0.005 for the Model (3).

For firm-specific variables, the coefficients are qualitatively and quantitatively similar in all cases. The coefficients of the stock price volatility are -0.082 for the Model (1), -0.083 for the Model (2) and (4), and -0.081 for the Model (3). The natural logarithm of total assets has coefficients of are -0.348 for the Model (1), -0.347 for the Model (2), -0.348 for the Model (3), and -0.346 for the Model (4). The coefficients of the leverage ratio are -0.208 for the Model (2), and -0.207 for the Model (1), (3), (4). All coefficients of the firm-specific variables are significant at 1% level.

In line with the firm-level controls, the country-level control variables show quantitative and qualitative similarity. For instance, the coefficients of the GDP growth rate are 0.091 for the Model (1), 0.080 for the Model (2), and 0.087 for the Model (3). In the Model (4), the GDP per capita growth rate has a coefficient of 0.086. The unemployment rate is also shown significance in all cases. The coefficients are -

0.222 for the Model (1), -0.216 for the Model (2), -0.221 for the Model (3), and -0.215 for the Model (4). Finally, the legal system dummy has coefficients of -0.527 for the Model (1), -0.519 for the Model (2), -0.527 for the Model (3), and -0.533 for the Model (4). All coefficients of these country-specific variables are also significant at 1% level.

**Table 18.** The Test Results of (P/B) Model for the Emerging Economies

<b>DV: P/B</b>	<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>
<b>CGS</b>	0.010 (0.950)	0.017 (0.917)	0.007 (0.967)	0.008 (0.959)
<b>EFI</b>	-0.092** (0.032)	-0.097** (0.023)	-0.094** (0.029)	-0.091** (0.035)
<b>CGS*EFI</b>	0.003 (0.987)	-0.007 (0.967)	0.005 (0.976)	0.003 (0.984)
<b>VOL</b>	-0.082*** (0.000)	-0.083*** (0.000)	-0.081*** (0.000)	-0.083*** (0.000)
<b>TA</b>	-0.348*** (0.000)	-0.347*** (0.000)	-0.348*** (0.000)	-0.346*** (0.000)
<b>D/A</b>	-0.207*** (0.000)	-0.208*** (0.000)	-0.207*** (0.000)	-0.207*** (0.000)
<b>GRW</b>	0.091*** (0.000)	0.080*** (0.000)	0.087*** (0.000)	
<b>GRWP</b>				0.086*** (0.000)
<b>GDP</b>	0.004 (0.923)	-0.012 (0.786)	0.001 (0.975)	-0.015 (0.722)
<b>CPINS</b>				-0.013 (0.509)
<b>INF</b>	0.015 (0.396)			
<b>CPIS</b>		-0.011 (0.580)		
<b>CPIYNS</b>			0.009 (0.606)	
<b>U</b>	-0.222*** (0.000)	-0.216*** (0.000)	-0.221*** (0.000)	-0.215*** (0.000)
<b>COR</b>	-0.036 (0.298)	-0.036 (0.293)	-0.036 (0.292)	-0.042 (0.222)



**Table 18.** The Test Results of (P/B) Model for the Emerging Economies (cont'd)

<b>LEG</b>	-0.527*** (0.000)	-0.519*** (0.000)	-0.527*** (0.000)	-0.533*** (0.000)
<b>Constant</b>	0.354*** (0.002)	0.350*** (0.003)	0.353*** (0.002)	0.355*** (0.002)
<b>Industry Dummies</b>	Included	Included	Included	Included
<b>N</b>	3973	3973	3973	3973
<b>d.f.</b>	22	22	22	22
<b>R<sup>2</sup>_b</b>	0.32	0.32	0.32	0.32
<b>Chi2</b>	558.8	558.1	558.3	559.0

In this table, CGS represents Corporate Governance General Score, EFI represents Economic Freedom Overall Index, CGS \* EFI is the interaction variable of Corporate Governance Score and Economic Freedom Index, VOL represents Stock Price Volatility by percentage, TA is the natural logarithm of Total Assets, D/A is the Leverage (Debt to Assets) Ratio, GRW is the GDP Growth Rate by percentage, GRWP is the GDP per capita growth rate, GDP is the natural logarithm of GDP per Capita, CPINS is the Consumer Price Index with no seasonal adjustment, INF is the inflation rate, CPIS is the seasonally adjusted consumer price index, CPIYNS is the consumer price index with no seasonal adjustment for year-over-year (y-o-y) method, U is the Unemployment Rate as percentage, COR is the Corruption Perceptions Index, and LEG is the dummy variable of the Legal System. Column numbers represent different estimations. (1) uses the inflation rate, (2) employs the seasonally adjusted consumer price index, (3) uses the consumer price index with no seasonal adjustment and year-over-year (y-o-y) method, and (4) employs the GDP per capita growth rate. For all estimations, the dependent variable is the price to book ratio (P/B). The bracketed values are p-values. \*, \*\*, and \*\*\* denotes statistical significance at 0.1, 0.05, and 0.01 levels.

On the developed economies side, we make a total of 24 additional estimations since the non-U.S. subset is needed to be analyzed as well. As it is in the emerging economies part, different numbers interpret different cases. (1) is for the estimations that employ the inflation rate, (2) is for the estimations that use the seasonally adjusted consumer price index, (3) is for the estimations that employ the consumer price index with no seasonal adjustment for year-over-year method, and (4) is the estimations that employ GDP per capita growth rate.

The test results of the main estimations of the (ROA) model are presented in Table 19. The test results suggest that the main estimations are robust to the different country-level control variables. In line with the main model, the corporate governance score shows no significance in any estimations. The economic freedom index also shows similar results. The coefficients are 0.052 for the Model (1), 0.065 for the Model (2), 0.052 for the Model (3), and 0.068 for the Model (4). The significance levels are 10% for the Models (1) and (3), 5% for the Models (2) and (4).

Additionally, the coefficients of the interaction term are parallel to the main model. No statistical significance is observed.

**Table 19.** The Test Results of Main (ROA) Model for the Developed Economies

<b>DV: ROA</b>	<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>
<b>CGS</b>	0.237 (0.276)	0.299 (0.176)	0.238 (0.273)	0.311 (0.159)
<b>EFI</b>	0.052* (0.092)	0.065** (0.045)	0.052* (0.093)	0.068** (0.035)
<b>CGS*EFI</b>	-0.225 (0.318)	-0.300 (0.189)	-0.226 (0.315)	-0.311 (0.172)
<b>VOL</b>	-0.243*** (0.000)	-0.241*** (0.000)	-0.243*** (0.000)	-0.242*** (0.000)
<b>TA</b>	-0.001 (0.946)	0.005 (0.731)	-0.001 (0.950)	0.005 (0.744)
<b>D/A</b>	-0.165*** (0.000)	-0.167*** (0.000)	-0.165*** (0.000)	-0.167*** (0.000)
<b>GRW</b>	0.096*** (0.000)	0.021 (0.177)	0.097*** (0.000)	
<b>GRWP</b>				0.014 (0.377)
<b>GDP</b>	0.009 (0.278)	0.004 (0.708)	0.009 (0.287)	0.005 (0.615)
<b>CPINS</b>				-0.019 (0.425)
<b>INF</b>	0.073*** (0.000)			
<b>CPIS</b>		-0.019 (0.419)		
<b>CPIYNS</b>			0.067*** (0.000)	
<b>U</b>	0.020* (0.067)	0.044*** (0.002)	0.020* (0.068)	0.046*** (0.001)
<b>COR</b>	-0.036*** (0.003)	-0.034*** (0.006)	-0.036*** (0.003)	-0.032*** (0.009)
<b>LEG</b>	0.014 (0.797)	-0.078 (0.304)	0.013 (0.806)	-0.078 (0.302)
<b>Constant</b>	0.149*** (0.000)	0.194*** (0.000)	0.152*** (0.000)	0.197*** (0.000)
<b>Industry Dummies</b>	Included	Included	Included	Included
<b>N</b>	11283	11283	11283	11283
<b>d.f.</b>	22	22	22	22
<b>R2_b</b>	0.20	0.20	0.20	0.20
<b>Chi2</b>	1459.1	1397.8	1459.0	1397.7

In this table, CGS represents Corporate Governance General Score, EFI represents Economic Freedom Overall Index, CGS \* EFI is the interaction variable of Corporate Governance Score and Economic Freedom Index, VOL represents Stock Price Volatility by percentage, TA is the natural logarithm of Total Assets, D/A is the Leverage (Debt to Assets) Ratio, GRW is the GDP Growth Rate by percentage, GRWP is the GDP per capita growth rate, GDP is the natural logarithm of GDP per Capita, CPINS is the Consumer Price Index with no seasonal adjustment, INF is the inflation rate, CPIS is the seasonally adjusted consumer price index, CPIYNS is the consumer price index with no seasonal adjustment for year-over-year (y-o-y) method, U is the Unemployment Rate as percentage, COR is the Corruption Perceptions Index, and LEG is the dummy variable of the Legal System. Column numbers represent different estimations. (1) uses the inflation rate, (2) employs the seasonally adjusted consumer price index, (3) uses the consumer price index with no seasonal adjustment and year-over-year (y-o-y) method, and (4) employs the GDP per capita growth rate. For all estimations, the dependent variable is the return on assets (ROA). The bracketed values are p-values. \*, \*\*, and \*\*\* denotes statistical significance at 0.1, 0.05, and 0.01 levels.

For the firm level-controls, qualitative and quantitative similarities are observed. As in the main model, the stock price volatility and leverage ratio show statistical significance. The country-level controls are also in line with the main model. For all estimations, the unemployment rate and the corruption perceptions index are statistically significant. In addition, the Model (1) and (3) interpret significance for the GDP growth rate and the price level variables.

The test results of the (ROA) model for the non-U.S. subset are presented in Table 20. The test results are parallel with the initial estimation. The corporate governance score is significant at 5% level for all cases. The coefficients are 0.430 for the Model (1), 0.446 for the Model (2), 0.432 for the Model (3), and 0.465 for the Model (4). The economic freedom index, on the other hand, shows quantitative similarity for all cases. The coefficients are -0.051 for the Model (1), -0.020 for the Model (2), -0.051 for the Model (3), and -0.013 for the Model (4). For the Models (1) and (3), the coefficients are significant at 10% level. The interaction term is also significant at 5% level among all cases. The coefficients are -0.443 for the Model (1), -0.481 for the Model (2), -0.445 for the Model (3), and -0.501 for the Model (4).

For firm-specific controls, in line with the main estimations, all coefficients are significant at 1% level. The country-specific controls, on the other hand, show some differences. The growth rates (GDP and GDP per capita), the natural logarithm of GDP per capita, the unemployment rate, and the legal system are statistically significant in all cases. The other control variables have qualitatively similar

coefficients. However, the corruption perception index and the price level controls indicate different results for some estimations. For instance, the corruption index and price level controls show statistical significance only for the Models (1) and (2).

**Table 20.** The Test Results of Non-U.S. (ROA) Model for the Developed Economies

<b>DV: ROA</b>	<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>
<b>CGS</b>	0.430** (0.029)	0.446** (0.025)	0.432** (0.028)	0.465** (0.019)
<b>EFI</b>	-0.051* (0.096)	-0.020 (0.523)	-0.051* (0.094)	-0.013 (0.663)
<b>CGS*EFI</b>	-0.443** (0.033)	-0.481** (0.021)	-0.445** (0.032)	-0.501** (0.016)
<b>VOL</b>	-0.169*** (0.000)	-0.164*** (0.000)	-0.169*** (0.000)	-0.165*** (0.000)
<b>TA</b>	-0.067*** (0.000)	-0.059*** (0.000)	-0.067*** (0.000)	-0.060*** (0.000)
<b>D/A</b>	-0.192*** (0.000)	-0.194*** (0.000)	-0.192*** (0.000)	-0.194*** (0.000)
<b>GRW</b>	0.126*** (0.000)	0.053*** (0.009)	0.126*** (0.000)	
<b>GRWP</b>				0.035* (0.077)
<b>GDP</b>	0.029*** (0.005)	0.027** (0.017)	0.029*** (0.005)	0.032*** (0.004)
<b>CPINS</b>				0.021 (0.370)
<b>INF</b>	0.077*** (0.000)			
<b>CPIS</b>		0.015 (0.525)		
<b>CPIYNS</b>			0.071*** (0.000)	
<b>U</b>	-0.078*** (0.000)	-0.036* (0.068)	-0.078*** (0.000)	-0.033* (0.094)
<b>COR</b>	-0.026** (0.032)	-0.018 (0.138)	-0.026** (0.032)	-0.018 (0.147)
<b>LEG</b>	-0.184*** (0.005)	-0.188** (0.017)	-0.185*** (0.005)	-0.186** (0.019)
<b>Constant</b>	0.163*** (0.007)	0.175*** (0.005)	0.166*** (0.006)	0.182*** (0.004)
<b>Industry Dummies</b>	Included	Included	Included	Included

**Table 20.** The Test Results of Non-U.S. (ROA) Model for the Developed Economies (cont'd)

<b>N</b>	5674	5674	5674	5674
<b>d.f.</b>	22	22	22	22
<b>R2_b</b>	0.22	0.21	0.22	0.21
<b>Chi2</b>	721.7	667.0	721.9	663.0

In this table, CGS represents Corporate Governance General Score, EFI represents Economic Freedom Overall Index, CGS \* EFI is the interaction variable of Corporate Governance Score and Economic Freedom Index, VOL represents Stock Price Volatility by percentage, TA is the natural logarithm of Total Assets, D/A is the Leverage (Debt to Assets) Ratio, GRW is the GDP Growth Rate by percentage, GRWP is the GDP per capita growth rate, GDP is the natural logarithm of GDP per Capita, CPINS is the Consumer Price Index with no seasonal adjustment, INF is the inflation rate, CPIS is the seasonally adjusted consumer price index, CPIYNS is the consumer price index with no seasonal adjustment for year-over-year (y-o-y) method, U is the Unemployment Rate as percentage, COR is the Corruption Perceptions Index, and LEG is the dummy variable of the Legal System. Column numbers represent different estimations. (1) uses the inflation rate, (2) employs the seasonally adjusted consumer price index, (3) uses the consumer price index with no seasonal adjustment and year-over-year (y-o-y) method, and (4) employs the GDP per capita growth rate. For all estimations, the dependent variable is the return on assets (ROA). The bracketed values are p-values. \*, \*\*, and \*\*\* denotes statistical significance at 0.1, 0.05, and 0.01 levels.

Table 21 presents the test results from the main estimation of (Q) model. The corporate governance score preserves its statistical significance at 1% level in all cases. The coefficients are 0.721 for the Model (1) and (3), 0.547 for the Model (2), and 0.551 for the Model (4). Economic freedom, however, indicates no significance for the Models (1) and (3). The economic freedom index has coefficients of 0.041 for the Models (1) and (3), 0.070 for the Model (2), and 0.071 for the Model (4). The coefficients in the Models (2) and (4) are significant at 1% level. The interaction variable, on the other hand, interprets parallel results to the main estimation. The coefficients are -0.716 for the Model (1) and (3), -0.548 for the Model (2), and -0.553 for the Model (4). All coefficients are significant at 1% level.

For the firm-specific variables, the natural logarithm of total assets and leverage ratio indicate parallel results with the main estimation. The coefficients of the natural logarithm of total assets are significant at 1% level in all cases. However, for the other firm-level controls, the qualitative similarity is not observed for all cases. For instance, the stock price volatility is significant at 5% level for the Models (1) and (2), which is not significant in the main estimation.

Similar to firm-level controls, the country-level controls interpret some differences. The price level variables, for instance, show qualitative similarity in all cases, but no statistical significance is observed for the Models (1) and (3). The unemployment rate, on the other hand, has distinct results among cases. The coefficients are -0.055 for the Models (1) and (3), 0.017 for the Model (2), and 0.016 for the Model (4). Similar to the unemployment rate, the coefficients of the legal system vary among cases. The coefficients are -0.150 for the Models (1) and (3), 0.125 for the Model (2), and 0.122 for the Model (4).

**Table 21.** The Test Results of Main (Q) Model for the Developed Economies

<b>DV: Q</b>	<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>
<b>CGS</b>	0.721*** (0.000)	0.547*** (0.003)	0.721*** (0.000)	0.551*** (0.002)
<b>EFI</b>	0.041 (0.102)	0.070*** (0.005)	0.041 (0.103)	0.071*** (0.005)
<b>CGS*EFI</b>	-0.716*** (0.000)	-0.548*** (0.004)	-0.716*** (0.000)	-0.553*** (0.003)
<b>VOL</b>	-0.023** (0.049)	-0.017 (0.148)	-0.023** (0.049)	-0.017 (0.144)
<b>TA</b>	-0.402*** (0.000)	-0.402*** (0.000)	-0.402*** (0.000)	-0.402*** (0.000)
<b>D/A</b>	-0.012 (0.154)	-0.012 (0.157)	-0.012 (0.154)	-0.012 (0.158)
<b>GRW</b>	0.005 (0.649)	0.005 (0.578)	0.005 (0.645)	
<b>GRWP</b>				0.004 (0.711)
<b>GDP</b>	0.016*** (0.008)	0.039*** (0.000)	0.016*** (0.008)	0.038*** (0.000)
<b>CPINS</b>				0.135*** (0.000)
<b>INF</b>	0.005 (0.379)			
<b>CPIS</b>		0.137*** (0.000)		
<b>CPIYNS</b>			0.005 (0.375)	
<b>U</b>	-0.055*** (0.000)	0.017 (0.159)	-0.055*** (0.000)	0.016 (0.200)
<b>COR</b>	-0.035*** (0.001)	-0.031*** (0.003)	-0.035*** (0.001)	-0.032*** (0.002)

**Table 21.** The Test Results of Main (Q) Model for the Developed Economies  
(cont'd)

<b>LEG</b>	-0.150*** (0.005)	0.125* (0.054)	-0.150*** (0.005)	0.122* (0.059)
<b>Constant</b>	0.385*** (0.000)	0.317*** (0.000)	0.385*** (0.000)	0.318*** (0.000)
<b>Industry Dummies</b>	Included	Included	Included	Included
<b>N</b>	11389	11389	11389	11389
<b>d.f.</b>	22	22	22	22
<b>R2_b</b>	0.26	0.26	0.26	0.26
<b>Chi2</b>	1677.5	1736.2	1677.5	1734.4

In this table, CGS represents Corporate Governance General Score, EFI represents Economic Freedom Overall Index, CGS \* EFI is the interaction variable of Corporate Governance Score and Economic Freedom Index, VOL represents Stock Price Volatility by percentage, TA is the natural logarithm of Total Assets, D/A is the Leverage (Debt to Assets) Ratio, GRW is the GDP Growth Rate by percentage, GRWP is the GDP per capita growth rate, GDP is the natural logarithm of GDP per Capita, CPINS is the Consumer Price Index with no seasonal adjustment, INF is the inflation rate, CPIS is the seasonally adjusted consumer price index, CPIYNS is the consumer price index with no seasonal adjustment for year-over-year (y-o-y) method, U is the Unemployment Rate as percentage, COR is the Corruption Perceptions Index, and LEG is the dummy variable of the Legal System. Column numbers represent different estimations. (1) uses the inflation rate, (2) employs the seasonally adjusted consumer price index, (3) uses the consumer price index with no seasonal adjustment and year-over-year (y-o-y) method, and (4) employs the GDP per capita growth rate. For all estimations, the dependent variable is Tobin's Q (Q). The bracketed values are p-values. \*, \*\*, and \*\*\* denotes statistical significance at 0.1, 0.05, and 0.01 levels.

The test results of (Q) model of the non-U.S. subsample are represented in Table 22. The results are quite parallel to the main estimation. The coefficients of the corporate governance score are 0.491 for the Models (1) and (3), 0.381 for the Model (2), 0.389 for the Model (4). The coefficients of Model (1) and (3) is significant at 1% level, the others are at 5% significance level. For the economic freedom index, the coefficients are 0.080 for the Model (1), 0.103 for the Model (2), 0.079 for the Model (3), and 0.108 for the Model (4). All coefficients are significant at 1% level. The interaction term, on the other hand, has coefficients of -0.486 for the Model (1), -0.393 for the Model (2), -0.487 for the Model (3), and -0.389 for the Model (4). The coefficients are significant at 1% level for the Models (1) and (3) and at 5% level for the Models (2) and (4).

The firm-level variables are mostly in line with the main estimation. However, the statistical significance varies for the stock price volatility among the cases. Distinctly from the main estimation, the Models (1) and (3) show significance at 5% level. Similar to the firm-specific controls, the country-level variables interpret some differences. The coefficients of the natural logarithm of GDP per capita, for instance, interpret no qualitatively or quantitatively similar results in the Models (1) and (3). Similarly, the price level variables, the unemployment rate, and the legal system dummy show no statistical significance in the Model (1) and (3) either.

Table 23 represents the test results of the main price to book model. In line with the main estimation, no statistical significance is observed for the corporate governance score, economic freedom index, and the interaction term. However, the direction of economic freedom – financial performance relationship varies in some cases. For instance, the coefficient of the economic freedom index is -0.007 in the Models (1) and (3), 0.012 for the Model (2), and 0.015 for the Model (4).

**Table 22.** The Test Results of Non-U.S. (Q) Model for Developed Economies

<b>DV: Q</b>	<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>
<b>CGS</b>	0.491*** (0.002)	0.381** (0.016)	0.491*** (0.002)	0.389** (0.014)
<b>EFI</b>	0.080*** (0.001)	0.103*** (0.000)	0.079*** (0.001)	0.108*** (0.000)
<b>CGS*EFI</b>	-0.486*** (0.004)	-0.393** (0.019)	-0.487*** (0.004)	-0.401** (0.017)
<b>VOL</b>	-0.028** (0.043)	-0.020 (0.155)	-0.028** (0.043)	-0.020 (0.145)
<b>TA</b>	-0.282*** (0.000)	-0.286*** (0.000)	-0.282*** (0.000)	-0.286*** (0.000)
<b>D/A</b>	-0.032*** (0.004)	-0.033*** (0.003)	-0.032*** (0.004)	-0.033*** (0.003)
<b>GRW</b>	0.046*** (0.000)	0.036*** (0.001)	0.046*** (0.000)	
<b>GRWP</b>				0.029*** (0.006)
<b>GDP</b>	-0.006 (0.312)	0.013** (0.040)	-0.006 (0.314)	0.014** (0.020)
<b>CPINS</b>				0.118*** (0.000)



**Table 22.** The Test Results of Non-U.S. (Q) Model for Developed Economies  
(cont'd)

<b>INF</b>	0.007 (0.220)			
<b>CPIS</b>		0.115*** (0.000)		
<b>CPIYNS</b>			0.007 (0.213)	
<b>U</b>	0.014 (0.364)	0.071*** (0.000)	0.014 (0.373)	0.072*** (0.000)
<b>COR</b>	0.003 (0.740)	0.008 (0.452)	0.003 (0.744)	0.006 (0.536)
<b>LEG</b>	0.095 (0.141)	0.326*** (0.000)	0.094 (0.143)	0.329*** (0.000)
<b>Constant</b>	0.037 (0.645)	-0.044 (0.586)	0.038 (0.641)	-0.043 (0.594)
<b>Industry Dummies</b>	Included	Included	Included	Included
<b>N</b>	5737	5737	5737	5737
<b>d.f.</b>	22	22	22	22
<b>R2_b</b>	0.19	0.20	0.19	0.20
<b>Chi2</b>	477.0	528.9	477.1	524.6

In this table, CGS represents Corporate Governance General Score, EFI represents Economic Freedom Overall Index, CGS \* EFI is the interaction variable of Corporate Governance Score and Economic Freedom Index, VOL represents Stock Price Volatility by percentage, TA is the natural logarithm of Total Assets, D/A is the Leverage (Debt to Assets) Ratio, GRW is the GDP Growth Rate by percentage, GRWP is the GDP per capita growth rate, GDP is the natural logarithm of GDP per Capita, CPINS is the Consumer Price Index with no seasonal adjustment, INF is the inflation rate, CPIS is the seasonally adjusted consumer price index, CPIYNS is the consumer price index with no seasonal adjustment for year-over-year (y-o-y) method, U is the Unemployment Rate as percentage, COR is the Corruption Perceptions Index, and LEG is the dummy variable of the Legal System. Column numbers represent different estimations. (1) uses the inflation rate, (2) employs the seasonally adjusted consumer price index, (3) uses the consumer price index with no seasonal adjustment and year-over-year (y-o-y) method, and (4) employs the GDP per capita growth rate. For all estimations, the dependent variable is Tobin's Q (Q). The bracketed values are p-values. \*, \*\*, and \*\*\* denotes statistical significance at 0.1, 0.05, and 0.01 levels.

The firm-specific control variables, on the other hand, interprets quite similar results to the main estimation. The coefficients are at 1% significance level in all cases. For the country-specific variables, however, there are some differences among the cases. For example, the growth rates and the legal system dummy interpret 10% significance for the Models (1) and (3). Similarly, the unemployment rate is significant at 5% level for the Models (1) and (3), while it is not statistically significant in the main estimation.

**Table 23.** The Test Results of Main (P/B) Model for Developed Economies

<b>DV: P/B</b>	<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>
<b>CGS</b>	0.315 (0.310)	0.293 (0.351)	0.316 (0.309)	0.298 (0.342)
<b>EFI</b>	-0.007 (0.883)	0.012 (0.801)	-0.007 (0.885)	0.015 (0.759)
<b>CGS*EFI</b>	-0.245 (0.446)	-0.228 (0.482)	-0.246 (0.445)	-0.233 (0.472)
<b>VOL</b>	-0.045*** (0.004)	-0.044*** (0.005)	-0.045*** (0.004)	-0.044*** (0.005)
<b>TA</b>	-0.096*** (0.000)	-0.093*** (0.000)	-0.096*** (0.000)	-0.093*** (0.000)
<b>D/A</b>	-0.064*** (0.000)	-0.064*** (0.000)	-0.064*** (0.000)	-0.064*** (0.000)
<b>GRW</b>	0.055* (0.073)	0.030 (0.246)	0.054* (0.075)	
<b>GRWP</b>				0.031 (0.231)
<b>GDP</b>	0.012 (0.348)	0.016 (0.266)	0.012 (0.350)	0.017 (0.238)
<b>CPINS</b>				0.027 (0.457)
<b>INF</b>	0.026 (0.111)			
<b>CPIS</b>		0.024 (0.503)		
<b>CPIYNS</b>			0.024 (0.118)	
<b>U</b>	-0.041** (0.017)	-0.022 (0.302)	-0.041** (0.017)	-0.019 (0.354)
<b>COR</b>	-0.026 (0.133)	-0.028 (0.115)	-0.026 (0.134)	-0.027 (0.122)
<b>LEG</b>	-0.148* (0.053)	-0.108 (0.331)	-0.149* (0.053)	-0.108 (0.333)
<b>Constant</b>	0.156*** (0.002)	0.153*** (0.005)	0.157*** (0.002)	0.152*** (0.005)
<b>Industry Dummies</b>	Included	Included	Included	Included
<b>N</b>	11383	11383	11383	11383
<b>d.f.</b>	22	22	22	22
<b>R<sup>2</sup>_b</b>	0.06	0.06	0.06	0.06
<b>Chi<sup>2</sup></b>	264.4	262.1	264.3	262.2

In this table, CGS represents Corporate Governance General Score, EFI represents Economic Freedom Overall Index, CGS \* EFI is the interaction variable of Corporate Governance Score and Economic Freedom Index, VOL represents Stock Price Volatility by percentage, TA is the natural logarithm of Total Assets, D/A is the Leverage (Debt to Assets) Ratio, GRW is the GDP Growth Rate by percentage, GRWP is the GDP per capita growth rate, GDP is the natural logarithm of GDP per Capita, CPINS is the Consumer Price Index with no seasonal adjustment, INF is the inflation rate, CPIS is the seasonally adjusted consumer price index, CPIYNS is the consumer price index with no seasonal

adjustment for year-over-year (y-o-y) method, U is the Unemployment Rate as percentage, COR is the Corruption Perceptions Index, and LEG is the dummy variable of the Legal System. Column numbers represent different estimations. (1) uses the inflation rate, (2) employs the seasonally adjusted consumer price index, (3) uses the consumer price index with no seasonal adjustment and year-over-year (y-o-y) method, and (4) employs the GDP per capita growth rate. For all estimations, the dependent variable is the price to book ratio (P/B). The bracketed values are p-values. \*, \*\*, and \*\*\* denotes statistical significance at 0.1, 0.05, and 0.01 levels.

Ultimately, the test results from the price to book ratio estimations of the non-U.S. subsample are presented in Table 24. In parallel with the initial estimation of the non-U.S. subsample, the test results show no significance for the corporate governance score, economic freedom index, and interaction term. However, on the contrary to the estimations of the whole sample, all coefficients are qualitatively similar to the initial estimation.

**Table 24.** The Test Results of Non-U.S. (P/B) Model for Developed Economies

<b>DV: P/B</b>	<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>
<b>CGS</b>	0.185 (0.377)	0.125 (0.553)	0.185 (0.377)	0.126 (0.549)
<b>EFI</b>	-0.020 (0.531)	-0.005 (0.881)	-0.020 (0.531)	-0.001 (0.975)
<b>CGS*EFI</b>	-0.127 (0.565)	-0.076 (0.730)	-0.127 (0.565)	-0.077 (0.728)
<b>VOL</b>	-0.040*** (0.007)	-0.038** (0.010)	-0.040*** (0.007)	-0.038** (0.010)
<b>TA</b>	-0.119*** (0.000)	-0.117*** (0.000)	-0.119*** (0.000)	-0.117*** (0.000)
<b>D/A</b>	-0.016 (0.267)	-0.016 (0.265)	-0.016 (0.267)	-0.016 (0.267)
<b>GRW</b>	0.029 (0.218)	0.030 (0.167)	0.029 (0.217)	
<b>GRWP</b>				0.029 (0.166)
<b>GDP</b>	-0.003 (0.802)	0.011 (0.380)	-0.003 (0.802)	0.011 (0.330)
<b>CPINS</b>				0.062*** (0.010)
<b>INF</b>	-0.004 (0.726)			
<b>CPIS</b>		0.059** (0.016)		

**Table 24.** The Test Results of Non-U.S. (P/B) Model for Developed Economies

(cont'd)

<b>CPIYNS</b>			-0.004 (0.728)	
<b>U</b>	-0.029 (0.156)	-0.014 (0.500)	-0.029 (0.157)	-0.011 (0.603)
<b>COR</b>	0.007 (0.583)	0.006 (0.669)	0.007 (0.583)	0.005 (0.672)
<b>LEG</b>	-0.080 (0.249)	0.033 (0.696)	-0.080 (0.249)	0.039 (0.644)
<b>Constant</b>	0.039 (0.550)	0.003 (0.960)	0.039 (0.552)	0.001 (0.986)
<b>Industry Dummies</b>	Included	Included	Included	Included
<b>N</b>	5736	5736	5736	5736
<b>d.f.</b>	22	22	22	22
<b>R2_b</b>	0.13	0.13	0.13	0.13
<b>Chi2</b>	196.6	203.0	196.6	203.0

In this table, CGS represents Corporate Governance General Score, EFI represents Economic Freedom Overall Index, CGS \* EFI is the interaction variable of Corporate Governance Score and Economic Freedom Index, VOL represents Stock Price Volatility by percentage, TA is the natural logarithm of Total Assets, D/A is the Leverage (Debt to Assets) Ratio, GRW is the GDP Growth Rate by percentage, GRWP is the GDP per capita growth rate, GDP is the natural logarithm of GDP per Capita, CPINS is the Consumer Price Index with no seasonal adjustment, INF is the inflation rate, CPIS is the seasonally adjusted consumer price index, CPIYNS is the consumer price index with no seasonal adjustment for year-over-year (y-o-y) method, U is the Unemployment Rate as percentage, COR is the Corruption Perceptions Index, and LEG is the dummy variable of the Legal System. Column numbers represent different estimations. (1) uses the inflation rate, (2) employs the seasonally adjusted consumer price index, (3) uses the consumer price index with no seasonal adjustment and year-over-year (y-o-y) method, and (4) employs the GDP per capita growth rate. For all estimations, the dependent variable is the price to book ratio (P/B). The bracketed values are p-values. \*, \*\*, and \*\*\* denotes statistical significance at 0.1, 0.05, and 0.01 levels.

For the firm-level control variables, the results are still quite similar. The natural logarithm of total assets is at 1% significance level for all cases. For the stock price volatility, however, the level of significance changes in some cases. The coefficients are -0.040 at 1% significance level for the Models (1) and (3), and -0.038 at 5% significance level for the Models (2) and (4). Similar to the firm-specific controls, country-specific controls interpret mostly parallel results to the initial estimation. In some estimations, however, the coefficients of the price level variables interpret no significant results. The coefficients of the inflation rate in Model (1) and the consumer price index with no seasonal adjustment and year-over-year method in

Model (3) are -0.004 without any statistical significance. In line with the initial estimation, the other price level variables in the Models (2) and (4) are significant at 5% level.

In addition to employing different country-level control variables one-by-one, we make other estimations by combining these different variables to create different fractions. For instance, we re-estimate the regressions by using both seasonally adjusted consumer price index and the GDP per capita growth rate. In addition to the estimations above, we make 27 estimations to observe the effect of different cases. The emerging economies sample is examined in 9 estimations. The developed economies sample, on the other hand, has 18 estimations (9 for the whole sample and 9 for the non-U.S. subsample). The results in these estimations are still in line with the main regressions. The estimation results of these cases are presented in Appendix B.

## CHAPTER 4

### CONCLUSION

#### 4.1. Discussion

The main purpose of this study is to show the relationship between corporate governance and the financial performance of firms in the emerging markets. In addition, we aim to observe the economic freedom-financial performance relationship and the moderating effect of economic freedom on the governance-performance relationship. This moderation effect is especially important since it is the most significant contribution of this study to the related literature. Also, in an effort to make a comparison between the emerging and developed economies, we examine governance-performance relationship for G-7 countries as well. Our purpose on this is to explore possible differences in terms of the application of corporate governance practices between the emerging and developed markets.

The regression results suggest that, in the emerging economies, firms' return on assets increase as the corporate governance scores increase. Furthermore, a higher level of economic freedom enhances the return on assets as well. On the developed economies, corporate governance score is significantly and positively associated with Tobin's Q. In line with the emerging economies, the developed economies sample provides a significant association between the economic freedom index and Tobin's Q. On the other hand, the moderating effect of economic freedom on the governance-performance relationship is observed when performance is measured by ROA and Tobin's Q in the emerging economies and developed economies respectively. However, the marginal effect of economic freedom diminishes as the level of economic liberty increases in the governance-performance relationship.

However, we also observe that the governance-performance relationship is not significant when Tobin's Q and price to book ratio are used as performance measures in emerging markets. The best possible explanation of these outcomes may

be the underdeveloped stock markets of emerging economies. In underdeveloped stock markets, the stock prices are vulnerable to the effects of asymmetric information (Hasbrouck, 1991). Therefore, the stock prices in the emerging markets do not represent the true value of stocks. Since both Tobin's Q and price to book ratio are considerably related to stock prices, the unexpected results from (Q) and (P/B) models seem to be reasonable.

On the other hand, the results of (ROA) and (P/B) models for the developed economies sample are also unparallel with the hypotheses. After a brief examination of the dataset, it is observed that the data set is unbalanced among the developed countries because most of the firms are from the United States. This may be a possible reason for the insignificant results since the accounting principles are different between the U.S. and the other G-7 countries. The U.S. firms use the 'U.S. Generally Accepted Accounting Principles' (US GAAP), while the other G-7 countries depend on the 'International Financial Recording System' (IFRS). According to Bratton and Cunningham, (2009), there are considerable differences between these two accounting systems in terms of the calculation of accounts in financial statements. Moreover, these methodological differences affect the calculation of some financial ratios, including return on assets.

In order to eliminate this accounting system effect, we exclude the U.S. firms from the sample and build two subsets, one for the U.S. firms and the other for the non-U.S. firms. When we estimate the regression models for these two separate subsets, we find that. for (ROA) and (Q) models, both U.S. and non-U.S. firms show significant results for the governance-performance relationship as well as the moderating effect of economic freedom. However, the results for the price to book ratio is still insignificant for both U.S. and non-U.S. firms. We also observe that the economic freedom index does not provide significant results for several estimations. Especially for (P/B) models, economic freedom is ineffective on financial performance. There might be possible reasons behind these outcomes. For example, the stock market development level might affect the association between corporate governance and financial performance. While the underdeveloped stock markets cannot represent the true value of the stocks, it may be possible that economic

freedom is less effective on the market-based financial performance in the developed economies.

The idea may seem to be unparallel to the evidence presented earlier regarding the possible effect of economic freedom on financial performance. However, it should be considered that the moderating effect of economic freedom diminishes as the level of economic freedom rises. As mentioned before, the two possible explanations for this outcome are the disciplinary effect of market competition (Giroud and Mueller, 2010) and the legislative enforcement on corporate disclosure (Hope and Thomas, 2008). Especially from the corporate disclosure side, every condition and action that a corporation takes is revealed for individual and institutional investors, regulators, and other agents in the developed stock markets. Since the information becomes more symmetrical, all agents in the market are able to anticipate the outcomes of the conditions and actions of firms. Eventually, the reactions of the agents become more accurate. On the other hand, the achievement of economic freedom requires liberal stock markets. In order to liberate stock markets and provide freedom on investments, the information demand of agents about the actions and conditions of firms must be satisfied. In this matter, it can be interpreted that corporate disclosure is an important determinant of economic freedom.

While economically free countries experience a liberal and developed the stock market the association between economic freedom and financial performance is insignificant in the developed economies, when (P/B) is used as a performance measure, including non-U.S. and U.S.-only subsets. There is also a diminishing effect of economic freedom on the governance-performance relationship. As mentioned before, the moderation effect of economic freedom is linked to the corporate disclosure activities, eventually the liberal stock markets. Stock market liberalization, on the other hand, is linked to the level of economic freedom. While the marginal effect of economic freedom diminishes for the governance-performance relationship, it is also possible that this marginal effect also diminishes for the freedom-performance relationship. If this view is taken a step further, it may be possible that in a country with a developed stock market, an increase in the level of economic freedom is ineffective on the financial performance since the agents already



overcome the asymmetric information problem. However, we anticipate that this idea may only be valid for market-based performance indicators, such as the price to book ratio because the most significant effect of stock market liberalization is observed on stock prices.

From another point of view, the negative coefficients of economic freedom for (Q) and (P/B) models of the emerging economies may be related to the stock market development. The results show that the coefficients of (Q) and (P/B) models are significantly negative. This means that an increase in the level of economic freedom results in a decrease in the level of financial performance. Since both of these performance indicators are linked to the stock prices, the level of stock market development may also have an influence on these outcomes.

The possible reason behind the absence of the influence of corporate governance on financial performance is explained by the underdeveloped stock markets. Contrary to the developed markets, the underdeveloped markets have the asymmetric information problem. The asymmetric information causes a lack of accurate prediction of the outcomes of corporate behaviors. Consequently, corporate governance practices become ineffective to explain the financial performance that is related to stock prices. From the economic freedom side, the lack of corporate disclosure prevents market development, in terms of financial and investment freedom as a result of asymmetric information. While the common logic presents this chain of events, the significantly negative coefficients of the economic freedom index on (Q) and (P/B) models may show that an increase on the level of economic freedom causes the mitigation of abnormal movements of stock prices. The possible reason behind the abnormal price movements may be the information asymmetry that is caused by the lack of corporate disclosure requirements. Since abnormal price movements are mitigated by the corporate disclosure actions, it can be concluded that an increase in the level of economic freedom may decrease financial performance that is related to stock prices by mitigating abnormal price movements. However, all these inferences that we mention above are hypothetical and do not represent any empirical findings. The possible explanations on these subjects remain for future research.

Eventually, the findings from several models support the general view of the literature. For instance, Core et. al. (2006) also find a positive association between return on assets and shareholder rights. Also, Liu et. al. (2015) show a positive relationship between board independence and return on assets. La Porta et. al. (2002) and Durnev and Kim (2005) find a positive association between shareholder rights and Tobin's Q value. Although these studies use dimensions of corporate governance instead of a general index, the findings of this study support the literature regarding the positive effect of governance practices on financial performance.

#### **4.2. Managerial Implications**

For managers and other business professionals, this study provides important findings regarding the internal environments of the firms. As mentioned before, one of the most important purposes of corporate governance practices is to mitigate agency problems. Agency problems threaten performance and sustainability of a firm. However, these problems that are promulgated by agency-shareholder conflict generally do not show their effects immediately. Most of their negative effects are visible in the long-term. In this matter, corporate governance practices are developed for the prevention of these negative long-term effects. Managers, on the other hand, usually make decisions for the short run and focus on "measurable" outcomes, such as profitability, sales growth, or stock prices.

In this regard, this study provides evidence for the measurable outcomes of corporate governance practices. Our findings show that the level of governance practices is positively associated with the level of financial performance. By providing evidence on a measurable relationship between governance and performance, this study suggests managers to focus on the corporate governance practices for long-term performance and sustainability.

### **4.3. Limitations**

One of the constraints of this study is the extent of the data, which is limited by the Thomson Reuters ASSET4 Database. This database is the only source available for the solid corporate governance data within Thompson Reuters. Consequently, the firms in both samples are limited to the extent of ASSET4. Moreover, the number of firms from each country is an important limitation. The countries in which the firms operate is a crucial determinant of the study since we also consider the country-specific effects in the empirical research. However, the extent of firms in ASSET4 does not cover all firms from all countries. Only a limited number of firms from each country are included in the country indexes of ASSET4. Especially in the emerging economies sample, some countries are represented by quite a few numbers of firms. For example, there are three firms for Hungary and 13 firms for Colombia in the emerging economies sample. The scantiness of observations for some countries narrows the sample size and reduces the chance of generalizability.

In addition to the extent of the database, the missing observations, which include the data of corporate governance, performance indicators, and firm-level control variables, also severely mitigates the sample size. The initial emerging economies samples include 1,062 firms and 11,682 firm-year observations, while the numbers are 3,738 firms and 41,118 firm-year observations for the initial developed economies sample. When the missing data points are excluded, the datasets include 3,271 firm-year observations for 758 firms in the emerging economies and 11,275 firm-year observations for 3,137 firms in the developed economies. Although the number of firms and observations varies across the models due to the use of different performance indicators, it is obvious that a great portion of the data is excluded from the initial dataset.

The missing data problem not only reduces the sample size but also results in the complete exclusion of several countries. In the final sample of the emerging economies, there are no firms from Czech Republic, Indonesia, Malaysia, and the United Arab Emirates because all the data from these countries are excluded from the final sample for the significant amount of missing data. The exclusion of these

countries hampers the generalizability of the study since the characteristic effects of these countries cannot be presented. Therefore, the ability of the study to present the emerging economies is reduced.

The missing data also limits the study by preventing the consideration of some variables. For instance, most single dimensions of corporate governance practices are not suitable for use. Especially, the dimensions that focus on specific conditions, such as ‘Majority Ownership’, ‘Single Biggest Owner’, or ‘Poison Pills’, have a significant number of missing observations. In addition to providing a general view on the governance-performance relationship, the missing observations on the specific dimensions of corporate governance force me to use a general index of corporate governance.

Related to the number of firms and missing observations, some control variables that we initially consider in the study cannot be used as well. For example, we consider using the Herfindahl-Hirschman Index (HHI) in order to demonstrate the effect of industry-level competition. However, the limited number of firms for countries, especially in the emerging economies, make it unsuitable to calculate the HHI since there must be a significant number of firms for every industry in order to calculate the HHI. Since there are several missing firm-year observations and the extent of the database is limited to a few firms in several industries, the calculation of the HHI becomes impossible.

#### **4.4. Suggestions for the Future Research**

For future research, the study may be conducted by using individual dimensions of governance practices rather than a general index of corporate governance. For example, the legislative side of corporate governance, especially shareholder rights and investor protection, can be investigated since the legal structures of the countries have a significant impact on firms’ governance practices. In line with this, the effects of the legal aspects of economic freedom, such as judicial effectiveness or rule of law, can be used in order to present evidence on the effect of legal regulations on corporate governance and legal environment on firm

performance. However, some constraints on the data hamper this possibility. We will explain these constraints and other future research suggestions in the following section.

Moreover, different macroeconomic factors can be also considered. For example, the effect of stock market development can be investigated. Since its effects on the governance-performance, freedom-performance, and the moderating effect of economic freedom on the governance-performance relationship are anticipated, the future studies may consider including the effect of stock market development as well. In line with the previous recommendation, the effect the country-level corporate governance practices on the firm performance can be measured.

As a final suggestion, a different sample can be generated. Specifically, selecting different countries contribute to the generalizability of the study. For example, within the developed economies, Norway, Sweden, or the Netherlands, can be included since these countries are also considered as ‘developed’. Similarly, the emerging economies sample can be extended. The inclusion of other emerging economies, such as Egypt or Saudi Arabia, can be beneficial since the emerging economies sample that we use is relatively narrow. Including such countries can improve the generalizability of the outcomes for the emerging economies.

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## APPENDICES

### A: THE LIST OF CORPORATE GOVERNANCE VARIABLES

All corporate governance variables that are mentioned in Table 25 are labeled as ‘Score’ in the Thomson-Reuters DataStream - ASSET4 Database. These ‘Scores’ are scaled from zero to 100.

**Table 25.** The List of Corporate Governance Variables

<b>1. Board Structure</b>
Background and Skills
Board Diversity
Board Member Affiliations
CEO-Chairman Separation
Experienced Board
Implementation
Improvements
Independent Board Members
Individual Reelection
Mandates Limitation
Monitoring
Non-Executive Board Members
Policy

**Table 25.** The List of Corporate Governance Variables (cont'd)

Size of Board
Specific Skills
Strictly Independent Board Members
Term Duration
<b>2. Board Function</b>
Audit Committee Expertise
Audit Committee Independence
Audit Committee Management Independence
Board Attendance
Board Meetings
Compensation Committee Independence
Compensation Committee Management Independence
Implementation
Improvements
Monitoring
Nomination Committee Independence
Nomination Committee Involvement
Nomination Committee Management Independence
Nomination Committee Processes
Policy

**Table 25.** The List of Corporate Governance Variables (cont'd)

<p><b>3. Compensation Policy</b></p> <p>Board Member Compensation</p> <p>Compensation Controversies</p> <p>Highest Remuneration Package</p> <p>Implementation</p> <p>Improvements</p> <p>Individual Compensation</p> <p>Long Term Objectives</p> <p>Monitoring</p> <p>Policy</p> <p>Remuneration Structure</p> <p>Stock Compensation</p> <p>Stock Option Program</p> <p>Sustainability Compensation Incentives</p> <p><b>4. Shareholder Rights</b></p> <p>Anti-Takeover Devices</p> <p>Available Article of Association</p> <p>Implementation</p> <p>Improvements</p> <p>Majority Shareholders</p> <p>Monitoring</p> <p>Ownership</p> <p>Policy</p>
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**Table 25.** The List of Corporate Governance Variables (cont'd)

Share Structure
Shareholder Controversies
Voting Rights
<b>5. Vision and Strategy</b>
CSR Reporting
Challenges and Opportunities
GRI Report
Global Compact Signatory
Global Reporting
Implementation
Improvements
Integrated Strategy
Monitoring
Policy
Stakeholder Engagement
Transparency



## B: THE RESULTS OF ADDITIONAL ROBUSTNESS TESTS

**Table 26.** The Fractions for (ROA) Model of the Emerging Economies Sample

<b>DV: ROA</b>	<b>(1)</b>	<b>(2)</b>	<b>(3)</b>
<b>CGS</b>	0.314* (0.063)	0.288* (0.092)	0.319* (0.059)
<b>EFI</b>	0.291*** (0.000)	0.297*** (0.000)	0.294*** (0.000)
<b>CGS*EFI</b>	-0.319* (0.063)	-0.291* (0.094)	-0.323* (0.060)
<b>VOL</b>	-0.027 (0.247)	-0.022 (0.360)	-0.028 (0.232)
<b>LOGTA</b>	-0.034 (0.276)	-0.034 (0.280)	-0.034 (0.277)
<b>D/A</b>	-0.044* (0.064)	-0.042* (0.080)	-0.044* (0.066)
<b>GRWP</b>	0.121*** (0.000)	0.139*** (0.000)	0.124*** (0.000)
<b>GDP</b>	-0.071 (0.116)	-0.033 (0.489)	-0.068 (0.134)
<b>INF</b>	-0.017 (0.338)		
<b>CPIS</b>		0.030 (0.131)	
<b>CPIYNS</b>			-0.010 (0.552)
<b>U</b>	0.049 (0.242)	0.032 (0.445)	0.047 (0.259)
<b>COR</b>	-0.047 (0.213)	-0.051 (0.179)	-0.047 (0.215)
<b>LEG</b>	-0.383*** (0.002)	-0.431*** (0.001)	-0.384*** (0.002)
<b>Constant</b>	0.458*** (0.000)	0.484*** (0.000)	0.460*** (0.000)
<b>Industry Dummies</b>	Included	Included	Included
<b>N</b>	3271	3271	3271
<b>d.f.</b>	22	22	22
<b>R2_b</b>	0.23	0.23	0.23
<b>Chi2</b>	295.0	299.0	294.4

In this table, CGS represents Corporate Governance General Score, EFI represents Economic Freedom Overall Index, CGS\*EFI is the interaction variable of Corporate Governance Score and Economic Freedom Index, VOL represents Stock Price Volatility by percentage, TA is the natural logarithm of Total Assets, D/A is the Leverage (Debt to Assets) Ratio, GRW is the GDP Growth Rate by percentage, GRWP is the GDP per capita growth rate, GDP is the natural logarithm of GDP per Capita,

INF is the inflation rate, CPIS is the seasonally adjusted consumer price index, CPIYNS is the consumer price index with no seasonal adjustment for year-over-year (y-o-y) method, U is the Unemployment Rate as percentage, COR is the Corruption Perceptions Index, and LEG is the dummy variable of the Legal System. Column numbers represent different estimations. (1) uses the inflation rate, (2) employs the seasonally adjusted consumer price index, and (3) uses the consumer price index with no seasonal adjustment and year-over-year (y-o-y) method. For all estimations, the dependent variable is return on assets (ROA). The bracketed values are p-values. \*, \*\*, and \*\*\* denotes statistical significance at 0.1, 0.05, and 0.01 levels.

**Table 27.** The Fractions for (Q) Model of the Emerging Economies Sample

<b>DV: Q</b>	<b>(1)</b>	<b>(2)</b>	<b>(3)</b>
<b>CGS</b>	0.186 (0.176)	0.134 (0.332)	0.188 (0.170)
<b>EFI</b>	-0.140*** (0.000)	-0.133*** (0.001)	-0.139*** (0.000)
<b>CGS*EFI</b>	-0.164 (0.239)	-0.111 (0.429)	-0.167 (0.230)
<b>VOL</b>	-0.053*** (0.007)	-0.044** (0.028)	-0.053*** (0.007)
<b>LOGTA</b>	-0.514*** (0.000)	-0.517*** (0.000)	-0.514*** (0.000)
<b>D/A</b>	-0.008 (0.676)	-0.005 (0.787)	-0.008 (0.670)
<b>GRWTP</b>	0.077*** (0.000)	0.104*** (0.000)	0.078*** (0.000)
<b>GDP</b>	0.006 (0.871)	0.070* (0.076)	0.005 (0.899)
<b>INF</b>	-0.026* (0.065)		
<b>CPIS</b>		0.055*** (0.001)	
<b>CPIYNS</b>			-0.027* (0.054)
<b>U</b>	-0.266*** (0.000)	-0.294*** (0.000)	-0.264*** (0.000)
<b>COR</b>	0.003 (0.926)	-0.002 (0.941)	0.002 (0.939)
<b>LEG</b>	-0.510*** (0.000)	-0.588*** (0.000)	-0.508*** (0.000)
<b>Constant</b>	0.323*** (0.004)	0.362*** (0.001)	0.323*** (0.004)
<b>Industry Dummies</b>	Included	Included	Included
<b>N</b>	3978	3978	3978
<b>d.f.</b>	22	22	22

**Table 27.** The Fractions for (Q) Model of the Emerging Economies Sample

<b>R2_b</b>	0.35	0.35	0.35
<b>Chi2</b>	911.1	920.0	911.5

In this table, CGS represents Corporate Governance General Score, EFI represents Economic Freedom Overall Index, CGS\*EFI is the interaction variable of Corporate Governance Score and Economic Freedom Index, VOL represents Stock Price Volatility by percentage, TA is the natural logarithm of Total Assets, D/A is the Leverage (Debt to Assets) Ratio, GRW is the GDP Growth Rate by percentage, GRWP is the GDP per capita growth rate, GDP is the natural logarithm of GDP per Capita, INF is the inflation rate, CPIS is the seasonally adjusted consumer price index, CPIYNS is the consumer price index with no seasonal adjustment for year-over-year (y-o-y) method, U is the Unemployment Rate as percentage, COR is the Corruption Perceptions Index, and LEG is the dummy variable of the Legal System. Column numbers represent different estimations. (1) uses the inflation rate, (2) employs the seasonally adjusted consumer price index, and (3) uses the consumer price index with no seasonal adjustment and year-over-year (y-o-y) method. For all estimations, the dependent variable is Tobin's Q (Q). The bracketed values are p-values. \*, \*\*, and \*\*\* denotes statistical significance at 0.1, 0.05, and 0.01 levels.

**Table 28.** The Fractions for (P/B) Model of the Emerging Economies Sample

<b>DV: P/B</b>	<b>(1)</b>	<b>(2)</b>	<b>(3)</b>
<b>CGS</b>	-0.003 (0.984)	0.008 (0.959)	-0.006 (0.970)
<b>EFI</b>	-0.087** (0.045)	-0.091** (0.035)	-0.089** (0.040)
<b>CGS*EFI</b>	0.017 (0.919)	0.003 (0.984)	0.018 (0.912)
<b>VOL</b>	-0.081*** (0.000)	-0.082*** (0.000)	-0.081*** (0.000)
<b>LOGTA</b>	-0.346*** (0.000)	-0.346*** (0.000)	-0.346*** (0.000)
<b>D/A</b>	-0.206*** (0.000)	-0.207*** (0.000)	-0.207*** (0.000)
<b>GRWTP</b>	0.096*** (0.000)	0.086*** (0.000)	0.093*** (0.000)
<b>GDP</b>	0.000 (0.999)	-0.015 (0.724)	-0.003 (0.940)
<b>INF</b>	0.011 (0.524)		
<b>CPIS</b>		-0.013 (0.514)	
<b>CPIYNS</b>			0.004 (0.802)
<b>U</b>	-0.221*** (0.000)	-0.215*** (0.000)	-0.219*** (0.000)
<b>COR</b>	-0.043 (0.212)	-0.043 (0.220)	-0.044 (0.208)

**Table 28.** The Fractions for (P/B) Model of the Emerging Economies Sample  
(cont'd)

<b>LEG</b>	-0.545*** (0.000)	-0.533*** (0.000)	-0.544*** (0.000)
<b>Constant</b>	0.361*** (0.002)	0.354*** (0.002)	0.359*** (0.002)
<b>Industry Dummies</b>	Included	Included	Included
<b>N</b>	3973	3973	3973
<b>d.f.</b>	22	22	22
<b>R2_b</b>	0.32	0.32	0.32
<b>Chi2</b>	559.2	559.0	559.0

In this table, CGS represents Corporate Governance General Score, EFI represents Economic Freedom Overall Index, CGS\*EFI is the interaction variable of Corporate Governance Score and Economic Freedom Index, VOL represents Stock Price Volatility by percentage, TA is the natural logarithm of Total Assets, D/A is the Leverage (Debt to Assets) Ratio, GRW is the GDP Growth Rate by percentage, GRWP is the GDP per capita growth rate, GDP is the natural logarithm of GDP per Capita, INF is the inflation rate, CPIS is the seasonally adjusted consumer price index, CPIYNS is the consumer price index with no seasonal adjustment for year-over-year (y-o-y) method, U is the Unemployment Rate as percentage, COR is the Corruption Perceptions Index, and LEG is the dummy variable of the Legal System. Column numbers represent different estimations. (1) uses the inflation rate, (2) employs the seasonally adjusted consumer price index, and (3) uses the consumer price index with no seasonal adjustment and year-over-year (y-o-y) method. For all estimations, the dependent variable is the price to book ratio (P/B). The bracketed values are p-values. \*, \*\*, and \*\*\* denotes statistical significance at 0.1, 0.05, and 0.01 levels.

**Table 29.** The Fractions for (ROA) Model of the Developed Economies Sample

<b>DV: ROA</b>	<b>(1)</b>	<b>(2)</b>	<b>(3)</b>
<b>CGS</b>	0.280 (0.197)	0.309 (0.162)	0.281 (0.195)
<b>EFI</b>	0.061** (0.047)	0.068** (0.034)	0.061** (0.047)
<b>CGS*EFI</b>	-0.268 (0.233)	-0.310 (0.175)	-0.269 (0.231)
<b>VOL</b>	-0.244*** (0.000)	-0.242*** (0.000)	-0.244*** (0.000)
<b>LOGTA</b>	-0.001 (0.920)	0.005 (0.739)	-0.001 (0.924)
<b>D/A</b>	-0.165*** (0.000)	-0.167*** (0.000)	-0.165*** (0.000)
<b>GRWTP</b>	0.079*** (0.000)	0.014 (0.371)	0.079*** (0.000)
<b>GDP</b>	0.011 (0.188)	0.005 (0.599)	0.011 (0.194)

**Table 29.** The Fractions for (ROA) Model of the Developed Economies Sample  
(cont'd)

<b>INF</b>	0.066*** (0.000)		
<b>CPIS</b>		-0.018 (0.457)	
<b>CPIYNS</b>			0.061*** (0.000)
<b>U</b>	0.027** (0.011)	0.047*** (0.001)	0.027** (0.011)
<b>COR</b>	-0.032*** (0.008)	-0.033*** (0.008)	-0.032*** (0.009)
<b>LEG</b>	-0.003 (0.949)	-0.076 (0.320)	-0.004 (0.939)
<b>Constant</b>	0.159*** (0.000)	0.196*** (0.000)	0.161*** (0.000)
<b>Industry Dummies</b>	Included	Included	Included
<b>N</b>	11283	11283	11283
<b>d.f.</b>	22	22	22
<b>R2_b</b>	0.20	0.20	0.20
<b>Chi2</b>	1451.2	1397.6	1451.0

In this table, CGS represents Corporate Governance General Score, EFI represents Economic Freedom Overall Index, CGS\*EFI is the interaction variable of Corporate Governance Score and Economic Freedom Index, VOL represents Stock Price Volatility by percentage, TA is the natural logarithm of Total Assets, D/A is the Leverage (Debt to Assets) Ratio, GRW is the GDP Growth Rate by percentage, GRWP is the GDP per capita growth rate, GDP is the natural logarithm of GDP per Capita, INF is the inflation rate, CPIS is the seasonally adjusted consumer price index, CPIYNS is the consumer price index with no seasonal adjustment for year-over-year (y-o-y) method, U is the Unemployment Rate as percentage, COR is the Corruption Perceptions Index, and LEG is the dummy variable of the Legal System. Column numbers represent different estimations. (1) uses the inflation rate, (2) employs the seasonally adjusted consumer price index, and (3) uses the consumer price index with no seasonal adjustment and year-over-year (y-o-y) method. For all estimations, the dependent variable is return on assets (ROA). The bracketed values are p-values. \*, \*\*, and \*\*\* denotes statistical significance at 0.1, 0.05, and 0.01 levels.

**Table 30.** The Fractions for (ROA) Model of the Developed Economies Sample -  
(Excluding U.S. Firms)

<b>DV: ROA</b>	<b>(1)</b>	<b>(2)</b>	<b>(3)</b>
<b>CGS</b>	0.486** (0.014)	0.465** (0.019)	0.487** (0.013)
<b>EFI</b>	-0.036 (0.233)	-0.013 (0.668)	-0.036 (0.229)

**Table 30.** The Fractions for (ROA) Model of the Developed Economies Sample -  
(Excluding U.S. Firms) (cont'd)

<b>CGS*EFI</b>	-0.498** (0.016)	-0.501** (0.016)	-0.499** (0.016)
<b>VOL</b>	-0.170*** (0.000)	-0.165*** (0.000)	-0.170*** (0.000)
<b>LOGTA</b>	-0.068*** (0.000)	-0.060*** (0.000)	-0.068*** (0.000)
<b>D/A</b>	-0.193*** (0.000)	-0.194*** (0.000)	-0.193*** (0.000)
<b>GRWTP</b>	0.085*** (0.000)	0.035* (0.077)	0.085*** (0.000)
<b>GDP</b>	0.034*** (0.001)	0.032*** (0.004)	0.034*** (0.001)
<b>INF</b>	0.066*** (0.000)		
<b>CPIS</b>		0.021 (0.358)	
<b>CPIYNS</b>			0.061*** (0.000)
<b>U</b>	-0.068*** (0.000)	-0.033 (0.101)	-0.069*** (0.000)
<b>COR</b>	-0.023* (0.060)	-0.017 (0.152)	-0.023* (0.060)
<b>LEG</b>	-0.206*** (0.002)	-0.185** (0.019)	-0.207*** (0.001)
<b>Constant</b>	0.186*** (0.002)	0.182*** (0.004)	0.189*** (0.002)
<b>Industry Dummies</b>	Included	Included	Included
<b>N</b>	5674	5674	5674
<b>d.f.</b>	22	22	22
<b>R2_b</b>	0.22	0.21	0.22
<b>Chi2</b>	704.3	663.1	704.5

In this table, CGS represents Corporate Governance General Score, EFI represents Economic Freedom Overall Index, CGS\*EFI is the interaction variable of Corporate Governance Score and Economic Freedom Index, VOL represents Stock Price Volatility by percentage, TA is the natural logarithm of Total Assets, D/A is the Leverage (Debt to Assets) Ratio, GRW is the GDP Growth Rate by percentage, GRWP is the GDP per capita growth rate, GDP is the natural logarithm of GDP per Capita, INF is the inflation rate, CPIS is the seasonally adjusted consumer price index, CPIYNS is the consumer price index with no seasonal adjustment for year-over-year (y-o-y) method, U is the Unemployment Rate as percentage, COR is the Corruption Perceptions Index, and LEG is the dummy variable of the Legal System. Column numbers represent different estimations. (1) uses the inflation rate, (2) employs the seasonally adjusted consumer price index, and (3) uses the consumer price index with no seasonal adjustment and year-over-year (y-o-y) method. For all estimations, the dependent variable is return on assets (ROA). The bracketed values are p-values. \*, \*\*, and \*\*\* denotes statistical significance at 0.1, 0.05, and 0.01 levels.

**Table 31.** The Fractions for (Q) Model of the Developed Economies Sample

<b>DV: Q</b>	<b>(1)</b>	<b>(2)</b>	<b>(3)</b>
<b>CGS</b>	0.732*** (0.000)	0.550*** (0.002)	0.732*** (0.000)
<b>EFI</b>	0.043* (0.080)	0.071*** (0.004)	0.043* (0.081)
<b>CGS*EFI</b>	-0.727*** (0.000)	-0.552*** (0.003)	-0.727*** (0.000)
<b>VOL</b>	-0.024** (0.047)	-0.017 (0.145)	-0.024** (0.047)
<b>LOGTA</b>	-0.402*** (0.000)	-0.402*** (0.000)	-0.402*** (0.000)
<b>D/A</b>	-0.012 (0.151)	-0.012 (0.158)	-0.012 (0.151)
<b>GRWTP</b>	-0.002 (0.854)	0.004 (0.698)	-0.002 (0.857)
<b>GDP</b>	0.017*** (0.006)	0.039*** (0.000)	0.016*** (0.006)
<b>INF</b>	0.003 (0.595)		
<b>CPIS</b>		0.138*** (0.000)	
<b>CPIYNS</b>			0.003 (0.592)
<b>U</b>	-0.053*** (0.000)	0.018 (0.149)	-0.053*** (0.000)
<b>COR</b>	-0.034*** (0.001)	-0.031*** (0.003)	-0.034*** (0.001)
<b>LEG</b>	-0.149*** (0.005)	0.125* (0.053)	-0.149*** (0.005)
<b>Constant</b>	0.388*** (0.000)	0.317*** (0.000)	0.388*** (0.000)
<b>Industry Dummies</b>	Included	Included	Included
<b>N</b>	11389	11389	11389
<b>d.f.</b>	22	22	22
<b>R2_b</b>	0.26	0.26	0.26
<b>Chi2</b>	1676.6	1736.2	1676.6

In this table, CGS represents Corporate Governance General Score, EFI represents Economic Freedom Overall Index, CGS\*EFI is the interaction variable of Corporate Governance Score and Economic Freedom Index, VOL represents Stock Price Volatility by percentage, TA is the natural logarithm of Total Assets, D/A is the Leverage (Debt to Assets) Ratio, GRW is the GDP Growth Rate by percentage, GRWP is the GDP per capita growth rate, GDP is the natural logarithm of GDP per Capita, INF is the inflation rate, CPIS is the seasonally adjusted consumer price index, CPIYNS is the consumer price index with no seasonal adjustment for year-over-year (y-o-y) method, U is the Unemployment Rate as percentage, COR is the Corruption Perceptions Index, and LEG is the dummy variable of the Legal System. Column numbers represent different estimations. (1) uses the inflation

rate, (2) employs the seasonally adjusted consumer price index, and (3) uses the consumer price index with no seasonal adjustment and year-over-year (y-o-y) method. For all estimations, the dependent variable is Tobin's Q (Q). The bracketed values are p-values. \*, \*\*, and \*\*\* denotes statistical significance at 0.1, 0.05, and 0.01 levels.

**Table 32.** The Fractions for (Q) Model of the Developed Economies Sample –  
(Excluding U.S. Firms)

<b>DV: Q</b>	<b>(1)</b>	<b>(2)</b>	<b>(3)</b>
<b>CGS</b>	0.515*** (0.001)	0.391** (0.014)	0.515*** (0.001)
<b>EFI</b>	0.087*** (0.000)	0.108*** (0.000)	0.087*** (0.000)
<b>CGS*EFI</b>	-0.511*** (0.002)	-0.402** (0.016)	-0.511*** (0.002)
<b>VOL</b>	-0.029** (0.039)	-0.020 (0.145)	-0.029** (0.039)
<b>LOGTA</b>	-0.282*** (0.000)	-0.286*** (0.000)	-0.282*** (0.000)
<b>D/A</b>	-0.032*** (0.004)	-0.033*** (0.003)	-0.032*** (0.004)
<b>GRWTP</b>	0.030** (0.013)	0.029*** (0.006)	0.030** (0.013)
<b>GDP</b>	-0.004 (0.488)	0.015** (0.019)	-0.004 (0.490)
<b>INF</b>	0.003 (0.574)		
<b>CPIS</b>		0.118*** (0.000)	
<b>CPIYNS</b>			0.003 (0.560)
<b>U</b>	0.016 (0.279)	0.073*** (0.000)	0.016 (0.285)
<b>COR</b>	0.002 (0.817)	0.007 (0.502)	0.002 (0.819)
<b>LEG</b>	0.085 (0.187)	0.325*** (0.000)	0.085 (0.189)
<b>Constant</b>	0.048 (0.552)	-0.040 (0.621)	0.048 (0.551)
<b>Industry Dummies</b>	Included	Included	Included
<b>N</b>	5737	5737	5737
<b>d.f.</b>	22	22	22
<b>R2_b</b>	0.19	0.20	0.19
<b>Chi2</b>	468.5	524.9	468.5



In this table, CGS represents Corporate Governance General Score, EFI represents Economic Freedom Overall Index, CGS\*EFI is the interaction variable of Corporate Governance Score and Economic Freedom Index, VOL represents Stock Price Volatility by percentage, TA is the natural logarithm of Total Assets, D/A is the Leverage (Debt to Assets) Ratio, GRW is the GDP Growth Rate by percentage, GRWP is the GDP per capita growth rate, GDP is the natural logarithm of GDP per Capita, INF is the inflation rate, CPIS is the seasonally adjusted consumer price index, CPIYNS is the consumer price index with no seasonal adjustment for year-over-year (y-o-y) method, U is the Unemployment Rate as percentage, COR is the Corruption Perceptions Index, and LEG is the dummy variable of the Legal System. Column numbers represent different estimations. (1) uses the inflation rate, (2) employs the seasonally adjusted consumer price index, and (3) uses the consumer price index with no seasonal adjustment and year-over-year (y-o-y) method. For all estimations, the dependent variable is Tobin's Q (Q). The bracketed values are p-values. \*, \*\*, and \*\*\* denotes statistical significance at 0.1, 0.05, and 0.01 levels.

**Table 33.** The Fractions for (P/B) Model of the Developed Economies Sample

<b>DV: P/B</b>	<b>(1)</b>	<b>(2)</b>	<b>(3)</b>
<b>CGS</b>	0.334 (0.282)	0.295 (0.347)	0.334 (0.281)
<b>EFI</b>	-0.003 (0.945)	0.016 (0.744)	-0.003 (0.946)
<b>CGS*EFI</b>	-0.263 (0.413)	-0.231 (0.478)	-0.264 (0.412)
<b>VOL</b>	-0.045*** (0.004)	-0.044*** (0.005)	-0.045*** (0.004)
<b>LOGTA</b>	-0.097*** (0.000)	-0.093*** (0.000)	-0.097*** (0.000)
<b>D/A</b>	-0.064*** (0.000)	-0.064*** (0.000)	-0.064*** (0.000)
<b>GRWTP</b>	0.048* (0.098)	0.031 (0.227)	0.047 (0.100)
<b>GDP</b>	0.013 (0.313)	0.017 (0.226)	0.013 (0.314)
<b>INF</b>	0.023 (0.143)		
<b>CPIS</b>		0.029 (0.420)	
<b>CPIYNS</b>			0.021 (0.150)
<b>U</b>	-0.037** (0.026)	-0.018 (0.396)	-0.037** (0.027)
<b>COR</b>	-0.024 (0.169)	-0.027 (0.122)	-0.024 (0.170)
<b>LEG</b>	-0.159** (0.038)	-0.102 (0.359)	-0.160** (0.038)

**Table 33.** The Fractions for (P/B) Model of the Developed Economies Sample

(cont'd)

<b>Constant</b>	0.160*** (0.002)	0.151*** (0.006)	0.161*** (0.001)
<b>Industry Dummies</b>	Included	Included	Included
<b>N</b>	11383	11383	11383
<b>d.f.</b>	22	22	22
<b>R2_b</b>	0.06	0.06	0.06
<b>Chi2</b>	263.9	262.3	263.8

In this table, CGS represents Corporate Governance General Score, EFI represents Economic Freedom Overall Index, CGS\*EFI is the interaction variable of Corporate Governance Score and Economic Freedom Index, VOL represents Stock Price Volatility by percentage, TA is the natural logarithm of Total Assets, D/A is the Leverage (Debt to Assets) Ratio, GRW is the GDP Growth Rate by percentage, GRWP is the GDP per capita growth rate, GDP is the natural logarithm of GDP per Capita, INF is the inflation rate, CPIS is the seasonally adjusted consumer price index, CPIYNS is the consumer price index with no seasonal adjustment for year-over-year (y-o-y) method, U is the Unemployment Rate as percentage, COR is the Corruption Perceptions Index, and LEG is the dummy variable of the Legal System. Column numbers represent different estimations. (1) uses the inflation rate, (2) employs the seasonally adjusted consumer price index, and (3) uses the consumer price index with no seasonal adjustment and year-over-year (y-o-y) method. For all estimations, the dependent variable is the price to book ratio (P/B). The bracketed values are p-values. \*, \*\*, and \*\*\* denotes statistical significance at 0.1, 0.05, and 0.01 levels.

**Table 34.** The Fractions for (P/B) Model of the Developed Economies Sample -

(Excluding U.S. Firms)

<b>DV: P/B</b>	<b>(1)</b>	<b>(2)</b>	<b>(3)</b>
<b>CGS</b>	0.197 (0.345)	0.127 (0.546)	0.197 (0.345)
<b>EFI</b>	-0.017 (0.601)	-0.001 (0.982)	-0.017 (0.602)
<b>CGS*EFI</b>	-0.139 (0.528)	-0.078 (0.725)	-0.139 (0.529)
<b>VOL</b>	-0.040*** (0.007)	-0.038** (0.010)	-0.040*** (0.007)
<b>LOGTA</b>	-0.120*** (0.000)	-0.117*** (0.000)	-0.120*** (0.000)
<b>D/A</b>	-0.016 (0.262)	-0.016 (0.267)	-0.016 (0.262)
<b>GRWTP</b>	0.020 (0.365)	0.028 (0.167)	0.020 (0.363)
<b>GDP</b>	-0.002 (0.888)	0.012 (0.322)	-0.002 (0.888)

**Table 34.** The Fractions for (P/B) Model of the Developed Economies Sample -  
(Excluding U.S. Firms) (cont'd)

<b>INF</b>	-0.007 (0.554)		
<b>CPIS</b>		0.063*** (0.009)	
<b>CPIYNS</b>			-0.006 (0.556)
<b>U</b>	-0.027 (0.196)	-0.010 (0.640)	-0.027 (0.197)
<b>COR</b>	0.008 (0.545)	0.006 (0.634)	0.008 (0.546)
<b>LEG</b>	-0.085 (0.219)	0.039 (0.642)	-0.085 (0.220)
<b>Constant</b>	0.044 (0.498)	0.002 (0.976)	0.044 (0.500)
<b>Industry Dummies</b>	Included	Included	Included
<b>N</b>	5736	5736	5736
<b>d.f.</b>	22	22	22
<b>R2_b</b>	0.13	0.13	0.13
<b>Chi2</b>	195.7	203.0	195.7

In this table, CGS represents Corporate Governance General Score, EFI represents Economic Freedom Overall Index, CGS\*EFI is the interaction variable of Corporate Governance Score and Economic Freedom Index, VOL represents Stock Price Volatility by percentage, TA is the natural logarithm of Total Assets, D/A is the Leverage (Debt to Assets) Ratio, GRW is the GDP Growth Rate by percentage, GRWP is the GDP per capita growth rate, GDP is the natural logarithm of GDP per Capita, INF is the inflation rate, CPIS is the seasonally adjusted consumer price index, CPIYNS is the consumer price index with no seasonal adjustment for year-over-year (y-o-y) method, U is the Unemployment Rate as percentage, COR is the Corruption Perceptions Index, and LEG is the dummy variable of the Legal System. Column numbers represent different estimations. (1) uses the inflation rate, (2) employs the seasonally adjusted consumer price index, and (3) uses the consumer price index with no seasonal adjustment and year-over-year (y-o-y) method. For all estimations, the dependent variable is the price to book ratio (P/B). The bracketed values are p-values. \*, \*\*, and \*\*\* denotes statistical significance at 0.1, 0.05, and 0.01 levels.

## C. TURKISH SUMMARY / TÜRKÇE ÖZET

### **Ekonomik Özgürlük Gelişmekte Olan Ükelere Yardım mı Eder Yoksa Zarar mı Verir? Ekonomik Özgürlüğün Kurumsal Yönetim - Finansal Performans İlişkisi Üzerindeki İki Taraflı etkisi: Uluslararası Bir Çalışma**

#### **Kurumsal Yönetim'in Tanımı ve Teorik Arkaplanı**

Kurumsal yönetim, son on yılda en çok işlenen konulardan biridir. Son yıllarda, Enron ve WorldCom gibi bazı büyük skandalların sonucunda, kurumsal yönetim kavramı daha da önem kazanmıştır. Bu skandalların ardından, meşhur "Sarbanes-Oxley Yasası" (SOX) 2002 yılında imzalandı. Yasanın amacı, yeni standartları belirlemek ve kamu kurumlarının yönetim kurulları, yöneticileri ve denetçileri için mevcut olan standartları iyileştirmektir. Bu standartlar, aynı zamanda kurumsal yönetim prosedürlerini de kapsamaktadır (Murdock, 2018).

Gompers ve diğ. (2003) şirketleri birer cumhuriyet olarak tanımlamaktadır. Cumhuriyetler olarak, şirketlerin seçmenleri (hissedarları), seçilmiş vekilleri (yönetim kurulu) ve atanmış yetkilileri (yöneticileri) vardır. Böyle bir senaryoda, kurumsal yönetim terimi, fayda maksimizasyonu ve seçmen haklarının korunmasını sağlayan kanunlar bütünü olarak görülebilir.

Finansal açıdan bakıldığında, kurumsal yönetim, finans tedarikçileri için bir güvence olarak görülebilir. Kurumsal yönetim uygulamaları, talep edilen finansmanın takibini sağlar. Bu takip, finansman tedarikçilerinin yatırımlarının iyi bir şekilde kullanıldığından ve yatırımlarından geri dönüş elde edeceklerinden emin olmalarını sağlar (Shleifer ve Vishny, 1997).

Literatüre dayanarak, kurumsal yönetimi tüm şirketler için mümkün olan en iyi şeffaflık, hesap verebilirlik ve sürdürülebilirlik uygulamalarını tanımlamayı ve uygulamayı amaçlayan sistemler bütünü olarak kabul ediyorum.

Kurumsal yönetimin arka planı bazı teorilere dayanmaktadır. Bu teoriler arasında ağırlıklı olarak “Vekalet Teorisi” üzerine odaklandım. Vekalet teorisinin kökleri Coase'a (1937) dayanmaktadır. Fakat, modern iş dünyası için teorisinin geliştirilmesi ve uygulanması, 70'lerin ve 80'lerin sonlarında gerçekleşmiştir (bkz. Jensen ve Meckling, 1976; Fama, 1980; Fama ve Jensen, 1983).

Teorinin temel dayanağı, “sahipler” ve “temsilciler” arasındaki ilişkidir (Eisenhardt, 1989). Bu “vekalet ilişkisi”, mal sahibinin muhtemelen “karar vermeyi” içeren görevleri yapmak için temsilcileri kullanması olarak tanımlanabilir. Hem mal sahibi hem de temsilci, ya da vekil, faydalarını en üst seviyeye çıkarmayı hedeflediğinden, vekiller, mal sahibinin çıkarını aramayabilir (Jensen ve Meckling, 1976). Vekil ile mal sahibi arasında sorun yaratabilecek olası çıkar çatışmasına “Vekalet Sorunları” denir. Vekalet Teorisinin temel amacı, vekiller ve mal sahipleri arasındaki olası problemleri çözmektir (Eisenhardt, 1989).

Vekalet sorunlarının temel nedeni “mülkiyet” ve “kontrol” mekanizmalarının ayrılmasıdır (Fama ve Jensen, 1983). Bu ayrılık farklı açılardan incelenebilir. Çoğunlukla, sorunlara sahipler ve vekiller arasındaki “bilgi asimetrisi” ve “risk algısı” neden olmaktadır. Bilgi asimetrisi kavramında, bir vekil kendine verilen görev hakkında mal sahibinden daha fazla bilgiye sahiptir. Bu nedenle, mal sahibi, vekilin çıkarına göre hareket edip etmediğinden emin olamamaktadır. Öte yandan, risk algısı için vekiller ve sahipler farklı risk toleranslarına sahiptir. Farklı risk toleransları, vekillerin ve mal sahiplerinin aynı olayla ilgili farklı tepkiler vermelerine neden olmaktadır (Eisenhardt, 1989).

Hem asimetrik bilgi hem de farklı risk algıları, vekilleri mal sahiplerinin çıkarlarına aykırı davranmaya teşvik eder. Bu tip vekillerin davranışları iki başlık altında toplanabilir. İlki “ters seçim” dir. Olumsuz seçim bir vekilin görevi ile ilgili becerilerinin belirsizliğini ifade eder. Bir vekil, çalıştığı görev için yeteneğini yanlış beyan edebilir. İkincisi “ahlaki tehlike” dir. Ahlaki tehlike, bir vekil görevi için kasten yeterli performans göstermediğinde ortaya çıkar (Eisenhardt, 1989).

Olumsuz seçim ve ahlaki tehlikeyi önlemek için, mal sahipler çıkarlarını vekillerinkiler ile paralel hale getirmeyi amaçlarlar. Bunu başarmak için, mal sahibi, teşvik ya da bilgi sistemlerini kullanabilir. Ek olarak, bir mal sahibi, bir aracının

çalışmasının sonuçlarına ve performansına dayanan ücretlendirme sistemlerini kullanabilir. Ancak aynı zamanda, bu uygulamalar “Vekalet Maliyetleri” olarak adlandırılan bir maliyet yükü yaratır (Jensen ve Meckling, 1976).

Özetle, vekalet teorisi insanları “homo Economicus” olarak tanımlamaktadır. Hem mal sahipleri hem de vekillerin temel amaçları kendi faydalarını maksimize etmektir. Teori kadar, vekiller ve mal sahiplerinin davranışları da kendi bireysel bakış açılarına dayanır. Bu açıdan, kurumsal yönetim uygulamalarının amacı bireysel fayda odaklı davranışları en aza indirmektir.

### **Kurumsal Yönetim - Finansal Performans İlişkisi**

Bir önceki bölümde belirtildiği gibi, kurumsal yönetim uygulamalarının en önemli amacı vekalet sorunlarını azaltmaktır. Teorik olarak, vekillerin çıkarları mülk sahiplerinin menfaatlerine yakınsadığı zaman, firmaların etkinliğinin ve performansının artması beklenmektedir. İlgili literatür, bu konuda birçok ampirik kanıt sunmaktadır. Bu kurumsal yönetim-performans ilişkisine yönelik bakış açıları farklılık göstermektedir, çünkü kurumsal yönetim, farklı disiplinler için birçok farklı uygulama içermektedir.

Öte yandan, performans da nispeten öznel bir terimdir. Firmalar, özellikle modern kurumsal şirketler, hisse senedi getirileri, muhasebe oranları veya genel firma değerlendirme gibi çeşitli finansal performans göstergelerini kullanmaktadır. Farklı finansal performans türlerini açıklamak için farklı kurumsal yönetim göstergeleri kullanılmaktadır. Literatürdeki her bir kombinasyon farklı bakış açıları sunar ve kurumsal yönetim-performans ilişkisi anlayışını zenginleştirir.

Farklı kurumsal yönetim perspektiflerine bir örnek olarak, mülkiyet yapısının etkisi literatürde geniş biçimde incelenmiştir. Örneğin, Shleifer ve Vishny (1997), mülkiyet yapısını incelemek için en temel vekalet teorisi görüşünü benimsemişlerdir. Mülkiyet ve kontrol haklarının ayrılmasını başlangıç noktası olarak kullanmışlardır. La Porta ve diğ. (1999) ise şirketlerdeki nihai kontrol gücünü araştırmışlardır.

Mülkiyet yapılarıyla ilgili çeşitli çalışmalardan birçoğu, mülkiyet yapısının finansal performans üzerindeki etkisine odaklanmıştır. Örneğin, Mitton (2002), daha

yüksek mülkiyet konsantrasyonunun daha yüksek hisse senedi getirileri ile sonuçlandığını belirtmiştir. Ampirik bulguları, en büyük hissedarların hisselerinin artmasının hisse senedi getirilerini artırdığını göstermektedir. Lemmon ve Lins (2003) ise, Asya Mali Krizi'nde mülkiyet yapısının hisse senedi getirileri üzerindeki etkisini araştırmışlardır. Nakit akışı ile kontrol sahipliğinin ayrılmasının hisse senedi getirileri üzerindeki etkisine odaklanırlar. Ayrılmış nakit akışı ve kontrol sahipliğine sahip firmaların hisse senedi getirilerinin düşük olduğunu tespit etmişlerdir.

Mülkiyet yapısı ile ilgili olarak, hissedar hakları da birçok akademisyen tarafından incelenmiştir. Hissedarların ve diğer yatırımcıların haklarının korunması, oldukça önemli bir konudur. Yatırımcı koruma uygulamaları etkin bir şekilde uygulandığında, yatırımcılar yatırımlarından geri dönüş sağlayacakları beklentisine girerler ve şirketleri finanse etme eğilimleri artar (La Porta ve diğ. 2002). Ancak, hissedar haklarının korunması, yalnızca bir iç kurumsal yönetim faaliyeti değildir. Bir ülkedeki kanuni düzenlemeler de yatırımcıların korunmasında etkilidir. Örneğin, La Porta ve diğ. (1998), bir ülkenin yasal sisteminin (örneğin, anglo-sakson – kıta avrupalı hukuku) paydaşların korunmasında etkili olduğunu ifade etmişlerdir.

Kurumsal yönetim uygulaması olarak kabul edilen bir diğer bakış açısı ücretlendirme planlarıdır. Yönetici ücretleri, akademisyenler tarafından sıklıkla çalışılmaktadır. Teorik olarak, ücretlendirme planları dahil olmak üzere etkin teşvik mekanizmaları, vekillerin mal sahiplerinin çıkarlarına uygun hareket etmelerini desteklemektedir (Jensen ve Meckling, 1976). Bu nedenle, yürütme çabalarını arttırması için etkili bir ücretlendirme planının beklendiği söylenebilir. Sonuç olarak, firma performansının artması beklenmektedir. Örneğin, Zajac (1990) CEO'ların ücretlendirme / zenginlikleri ile firma performansı arasındaki ilişkiyi incelemiştir. CEO'ların, kişisel servetiyle firma servet arasındaki pozitif ilişki hakkındaki algısının, firma performansını olumlu yönde etkilediğini gözlemlemiştir. Gomez-Mejia (1992), kurumsal çeşitlendirme uygulamalarının iki taraflı etkisi altında tazminat-performans ilişkisini araştırmıştır. Bulguları, firmaların verimli bir şekilde çeşitlendirilmesi durumunda tazminat planlarının firma performansı üzerinde daha etkili olduğunu göstermektedir.

Yönetim kurulu da, kurumsal yönetim uygulamalarının bir alanı olarak kabul edilmektedir. Örneğin, Hermalin ve Weisbach (1991), yönetim kurulu ve mülkiyet yapısının firma performansı üzerindeki etkisini incelemişlerdir. Bulguları, yönetim kurulu yapısı ile firma performansı arasında anlamlı bir ilişki olmadığını göstermektedir. Yermack (1996) ise, kurul büyüklüğünün firma değeri üzerindeki etkisini incelemektedir. Bulguları, daha küçük kurullara sahip firmaların daha yüksek firma değerlerine sahip olma eğiliminde olduğunu göstermektedir. Sundaramurthy ve diğ. (1997), yönetim kurulu yapısının, anti-takas hükümleri ve piyasa performansı arasındaki ilişki üzerindeki etkisini incelemektedir. CEO ve başkan ayrılmasının, anti-takas hükümlerinin firma performansı üzerindeki olumsuz etkisini azalttığını buldular.

Firmanın bu iç dinamiklerine ek olarak, dış dünyanın etkisi de bir kurumsal yönetim mekanizması olarak kabul edilir. Jensen'e (1993) göre, standart iç yönetim mekanizmaları, değişen yasal ve ekonomik ortamdan dolayı son on yılda firma dinamiklerini kontrol etme yeteneklerini yitirmektedir. Yasal ve ekonomik ortamlar ayrıca kurumsal yönetim uygulamasında önemli bir rol oynamaktadır. Dış kurumsal yönetim mekanizmaları iki başlık altında incelenebilir: yasal ortam ve kurumsal kontrol piyasası.

Literatürdeki birçok çalışmada, yasal düzenlemeler kurumsal yönetim uygulamalarının etkin bir belirleyicisi olarak incelenmiştir. Örneğin, Shleifer ve Vishny (1997), yatırımcıların yasal olarak korunmasının önemine dikkat çekmişlerdir. Ayrıca, yatırımcıların yasal korumasının dış finansman için önemli olduğuna dikkat çekmişlerdir. La Porta ve diğ. (1998) hukuk sistemlerini, yatırımcı koruma uygulamalarının kaynağı olarak ele almışlardır. Elde ettikleri bulgular, anglo-sakson hukuk sistemine sahip ülkelerin, yatırımcıları kıta avrupası hukuk sistemine sahip ülkelere göre daha fazla koruduğunu göstermektedir. Chen ve diğ. (2009) yatırımcıyı koruma yasalarının iç kurumsal yönetim ve özsermaye maliyeti arasındaki ilişki üzerindeki etkisini incelemişlerdir. Yatırımcı korumasının zayıf olduğu ülkelerde, firma düzeyinde kurumsal yönetim uygulamalarının sermaye maliyeti üzerindeki olumsuz etkisinin daha büyük olduğunu göstermektedir.



Öte yandan, kurumsal kontrol pazarı, firmaların kontrol haklarının birer emtia olduğu devralma pazarı olarak tanımlanmaktadır. Bu açıdan, bir firmanın kontrol hakları bir firmanın kaynaklarını yönetme yetkisine işaret eder. Devralma piyasasında, “teklif veren” olarak adlandırılan taraflar, “hedef” olarak belirlenen şirketlerin yönetim kurullarının çoğunluk sandalyelerinin kontrolü için rekabet ederler (Jensen ve Ruback, 1983).

Kurumsal kaynakların kontrolü için rekabetin firmalara ve iş dünyasına etkisine ilişkin iki farklı bakış açısı vardır. Bir açıdan ele geçirme tehdidi yöneticilerin daha iyi performans göstermeleri için baskı yaratmaktadır (Bebchuk ve Fried, 2003). Farklı bir bakış açısıyla, düşmanca devralmalar, hedef şirketin paydaşlarından teklif sahiplerine servet transferine neden olur, dolayısıyla düşmanca devralmalar, şirketlerin ekonomik ve kültürel bütünlüğüne zarar verebilir (bkz. Shleifer ve Summers, 1988; Herzel ve Shepro, 1990).

Kurumsal yönetim uygulamalarının farklı boyutlarına odaklanan çalışmalara ek olarak, kurumsal yönetim-performans ilişkisi üzerine bazı araştırmacılar daha genel bir bakış açısı benimsemiştir. Finansal performans ile yönetim kurulu yapısı veya icra tazminatı gibi tekil bir kurumsal yönetim unsuru arasındaki ilişkiyi araştırmak yerine, bu çalışmalarda genel bir endeks veya kurumsal yönetim puanı kullanılmıştır.

Kurumsal yönetim uygulamalarının seviyesini tanımlamak için mevcut bir endeks veya puan kullanılır. Ya da araştırmacılar, endeksi kendi metodolojilerine veya araştırma alanlarına göre oluştururlar. Bu endekslerin bazıları, kurumsal yönetimin tüm yönlerini içerirken, diğerleri daha özel boyutlara odaklanmaktadır. Örneğin, Gompers ve diğ. (2003), hissedar haklarıyla ilgili 24 yönetim aracını kullanarak kendi “Kurumsal yönetim Endeksi” ni kurmuşlardır. Hissedar haklarının hisse senedi getirisi üzerindeki etkisini araştırmışlardır. Bulguları, daha güçlü hissedar haklarına sahip firmaların daha yüksek bir hisse senedi getirisi eğiliminde olduğunu göstermektedir.

Kurumsal yönetim ve performans ilişkisi üzerine yapılan araştırmalar, araştırmacıların konuya yaklaşımlarında benimsemiş oldukları kurumsal yönetim perspektiflerine bağlı olarak değiştiğini göstermektedir. Bu çalışmalarda,

arařtırmacılar kurumsal yönetim uygulamalarının farklı boyutlarını ve farklı performans ölçütlerini kullanmışlardır. Çeliřkili çalıřmalar olmasına rađmen, kurumsal yönetim ve finansal performans arasındaki iliřki hakkındaki çalıřmaların büyük çođunluđu, kurumsal yönetim uygulamalarının finansal performansı arttırdıđı sonucuna varmaktadır.

### **Ekonomik Özgürlük'ün Tanımı**

Bu çalıřmada bir diđer odak noktası da ekonomik özgürlük ve bir ülkedeki ekonomik özgürlük düzeyinin firmaların finansal performansı üzerindeki etkisidir. Ekonomik özgürlük kavramı, bireylerin diđer bireylerin haklarına müdahale etmeden kiřisel mülkleriyle ne yapacaklarına karar verme özgürlüđünü ifade eder. Bu özgürlüđün, dinamik bir ekonomi ve medeni bir toplum oluřturmak için hükümetler ve diđer ilgili kurumlar tarafından korunması gerekmektedir (Miller ve Kim, 2016).

Gwartney ve diđer. (1996), ekonomik özgürlüđe temel oluřturan üç kavram olduđunu açıklamaktadır. Bunlar bađımsız seğıim yapma ve mülkiyete sahip olma özgürlüđü, bireylerin ve mülkiyet haklarının güvenliđi, ve mülkiyet haklarının ve bireylerin mülklerinde takas haklarının olmasıdır. Bireylerin kendileri hakkında karar vermelerinde bađımsız olmak, ekonomik özgürlüđü de içeren her türlü özgürlüklerin en temel kavramıdır. İnsanlar, başkalarının haklarını ihlal etmeden kendileri için ne yapacaklarına karar vermekte özgürdürler (Gwartney ve Lawson, 2003).

Öte yandan, hükümetler ve diđer ilgili kurumlar, bireylerin ekonomik seğıimler yapma ve mülk sahibi olma özgürlüđünün korunmasından sorumludur. Uygun güvenlik sađlanmadan, ekonomik özgürlük kötü niyetli bireyler tarafından ihlal edilmeye açıktır. Ayrıca, ekonomik hakların güvenliđi, devletin belirli bir düzeyin üzerindeki kısıtlayıcı bir müdahalesi olmadan sađlanmalıdır, çünkü sađlam bir sebep olmaksızın haklar ve mülklerle ilgili herhangi bir kısıtlama, aynı zamanda ekonomik özgürlüklerin ihlalidir. Ekonomik özgürlüklerin korunmasını sađlamak için hükümetler, kanuni güçlerini bireylerin ekonomik faaliyetleri üzerinde belirli bir seviyeye kadar kullanırlar (De Haan ve Strum, 2000).

## **Ekonomik Özgürlük ve Finansal Performans Arasındaki İlişki**

İlgili literatürün genel fikri, ekonomik özgürlüğün bir ülkenin makroekonomik dinamiklerini desteklediğini göstermektedir. Öte yandan, ekonomik özgürlüğün ekonomik birimler üzerindeki etkisi, halen araştırılması gereken bir sorudur. Genel anlamda, eğer ekonomik özgürlüğün bir bütün olarak ekonomi üzerinde olumlu bir etkisi varsa, aynı zamanda o ekonominin birimleri üzerinde de bir etkisi olduğu varsayılabılır. Bu çalışmanın konusu ekonomik birimler olarak firmalar olduğundan, ekonomik özgürlüğün firma performansı üzerindeki etkisini üzerinde durulmuştur.

Ekonomik özgürlük ve firma performansı arasında sağlam bir bağlantı sağlamak için başlangıçta doğrudan yabancı yatırım (DYY) faaliyetleri incelenmiştir. Firmalar DYY faaliyetlerini gerçekleştirirler, çünkü büyümeleri ve sürdürülebilirlikleri sadece iç pazarlardaki başarılarına değil, aynı zamanda küresel pazarlara katılma yeteneklerine de bağlıdır. Sonuç olarak, DYY uluslararası alanda rekabet edebilmek için çok önemli bir role sahiptir (Moon ve diğ. 1998). Doğrudan yabancı yatırım-performans ilişkisi üzerine yapılan araştırmalar bu görüşü desteklemektedir. İlgili literatür, yükselen DYY seviyesinin firma performansı üzerinde artırıcı bir etkiye sahip olduğunu göstermektedir. Lu ve Beamish (2001), küreselleşmenin küçük ve orta ölçekli işletmelerin performansı üzerindeki etkisini araştırmaktadır. Küreselleşme faaliyetlerinin, firma performansı üzerinde artırıcı bir etkisi olduğunu tespit etmişlerdir. Ayrıca, bu etkinin çoğunlukla firmaların elde ettiği DYY düzeyi ile bağlantılı olduğunu da göstermişlerdir.

Buna paralel olarak, Chang ve Rhee (2011), küreselleşmenin iki taraflı etkisi altında küreselleşme ile firma performansı arasındaki ilişkiyi araştırmaktadır. Elde ettikleri bulgular, finansal performansın küresel rekabet halindeki endüstrilerde doğrudan yabancı yatırım ile pozitif bir ilişki içinde olduğunu göstermektedir. Küreselleşme ve finansal performans arasındaki ilişkiye odaklanan diğer çalışmalar, DYY ve finansal performans seviyesinin pozitif olarak ilişkili olduğu görüşünü güçlendirmektedir (bkz. Buckley ve diğ. , 2002; Lu ve Beamish, 2004).

Öte yandan, bazı araştırmalar ekonomik özgürlük ve firma performansı arasında doğrudan bir ilişki olduğunu ispatlamayı amaçlamaktadır. Henry (2000)

borsa serbestleştirilmesinin hisse senedi fiyatlarına etkisi üzerine bir çalışma yürütmektedir. Borsa serbestleştirmesini, yerli yatırımcıların yabancı yatırımcılar tarafından alım satım izni olarak tanımlamaktadır. Çalışmanın sonucu, liberalleşmeden sonra iç sermaye piyasalarında hisse senedi endeksindeki artışın arttığını göstermektedir.

Smimou ve Karabegovich (2010), Orta Doğu ve Kuzey Afrika'daki gelişmekte olan pazarlarda ekonomik özgürlük seviyesinin hisse senedi getirileri üzerindeki etkisini araştırmışlardır. Henry (2000) doğrultusunda bulguları, ekonomik özgürlüğün hisse senedi getirileri üzerindeki olumlu etkisini göstermektedir. Blau ve diğ. (2014) ise, ekonomik özgürlüğün hisse senedi fiyatlarındaki oynaklık üzerindeki etkisini incelemektedir. Yüksek özgürlüğe sahip ekonomilerin daha istikrarlı borsalara sahip olma eğiliminde olduklarını yorumluyorlar.

Chen ve diğ. (2015) konuya farklı bir bakış açısıyla yaklaşmışlardır. Yatırım esnekliğinin özkaynak değerlemesine etkisini araştırmışlardır. Ekonomik özgürlüğün firmalara daha geniş bir yelpazede yatırım ve büyüme seçenekleri sunan kurumsal bir etkisi olduğunu belirtiyorlar. Yatırım ve büyüme stratejileri konusunda daha fazla seçenek olan firmaların, özkaynak değerleri daha yüksek olma eğiliminde olduğunu ifade etmektedirler.

Özgürlük-sermaye ilişkisi dışında, bazı deneysel çalışmalar ekonomik özgürlüğün banka performansı üzerindeki etkisine odaklanmaktadır. Örneğin, Demirgüç-Kunt ve diğ. (2004), düzenleyici, kurumsal ve yapısal koşulların banka performansı üzerindeki karmaşık etkileri konusunda bir araştırma yapmışlardır. Ekonomik özgürlük ile ilgili bulguları, endüstriyel düzenlemelerin ekonomik özgürlük ve mülkiyet hakları seviyesinden güçlü bir şekilde etkilendiğini göstermektedir. Başka bir deyişle, endüstriyel düzenlemelerin bankaların performansı üzerindeki etkisinin gücü, ekonomik özgürlük ve mülkiyet hakları seviyesine bağlıdır.

İlgili literatür, firma performansı ile ekonomik özgürlük arasındaki bağı ele alan çeşitli ampirik çalışmalar sunmaktadır. Daha önce de belirtildiği gibi, ekonomik özgürlüğün etkisi hem doğrudan hem de dolaylı olarak ele alınabilir. Dolaylı etki, çoğunlukla ekonomik özgürlüğün makroekonomik ortamlar üzerindeki etkisi ve

ekonomik çevrenin firma performansı üzerindeki etkisi ile ilgilidir. Doğrudan etkiler için, birkaç çalışma ekonomik özgürlük ile çeşitli firma düzeyinde performans göstergeleri arasındaki ilişkiyi ampirik olarak incelemektedir. Ek olarak, önemli sayıda çalışma ekonomik özgürlüğün bazı bileşenlerini veya bununla güçlü bir şekilde ilişkili olan uygulamaları dikkate alır. Sonuç olarak, önceki çabalar tarafından sunulan genel fikir, ekonomik özgürlüğün varlığının firma performansını arttırdığına işaret etmektedir.

### **Ekonomik Özgürlüğün Kurumsal Kurumsal yönetim ve Finansal Performans Arasındaki İlişki Üzerindeki İki Taraflı Etkisi**

Ekonomik özgürlüğün iki taraflı etkisini açıklamak için öncelikle “iki taraflı etki” kavramına kısa bir giriş yapılması gerekmektedir. İki taraflı etki, bir değişkenin iki değişken arasındaki ilişki üzerindeki pozitif veya negatif etkisi olarak tanımlanabilir. İlişkiyi etkileyen değişkene "moderatör" veya "iki taraflı değişken" denir. Regresyon modellerinin çoğunda, moderatör bağımlı değişken ile bağımsız değişken arasındaki ilişkiyi etkileyip etkilemediği incelenmektedir. Bu etki, bağımlı değişkenin açıklayıcı gücünü güçlendirebilir veya zayıflatabilir veya hatta ilişkinin yönünü etkileyebilir (Dawson, 2014).

Bununla birlikte, ekonomik özgürlüğün iki taraflı etkisi sınırlı sayıda ampirik çalışmada ele alınmıştır. Örneğin, De Clercq ve diğ. (2010), ağ oluşturma faaliyetlerinin yeni iş yaratma üzerindeki etkisi konusunda kurumsal düzenlemelerin iki taraflı etkisi konusunda araştırma yapmışlardır. Bir ülke daha yüksek düzeyde kurumsal düzenlemelere sahip olduğunda, ortak faaliyetlerin iş yaratma üzerindeki olumlu etkisinin daha da güçlendiğini göstermektedir.

Shinkle ve McCann (2014), yeni ürün ve hizmet geliştirmeyi teşvik eden faktörler üzerine bir çalışma yürütmüşlerdir. Çalışma, bu faktörleri kurumsal ve ekonomik kalkınma bağlamında ele almaktadır. Elde ettikleri bulgular, kurumsal gelişim düzeyi ile ilgili birkaç önemli noktayı göstermektedir. Çalışmaya göre, geçiş ekonomilerinde kurumsal kalkınmanın etkisi zayıflıyor.

Roy ve Goll (2014) ise ulusal kültürün ulusal sürdürülebilirlik üzerindeki etkisini araştırmışlardır. Ulusal kültürü, performans, sosyal destek ve toplumsal cinsiyet eşitliği olan üç kültürel boyutta tanımlar. Ayrıca, ulusal sürdürülebilirliği yolsuzluk, çevresel performans, ve insani gelişme özgürlüğü olarak üç kavram altında tanımlamışlardır. Ekonomik özgürlük ile ilgili olarak, ekonomik özgürlük düzeyinin ulusal kültür üzerindeki iki taraflı etkisini de ölçmektedirler. Ekonomik özgürlüğün, toplumsal cinsiyet eşitliğinin çevresel performans üzerindeki olumlu etkisini artırdığını göstermişlerdir.

Su ve Si (2015), ekonomik özgürlüğün finansal inovasyon ile "hedeflenen-gerçekleşen" performans aralığı arasındaki ilişki üzerindeki iki taraflı etkisini araştırmaktadır. Bulguları ekonomik özgürlüğün bu ilişki üzerindeki olumlu etkisini göstermektedir. Crum ve diğ. (2015), insan sermayesi ve girişimcilik faaliyetleri arasındaki ilişkiyi göstermektedir. İnsan sermayesinin seviyesini, eğitim seviyesinin ve girişimcilik becerilerinin bir kombinasyonu olarak belirtmişlerdir. Ekonomik özgürlük, girişimcilik faaliyetleri üzerindeki olumlu etkilerinden dolayı dikkate alınmıştır (bkz. Baumol, 1996; Kreft ve Sobel, 2005). Elde ettikleri sonuçlar, ekonomik özgürlüğün farklı bileşenlerinin farklı etkilere sahip olduğunu göstermektedir. Örneğin, mülkiyet haklarının etkisi girişimcilik becerisi - girişimcilik faaliyetleri ilişkisi üzerinde güçlü, iş özgürlüğü ise nispeten daha zayıf bir etkiye sahiptir.

Bu çalışmanın literatüre en önemli katkısı, ekonomik özgürlüğün kurumsal yönetim ve finansal performans arasındaki ilişki üzerindeki iki taraflı etkisine dair ampirik kanıt sağlamaktır.

## **Ampirik Bulgular ve Sonuç**

Gelişmekte olan ekonomilerdeki kurumsal yönetim uygulamalarının sağlam bir incelemesini sağlamak için bu çalışmaya dahil edilen ülkeler, 'Bloomberg'in 2018'deki En İyi Performans Gösteren 20 Piyasası' listesinden seçildi. Gelişmekte olan ekonomilere ek olarak, gelişmiş ekonomileri temsil etmek için G-7 ülkeleri için veri toplanmıştır. Gelişmiş ekonomilerin analize dahil edilmesinin ardındaki amaç,

gelişmekte olan ve gelişmiş ekonomiler arasında bir karşılaştırma yapmaktır. Finansal performansa ilişkin farklı bakış açılarını, yani muhasebe temelli, değerlendirme temelli ve piyasa temelli bakış açılarını göstermek için çeşitli finansal performans göstergeleri seçilir. Kurumsal yönetimin tek boyutlarını araştırmak yerine, firmaların kurumsal yönetimini daha geniş bir perspektiften değerlendirmek için Bloomberg veri tabanı tarafından geliştirilen kurumsal yönetim puanı kullanılmıştır. Aynı nedenlerden dolayı, ekonomik özgürlük de genel endekste temsil edilir. Ekonomik özgürlüğün iki taraflı etkinin gösterimi, kurumsal yönetim puanının ve ekonomik özgürlük endeksinin etkileşim değişkeniyle sağlanır. Ayrıca modeller, firma, endüstri ve ülke etkileri için de kontrol edilmiştir. Ampirik araştırma metodolojisi, bu kesitsel analiz için en uygun modelin yapısına göre seçilmiştir. Sıradan En Küçük Kareler (SEKK) metodu kullanılmıştır. Çalışmadaki firmaların ve ülkelerin verileri, her örnek için (gelişmekte olan ve gelişmiş ekonomiler) üç farklı model için (her biri farklı performans perspektifleri için; varlık getiri oranı (ROA), Q değeri (Tobin's Q) ve adi hisse senedinin fiyat/defter oranı (P/B)) 2008 - 2018 dönemini kapsamaktadır.

Regresyon sonuçları, gelişmekte olan ekonomilerde şirketlerin kurumsal yönetim puanları arttıkça varlık getiri oranlarının arttığını göstermektedir. Ayrıca, daha yüksek düzeyde bir ekonomik özgürlük, varlıkların getirisini de arttırmaktadır. Gelişmiş ekonomilerde, kurumsal yönetim puanı, Q değeri anlamlı ve pozitif bir şekilde ilişkilidir. Gelişmekte olan ekonomilere paralel olarak, gelişmiş ekonomiler örneği de, ekonomik özgürlük endeksi ve Q değeri arasında pozitif bir ilişki belirtmektedir. Öte yandan, Gelişmekte olan ekonomilerde ve gelişmiş ekonomilerde performans varlık getirisi ve Q değerleri ile ölçüldüğünde, kurumsal yönetim-performans ilişkisinde ekonomik özgürlüğün iki taraflı pozitif etkisi görülmektedir. Ancak, ekonomik özgürlüğün bu marjinal etkisi, kurumsal yönetim-performans ilişkisinde ekonomik özgürlük düzeyi arttıkça azalmaktadır.

Ancak, Q değeri ve fiyat/defter değeri oranının gelişmekte olan piyasalarda performans ölçütleri olarak kullanılması durumunda, kurumsal yönetim-performans ilişkisinin istatistiksel olarak anlamlı olmadığı gözlemlenmiştir. Bu sonuçların mümkün olan en iyi açıklaması gelişmekte olan ekonomilerin gelişmemiş borsaları olabilir. Gelişmemiş borsalarda, hisse senedi fiyatları asimetrik bilgilerin etkisine

karşı hassastır (Hasbrouck, 1991). Dolayısıyla, gelişmekte olan piyasalardaki hisse senedi fiyatları, hisse senetlerinin gerçek değerini temsil etmemektedir. Hem Q değeri hem de fiyat/defter değeri oranı, hisse senedi fiyatları ile önemli ölçüde ilişkili olduğundan, (Q) ve (P/B) modellerinden beklenmeyen sonuçlar makul görünmektedir.

Öte yandan, gelişmiş ekonomiler örneği için (ROA) ve (P/B) modellerinin sonuçları da hipotezlerle ilgisizdir. Veri setinin kısa bir incelemesinden sonra, veri kümesinin gelişmiş ülkeler arasında dengesiz olduğu, çünkü firmaların çoğunun ABD'den geldiği görülmektedir. Kullanılan muhasebe yöntemlerinin, ABD ile diğer G-7 ülkelerinde farklı olması, bu sonuçların olası bir nedeni olabilir. ABD şirketleri Genel Olarak Kabul Edilen Muhasebe İlkeleri'ni (US GAAP) kullanıyor. Diğer G-7 ülkeleri 'Uluslararası Finansal Kayıt Sistemi'ni (IFRS) uygulamaktadır. Bratton ve Cunningham'a (2009) göre, bu iki muhasebe sistemi arasında finansal tablolaradaki hesapların ve oranların hesaplanması açısından önemli farklılıklar vardır. Ayrıca, bu metodolojik farklılıklar, varlıkların getirisi de dahil olmak üzere bazı finansal oranların hesaplanmasını etkiler.

Bu muhasebe sistemi etkisini ortadan kaldırmak için, ABD firmaları örneklemin dışında tutulmuş ve biri ABD şirketleri, diğeri de ABD dışındaki şirketler için iki altküme oluşturulmuştur. Bu iki ayrı altküme için regresyon modellerini tahmin ettiğimde, (ROA) ve (Q) modelleri için, hem ABD hem de ABD dışındaki şirketler, kurumsal yönetim-performans ilişkisi ve ekonomik özgürlüğün iki taraflı etkisi için istatistiksel olarak anlamlı sonuçlar göstermektedir. Ancak, fiyat/defter oranının sonuçları, hem ABD hem de ABD dışındaki şirketler için anlamsızdır. Ayrıca, ekonomik özgürlük endeksinin birkaç tahmin için anlamlı sonuçlar sağlamadığı da gözlemlenmiştir. Özellikle (P/B) modellerde ekonomik özgürlük finansal performans üzerinde etkili değildir. Bu sonucun arkasında çeşitli nedenler olabilir. Örneğin, borsa geliştirme düzeyi, kurumsal yönetim ile finansal performans arasındaki ilişkiyi etkileyebilir. Azgelişmiş borsalar hisse senetlerinin gerçek değerini temsil edemezken, ekonomik özgürlüğün gelişmiş ekonomilerdeki piyasaya dayalı finansal performans üzerinde daha az etkili olması mümkün olabilir.



Bu fikir, ekonomik özgürlüğün finansal performans üzerindeki olası etkisine ilişkin daha önce sunulan kanıtlara paralel görünmeyebilir. Ancak, ekonomik özgürlüğün iki taraflı etkisinin, ekonomik özgürlük düzeyi arttıkça azaldığı göz önünde bulundurulmalıdır. Daha önce de belirtildiği gibi, bu sonuç için olası iki açıklama, piyasa rekabetinin disiplin etkisi (Giroud ve Mueller, 2010) ve kurumsal ifşa üzerindeki yasal zorunluluktur (Hope ve Thomas, 2008). Özellikle kurumsal açıklama tarafında, bir şirketin gerçekleştirdiği her koşul ve eylem, bireysel ve kurumsal yatırımcılar, düzenleyiciler ve gelişmiş borsalardaki diğer vekiller için ortaya çıkar. Bilgi daha simetrik hale geldiğinden, piyasadaki tüm aktörler firmaların koşullarının ve eylemlerinin sonuçlarını tahmin edebilmektedir. Sonunda, vekillerin reaksiyonları daha kesin hale gelir. Öte yandan, ekonomik özgürlüğün kazanılması borsaların liberalleşmesini gerektirmektedir. Borsaları serbest bırakmak ve yatırımlarda özgürlük sağlamak için, piyasa aktörlerinin firmaların eylemleri ve koşulları hakkındaki bilgi taleplerinin karşılanması gerekir. Bu konuda, kurumsal açıklamanın ekonomik özgürlüğün önemli bir belirleyicisi olduğu şeklinde yorumlanabilir.

Gelişmiş ekonomiler örneklemindeki (P/B) modelleri için (ABD ve ABD dışı), ekonomik olarak özgür ülkeler liberal ve gelişmiş bir borsaya sahip olsalar da, ekonomik özgürlük ve finansal performans arasındaki ilişki istatistiksel olarak anlamsız olarak gözlemlenmektedir. Ayrıca, ekonomik özgürlüğün kurumsal yönetim-performans ilişkisi üzerinde azalan bir etkisi olduğu da gözlemlenmektedir. Daha önce de belirtildiği gibi, ekonomik özgürlüğün iki taraflı etkisi, kurumsal liberal faaliyetler, dolayısıyla liberal borsalar ile bağlantılıdır. Öte yandan, borsa liberalleşmesi, ekonomik özgürlük düzeyiyle ilişkilidir. Ekonomik özgürlüğün marjinal etkisi, kurumsal yönetim-performans ilişkisi için azalırken, bu marjinal etkinin özgürlük-performans ilişkisi için de azalması da mümkün olabilir. Bu görüş bir adım daha ileri götürülürse, gelişmiş bir borsaya sahip bir ülkede, ekonomik özgürlük seviyesindeki artışın, vekiller ve mal sahipleri arasındaki asimetric bilgi sorunu hali hazırda aşıldığından, finansal performans üzerinde etkisiz olması da mümkün olabilir. Ancak, bu fikrin yalnızca piyasaya dayalı performans göstergeleri

için geçerli olabileceği göz önünde bulundurulmalıdır, çünkü borsa serbestleşmesinin en önemli etkisi hisse senedi fiyatları üzerinde gözlenmektedir.

Sonuç olarak, çeşitli modellerden elde edilen bulgular, literatürün genel görüşünü desteklemektedir. Örneğin, Core ve diğ. (2006) ayrıca varlık getirileri ve hissedar hakları arasında pozitif bir ilişki bulmuşlardır. Ayrıca, Liu ve diğ. (2015) yönetim kurulu bağımsızlığı ile varlıkların getirisi arasında pozitif bir ilişki olduğunu göstermişlerdir. La Porta ve diğ. (2002) ve Durnev ve Kim (2005), hissedar hakları ile Q değeri arasında pozitif bir ilişki bulmaktadır. Bu çalışmalar genel endeks yerine kurumsal yönetim boyutlarını kullanmasına rağmen, bu çalışmanın bulguları kurumsal yönetim uygulamalarının finansal performans üzerindeki olumlu etkisine ilişkin literatürü desteklemektedir.

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