The Impact of Institutional Investment Horizon on Corporate Governance and Firm Performance

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ABSTRACT
The purpose of this research study is to explore the impact of institutional investors in corporate governance and market measure firm performance mechanism. The study defined the investment horizon of the financial institutions on the bases of their long or short term investment objectives in the investee companies. In order to study these relationships the research analyzed an unbalanced panel of 287 non-financial firms’ from 2005 to 2016. The selected sample was analyzed by fixed effect, random effect and Arellano–Bond dynamic panel models. The results of the study confirm the positive impact of institutional investors (as a homogenous group) in enhancing the corporate governance and firms’ performance mechanism in the light of agency and signaling theories. However, when the financial institutions are analyzed on the basis of their investment horizon the empirical results deviated from the previous predicted theoretical findings. The research further concludes that long investment horizon institutional investors play a positive role in improving corporate governance index and Tobin’s Q, however, short investment horizon institutional investors are found detrimental for both the corporate governance and performance mechanism in Pakistani firms. The current study is unique in the context of the emerging economies, as it provides response to the previous contradictory opinions about the role of financial institutions in firm performance and corporate governance mechanism. Moreover, the current research is also useful for individual investors, corporate managers and regulatory authorities for better understanding of this phenomenon.

JEL Classification: G30 G31, G32

Keywords: Institutional Investors; Corporate Governance Index; Firm Performance; Arellano–Bond dynamic panel models; Pakistan

INTRODUCTION
Institutional investors dominate the emerging financial markets, yet there is little information available regarding their role in corporate governance and performance mechanism in firms (Jacob, 2018). The current paper analyzes the impact of institutional investors on corporate governance and firm performance mechanism in the emerging Pakistani economy. Unlike the previous studies the current study employed a comprehensive measure of corporate governance index by using seven governance proxies from Pakistani listed firms. Institutional investors, such as, mutual funds, banks, pension funds, and insurance companies are heterogeneous in nature and differ in terms of their investment horizon (Chaganti & Damanpour, 1991; Koh, 2003). Although, different researchers studied the relationship among ownership structure, corporate governance and firm performance, but how these variables empirically interact with each other in a unified theoretical frame work is less explored and is inconclusive particularly in the developing countries like Pakistan where laws and regulations related to the investor’s protection are weak.
There are numerous reasons which explain the growing influence of financial institutions in the internal governance mechanism in corporations. Firstly, their active involvement in the internal governance mechanism is due to their huge volume in the firm’s ownership structure. Financial institutions hold more than 65% stock in the United States and more than 80% stock in the United Kingdom and Japan in 2017 (OECD). Secondly, European countries have very weak legal investor protection mechanism which enables the financial institutions to take an active role in corporate governance affairs (García-Meca, García-Sanchez, & Martínez-Ferrero, 2015). Thirdly, financial institutions not only have expertise to collect the information but also have abilities to monitor the management which makes them superior investors (Elyasiani & Jia, 2010). Theoretically, financial institution’s ownership in the firms provides an effective external governance mechanism. Agency theory states that institutional investors act as monitoring agents of management and play a key role in minimizing agency problems (Holderness, 2003; Jensen & Meckling, 1976). Signaling theory narrates that the presence of institutional shareholdings in firms transmits a positive signal in the marker regarding the firm’s current financial potential and future profitability (Short, Zhang, & Keasey, 2002).

Thus, in order to empirically test these objectives the study employed two measures to capture the influence of financial institutions on internal corporate governance mechanism. Firstly, the study analyzed the cumulative impact of institutional ownership on governance and performance in firms (Boone, Field, Karpoff, & Raheja, 2007; Gillan & Starks, 2000; Wang, Elsayed, & Ahmed, 2011). Secondly, the current study classified the institutional investors on the basis of their investment horizon in the investee companies and regress these proxies on governance and performance mechanisms (Bushee, 2001; Copeland, Weston, & Shastri, 2005; Ryan & Schneider, 2002). Financial institutions, such as, pension funds hold long terms investors as their beneficiaries (Copeland et al., 2005). They have long terms investment perspective (Brown, 1998; Harford, Kecskés, & Mansi, 2018; Monks & Minow, 1996) so, they invest their savings for a longer period of time in the firm (Copeland et al., 2005; Ryan & Schneider, 2002). On the contrary, mutual funds and banks beneficiaries may claim their savings at any time, so they have greater liquidity requirements (Levinthal & Myatt, 1994; Monks & Minow, 1996).

Thus, mutual funds and commercial banks invest for a shorter period of time in corporations and have short term investment horizon (Cox, Brammer, & Millington, 2004; Cox & Wicks, 2011; Harford et al., 2018; Zahra, 1996). The research studies in the developed countries revealed that long term institutional investors are more sustainable and they actively participate in the corporate governance mechanism whereas short term institutional investors are not concerned with the governance affairs and their investment decisions are linked with the market conditions of the country (Cox et al., 2004; Cox & Wicks, 2011; Johnson & Greening, 1999). The current financial literature concluded a significant impact of financial institutions on the corporate governance mechanism (Ferreira & Matos, 2008; Hamdani & Yafeh, 2012; Ruiz-Mallorquí & Santana-Martin, 2011). However, investment horizon of institutional investors and corporate governance is least explored and inconclusive, especially, for emerging economies.

The Asian financial crises in 1997 exposed the weak corporate governance system of this region and the socio-economic and institutional environment in Pakistan is more volatile than...
any other country of this region (Sheikh, Shah, & Akbar, 2018). The notorious Taj Company scandal in Pakistan also shattered the trust of investors. In order to restore investors’ trust and to grow and develop the financial sector in Pakistan, Security and Exchange Commission of Pakistan (SECP) issued Code of Corporate Governance (PCCG) for Pakistani firms in 2002. In 2007 Pakistan Stock exchange (PSX) established a separate board to monitor firms compliance with PCCG, and tried to improve the firm’s disclosures quality. But empirical results show the other picture of the story, as Javid and Iqbal (2010) concluded that the corporate governance system in Pakistan is ineffective to decrease the influence of insiders and firms are reluctant to pay dividends in the absence of powerful external shareholders (Abdullah, Shah, Gohar, & Iqbal, 2011). Moreover, Abdullah et al. (2011) also concluded that family controlled firms not only expropriate minority shareholders but they also show a poor financial performance. The current research is an effort to unveil the connection of institutional investors in improving governance and performance mechanism in corporations. The research documented this relationship by analyzing the institutional investors not only as a homogeneous group but also established a link based on their heterogeneous nature, based on their investment horizon, with corporate governance and firm performance. The current research helps to explain the inconsistent relationships among institutional investors, corporate governance and firm performance in the literature (Dana, 2015; Demsetz & Villalonga, 2001; Elyasiani & Jia, 2010; Gillan & Starks, 2007).

The results of the current study augment the existing literature and support the views of agency and signaling theories that financial institutions participate effectively in internal corporate governance and firm performance mechanism when they are regressed as a single homogeneous group. On the contrary, when institutional investors are grouped on the bases of their investment horizon, then the predicted theoretical relationships among institutional investors, corporate governance and firm performance deviates. Thus, the current study claims that the investment horizon is an imperative determinant in describing the relationship among institutional investors, governance and firm performance mechanism. The study found that, unlike short term, the long horizon institutions play a constructive role in internal corporate governance mechanism, but unlike long term, the short horizon institutional investors are ineffective in the betterment of corporate governance and performance mechanism. Thus, the study concludes that effective monitoring hypothesis is valid in Pakistan, especially, when the shareholding of long term institutional investors increases in firms. So, the study concludes that institutional investors and their investment horizon play a critical role in the failure or success of corporate governance and firm performance mechanism. Finally, the results of the current study are generalizable to developing economies of this region which are generally suffering due to poor corporate governance mechanism.

The study is helpful for various market participants and regulatory bodies especially in the emerging countries. The current research facilitates the individual investors to evaluate the internal corporate governance and firm performance mechanism in the presence of institutional investors both as a homogeneous and heterogeneous group. The study also guides them to generate an investment portfolio based on their perceived long term or short term interests by identifying different traits of the internal corporate governance mechanism. Secondly, the research is of great assistance for corporate managers, who can understand the role of diverse institutional investors, in the ownership structure, effecting the internal governance and market reputation of their firms. Thirdly, the study is also helpful for monitory
bodies, such as, Security Commission of Pakistan (SECP) for the policy formulation and implementation on listed companies.

LITERATURE REVIEW
Institutional Investors and Corporate Governance
There is extensive empirical research explaining the growing role of financial institutions in corporate governance mechanism with conflicting results (Cremers & Nair, 2005; Shleifer & Vishny, 1986; Subramanian, 2015; Waheed & Malik, 2020; Webb, Beck, & McKinnon, 2003). However, different researchers (Bhide, 1993; Coffee, 1991; Dobrzynski, 1993; Hartzell & Starks, 2003; Kushwaha, 1993; Monks & Minow, 1996) identified different roles which the institutional investors play in the firm management practices. According to Monks and Minow (1996), institutional investors with their heavy investment in firm capital structures have long term objectives and goals and play a very constructive role, by monitoring the management as an owner. On the other hand, Bhide (1993) and Coffee (1991) revealed that the purpose of institutional investors is to earn maximum profit in a very small period of time and that they only trade securities and invest merely in those firms from which they can earn huge profit, in a very small period of time. But, Hartzell and Starks (2003) concluded that institutions play a significant role in determining the compensation for CEO and executives. By analyzing the data of 1500 firms for a period of 1992-1997, they concluded that institutional investors play a very effective monitoring role and they also enforce the governing body to up lift the salaries of their managers. Webb et al. (2003) found an active and effective role of institutional investor in monitoring the management and enforcing corporate governance practices in the UK. Davis (2002) also analyzed the growing dominance of financial institutions in corporate governance mechanism across Anglo-Saxon states (UK, USA and Canada), continental Europe and Japan. He found that institutional investors in Anglo-Saxon countries directly threaten the management by involving in take over activities, whereas, in continental Europe and Japan institutional investors establish working relations with the management. Wahab, How, and Verhoeven (2008) in Malaysia and Kamran and Shah (2014) in Pakistan found significant positive relationship between institutional investors and governance variables in corporations. However, Bushee, Core, Guay, and Hamm (2010) found no significant relationship between institutional ownership and different proxies of corporate governance. Thus, based on the above conflicting finds the study hypothesized that:

H1: Institutional investors positively influence the internal corporate governance index in firms.

Institutional Investment Horizon and Corporate Governance
Gillian and Starks (2007) conducted an extensive literature review explaining the association among institutional ownership, corporate governance and firm performance. In their review they found conflicting findings because different researchers employed different techniques to measure corporate governance and performance variables. Furthermore, empirical research also concluded heterogeneous nature of investment behavior (active or passive) of institutional investors (Dong & Ozkan, 2008; Hutchinson, Seamer, & Chapple, 2015). The hypothesis of homogeneous nature of financial institutions is also rejected on the basis of their long term or short term investment objectives in their investee companies (Wahal, 1996). For example, Pension funds and investment companies invest in the firm for a longer period of time (Copeland et al., 2005; Del Guercio & Hawkins, 1999; Hutchinson et al., 2015;
The agency theory proposed that effective corporate governance system results better management practices which enhances firm performance. Strategic management theorists linked corporate governance with firm valuations in the light of resource dependence theory and managerial rents theory (Castanias & Helfat, 2001). Strategic literature identified corporate governance as a key managerial resource which provides a key competitive edge to the corporation (Dwivedi & Jain, 2005). Thus, theoretically, good corporate governance policies have a positive influence on performance in firms (Waheed & Malik, 2019a), however, empirical results regarding this relationship provides conflicting findings in developed and emerging economies (Bebchuk, Cohen, & Ferrell, 2008; Brown & Caylor, 2009; Gompers, Ishii, & Metrick, 2003). Cadbury (1993) proposed that better governance practices strengthen the relationships between firm and the equity holders, management and employees, which enhances productivity of the firms. According to Gompers et al. (2003), better governance practices especially stronger stockholders right results higher market valuation of the firms when measured in term of Tobin’s Q. Brown and Caylor (2009) also reported a positive link between better governance practices and accounting measure of performance in three major stock exchanges in USA. Huang, Jeng, and Shyu (2016) also reported a positive association between corporate governance and firm performance in Taiwan. Thus, better governance practices increase the trust of investors in the firm’s management team and they feel that their investment can be returned (Shleifer & Vishny, 1997). Thus, based on the above conflicting findings the study hypothesized that:

H4: Corporate governance index has a positive effect on firm performance.

Corporate Governance and Firm Performance

On the contrary, mutual funds and commercial banks managers are under immense pressure to show short term results (Aguilera, Rupp, Williams, & Ganapathi, 2007; Cox et al., 2004; Cox & Wicks, 2011; Du, Huang, & Blanchfield, 2009; Zahra, 1996). Theoretically, information asymmetry theory describes that the investment decision of short horizon financial institutions (such as banks and mutual funds) is based on the availability of the insider information. On the bases of such information, they prefer to invest in the undervalued securities to earn abnormal returns in a smaller period of time (Elyasiani & Jia, 2010). These types of institutional investors do not bear extra monitoring cost to monitor the management (Pozen, 1994) neither they oppose the management of their investee firms, so they are found ineffective in shaping the corporate governance policies in firms (Hutchinson et al., 2015). Thus, financial institutions with short investments horizon have a passive role in corporate governance mechanism (Dong & Ozkan, 2008). Thus, based on the above conflicting findings the study hypothesized that:

H2: Long investment horizon institutional investors (pension funds) have positive influence in the corporate governance mechanism in firms.

H3: Short investment horizon institutional investors (mutual funds and banks) have no significant influence on the corporate governance mechanism in firms.

H4: Corporate governance index has a positive effect on firm performance.
Institutional Investors and Firm Performance

The review of the literature (Demsetz & Villalonga, 2001; Earle, Kucsera, & Telegdy, 2005; Perrini, Rossi, & Rovetta, 2008; Qi, Wu, & Zhang, 2000; Rafique, Malik, Waheed, & Khan, 2017) suggests that diversity in the ownership structure effects firms’ performance. Qi et al. (2000) in China and Earle et al. (2005) in Hungary found that the diversity in ownership structure results in better corporate governance in firms which eventually improves the firms performance. Institutional investors are an important component of ownership structure of the firms (Johnson & Greening, 1999). But there are diverse opinions about constructive role of institutional investors in the firm performance (Aggarwal & Rao, 1990; Bhattacharya & Graham, 2007; Dana, 2015; Elyasiani & Jia, 2010). Aggarwal and Rao (1990), found that presence of institutional ownership lowers the stranded deviation of the stock price return in United States. Daily, Johnson, Ellstrand, and Dalton (1996) further explained this relationship and concluded that institutional investors decrease the risk and enhance the marker based performance of the firms. According to some researchers (Ajina, Lakhal, & Sougné, 2015; Elyasiani & Jia, 2010), institutional investors are informed investors but it is not necessary that they have correct information about the operations of the investee firms (David & Kochhar, 1996)). Furthermore, due to legal constraints their knowledge and expertise are not always beneficial for their investee firms (David & Kochhar, 1996). Empirically, Bhattacharya and Graham (2007) in Finland found a negative and Lee (2008) in South Korea found insignificant relationship between institutional investors and performance of the firm. Thus, the review of the literature suggests that the role of institutional investors in firm’s performance is inconclusive and majority of the researchers studied the homogeneous nature of financial institutions.

H5: Institutional investors have positive effect on firm’s performance in Pakistan.

Institutional Investment Horizon and Firm Performance

The literature review suggests that financial institutions, such as, commercial banks, mutual funds and pension funds have different investment horizons (Del Guercio & Hawkins, 1999; Ryan & Schneider, 2002; Woidtke, 2002) investment objectives and behavior in the investee companies (Chaganti & Damanpour, 1991; Koh, 2003). However, Ryan and Schneider (2002) hypothesized that the propensity of institutional investors to influence firm’s performance depends upon three factors i.e. size of the firm, economic conditions and type of institutional investors. Investment horizon of the institutional investors depends upon their need for liquidity (Monks & Minow, 1996). Pension funds require out flows over a longer period of time for their beneficiaries (Brown, 1998; Davis, 2002; Ryan & Schneider, 2002) so they invest in the firms over a longer period of time (Copeland et al., 2005; Mutalib et al., 2017; Ryan & Schneider, 2002). Long term institutional investors with their abilities and skills not only play a constructive role in shaping the firm’s management practices but they also make the management accountable for poor performance (Millisstein, 1991) which results in better performance of the firm (Chen, Harford, & Li, 2007; Elyasiani & Jia, 2010). Moreover, long term institutional investors alleviate the managerial myopia in the firms and managers adopt long term growth and expansion strategies in the firms (Bushee, 2001; Edmans, 2009). The presence of the pension funds in the ownership structure increases the stock market liquidity of the firms (Ajina et al., 2015). On the contrary, mutual funds managers and commercial banks also require liquidity to fulfill the demands of their beneficiaries so they invest their funds on short horizon in order to have liquidity requirements (Ajina et al., 2015). Thus
mutual funds and banks have high turnover and they are also involved in frequent trading based on market information and trends (Yan & Zhang, 2007). Furthermore, Bushee (2001) found that short term institutional investors do not play any constructive role in the market value creation of the firms. Thus, based on the above conflicting finds the study hypothesized that:

H6: Long investment horizon institutional investors (pension funds) have a significant influence on firm’s performance in Pakistan.

H7: Short investment horizon institutional investors (mutual funds and banks) have no significant influence on firm’s performance in Pakistan.

**METHODOLOGY**

**Sample**

The sample for the current study includes all non-financial listed firms on Pakistan Stock Exchange with complete data. The data used for analysis is obtained from a number of sources. The data related to corporate governance variables and institutional ownership is obtained from the firms’ annual reports. Whereas, the data related to control variables, such as, firm size, leverage, dividend yield and sales growth is calculated with the help of balance sheet analysis published by the State Bank of Pakistan (SBP). The final selected sample consists of an unbalance panel of 287 firms over a period of 11 years from 2006 to 2016.

**Variables**

**Tobin’s Q**

The current study used Tobin’s Q as a measure of firm performance. Tobin’s Q being market measure of performance which not only accounts for all the current decisions taken by the management of the firm but also accounts for the future expected performance of the firms. There exists an extensive body of literature (Cho, 1998; Himmelberg, Hubbard, & Palia, 1999; Mahmood, Khalid, Waheed, & Arif, 2019) which suggests Tobin’s Q as a superior measure of performance when corporate governance and ownership structure variables are involved.

**Institutional Investment Horizon and Firm Performance**

The current study used a comprehensive measure of corporate governance score, developed by Gompers et al. (2003). This additive index is developed by using seven internal attributes of corporate governance which are: size of the corporate board, number of executive directors, number of non-executive directors, number of independent directors, CEO- duality, number of board meetings and big four. Under this methodology, each proxy of the corporate governance attribute is grouped into 5 quintiles and is assigned a value between 1 to 5, where higher values depict better corporate governance attributes in firms and the lower value depicts vice versa. Afterwards, all the values on the corresponding rows were added and then a minimum, maximum value and range for each year in the sample is calculated. The index value is finally calculated by taking the difference of the sum values and minimum values and by dividing this value with the range (Gompers et al., 2003). The proxies of corporate governance used for the construction of the corporate governance index are as follows (Waheed & Malik, 2019b).
1. **Board Size**: Corporate board is the highest decision making authority in the company. Board size provides the total number of directors (such as executive, nonexecutive and independent) in the governing body. The presence of larger board in the governing body ensures more resources for the firm in terms of knowledge, experience and resources (Adams & Mehran, 2003).

2. **Executive Directors**: Executive directors are an important component of the governing body. They are those individuals in the firm who hold firm’s shares and are also part of the management team. Their majority in the governing body results in the expropriation of the wealth of the minority shareholders (Morck, Shleifer, & Vishny, 1988).

3. **Non-Executive Directors**: Non-Executive directors are those owners in the governing body who are not part of the management team. Their presence in the governing body aggravates agency problems and they potentially compel the management to follow best corporate governance practices (Pass, 2004; Roberts, McNulty, & Stiles, 2005).

4. **Independent Directors**: Independent directors or outsiders do not possess any pecuniary stake in the firm. They are selected in the governing body on the bases of their expertise or experience. They play a very effective role in enhancing best governance practices in the governing body and their presence increases the credibility of the governing body in the eyes of smaller investors (Carcillo, Hermanson, Neal, & Riley Jr, 2002; Hermalin & Weisbach, 2001).

5. **CEO Duality**: CEO duality is a single person who holds both the position of CEO and Chairman in the governing body. CEO duality decreases the powers of the corporate board and results in an ineffective corporate governance mechanism (Ehikioya, 2009). The empirical results revealed that the firms having CEO duality are found in hiding their true financial health and performance (Agrawal & Nasser, 2019; Brickley, Coles, & Jarrell, 1997; Brickley et al., 1988; Efendi, Srivastava, & Swanson, 2007).

6. **Board Meetings**: The higher number of board meetings shows the effectiveness of the governing body which helps in improving corporate governance practices board (Brick & Chidambaram, 2010).

7. **Big Four**: If a firm is audited by any of the big four audit firms then it increases the transparency of the governance affairs which positively contributes to corporate governance affairs (Abbott, Parker, Peters, & Raghunandan, 2003; Yasar, 2013).

**Institutional Ownership (IO)**

Institutional ownership structure is the main independent variable in the current study. It is the fraction of shares held by different type of financial institutions (i.e. banks, charitable trusts, insurance companies, investment companies, modarba companies, mutual funds, pension funds) to the total common shares of the firm (Boone et al., 2007; Gillan & Starks, 2000; Sajjad, Abbas, Hussain, & Waheed, 2019; Wang et al., 2011). For the purpose of analysis, this variable is further divided into short investment horizon financial institutions (mutual funds & banks) and long investment horizon institutions (pension funds) on the bases of their trading behavior.

**Long investment horizon institutional investors (LT_IO)**

It is the fraction of shares held by the pension funds to the total common shares (Copeland et al., 2005; Mutaib et al., 2017; Ryan & Schneider, 2002).
Long investment horizon institutional investors (ST_IO)
It is the fraction of shares held by the mutual funds and banks to the total common shares (Cox et al., 2004; Cox & Wicks, 2011; Mualib et al., 2017).

Control Variables
Firm size (FZ), leverage (LVE), dividend yield (DY) and firm age (FA) are included as control variables in the current study.

The Model
The objective of the current study is to explore the impact of institutional ownership and their investment horizon on corporate governance firm performance mechanism in non-financial Pakistani listed firms from 2006 to 2016. As the data has both cross section and time series in nature, so panel data methodology is used to control the undetectable heterogeneity. Under this methodology common effect, fixed effect and random effect models are regressed to explore the corporate governance and ownership structure relationship. Moreover, the results of the Hausman test are also reported which suggest that fixed/random model is best fitted to explain the models. Since the structure of the data set (i.e. unbalance panel) and potential endogeneity problem between institutional ownership and corporate governance (Bhagat & Bolton, 2008) and institutional ownership and firm performance (Tsai & Gu, 2007) and corporate governance and firm performance. So in order to address the troubles of unobserved heterogeneity, serial correlation, simultaneous and dynamic endogeneity the current study adopted the technique of Arellano–Bond dynamic panel data estimation (under assumptions of GMM) in order to provide more robust and generalizable results (Wooldridge, 2010). The above mentioned models are run with the help of the following econometric equations.

RESULTS AND FINDINGS
Descriptive Statistics
Table 1 provides the descriptive statistics of the variables used in the current study. The minimum and maximum values of Tobin’s Q are 0.251 and 16.55 respectively with the mean value of 1.379 and standard deviation of 1.331, which shows that majority of the values are near the central value. The value of the corporate governance index ranges from 0 to 1 and its mean value is .47 with a very little (0.198) value of standard deviation. This shows that internal corporate governance mechanism in majority of the sampled firms is on average level. The sample contains firms with no institutional ownership and maximum institutional shareholding in a firm is 79.5% with a mean value of 11.3%. Moreover, the selected sample contains on average 7.8% ownership by long term institutional investors and 1.7% ownership by short term institutional investors. The control variables in the study have majority of the values around their mean value as indicated by their lower value of standard deviations.
Table 1:
Descriptive Statistics

<table>
<thead>
<tr>
<th>Variables</th>
<th>Min</th>
<th>Maximum</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tobin's Q</td>
<td>0.251</td>
<td>16.550</td>
<td>1.379</td>
<td>1.331</td>
</tr>
<tr>
<td>Corporate Governance Index</td>
<td>0.000</td>
<td>1.000</td>
<td>0.473</td>
<td>0.198</td>
</tr>
<tr>
<td>Institutional Ownership</td>
<td>0.000</td>
<td>0.795</td>
<td>0.113</td>
<td>0.117</td>
</tr>
<tr>
<td>Long Horizon institutional investors</td>
<td>0.000</td>
<td>0.437</td>
<td>0.057</td>
<td>0.029</td>
</tr>
<tr>
<td>Short Horizon Institutional Investors</td>
<td>0.000</td>
<td>0.643</td>
<td>0.078</td>
<td>0.087</td>
</tr>
<tr>
<td>Firms Size</td>
<td>4.939</td>
<td>8.465</td>
<td>6.769</td>
<td>0.662</td>
</tr>
<tr>
<td>Leverage</td>
<td>0.031</td>
<td>1.997</td>
<td>0.488</td>
<td>0.197</td>
</tr>
<tr>
<td>Dividend Yield</td>
<td>0.000</td>
<td>3.378</td>
<td>0.050</td>
<td>0.155</td>
</tr>
<tr>
<td>Firms Age</td>
<td>1.386</td>
<td>4.290</td>
<td>3.502</td>
<td>0.492</td>
</tr>
</tbody>
</table>

Correlation Matrix

The correlations matrixes among the selected variables of the study are provided in the following table 02. The table includes the correlation matrix among Tobin’s Q, corporate governance index, institutional ownership, long term institutional investors, short term institutional investors, firm size, leverage, dividend yield and firms age. The matrix shows that Tobin’s Q is positively correlated with corporate governance index, institutional ownership and long term institutional ownership but negatively correlated with short horizon institutional investors. Moreover, there exists a positive correlation between corporate governance index and institutional ownership. Furthermore, all the values in the sample are lower than .7 which indicates that there is no issue of multicollinearity among the explanatory variables of the study.

Table 2:
Correlation Matrix

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tobin's Q</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CGI (2)</td>
<td>0.119***</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IO (3)</td>
<td>0.086***</td>
<td>0.353***</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LT, IO (4)</td>
<td>0.112*</td>
<td>0.303***</td>
<td>0.348***</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ST, IO (5)</td>
<td>-0.012**</td>
<td>0.223***</td>
<td>0.452***</td>
<td>0.170</td>
<td>1.00</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Firms Size (6)</td>
<td>0.021</td>
<td>-0.003</td>
<td>0.122***</td>
<td>0.017*</td>
<td>0.111</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leverage (7)</td>
<td>0.265***</td>
<td>0.058***</td>
<td>-0.056**</td>
<td>-0.052</td>
<td>-0.063*</td>
<td>-0.18***</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dividend Yield (8)</td>
<td>-0.035</td>
<td>0.000</td>
<td>0.047*</td>
<td>0.014***</td>
<td>0.097</td>
<td>0.087</td>
<td>-0.049*</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Firms Age (9)</td>
<td>0.040</td>
<td>-0.079**</td>
<td>-0.066*</td>
<td>-0.015*</td>
<td>0.086</td>
<td>0.072***</td>
<td>-0.104*</td>
<td>-0.006</td>
<td>1.00</td>
</tr>
</tbody>
</table>

The table 2 provides the correlation matrix among Tobin's Q, corporate governance index, institutional ownership, long term institutional investors, short term institutional investors, firm's size, leverage, dividend yield and firm's age.

Regression Analysis

The following table 3 gives the econometrics results of equation (i & ii). The table provides the results of fixed effect and Arellano–Bond dynamic panel data estimation (under assumptions of GMM) models for the corporate governance index (CGI) in columns 1-4 and for Tobin’s Q in columns 5-8 along with other control variables. However, the results of random effect and common effect model are not reported in the table. The table also reports that the p-value of Hausman test is significant in all the 4 models, which suggests that fixed
effect model is the most appropriate one to explain the current relationships. In order to access weather, Arellano–Bond dynamic panel model (under assumptions of GMM) is effectively controlling the issue of endogeneity. We check the validity of the instruments by employing Sargan test and serial correlation test. The insignificant p-values of Sargan test and AR(2) terms validates the instruments used in the model and the absence of serial correlation in the data.

In the following table 3, model-1 explains the combined effect of all type institutional investors such as banks, charitable trusts, insurance companies, investment companies, modarba companies, mutual funds, pension funds on the corporate governance index along with the control variables. In the column 1 and 2, the coefficient of institutional ownership is positive and highly significant with the corporate governance index. The result leads to accept the first hypothesis H1 of the study. This result conforms to the agency view and effective monitoring hypotheses proposed (Pound, 1991) which describes that financial institutions are effective monitor of the management and the negotiation hypothesis proposed by (Kieschnick & Moussawi, 2004) which states that institutional investors improve corporate governance by decreasing managerial influence on firms. Our findings validate the results of Choi, Park, and Yoo (2007) for Korea, Mohanty (2003) and Sarkar and Sarkar (2000) and for India and Webb et al. (2003) for UK.

The second hypothesis states that long horizon institutional (pension funds) investors have positive influence on corporate governance mechanism. In columns 3 and 4 the coefficient of long horizon institutional investors is positive and significant with corporate governance index and it is consistent with the findings of (Davis, 1998) and Faccio and Lasfer (2000) for UK, Jan de Graaf and Haigh (2011) for Netherlands and Mutalib et al. (2017) for Malaysia. However, the coefficient of short horizon institutional investors (mutual funds and commercial banks) is insignificant with the corporate governance index in column 3 for fixed effect model, but it is significant in column 4 for dynamic panel (GGM) model. Thus, we accept the third hypothesis H3 of the study. Thus, we conclude the short horizon institutional investors play destructive role in internal corporate mechanism of the firms. This result is consistent with the findings of Subramanian (2015) for India.

In the models 3 and 4, the corporate governance index is regressed on market measure of the firm performance i.e. Tobin’s Q. The coefficient of corporate governance index is positive and significant for both fixed effect and dynamic panel (GGM) model. This conforms to the fourth hypothesis H4 of the study. This result validates the propositions of agency and managerial rents theory in Pakistani context. Moreover, this finding is congruent with Gompers et al. (2003), Brown and Caylor (2009) and Fu and Ho (2014). In the models 3, the collective effect of all the institutional investors is regressed on market measure of the firm performance i.e. Tobin’s Q. The coefficient of institutional ownership is positive and significant for both fixed effect and dynamic panel (GGM) model. This conforms to the fifth hypothesis H5 of the study. This also conforms to the narrative of agency and signaling theories. This result is consistent with the findings of (Attig, Cleary, El Ghoul, & Guedhami, 2012; Short et al., 2002).

The model 4 in the table 3 provides the results of long horizon and short horizon institutional investors on firm performance measure. The coefficient of long horizon institutional investors is not significantly associated with Tobin’s Q in fixed effect model but it is highly significant
Table 3:
Results for Tobin’s Q, corporate governance index regressed on institutional ownership structure proxies and other control variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>Fixed Effect</th>
<th>Dynamic Fixed Effect</th>
<th>Fixed Effect</th>
<th>Dynamic Fixed Effect</th>
<th>Fixed Effect</th>
<th>Dynamic Fixed Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Panel (GMM)</td>
<td>Panel (GMM)</td>
<td>Panel (GMM)</td>
<td>Panel (GMM)</td>
<td>Panel (GMM)</td>
<td>Panel (GMM)</td>
</tr>
<tr>
<td>Lagged CGI</td>
<td>0.209***</td>
<td>0.235***</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.060)</td>
<td>(0.067)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lagged Tobin’s Q</td>
<td></td>
<td></td>
<td>0.361***</td>
<td>0.261***</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(0.007)</td>
<td>(0.016)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CGI</td>
<td></td>
<td></td>
<td>0.319*</td>
<td>0.194***</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(0.166)</td>
<td>(0.068)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Institutional Ownership</td>
<td>0.496***</td>
<td>0.554***</td>
<td>0.799**</td>
<td>0.105***</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.053)</td>
<td>(0.084)</td>
<td>(0.32)</td>
<td>(0.061)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Long Horizon Institutional Investors</td>
<td>0.454***</td>
<td>0.838***</td>
<td></td>
<td></td>
<td>0.658</td>
<td>1.031***</td>
</tr>
<tr>
<td></td>
<td>(0.06)</td>
<td>(0.257)</td>
<td></td>
<td></td>
<td>(0.367)</td>
<td>(0.321)</td>
</tr>
<tr>
<td>Short Horizon Institutional Investors</td>
<td>-0.056*</td>
<td>-0.153***</td>
<td>-0.120**</td>
<td>-0.116***</td>
<td>0.323*</td>
<td>-0.324</td>
</tr>
<tr>
<td></td>
<td>(0.03)</td>
<td>(0.057)</td>
<td>(0.03)</td>
<td>(0.059)</td>
<td>(0.175)</td>
<td>(0.179)</td>
</tr>
<tr>
<td>Firms Size</td>
<td>-0.026*</td>
<td>-0.208**</td>
<td>-0.023*</td>
<td>0.024***</td>
<td>-0.584**</td>
<td>-0.456**</td>
</tr>
<tr>
<td></td>
<td>(0.026)</td>
<td>(0.017)</td>
<td>(0.025)</td>
<td>(0.018)</td>
<td>(0.078)</td>
<td>(0.151)</td>
</tr>
<tr>
<td>Leverage</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dividend Yield</td>
<td>-0.02</td>
<td>-0.013</td>
<td>-0.031</td>
<td>0.019**</td>
<td>-0.351**</td>
<td>-0.414</td>
</tr>
<tr>
<td></td>
<td>(0.026)</td>
<td>(0.017)</td>
<td>(0.025)</td>
<td>(0.018)</td>
<td>(0.151)</td>
<td>(0.108)</td>
</tr>
<tr>
<td>Firms Age</td>
<td>-0.094**</td>
<td>0.182*</td>
<td>-0.159**</td>
<td>-0.112**</td>
<td>10.470***</td>
<td>20.033***</td>
</tr>
<tr>
<td></td>
<td>(0.042)</td>
<td>(0.079)</td>
<td>(0.041)</td>
<td>(0.098)</td>
<td>(0.247)</td>
<td>(0.181)</td>
</tr>
<tr>
<td>R-Square</td>
<td>0.566</td>
<td>0.575</td>
<td>0.725</td>
<td>0.714</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hausman Test p-value</td>
<td>0.003</td>
<td>0.000</td>
<td>0.429</td>
<td>0.620</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arellano –Bond</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AR(1) in diff. (m1) p-value</td>
<td>0.001</td>
<td>0.000</td>
<td>0.429</td>
<td>0.620</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AR(2) in diff. (m2) p-value</td>
<td>0.188</td>
<td>0.130</td>
<td>0.171</td>
<td>0.444</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Over identification test</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sargan test p-value</td>
<td>0.410</td>
<td>0.395</td>
<td>0.455</td>
<td>0.540</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Statistical significance is denoted by ***, **, and * at 1, 5, and 10 percent respectively.
CONCLUSION

The objective of the current research was to explore the generalizable, long and short term impact of financial institutions on corporate governance and firm performance mechanism. The study brought together various aspects of the internal corporate governance mechanism in order to develop an index and investigated the effect of institutional investors on the internal corporate governance index. The empirical results revealed that when institutional investors are considered homogeneous in nature then, they not only play a constructive role in the internal corporate governance mechanism by monitoring the managers but also positively influence the firm’s market measure of performance i.e. Tobin’s Q. This result also supports the views of agency and signaling theories. As according to agency theory, the presence of financial institutions in the firm’s ownership structure improves the internal corporate governance mechanism by lowering the managerial influence. According to signaling theory, the presence of financial institutions (being informed and knowledgeable investors) in the firm’s ownership structure transmits a very good signal about the firm’s financial strength and profitability in the market. Thus, the study concludes that the effective monitoring hypothesis is valid in Pakistan, especially, when the ownership stake of long term institutional investors increases in firms.

Contrary to the previous findings when institutional investors are studied as heterogeneous investors having different long term or short term investment objectives, the present study found that the empirical results deviate from the predicted theoretical results. The current study found that the long horizon institution investors (pension funds) enforce the management to adopt good corporate governance practices and short term institutional investors (mutual funds and commercial banks) negatively influence internal corporate governance mechanism. The empirical results confirmed that long horizon institutional investors are an important determinant to predict better firm performance. However, the current research also concludes that the presence of short horizon institutional investors in the firms’ ownership structure results in poor firm performance (Tobin’s Q). In this context, long investment horizon of financial institutions plays a facilitating role in corporate governance mechanism and adds value to the observed firms. Whereas, heterogeneity of financial institutions contradicts the findings in earlier literature and creates a need to identify those factors responsible for such deviations from theory and predicted findings. Thus, the study concludes that financial institutions significantly and differentially control the internal governance and performance mechanism in firms. Moreover, the study also found that institutional investors also play a critical role in the failure or success of corporate governance system. The research is useful for individual investors for making an investment decision and also for the corporate managers for the better understanding of firm performance and corporate governance mechanism (Abdullah et al., 2011).

REFERENCES


