



The Impact of The Development of Corporate Governance Regulations and Policies on Investors' Confidence in Companies Listed on the Saudi Arabian Stock Exchange (TADAWUL)

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Abstract:

Purpose: This study aims to examine the relationship between the development of Corporate Governance (CG) regulations and policies, and investors' confidence in non-financial firms listed on the Saudi Arabia Stock Exchange (Tadawul) in the period from 2006 to 2020

Methodology: This study's sample includes the most active 104 non-financial companies on listed on the Tadawul and representing 1355 firm-year observations in the period from 2006 to 2020. Investors' confidence, which is measured by Investor Sentiment Index (ISI) using Thomson-Reuters dataset, is the main variable for this study paper along with the corporate governance index built based on the provisions of the CG Code (CGC) and international best practices. First, in this study, the researcher examined the sample data as a whole and, then to have a clear picture of subject matter, divided it into pre and post-mandatory periods. The researcher used a number of statistical and econometrics techniques such as OLS (Ordinary Least Squares), OLS fixed effects and Generalized Method of Moments (GMM) to overcome some endogeneity problems inherent in the data. The author tested the robustness by using several alternative variables such as earnings management and specification to the firm measurement.

Finding: This study's findings show that the development of CG regulations and policies improves investors' confidence and enhances firm performance and investment in the companies listed on the Tadawul¹. These findings became evident when the author examined the data using the GMM techniques. This study has produced different findings under the pre- and post-mandatory periods. Under the pre-mandatory period, there are no significant relationships between the main variables. In the post-mandatory period, there is a positive relationship between the CG index, investors' confidence, firm performance, and firm investment. These findings suggest, also, that good corporate governance enforcement and practice can promote the companies' board members to execute monitoring functions efficiently and effectively. Therefore, the companies should embrace CG practices, by fostering the monitoring function and extending the effectiveness of the ownership structure to mitigate the managers' opportunistic behaviors which, in turn, impact on investors' confidence, firm performance, and investment.

Originality/value: To the best of the author's knowledge, this is the first study that has used 14 years of data to focus on the effect of the development of CG regulations and policies on investors' confidence in Saudi Arabia. Therefore, by focusing on the subject matter, this study's findings contribute to the limited extant literature in developing countries. In addition, this study provides empirical evidence for the practitioners, policymakers, and academics by showing CG's essential role in enhancing investors'

¹ With good governance, Company's investor's confidence increases. Therefore, the companies with good governance have better performance, profitability and engage more in investment-efficiently. This result is similar to the findings of (Bimo et al., 2021; Albulescu, 2020, and Shahid and Abbas, 2019). These findings support the growing importance of the Saudi market at the global level and have noteworthy implications for companies operating in the stock market, as well as for the national authorities such as the CMA interested in the development and increased performance of the stock market.



confidence in the market. More especially in a developing country like Saudi Arabia where development and entrepreneurship are being scaled up rapidly, CG has a crucial role to play. Policymakers must emphasize and promote the belief that following CG reaps greater benefits for all stakeholders and the business as a whole.

Keywords: Corporate Governance(CG); investors' confidence; Saudi Arabia

Introduction:

In 2006, the Saudi Stock Exchange Market (Tadawul) crashed and its general index fell by 45% of its market value. The ISI dropped from 20,100.40 at the end of 2005 to 11,141.04 by the end of 2006 (Hussainey and Al Nodel, 2008), and resulted in a loss of shareholders' confidence (Lerner et al., 2017). Investors need reassurance that the companies can address the risks that impact their operations. According to Saidi, (2015) "the key point is that the investors do not buy the past, but the future and therefore they need to know how companies are managed to allay their fears and bring confidence to the market". To overcome this issue and enhance investors' confidence, the Capital Market Authority (CMA) intensified its efforts to provide fairness in the trading of Saudi stocks. This was done by introducing CG rules and regulations to prevent similar crises in the future and to push businesses toward greater transparency and sustainability.

According to Berle and Mean (1932), most individual outside investors, who do not have the expertise and resources to monitor insiders' actions or access to information on the firms' prospects, are more likely to be at a disadvantage. The good practice of CG encourages the optimal use of the company's resources. Therefore, the validity of accountability mechanisms along with improving the reliability and quality of financial information and efficiency of the capital market (Shailer, 2004) can be assured by the quality of CG practice which, in turn, enhances investors' confidence .

This raises the following question:

Why do we need corporate governance regulations aimed at enhancing investors' confidence?

Previous studies' findings show improvement in CG quality indicators is a global phenomenon and that there are fewer differences between countries in terms of quality of governance. Nevertheless, scholars argue that, due to its link to the ability to attract local and foreign investment necessary for development, the governance may be more essential for developing economies with scarce resources. Therefore, the need for regulators to develop the quality of CG enforcement is not a luxury. On the contrary, it is a necessity imposed by the need to attract foreign investments; enhance investors' confidence in developing economies; and enhance financial soundness in them. This is especially so since it appears from the results of the investor opinions survey that there is greater understanding of the need to do so.

Investors' confidence is associated with the stable and healthy development of the stock market. Therefore, this begs the following questions:

Does it mean that investors' confidence has changed in recent years?

Does corporate governance affect investors' confidence?



According to various authors, such as Polk and Sapienza, (2009); Gilchrist et al., (2005); Baker and Wurgler, (2004); Bimo et al., (2021); Albulescu, (2020), decisions made by firm managers influence the investors' confidence which, in turn, affects the influence of strong CG and the protection of shareholders. When investors become more optimistic about a firm, the investors tends to invest more². In theory, good CG ensures that the firm is fair and transparent and is accountable to investors. This leads to greater confidence (Larcker et al., 2007). However, there remains inconclusive evidence of the existence of the association between CG development and investors' confidence. Therefore, it is not possible to state empirically if the development of CG has a positive impact on investors' confidence in all institutional settings. Nevertheless, according to the literature, there are agency problems within the management of the firm. This is because the managers may not act or make decisions based on the shareholders' interests of. Additionally, Jensen and Meckling, (1976); Baker et al., (2003); Dong et al., (2007) argue that controlling shareholders may enhance their interests at the expense of minority shareholders.

In the context of this topic, the Tadawul is somewhat unique. The principal-principal conflict is more recognizable in Saudi Arabian companies than the principal-agent conflict. These factors have the potential to increase the importance of the board's monitoring. The Tadawul is a leading emerging market and has grown rapidly (AL-Nasser, 2019). The Saudi Arabian Government has instigated several policies and reforms for financial development. Therefore, the Tadawul has emerged as a world-leading attraction for international and local investors (Core et al., 2006).

Despite the improvement in performance in recent years, the market is highly unpredictable due to a number of internal and external factors. In Saudi Arabia, the CGC has become one of the most significant research areas to investigate if such negative impacts can be mitigated by sound CG practices.

Along with the limited set of extant literature analyzing the relationship between the development of CG regulations and policies and investors' confidence in developed economies, there is a lack of focus on such an association in developing economies. CG practices are even more critical for emerging economies than for advanced economies. Recently, due to high growth rates and better investment opportunities, several large investors have moved their capital from developed markets to developing markets (Singam, 2003; De Jong and Swinkels, 2022; Badwan, 2022; Areneke et al., 2022). The framework of CG is almost commonplace across countries. Therefore, CG and investors' confidence can be compared across firms and markets (Zulkafli and Samad, 2007; Shahid and Abbas, 2019). The findings of numerous studies show that sound CG practices provide enhancement and mitigate the agency problems involved with management and, thereby, maximize the shareholders' wealth (Cremers and Nair, 2005; Core et al., 2006). This encourages, also, local and international investors to purchase shares in domestic companies. Therefore, there is merit in investigating further the relationship between CG and investors' confidence since such

²According to literature investors become optimistic when the market goes up and assume this will continue to do so.

information is essential to emerging markets such as Saudi Arabia and to fill the gap in the literature related to emerging economies.

To the best of the researcher's knowledge, this study has made several contributions to the literature in that, by spanning some, 14 years of data, it is the first Saudi Arabian study to focus on the effect of the development of CG regulations and policies on investors' confidence. Consequently, this study contributes to a somewhat limited set of literature that has focused on this issue in relation to developing countries. In addition, by showing the essential role played by governance to enhance investors' confidence in the market, this study provides empirical evidence for the practitioners, policymakers, and academics. This is particularly relevant in a developing country, like Saudi Arabia, where development and entrepreneurship are scaling up rapidly and where the CGC has a crucial role to play. Policymakers must emphasize and promote the belief that following CG reaps greater benefits for all stakeholders and the business as a whole.

The layout of this paper is as follows. The second section discusses Saudi Arabia's development of existing CG regulations and policies. The third section focuses on a theoretical framework. The fourth section provides literature review and hypotheses. The fifth section describes the research methodology and the study's data sample. The sixth section presents the empirical findings, The final section provides the conclusions and remarks.

2. Saudi Arabia's Development of The Corporate Governance Regulations and Policies

After Oman, Saudi Arabia was the second Gulf country to adopt corporate governance for public companies and the country has witnessed several reforms in the governance code. The Saudi Arabian Capital Market Authority (CMA) is responsible for the country's CGC, which is in line with the principles of the Organization for Economic Co-operation and Development (OECD, 2004). One of CMA's services is to establish the best international practices in the field of governance for the companies listed on the Tadawul and for their investors. The aim is to improve the level of protection for all investors and, more especially, minority shareholders by providing them with legal advice to implement their rights and to counteract any injustice practices by the majority stakeholders. (Al-Janadi, et al, 2016).

The CMA has strived to meet the objective and strategies of regulating the Saudi Arabian financial market in line with the KSA vision 2030. In 2006, it introduced voluntary regulation of corporate governance to contribute to the national legislative system within which companies operate; to drive the country's economy; and to increase GDP. Furthermore, in 2010, the CMA introduced several amendments in which corporate governance provisions became compulsory for listed companies. For instance, it made some changes to the definition of *Independent member* that now reads a non-executive member of the board who enjoy complete independence in his/her position and decisions and none of the independence affecting issues stipulated in regulations.



In 2016, the regulations added detailed provisions for listed companies' formation of the board of directors and its committees such as their functions, responsibilities, meetings, and the rights and duties of their members. The regulations include, also, detailed provisions about auditors and the internal control procedures. These procedures aim to ensure that the companies disclose the information needed by the shareholders and other stakeholders to enable them to build investment strategies in a systematic and fair manner. In 2017, the CMA set effective governance that focuses on fair treatment of stakeholders' rights without discrimination and transparency of information so that stakeholders can fully exercise their statutory rights. In 2018, the CMA added a requirement that board members disclose direct and indirect interests in the company's business and contracts. In 2019, the CMA required the chairman of the board of directors to inform the general assembly of any business practices by the board members. In 2020, the CMA developed the definition of "*related party*" based on international best practices and best accounting standards when identifying related parties. (CMA, 2022).

3.Theoretical Framework

Agency theory

Recently there has been increased interest in studying and examining CG. However, there is no one theoretical framework that provides the whole explanation of the effect of the development of the CGC on investors' confidence. Nevertheless, in the literature, agency theory is the most used theory to explain firm compliance with CG requirements to protect the shareholders' interests which, in turn, enhances investors' confidence (Carpenter and Feroz, 1992; Deegan, 2002; Eng and Mak, 2003).

Agency theory focuses on the relationship between owners and managers. Justification for its existence is that it establishes appropriate and adequate incentives to eliminate opportunistic behaviors by the company's management and ensures that they pursue and maximize not only the company's wealth and interests but, also, work on behalf of the shareholders (Jensen and Meckling, 1976). The theory focuses on reducing the agency problem with the aim of maximizing the company's value and the returns on shareholders' investments. In addition, the theory suggests some ways of reducing agency costs to enhance firm performance and investors' confidence. These are: namely, monitoring costs; bonding costs; and residual losses which stem from the CG structure (Eisenhardt, 1989; Shabbir and Padget, 2005).

4. Literature Review and Development of the Hypotheses

From utilizing different CG attributes and firm characteristics, previous studies obtained mixed results. This study identifies the key factors of CG based on theoretical, empirical literature and the context of Saudi Arabia that impacts directly on companies' CG compliance which reflects investors' confidence. These factors are classified into three types. First, ownership structure variables consist of government ownership, institutional ownership and family ownership. Second, board characteristics and its committees' variables are made up of board size, the number of board meetings, the proportion of independent directors, the presence of the nomination and remuneration committee and the audit committee. In addition, there are the characteristics of an audit committee such as size, number of meetings and accounting



expertise within the members of the committee. The external auditor is one of the big 4-audit firms. Third, transparency and accountability variables consist of disclosure of CG and other reports.

4.1 Ownership Structure:

The large shareholders or concentrated ownership still have a tight grip on companies in emerging countries. Additionally, Hansmann (2000) emphasize that the most important aspect of CG is the ownership structure that influences investors' confidence. Shleifer and Vishny, (1997) and Claessens (2002) have concluded that, by mitigating the abuse of power and resources by managers and controlling shareholders, CG mechanisms influence investors' confidence. Abdallah and Ismail (2017) conclude that, in GCC countries, the higher the ownership concentration, the weaker or poorer the governance structure and performance which, in turn, lowers investors' confidence. Mollah et al.'s (2012) findings are similar in the South African context. However, some studies' findings demonstrate a positive relationship between ownership structure and investors' confidence. Goton and Schmid (2000) conclude that in the German context, there is a positive relationship between the concentration of ownership and firm performance and this indicates that they play an essential role in the CGC and investors' confidence. The three common ownership structures in Saudi Arabia are state ownership, family ownership and institutional ownership (Al-Saidi and Al-shammari 2015).

4.1.a. Family Ownership:

There are two arguments regarding the effects of family ownership on firm performance. On the one hand, some argue that, due to their voting power and involvement in the firm's management, controlling families prefer to put their interests above those of other stakeholders. These influence policies that benefit them which, in turn, reduce firm performance and investors' confidence (La-Porta et al., 1999; Wiwattanakantang, 2001; Panyasrivanit, 2005). Empirically, Cucculelli and Micucci's (2008) and Arosa et al.'s (2010) findings provide evidence that there is a negative relationship between family ownership and firm performance and, in turn, this reduces investors' confidence. On the other hand, other scholars argue that family ownership provides good monitoring and increases firm value through their wealth and contribution to the firm which, in turn, increase firm performance and investors' confidence. (Smith and Amoako-Adu, 1999; Wiwattanakantang, 2001; Panyasrivanit, 2005).

4.1.b. State Ownership:

According to agency theory, Government or State ownership can mitigate agency costs due to its role in focusing on different angles such as regulating the economy; protecting the minority shareholders' rights; reducing firms; exposing them to asymmetric information; and mitigating externalities. Therefore, State ownership is more likely to improve firm performance that is reflected in an improvement in investors' confidence (Alfaraih et al., 2012; Aljifri and Moustafa, 2007). Pillai et al.'s (2018) and Al-Saidi and Al-shammari's (2015) findings show that, in GCC countries and the Kuwait Stock Exchange respectively, State ownership has a positive influence on firm performance, which, in turn, is reflected in good investors' confidence.

Other scholars argue that State ownership of firms may encourage the executive to focus more on social and political matters rather than profitability. These reduce the firm performance and the quality of CG (Shen and Lin, 2009). Previous studies have examined State ownership in developed and developing economies and have documented a negative relationship between State ownership and firm performance (Xu and Wang 1997; Sun and Tong, 2003; Gupta, 2005; Liu and Sun, 2005; Wei et al., 2005; Megginson and Netter, 2001). In Singapore, Heracleous' (2001) findings show that, when compared to private firms, State owned firms is more likely to lead to their having lower performance rates. This is because they do not have a clear objectives and their absence leads to inefficient performance. Saleh et al.'s (2009) findings that State owned firms are more likely to reduce their performance because of their selection of the board members based on political and social goals rather than their respective experiences.

4.1.c. Institutional Ownership:

Institutional ownership has a different impact on performance. Some scholars view the effect of this ownership as dependent on the institutional setting. If the institutional setting lacks proper CG practices, institutional ownership plays a role as an alternative to CG mechanisms to protect the investors. They argue, also, that institutional ownership may use the representation on the board and voting power to provide a better monitoring role over the manager's activities and, in turn, this reduces the agency problem (Chen et al. (2009)). This leads to better and more effective firm performance (Grossman and Hart, 1986; Hu and Izumida, 2008; Arouri et al., 2014). Others argue that institutional ownership can increase agency problems by expropriating the wealth of minority shareholders as they seek private benefits rather than effective monitoring (Villalonga and Amit, 2006; Al-Saidi, 2012). In line with the poor monitoring offered by institutional ownership, Al-Saidi and Al-Shammari's (2015) reported evidence shows that, in terms of the Kuwait Stock Exchange, there is no relationship between institutional ownership and firm performance. In this vein, Goergen's (2012) findings show a negative association between institutional ownership and firm performance which, in turn, reduces investors' confidence. Shahwan's (2015) findings demonstrate that, in terms of Egyptian listed companies, institutional ownership has no relationship with the structure of CG and firm performance.

4.2. Board of Directors:

One of the most important factors in the emergence and development of capital markets (OECD, 2004), is investors' confidence is that their invested funds will be used in an optimal manner and take account of their interests and will not be misused by the company's members of the board of directors, major shareholders or managers, is. The matter is that the boards of directors, the major shareholders and managers, and have the opportunity to make decisions that achieve their interests at the expense of the interests of other shareholders. Therefore, investors' confidence is available only if the investors are sure that they will receive fair and equal treatment regardless of whether they are local or foreign. Therefore, an effective CG system must provide means that shareholders can use to protect their rights.



The board of directors is an essential part of the CG mechanisms since it has a fiduciary obligation to shareholders (Monks and Minow, 1995; Jebran et al., 2019). Furthermore, the board of directors should discharge their responsibilities and perform their duties by monitoring the performance of the firm's management to ensure that they act in the shareholders' best interests. Previous studies' findings have confirmed that the effectiveness of a board of directors in the performance of CG activities that help to align the shareholders' and managers' interests and, by mitigating agency costs, help to protect the shareholders' interests (Jensen and Meckling, 1976; Fama, 1980; Jensen, 1993; Brennan, 2006; Linck et al., 2009). In turn, this leads to greater investors' confidence. The existing literature has considered already some specific aspects of CG and demonstrated the importance of an effective board of directors and the elements such as its size, the number of independent directors, CEO duality and the frequency of meetings Gompers et al. (2003); Yermack (1996), Lipton and Lorch (1992); Hermalin and Weisbach (1991), Bhagat and Black (2007), Bebchuk et al. (2005), Cremers and Nair (2005), Core et al. (1999). The findings of empirical studies, which have used various CG indices, show that there is a positive association between the CGC is and firm value or stock returns (Bebchuk et al. 2005; Gompers et al. 2003; Garay and González 2008).

4.2.a. Board Size:

Best CG practices and most pieces of literature have emphasized the importance of board size. Saudi Arabia's CGC recommends a minimum and a maximum board size between 3 to 11 members. There is no agreement on the best size of a board of directors (Zahra and Pearce II, 1989). Previous studies have reported mixed findings about the effective size of the board of directors. For instance, Zahra and Pearce's II (1989), Klin's (2002), Yu's (2008) and Khan et al.'s (2019) findings show that, due to the members' diverse range of expertise and skills, a large board size is more capable of acting in the shareholders' best interests. However, the shortcoming of a large board is that a slow decision-making process may not encourage innovation (Ismail et al., 2010). Other scholars, such as Jensen (1993), Vafeas (2000), and Alonso et al., (2000), have concluded that a small board size is more effective in increasing the company's market value through monitoring the CEO and reporting more informative earnings (Lipton and Lorsch 1992; Karamanou and Vafeas, 2005). These findings highlight the view that, when compared to a large board, a small board has better communication skills and is better at controlling and monitoring the management's activities. Certo (2003) posits that, in terms of communication and coordination, the role of a large board size is not dynamic and more symbolic. They may be involved as advisors rather than simply monitoring the management. In addition, a large board may have coordination difficulties in and may be controlled easily by a powerful CEO (Jensen, 1993).

4.2.b. Independent Directors:

The appointment of independent directors to the board of directors is one of the most essential decisions made by modern companies in terms of their internal CG mechanisms to mitigate agency problems and information asymmetry problems (Fama, 1980; Lipton and Lorsch 1992; Jensen, 1993). However, there are two theories about the appointment of independent directors to the board of directors. One group

of scholars argues in favour of more independent directors while others favour more executive directors on the board.

Those, who support the first view, base their arguments on Agency theory and claim that, when compared to executive directors, independent directors can be more accountable because they make independent judgments when considering the decisions to be taken by the board (Fama, 1980; Cadbury Report, 1992; Sannfeld 2002; Chhaochharia and Grinstein, 2009). This is because independent directors are not financially dependent on a company and, in accordance with the Saudi Arabian CGC, they should not have close family ties to the company. Independent directors should not receive fees, which are unrelated to the company's performance, and they should not serve on the board for more than nine years. They should not hold cross directorship in other companies and they should not represent specific groups of shareholders. If these characteristics are met, independent directors are thought to be in a position to monitor the company's management more effectively and be able to overcome any pressures to accept earnings manipulation. For instance, Byrd and Hickman's (1992), Brickley et al.'s (1994) and Khan et al.'s (2019) findings show that companies, which have more independent directors, are more effective in monitoring the management's activities.

Lee and Shailer's (2008) findings show that CG information disclosure increases the responsibilities of independent directors, the board of directors, and its committees and management and, in addition, guarantees the integrity of the firm's financial statement which enhances investors' confidence. Due et al.'s (2014) findings show that the ratio of independent directors influences investors' confidence and has a positive effect on agricultural listed company value.

The opponents of more independent directors on the board base their arguments on stewardship theory in that independent directors have less knowledge about the company (Weir and Laing, 1999) and that this has the potential for the board to make poorer decisions (Haniffa and Hudaib, 2006). Independent directors are part-timers who are normally present on other companies' boards (Bozec, 2005; Jiraporn et al., 2009). Therefore, they have little time to understand and offer effective monitoring of the complexities of the company's activities. Accordingly, this has a negative influence on the company's performance (Baysinger and Hoskisson, 1990; Weir and Laing, 1999; Bozeco, 2005). On the contrary, Kiel, and Nicholson's (2003) findings show that due to they having greater knowledge of the company's activities, a larger number of executive directors on the board can provide better decision-making and lead to better company performance.

In addition, some scholars claim that, in emerging countries, independent directors have a ceremonial role on the board of directors and are more likely to follow the lead taken by the executive directors (Mahadeo and Soobaroyen, 2012). Consequently, the independent directors are involved weakly in the board's decision-making process because it is more than likely that their selection does not meet the recommendations of either worldwide CGCs (Ferrarini and Filopelli, 2014).



4.2.b. Board Meetings:

The frequency of board meetings plays an essential role in monitoring and tackling more effectively the issues within a firm. The CG best practices and the Saudi Arabian CGC recommend that the board of directors holds regular meetings to carry out their duties efficiently. The findings of previous studies support this recommendation. However, the findings of other studies show that board meetings are not necessarily beneficial because, by taking up too much time, they constrain routine tasks.

The existing literature documents, also, the importance of the board of directors meeting frequently in order to measure the board operations and the company's activities (Vefreas, 1999). Therefore, a higher number of board meetings reflects that the board is active and is able to resolve problems and monitor the company's management (Vefreas, 1999; Conger et al., 1998; Managena and Tauringana, 2008; Adam and Ferrira, 2009; Khan et al., 2019).

However, the findings of other studies argue that most of the problems in a publicly-traded company are due to the board of directors having insufficient time to attend meetings in order to discharge their duties and to monitor the company's management effectively (Lipton and Lorsch, 1992; Conger et al., 1998). Therefore, due to time constraints, the board meetings may not reflect truly the exchange of information and ideas between board members and the company's management.

4.3. Audit Committee:

4.3.a. Independent Audit Committee:

The literature documents mixed findings about the relationship between audit committee independence, firm performance and the firm. Harrison (1987), Wild (1994), and Sun and Cahan (2009) posit that there is a positive association between the establishment of these committees for monitoring and firm performance. This is due to the election of independent directors to these committees who are in a better position to protect the shareholders' interests (Vefreas, 1999). Chan and Li (2008) state that there is a positive association between independent members of an audit committee and the firm's value. However, Hsu's (2008), Klein's (1998), Reddy et al.'s (2008) and Cotter and Silvester's (2003) findings document an insignificant relationship between the independence of an audit committee and the firm's value.

4.3.b. Audit Committee Size:

The literature reported mixed findings about the association between audit committee size and firm performance and firm value. Investors' confidence is a reflection of good firm performance. Dalton et al. (1999), Saleh et al. (2007), Mir and Souad (2008), and Karamanou and Vafeas (2005) posit that the large sized audit committee is beneficial for performance since the members have a wider knowledge base. Coleman et al., (2007) and Kipkoeh (2016) conclude that there is a positive and significant association between audit committee size and firm's performance.

However, in Malaysia and Singapore, Mak and Kusnadi's (2005), Amer et al.'s (2014), and Aanu et al.'s (2014) findings report no relationship between the two variables.

4.3.c. Audit Committee Meeting:

Due to different factors, the literature's findings are inconclusive about the effect of audit committee meetings on firm performance and firm value. Investors' confidence is a reflection of good firm performance. Azam et al.'s (2010) and Amer et al.'s (2014) findings demonstrate a positive association between the frequency of audit committee meetings and firm's performance. However, due to these committee meetings being simply "tokenistic", Aanu et al.'s (2014) findings show no relationship between the two variables (Krambia-Kapardis and Psaros, 2006).

4.3.d. Audit Committee Expertise:

According to the literature, few studies have investigated the association between audit committee expertise, firm performance, and firm value which reflects investors' confidence. Chan and Li's (2008) findings demonstrate a positive relationship between an audit committee's expert members and firm value. Hsu's (2008), Amer et al.'s (2014), and Kipkoech's (2016) findings demonstrate that there is a positive and significant relationship between audit committee expertise and firm performance.

4.4. Remuneration and Nomination Committee:

The board of directors can delegate some of its power to specific and specialized committees. These committees are important to providing further protection of investors' interests and independent opinions on the company's various activities; in turn, this enhances investors' confidence. Jaafar et al.'s (2015) findings demonstrate that an effective remuneration and nomination committee reduces agency problem and encourages the company's management to perform better. In turn, these enhance firm performance and investors' confidence. Ferris et al.'s (2018) findings show that the remuneration and nomination committee's appropriate executive compensation structure enhances firm performance which reflects, also, strong investors' confidence. In this vein, Agyemang-Mintah's (2015) findings show that there is a positive relationship between the remuneration and nomination committee's appropriate executive compensation structure and firm performance. Having used 250 UK-listed firms in 1994 to investigate the impact of audit, remuneration, and nomination committees on these companies' performance, Vafeas and Theodorou (1998) argue that, ultimately, the remuneration and nomination committee determines the quality of the appointed directors, and helps the companies to achieve good CG. However, their findings show no relationship between the existence of three board committees and firm performance.

4.5. Transparency and Accountability:

Stock market investors need financial and non-financial information to help them be objective in making their investment decisions. It is accepted that the lower the level of disclosure the higher the level of ambiguity in the reports regardless of whether the information is non-financial or financial. This means that these companies

are not following the principles of transparency and disclosure standards. Consequently, such occurrences have led to successive collapses in the market and investors losing confidence in the market.

There is limited literature that focuses directly on CG and investors' confidence (Xiaolu et al., 2016). It is important for all firms to have a combination of external and internal CG mechanisms to ensure that they have effective CG structures and balance the power between shareholders, directors and management to better protect the investors' benefits (Diane et al., 2003).

Simon et al.'s (2001) findings provide evidence that an effective CG structure leads to a number of benefits such as helping to ensure better operation of the accountability mechanism and increasing the reliability and high quality of CG information and increasing the integrity and efficiency of the capital market. Together, these improve investors' confidence. In addition, from examined CG in 14 emerging companies, Leora and Inessa's (2004) findings show the relationship between the level of CG within the company and information asymmetry.

Nabil et al.'s (2014) findings demonstrate further that an effective CG structure validates the transparency, and accountability mechanism and enhances the reliability, quality, and integrity of financial information. In turn, these enhance the efficiency of the capital market and investors' confidence. Their findings show, also, that, to some extent in the future, the investors' confidence affects the company's development. From examining the importance of companies focusing on investors' confidence over other paradigms, such as bankruptcy and conventional financial problem, Wise's (2002) findings demonstrate that, if the company loses the investors' confidence, it may face difficulties in obtaining the necessary funds to meet its development requirements. Additionally, Lei et al.'s (2012) findings show that there is a strong relationship between investors' confidence and the quality of CG impeded by the company. Li et al.'s (2005) findings show that the company's good sound CG brings consistency and stability to its CG strategy and guarantees future investment which increases investors' confidence. Xiaolu et al.'s (2016) findings demonstrate that a strong level of CG has a positive influence on investors' confidence. In the context of the Amman stock market, Omran and Shaban (2021)'s findings show that internal CG mechanisms enhance investors' confidence and mitigate the risk of stock fluctuations.

In summary, the findings of theoretical and empirical studies confirm that, by providing appropriate, understandable and reliable information, CG contributes to enhancing the quality of companies' disclosure and accounting information that investors can use to make comparisons between different companies over multiple periods of time.

4.6. Hypotheses:

From the above discussion, it can be seen that CG mechanisms, ownership structure, transparency, and accountability have a positive impact on investors' confidence. Therefore, the researcher formulated the following hypotheses:



H1. The development of Corporate Governance regulations and the Corporate Governance Code has had a statically positive and significant influence on investors' confidence.

H2. Saudi Arabia's voluntary implementation of the Corporate Governance Code from 2006 to 2010 has had a statically positive and significant influence on investors' confidence.

H3. Saudi Arabia's compulsory implementation of the Corporate Governance Code from 2011 to 2020 has had a statically positive and significant positive influence on investors' confidence.

5. Methodology:

The purpose of this study is to examine the effect of the development of CG regulations and policies on investors' confidence. In this study, the author used CG information obtained from companies' annual reports that are available from either the company website or the Tadawul and financial data collected from the Thomson-Reuters database. The sample data relates to the 104 most active non-financial companies listed on the Tadawul from 2006 to 2020 and this data represents 1355 firm-year observations.

5.1. The Criteria for Selecting the Sample

There is criteria in order for a firm to be included in the final sample. The CGC and financial information had to be available for at least 10 years during the period from 2006 to 2020. The researcher applied these criteria to all listed firms for the following reasons.

This helps the sample data to cover Saudi Arabia's pre-and-post mandatory implementation of the CGC. This also to achieve the extent to which the development and regulation of the country's CGC has enhanced CG practices which, in turn, have enhanced investors' confidence.

The data is an unbalanced panel³ of non-financial firms⁴. As measured by the Investor Sentiment Index (ISI), investors' confidence is this study's main variable. Investors' confidence represents the investor behavior used in the model based on behavioral finance. Investors' confidence refers to the index, which can be built from the aggregate attitude in the investment community. At any given time, the measurement of the stock market's attitude can be either overly bullish or bearish, or somewhere in the middle.

5.2. Calculation of Investors' Confidence

The ISI is constructed by following the approach adopted by Persaud (1996) and Bandopadhyaya and Jones (2006). To calculate ISI For this study, firstly the author computed the weekly returns of the sample firms from the Tadawul. Next, the author

³ unlike many previous studies that included only large firms in their samples, this study includes all firms for which there is available data in order to enhance the generalizability of its findings. This allowed the study to use panel data analysis.

⁴ In the sample data, banks, insurance, and financial service companies are excluded as they are subject to different regulations than other entities. For instance, Saudi Arabia has different corporate governance codes for banks and financial institutions. Even insurance companies have their own corporate governance code from the Saudi Central Bank. These codes have different characteristics regarding a financial statement, profitability measurement, liquidity assessment, and capital structure. In other words, the accrual characteristics of the financial industry are different from other industries (Bekiris et al., 2011; Wang & Xin, 2011; SAMA, 2022).

computed the average standard deviation for each firm by taking the returns from the previous four weeks to measure the daily historic volatility. Then, the author ranked the daily rates of returns and the historic volatility to compute Pearson's Rank Correlation between the weekly returns and the historic volatility.

The ISI equation is as follows:

$$ISI = \frac{\sum(R_i - R_i^{\wedge}) (S_i - S_i^{\wedge})}{\sum(R_i - R_i^{\wedge})^2 \sum(S_i - S_i^{\wedge})^2}$$

Table 1: Variables Definition

R_i	The rank of the weekly return for security i
S_i	The rank of historical volatility for security i
R_i^{\wedge} and S_i^{\wedge}	The population means the return and historical volatility rankings.

Higher levels of confidence are represented by this index's positive values (positive correlation between the rank of return and the rank of volatility). On the other hand, this index's negative values indicate low confidence due to a risk-averse situation.

5.3. Construction of Corporate Governance Index (CGI):

Also, there is no unified CG model since it differs from country to country due to their different economic, legal, and even social environments. Governance models can differ, also, within the same country due to its different economic sectors and according to the legal form of its institutions. However, the constant is that there are common elements that determine the proper methods of CG. Consequently, this study focuses on non-financial companies listed on the Tadawul, which follow the CGC introduced by the CMA. As introduced by Saudi Arabia's Central Banks, the country's banks and insurance companies have additional CGCs.

The CG process is affected by legal, regulatory, contractual and market-based mechanisms. Besides that the company's principles, values, procedures and policies are essential CG mechanisms that the company should develop and implement. Therefore, CG's importance depends on the company's transparency, disclosure, accountability and the integrity of its management. CGCs should focus not only on compliance but, also, be treated as continuous work towards building an excellent company.



According to Boehren and Oedegaard (2003), “relating corporate performance to a particular aspect of corporate governance may not capture the true relationship unless that specific aspect is controlled for other aspects of governance.” This argument has inspired several researchers to construct CG indices as a scorecard intended to measure firms’ CG over several dimensions. CG indices have been constructed for developed markets and some emerging markets (Gompers et al., 2003; Klapper and Love, 2004; Black et al., 2006; Balasubramanian et al., 2010).

Carefully, this study reviewed the key factors of CG based on the theoretical, empirical literature by Andersson and Daoud (2005); Oyelere and Mohamed (2005), and Aksu and Kosedag (2006) and, in the Saudi Arabian context, that impacts directly on firms’ compliance of CG which, in turn, influences the investors’ confidence. Thereafter, for this study, the researcher identified and selected the final list of CG factors and compared this list of items with those articles in Saudi Arabia’s CG code as introduced and implemented by the CMA. This allowed the researcher to create the CG index applicable to Saudi companies.

In order to construct a CG index for the firms listed on Tadawul, this study relies on the CG mechanisms adopted by Brown and Caylor (2004); Gill et al., (2012) and Javeed et al., (2014). The CG index is based on provisions which include ownership structure, board of directors, and board’s committees, transparency and accountability. The researcher assigned a value of one to every firm’s CG attribute if the company met either the minimally acceptable standard on that attribute or provision and, otherwise, was assigned zero on the binary scale. All companies in the sample met the several minimum accepted standards representing the CMA’s mandatory requirements on the CG Code.

The researcher selected forty (40) CG proxies or indicators, and categorized these indicators are into main themes. The sub-indices consist of indicators: three for ownership and eighteen factors for the Board and its committee and nineteen factors for transparency and accountability. According to Ho (2005), the examination of the individual CG provisions may not fully capture CG’s effect as much as in the case where all the provisions are considered collectively. Therefore, this study measures the overall CG by adding up the sub-index provisions and using the aggregated index to identify the relationship between the CGC and investors’ confidence. Consequently, a higher CGC score indicates the company’s good governance. Table 2 in the Appendix shows the construction of these variables.

5.4. Control variables

Along with the CG index and investors’ confidence index, the researcher used a set of control variables as estimations to avoid some limitations inherent in each model. If they are left uncontrolled the result may not be reliable or valid (Dechow et al., 1995; Kothari et al., 2005). The researcher identified from previous studies these control variables as including firm size, firm age, leverage, cash flow, Return on Asset (ROA), and Return on Equity (ROE). According to Orens et al. (2009), if these ratios were greater it would reflect the investors’ higher confidence in the company’s financial reports or disclosed information. Firm size, firm age, and cash flow control for potential

advantages of scale and scope of the market power, and market opportunities. The leverage controls for a firm's different risk characteristics. This study controls, also, for industry-related fixed effects and year-specific fixed effects.

5.5. Empirical Model Specification

This study uses panel data. The model is based on investors' confidence as the dependent variable and the independent variables are such as the CG index, firm investment, and firm characteristic variables .

Using only the OLS estimator may lead to inconsistent and biased results because the variables on the model are endogenous in nature. The researcher resolved this endogeneity problem in estimation by applying the Generalized Method of Moments as an estimation technique. The structure of the panel data allows us to follow firm i ($i = 1, \dots, I$) across time, t ($t = 1, \dots, T$):

$$\begin{aligned}
 ISI_{it} = & \alpha + \beta_1 \ln (INVEST)_{it} + \beta_2 CGindex_{it} + \beta_3 Leverage_{it} \\
 & + \beta_4 Firm\ size_{it} + \beta_5 Firm\ age_{it} + \beta_6 ROA\ or\ ROE_{it} + \beta_7 CF_{it} \\
 & + \beta_8 Year_{it} + \beta_9 Industry_{it} + \varepsilon_{it}
 \end{aligned}$$

Table 3: The Definition and the Measurement of All Variables.

Table 3: Variables Definition				
Variable	Symbol	Variable Meaning and Narrative	Expected sign	Reference
<i>Dependent variable</i>				
Investors' Confidence	ISI	To proxy Investor confidence. Sentiment Indexes are constructed by computing the Pearson correlation between the ranks of weekly return and the historical volatility		Persaud (1996) and Bandopadhyaya and Jones (2006)
<i>Independent variable</i>				
Investment	Ln (INVEST)	To proxy the corporate investment decision The sum of all outlays on Capital expenditure, Acquisitions, Receipts from the sale of property, plant, and equipment minus	+	Richardson (2006); Grundy and Li (2010)



		Amortization and depreciation		
Corporate governance index	CGI	The construction of these variables is shown in Table2 in the appendix.	+	Javeed et al., (2014); Gill et al., (2012); Brown and Caylor (2004).
<i>Control variables</i>				
Leverage	Leverage	Total liabilities divided by total assets	-	Dimitropoulos and Asterious,(2010) Al-Ghamdi; Rhodes, (2015)
Firm size	Firm size	Logarithm of total assets at the start of year	+	Laeven et al., (2016) Buallay et al. (2017)
Firm age	Firm age	The annual change in net sales divided by total assets	+	Dimitropoulos and Asterious, (2010) Al-Ghamdi Rhodes, (2015)
ROA	Return on Assets	Net income divided by average total assets	+	Danoshana and Ravivathani, 2013
ROE	Return on Equity	Net income divided by average shareholder's equity	+	El Ghoul et al., 2011
CF	Cash flow	The sum of earnings before extraordinary item and depreciation deflated by total assets.	+	Richardson (2006)
Industry	Industry	A dummy variable takes a value of one if the firm belongs to industry i and zero otherwise.		AL Nasser, (2019)
Year	Year	A dummy variable takes a value of one if the year i and zero otherwise.		
α		The intercept		
β		the coefficient of independent variables		
ε_{it}		The stochastic error term		

5.6.Pre and Post Mandatory Corporate Governance

As discussed previously, the Saudi Arabian CGC was first issued in 2006. However, at that time, the provisions were voluntary. The revised code was issued and implemented in 2010 when most of the CG provisions became mandatory. Therefore, in order to have a clear picture of how the development of CG regulation effected investors' confidence and the relationship was formed, the researcher divided this

study's sample data into the pre-mandatory CG period from 2006 to 2010⁵ (pre-mandatory period) and the post- mandatory CG period from 2011 to 2020 (post-mandatory period) .

In order to divide the sample data, the researcher had to ensure that there were changes over the period of time. Therefore, the researcher employed a t-test (see Table 4) which is a mean comparison test to examine if the mean value changes over different periods. Given that the variables were equal and did not change over the period, the researcher rejected the null hypothesis of $p\text{-value} < 5\%$. In other words, the researcher used the t-test as an independent sample to compare the results of the pre and post-mandatory CG periods. In addition, the researcher utilized the Wilcoxon z test (see Table 5) to examine the equality of the median value over the period. Under the null hypothesis, the researcher drew samples from populations with the same median and, consequently, this study rejected the null hypothesis. It seems that, while it is more effective in the post-mandatory period, the CGC was ineffective in enhancing investors' confidence in the pre- mandatory period.

Table 4- T-test

Variable	T-test	P-val
ISI	0.16	0.87
Ln (INVEST)	-0.21	0.83
CGI	-27.75	0.00
Leverage	-1.60	0.11
Firm size	-0.35	0.73
Firm age	-5.69	0.00
CF	4.78	0.00
ROA	4.47	0.00
ROE	3.69	0.00

⁵ The study included the year 2010 under the pre- mandatory period as the first enforcement might not be strong as the following years (AL-Nasser, 2019).

Table 5- WilcoxonZ

Variable	WilcoxonZ	P-val
ISI	0.29	0.77
Ln (INVEST)	-0.47	0.64
CGI	-24.64	0.00
Leverage	-1.30	0.19
Firm size	-0.17	0.87
Firm age	-5.76	0.00
CF	5.20	0.00
ROA	4.16	0.00
ROE	3.92	0.00

5.7. Robustness test:

Investors' confidence can be influenced by earnings management and, based on their interests in using different ways of earnings management, such as the preparation and presentation of balance according to the accrual basis, the firm's management can influence firm performance. Therefore, to check the robustness of the findings, the researcher included in this study the earnings management variables used in two models by Defond and Park, (2002) and Francie and Wang (2004). According to Sivaramakrishnan et al., (2011), there is a significant association between adequate CG and the quality of earnings. In addition, the events of 2020 were extraordinary for all companies and affected economies worldwide. Therefore, the researcher used another robustness test in this study by performing the analysis through using 2020 as control variables as a period of time and as dummy variables.

6. Results and Discussion:

Table 4 provides summary statistics of the variables included in the sample.

Table 6: Descriptive Statistics (firm level data)

Variable	Mean	Median	Std	Min	Max
ISI	1.71	1.72	0.37	0.72	2.84
Ln(INVEST)	14.20	14.06	2.11	5.00	20.94
CGI	19.60	17.00	5.76	10.00	31.00
Leverage	0.23	0.21	0.20	-0.27	1.05
Firm size	13.46	13.35	1.71	0.85	18.90
Firm age	27.15	26.00	14.28	0.00	67.00
CF	0.08	0.07	0.11	-0.65	0.66
ROA	5.21	4.39	8.92	-61.70	35.25
ROE	6.47	6.69	17.40	-113.05	61.81

Table 6 provides descriptive statistics for the sample of non-financial companies listed on the Tadawul during the period from 2006 to 2020. It shows that the mean of the investor confidence proxy is 1.71 while and standard deviations is 0.37 respectively. This is consistent with Shahid and Abbas' (2019) finding (mean = 1.50 and the standard deviations= 0.57. The mean of corporate investment is 14.20 and the standard deviation is 2.11. The mean of the Corporate Governance Index (CGI) is 19.60. The average of performance is positive and indicates a good level of financial performance. Non-financial companies, listed on the Tadawul, use leverage to finance capital investment. As presented in Table 6, the leverage ratio is 23

Table 7 : Correlation Matrix Analysis

Variable	Ln (INVEST)	CGI	Leverage	Firm size	Firm age	CF	ROA	ROE	VIF
Ln(INVEST)	1	0.04	0.06	0.35	-0.17	0.02	0.01	0.01	1.18
CGI	0.04	1	0.02	0.03	0.20	0.00	0.01*	0.01	1.05
Leverage	0.06**	0.02	1	0.38	-0.04	-0.14	-0.20	-0.19	1.31
Firm size	0.35**	0.03	0.38**	1	-0.13	0.10	0.11	0.15	1.50
Firm age	-0.17**	0.20	-0.04	-0.13	1	0.06	0.05	0.04	13.27
CF	0.02	0.00	-0.14**	0.10**	0.06	1	0.57*	0.47	1.55
ROA	0.01	-0.01	-0.20**	0.11**	0.05	0.57	1	0.88	5.05
ROE	0.01	0.01	-0.19**	0.15**	0.04	0.47*	0.88*	1	4.45

Notes: * correlation is significant at the 0.05 level (two-tailed). ** correlation is significant at the 0.01 level (two tailed)

Table 7 shows the Pearson correlation matrix of the variables. It is clear that there is no multicollinearity issue since no Pearson correlation coefficient value exceeds 0.80 between any two variables (Gujarati, 2009). In addition the researcher computed Variance Inflation Factors (VIF) for each regression and the results show that multicollinearity is not a problem. The CGI has a significant correlation matrix with ROA and this is consistent with Shahid and Abbas’ (2019) finding.

6.1. Regression Results

Table 8 presents the regression results of the model. The researcher conducted Breusch and Pagan LM (BP LM) test and the Hausman test to choose the most appropriate estimation technique. The test statistic in BP LM method failed to reject the null hypothesis (BP LM Prob>chibar2 =1), also the Hausman test statistic rejected the null hypothesis (Hausman Prob>chi2=0.007). Therefore, fixed effect estimation was used to analyze the model of the study. The empirical findings show that the investors’ confidence index is not statistically significant with the development of Saudi Arabia’s CGC. Moreover, there is a negative and insignificant association between investors’ confidence, firm performance (ROA), and corporate investment Ln (INVEST).

The literature documented that the relationship between CG and firm performance suffers from endogeneity problems that may bias the results (Mura, 2007). Therefore, the issue has been presented and the researcher cannot assume independency between the two variables. In order to deal with this problem the researcher employed Generalized Method of Moments (GMM) regression to reduce heterogeneity and the dynamic endogeneity (Roberts and Whited, 2013). Therefore, this approach includes lagged performance as an explanatory variable and takes the first difference, which, in turn, eliminates the company specific fixed effects. In other words, the GMM estimation uses lagged levels of performance as instruments which control for both dynamic and simultaneous endogeneity. The GMM estimation allows the current values of the explanatory variables to depend on their past values and the independent variables (Shahid and Abbas, 2019). The finding shows that ISI has a positive and statistically significant relationship with the CGI at the 5% level. It means that, as the regulator developed the CGC, the confidence of investors was enhanced. This finding means that hypothesis H1 is accepted. Practically, by using this method, the researcher assure that in this study the CG’s impact on performance was not driven



by unobserved firm effects such as simultaneous endogeneity or dynamic endogeneity. Therefore, CG plays a central role in enhancing investors' confidence since the central pillar of CG mechanisms is the board of directors which is responsible for monitoring the executive management efficiently to prevent conflict of interest and to ensure that the firm 's operation comply with the laws which, in turn, improve investors' confidence. In addition, this study's findings are in line with the theoretical framework which is agency theory and the available empirical literature. These state that strong CG in terms of development and implementation enhances investors' confidence, which, in turn, mitigates the agency problem and discourages the management from engaging in self-interest practices (Al-Shammari and Al-Saidi, 2015; Shahid and Abbas, 2019; Wang, 2021 and Bonini and Lagasio, 2022; Bimo et al., 2021; Albulescu, 2020).

Among other variables, the association between ISI and firm investment and firm performance, as measured by ROA and ROE respectively is positive but insignificant. Other control variables such as leverage, firm size, firm age and cash flow have a negative and insignificant relationship with ISI.

6.2. Regression Results for Pre- and Post -Mandatory Periods

The results of models 2 and 3 for the pre-mandatory period and post-mandatory periods are reported in Tables 9 and 10 respectively so that they can be compared easily. The researcher conducted similar techniques to the whole data analysis and, therefore this study started with OLS, fixed effects and ended with GMM. In the pre-mandatory period, the coefficients of almost all variables and, more especially, the CGI is statistically insignificant with ISI under the GMM technique while, in the post- mandatory period, there is a positive and significant relationship between the CGI and ISI. Furthermore, there is, also, a positive and statistically significant association between ISI and firm performance (ROA). There is, also, a positive and significant relationship between ISI and firm investment Ln (INVEST). Consequently, in the absence of strong enforcement and the development of the CGC, the CG mechanisms become ineffective in enhancing ISI and this reflects the findings in the pre-mandatory period. These results are inconsistent with hypothesis H2 under pre-mandatory period but are consistent with hypothesis H3 under the post- mandatory period. The results of the post- mandatory period are in line with agency theory which assumes that CG reduces the executives' abuse of power and, in turn, enhances investors' confidence (Jensen and Meckling, 1976; Carpenter and Feroz, 1992; Dong, 2006) and the empirical findings of Al-Shammari and Al-Saidi,(2015), Shahid and Abbas, (2019); Wang (2021), Bimo et al., (2021), Albulescu, (2020) and Bonini and Lagasio (2022). They state that the impact of CG mechanisms on investors' confidence depends on the country's development of CG policies and regulations and policies. These results suggest that the policies and the regulations in the post-mandatory period of the CG era have improved firm performance, firm investment and the quality of financial disclosures and, in turn. the investors' confidence. In addition, some interesting facts have been revealed of differences between the pre- and post- mandatory periods of CG. During the pre- mandatory period, firms' poor CG practices did little to protect investors since less information was available in the public domain and this did not improve investors' confidence.

6.3. Results of Robustness Test:

The results show that, in line with agency theory and empirical findings, the relationship between investors' confidence and earnings management is statistically negative and significant (Defond and Park, 2002, Francie and Wang, 2008 and Sivaramakrishnan et al. 2011). The findings of other variables remained unchanged and similar to those reported in the main model. In other words, this model's results, as reported in Tables 11 to 16 in the Appendix, are consistent with those of other models in terms of there being a significant relationship and direction.

6.4. Discussion:

As mentioned earlier, CGC's importance as a global phenomenon and the differences in the CGC quality requirements have had a positive impact on companies worldwide disclosing information and enhancing investors' confidence. However, there is much need for CGCs in emerging countries to retain and attract potential local and foreign investors. Investors invest their money whether they are buying, selling or retaining shares of those companies listed on the market. They need information and data through which they can judge and compare these companies. Therefore, they need to be confident either to expand their investments in particular companies or to invest more in the market. Investors believe in regulations and enforcement to protect their investments from any abuse from the company's management and controlling shareholders and sustain their investments in the market. CGC is such regulation and, if it is insufficient in terms of tools and power, the investors' confidence is reduced.

From analyzing the whole data from 2006 to 2020 by using different econometrics techniques such as GMM, this study's findings show that the development of CG regulations and policies has a positive effect on investors' confidence, firm performance and firm investment. In addition, this study's findings show no relationship between investors' confidence and firm value and growth.

The point of pre and post-mandatory periods shows that some provisions of the CMA regulations took time to implement and, to a certain extent, to enforce. As mentioned in the results section about the pre-mandatory period, the findings show that the development of CG has had no positive and significant effect on investors' confidence. Therefore, the effects of regulatory changes were not fully realized before 2010 when enforcement was voluntary. The CG environment was improved after the CMA revised the CGC on a number of occasions. During the post-mandatory periods, the findings show changes to investors' confidence over time and this improved with the implementation of certain CG regulations. Of course, in addition to the CGC, there are several factors that have led to an increase in investors' confidence. Hence, an increase in investors' confidence arises from the CMA's continuous development of CG tools and provisions. This continuous development is based on several factors such as the CMA's accumulated experience, and the stock market crash in 2006. The CMA imposed severe financial fines on stock price manipulators and these fines were applied to manipulative companies and members of their board of directors. In Saudi Arabia, the establishment of some non-mandatory legislation as best practices and preparing companies to implement the highest standards of CG has seen these over time being



converted to mandatory legislation. Strict control of the Tadawul and the dissemination of companies' information in accordance with certain controls has led to an increase in market efficiency.

In fact, CG mechanisms, tools, and provisions are an ethical requirement that fits and keeps pace with a clean economy. In turn, these measures protect investors and companies from falling into illegal dealings. Whenever the information is disclosed at times and with high transparency, it benefits the company, the investor, and, also the country's economy. As part of the tools of CG mechanisms, listed companies should provide the necessary information to investors through annual and quarterly financial reports published in the financial market. Finally, to enable the financial market to become an appropriate investment climate, in terms of the disclosed information, there must be, equality and justice for all categories of investors in respect of the type, place, and time of financial reports that investors receive from joint-stock companies. This suggests that the CMA believes in the importance of CG as part of Saudi Arabia's contemporary economic environment. It has become difficult for companies to attract the necessary funding from investors without first creating good CG systems in accordance with international standards. Consequently, in order to have the best CG practices in place, some Saudi Arabian companies go beyond the CGC's minimal requirements and apply and enforce more voluntary provisions such as Environmental, Social Governance (ESG), and other international standards.

7. Conclusion

As in the case of Saudi Arabia and, more especially, companies that are listed on the stock market such as the Tadawul, a country's companies play an important role as one of the most important economic organs and they require more funds from investors to function properly. Similar to most developed and developing countries, the Saudi Arabian market experienced, also, a severe crisis in 2006 and this had a profound effect on investors' confidence. Also, these crisis revealed major deficiencies in the integrity of administrations; the quality of financial data; transparency; and disclosure of information in these markets.

Due to these crises, many countries and institutions have taken measures to ensure the restoration of investors' confidence in the markets and to avoid the recurrence of these crises. Efforts to improve CGCs have occupied an advanced place within these measures. As shown in the literature, several studies have established that the CGC contributes to investors' confidence and the development of capital markets. It appears, also, from the literature review that many previous studies' findings have proven that improvements to the quality of the CGC contributes positively to enhancing investors' confidence in companies. This is reflected in their willingness to pay additional premiums in the share prices of those companies that have more advanced governance systems.

The literature demonstrates, also, found that the results of the statistical analysis prove clearly that improvements to the quality of the CGC relates positively in an improvement in economic efficiency and is reflected positively in an improvement

in investors' confidence and financial safety indicators. Therefore, this study investigated the influence of the development of CG policies regulations along with the policies on investors' confidence in companies listed on the Tadawul. The data consists of 104 non-financial companies listed on the Tadawul during the period from 2006 to 2020. The researcher applied the correlation, pooled OLS regression, fixed effects and GMM techniques to validate the findings. Investors' confidence is measured by using the Investor Sentiment Index (ISI) developed by Persaud (1996) and Bandopadhyaya and Jones (2006). The CG index contains 40 items based on the three major types of governance specified by theoretical, empirical literature and the context of the Saudi Arabian provisions. These are: ownership structure; board of directors; board's committees; and transparency and accountability.

This study's findings demonstrate that the investors' confidence in the Saudi Arabian market was influenced positively by the development of CG's regulations and policies. These findings become more obvious after dividing the sample data into pre and post-mandatory periods. Also, the final findings appear under the post-mandatory periods. Good CG practices improve board members' monitoring function and control shareholders' interests. Therefore, firm managers make decisions effectively. However, investors need more assurances to have more faith about Saudi Arabia's CG power in respect of the Saudi markets and to incorporate corporate CG in their strategic policies. Additionally, this study's findings confirm that, since the CG framework provides a safeguard to shareholders and investors, will help to enhance firm performance and investors' confidence. The findings show that companies could raise more capital and, hence, they would have more funds for the corporate investments. As explained earlier, because a large amount of money is involved, investment decisions are critical since the companies and the investors need to be confident in the market and, also, in the companies as.

Although CMA is currently doing an outstanding work, based on the findings of this study, the following are recommended for CMA:

- Increase the controls of mechanisms in the financial market by focusing on the development of CG regulations further based on expected changes in the local and international economy.
- Establish a joint monitoring methodology that monitors investors' complaints
- Improve transparency to enhance awareness and integrity because by building awareness and the culture around importance of corporate governance will lead to building an economy with strong corporate governance
- Training of the board members must be mandatory

Finally, CG in Saudi Arabia is the best when compared to other GCC countries, therefore KSA can serve as pace setter for neighbouring countries as each pursuit improved corporate governance which is at par with international standard. CG plays an important role in maintaining and building investors' confidence to help them evaluate practically the company's value and level of CG from the investors' perspective.

This study's limitation is that it focused only on Saudi Arabia, which may not reflect the region as a whole. Therefore, it is recommended that future studies expand the research to other GCC countries to enable comparisons with other Asian countries. In addition, it is recommended that future studies include the price of oil since oil forms a large part of Saudi Arabia's exports and its GDP is based on oil revenues. Furthermore, it is recommended that future studies overcome this study's limitation by examining if adequate firm-level CG standards can help the companies to address the problems of low production and poor management practices and lead to greater transparency in the disclosure of the company's information.

Table 8: Full sample data using Fixed effects and GMM				
VARIABLES	FE	FE	GMM	GMM
Ln (INVEST)	-0.00455	-0.00446	0.0110	0.00678
	(0.00926)	(0.00923)	(0.0438)	(0.0425)
CGI	6.14e-05	-3.69e-05	0.0637**	0.0626**
	(0.00586)	(0.00585)	(0.0258)	(0.0253)
Leverage	-0.0593	-0.0784	0.0565	-0.0312
	(0.0795)	(0.0798)	(0.391)	(0.406)
Firm size	-0.00769	-0.00344	-0.00291	-0.00187
	(0.0104)	(0.0106)	(0.0452)	(0.0445)
Firm age	0.0603	0.0598	0.343	0.337
	(0.0497)	(0.0496)	(0.227)	(0.226)
CF	-0.134	-0.129	-0.760	-0.653
	(0.141)	(0.135)	(0.538)	(0.532)
ROA	-0.00318*		0.00590	
	(0.00165)		(0.00689)	
ROE		-0.00244***		
		(0.000847)		
Constant	1.733***	1.681***		
	(0.266)	(0.266)		
R-squared	0.156	0.159		
Adjusted R-squared	0.066	0.069		
Year FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Company FE	Yes	Yes	Yes	Yes
Notes: Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1				



Table 9: Pre- mandatory corporate governance period From 2006 to 2010 using Fixed effects and GMM

VARIABLES	FE	FE	GMM	GMM
Ln (INVEST)	0.0198	0.0206	-0.276	-0.272
	(0.0306)	(0.0305)	(0.230)	(0.244)
CGI	0.00813	0.00780	0.00369	-0.0109
	(0.0302)	(0.0301)	(0.241)	(0.223)
Leverage	0.179	0.164	-0.172	0.468
	(0.307)	(0.304)	(2.614)	(2.488)
Firm size	0.108	0.115	0.258	0.307
	(0.0737)	(0.0755)	(0.699)	(0.689)
Firm age	-0.109	-0.109	-1.432	-1.086
	(0.0916)	(0.0915)	(1.504)	(1.463)
CF	0.191	0.212	-0.822	-0.518
	(0.352)	(0.350)	(1.915)	(1.706)
ROA	-0.000326		0.0202	
	(0.00618)		(0.0594)	
ROE		-0.00108		
		(0.00306)		
Constant	0.140	0.0527		
	(1.195)	(1.217)		
R-squared	0.386	0.386		
Adjusted R-squared	0.145	0.146	.	.
Year FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Company FE	Yes	Yes	Yes	Yes

Notes: Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Table 10: post-mandatory corporate governance period From 2011 to 2020 using Fixed effect and GMM				
VARIABLES	FE	FE	GMM	GMM
Ln (INVEST)	-0.0149	-0.0154	0.0238*	0.0165*
	(0.0118)	(0.0118)	(0.0835)	(0.0825)
CGI	0.00118	0.00103	0.0820**	0.0808**
	(0.00656)	(0.00654)	(0.0474)	(0.0458)
Leverage	-0.108	-0.141	0.257	-0.0325
	(0.0933)	(0.0941)	(0.550)	(0.569)
Firm size	-0.00283	0.00244	0.0774	0.0918*
	(0.0119)	(0.0121)	(0.0529)	(0.0540)
Firm age	0.104	0.103	0.780*	0.739*
	(0.0978)	(0.0975)	(0.444)	(0.423)
CF	-0.300*	-0.276	-1.300	-1.262
	(0.180)	(0.173)	(0.865)	(0.902)
ROA	0.00311		0.00900*	
	(0.00193)		(0.0122)	
ROE		0.00274***		
		(0.000983)		
Constant	1.666***	1.616***		
	(0.421)	(0.420)		
R-squared	0.157	0.162		
Adjusted R-squared	0.041	0.046		
Year FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Company FE	Yes	Yes	Yes	Yes

Notes: Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

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Appendix:

Table 2- Variables of Corporate Governance Index			
<i>Ownership structure</i>			
#	Symbol	Variable	Variable meaning and narrative
1	FAMC	Family ownership	A dummy variable that takes the value of one if a family owns at least 20% of shares and a family member serves on the board and in management and zero otherwise Claessens et al., (2000); La Porta et al., (1999); Miller et al., (2007); Saito, (2008); Jaggi et al., (2009).
2	STATC	STAT ownership	A dummy variable that takes the value of one if at least 20% of shares owned by the government and zeroes otherwise (Wang and Judge, 2011).
3	INSTITU	Institutional ownership	A dummy variable that takes the value of one if institutional investors own at least 15% of shares and zero otherwise (Dian, 2014; Namazi and Kermani, 2013).
<i>Board of directors' characteristics</i>			
#	Symbol	Variable	Variable meaning and narrative
4	BSIZE	board size	A dummy variable takes a value of one if the board of directors has 6 members or more and zero otherwise.

5	FD	Female	A dummy variable takes a value of one if the board of directors has female directors and zero otherwise.
6	RD	Relative	A dummy variable takes a value of one if the board of directors has relatives directors and zero otherwise.
7	IND	Independent directors	A dummy variable takes a value of one if the board of directors has independent directors and zero otherwise.
8	IND50	Independent and non-executive directors account for more than 50 % of the board	A dummy variable that takes the value of one if the company has independent and non-executive directors account for more than 50 % of the board and zero otherwise.
9	MEET	Board meetings held once in a quarter	A dummy variable that takes the value of one if the full board held meetings once in a quarter and zero otherwise.
10	MEET4	More than 4 meeting a year	A dummy variable takes a value of one if the board of directors meets more than 4 meeting a year and zero otherwise.
Board's Committees			
11	AUDITSIZE	Audit committee size	A dummy variable takes a value of one if the audit committee has at least 3 members and zero otherwise.
12	AUDITID	Audit committee independent	A dummy variable takes a value of one if the audit committee has independent directors and zero otherwise.
13	AUDITMEET	Audit committee meeting	A dummy variable takes a value of one if the audit committee has at least four meetings a year and zero otherwise.
14	AUDITMEET4	Audit committee meeting more than 4 times a year	A dummy variable takes a value of one if the audit committee has more than four meetings a year and zero otherwise.
15	AUDIT	Audit committee	A dummy variable that takes the value of one if the company has an audit committee and zero otherwise.
16	AUDITF	The members having financial/accounting background in audit committee	A dummy variable that takes the value of one if the audit committee has members having financial/accounting background and zero otherwise.
17	AUDITIND	Independence of Chairman of the Audit Committee	A dummy variable that takes the value of one if the Chairman of the Audit Committee is an Independent Director and zero otherwise.
18	AUDITREVIEW	The audit committee supervise internal audit and review accounting procedures	A dummy variable that takes the value of one if the audit committee supervises internal audit and review accounting procedures and zero otherwise.
19	REM	a remuneration and nomination committee	A dummy variable that takes the value of one if the company has a remuneration and nomination committee and zero otherwise.
20	REMCHAIR	Chairman of the Remuneration and nomination Committee an Independent Director	A dummy variable that takes the value of one if the Chairman of the the Remuneration and nomination

			Committee is an Independent Director and zero otherwise.
21	BIG4	Big-4 audit firm	A dummy variable takes a value of one if the company audited by one of the Big-4 and zero otherwise
22	CODE	Changing in corporate governance code	A dummy variable takes a value of one if the code of corporate governance changes and zero otherwise
Transparency and accountability			
#	Symbol	Variable	Variable meaning and narrative
23	ANNUALCG	The annual report of the company includes a section on the company's performance in implementing corporate governance principles	A dummy variable that takes the value of one if the annual reports of the company include a section on the company's performance in implementing corporate governance principles and zero otherwise.
24	MISSIONCG	A "mission statement" with a priority on good corporate governance?	A dummy variable that takes the value of one if the company issued a "mission statement" that explicitly places a priority on good corporate governance and zero otherwise.
25	CLEAR	The clear and informative reports	A dummy variable that takes the value of one if the company reports clear and informative and zero otherwise.
26	AR/EN	The company has an Arabic-English-language website	A dummy variable that takes the value of one if the company has an Arabic and English-language website where results and other announcements are updated promptly and zero otherwise.
27	INTERN	The accounts follow internationally accepted accounting standards	A dummy variable that takes the value of one if the company has accounts presented according to internationally accepted accounting standards and zero otherwise.
28	FULL	Full disclosure of corporate governance practices	A dummy variable that takes the value of one if the company has full disclosure of corporate governance practices and zero otherwise.
29	DISCLOSEB	Disclose full biographies of its board members	A dummy variable that takes the value of one if the company discloses full biographies of its board members and zero otherwise.
30	DISCLOSEREM	Disclosure of board directors and executive staff members' remuneration	A dummy variable that takes the value of one if the company discloses board of directors and staff members' remuneration and zero otherwise.
31	TRAINING	Training program on corporate governance	A dummy variable that takes the value of one if the company ensures that all directors attend at least one training program on corporate governance and zero otherwise.
32	CGC	Company corporate governance code	A dummy variable that takes the value of one if the company has a corporate governance code and zero otherwise.

33	MINI	Minority shareholders have ever approached any court against the company in the last 5 years	A dummy variable that takes the value of one if the minority shareholders have ever approached any court against the company in the last 5 years and zero otherwise.
34	GM	Is all necessary information for General Meetings made available prior to General Meetings?	A dummy variable that takes the value of one if the company has all necessary information for General Meetings made available prior to General Meetings and zero otherwise.
35	CONTROV	If there have been any controversies or questions raised over any decisions by senior management in the past 5 years where majority shareholders are believed to have gained at the expense of minority shareholders?	A dummy variable that takes the value of one if the company has any controversies or questions raised over any decisions by senior management in the past 5 years where majority shareholders are believed to have gained at the expense of minority shareholders and zero otherwise.
36	WHISTLE	a whistle-blower policy in company	A dummy variable that takes the value of one if the company has a whistle-blower policy and zero otherwise.
37	RELATION	Investor Relation Office	A dummy variable that takes the value of one if the company has Investor Relation Office and zero otherwise.
38	CALL	Equity holders have the right to call General Meetings	A dummy variable that takes the value of one if all equity holders have the right to call General Meetings and zero otherwise.
39	Voting	voting methods are easily accessible	A dummy variable that takes the value of one if the company has voting methods easily accessible and zero otherwise.
40	WINNING	winning an award for Corporate Governance	A dummy variable that takes the value of one if the company has won an award for Corporate Governance and zero otherwise.

Table 11: Full sample data and earnings management variable using Defond and Park, (2002) model



VARIABLES	FE	FE	GMM	GMM
Ln (INVEST)	-0.00448 (0.00927)	-0.00441 (0.00924)	0.0149 (0.0436)	0.0116 (0.0432)
CGI	5.92e-05 (0.00586)	-3.84e-05 (0.00585)	0.0655** (0.0263)	0.0650** (0.0257)
Leverage	-0.0593 (0.0795)	-0.0783 (0.0798)	0.0860 (0.391)	0.0247 (0.406)
Firm size	-0.00749 (0.0105)	-0.00330 (0.0106)	0.000309 (0.0455)	0.000771 (0.0453)
Firm age	0.0614 (0.0500)	0.0607 (0.0498)	0.390 (0.268)	0.393 (0.273)
CF	-0.134 (0.141)	-0.129 (0.135)	-0.751 (0.542)	-0.662 (0.535)
ROA	0.00316* (0.00166)		0.00597 (0.00697)	
Earnings management	-0.0136 (0.0632)	-0.0103 (0.0631)	-0.162* (0.305)	-0.178* (0.301)
ROE		0.00243*** (0.000849)		
Constant	1.727*** (0.267)	1.676*** (0.268)		
R-squared	0.156	0.159		
Adjusted R-squared	0.065	0.069	.	.
Year FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Company FE	Yes	Yes	Yes	Yes



Table 12: Pre- mandatory corporate governance period and earnings management variable using Defond and Park, (2002) model				
VARIABLES	FE	FE	GMM	GMM
Ln (INVEST)	0.0291	0.0295	-0.272	-0.262
	(0.0307)	(0.0307)	(0.234)	(0.239)
CGI	0.00635	0.00616	0.0187	-0.00669
	(0.0300)	(0.0299)	(0.237)	(0.222)
Leverage	0.182	0.173	0.0520	0.116
	(0.305)	(0.302)	(2.553)	(2.778)
Firm size	0.116	0.119	0.283	0.330
	(0.0733)	(0.0751)	(0.703)	(0.672)
Firm age	-0.108	-0.108	-1.314	-1.291
	(0.0910)	(0.0909)	(1.482)	(1.610)
CF	0.188	0.200	-0.803	-0.797
	(0.350)	(0.348)	(1.867)	(1.885)
ROA	0.000109		0.0198	
	(0.00614)		(0.0567)	
Earnings management	-0.365**	-0.362**	-0.318	-0.437
	(0.180)	(0.181)	(0.775)	(0.965)
ROE		-0.000459		
		(0.00306)		
Constant	-0.0578	-0.0986		
	(1.191)	(1.212)		
R-squared	0.397	0.397		
Adjusted R-squared	0.156	0.156	.	.
Year FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Company FE	Yes	Yes	Yes	Yes

Table 13: Post-mandatory corporate governance period and earnings management variable using Defond and Park, (2002) model				
VARIABLES	FE	FE	GMM	GMM
Ln (INVEST)	-0.0148	-0.0152	0.0390*	0.0322*
	(0.0119)	(0.0118)	(0.0937)	(0.0935)
CGI	0.00116	0.000996	0.0961*	0.0970*
	(0.00656)	(0.00654)	(0.0547)	(0.0544)
Leverage	-0.109	-0.142	0.358	0.228
	(0.0935)	(0.0943)	(0.627)	(0.657)
Firm size	-0.00306	0.00215	0.0772	0.0827
	(0.0120)	(0.0122)	(0.0552)	(0.0577)
Firm age	0.101	0.0972	1.208*	1.200*
	(0.1000)	(0.0996)	(0.636)	(0.643)
CF	-0.300*	-0.277	-1.609*	-1.631*
	(0.181)	(0.173)	(0.901)	(0.925)
ROA	-0.00311		0.00961*	
	(0.00193)		(0.0129)	
Earnings management	0.0176	0.0253	-0.884*	-0.902*
	(0.0941)	(0.0939)	(0.717)	(0.722)
ROE		-0.00274***		
		(0.000984)		
Constant	1.679***	1.635***		
	(0.427)	(0.426)		
R-squared	0.157	0.162		
Adjusted R-squared	0.040	0.045		
Year FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Company FE	Yes	Yes	Yes	Yes

Table 14: Full sample data and earnings management variable using Francis and Wang, (2008) model				
VARIABLES	FE	FE	GMM	GMM
Ln (INVEST)	-0.00459	-0.00450	0.0112*	0.00865*
	(0.00926)	(0.00923)	(0.0449)	(0.0440)
CGI	0.000270	0.000179	0.0637**	0.0629**
	(0.00587)	(0.00586)	(0.0257)	(0.0252)
Leverage	-0.0592	-0.0783	0.0561	-0.0303
	(0.0795)	(0.0798)	(0.392)	(0.408)
Firm size	-0.00735	-0.00308	-0.00306	-0.00311
	(0.0104)	(0.0106)	(0.0456)	(0.0450)
Firm age	0.0595	0.0589	0.342	0.332
	(0.0497)	(0.0496)	(0.226)	(0.225)
CF	-0.143	-0.139	-0.764	-0.696
	(0.142)	(0.136)	(0.549)	(0.551)
ROA	-0.00321*		0.00584*	
	(0.00166)		(0.00706)	
Earnings management	0.0157	0.0163	0.00390*	0.0325*
	(0.0281)	(0.0281)	(0.139)	(0.135)
ROE		-0.00246***		
		(0.000848)		
Constant	1.715***	1.663***		
	(0.268)	(0.268)		
R-squared	0.156	0.159		
Adjusted R-squared	0.065	0.069		
Year FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Company FE	Yes	Yes	Yes	Yes



Table 15: Full sample data and intercept of 2020 (period of time)

VARIABLES	FE	FE	GMM	GMM
Ln (INVEST)	-0.00455	-0.00446	0.0110*	0.00678*
	(0.00926)	(0.00923)	(0.0438)	(0.0425)
CGI	6.14e-05	-3.69e-05	0.0637**	0.0626**
	(0.00586)	(0.00585)	(0.0258)	(0.0253)
2020 Period			-1.082***	-1.061***
			(0.363)	(0.358)
Leverage	-0.0593	-0.0784	0.0565	-0.0312
	(0.0795)	(0.0798)	(0.391)	(0.406)
Firm size	-0.00769	-0.00344	-0.00291	-0.00187
	(0.0104)	(0.0106)	(0.0452)	(0.0445)
Firm age	0.0603	0.0598	0.343	0.337
	(0.0497)	(0.0496)	(0.227)	(0.226)
Cash flow	-0.134	-0.129	-0.760	-0.653
	(0.141)	(0.135)	(0.538)	(0.532)
ROA	-0.00318*		0.00590	
	(0.00165)		(0.00689)	
ROE		-0.00244***		
		(0.000847)		
Constant	1.733***	1.681***		
	(0.266)	(0.266)		
R-squared	0.156	0.159		
Adjusted R-squared	0.066	0.069	.	.
Year FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Company FE	Yes	Yes	Yes	Yes



Table 16: Full sample data and slop of 2020 (dummy variables)				
VARIABLES	FE	FE	GMM	GMM
Ln (INVEST)	-0.00413	-0.00406	0.0114*	0.00723*
	(0.00927)	(0.00925)	(0.0437)	(0.0423)
CGI	-0.0139	-0.0135	0.0857*	0.0891*
	(0.0173)	(0.0173)	(0.108)	(0.110)
CG_Period	0.0153	0.0148	-0.0225	-0.0272
	(0.0179)	(0.0179)	(0.108)	(0.109)
Leverage	-0.0606	-0.0795	0.0490	-0.0449
	(0.0795)	(0.0798)	(0.401)	(0.422)
Firm size	-0.00727	-0.00306	-0.00239	-0.00104
	(0.0104)	(0.0106)	(0.0457)	(0.0449)
Firm age	0.0599	0.0594	0.338	0.330
	(0.0497)	(0.0496)	(0.230)	(0.230)
CF	-0.139	-0.134	-0.765	-0.656
	(0.141)	(0.135)	(0.545)	(0.537)
ROA	-0.00318*		0.00581	
	(0.00166)		(0.00687)	
ROE		-0.00244***		
		(0.000848)		
Constant	1.747***	1.695***		
	(0.266)	(0.267)		
R-squared	0.156	0.160		
Adjusted R-squared	0.066	0.069		
Year FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Company FE	Yes	Yes	Yes	Yes

Thank you