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Ownership Concentration, Firm Risk taking and Performance: Evidence from Developing Economy of Pakistan

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ABSTRACT

Ownership structure has a substantial impact on corporate decision-making and plays a significant part in the corporate governance framework. Ownership structure can accomplish a significant purpose in aligning interest of managers and owners. The legal protections provided to shareholders in a country have a significant impact on ownership concentration. From 2008 to 2018, data on 225 non-financial companies were obtained from the Pakistan Stock Exchange in order to analyse the effects of ownership concentration on business risk-taking and performance. Results postulated that Single large shareholder negatively affect corporate risk taking in act to preserve their personal benefits and support conservative investment policy. Presence of Multiple large shareholders proved to be a significant cause of internal governance mechanism, such firm's charades higher risk taking profile because agency conflict between Single large shareholder and other shareholders were unfriendly and multiple large shareholders can enforce value exploiting risky investments by their voting power. Individual ownership (diffused ownership) is significantly negative associated with risk taking and performance measures. Diffuse ownership imparts power to managers because disperse owners cannot directly monitor managers' practices and monitoring cost is very high. In such case mangers take those decisions which are in their personal favour and therefore favour low risk portfolio. Multiple conflicts between management and diffuse shareholders ultimately results in poor performance of the firm.

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1. Introduction

The most advanced form of Business; Company is preoccupied by control and ownership segregation. Corporate management and corporate governance are two unique phenomena. Management is in hands of managers (agents) while governance can be organized by numerous other means. Term of Corporate governance in theoretical literature was first suggested by Eells (1960) to term operations and to construct corporate policy; this beginning is not novel in real it is as ancient as formation of companies. Term of "Corporate Governance" is derivative from the resemblance between two terms i.e. government of nations and governance of corporations. The most basic issue of governance ascends when outside investor desires to control firm from a way different than manager. In the global economy, governance of corporations is of the highest prominence and needs attention equally as government of countries.

Corporate governance has risen to prominence in last two decades because of its inferences at state and corporate level. In order to achieve economic success in the best interests of stakeholders, corporate governance essentially serves as a tool to control the administration of the firm. Corporate governance is an accountability mechanism that sort management responsible to all stakeholders jointly and shareholders of the firm separately.

Some governance programs are external and some are internal to entirely shield the corporate practices by guarding all Stakeholders. In short, corporate governance is explained by Organization for Economic Cooperation and Development (OECD) as follow:

"A framework of rules and regulations, divide roles and tasks amid different parties like mangers, board, stakeholders and other shareholders and draw parameters of corporate decisions. It also helps in devising a structure to setup corporate motives and means of achieving it and monitoring mechanism."

From aforementioned meaning it gets clear that corporate governance has noteworthy influence on corporate choices like outside financing, risk concerning rules and investment collections. The responsibilities of the board and managers, practical behavior and accountability, information transparency and communication, the regulatory and legal environment, and reliable risk management concerns are some crucial components of corporate governance Corporate governance implementation is a difficult task since having laws and regulations is insufficient; what makes a difference is how they are put into practice. A corporate governance code is in place, but there are still certain gaps that need to be rectified. The combination of moral and legal safeguards to ensure corporate integrity attests to being a respectable answer to business issues. Use of such a tool can lead to a variety of disputes known as agency conflicts suggested by Berle and Means (1932). Berle and Means (1932), found enough proof to describe such clashes which are entrenched in separation of control and ownership. There may be a variety of discrepancies between shareholders and managers, small shareholders and major owners, managers and debt holders.

These agency conflicts can effect strategic decisions in numerous ways. Insiders (mangers) can effect divestiture choices to guard their position (Wright & Ferris, 1997), dividend policy (Easterbrook, 1984; Lang & Litzenberger, 1989), firm rearrangement (Bethel & Liebeskind, 1993; Johnson, Hoskisson, & Hitt, 1993), diversification strategy (Agrawal & Mandelker, 1990; Amihud & Lev, 1981; C. W. Hill & S. A. Snell, 1988; Kroll, Wright, Toombs, & Leavell, 1997) and anti-takeover attitude (Stulz, 1988). A most significant strategic choice on which success and development of business is dependent is risk taking strategy; it is also under the control of management because in above stated situation they are in strong position to take decision to reinforce themselves in the company. Ultimately nobody challenges their actions. Symbolically, CEO is the captain of the ship and has authority to steer in the direction of choice. Corporate governance has several tools to put down the concentration of such dry display by management like compensations, stock option, financial and non-financial rewards etc. Instead of increasing interest by such inducement, monitoring mechanism can be improved and board activities can be restricted, establishing audit committee, managing ownership structure etc.

Ownership structure plays a significant part in corporate governance framework and has noteworthy effect on corporate decision making. Ownership structure can accomplish a significant purpose in aligning interest of managers and owners. Ownership structure can be apparatus to lessen such agency conflict in order to safeguard the property right of firm (Barbosa & Louri, 2002). Presence of large shareholders has power to influence risk taking behavior of the company because they have concentrated voting rights and actively take part in company meetings (Shleifer & Vishny, 1986; Wright, Ferris, Sarin, & Awasthi, 1996), shareholders have benefit to surge up risk level because of their call option and encourage risky investments, confirmation provided by Cummins and Harrington (1988) for insurance companies and by Merton (1977) for guarantee funds. Risk taking by shareholders is reliant at their equity stake and depends on leverage between cost and benefit of such risk taking. If large shareholders have undiversified wealth portfolio their risk taking desire is thinned due to enhanced exposure but large shareholders with diversified portfolio are more disposed to risk taking. This too much risk taking brings great volatility in asset structure which has negative effect on economy eventually (Paligorova, 2010).

There is enough of literature on the subject, and it has been shown that a firm's ownership structure can have a significant impact on its performance (Ezazi, Sadeghisharif, Alipour, & Amjadi, 2011; Khan, Muttakin, & Siddiqui, 2013). Currently, attention is being paid to how different ownership forms affect business performance and if they are consistent across different economies. The legal protections provided to shareholders in a nation have a significant

impact on ownership concentration. Data demonstrates that increased ownership concentration is more common in nations with insufficient legal protection (Durnev & Kim, 2005). Large shareholders are in a better position to effect decision making and impact firm policy (Balla & Rose, 2015). However, the literature still does not fully understand the function of major stockholders particularly role of lone largest shareholder (as their holdings can be linked with benefit and cost, specifically underinvestment cost) (Heyden, Oehmichen, Nichting, & Volberda, 2015; Holderness, 2003; Truong & Heaney, 2007). The features of emerging markets vary from those of developed markets. Researches show that developing markets tend to have high concentration of shareholdings (Dam & Scholtens, 2013), with weak legal protection and regulatory environment, family dominance (Castellaneta & Gottschalg, 2016), varied shareholders profile and autocratic style of leadership (Du, Swaen, Lindgreen, & Sen, 2013). Such varying characteristic makes developing markets an interesting topic to discuss. This study can be a great in understand existing structure prevalent in Pakistani firms and can help in making guidelines for better utilization of companies' resources.

In finance works various studies considered shareholder concentration and its effect on numerous corporate choices but slight work is established in risk taking area. According to Holderness (2003) block holders and institutional stockholders encourage shareholder driven approaches and have significant authority to boost firm performance. Whereas agreeing with Eling and Marek (2014) great magnitude of monitoring, improved salaries and large block holders are inversely related to risk taking.

2. Literature Review

Economic theory supports that sole proprietorship is a form of business in which profits and value of firms is at the peak because single person is performing both roles of management and owner. In instance of developed forms of business; the companies are described by control and ownership separation. Corporate management and corporate governance are two distinct concepts. Management is in the hands of managers (agents) however governance can be done by many other means. Ownership structure can be used to ease the agency conflict in order to safeguard the rights of a firm (Barbosa & Louri, 2002).

Risk taking has always been an important subject in corporate finance; it gets affected by the agency conflict. Owners impact the risk- taking behavior of the firm. Fama and Jensen (1983), established a theory to explain the contracting environment of the organizations. This theory's emphasis was on the decision-making process, the distribution of residual rights, and strategies for reducing agency conflict, which exists because ownership and control are separated. The author proposed two related assumptions concerning decision management. One hypothesis suggested split-up of decision management from the hands of Owners; this idea completely divides decision control mechanism from decision management. Second hypothesis anticipated limiting decision control and decision management in hand of very few agents. The second proposal is one way to reduce friction between decision-makers and owners, and it is supported by a variety of business structures, including small partnerships, proprietorships, and closed corporations that engage in small-scale production and service activities. These all arrangements rely on intense decision making management system. Opposing to this, in complex organizations where the decision system is defused and passed on to specialized people, agency problem can be eased by conferring reward with initiating, applying, ratifying and monitoring decision of other agents.

Diffused ownership in firms is standardized by Berle and Means (1932). Diffuse owners can exercise corporate governance mechanism by imparting their voting rights in meetings and by electing board of directors to control managers and link their interests with the owners. On the other hand, disperse owners cannot directly monitor managers' practices because monitoring cost is very high (Grossman & Hart, 1982). Another way which has gained a lot of popularity in recent world scenario is, to line up interest of both parties by conferring managers with equity shares. In this way, they also become the owners of the firm and while taking decisions they keep focus on the ability of success of that particular decision. Drawback of this remedy is entrenchment-effect because managers may become more conservative with respect to decision-making because now their own undiversified wealth is also at stake. (Martínez & Ramírez, 2011), concluded that because of distinction in ownership and control variability of risk in banks can occur. This can lead to corporate governance complications because often owners fail to exercise control on mangers for the allocation of capital and risk behavior decision

Data from all Colombian banks were gathered in order to analyze the association between ownership structure and risk of Colombian banks and Savings and Housing Corporations (Cavs) from year 1989 to 2009. results stressed that composition of bank`s portfolio and risk taking behavior dependent on the controlling hands of capital. Diffused ownership in Colombian Banks could not exercise pressure on mangers, in such case mangers take those decisions which are in their personal favor and therefore favor low risk portfolio. Outcomes maintained the opinion of concentrated ownership; such type of ownership arrangement decreases agency conflicts and surges the risk. Bank risk taking was also connected to the size of bank and market rivalry, banks having bigger size choose higher risk taking because they follow the philosophy of "too big to fail". Further research is essential to explore this phenomenon.

One of the studies was carried by Boubaker, Mansali, and Rjiba (2014); he conducted research on role of single largest controlling shareholder in developing risk taking attitude. Design of the study measured impact of large controlling shareholder on risk in absence of other block holders. Data of 525 French listed firms for year 2003-2005 revealed that (LCS) has ability to negatively influence risk taking and avoid from risky projects. Reportedly firms show less volatility in returns and performance remains predictable. Sapping of cash-flow is one example of selfish behavior at the prize of minorities. Thereon, presence of MLS (multiple large shareholders) lessened this type of behavior and worked as governance mechanism in taking riskier value maximizing projects during study period. Research can be extended further by adopting similar methodology and new domains in corporate governance linked with large controlling shareholders and multiple large shareholders can be explored.

In the permanency of previous works, Gadhoum and Ayadi (2003) tried to verify the linkage amid ownership structure and variations in risk taking behavior owing to such ownership development. They scrutinized 569 publically traded non-financial firms of Canada from the year of 1989-1991. Three ownership proxies and six competing model of risk were taken to calculate the effect of ownership on corporate risk taking. Research outcomes jagged out very significant features of Canadian non-financial firms, descriptive stats presented that ownership is concentrated in Canadian firms. Application of univariate and multivariate regression and correlation analysis revealed that ownership structure negatively impacts total and systematic risk level of firm and such relation is complicated and nonlinear (quadratic or cubic), risk tendency is high at higher and lower level of managerial ownership. This negative relationship is driven by historical change and voting right held by five largest shareholders. They also projected that diffused firms are more disposed towards risk taking; however concentrated firms are risk opposed in order to safeguard their investments.it can be said that ownership control is a major factor behind risk taking and needs further exploration in future researches.

Gursoy and Aydogan (2002), have done a great work in exploring ownership structure of Turkish non-financial firms with the aim of knowing its effect on firm performance and risk. They took two proxies for ownership structure: ownership mix and ownership concentration. Turkish businesses have a highly concentrated ownership structure; many of them are family-owned and part of larger groups of businesses that are also mostly controlled by families or groups of families. For the years 1992 to 1998, information was gathered from non-financial firms listed on the Istanbul Stock Exchange (ISE). Sample size increased from 106 companies in 1992 to 194 in 1998. The results of the observations suggested that the performance and risk of Turkish enterprises are significantly influenced by both the ownership mix and ownership concentration dimensions of the ownership structure. More concentrated are the firms better they perform. While family owned firms are disposed to toward lesser risk taking which subsequently resulted in low performance. Foreign owned firms display improved performance. Firms owned by government have higher market performance and higher risk but at accounting level they are poor.

In one of the study, Paligorova (2010) examined the causes of corporate risk taking. This paper stretched the research on largest shareholders` enticement in taking risk and also tried to find that largest shareholders in one company, whether have equity stakes in other company or not, and how this deviation of their personal wealth portfolio inspire them to take risk. To check this evidence data from 2003 to 2006 of 13,486 firms across 38 countries were collected. Results demonstrated the argument of the work that there occurs a positive relation among largest shareholders and risk taking, but this remains correct only for owners who have largest

equity stakes in other firms as well. Having shares in other firms ascribed to more diversified position, and higher risk taking is harmless because loss at one end is paid by other. However as equity ownership of family is amplified it has negative impact on corporate risk taking. Countries with improved legal protection of shareholders` right increase risk taking but legal protection of creditors' right diminish risk taking of firms.

Amrita (2011) suggested a model to confirm the causes of ownership structure and later its effect on risk profile of firm when majority voting system is used to endorse the decisions; his effort was a valued accumulation in current literature of ownership and risk. Much of subjective evidences advocated that ownership structure regulate risk taking behavior but none of them measured that how risk decisions form ownership structure, this study is different in this line. The mode suggested that divergence of interest on risk choices help in defining additional ownership structure and multiple large block holders appear because they are in position to influence risk decisions owing to larger voting rights and decisions are not only in control of one large shareholder. Model also suggested that ownership structure is ascribed to firm level characteristics like investment size, industry characteristics and monitoring shareholder's involvement. He concluded that relying on model constraints three ownership structures arises: one single largest shareholder with fringe of minority shareholders, completely dispersed ownership and multiple large block holders (more prevalent one). Ownership structure of multiple large shareholders which arise in order to lessen the agency conflict among one large shareholder and other minority shareholder, desire value enhancing risk projects and positively affect firm`s value. This structure monitoring cost is more than diffused one but less than one largest shareholder structure. This study reflected that all outside investors are alike and only majority voting system was involved. Henceforth it can be promoted by comprising heterogeneity of investors and multiple voting tools.

Mishra (2011) shifted his focus to East Asian businesses and developing nations, looking at the effects of several large shareholders on powerful dominating shareholders and whether this reduces agency conflict between the largest shareholder and other minority shareholders. IN the lack of strong external governance mechanism agency conflicts intensified so much that it negatively influences corporate risk taking (CRT) but MLS can diminish such properties by their voting power and mend risk taking. To verify above stated argument he used data of nine East Asian countries presented in Claessens, Djankov, and Lang (2000), consisted on 1,686 non-financial firms satisfying multiple parameters. Governance role of MSL was quantified by CRT, because in this manner their impact on firm's decision can be measured. As ownership proxies, the voting rights of the five ultimate largest shareholders and the dividend rights of the active greatest shareholder were each employed. Results postulated that SLS negatively affect CRT in edict to preserve their personal benefits and approve conservative investment policy. Presence of MLS verified to be a noteworthy cause of internal governance mechanism, such firm's pretenses higher risk taking profile because agency conflict between SLS and other shareholders were aloof and MLS can divulge value exploiting risky investments by their voting power. Role of MLS is further noticeable in family controlled firms as compare to non-family controlled because in family controlled firms' agency issue is more distinct so presence of MLS lessens such issue. Henceforth, it can be said MLS have strong positive effect on CRT. Study can be advanced by seeing other countries and time series data.

There are multiple researches that have explored connection among ownership concentrations and firm performance. Findings of the study are mixed, some of the researches showing that ownership concentration have positive linkage with the firm performance (Gorton & Schmid, 2000) and some predicting negative association with the firm performance (Demsetz & Villalonga, 2001). Each outcome can be backed by arguments and justifications can be made regarding findings. Management interest plays an important role on firm performance, when management interest is minimum, managers involve themselves in value decreasing activities. In presence of large shareholders, power of minor shareholders to control management gets diluted. Such conduct points to adversely swayed performance; subsequently the free decision-making is also affected (Khan et al., 2013). Instead, when the ownership structure gets diluted, agency problems likely to be minor owing to reduced degree of authority (Jensen & Murphy, 1990); subsequently managers are competent to apply their rational capitals (e.g., knowledge, experience, expertise), to such degree diffused shareholdings can result towards improved firm performance.

Present works concerning ownership are yet to cultivate a tangible model for the impact of ownership on shareholder benefits. Agreeing with Leech and Leahy (1991) the ownership structure primarily outlines the distribution of voting rights and the process among shareholders, which restricts managerial decisions to protect the interests of shareholders (Thomsen & Pedersen, 2000). The power distribution between principals (shareholders) and agents (managers) is regulated by ownership concentration, which is strongly linked to business value. However, evidence suggests that greater ownership concentration strengthens block holdings, which has a negative impact on business value. However, there are still valid concerns about the effects that ownership structure productivity and the sort of business environment have on firm success (Khan et al., 2013).

Concentrated owners can rely on dominating management to act in their best interests while ignoring the needs of minority shareholders. Numerous studies of corporate governance have concentrated on the importance of managers' and shareholders' divergent interests (Fama & Jensen, 1983; Jensen & Meckling, 2019). However, the researchers have focused particularly on the actions taken by large shareholders to impair the interests of small shareholders (Bae, Kang, & Kim, 2002; Bertrand, Mehta, & Mullainathan, 2002).

When times are tough, large owners use the company's assets to pay off their debts, while trailing companies ask their better-performing competitors to "bail them out" (Gedajlovic & Shapiro, 2002) where board of director is represented by major shareholder, guidance tends to be relaxed and smoother for firm. In this case, the minority shareholders suffer losses as a result of the permitted authority to make managerial choices about business transactions, leading to a conflict between the minority shareholders and the manager of the company. By using the resources of the primary company to benefit themselves personally, the leading shareholders can assist other businesses (Djankov, La Porta, Lopez-de-Silanes, & Shleifer, 2008). Second large owners on the list, through actions that do not involve asset allocation but harm minority shareholders, such as minority freeze-outs or delusionary share issuance, large shareholders can expand their stake in the company (Djankov et al., 2008). Third, the controlling director-shareholders might steal money from minority shareholders by receiving non-performance-based compensation packages that are finer than market standards. Moreover, Daily, Dalton, and Cannella Jr (2003) pronounced that the main factors concerning the influence of concentrated ownership on firm performance were not established to be statistically significant.

These findings led to the conclusion that the associated costs can wipe out the benefits of concentrated ownership. Although evidence demonstrates that the impact of ownership structure on company performance varies, this does not imply that ownership concentration is inconsequential in all circumstances (Demsetz & Villalonga, 2001; McConnell & Servaes, 1990; Morck, Shleifer, & Vishny, 1988). It has a significant effect on how much ownership is concentrated. Additionally, a corresponding non-linear relationship between the size of ownership concentration and business profitability was investigated (Morck et al., 1988).

Similar to ownership concentration, it had a beneficial relationship up to a certain point before having a negative impact (Thomsen & Pedersen, 2000). Non-linear connotation (Ahmed, Ahmed, Khan, Pasha, & Rehman, 2012; C. R. Chen & Steiner, 1999; Leech & Leahy, 1991) is frequently demonstrated with substantial stock holdings because of their authoritarian nature. One effect of family dominance and ownership concentration is to emphasize conflicts of interest not only between owners and managers but also between significant shareholders and minorities (S. Chen, 2011; Vafeas & Theodorou, 1998). This receives a stamp when majority shareholders take on management positions or appoint relatives to executive positions (Marrakchi Chtourou, Bedard, & Courteau, 2001). Moreover, family and majority shareholders addition to the board undermines skill, and competence (Khan et al., 2013; Sufian & Zahan, 2013). This has a negative influence not only on the firm performance but also weakens the influence level of minority shareholders and other stakeholders. We can say that protection of vested interest of large shareholders directs to the negative performance (Ahmed et al., 2012; C. R. Chen & Steiner, 1999; Claessens & Yurtoglu, 2013; Fama & Jensen, 1983).

Detail of separation of ownership and control was discussed by Marks (1999). He said that all issues are rooted in phenomena of control and ownership separation. Owners who are

residuals claimants have limited control on the managers and cannot directly monitor their activities; hence such limitation gives chance to management to act like a free horse. They can take any decisions without any fear and this decision making attitude causes severe harms to organization and results in huge cost disadvantages. The researcher pointed that there are various mechanism through which these costs can be alleviated. Firstly such businesses are eliminated by failure, this mechanism is natural process which takes out incompetent mangers from the market and restrain moral hazards and unfavorable selection. Presence of market of corporate control can also help in mitigating such agency cost because market pressurize directors to work in best interest of owner otherwise they would be replaced by takeover bid. Determination of mangers duties and development of governance mechanism can also be proved a helpful tool in eradicating agency issue. Another most adorable tactic for the alignment of interest is financial incentive for managers on other hand shareholders empowerment over management is also a great proposal form some critiques with a view to minimize agency cost On the other side, numerous works has recommended reliable that there is a direct correlation between ownership concentration and business performance (Alfaraih, Alanezi, & Almujamed, 2012; Douma, George, & Kabir, 2006; Gedajlovic & Shapiro, 2002; Kim & Lu, 2011; Ongore & K'OBONYO, 2011; Thomsen & Pedersen, 2000). It can be assumed that owners and managers have shared interests and work together to reduce it (Ujunwa, 2012) dispute inside the agencies. Studies show that when ownership is more spread, the profit margin and net asset growth amount are significantly higher (Alfaraih et al., 2012; Ongore & K'OBONYO, 2011), subsequently centered on nature of control, the discrete block holders have fewer chances of influencing on managerial decision-making. Therefore, the comprehensive study efforts show that diffused ownership occurs far less frequently than expected and has been replaced by concentrated ownership (La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 2000). Consequently, a serious concern is the potential for majority owners to mistreat minority shareholders (La Porta et al., 2000; Lehmann & Weigand, 2000).

Different owners have different goals, ownership structure has an impact on company performance in an environment that is rigid (Douma et al., 2006). Large shareholders may be detrimental to a company's profitability since their objectives are at odds with those of small shareholders, who are vulnerable to exploitation. Due to differing working conditions in various nations and various ownership structures, governance-performance differs (Klein, Shapiro, & Young, 2005). Therefore, different ownership classes have the power to force the management to work for their greatest advantages. Large shareholders' expertise and experience can advance management and organizational skills (Carney & Gedajlovic, 2001). Large shareholders have capacity to get out of crisis periods by using personal assets to avoid credit default and cash flow shortage. A fleeting fall can be dodged by bringing personal cash into usage, reserving a right to acquire future gains (Friedman, Johnson, & Mitton, 2003). Therefore, we can assume that ownership concentration and firm performance are positively correlated. We have the following conclusion based on the aforementioned research:

Ownership of an organization can be in multiple hands or can be concentrated among few. In either scenario ownership structure plays a pivotal role in risk taking and performance of the firm. C. W. Hill and S. A. Snell (1988) concluded that concentrated ownership force managers to take risky decisions and restrains them from usual risk adverse behavior(Anthony Saunders, Elizabeth Strock, & Nickolaos G. Travlos, 1990). In a similar type research found that ownership concentration has a significant relation with risk taking but its direction cannot be verified.

Ability of owners to influence management depends on concentration of ownership. Large owners with bulk of shares have capacity to effect managerial decisions. Large owners can shape management decisions; banks in japan with concentrated ownership take high risk and bring volatile returns (leaven and Levine 2009). In Colombia similar results were drawn that concentrated ownership leads towards excessive risk taking and size of the bank matters a lot (Martínez & Ramírez, 2011). Gursoy and Aydogan (2002) found that concentrated ownership has higher risk taking attitude and large shareholders prefer high risk taking at cost of the creditors.

It is difficult for disperse owners to exert pressure on managers, as a result managers are in full control and authority to make decisions of their choices. Dispersed ownership in Colombian Banks could not exert pressure on mangers, in such case mangers take those

decisions which are in their personal favor and therefore prefer low risk portfolio. Results supported the view of concentrated ownership; such type of ownership structure diminishes agency conflicts and increases the risk. Diffused ownership in firms is standardized by Berle and Means (1932). Diffuse owners can exercise corporate governance mechanism by imparting their voting rights in meetings and by electing board of directors to monitor managers and align their interests with the owners. On the other hand, disperse owners cannot directly monitor managers' practices because monitoring cost is very high (Grossman & Hart, 1982). Another way which has gained a lot of popularity in recent world scenario is, to line up interest of both parties by conferring managers with equity shares.

Diffuse ownership gives very less control to shareholder to monitor managers and to protect their interest, this leads to multiple conflicts between owners and managers (Jensen & Meckling, 2019). This may lead to poor performance of the firm. In light of above literature following hypothesis are developed:

H_0: There is no association between ownership concentration and firm risk taking and performance

H_1: There is an association (positive or negative) between ownership concentration and firm risk taking and performance.

3. Definition of Variables

3.1. Risk

Financial literature (Modigliani & Miller, 1958) gives us enough understanding concerning risk measures ensuing this works we proxy risk by both market measures and balance sheet/accounting measures. Market measures of risk are categorized into three forms:

- Total risk
- Systematic risk/market risk
- Unsystematic/idiosyncratic/firm specific risk

Total risk (TR) is a proxy for the annual standard deviation of daily stock returns with a maximum of 248 days and a minimum of 30 days in a year. The same formula was used by Pathan (2009). P. Nguyen (2011) considered the standard deviation of monthly stock returns in his study.

Systematic risk (SYSR) i.e. beta is calculated by single index market model using PSE all index daily return and daily stock return of the particular company under consideration (Anderson & Fraser, 2000). A market model for reliable, systematic risk measurement. Two index market models have an autocorrelation issue, and there may be a connection between changes in interest rates and market return changes. Although such a relationship between interest rates and market returns can be prevented by orthogonalization (i.e., E (Yit, Xit) = 0) (Chance & Lane, 1980), it also results in some bias. We therefore chose the single-index model because there is no significant difference in results (Anderson & Fraser, 2000). Gadhoum and Ayadi (2003) also used single index market model to measure the systematic and firm specific risk.

Rit = a1 + Bi Rmt + Eiti and t denotes the firm and time separately, R_{it} is equity return of firm and R_{mt} is the return on PSE All market index .□□□is the intercept term,□□ is systematic risk which is linked to drive in market factors; it triggers economic and financial circumstances of specific industry and displays compassion of firm stock in connection to market, we can also say it perception of investors about firm`s stock. Alternative common term recognized for systematic risk is beta. Beta value can also be considered as slope of firm return / market index yield at a specific time period. Beta is the instability or risk of a certain stock comparative to the unpredictability of the whole stock market. Beta is a gauge of how risky a specific stock is, and it is used to appraise its probable rate of return.

However duration □ represents residuals, Idiosyncratic/ firm specific (IDOR) risk is calculated by standard deviation of residuals, constant with several preceding studies (Anderson & Fraser, 2000; Pathan, 2009). Firm explicit risk measures stock instability which is innate in firm`s capital arrangement, asset management, policies and investments.

We integrate earnings volatility by standard deviation of *ROA using the idea of Laeven and Levine (2009). John, Litov, and Yeung (2008), also had a similar approach in their study. Initially we divide EBIT/Total Assets for every one year to acquire ROA, than we compute standard deviation of earnings for every year by taking moving averages.

$$*ROA = \frac{\text{Earnings before interest and tax}}{\text{Total Assets}}$$

Z-score stipulates distance from bankruptcy (Roy, 1952). It is condition when damages are more than earnings and firm is not capable to pay debts (E< -r) E is equity and (r) are profits. The likelihood of insolvency is when -ROA < CAR, here ROA is R/A and CAR is A/E. The mutual of probability of insolvency is Z-score and we used the formula given by Laeven and Levine (2009). It displays that how steady is the firm, high value of Z-score directs more stability and it decide among firms on the base of asset composition and leverage.

$$\text{Z-score} = \frac{\text{ROA} + \text{CAR}}{\text{S.d of } \square\text{ROA}}$$

3.2. Ownership Variables

In ownership concentration (OC) we take two measures of concentration. Percentage of Shares detained by one largest shareholder (TOP_1) it indicates whether shares are concentrated in hands of one shareholder (Shah, Kouser, Aamir, & Hussain, 2012). More comprehensive measure of ownership concentration is taking data for 5 largest shareholders (TOP-5); Percentage of shares held by top five shareholders (P. Nguyen, 2011). Diffused ownership is measured by calculating shares held by general public and individuals (small shareholders). Diffuse ownership gives authority to managers as general public (small shareholders) are unable to monitor the firm activities on regular basis.

3.3. Control Variables

One of the most important variables is size of the firm it is defined as logarithm of total assets and is consistent with former studies (John et al., 2008; Laeven & Levine, 2009). Bigger firms have attained economies of scale and are more diversified. Their operations are extra evident owing to media helpfulness henceforth it encourages managerial actions and investor protection.. ROA expresses profitability (PROF) of firm and it has been used in numerous studies (Kim & Lu, 2011) because profitability of firm is one of important feature which effect choices concerning risk. Poor acting firms are further liable towards diversification to diminish the risk (Campa & Kedia, 2002). Higher risk taking is linked to higher profitability (P. Nguyen, 2011).

$$\text{ROA} = \frac{\text{Earnings before interest and Tax}}{\text{Total Assets}}$$

Tobin's` Q is fundamentally an approximation or growth opportunity available to firm, choices regarding risky investments also dependent at growth chances vacant to firm. According to Velury, Reisch, and O'Reilly (2003) institutional investors wish high profitability firms as compare to high growth firms. This outcome is more confirmed by Hutchinson, Seamer, and Chapple (2015). Wright et al. (1996) verified that institutional owners effect upcoming risk taking of just those firms which have growth prospects, whereas manager at little equity stakes effect positively risk taking of firms having growth possibility but this association is inversed at high level of equity. Laeven and Levine (2009) used following formula to calculate growth opportunities.

$$\text{Tobin`s Q} = \frac{\text{Market value of equity} + \text{book value of debt}}{\text{Book value of assets}}$$

One of significant factor of company`s risk is leverage it also shows tendency of bankruptcy, following the preceding studies (S. Chen, 2011; Paligorova, 2010; Pathan, 2009). We go with the formula of:

$$\text{Leverage} = \frac{\text{BV of total Debt}}{\text{BV of total assets}}$$

Firms with big size have more leverage and less risk level (Gursoy & Aydogan, 2002). Liquidity of a firm also effect firms decision making (Kim & Lu, 2011; Laeven & Levine, 2009). The effect of liquidity on risk in Colombian bank was negative and small in scale (Martínez & Ramírez, 2011). Liquidity (LEQ) situation of firm is calculated by ratio of current assets and current liabilities of firm i.e.

$$\text{Current Ratio} = \frac{\text{Current assets}}{\text{Current liabilities}}$$

4. Research Methodology

Since the primary goal of this study is to examine how ownership concentration affects various risk metrics and firms, it is crucial that we use econometric methodologies. Econometrics is fundamentally application of mathematical statistics on economic data in quest to get numerical result. One of the utmost significant tools of econometrics is regression technique which supports in getting empirical results of economic models, which are made with the aid of mathematical economics (Gujarati, 2003).

On our data set, many regression approaches were used. To determine whether ownership variables contribute to cross-sectional risk fluctuation across time, we design a time-series cross-sectional model. Agreeing to Gujarati (2003) time-series cross-sectional panel data has advantage that it has both time and space dimensions, in such data same cross sectional component (i.e. firm) is studied over the period of time. In literature time-series cross-sectional panel has various different names: Pooled data (pooling of time series and cross sectional observations), longitudinal data, micro panel data, event history analysis etc. In current study context we use panel data term in a generic form. Model presented in Eq. (1) can be calculated by OLS (ordinary least square) and GLS (generalized square) as well. For fixed effects models, OLS is regarded as the best linear unbiased estimate, whereas for random effects models, GLS is the best linear unbiased estimate.

Fixed effect panel regression was applied by Yermack (1996) & Himmelberg, Hubbard, and Palia (1999) in order to address endogeneity concerns. If unobservable characteristic are constant over time for an individual firm, one can use fixed effect model to get consistent results (Petersen, 2008). It is possible to get consistent results in fixed effect, if one has small T series and large cross sections. We also applied fixed effect method to calculate our results, Housman test was used to choose between random effect and fixed effect method. We used cluster standard errors when using FEM and REM because using cluster standard errors solves issue of autocorrelation and Heteroskedascity (Driscoll & Kraay, 1998). To check for endogeneity Durbin Watson Hausman test was applied. Results inferred that our model is not affected by endogeneity problem.

4.1. Empirical Model

Relationship discussed between ownership concentration, Firm Performance and risk taking can be studied with the help of panel data regression technique. We purpose following model in order to evaluate the influence of ownership concentration on risk taking and performance of firm in presence of control variables. Our time-series cross-section model employs the following structure:

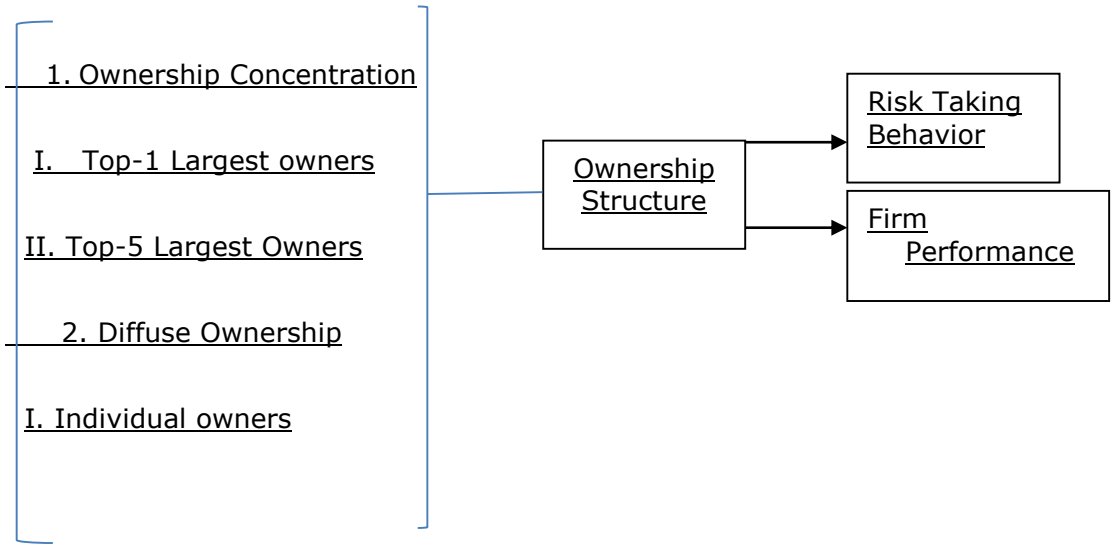
$$RISK_{i,t} = B_1\,OCTop\text{-}1_{i,t} + B_2\,OC\ Top\text{-}5_{i,t} + B_3\,IOS_{i,t} + B_4\,Size_{i,t} + B_5\,LIQ_{i,t} + B_6\,LEV_{i,t} + B_7\,Tobins`Q_{i,t} + B_8 PROF + \varepsilon_{i,t} \quad (1)$$

$$Performance_{i,t} = B_1\,OCTop\text{-}1_{i,t} + B_2\,OCTop\text{-}5_{i,t} + B_3\,IOS_{i,t} + B_4\,Size_{i,t} + B_5\,LIQ_{i,t} + B_6\,LEV_{i,t} + B_7\,Tobins`Q_{i,t} + B_8\,PROF + \varepsilon_{i,t} \quad (2)$$

Where:

- i= 1, 2, 3… (They are cross sectional identifier).
- t= 1, 2, 3… (This is time-series identifier covering period 2008 to 2018).
- RISK= risk is represented by different proxies; (TR), systematic (SYSR) and idiosyncratic risk (IDOR) all three are form of Market risks. Volatility of earnings measured by Standard deviation of ROA and Z-score a composite measure of risk are both balance sheet measures.
- IOS = Individual Ownership; it is percentage of shares held by general public and small individual shareholders.
- OC Top-1= % of shares held by first large shareholder.
- OC Top-5= % of shares held by five large shareholders.
- Tobin`s Q = is basically growth opportunity and calculated by Market value of Equity+Book value of debt/Book value of Assets
- Size = log of total assets is a proxy for firm size
- LIQ = current assets/current Liabilities
- LEV = debt/total assets.
- PROF = Return on Assets.
- $E_{i,t}$ = Error term.

4.2. Theoretical Model



5. Analysis and Discussion

5.1. Ownership concentration and risk taking

Regression analysis is done to calculate the effect of independent variables on the dependent variables. The dependent variables are the different measures of Risk. Due to the skewness of the variable, we use the log of risk variables in our regression analysis. The independent governance variables are concentration of shareholdings by top-1 and top-5 shareholders. VIF values were checked, and all values were less than 2.2, so there is no issue of Multicollinearity.

Table 1 to 5 lists result of regression analysis; firstly, we had measured impact of ownership concentration on five different risk measures. We have used three measures of ownership concentration to study its impact on risk taking. One is TOP_1 i.e. one largest shareholder of the firms, other is top-5 shareholders measured by summing first five largest shareholders of the firm and last is shares held by individual ownership measured by summing up small number of shares held by individuals; individual ownership represents diffused ownership.

Table 1 reports result regarding ownership concentration and total risk from three econometric models, Pooled OLS (Ordinary Least Squares), Fixed Effect and Random Effect regression. Panel data consists of 225 firms of non-financial sectors listed on Pakistan Stock Exchange from the period 2008 to 2018. A formal test to choose between fixed effect and random effect models was developed by Housman (1978), which has a null hypothesis that the fixed effect and random effect estimators do not differ systematically. If the null hypothesis is rejected, then the fixed effect model is the best method to get results.

Table 1: Total Risk and Ownership Concentration

Variables	Pooled OLS Regression		Fixed Effect		Random Effect	
	Model 1	**Model 2**	**Model 1**	**Model 2**	**Model 1**	**Model 2**
constant	1.46 (50.6)***	3.67 (35.2)***	1.24 (11.64)***	3.62 (5.13)***	1.35 (18.45)***	3.65 (15.5)***
Own top 1	-0.862 (-8.33)***	-0.32 (-3.89)***	-0.72 (-2.54)**	-0.57 (-2.14)**	-0.821 (-4.18)***	-0.412 (-2.69)***
TOP-5	0.216 (2.43)**	0.228 (3.28)***	0.601 (2.40)**	0.525 (2.28)**	0.429 (2.37)**	0.273 (2.07)**
Individual ownership	0.215 (5.95)***	-0.115 (-3.83)***	-0.078 (-1.31)	-0.099 (-1.70)*	0.044 (0.90)	-0.099 (-1.31)
Total asset		-0.153 (-24.17)***		-0.148 (-3.15)***		-0.153 (-10.37)***
Debt /asset		0.174 (6.22)***		-0.093 (-0.76)		0.131 (2.15)**
Return on Asset		-1.10 (-10.19)		-0.417 (-2.58)**		-0.613 (-3.86)***
Tobins Q		-0.02 (-4.30)***		-0.0065 (-0.96)		-0.012 (-1.90)*
Current Ratio		-0.049 (-5.54)***		-0.013 (-1.04)		-0.029 (-2.37)**
F-value	56.16***	199.6***	4.06**	5.70***		
Wald-x-statistic					17.81***	210.3***
Adj -R	0.0578	0.436	0.0195	0.303	0.0502	0.421
No of observation	1800	1800	1800	1800	1800	1800
Hausman test			Model 1 (8.40)** fe re		Model 2 (109.6)*** fe re	
Breusch Pagon	45.4***	192.6***				
Breusch Godfrey	790***	451***				
Xttest 3			8454***	5619***		

Fixed effect and random effect estimates are calculated by using clustered robust errors. *** represent significance at 1% level. ** represent significance at 5% level and * represent significance at 10% level. Figure inside the parenthesis represent z and t statistic, while figure above represents coefficient.

Hausman test result show that fixed effect results are appropriate for model 1 and model 2. According to the results top-1 owners negatively impact (total risk) taking and TOP-5 owners positively impact on (total risk) taking. Coefficients for both the ownership measures are significant at 0.05 levels. Plausible explanation for the fact is that some time owners have undiversified wealth portfolio and their stakes are clustered in one organization, so to safe their interests they avoid risky projects and lower down the risk profile of firms. Our findings are concurrent with the research of Paligorova (2010) & Gadhoum and Ayadi (2003). As ownership concentration gets more diversified and number of ownership concentration increases (Top-5), firms tends to take more risk. Diversified owner's influences management to take more risk in order to have more opportunity of earnings. Size of the firm and return on asset has significant negative relationship with total risk. Other control variables also have negative relationship with total risk but relationship of other control variables is insignificant. OLS regression also gives the same type of results and coefficients in OLS and Fixed effect have similar signs for ownership concentration coefficients.

Idiosyncratic risk is firm specific risk and measured by market model, Table 2 highlights the results of effect of ownership concentration on firm-specific risk. According to the Housman results, fixed effect is appropriate for both model 1 and model 2. However, results inferred from all econometric models (OLS, GLS (Random), Fixed effect are similar in nature. Results report that (top-1) ownership concentration is negatively linked with firm risk and TOP-5 (TOP-5) Ownership concentration is positively linked with firm risk, Coefficients of both ownership measures are significant at 0.01significance level.Top-5 owners have a positive relationship with

firm risk because ownership concentration lessens the conflict among managers and owners and restrain them from adopting risk reducing activities like diversification(C. W. L. Hill & S. A. Snell, 1988).Such findings confirms with the findings of Boubaker et al. (2014) who supported the view that single large owner has negative effect on firm risk taking while multiple large owners increase firm`s risk. We can support our finding by the fact that sometimes large owners have undiversified portfolio and they tend to influence managers not to take too much risk. Undiversified portfolio may make them conformist (Paligorova, 2010) and they evade risky projects by hurting benefits of minority shareholders (Gadhoum & Ayadi, 2003). Control variables have negative relation with the firm risk. Increase in size, Leverage, liquidity, Tobin's Q and ROA tends to impact firm risk negatively. Our findings supported the view that larger firms have low idiosyncratic risk due to their ability to diversify away the firm taken specific risk (Paligorova, 2010).

Table 2: Firm Risk and Ownership Concentration

Variables	Pooled OLS Regression		Fixed Effect		Random Effect	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
constant	1.38 (45.51)***	3.95 (37.3)***	1.16 (11.16)***	3.68 (4.88)***	1.27 (16.6)***	3.87 (16.12)***
Own top 1	-0.988 (-9.06)***	-0.369 (-4.4)***	-0.904 (-3.10)***	-0.754 (-2.75)***	-0.97 (-4.67)***	-0.507 (-3.2)***
TOP-5	0.37 (3.93)***	0.36 (5.22)***	0.794 (3.04)***	0.715 (3.0)***	0.621 (3.14)***	0.431 (3.09)***
Individual ownership	0.228 (5.98)***	-0.146 (-4.79)***	-0.128 (-2.13)**	-0.15 (-2.54)**	0.0058 (0.11)	-0.12 (-2.45)**
Total asset		-0.17 (-27.5)***		-0.156 (-3.07)***		-0.174 (-10.9)***
Debt / asset		0.18 (6.43)***		-0.102 (-0.77)		0.133 (2.05)**
Return on Asset		-1.08 (-9.85)***		-0.41 (-2.40)**		-0.604 (-3.60)***
TOBINS Q		-0.023 (-4.74)***		-0.0065 (-0.9)		-0.0133 (-1.85)*
Current Ratio		-0.055 (-6.09)***		-0.015 (-1.25)		-0.032 (-2.79)***
F-value	53.83***	232***	6.04***	6.48***		
Wald-x-statistic					21.83***	240***
Adj -R	0.055	0.473	0.0234	0.335	0.0465	0.457
No of observation	1800	1800	1800	1800	1800	1800
Housman test			Model 1 (7.64)** fe re		Model 2 (119.6)*** fe re	
Breusch Pagon	14.83***	212***				
Breusch Godfrey	848***	492***				
Xttest 3				8456***		

Individual ownership represents diffuse ownership, increase in individual ownership results in decrease of firm risk and total risk. There are multiple reasons for it; increase in individual ownership means more power to managers because it is difficult for individual owners to monitor managers. Managers take decisions of their choice; managers are basically risk averse in nature and prefer projects having low risk. Our results support entrenchment hypothesis; Managers feel easy and comfortable in selecting projects with minimum risk as risky projects may result in loss and can insecure management positions.

Table 3 estimates impact of ownership concentration on systematic risk. Systematic risk is also known as market risk (beta). Result of Housman test show that random effect is appropriate for model 1 and fixed effect is appropriate for model 2. All three econometric models (OLS, fixed effect, Random effect) give similar results; ownership concentration coefficients in all models are statistically significant. Result infers that ownership concentration (top-1) is positively associated with systematic risk and ownership concentration (top-5) is negatively associated with systematic risk. Coefficients of ownership concentration are significant at 0.01 levels in model 1 and model 2. Reasonable explanation for positive coefficient of top-1 ownership is that the largest shareholder as discussed earlier take less firm risk, as a result they are more exposed to market risk and their stocks are more affected by the market factors, market risk is mostly unavoidable. These results are consistent with findings of (García-Marco & Robles-Fernández, 2008; Anthony Saunders, Elizabeth Strock, & Nickolaos G Travlos, 1990).

One of the reason for Top-5 ownership to be negatively associated with systematic risk is that multiple concentration of ownership in a firm take high firm risk as a result market risk gets diluted. All control variables are positively related to systematic risk. Size and systematic risk has positive relation constant with the findings of Martínez and Ramírez (2011); large firms have high systematic risk because of their superior coverage to the market. But they are sufficiently large to face market changes effecting the firm and too big to fail (Martínez & Ramírez, 2011).

Result of market risk (beta) result infer that Individual owners have significant positive relationship with beta risk, obvious reason for that is beta is related to market risk and general public tend to choose those companies which can give higher return than the average market. Individual owners (general public) have to face market risk at every stage; they have less knowledge of the market forces and risk; they tend to invest when market is doing well. In other words, their investment in a particular stock is linked to the overall market return and market news. So they chose companies which are more exposed to market risk. So increase in individual owners result in increase of market risk.

Table 3: Beta Risk and Ownership Concentration

Variables	Pooled OLS Regression		Fixed Effect		Random Effect	
	Model 1	**Model 2**	**Model 1**	**Model 2**	**Model 1**	**Model 2**
constant	2.40 (733.6)***	2.33 (157)***	2.39 (219)***	2.24 (46.5)***	2.40 (399)***	2.32 (87.5)***
Own top 1	0.083 (7.12)***	0.073 (6.29)***	0.110 (3.53)***	0.105 (3.51)***	0.0904 (5.38)***	0.079 (5.01)***
TOP-5	-0.103 (-10.2)***	-0.092 (-9.38)***	-0.108 (-3.41)***	-0.108 (-3.47)***	-0.105 (-6.65)***	-0.099 (-6.43)***
Individual ownership	0.0097 (2.36)**	0.012 (2.79)***	0.017 (2.0)**	0.015 (1.71)*	0.0129 (2.18)**	0.014 (2.77)***
Total asset		0.0038 (4.29)***		0.0081 (2.75)***		0.0041 (2.78)***
Debt / asset		0.0192 (4.82)***		0.038 (3.59)***		0.0267 (3.32)***
Return on Asset		-0.067 (-4.35)***		0.00265 (0.17)		-0.026 (-1.63)
Tobins Q		0.00098 (1.42)		0.0029 (2.78)***		0.00224 (2.19)**
Current Ratio		-0.0018 (-1.42)		0.000603 (0.45)		-0.00077 (-0.60)
F-value	53.32***	31.1***	7.24***	9.45***		
Wald-x-statistic					44.7***	110***
Adj -R	0.055	0.104	0.0514	0.079	0.0558	0.10
No of observation	1800	1800	1800	1800	1800	1800
Hausman test			Model 1 (0.98) fe re		Model 2 (29.07)*** fe re	
Breusch Pagon	0.58	0.92				
Breusch Godfrey	119***	91.1***				
Xttest 3			33086***	3076***		

Table 4 enlists result of ownership concentration effect on earnings volatility of the firm. Proxy used for earning volatility is standard deviation of (return on assets). It is a direct measure of companies earning and its performance. Value of (ROA) tells a lot about a company's performance and its operation. Housman test result report that random effect is suitable for model 1 and fixed effect is suitable for model 2. In model 1 we have significant positive relation between (top-1) ownership and earning volatility, while relation with (top-5) ownership and earning volatility is insignificant negative. In model 2 we control for size, leverage, liquidity, performance and growth.

Result of ownership (Top-1) is significant positive with earning volatility and ownership (Top-5) has significant negative relation with earning volatility. Sign of coefficients are same in random effect and fixed effect. So the conclusion is that top -1 owner permutes risk and top-5 owner discourage risk. Size and ROA has positive relationship which is on comparable line that larger firms have greater firm specific risk. The association between ROA and Tobin`s Q is significantly positive. Rise in growth opportunities also upsurge firm level of risk because firms

having growth prospects embrace risky project in order to get more profits. Wright et al. (1996) also held that firm having growth opportunities has positive relation between risk and low insider ownership.

Table 4: Standard Deviation ROA and Ownership Concentration

Variables	Pooled OLS Regression		Fixed Effect		Random Effect	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
constant	0.58 (28.7)***	0.923 (10.22)***	0.575 (8.16)***	-0.381 (-0.95)	0.581 (11.47)***	0.475 (2.07)**
Own top 1	0.042 (0.59)	0.124 (1.74)*	0.477 (2.33)**	0.424 (2.32)***	0.293 (2.11)**	0.274 (2.14)**
TOP-5	0.045 (0.73)	0.044 (0.74)	-0.27 (-1.61)	-0.261 (-1.78)*	-0.146 (-1.25)	-0.142 (-1.36)
Individual ownership	0.068 (2.69)***	0.0049 (0.19)	0.072 (1.42)	0.063 (1.53)*	0.071 (1.79)*	0.06 (1.59)*
Total asset		-0.035 (-6.48)***		0.050 (2.00)**		-0.0047 (-0.34)
Debt /asset		0.198 (8.14)***		0.216 (3.29)***		0.194 (4.31)***
Return on Asset		0.262 (2.79)***		0.249 (1.70)*		0.217 (1.57)
TOBINS Q		0.0176 (4.19)***		0.0265 (3.06)***		0.027 (3.44)***
Current Ratio		0.0011 (0.14)		-0.002 (-0.24)		-0.00057 (-0.05)
F-value	2.01	22.8***		8.13***		
Wald-x-statistic					4.5	48.12***
Adj -R	0.0022	0.078	0.0005	0.0073	0.0007	0.056
No of observation		1800		1800		
Hausman test			Model 1 (5.16)* fe re		Model 2 (33.02)*** fe re	
Breusch Pagon	46.5***	4.91**				
Breusch Godfrey	780***	739***				
Xttest 3			260000***	210000***		

Individual ownership has a positive relationship with volatility of return; individual ownership stretches power to management, managers usually take less risk firm risk and try to play safe. Mostly firms in hands of manager are affected by market risk. High exposition to market risk results in fluctuation of return on assets. Secondly; most individual owners are short term investors and management keeping their interest in mind take short term risk, which also causes high fluctuation in ROA.

Table 5 enlists result of impact of ownership concentration on Z score. Z-score is the amalgamated measure of risk which gives us insight about solvency of the company, higher Z-score specifies that company has lower solvency risk. Natural logarithm of Z score was taken because distribution was skewed, but we symbolize it by Z-score in whole context for briefness. According to the result of Housman test, random effect results are more suitable for model 1 and fixed effect results are more suitable for model 2. Coefficients of ownership concentration are insignificant in model 1 and model 2; however, signs are same in both models. Ownership concentration (top-1) has negative relation with Z score and (top-5) have positive relation with Z score.

Increase in value of Z score by increase in top-5 means that risk is reduced by increase in ownership of top-5. While increase in ownership of top-1 share holder tend to decrease value of Z score meaning that single large shareholder tends to increase risk taking activity, in order to increase their returns. Size of the firm has significant negative relation with the Z score. While profitability has significant positive relation with Z score, it means profitable firms tend to be more stable and their risk volatility is minimum. Firms with higher profitability ratio are more stable and have less volatility in returns (P. Nguyen, 2011), Individual ownership has insignificant relationship with Z-Score, strategic decisions relating to debt and liquidity position of the firm are taken by the firm board, mostly these types of decisions are related to long term plans; individual ownership usually are not in a position to play significant role regarding it.

Table 5: Z score and Ownership Concentration

Variables	Pooled OLS Regression		Fixed Effect		Random Effect	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
constant	0.86 (32.2)***	0.645 (6.18)***	0.902 (12.4)***	3.97 (4.64)***	0.884 (14.94)***	1.99 (3.03)***
Own top 1	-0.07 (-0.73)	-0.172 (-2.09)**	-0.193 (-0.87)	-0.21 (-1.12)	-0.139 (-0.81)	-0.142 (-0.96)
TOP-5	0.09 (1.09)	-0.0089 (-0.13)	0.107 (0.50)	0.162 (0.95)	0.105 (0.73)	0.076 (0.63)
Individual ownership	-0.153 (-4.54)***	-0.021 (-0.7)	-0.136 (-2.09)**	-0.042 (-0.92)	-0.142 (-2.69)***	-0.074 (-1.53)
Total asset		0.0315 (4.96)		-0.169 (-3.17)***		-0.047 (-1.14)
Debt /asset		-0.348 (-12.39)***		-0.75 (-5.9)***		-0.57 (-5.52)***
Return on Asset		1.244 (11.47)***		0.828 (5.17)***		0.969 (5.51)***
TOBINS Q		-0.041 (-8.44)***		-0.0328 (-3.39)***		-0.038 (-3.90)***
Current Ratio		0.0432 (4.81)***		0.02 (1.51)		0.022 (1.82)*
F-value	0.61		0.39	11.26***		
Wald-x-statistic					0.70	89****
Adj -R	0.0007		0.0002	0.1167	0.0004	0.243
No of observation	1800	1800	1800	1800	1800	1800
Hausman test			Model 1 (0.37) fe re		Model 2 (125)*** fe re	
Breusch Pagon	17.28***	39.4***				
Breusch Godfrey	989***	870***				
Xttest 3						

5.2. Ownership concentration and Firm Performance (ROA)

Table 6 enlists results of impact of ownership concentration on return on assets. Result of Housman test demonstrates that random effect is suitable for model 1 and fixed effect is suitable for model 2. Interestingly in all econometric models (OLS regression, fixed effect, and random effect) coefficients of top-1 and top-5 ownership are insignificant. Relationship of top-1 ownership with (ROA) is positive which means that increase in (top-1) ownership increase firms return on asset.

Table 6: ROA and Ownership Concentration

Variables	Pooled OLS Regression		Fixed Effect		Random Effect	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Constant	0.016 (2.98)***	-0.073 (-3.25)***	0.038 (2.42)**	0.375 (2.93)***	0.0245 (2.25)**	0.024 (0.42)***
Own top 1	0.03 (1.49)	-0.0172 (-0.96)	0.044 (1.06)	0.0084 (0.21)	0.0409 (1.25)	-0.00012 (-0.00)
TOP-5	0.039 (2.24)**	0.011 (0.79)	-0.0206 (-0.52)	0.0037 (0.10)	0.0139 (0.45)	0.0077 (0.34)
Individual ownership	-0.035 (-5.03)***	-0.01 (-1.55)*	-0.034 (-2.97)***	-0.02 (-1.70)*	-0.035 (-3.24)***	-0.018 (-1.92)*
Total asset		0.0081 (5.93)***		-0.017 (-2.07)**		0.0032 (0.88)
Debt/ asset		-0.069 (-11.79)***		-0.13 (-5.78)***		-0.092 (-4.36)
Current Ratio		0.016 (8.36)***		0.0064 (2.22)***		0.0103 (3.14)***
F-value	15.9***	108***	0.56	12.08***		
Wald-x-statistic					4.76*	86.4***
Adj –R	0.0164	0.264	0.0063	0.154	0.0166	0.254
No of observation	1800	1800	1800	1800	1800	1800
Hausman test			Model 1 (2.4) fe re		Model 2 (51.93)*** fe re	
Breusch Pagon	12.88***	22.19***				
Breusch Godfrey	558***	388***				
Xttest 3				280000***		

According to results relation of top-5 ownership with (ROA) is positive, this means that increase in ownership concentration (top-5) will increase the profit of the firm (ROA). Large owners are in better position to influence firm's decision making process, large owners usually invest in projects which yield more return. Due to wide experience of business large owners tend to invest in projects which tend to yield more and have controllable risk. Size of the firm has negative relation with (ROA); however, the change in coefficient is very small. Plausible explanation is that in terms of percentage it is difficult for large firms to have high ROA because amount of assets owned by the large firms are of great amount. Large firms are more stable in their earning, but in terms of percentage of return small firms can earn more profit. Relation of ROA is negative with leverage and positive with current ratio, both relations are statistically significant. Demsetz and Villalonga (2001) found an insignificant relation between ROA and ownership concentration. The study emphasized on that diffuse ownership compensates many problems such as agency problem. Omran, Bolbol, and Fatheldin (2008) gathered data of Arab countries (Egypt, Jordon, Oman and Tunisia) to study impact of ownership concentration on firm performance and found that ownership concentration doesn't seem to have significant effect on firm performance.

Individual ownership has significant negative relationship with ROA; individual owners have less authority to influence management. They are totally dependent on management; managers usually take limited risk, this can result in poor performance of the firm.

5.3. Ownership concentration and Firm performance (TOBINS Q)

Another important measure of performance of firm is TOBINS Q. TOBINS Q is growth opportunities available to the firm. Table 7 reports result of impact of ownership concentration (top-1 top-5) on firm's growth opportunity (Tobin's q). According to the Housman results Random effect is suitable for model 1 and fixed effect is appropriate for model 2. In model 1 coefficient of top-1 is significant and coefficient of TOP-5 (top-5) is insignificant. Top-1 ownership has significant positive relation with TOBINS Q and top-5 has insignificant positive relationship with Tobin's Q in model 1.

Table 7: TOBINS Q and Ownership Concentration

Variables	Pooled OLS Regression		Fixed Effect		Random Effect	
	Model 1	**Model 2**	**Model 1**	**Model 2**	**Model 1**	**Model 2**
constant	0.76 (6.84)***	1.23 (2.44)**	1.26 (2.59)**	-8.18 (-3.19)***	0.908 (4.02)***	-0.57 (-0.43)
Own top 1	1.39 (3.46)***	1.36 (3.42)***	1.91 (1.62)	1.56 (1.36)	1.66 (2.28)**	1.35 (1.92)*
TOP-5	0.794 (2.29)**	0.606 (1.79)*	-0.693 (-0.53)	-0.564 (-0.45)	0.282 (0.36)	0.321 (0.45)
Individual ownership	-0.36 (-2.60)***	-0.36 (-2.39)**	-0.027 (-0.11)	-0.051 (-0.17)	-0.26 (-1.34)	-0.157 (-0.71)
Total asset		-0.04 (-1.30)		0.572 (3.67)***		0.083 (1.03)
Debt /asset		0.120 (0.88)		0.976 (1.65)		0.268 (1.04)
Current Ratio		-0.052 (-1.20)		-0.066 (-0.68)		-0.047 (-0.65)
F-value			1.44	4.88***		
Wald-x-statistic					15.74***	27.74***
Adj –R	0.0397	0.0987	0.0263	0.018	0.0397	0.0886
No of observation	1800	1800	1800	1800	1800	1800
Hausman test			Model 1 (3.33) fe re		Model 2 (50.2)*** fe re	
Breusch Pagon	84.43***	171***				
Breusch Godfrey	535***	492***				
Xttest 3				2900000***		

In model 2 coefficients of ownership concentration (top-1 top-5) is insignificant. Relationship of top-1 with TOBINS Q is positive and of top-5 is negative with Tobin's Q in model2. Market performance is not always related to balance sheet measures, market value is affected by multiple factors, some related to internal decision taken by the firm like dividend payout option and distribution of profit among the shareholders. Result show that top-1 shareholder has a positive relation with the Tobin's Q, top-1 owner had a negative relation with firm risk and total risk, while positive relation with the beta risk; this give us an insight that firms which are

taking excessive market risk and show extra courage in comparison to other firms perform better in term of market performance. Firms taking high market risk tend to perform better on market accounting performance measures. Simply we can say that diversification of firm risk helps firm to take advantage of market premium and results in better performance. Top-5 owners have negative relation with Tobin's Q, increase in shares of large shareholders tend to create confusion among the management and management is confused regarding taking orders and making timely market decisions, as it is not possible to take command from single owner, this have a negative impact on firms' market performance. Top 5 owners have positive relation with total and firm risk, while negative relation with market risk.

Lower market risk taking has a negative effect on performance since market risk is directly related to a firm's market performance. Tobin's Q and firm size have a positive correlation; large firms are in a better position to earn more money and have greater room for expansion. Tobin's Q is a popular performance metric; many scholars contend that it is a superior performance metric since it incorporates market measures. Claessens and Djankov (1999) found a link between ownership concentration and company performance in Czech Republic businesses, although they claim that the large privatization of these businesses was a key factor in these results (T. Nguyen, Locke, & Reddy, 2015). In context of Singapore found a positive relation between ownership concentration and firm performance arguing that concentrated ownership tends to resolve agency problem and makes concentrated owners to protect their interest. La Porta et al. (2000) also found a positive relationship among ownership concentration and performance.

Individual ownership has insignificant negative relation with market performance of the firm. Diffuse ownership imparts power to management; who are more interested in safeguarding their personal benefit. Taking calculating risk and avoiding value growth opportunities become their habit; firms have to pay its cost in terms of poor performance.

6. Conclusion

The ownership concentration is deeply influenced by the legal protection framework available to shareholders in a country; data reveals that countries with weak legal protection tend to have higher shareholders concentration (Durnev & Kim, 2005). In Pakistan data determines that concentration of ownership is high and dominant shareholders are families, foreign companies and financial institutions. According to the results top-1 owners negatively impact (total risk and firm risk) taking and TOP-5 owners positively impact on (total risk and firm risk) taking .Our findings are concurrent with the research of Paligorova (2010) & Gadhoum and Ayadi (2003). As ownership concentration gets more diversified and number of ownership concentration increases (Top-5), firms tends to take more risk. If large shareholders have undiversified wealth portfolio their risk taking desire is thinned due to enhanced exposure but large shareholders with diversified portfolio are more disposed to risk taking. This too much risk taking brings great volatility in asset structure.

Beta risk is positively associated with top-1 owners and negatively associated with top-5 owners. Top-1 owners take less firm risk as a result they are more exposed to market risk; however top-5 owner's market risk gets diluted due to high firm risk taking. TOP-1 owners and Top-5 owners have an insignificant positive relationship with ROA; While Top-1 owners have significant positive relationship with Tobin's q and insignificant negative relationship with Top-5 owners. Large shareholders have ability to get out of crisis periods by using personal assets to avoid credit default and cash flow shortage. A fleeting fall can be dodged by bringing personal cash into usage, reserving a right to acquire future gains. Moreover, major shareholders can evolve managerial and organizational abilities by using their past experiences and knowledge resulting in positive outcomes.

Individual ownership represents diffuse ownership, increase in individual ownership results in decrease of firm risk, total risk and increase of market risk; diffuse ownership imparts power to managers because disperse owners cannot directly monitor managers' practices because monitoring cost is very high. In such case mangers take those decisions which are in their personal favor and therefore favor low risk portfolio. Individual ownership has significant negative relationship with ROA and Tobin's Q; individual owners are not in a favorable position to influence management. They are totally dependent on management; managers take limited

risk, multiple conflicts between management and diffuse shareholders ultimately results in poor performance of the firm.

Results postulated that Single large shareholder negatively affect corporate risk taking in act to preserve their personal benefits and support conservative investment policy. Presence of Multiple large shareholders verified to be a noteworthy cause of internal governance mechanism, such firms charades higher risk taking profile because agency conflict between SLS and other shareholders were unfriendly and multiple large shareholders can enforce value exploiting risky investments by their voting power. So conflict of interest in developing countries like Pakistan is not restricted only to majority and minority shareholders but a battle between single large shareholder and multiple large shareholders is also intense. Weak legal protection also hampers small shareholders because legal battles are often difficult and time consuming resulting in favor of large shareholders.

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