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Keywords

Risk-return paradox; Corporate governance; Reference point; Aspiration level; Firm-risk and -return measures.

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Ranjan Dasgupta[1]

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***JEL classification**:* F65; G02; G31

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1. Introduction:

Traditional finance theory posits a risk-return trade-off wherein higher risk would only be undertaken for higher expected return, thereby requiring a positive risk-return association (Ghysels et al. 2005; Chari et al. 2019). However, starting with Bowman (1980), plentiful empirical research in finance and strategic management reports a negative risk-return association termed as 'Bowman's *paradox*' (see the review by Andersen et al., 2007). Prior research emphasises '*troubled*' firm context (Bowman 1982; Kliger and Tsur 2011; Dasgupta 2017; DasGupta and Pathak 2018; DasGupta and Singh, 2021) and '*quality management*' perspective (Bowman 1980; Wiemann and Mellewigt 1998) as reasons for such a negative risk-return association.

In the former case, a low performing firm[2] would take higher risk to improve its own performance, however due to lower operating performance that in turn might lead the firm to a negative risk-return association. On the contrary, a firm with '*quality management*' could achieve higher performance with low risk-taking by using its *organizational hierarchical structure and decision-making processes* (Wiemann and Mellewigt 1998); *market power* (Cool et al. 1989); *firm-size* (Wiemann and Mellewigt 1998); and *diversification pattern* (Wiemann and Mellewigt 1998) most efficiently. So, a negative risk-return association could also take place for a high performing firm.[1] To the best of my knowledge, no earlier study has investigated this phenomenon and the probable influence arising from the existing corporate governance mechanisms.

However, generally firms with '*quality management*' would be less willing to take additional risk to improve its expected return. Thus, when a high performing[1] firm undertakes higher risk, it would be a risk that generates higher return. This implies a probable positive association in risk-return for this kind of firms.[3]

Accordingly, the study objectives here are three-fold. *Firstly*, the study wants to examine whether a firm's [both poor and superior] negative risk-return association would arise from all individual corporate governance mechanisms undertaken here. On the contrary, the study will also investigate whether only *board size* and *executive directors' remuneration* might have an impact on high performing firm's conventional positive risk-return relationship. Chari et al. (2019) earlier present evidence that risk-return '*paradox*' is aggravated by agency problems that contribute to CEO career concerns (Dewatripont et al. 1999), and could be mitigated (but not reversed) by various governance mechanisms (such as large block owners, market monitoring for corporate control, vigilant board, institutional owners and CEO incentive alignment). The study is different from Chari et al. (2019) in three contexts. First of all, the study examines the role of individual corporate governance mechanisms in attenuating risk-return paradox for both low and high performing firms unlike Chari et al. (2019) who undertake different composite measures of corporate governance for all firms at a time. In addition, they don't find any significant impact of individual corporate governance mechanisms on firm's risk-return association. However, the study results are completely different in this regard. Secondly, here risk and return measures are calculated after adjusting for firm's own historical aspiration and its

[2] A low performing firm is one which performs below than the cross-sectional median value i.e. the *reference point* [see *strategic reference point theory* (Feigenbaum et al. 1996)] of all study firms undertaken here. Reversely, a high performing firm performs above the *reference point*.

[3] These basic propositions help the study to formulate its first main *hypothesis* as depicted in the *Data and Methodology* section.

social aspiration in terms to industry peers. This implies that both firm's own heterogeneity and industry heterogeneity have been accounted for unlike Chari et al.'s (2019) direct measure of risk and return computed from ROA. Lastly, Chari et al.'s (2019) paper is based on USA firms whereas the study uses Indian firms i.e. in an emerging market context with distinctive variability in regard to investor protection rights and risk-orientation in national culture. Accordingly, the study can argue that its results will portray different theoretical underpinnings for the concerned literature. Prior research also reports that multiple mechanisms operate together either as *substitutes* (high level of one mechanism rules out the need for other mechanisms) or *complements* (high level of one mechanism is more effective in presence of other such mechanisms) (Misangyi and Acharya 2014). However, Bhagat and Bolton (2008) criticize a total measurement as a good proxy for overall sound corporate governance because an index requires that each of the constituents would be weighted and till date an appropriate system of such weight is unresolved in empirical literature. Accordingly, they suggest that a single mechanism of firm's corporate governance could be even more suitable proxy of strong corporate governance presence than a general index. Therefore, the study have used other (independent from Chari et al. 2019) corporate governance mechanisms distinctively, and probably yet to be explored in literature to examine their standalone impact on influencing the Bowman's '*paradox*' more specifically.

Prior research also explains risk-return '*paradox*' resulting from value-reducing risk-taking arising from poor managerial decision-making due to lower ability (i.e. lack of '*quality management*') or different risk-preferences (Andersen et al., 2007). Accordingly, the study builds its *second objective* based on *prospect theory*'s (Kahneman and Tversky 1979) observation that decision-makers might frame the situational context in relation to a *reference point* i.e. if such context is framed as a loss in relation to the *reference point*, managers would tend to be more risk-seeking than when the same situation is framed as a gain. To capture this effect, the study divides all firms based on cross-sectional median value of returns i.e. the *reference point* (in line with *strategic reference point theory* of Feigenbaum et al. 1996), firms above which (i.e. above-median or high performing firms) would be risk-averse, and on the contrary, below-median firms (i.e. low performing firms) would be risk-seeking. Presumably, the study expects a negative risk-return association for low performing firms and a positive one for high performing firms. However, for high performing firms with '*quality management*' and amidst distinctive influential corporate governance mechanisms, low risk – high return situations could also entail a Bowman's '*paradox*'.

The study's *third objective* is grounded on *behavioural theory* (Cyert and March 1963), as firm-managers might base risk-estimations on performance comparisons with a referent aspiration level of performance. When firm-performance is below their aspiration level, firms take more risk in searching for probable solutions to mitigate the gap than when performance exceeds the aspiration level. Here, the study computes both firm's own *historical performance* and its *social performance* (Massini et al. 2005) based performance-aspiration gap for short-term (1 year) and long-term (5 years). The study does this to find whether there is any discrepancy in its main results due to this longitudinal computational difference (see Ruefli 1990; and Henkel 2000).[4] Presumably,

[4] Ruefli (1990) earlier reports different results in relation to firm's risk-return association with shorter and longer time-periods. However, Henkel (2000) criticises stating that it might be possible that the variance of some firms' returns is low over the long-term and high over the short-term, and vice versa for other firms.

for firms whose performance is below their aspiration level (i.e. low performing firms), the study expects a negative risk-return association whereas high performing firms with a positive performance-aspiration gap would probably show a positive risk-return association. The study's social performance-aspiration gap measure would also capture the weak decision-making abilities of managers who would pursue higher risk strategies with lower returns (see Anderson et al. 2007).

Empirical literature also propagates the overall role of corporate governance reforms on firm's risk-taking by the wealth effect of investments channel and private consumption of the resources channel (John et al., 2008). The former channel positively impacts firm's value-enhancing risk-taking amidst a higher level of wealth effect from investment, whereas later develops a negative influence on firm's such behaviour in presence of higher level of private benefit. Thereby, an improvement in corporate governance reforms could therefore increase the utility from the wealth effect from investment and simultaneously decrease the utility from private benefits (Lu and Wang 2018). This in turn could encourage higher value-enhancing risk-taking. Prominent scholars also observe that weak corporate governance mechanisms in board practices and executive compensation policy would have encouraged excessive risk-taking by a firm (Erkens et al. 2009). On the contrary, many studies also report evidences of negative association between such reforms and firm's risk-taking behaviour (Cohen and Dey 2013). Accordingly, here the study tests its univariate and multivariate analyses pre-2013 and post-2013 under robustness tests to capture the impact of stricter corporate governance regime (as promulgated in 2013 through *2013 Companies Act*) on Bowman's '*paradox*' of Indian firms.

Overall, the study contributes to the existing empirical literature in three ways. *Firstly*, the study results report the significant influential role that *board size* and *women directors' presence* play in both high and low performing firms' '*paradoxical*' risk-return association. More specifically, we find that small *board size* and lower *women directors'* presence is causing the '*paradoxical*' risk-return association for low performing firms, however, large *board size* and higher *women directors'* presence could create a negative risk-return association for high performing firms. These results imply agency problems (Jensen 1993; Chari et al. 2019) and problemistic search behaviours (Gupta 2017; DasGupta and Pathak 2018) for low performing firms. On the contrary, for high performing firms, the study's observation is that higher women dominance in boards (Adams and Funk 2012) and large board size (contradicting empirical literature [see e.g. Sah and Stiglitz 1986; 1991; Cheng 2008; etc.]) are actually creating a risk-seeking behavior and thereby causing value-destruction (Andersen et al. 2007; and Chari et al. 2019) for these firms. Lack of quality management (Wiemann and Mellewigt 1998) is also evident in these firms. On the contrary, *board meetings*, *busy board* and *board tenure* develops Bowman's '*paradox*' in risk-return association for high performing firms only. These results are in line with Fich and Shivdasani, (2006); Falato et al. (2014); etc. and reiterate that busy directors are associated with higher risk-taking in high performing firms which might be due to less effective monitoring or implies value-reducing risk-taking (Andersen et al. 2007; and Chari et al. 2019). The study results also contradict with the '*reputation hypothesis*' (Chen 2015) that higher *board tenure* mitigates the career concerns for board members with enhanced reputation which in turn could generate higher returns at lower level of firm-risk. It rather finds that higher *board tenure* is

However, it appears plausible that this is an exception, and that the majority of firms show a similar degree of volatility over both the long- and short-terms.

impacting firm performance negatively whereas it has a positive influence on firm-risk. This also might depict a value-reducing risk-taking by these firm-managers (Andersen et al. 2007; and Chari et al. 2019) or complacency due to no career concerns. In addition, the study results support Jensen (1993) that in case of high performing firms which might not performing well higher *board meetings* is actually for firm's problemistic risk-taking and not resulting in superior firm performance (see Lipton and Lorsch 1992; and Ntim and Oser 2011). It is also intriguing to report that *EDR* only has a positive mediating effect on high performing firms' negative risk-return association. This implies that managerial compensation driven firm performance (Jensen and Meckling 1976) is evident in all Indian firms (in line with Akbar et al. 2017). So, overall, the study observes strong corporate governance driven quality management perspective in Indian firms which influence high performing firm's '*paradoxical*' (low risk – high return) risk-return association. However, the '*troubled firm*' context of Bowman's '*paradox*' is not fully evident en-route through all individual corporate governance mechanisms.

The study's *second* contribution is that along with the known '*paradoxical*' risk-return association of low performing firms (*strategic reference point* based), firms short-of historical or social aspiration levels also show a negative risk-return association. These results are exactly in line with the theoretical underpinnings of *strategic reference point* (Fiegenbaum et al. 1996) and *behavioural theory* (Cyert and March 1963). Conversely, firms which are high performing in this regard display a conventional positive risk-return association. These results are true both for short- and long-term aspiration levels, and across my return measures and market cycles.

Lastly, all return measures here i.e. ROA and ROE (post-tax); EBITDA ratio (pre-tax) and cash ratio (liquidity) under main and robustness tests results report similar results. Therefore, it can be said that Bowman's '*paradox*' is not contingent on the return measures used, rather in line under different market cycles, corporate governance regimes and strategic orientations for firms. In addition, it validates this study's claim that risk and return measures computation here have addressed the weaknesses as being reported in earlier studies (Albrechtet al. 2004; Brick et al. 2015; Almamy et al. 2016; Dasgupta 2017; DasGupta and Pathak 2018; etc.).

The remaining portion of this paper is organized as follows - next section deals with the relevant literature and hypotheses developed, section 3 provides data and methodology, section 4 presents the results and section 5 concludes the discussion, followed by references.

2. Literature review and hypotheses developed:

2.1. *Reference point* theoretical overview:

The possible logical explanations of Bowman's risk-return '*paradox*' being promulgated so far can be categorized into - those developed on *prospect* and *behavioural theory* findings (Cyert and March 1963; Bromiley 1991; Dasgupta 2017; Gupta 2017; DasGupta and Pathak 2018; DasGupta and Singh, 2021); *strategic and organizational factors* (Bowman 1980; Cool et al. 1989; Wiemann and Mellewigt 1998) and *empirical model misspecifications* (Bromiley 1991; Henkel 2000).

The *prospect theory* (Kahneman and Tversky 1979) postulates a target (i.e. reference) return level above which a firm would be risk-averse, but is risk-seeking below this point

(see Bowman 1982; Kliger and Tsur 2011; Dasgupta 2017; Gupta 2017; DasGupta and Pathak 2018; DasGupta and Singh, 2021). This induces low performing firms (i.e. firms below reference point) to take higher risk to improve their performance, however due to lower operating performance that in turn leads them *ex post* to a negative risk-return association. However, a high performing firm would be less willing to take additional risk in order to improve its expected return. Thus, when a high performing firm does assume additional risk, it would be a risk that generates higher returns. This implies a positive risk-return association for this kind of firms.[2]

Accordingly, this study classifies a firm 'above' ('below') group if its pooled average return over the sample period is higher (lower) than the reference point (i.e. cross-sectional median value). The study also uses similar process for bull and bear sub-periods study undertaken here.[5] Therefore, in accordance with Bowman's (1980) '*paradox*' (for low performing firms) and classical *positive* (for high performing firms) risk-return association, the study would test the following research hypothesis:

Hypothesis 1: There exists a negative risk-return association for firms below reference point (i.e. cross-sectional median returns) (i.e. for low performing firms). On the contrary, there exists a positive risk-return association for firms above such reference point (i.e. for high performing firms). These associations are static across market cycles and return measures.

2.2. *Aspiration level* theoretical overview:

Firm's risk-taking is a strategic behaviour and performance-aspiration gap guides this firm-behaviour (Cyert and March 1963; Fiegenbaum et al. 1996). Accordingly, most early researchers use aspiration level to explain risky choices of firms (Bromiley 1991). When firm-performance is below its aspiration level, firms would take more risks in searching for solutions to mitigate the gap than when performance exceeds firm aspiration. Here, the study computes both firm's own *historical performance* and its *social performance* (Massini et al. 2005) based performance-aspiration gap for short-term (1 year) and long-term (5 years). This would incorporate the longitudinal impact on measures used if any (see Ruefli 1990; and Henkel 2000).[3] For firms whose performance is below their aspiration level (low performing firms), the study expects a negative risk-return association whereas high performing firms with a positive performance-aspiration gap would probably show a positive risk-return association. Therefore, the study would test the following research hypothesis:

Hypothesis 2: There exists a negative risk-return association for firms with performance below their aspiration level (i.e. negative performance-aspiration gap) (i.e. for low performing firms). On the contrary, there exists a positive risk-return association for firms with performance above their aspiration level (i.e. for high performing firms). These associations are static across market cycles and return measures. [6]

[5] The *bull* and *bear* sub-periods are classified by comparing annual NIFTY-50 Index returns with the risk-free rate. The study considers average annualized 91-day T-Bill yields as proxy for risk-free rate during the corresponding year throughout the study period. Accordingly, only the years 2008-09, 2011-12, 2012-13 and 2015-16 are found to be bear years within its overall study period.

[6] The study calculates both short-term (1 year) and long-term (5 years) performance-aspiration gap based on firm-adjusted [firm's own historical performance] and industry-adjusted [firm's social performance] aspiration level here for overall study period on a rolling basis. This would capture the static nature of such association provided the results are on similar lines (see Henkel 2000).

2.3. *Corporate governance* mediating effect:

It would be a common perception that a large firm-board with diverse experience, knowledge and resource possessions would probably have more meticulous learning and decision-making processes, thereby resulting in improved firm-performance. Theoretical models of Sah and Stiglitz (1986; 1991) also observe that firm-performance would be less variable when it has a large board. This is due to delay in reaching consensus for improbable problems of communication and coordination [see *agency theory* of Jensen (1993)] which might result in less risk-taking practices (Cheng 2008). Thereby, the study presumes that firms with large board might cause a negative risk-return (low risk – high return) association. On the other hand, Yermack (1996) argues that firms with smaller boards have better firm-performance in comparison to firms with larger boards. He also reports that small boards would be more likely to endorse riskier R&D-intensive investment projects that in turn would increase overall firm-risk. Thereby, the study presumes that firms with small *board size* would undertake high risk and accordingly would generate superior operating performance. Therefore, the study would test the following research hypothesis:

Hypothesis 3.1: Small board size might have a positive mediating effect on firms' conventional positive risk-return association. On the contrary, large board might positively mediate firms' negative risk-return association. These associations are static across market cycles, return measures and changing corporate governance regimes.[7]

It would also be pertinent to consider that in case of emerging economies like India, the advisory and resource catering role of firm's board members (see resource dependency theory [Pfeffer 1972]) is more critical than the monitoring role. Thus, independent board members as a result of their resource dependence role would help firms in pursuing growth rather than constraining firms from risk-taking (Singh and Delios 2017). However, according to the *reputation hypothesis*, non-executive directors would support investments in low-risk projects which would help a firm in avoiding losses and thereby protect the firm-image and their reputation (Pathan 2009). There are also plenty of empirical evidences supporting a negative relationship between presence of higher independent directors on firm-board and its risk-taking (Brick and Chidambaran 2008). Empirical literature (Jensen and Meckling 1976; Singh and Delios 2017) also reports that a high percentage of outside directors on firm-board would have a positive impact on firm-performance. In this context, Jackling and Johl (2009) find that *board independence* has a positive influence on firm-performance in India. Thereby, the study presumes that firms with high percentage of independent directors in their boards would undertake low risk, but could still generate superior operating performance. On the contrary, boards with lower percentage of independent directors could generate lower returns at higher risk

[7] Along with bull and bear sub-periods study, the study here also undertakes a pre-2013 and post-2013 sub-periods (a comparable 3 years period) study with its main analyses under robustness tests to capture deviations (if any) in my main results. This is because in 2013 a stricter corporate governance regime is introduced by the GOI in the form of *The Companies Act, 2013 inter alia* contains stricter provisions relating to board constitution, board processes, board meetings, independent directors, general meetings, related party transactions, audit committees, disclosure requirements in financial statements, etc. The study presumes that due to these stricter provisions post-2013 results might indicate more robust differential causal influence on especially erstwhile low performing firms' negative risk-return association, if any. This is because their corporate governance mechanisms have had to be strengthened in line with new provisions.

level (Chari et al. 2019). Therefore, the study would test the following research hypothesis:

Hypothesis 3.2: High and low board independence respectively might have a positive mediating effect on high and low performing firms' negative risk-return association. On the contrary, board independence has no role to play in firms' conventional positive risk-return association. These associations are static across market cycles, return measures and changing corporate governance regimes. [6]

Most of the empirical studies document positive impact of women directors on firm-performance (Erhardt et al. 2003; García-Meca et al. 2015), however only in developed market contexts. Also, Jhunjhunwala and Mishra (2012) report no link between gender diversity in Indian boards and firm-performance. On the contrary, Adams and Funk (2012) provide evidence that woman directors are induced to make riskier decisions than their male peers and that these decisions could lower profitability. These effects might be significant when women directors face more obstacles than men peers in making decisions in the firms like that in prevalent social-cultural contexts in India. Thereby, the study presumes that low performing firms[1] with high percentage of women directors might display a negative risk-return (high risk – low return) association. On the contrary, many studies argue that in profitable firms, women on firm-boards are induced to exercise excessive monitoring, thereby following less riskier decisions that in turn might decrease its relative performance and subsequent shareholder value (Adams and Ferreira 2009; Ahern and Dittmar 2012). However, Loukil and Yousfi (2016) observe that women directors' presence in firm-boards enhance performance at low level of risk-taking. Thereby, the study presumes that high performing firms with high percentage of women directors in their boards would undertake low risk, but could still generate superior operating performance. Therefore, the study would test the following research hypothesis:

Hypothesis 3.3: Higher women directors' presence might have a positive mediating effect on firms' negative risk-return association for both low and high performing firms. On the contrary, it also might have positive mediating effect on high performing firms' conventional positive risk-return association. These associations are static across market cycles, return measures and changing corporate governance regimes. [6]

Frequency of *board meetings* is regarded to be another important way to improve the effectiveness of the board (Adams and Ferriera 2009) through effective monitoring and intensity of board activities (see resource dependency theory [Pfeffer 1972]). Since meetings provide members of the board with the chance to come together, and to discuss and exchange ideas on how they incline to monitor managers and firm strategy, the study can argue that higher frequency of meetings would put optimum control over manager's activities. Lipton and Lorsch (1992) suggest that more frequent *board meetings* generate higher firm-performance. However, Johl (2006) finds that there is a negative relationship between frequency of *board meetings* and entrepreneurial activities such as risk-taking in firms. On the contrary, Jensen (1993) suggests that in such cases firm-boards would be relatively inactive and proof of higher board activity is likely to symbolize a response to poor performance i.e. problemistic search (risk-taking) behaviours. Bhagat et al. (2015) emphasize the number of risk committee meetings as the driver of market performance which implies strong risk governance or balanced risk-taking by firms. Thereby, the study presume**s** that high performing (see footnote 1) firms with high *board meetings* would undertake low risk, but could still generate superior operating performance. On the

contrary, high *board meetings* could also due to below-average past performance which initiate higher risk-taking by low performing firms. Therefore, **the study** would test the following research hypothesis:

Hypothesis 3.4: Higher board meetings might have a positive mediating effect on firms' negative risk-return association for both low and high performing firms. On the contrary, board meetings would have no role to play in firms' conventional positive risk-return association. These associations are static across market cycles, return measures and changing corporate governance regimes. [6]

Singh and Delios (2017) report that firms in emerging markets like India structure their boards in consideration of the resource dependence and advisory role of the board rather than just the monitoring role of it. Accordingly, firm-directors with multiple outside appointments, as a result of being more networked, could generate benefits by assisting to bring in required resources, suppliers and customers to a company (see resource dependency hypothesis [Pfeffer 1972]; and Booth and Deli 1996). Ferris et al. (2003) also observe that directors are more likely to secure additional board seats when their firm performs well (i.e. in line with *quality hypothesis* [Fama and Jensen 1983]). Sarkar (2009) in Indian context supports both '*resource dependency hypothesis*' and '*quality hypothesis*', however finds that multiple directorships by executive directors are negatively related to firm-performance. Thereby, the study presume**s** that for high performing firms (see footnote 1), multiple directorships of board members could enhance firm-performance at lower level of risk. On the contrary, many empirical studies find that busy directors are linked with less effective monitoring or detrimental to it (Fich and Shivdasani 2006; Falato et al. 2014). Less effective monitoring could initiate high firm-risk and thereby would make firms vulnerable to value-reducing risk-taking (Andersen et al. 2007; and Chari et al. 2019). Thereby, the study presume**s** that low performing firms with *busy board* would undertake high risk, but could only generate below-average (than their peers) or lower operating performance. Therefore, the study would test the following research hypothesis:

Hypothesis 3.5: Busy board might have a positive mediating effect on firms' negative risk-return association for both low and high performing firms. On the contrary, board busyness has no role to play in firms' conventional positive risk-return association. These associations are static across market cycles, return measures and changing corporate governance regimes. [6]

Anderson et al. (2004) observe that effective monitoring being potentially an acquired skill, boards with higher tenure provide more vigilant monitoring. However, as *board tenure* increases, managers might be better able to influence director's opinion, thereby implying director tenure exhibits an opposite relation to oversight firm-risk. Also, as higher *board tenure* mitigates the career concerns for board members with enhanced reputation (Chen 2015), this could further generate higher returns at lower level of firm-risk. The study presume**s** that this might be the case of high performing firms (see footnote 1). On the contrary, lower *board tenure* might create a potential for moral pressure or hazard, whereby directors can take actions that would generate lower returns and higher risk for shareholders, while obtaining favourable career outcomes for them.[8] Thereby, the

[8] Agency theoretic work on career concerns (Chen 2015) reports that career concerns create incentives for firm managers to use investment decisions to enhance their reputation by manipulating the labour market's assessment of their ability. This further results in value-reducing risk-taking.

study presume**s** that firms with shorter *board tenure* would undertake high risk, but could only generate below-average (than their peers) or lower operating performance. Therefore, the study would test the following research hypothesis:

Hypothesis 3.6: Higher and lower board tenure respectively might have a positive mediating effect on high and low performing firms' negative risk-return association. On the contrary, board tenure has no role to play in firms' conventional positive risk-return association. These associations are static across market cycles, return measures and changing corporate governance regimes. [6]

Following Adams and Mehran (2003) and Brick et al. (2006), the study presume**s** that executive directors' compensations are related to the difficult task of monitoring the firm. It also displays the skills and efforts carried out by the executive directors over discussing and establishing the overall strategic actions including risk-taking and monitoring financial and managerial actions. Accordingly, *agency theory* predicts that executive pay is positively related to firm-performance (Jensen and Meckling 1976). However, managerial incentives based on firm's financial performance, might encourage managers to take more risk (Jensen and Murphy, 1990), though find to be minimal in case of non-financial firms (Akbar et al. 2017). Thereby, the study presumes that high *board compensation* positively influences both firm-risk and firm-performance, especially in case of high performing firms (see footnote 1). Prior empirical literature also argues that boards' compensation rewards directors for excessive risk-taking through the use of short-term pay and stock options (De Young et al. 2010). On the contrary, Brick et al. (2006) find evidence that excess board compensation is associated with firm underperformance due to cronyism. Accordingly, the study expects executive directors' compensation would be positively related to the exigency for firm-monitoring and the difficulty of the directors' tasks, which in turn would be related to firm-complexity and -risk. Thereby, the study presumes that high *executive directors' remuneration* would positively influence firm-risk in low performing firms, but could only impact firm-performance negatively. Therefore, the study would test the following research hypothesis:

Hypothesis 3.7: Higher executive directors' remuneration might have a positive mediating effect on firms' negative risk-return association for low performing firms. On the contrary, it has a positive mediating effect in firms' conventional positive risk-return association for high performing firms. These associations are static across market cycles, return measures and changing corporate governance regimes. [6]

2.4. Firm-heterogeneities and *dummies*:

In addition, existing literature reports that '*previously existing risk-level*' (Bromiley 1991; Gupta 2017; DasGupta and Pathak 2018); '*industry-nature and competition*' (Gupta 2017; DasGupta and Pathak 2018); '*market power*' (Cool et al. 1989; Gupta 2017; DasGupta and Pathak 2018) and '*diversification*' (Wiemann and Mellewigt 1998) influence firm's risk-return association (especially Bowman's '*paradox*'). Therefore, the study incorporates *size* and *age* (proxy of '*market power*'), *leverage* (proxy of '*previously existing risk-level*'), *liquidity* (all control)[9] and also *related* and *unrelated diversified*

[9] The study also does partitions study to find whether firm's *age*, *size*, *leverage* and *liquidity* partitions (above- and below-median firms divisions for young and old firms; small and large size firms; low and high leverage firms and low and high liquidity firms) report similar/different results in regard to firm's risk-return association. All these results are in line with the study's overall results for both univariate and multivariate analyses. So, the study does not report them separately here for the sake of brevity.

dummy (proxy of firm's '*slack*', '*industry-nature and competition*' and '*diversification*') variables in **its** multivariate model. To moderate the influence of studied corporate governance mechanisms on firm's negative risk-return association, the study also include**s** MD/CEO and Chairman *duality* in **its** multivariate model. This is because empirical literature (Kim and Buchanan 2008; Pathan 2009) reports a negative influence of such duality on firm-risk, whereas, due to high power and independence of decision-making when Chairman and MD/CEO is the same person, it would impact firm-performance positively (see Finkelstein 1992).

3. Data and methodology:

3.1. Data and variables descriptions:

The study collects data pertaining to all related firm-level variables from the *Centre for Monitoring Indian Economy* (CMIE) Prowess database for its selection of all firms listed in the National Stock Exchange (NSE). The study period is spanning over 17 years from 2000 to 2017. The study uses annual (as on 31st March each study year in rupee term) published data of sample firms. The study filters its sample by including only those firms, which existed continuously from 2000-2017 and for which all data are available. Also, the study excludes all financial, utility and public sector firms. This translates into a final overall sample of 11,475 firm-years (675 firms existing continuously for 17 years).[10]

The study uses *return on assets* (ROA) computed by dividing net income to total assets (average) and *cash ratio* (CR) computed by dividing operating cash flow to total assets (average) as its main return measures. It also estimates firm-level risk with *standard deviation* (σ) of each of the above accounting measures using preceding 5 years' values on a rolling basis (see equation 3). To make the study more robust, it also uses *return on equity* (ROE) computed by dividing net income to shareholders' equity (average) and *EBITDA ratio* computed by dividing EBITDA to total assets (average) and their standard deviations which represent firm-risk under my robustness tests. Risk and return measures computation under this study have also addressed the weaknesses as being reported in earlier studies (Albrechtet al. 2004; Brick et al. 2015; Almamy et al. 2016; Dasgupta 2017; DasGupta and Pathak 2018; etc.).

The study also uses *age* computed by subtracting firm's year of incorporation from the current year; *firm-size* calculated as lognormal of total assets; *leverage* computed by dividing debt to total assets; and *liquidity* calculated as lognormal of cash and cash equivalents to control for firm-heterogeneities. It computes board size as lognormal of number of directors in firm-board; *independent directors percentage* [i.e. percentage of total directors] for each study year (then pooled); *women directors percentage* [i.e. percentage of total directors]; *board meeting* computed as lognormal of number of meetings held; *busy board* calculated as lognormal of number of external directorships firm-board members are holding; *board tenure* computed by lognormal of average number of years a firm-board is operating; and *executive directors remuneration* calculated as lognormal of total compensation (fixed and variable including stock options) executive directors are drawing from the firm. The study also incorporates related and unrelated diversified dummy to capture the influence of this kind of diversification on firm's risk-return association, and a duality dummy to control for the

[10] The study undertakes an out-of-the-sample robustness test to eliminate the chances of survivorship bias. However, there is no significant deviation from this study's main reported results. Accordingly, this study argues that eliminated firms do not impact the main findings of this study. Therefore, they are not reported here for the sake of brevity.

power when Chairman and MD/CEO is the same person on other corporate governance mechanisms (Singh and Delios 2017).

3.2. Risk and return measurement:

Strategic management literature (Cyert and March 1963 [*behavioural theory*]; Ansoff 1979 [*strategic thrust*]; and Fiegenbaum et al. 1996 [*strategic reference point theory*]) documents that strategic behaviour of firms such as risk-taking is guided by the discrepancy between firm-aspiration and -performance. On similar lines, most of earlier empirical studies examining Bowman's '*paradox*' in firm's risk-return association throughout the world (see DasGupta 2017 for reference) emphasize Fishburn's (1977) risk measure. Fishburn (1977) observes that risk is not necessarily a measure of deviation about an expected value rather it's a function of distance from a target outcome. The target outcome is the *strategic reference point* (see Fiegenbaum et al. 1996) or *aspiration level* of the firm (*historical* or *social* [see Cyert and March 1963; and Greve 2003]), above which firms are risk-averse as their performance is above (better than), and conversely risk-taking when performance is below (worse than) that level. Both these situations could generate a negative risk-return association.

Therefore, the study use**s** this notion of target (reference) return level in developing my model in line with DasGupta and Pathak (2018). Here, the target return (henceforth TAR) level for a firm for each study year is calculated in two ways:

Firstly, the target (reference) return level for firm *f* (henceforth FTAR) in year *t*, i.e., $FTAR_{f,t}$, is calculated as firm's return in the previous year (henceforth $FTAR_{1year}$ [measuring *short-term historical aspiration level* of the firm]), and also firm's mean return for previous 5 years on a rolling basis (henceforth $FTAR_{5\ years}$ [measuring *long-term historical aspiration level* of the firm]), i.e.,

$$FTAR_{1\ year} = ActualReturn_{f,t-1} \quad \textbf{(1.1)}$$

$$FTAR_{5\ years} = Mean\text{-}return_{f,t-1\ldots t-5} \quad \textbf{(1.2)}$$

The study also use**s** alternative industry-adjusted target (reference) return level (henceforth ITAR) which is the best proxy of *social aspiration level* of my sample firms, thereby making this study more in-depth and robust. The target return level for firm *f* in industry *i* in year *t*, i.e., $ITAR_{f,i,t}$, is calculated as cross-sectional mean return of industry for previous 1 year (henceforth $ITAR_{f,i,1\ year}$ [simply $ITAR_{1\ year}$ and measuring *short-term social aspiration level* of the firm]), and also cross-sectional industry mean return for preceding 5 years on a rolling basis (henceforth $ITAR_{f,i,5\ years}$ [simply $ITAR_{5\ years}$ and measuring *long-term social aspiration level* of the firm]), i.e.,

$$ITAR_{1\ year} = Mean\text{-}return_{i,t-1} \quad \textbf{(2.1)}$$

$$ITAR_{5\ years} = Mean\text{-}return_{i,t-1\ldots t-5} \quad \textbf{(2.2)}$$

Also, **the study** measure**s** risk (henceforth σ) as standard deviation of individual firm's actual returns (henceforth AR) for previous 5 years on a rolling basis, i.e.,

$$\sigma(AR)_t = \sqrt{\sum_{j=t-6}^{t-1} \frac{(AR_j - \overline{AR})^2}{n-1}} \quad \textbf{(3)}$$

Where, t = 2005, 2007,……., 2017

AR = ROA and CR, and ROE and EBITDA

3.3. Test Design:

The study splits the overall sample firms and all partitioned and sub-periods sub-samples in two divisions for each return measures - above (high performing)[1] and below (low performing)[1], which respectively corresponds firms below and above the cross-sectional median value of the whole group for the variable in each case. It does this to investigate '*Bowman's paradox*' for low performing firms and regular *positive* risk-return association for high performing firms after incorporating Fishburn's (1977) measure of risk. The *prospect theory* (Kahneman and Tversky 1979) and Fishburn's (1977) risk measure suggest that managers are more inclined to accept variability the further below the target they find themselves.[11] So, the standard deviation (σ) of returns would be related to distance from target (DFT here) (this measures the performance-aspiration gap [i.e. *attainment discrepancy*]) when firms are below or above-median levels. The study defines DFT (for FTAR [1 year and 5 years]) as follows:

$$DFTROA_{f,t} = ACRROA_{f,t} - ACRROA_{f,t\text{-}1} \quad \text{(1 year)}$$
$$DFTROA_{f,t} = ACRROA_{f,t} - MeanROA_{f,t\text{-}1\ldots t\text{-}5} \quad \text{(5 years)} \qquad \textbf{(4)}$$

Where:

$DFTROA_{f,t}$ = Individual firm's return distance from the target return level (i.e. $FTAR_{f,t}$) in year *t*.

$ACRROA_{f,t}$ = ROA actual return, for firm *f* in year *t*.

$ACRROA_{f,t\text{-}1}$ = ROA actual return, for firm *f* in year *t*-1 (i.e. previous year).

$MeanROA_{f,t\text{-}1\ldots t\text{-}5}$ = ROA mean return, for firm *f* in year *t*-1….*t*-5 (i.e. previous 5 years) on a rolling basis.[12]

For calculating ITAR (1 year and 5 years), the above formulae are reproduced in the following ways:

$$DFTROA_{f,i,t} = ACRROA_{f,i,t} - MeanROA_{i,t\text{-}1} \quad \text{(1 year)}$$
$$DFTROA_{f,i,t} = ACRROA_{f,i,t} - MeanROA_{i,t\text{-}1\ldots t\text{-}5} \quad \text{(5 years)} \qquad \textbf{(5)}$$

Where:

$DFTROA_{f,i,t}$ = Individual firm's return distance from the target return level of the cross-sectional industry mean return (i.e. $ITAR_{f,i,t}$) in year *t*.

$ACRROA_{f,i,t}$ = ROA actual return, for firm *f* in industry *i* in year *t*.

$MeanROA_{i,t\text{-}1}$ = Cross-sectional ROA mean return of industry, for industry *i* in year *t*-1 (i.e. previous year) on a rolling basis.

$MeanROA_{i,t\text{-}1\ldots t\text{-}5}$ = Cross-sectional ROA mean return of industry, for industry *i* in year *t*-1….*t*-5 (i.e. previous 5 years) on a rolling basis.[10]

Then the study analyzes all DFT means (return measure) and the respective standard deviations (risk measure) (see equation 3) by Kendall's correlation results for all return measures used here. It also conducts the scatter plot tests[13] to justify the model as used,

[11] Failing to achieve an aspiration for a firm is theorized to prompt problemistic search/risk-taking that results in organizational change. Therefore, more frequently organizational change occurs when performance is below, rather than above the aspiration level. When firm performance is above the aspiration level, it is expected to maintain the status quo (Bromiley et al. 2001), avoid actions that might cause its performance to go below aspirations (March and Shapira 1987), and strive for slightly higher performance (Cyert and March 1963).

[12] Similarly, the study also calculates for *CR* under main tests and for *ROE* and *EBITDA ratio* under robustness tests.

[13] These results point out the linear nature of datasets with minimum number of outliers. This encourages the study to apply correlation test of Kendall's (1938) initially and multivariate regression model for further analysis.

but for the sake of brevity results are not shown here. The KS tests results also authenticate the normality of the data.

The study follows the standard guidelines about when to use Pearson's (1895), Spearman's (1904) or Kendall's (1938) correlation coefficients. Kendall's τ is mostly preferred as being less sensitive to outliers and also for its simplicity and interpretation ease (Kendall, 1962). So, as the study uses ordinal or non-normal data and as there are only few outliers, it uses Kendall's (1938) test in comparison to other correlation tests. Kendall's possible values range from -1 (perfect negative correlation) to +1 (perfect positive correlation), with the absolute value of τ implying the strength of the monotonic association between the two used variables (Chen et al. 2002). However, if Kendall's value is consistently positive above the reference return level and negative below-median level, such results would tend to support the '*Bowman's paradox*' (for low performing firms) and conventional *positive* risk-return association (for high performing firms).

3.4. Multivariate regression model:

The study also carries out a multivariate regression model as shown below along with the univariate analysis supported by Kendall's correlation results:

$$\sigma_{f,t} = \alpha + \beta_1 RETURN_{f,t} + \beta_2 DFTSTFTAR_{f,t} + \beta_3 DFTLTFTAR_{f,t} + \beta_4 DFTSTITAR_{f,i,t} + \beta_5 DFTLTITAR_{f,i,t} + \beta_6 BS_{f,t} + \beta_7 ID_{f,t} + \beta_8 WD_{f,t} + \beta_9 BM_{f,t} + \beta_{10} BUSYBOARD_{f,t} + \beta_{11} AT_{f,t} + \beta_{12} EDR_{f,t} + \beta_{13} SIZE_{f,t} + \beta_{14} AGE_{f,t} + \beta_{15} LEVERAGE_{f,t} + \beta_{16} LIQUIDITY_{f,t} + \beta_{17} RELATEDDIVERSIFICATION_{f,t} + \beta_{18} UNRELATEDDIVERSIFICATION_{f,t} + \beta_{19} DUALITY_{f,t} + \varepsilon_{f,t} \quad \textbf{(6)}$$ [14,15]

Where,

$\sigma_{f,t}$ = Firm risk measured by the return measures' standard deviation for firm *f* at time *t*.

$RELATEDDIVERSIFICATION_{f,t}$ = Related diversified firm (=1) and others (=0) (dummy 1)

$UNRELATEDDIVERSIFICATION_{f,t}$= Unrelated diversified firm (=1) and others (=0) (dummy 2)

$DUALITY_{f,t}$ = If Chairman and MD/CEO is same person (=1), otherwise (=0)

α = Constant. β_1, β_2, ..., β_{19} = Coefficients. and $\varepsilon_{f,t}$ = Error term.

Other variables have usual meanings (defined earlier). Corporate governance variables are instrumental variables here. If the slope coefficient, i.e., β_1, β_2, β_3, β_4 or β_5, in respective cases, comes out to be significant and positive, it would imply a strong conventional *positive* risk-return association for high performing firms mainly, whereas in case of low performing firms, significant negative coefficient results would indicate evidence of a Bowman's (1980) '*paradox*'.[16]

[14] The study also uses return measures as the dependent variable and risk measure (σ of return measures) as the main independent variable along with other instrumental and control variables to find their influence on firm's negative risk-return association.

[15] The study also incorporates a business group dummy variable (1 if part of a business group, otherwise 0) for sample firms under one additional robustness test. However, this dummy has not shown any significance and deviation in the main findings of this study. However, these results are not reported here for the sake of brevity.

[16] This is because given a certain reported firm-return performance, the study is trying to figure out the risk-level estimated by the firm to generate that return. Hence it uses risk as the dependent and target (reference) returns as the independent variables of interest in the main model.

To present a very robust understanding on the issue, this study adopts a comparative approach amongst two methodologies i.e. panel fixed effect [FE] (with year and industry fixed effect) and dynamic OLS [DOLS], for exploring the risk-return association and CG impact on it. To start with, this study uses the Panel FE with OLS estimation for a basic general finding. This is undertaken over and above random effect model based on Hausman test results by which alternative hypothesis has been accepted. However, while studying such association for the diverse set of firms belonging to an emerging country like India, one should focus on two types of endogeneity issues - unobserved heterogeneity and dynamic endogeneity. It has been noticed in empirical literature that unobserved heterogeneity results, in presence of omitted variables, affects both the independent variables and the dependent variable. In such a case, the use of FE estimation is recognized to be a robust approach. However, in the presence of dynamic endogeneity, such FE models result in biased estimation. The issue of dynamic endogeneity i.e. dependence of the explanatory variables on the lagged values of the dependent variable should not be present in this study model as the dependent variable is calculated in a rolling way and the main independent variable also captures the unobservable industry- and firm-heterogeneities. However, still to mitigate any unobservable dynamic endogeneity issue in study model, this study uses dynamic OLS. Also, this study performs the Granger (1969) causality test and Dumitrescu Hurlin (2012) causality test for panel data only to nullify any presence of reverse causality among the studied variables. However, this study does not report these results for the sake of brevity.

4. Empirical results:

4.1. Descriptive statistics results:

Results (see table 1) show that among the return measures ROA is the least volatile (SD of 5.38%), and ROE has the highest volatility (SD of 13.37%). In bear sub-periods this kind of volatility is higher than that of bull sub-periods. On the contrary, it is evident through high volatility of % of independent directors (SD of 8.47%) and % of women directors (SD of 5.53%) in firm-boards that firms regularly change their board composition although board-size and other corporate governance mechanisms are stable across time-periods. This kind of board composition volatility is visibly higher in bull rather than bear sub-periods. Interestingly, average executive directors' remuneration is higher in bear sub-periods. On the other hand, firms are highly leveraged with highest volatility (SD of 17.17%) during bear sub-periods, and they show strong liquidity condition in bull sub-periods.

Table 1: Descriptive statistics results

This table reports mean, maximum, minimum and standard deviation (SD) statistics for 675 firms for the overall period, and bull and bear sub-periods. Here *ROA* stands for return on assets (net income/book value of assets) and proxy for firm's operating performance; *CR* denotes cash ratio (operating cash flow/book value of assets) and represents firm's cash/liquidity performance; *ROE* stands for return on equity (net income/book value of shareholders' equity) and proxy for firm's operating performance [under robustness tests]; *EBITDA* (earnings before interest, taxes, depreciation and amortisation) *ratio* (EBITDA/book value of assets) indicates firm's pre-tax book-unadjusted operating performance [under robustness tests]. Also, *BS Log* represents lognormal of board size (i.e. number of directors in the board); *ID* stands for independent directors (% of total directors); *WD* denotes women directors (% of total directors); *BM Log* depicts lognormal of number of board meetings; *BUSY BOARD Log* implies lognormal of number of directorships the executive directors are holding; *BT Log* denotes lognormal of average tenure of the board for the firms; *EDR Log* represents lognormal of executive directors remuneration; *Log SIZE* implies lognormal of the book value of assets (size proxy); *Log AGE* stands for lognormal of firm's age (study year – year of incorporation); DE (debt-equity) ratio (debt/book value of assets) proxies for firm's leverage; and *Log C&CE* implies lognormal of cash and cash equivalents for the firms and proxy for firm's liquidity. Here, all the variables are calculated yearly for the overall study period, and bull and bear sub-periods on a rolling basis, and then panelled together for **this study's** further analyses.

Variables	**Overall period**				**Bull sub-periods**				**Bear sub-periods**			
	Mean	**Maximum**	**Minimum**	**SD**	**Mean**	**Maximum**	**Minimum**	**SD**	**Mean**	**Maximum**	**Minimum**	**SD**
ROA (%)	6.02	36.93	-7.38	5.38	6.63	47.41	-8.00	5.69	4.82	39.82	-20.83	6.08
CR (%)	12.66	54.91	-12.96	6.67	13.32	74.93	-9.44	7.06	11.44	44.27	-20.63	7.23
ROE (%)	14.31	98.06	-55.52	**13.37**	15.08	107.14	-53.73	**13.82**	7.79	96.53	-173.51	**18.33**
EBITDA ratio (%)	14.63	49.37	-0.67	6.63	15.05	50.15	-1.95	6.82	13.79	49.03	-3.22	7.60
BS Log	**0.99**	1.35	0.43	0.12	**0.98**	1.36	0.48	0.12	**0.99**	1.32	0.30	0.12
ID (%)	**46.65**	66.56	0.00	**8.47**	**46.47**	69.33	0.00	**9.32**	**46.99**	67.58	0.00	**8.15**
WD (%)	**5.33**	33.48	0.00	**5.53**	**5.03**	41.47	0.00	**5.82**	**5.93**	29.91	0.00	**5.34**
BM Log	**0.73**	1.38	-0.78	0.15	**0.73**	1.39	-0.12	0.14	**0.71**	1.42	-0.30	0.14
BUSY BOARD Log	**0.46**	1.63	-1.08	0.47	**0.50**	1.62	-0.90	0.45	**0.53**	1.63	-0.60	0.43
BT Log	**0.70**	1.20	0.30	0.15	**0.70**	1.20	0.30	0.15	**0.70**	1.20	0.30	0.15
EDR Log	**1.15**	3.00	-0.83	0.58	**1.11**	2.98	-0.84	0.58	**1.24**	3.17	-1.00	0.60
Log SIZE	3.76	6.38	1.94	0.67	3.94	7.01	2.10	0.85	3.83	6.48	1.88	0.68
Log AGE	1.57	2.18	1.28	0.19	1.59	2.18	1.28	0.20	1.57	2.18	1.28	0.19
DE ratio	**1.69**	156.22	0.00	**6.67**	**1.35**	71.88	0.00	**3.53**	**2.42**	409.24	0.00	**17.17**
Log C&CE	**2.17**	5.28	-0.22	0.76	**2.46**	5.93	0.21	1.01	**2.20**	5.27	-0.05	0.78

4.2. Kendall's τ correlation results – low and high performing firms[1]:

Table 2 (see next page) shows Kendall's τ correlation results for low and high performing firms for the overall study period, and for bull and bear sub-periods.[17] Results shows that below-median (poor) firms under ROA (-.118***) report a significant negative risk-return association. On the contrary, a significant positive risk-return association is evident across my return measures [ROA (.283***) and CR (.195***)] for above-median (superior) firms. The bull and bear sub-periods results are also in tandem with the study's reported results for the overall study period.

The study report**s** that in low performing firms, *board size* has a significant negative influence on firm-risk in the overall period [ROA (-.071*) and CR (-.121***)] and in bull sub-periods [ROA (-.074**) and CR (-.142***)]. This is also true in **its** *busy board* corporate governance measure [ROA (-.077**) in overall and (-.076**) in bull periods]. *Executive directors' remuneration* has a similar strong negative influence on firm-risk of low performing firms [under CR (-.120***) in overall, and under ROA (-.089**) and CR (-.127***) in bull periods]. On the contrary, both *board size* and *executive directors' remuneration* has a significant positive influence and *busy board* also shows positive impact on firm-performance under all return measures across overall and sub-periods (see table 2 for coefficient values). *Board size* and *executive directors' remuneration* also has a significant negative influence on firm-risk only in overall and bull periods for high performing firms. On the contrary, *busy board* has a significant negative influence on both firm-performance and firm-risk of such firms under all return measures across all periods.

The study does not find any overall significant results supporting hypothesis 2 and 4 except that *independent directors* significantly impact firm-risk for low performing firms only in bear sub-periods (0.060*), and *board meetings* (.092**) has a significant positive impact on it in such periods. However, in both cases firm-performance has a negative coefficient. For high performing firms, the study does not find any significant influence under *independent directors* and *board meetings*.

The study also report**s** significant positive influence of *women directors* on firm-risk across overall [CR (.108***)]; bull [CR (.113***)]; and bear [ROA (0.068*) and CR (.102***)] periods for low performing firms. However, *women directors* have a negative impact on firm-performance [CR (-.083**)]. These results imply that though women directors are risk-seeking in low performing firms, however their attitude does **not** drive firm performance higher. Thereby, the reported negative risk-return association for below-median firms might be arising out of *women directors' presence*. On the contrary, *women directors* have a significant positive impact on both firm-risk and firm-performance across periods for high performing firms which in turn might cause the positive risk-return association.

[17] The study has also calculated Kendall's τ for the partition sub-samples (i.e. based on *size*, *age*, *leverage* and *liquidity*) after further dividing them in below- (low performing) and above-median (high performing) firms based on respective cross-sectional median values of its main return measures (i.e. *ROA and CR*). These results are in line with the study's main reported results. So, it does not hereby report them again for the sake of brevity.

Table 2: Kendall's τ correlation results

This table reports Kendall's τ correlation results for 675 firms for the overall period, and bull and bear sub-periods after dividing them in above- and below-median firms based on return measures' (i.e. ROA and CR) cross-sectional median values. Here, *ROA* stands for return on assets and *CR* denotes cash ratio. SD denotes standard deviation of return measures. Also, *BS Log* represents lognormal of board size (i.e. number of directors in the board); *ID* stands for independent directors (% of total directors); *WD* denotes women directors (% of total directors); *BM Log* depicts lognormal of number of board meetings; *BUSY BOARD Log* implies lognormal of number of directorships the executive directors are holding; *BT Log* denotes lognormal of average tenure of the board for the firms; *EDR Log* represents lognormal of executive directors remuneration. In addition, control variables of size, age, liquidity (lognormal values of respective measures) and leverage (D-E ratio %) of my model are also included. Here, all the variables are calculated yearly for the overall study period, and bull and bear sub-periods on a rolling basis, and then panelled together for this study's further analyses.

	Below-median (low performing) firms						**Above-median (high performing) firms**					
	Overall period		**Bull sub-periods**		**Bear sub-periods**		**Overall period**		**Bull sub-periods**		**Bear sub-periods**	
Variables	**Return**	**SD**	**Return**	**SD**	**Return**	**SD**	**Return**	**SD**	**Return**	**SD**	**Return**	**SD**
Panel A. ROA results												
ROA	1.000	**-.118*****	1.000	**-.141*****	1.000	**-.222*****	1.000	**.283*****	1.000	**.266*****	1.000	**.188*****
ROA SD	**-.118*****	1.000	**-.141*****	1.000	**-.222*****	1.000	**.283*****	1.000	**.266*****	1.000	**.188*****	1.000
BS Log	**.096*****	**-.071***	**.176*****	**-.074****	**.089****	-.041	-.031	**-.187*****	.021	**-.167*****	-.011	**-.177*****
ID (%)	-.018	.011	-.041	.021	-.012	**0.060***	.024	.045	.026	.014	.055	.058
WD (%)	-.006	.050	-.035	.046	-.022	**0.068***	.056	.042	.014	.033	.029	.044
BM Log	.057	-.027	.038	-.058	.016	.045	.002	.043	.027	.043	-.004	-.002
BUSY BOARD Log	-.013	**-.077****	.009	**-.076****	-.019	.002	**-.072****	**-.065***	-.036	**-.081****	**-.115*****	**-.083****
BT Log	.031	.019	.026	.029	.021	.014	-.038	.010	**-.073***	.005	-.029	-.018
EDR Log	-.018	-.046	**.224*****	**-.089****	**.153*****	-.025	.036	-.011	**0.068***	**-.160*****	**0.071***	**-.148*****
Log SIZE	.031	-.028	.032	.002	**.074****	**-.093****	.050	-.025	.005	-.035	-.007	**-.126*****
Log AGE	.019	-.059	.030	-.044	.048	-.019	.027	-.048	**-.072***	-.025	-.020	-.022
DE ratio	**-.127*****	-.007	.017	.051	**-.179*****	-.016	**-.350*****	**-.189*****	-.002	.014	**-.358*****	**-.210*****
Log C&CE	**.165*****	**-.097*****	.016	-.032	**.096*****	**-.085****	**.115*****	-.026	.044	-.035	**0.068***	-.018
Panel B. CR results												
CR	1.000	-.018	1.000	-.015	1.000	-.017	1.000	**.198*****	1.000	**.259*****	1.000	**.124*****
CR SD	-.018	1.000	-.015	1.000	-.017	1.000	**.198*****	1.000	**.259*****	1.000	**.124*****	1.000
BS Log	**.150*****	**-.124*****	**.143*****	**-.145*****	**.131*****	**-.068***	-.042	**-.165*****	**-.093****	**-.170*****	-.004	**-.146*****
ID (%)	.007	.033	-.006	.037	-.011	.037	.004	.030	-.025	-.012	-.005	.049
WD (%)	-.019	**.110*****	-.025	**.112*****	**-.083****	**.102*****	.035	.059	.017	.061	.021	.051
BM Log	-.034	-.028	-.026	-.043	-.021	.023	-.002	.059	.017	.040	**0.076***	.046
BUSY BOARD Log	.013	**-.076***	.003	**-.073***	-.020	-.056	**-.131*****	**-.141*****	**-.151*****	**-.160*****	**-.078***	**-.113*****
BT Log	.001	.039	.008	.040	.004	.018	**-.082****	-.065	**-.101****	-.053	-.026	-.060
EDR Log	**.215*****	**-.123*****	**.202*****	**-.128*****	**.186*****	-.062	.039	**-.133*****	-.019	**-.140*****	**.132*****	-.059
Log SIZE	**.118*****	**-.187*****	-.004	-.052	**.125*****	**-.175*****	**-.066***	**-.109*****	-.010	-.042	.005	**-.068***
Log AGE	-.046	-.033	-.027	-.054	**0.065***	**-.076***	-.026	**-.064***	.018	-.014	-.033	-.009
DE ratio	**.124*****	-.002	.016	.042	**.080****	-.043	**-.245*****	**-.196*****	.024	.050	**-.225*****	**-.155*****
Log C&CE	**.084****	**-.135*****	-.022	**-.064***	**.104*****	**-.123*****	.034	.028	.055	-.031	**0.062***	.054

*** Correlation is significant at the 0.01 level (2-tailed). ** Correlation is significant at the 0.05 level (2-tailed). * Correlation is significant at the 0.10 level (2-tailed).

Table 3: Kendall's τ correlation results (aspiration [*historical* and *social* short- & long-term] level results)

This table reports Kendall's τ correlation results for 675 firms for the overall period, and bull and bear sub-periods after dividing them in above- (high performing) and below-median (low performing) firms based on aspiration (*historical* and *social* short- & long-term) level cross-sectional median values. Here, *ROA* stands for return on assets and *CR* denotes cash ratio. SD denotes standard deviation. In addition, $DFT(FTAR_1)$; $DFT(FTAR_5)$; $DFT(ITAR_1)$; and $DFT(ITAR_5)$ stands for distance from firm-adjusted target (reference) returns for 1 year and 5 years, and distance from industry-adjusted target (reference) returns for 1 year and 5 years for both ROA and CR respectively. Here, all the variables are calculated yearly for the overall study period, and bull and bear sub-periods on a rolling basis, and then panelled together for **this study's** further analyses.

	Overall period				**Bull sub-periods**				**Bear sub-periods**			
Variables	**DFT ($FTAR_1$)**	**DFT ($FTAR_5$)**	**DFT ($ITAR_1$)**	**DFT ($ITAR_5$)**	**DFT ($FTAR_1$)**	**DFT ($FTAR_5$)**	**DFT ($ITAR_1$)**	**DFT ($ITAR_5$)**	**DFT ($FTAR_1$)**	**DFT ($FTAR_5$)**	**DFT ($ITAR_1$)**	**DFT ($ITAR_5$)**
Panel A. ROA-based results												
$SD_{Below\text{-}median}$	-.228***	-.250***	-.115***	-.123***	-.341***	-.259***	-.085**	-.123***	-.328***	-.372***	-.159***	-.155***
$SD_{Above\text{-}median}$	.203**	.279***	.199***	.196***	.329***	.363***	.236***	.227***	.354***	.317***	.191***	.184***
Panel B. CR-based results												
$SD_{Below\text{-}median}$	-.192***	-.179***	.045	.027	-.265***	-.190***	-.067*	-.078*	-.293***	-.351***	-.032	-.036
$SD_{Above\text{-}median}$	.206***	.238***	.159***	.160***	.262***	.297***	.167***	.160***	.279***	.226***	.143***	.201***

*** Correlation is significant at the 0.01 level (2-tailed). ** Correlation is significant at the 0.05 level (2-tailed). * Correlation is significant at the 0.10 level (2-tailed).

Therefore, the study results report that small *board size* and lower *women directors'* presence is causing a paradoxical risk-return association for low performing firms and it also develops a conventional positive one for high performing ones. On the contrary, large *board size* and higher *women directors'* presence could create a negative risk-return association for high performing firms. The study results also show that *executive directors' remuneration* is driving a paradoxical risk-return association for both low and high performing firms.

4.3. Kendall's τ correlation results – aspiration level results:

The study's Kendall's τ correlation results for both *historical* and *social aspiration* level and under both short- and long-term overwhelmingly report a positive risk-return association for high performing firms and a negative association for low performing firms (see table 3 previous page). So, it is proved that the nature of firm's risk-return association is static longitudinally. The corporate governance results are also in line, so the study **does not** report them separately for the sake of brevity.

4.4. Multivariate regression results:[18]

Table 4 (see next page) presents multivariate regression results of the study model.[19] In line with its earlier Kendall's τ correlation results, the study finds a negative risk-return association for low performing firms under ROA (-.184***) and CR (-.208***)[2] for **its** main independent variable. On the contrary, high performing firms show a strong significant positive risk-return association [ROA (.619***) and CR (.628***)]. The bull and bear sub-periods results are also similar.

The study results show that *board size* influences firm-risk significantly negatively [under CR (-2.659*)], however, has a positive impact on firm-performance for low performing firms under all return measures.[20] For high performing firms also *board size* has a significant negative influence on firm-risk [under ROA (-9.829***) and CR (-6.780**)], but positively impact firm-performance in the overall period. In both bull and bear sub-periods my results show similar trends. These clearly imply that small and large *board size* might be causing a paradoxical risk-return association for low and high performing firms. On the contrary, the study finds that *women directors* significantly positively influencing firm-risk for both low and high performing firms [under CR (.079**) and CR (.090*)], however, they have a significant negative impact on firm-performance. In bear sub-periods the study results reiterate such main findings. These imply that higher *women directors' presence* is behind the negative risk-return association of low performing firms and it might cause the same to superior firms. The study results report that *busy board* [ROA (-.895***)] negatively influence firm-risk of low performing firms. Also, it has a significant negative impact on firm-performance. On the contrary, for high performing firms, *busy board* has a significant positive influence on firm-

[18] The study in this section discusses the results mainly based on panel FE results. However, the DOLS results as shown in table 4 are exactly in line with these findings. So, these are not discussed in detail here for the sake of brevity.

[19] Reported R^2 and Adj.R^2 values for all models indicate the reliability of study results i.e. how reliably the study's independent variable(s) are explaining firm-risk. Also, F-test values are significant at 0.01 significance level which validates its models' goodness-of-fit.

[20] The study has also calculated taking firm-performance (through return measures of ROA and CR) as its dependent variable and firm-risk (SD of ROA and CR) as the main independent variable keeping all other variables intact. This is done to find out the influence of each of these corporate governance measures on firm-performance so that the study can present their impact on channelizing negative and positive risk-return association for below- and above-median firms, if there is any. However, these results are not reported here in details (coefficients etc.) for the sake of brevity.

Table 4: Panel FE and dynamic OLS (DOLS) regression results

This table reports **panel FE [with year and industry fixed effect] and dynamic OLS (DOLS)** regression results (see equation 6) for 675 firms for the overall period, and bull and bear sub-periods after dividing them in above- and below-median firms based on return measures' (i.e. ROA and CR) cross-sectional median values. Here, σ (risk measure) is the dependent variable and firm's return (i.e. ROA and CR) (main independent variable), distance (DFT) from the firm-adjusted and industry-adjusted target (reference) returns are independent variables. Here, *ROA* stands for return on assets and *CR* denotes cash ratio. In addition, $DFT(FTAR_1)$; $DFT(FTAR_5)$; $DFT(ITAR_1)$; and $DFT(ITAR_5)$ stands for distance from firm-adjusted target (reference) returns for 1 year and 5 years, and distance from industry-adjusted target (reference) returns for 1 year and 5 years for both ROA and CR respectively. Also, *BS Log* represents lognormal of board size (i.e. number of directors in the board); *ID* stands for independent directors (% of total directors); *WD* denotes women directors (% of total directors); *BM Log* depicts lognormal of number of board meetings; *BUSY BOARD Log* implies lognormal of number of directorships the executive directors are holding; *BT Log* denotes lognormal of average tenure of the board for the firms; *EDR Log* represents lognormal of executive directors remuneration. **This study** also incorporate**s** the control variables of size, age, liquidity (lognormal values of respective measures) and leverage (D-E ratio %) in my model. To make it more robust, dummy variables of related and unrelated diversified firms and duality (0 if Chairman and MD/CEO is the same person and 1 otherwise) are also included. Here, all the variables are calculated yearly for the overall study period, and bull and bear sub-periods on a rolling basis, and then panelled together for **this study's** further analyses.

	Below-median (low performing) firms						**Above-median (high performing) firms**					
	Overall period		**Bull sub-periods**		**Bear sub-periods**		**Overall period**		**Bull sub-periods**		**Bear sub-periods**	
Variables	**Coefficient (t-test)**		**Coefficient (t-test)**		**Coefficient (t-test)**		**Coefficient (t-test)**		**Coefficient (t-test)**		**Coefficient (t-test)**	
	Panel FE	**DOLS**	**Panel FE**	**DOLS**	**Panel FE**	**DOLS**	**Panel FE**	**DOLS**	**Panel FE**	**DOLS**	**Panel FE**	**DOLS**
Panel A. ROA results												
Constant	**5.239****	2.091	**5.667****	**11.858****	.944	11.734	5.177	-2.650	4.954	**-22.862****	**7.543****	14.451
	(2.535)	(0.438)	(2.373)	(2.366)	(.283)	(1.540)	(1.293)	(-.293)	(1.113)	(-2.066)	(2.064)	(1.332)
ROA	**-.184****		**-.354*****	**-**	.080		**.619*****		**.538*****		**.466*****	
	(-2.147)	**-0.947****	(-3.847)	**1.410*****	(.783)	-0.076	(7.940)	0.247	(5.227)	0.363	(6.306)	0.343
		(-3.039)		(-3.367)		(-.174)		(.872)		(.917)		(.801)
	-.562*	-0.470	-.189	**-0.529***	**-.221****	**0.520****	**-2.785*****	**-2.299*****	**-.813*****	0.566	**.464*****	-0.150
DFT($FTAR_1$)	(-1.639)	(-.581)	(-1.538)	(-1.662)	(-2.422)	(2.378)	(-7.757)	(-3.231)	(-5.780)	(1.319)	(5.095)	(-.482)
	.362**	0.186	**.280*****	**0.561****	**-.434*****	**-1.075*****	**1.212*****	**1.144****	**.749*****	0.274	**-.535*****	-0.213
DFT($FTAR_5$)	(2.354)	(.562)	(2.998)	(2.512)	(-4.683)	(-4.875)	(7.393)	(3.197)	(6.800)	(.981)	(-5.214)	(-.864)
	.289	0.329	.028	**0.918****	.060	-0.096	.008	0.899	**-.614****	-0.610	.064	**1.575****
DFT($ITAR_1$)	(1.184)	(.540)	(.174)	(2.004)	(.319)	(-.194)	(.023)	(1.095)	(-2.433)	(-.871)	(.602)	(3.262)
	-.480*		-.072		-.152		-.269		**.539***		-.257	-
	(-1.759)	-0.504	(-.414)	**-0.941***	(-.692)	-0.037	(-.719)	-1.128	(1.870)	0.355	(-1.624)	**1.659*****
DFT($ITAR_5$)		(-.757)		(-1.935)		(-.068)		(-1.271)		(.491)		(-3.551)
	-.764	**-7.783****	-1.128	**-7.221***	.793	**-9.041***	**-9.829*****	-4.278	**-6.386****	**-16.130***	-3.622	-12.689
BS Log	(-.526)	(-2.351)	(-.695)	(-1.853)	(.347)	(-1.829)	(-3.884)	(-.794)	(-2.101)	(-1.742)	(-1.433)	(-1.587)
	.009	0.032	-.006	0.034	.006	0.013	-.007	0.048	-.007	**0.128***	-.002	-0.089
ID (%)	(.462)	(.695)	(-.359)	(.927)	(.242)	(.218)	(-.222)	(.836)	(-.214)	(1.658)	(-.069)	(-1.161)
	.011	-0.073	.020	**0.101***	.024	**0.140***	.062	0.051	.024	0.058	-.034	**-0.229***
WD (%)	(.441)	(-1.372)	(.829)	(1.866)	(.631)	(1.765)	(1.315)	(.453)	(.491)	(.451)	(-.780)	(-1.798)
	1.315	1.517	-.155	-1.555	**2.201***	-3.119	1.625	1.466	2.034	**9.439***	.919	6.656
BM Log	(1.480)	(.746)	(-.157)	(-.867)	(1.650)	(-1.089)	(.898)	(.352)	(1.019)	(1.942)	(.544)	(1.215)

BUSY BOARD	**-.895*****	0.019	**-.891****	-0.858	-.540	0.941	**.848***	0.406	.350	0.675	.709	-1.127
Log	(-2.662)	(.024)	(-2.482)	(-1.091)	(-1.140)	(.893)	(1.615)	(.359)	(.590)	(.503)	(1.370)	(-.766)
	.128	-0.232	.392	3.847	-.744	0.938	2.009	3.063	2.132	**7.918****	.634	1.139
BT Log	(.129)	(-.101)	(.400)	(1.520)	(-.549)	(.336)	(1.216)	(.888)	(1.202)	(2.124)	(.450)	(.241)
	-.299	0.522	.115	0.456	.128	0.614	-.200	0.308	**-1.836*****	**-3.735****	**-1.206****	-1.819
EDR Log	(-1.235)	(.962)	(.335)	(.529)	(.254)	(.529)	(-.471)	(.319)	(-3.199)	(-2.654)	(-2.211)	(-1.116)
	-.037	0.099	.392	0.396	-.270	1.014	.114	**1.948***	.045	-2.634	**-1.879*****	0.442
Log SIZE	(-.158)	(.177)	(.400)	(.599)	(-.418)	(.635)	(.272)	(1.863)	(.063)	(-1.525)	(-2.614)	(.193)
	-1.010	**2.901***	.115	-2.319	.672	-3.298	.624	-0.058	.752	0.267	1.010	-0.122
Log AGE	(-1.312)	(1.671)	(.335)	(-1.525)	(.649)	(-1.516)	(.435)	(-.017)	(.512)	(0.075)	(.854)	(-.032)
	.018	**0.078****	.479	0.017	.004	0.051	**.217***	-0.202	-.252	-0.085	.537	-1.493
DE ratio	(1.134)	(2.655)	(1.361)	(.165)	(.221)	(1.177)	(1.606)	(-.693)	(-1.576)	(-.240)	(1.210)	(-1.127)
	.028	-0.213	-.457	-0.556	-.506	-1.630	-.319	**-1.781***	-.526	1.054	**1.175****	0.924
Log C&CE	(.122)	(-.413)	(-.622)	(-.899)	(-1.077)	(-1.470)	(-.747)	(-1.941)	(-.938)	(.789)	(2.253)	(.652)
Duality *dummy*	.123	-0.151	.012	-1.034	.207	0.248	**.840***	-1.855	.771	1.734	.030	-0.944
	(.394)	(-.194)	(.222)	(-1.458)	(.492)	(.266)	(1.638)	(-1.622)	(1.390)	(1.405)	(.070)	(-.740)
Related	.392		-.372		-.311		.056		.849		1.065	
Diversification	(.504)	-0.246	(-1.234)	-0.208	(-.318)	**3.675***	(.040)	0.324	(.639)	-2.189	(.939)	5.173
dummy		(-.134)		(-.112)		(1.874)		(.118)		(-.604)		(1.466)
Unrelated	.261		.353		.523		-	-	-	-	-	-
Diversification	(.203)	2.930	(1.159)	2.614	(.340)	-4.707						
dummy		(1.025)		(.939)		(-1.230)						
R^2	**20.5%**	**36.0%**	**20.7%**	**41.52%**	**34.7%**	**51.07%**	**45.3%**	**61.69%**	**52.4%**	**46.14%**	**36.1%**	**55.15%**
Adj. R^2	**15.5%**	**26.66%**	**15.5%**	**27.28%**	**30.3%**	**39.65%**	**42.1%**	**49.31%**	**49.4%**	**33.75%**	**31.7%**	**38.37%**
Panel B. CR results												
Constant	**11.594*****	**14.735****	**8.581*****	**14.803****	**12.874*****	**17.367****	-1.245	5.191	-2.516	12.459	5.099	-11.803
	(3.628)	(2.228)	(3.605)	(2.704)	(3.960)	(2.240)	(-.262)	(.645)	(-.483)	(1.029)	(1.489)	(-1.520)
CR	**-.208*****	-0.134	**-.375*****	-0.247	**-.165****	-0.282	**.628*****	0.080	**.783*****	0.564*	**.284*****	**0.597****
	(-3.194)	(-.294)	(-1.389)	(-.855)	(-2.518)	(-.459)	(8.700)	(.362)	(10.726)	(1.667)	(5.079)	(2.347)
	-1.657***	-1.061	-.010	0.375	**.502*****	**0.990*****	.603	0.731	**.298***	0.452	.086	-0.144
DFT($FTAR_1$)	(-5.250)	(-1.416)	(-.079)	(1.310)	(5.040)	(4.185)	(1.586)	(1.165)	(1.763)	(1.210)	(.774)	(-.530)
	.648***	0.206	-.142	-0.283	**-.501*****	**-0.864*****	**-.530*****	-0.398	**-.351*****	-0.338	**-.323*****	0.002
DFT($FTAR_5$)	(4.577)	(.621)	(-1.578)	(-1.421)	(-5.622)	(-3.707)	(-3.093)	(-1.418)	(-2.751)	(-1.381)	(-3.601)	(.010)
	-.205	-0.373	.102	0.318	**.219***	-0.327	.071	**1.435****	-.402	-0.294	**.577*****	**0.594***
DFT($ITAR_1$)	(-1.024)	(-.851)	(.762)	(1.110)	(1.700)	(-1.062)	(.186)	(2.149)	(-1.501)	(-.442)	(4.138)	(1.651)
	.279	0.517	-.067	-0.337	-.205	0.387	-.127	**-1.357****	.310	0.066	**-.669*****	**-0.749****
DFT($ITAR_5$)	(1.444)	(1.220)	(-.512)	(-1.213)	(-1.462)	(1.167)	(-.321)	(-1.989)	(1.100)	(.096)	(-4.523)	(-2.078)
	-2.659*	-2.966	**-3.841****	-3.946	-1.820	1.914	**-6.780****	-1.857	**-7.185****	-4.461	**-4.867****	2.656
BS Log	(-1.336)	(-.699)	(-2.373)	(-1.205)	(-.829)	(.328)	(-2.242)	(-.350)	(-2.144)	(-.659)	(-2.192)	(.445)
	.012	0.037	.008	-0.010	.015	-0.049	.013	0.062	-.005	-0.100	.027	0.066
ID (%)	(.499)	(.799)	(.463)	(-.293)	(.540)	(-.730)	(.403)	(1.293)	(-.150)	(-1.303)	(1.135)	(1.110)
WD (%)	**.079****	**0.124***	.031	0.032	-.027	0.005	**.090***	0.053	**.130****	0.152	-.010	-0.012

	(2.400)	(1.752)	(1.179)	(.573)	(-.725)	(.056)	(1.853)	(.700)	(2.534)	(1.256)	(-.282)	(-.160)
	1.390	0.565	.654	0.207	**2.236***	1.783	3.059	2.224	3.448	5.330	2.512	-2.085
BM Log	(1.160)	(.219)	(.692)	(.098)	(1.869)	(.583)	(1.308)	(.574)	(1.422)	(1.053)	(1.349)	(-.499)
BUSY BOARD	-.647	-0.126	**-.813****	-0.194	-.589	0.308	**1.027***	-0.904	.690	-0.993	.343	**-2.167***
Log	(-1.570)	(-.157)	(-2.268)	(-.254)	(-1.315)	(.283)	(1.758)	(-.887)	(1.102)	(-.713)	(.748)	(-1.864)
	1.212	-0.085	.843	0.323	-.441	-3.076	.137	-3.366	.323	**-7.183****	-.282	0.680
BT Log	(.980)	(-.033)	(.831)	(.139)	(-.328)	(-.960)	(.077)	(-1.160)	(.170)	(-2.093)	(-.225)	(.235)
	.739	0.134	-.312	-0.588	**1.134****	**1.880***	**-3.353*****	-1.114	**-1.802*****	-0.750	-.401	-0.864
EDR Log	(1.522)	(.115)	(-.933)	(-.804)	(2.363)	(1.778)	(-4.571)	(-.913)	(-2.770)	(-.535)	(-.750)	(-.728)
	-2.156***	**-2.219***	-.028	0.441	**-3.018*****	**-2.668****	-.062	-1.320	.613	0.814	-.872	2.058
Log SIZE	(-3.718)	(-1.622)	(-.079)	(.643)	(-5.305)	(-2.050)	(-.068)	(-.915)	(.815)	(.494)	(-1.352)	(1.328)
	-.235	-2.950	-.459	**-4.324****	.001	**-5.154****	.378	2.413	-.145	-2.997	-.821	-0.041
Log AGE	(-.244)	(-1.454)	(-.599)	(-2.774)	(.001)	(-2.151)	(.278)	(1.092)	(-.098)	(-.948)	(-.702)	(-.016)
	.062	**0.270****	.026	-0.124	.006	0.040	.200	-0.052	-.242	-0.551	.067	0.079
DE ratio	(1.156)	(2.415)	(.482)	(-1.203)	(.341)	(.804)	(1.566)	(-.254)	(-1.606)	(-1.459)	(.663)	(.496)
	1.150***	1.205	-.049	-0.189	**1.094****	0.723	**1.211***	0.337	-.642	-0.747	**.879****	-1.079
Log C&CE	(2.701)	(1.297)	(-.160)	(-.357)	(2.569)	(.692)	(1.838)	(.319)	(-1.074)	(-.593)	(2.034)	(-1.128)
Duality *dummy*	.005	1.188	-.024	-0.493	.360	**2.699****	.116	0.651	.470	-1.144	-.470	0.897
	(.013)	(1.470)	(-.074)	(-.776)	(.904)	(2.743)	(.213)	(.692)	(.806)	(-.909)	(-1.237)	(.888)
Related	-.019		.678		.201		-.066		.670		1.187	
Diversification	(-.024)	-2.076	(.982)	0.011	(.233)	**5.913****	(-.037)	**7.048****	(.403)	0.135	(1.050)	**4.339***
dummy		(-1.243)		(.008)		(2.876)		(2.455)		(.038)		(1.766)
Unrelated	.889		1.391		1.458		-1.285		-.958	-	-.126	-
Diversification	(.524)	-1.793	(1.001)	2.556	(.690)	**-9.541****	(-.410)		(-.291)		(-.062)	
dummy		(-.527)		(.963)		(-2.204)		-				
R^2	**30.9%**	**41.85%**	**14.6%**	**39.57%**	**31.3%**	**48.88%**	**42.1%**	**53.35%**	**53.6%**	**55.94%**	**37.6%**	**50.71%**
Adj. R^2	**25.9%**	**29.91%**	**8.3%**	**25.86%**	**26.1%**	**39.29%**	**38.1%**	**36.82%**	**50.1%**	**44.12%**	**32.5%**	**38.85%**

*** Correlation is significant at the 0.01 level (2-tailed). ** Correlation is significant at the 0.05 level (2-tailed). * Correlation is significant at the 0.10 level (2-tailed).

Note: All regression models are good-fit at 0.01 significance level based on their F-test values from the ANOVA analysis. So, separately they are not shown here for the sake of brevity.

risk [ROA (.848*) and CR (1.027*)], however, conversely significantly negatively impacting firm-performance. The bull and bear results are exactly on similar lines. So, it is evident that *busy board* might cause a paradoxical risk-return association for high performing firms, however for low performing firms the study find**s** no such evidence. *Board meetings* influence high performing firms' firm-risk positively, but, have a significant negative impact on firm-performance. The study finds similar results for bear sub-periods. It also reports a significant negative influence of *EDR* [under CR (-3.353***)] on firm-risk for high performing firms whereas a mixed influence for low performing firms, however, it impacts firm-performance positively for all firms. This is also clearly evident in both sub-periods. So, there is a contradicting viewpoint for all firms. The study reports that *board tenure* positively influences firm-risk for high performing firms across overall and sub-periods. On the contrary, it has a significant negative influence on firm-performance for these firms. On the contrary, the study does not find any influence of lower *board tenure* on low performing firms' paradoxical risk-return association.

Therefore, overall, the study accepts hypothesis 3.1 and extends it as small *board size* is also causing Bowman's 'paradox' for low performing firms. It also accepts hypothesis 3.3 as its results show that in case of both low and high performing firms, *women directors' presence* might be causing a negative risk-return association. The study accepts hypothesis 3.4 only partially as its results report that *board meetings* significantly positively influencing firm-risk of high performing firms, whereas it would have a negative impact on firm-performance. In addition, the study also accepts hypothesis 3.5 partially only for high performing firms as its results show Bowman's '*paradox*' in their risk-return association. The study accepts hypothesis 3.6 again partly only for high performing firms where results show that *board tenure* might be causing a negative risk-return association in line with Bowman's '*paradox*'. The study results contradict hypothesis 3.7 as it finds a significant negative risk-return association for high performing firms, whereas a mixed risk-return association for low performing firms in overall and bull and bear sub-periods. However, in post-2013 periods low performing firms' results got reversed (see robustness tests).

The study's firm-control results are also mostly significant across return measures and sub-samples and in line with **its** initial observations.

4.5. Aspiration level results:

The FTAR and ITAR results are also mostly in line for the study's overall study period, and bull and bear sub-periods. The FTAR and ITAR results for corporate governance's influence on low performing firms' negative risk-return association many times show contradictory results in comparison to **its** main return measure's (ROA and CR) impact on it. DFT($FTAR_1$) also show a significant negative association under multivariate results, however DFT($FTAR_5$) presents a contradictory positive relationship under both ROA and CR measures. This might happen due to the wider deviation in firm's short-term aspiration-performance gaps, however, in the long-term in line with mean-reversion facet, such gaps become neutralised. The bull and bear sub-periods result in this regard mostly in line except DFT($FTAR_5$) always depict a negative risk-return association across all return measures. However, in case of high performing firms, DFT($FTAR_5$) again depict a negative risk-return association across all return measures in overall and bear periods. Conversely, in the bull periods DFT($FTAR_1$) presents a negative risk-return association for these firms.

4.6. Explanations of contradiction:

The study finds regular positive risk-return association for high performing firms, however, the corporate governance mechanisms impact on firm's risk-return association mostly show that they create a *paradoxical* relationship for these firms. Therefore, to explain this contradiction, the study divides its high performing firms again into five return-quintiles (i.e. Q1 to Q5) where Q1 implies firms with lowest operating performance and conversely Q5 firms would be the superior ones. Arguably, Q1 firms would undertake higher risk in order to rise up the pecking order with their peers. This might create a *paradoxical* risk-return association for them. On the contrary, Q5 firms would always display a conventional positive risk-return association.
The study results are exactly in line with these theoretical arguments as under Q1 (-.209 for ROA and -.209 for CR), the study finds a significant negative risk-return association for these high performing firms. Therefore, the observation under this study is that as the firms are rising in pecking order of returns among high performing firms, they are generating a positive risk-return association from a negative one in bottom quintiles. Accordingly, the impact of corporate governance mechanisms is mostly for these bottom quintiles firms, and irrelevant for higher quintiles high performing firms.

4.7. Robustness tests results:

The study conduct**s** two sets of robustness tests - by introducing two additional return measures i.e. *ROE* and *EBITDA ratio*; and testing **its** models for pre-2013 and post-2013 sub-periods (a 3-year period each) which would test any results variation post-implementation of a stricter corporate governance regimes for Indian firms. Table 5-6 (see next page)reports the Kendall's τ correlation results and multivariate regression results for my two robustness tests.[21] The study's univariate results are exactly in line with **its** main findings.

In addition, both robustness tests report the study's initial main multivariate findings that *board size* influences firm-risk negatively and firm-performance positively (see table 6). This is true for all firms (more robust for superior firms), across time-periods and in both pre- and post-2013 periods. On the contrary, here, the study finds that *board independence*'s impact on driving a negative risk-return association for both low and high performing firms is strengthened in post-2013 period i.e. under a stricter corporate governance regime. *Women directors' presence* and *board meetings* robustness results under additional return measures, on the other hand, prove the study's initial main findings for all firms, however, does not show any significant result when it tests for pre- and post-2013 periods. In case of *busy board*, additional return measures results are exactly in line with the study's initial main findings i.e. it mediates firm's Bowman's '*paradox*' risk-return association. However, it is interesting to note that under both pre- and post-2013, 3-year sub-periods, *busy board* impacts low performing firm's both firm-risk and firm-performance significantly negatively. But, in case of high performing firms, the study's initial main findings are in line with pre-2013 results, but post-2013 a conventional positive risk-return association is reported might be due to the stricter corporate governance regimes. Under robustness tests, *board tenure* does not report any significant results. On the contrary, *EDR* results under all robustness tests document a Bowman's '*paradox*' for both low and high performing firms. This implies that *EDR* is one of the most critical corporate governance mechanisms which influence firm-risk negatively whereas firm-performance positively without any time-specific (pre- and post-2013) intervention.

[21] The study does not report its aspiration level robustness tests results separately here for the sake of brevity.

Table 5: Kendall's τ correlation results (robustness tests with two additional return measures and pre- and post-2013 sub-periods)

This table reports Kendall's τ correlation results for 675 firms for the overall period, and pre- and post-2013 sub-periods after dividing them in above- and below-median firms based on undertaken respective return measures' (i.e. ROE and EBITDA ratio [*first robustness test*], and ROA and CR [*second robustness test*]) cross-sectional median values. Here, *ROE* stands for return on equity; *EBITDA ratio* denotes EBITDA-to-book value of assets; and also, *ROA* stands for return on assets and *CR* denotes cash ratio. SD denotes standard deviation of return measures. In addition, *BS Log* represents lognormal of board size (i.e. number of directors in the board); *ID* stands for independent directors (% of total directors); *WD* denotes women directors (% of total directors); *BM Log* depicts lognormal of number of board meetings; *BUSY BOARD Log* implies lognormal of number of directorships the executive directors are holding; *BT Log* denotes lognormal of average tenure of the board for the firms; *EDR Log* represents lognormal of executive directors remuneration. In addition, control variables of size, age, liquidity (lognormal values of respective measures) and leverage (D-E ratio %) of **study** model are also included. Here, all the variables are calculated yearly for the overall study period, and pre- and post-2013 sub-periods respectively on a rolling basis, and then panelled together for **this study's** further analyses.

	Below-median (low performing) firms				**Above-median (high performing) firms**			
Variables	**Return**	**SD**	**Return**	**SD**	**Return**	**SD**	**Return**	**SD**
Panel A. Robustness tests – two additional return measures								
	ROE		**EBITDA ratio**		**ROE**		**EBITDA ratio**	
ROE/EBITDA ratio	1.000	**-.144*****	1.000	-.011	1.000	**.213*****	1.000	**.207*****
ROE/EBITDA ratio		1.000	-.011	1.000	**.213*****	1.000	**.207*****	1.000
SD	**-.144*****							
BS Log	**.104*****	-.054	**.157*****	**-.071***	.000	**-.092****	-.044	**-.136*****
ID (%)	-.019	.050	.039	.058	-.009	.027	-.014	.004
WD (%)	-.005	.041	.008	**0.061***	.011	.021	-.002	.005
BM Log	-.017	-.006	-.008	-.031	.002	.025	.022	.041
BUSY BOARD Log	-.036	**-.060***	-.023	-.035	**-.072****	-.018	**-.100*****	**-.115*****
BT Log	.002	.008	-.015	.024	**-.071***	-.023	-.045	-.030
EDR Log	**.164*****	-.039	**.076****	-.057	**.076****	**-.122*****	.037	.001
Log SIZE	.034	.033	.039	-.050	.003	-.058	.039	-.009
Log AGE	.020	-.006	**0.061***	-.029	-.010	.012	-.024	-.028
DE ratio	**-.129*****	**.249*****	**.079****	-.006	**-.138*****	**.088****	**-.266*****	**-.203*****
Log C&CE	**.132*****	-.041	.036	**-.129*****	**0.068***	-.030	**0.067***	.019
Panel B. Robustness tests – pre- and post-2013 sub-periods								
Panel B1. Pre-2013 sub-periods								
	ROA		**CR**		**ROA**		**CR**	
ROA/ CR	1.000	**-.208*****	1.000	-.038	1.000	**.196*****	1.000	**.184*****
ROA/ CR SD	**-.208*****	1.000	-.038	1.000	**.196*****	1.000	**.184*****	1.000
BS Log	**.124*****	**-.075****	**.110*****	**-.097*****	.016	**-.117*****	-.019	**-.073***
ID (%)	-.015	.008	-.019	**.073****	-.005	.047	**-.067***	-.027
WD (%)	.059	.020	.053	**.099****	**0.073***	.036	.018	.069
BM Log	-.003	.031	-.024	.043	.003	.020	**.111*****	.019
BUSY BOARD Log	.060	-.039	-.017	**-.098****	-.028	**-.085****	-.035	**-.104****
BT Log	-.038	.059	-.002	.014	-.045	-.057	-.044	-.059
EDR Log	**.251*****	**-.096****	**.200*****	**-.093****	**0.071***	**-.077***	**.100****	-.030
Log SIZE	**.178*****	**-.091****	**.101*****	**-.149*****	-.025	**-.088****	-.046	-.062
Log AGE	**0.063***	-.044	**0.067***	**-.084****	.006	.001	-.037	.021
DE ratio	**-.066***	**-.060***	**.144*****	-.050	**-.380*****	**-.217*****	**-.268*****	**-.161*****
Log C&CE	**.208*****	**-.093****	**.084****	**-.109*****	**.087****	.001	.031	.046
Panel B2. Post-2013 sub-periods								
ROA/ CR	1.000	**-.265*****	1.000	-.058	1.000	**.168*****	1.000	**.125*****
ROA/ CR SD	**-.265*****	1.000	-.058	1.000	**.168*****	1.000	**.125*****	1.000
BS Log	.019	.018	**.115*****	-.014	.021	**-.168*****	.032	**-.157*****

ID (%)	**-.071***	**.089****	.008	.024	.029	.016	.027	.035
WD (%)	-.032	.054	**-.078****	.032	.046	.054	.022	.034
BM Log	-.017	-.044	.005	**-.069***	.030	**-.083****	**.099****	-.007
BUSY BOARD Log	-.041	-.050	-.035	-.042	-.008	**-.097****	.000	**-.091****
BT Log	-.045	-.006	-.032	.009	-.050	-.039	-.003	-.028
EDR Log	**.102*****	.025	**.185*****	.000	**.131*****	**-.098*****	**.174*****	**-.079***
Log SIZE	-.022	-.047	**.093****	**-.086****	.021	**-.129*****	.054	**-.120*****
Log AGE	.023	**0.065***	.055	**0.061***	-.050	**-.069***	**-.104****	**-.093****
DE ratio	**-.257*****	**.095*****	.038	**0.066***	**-.283*****	**-.173*****	**-.163*****	**-.112*****
Log C&CE	.037	-.051	**.116*****	-.049	**.136*****	**-.066***	**.148*****	-.027

*** Correlation is significant at the 0.01 level (2-tailed). ** Correlation is significant at the 0.05 level (2-tailed). * Correlation is significant at the 0.10 level (2-tailed).

Table 6: Panel FE regression results (robustness tests with two additional return measures and pre- and post-2013 sub-periods)

This table reports **panel FE** regression results (see equation 6) [under robustness tests] for 675 firms the overall period, and pre- and post-2013 sub-periods after dividing them in above- and below-median firms based on undertaken respective return measures' (i.e. ROE and EBITDA ratio [*first robustness test*], and ROA and CR [*second robustness test*]) cross-sectional median values. Here, σ (risk measure) is the dependent variable and firm's return (i.e. ROE and EBITDA ratio; and ROA and CR) is the main independent variable in respective models.[#] Here, *ROE* stands for return on equity; *EBITDA ratio* denotes EBITDA-to-book value of assets; and, also, *ROA* stands for return on assets and *CR* denotes cash ratio. Also, *BS Log* represents lognormal of board size (i.e. number of directors in the board); *ID* stands for independent directors (% of total directors); *WD* denotes women directors (% of total directors); *BM Log* depicts lognormal of number of board meetings; *BUSY BOARD Log* implies lognormal of number of directorships the executive directors are holding; *BT Log* denotes lognormal of average tenure of the board for the firms; *EDR Log* represents lognormal of executive directors remuneration. **This study** also incorporate**s** the control and dummy variables as usual in all robustness tests.[#] Here, all the variables are calculated yearly for the overall study period, and pre- and post-2013 sub-periods on a rolling basis, and then panelled together for **this study's** further analyses.

	Below-median (low performing) firms				**Above-median (high performing) firms**			
Variables	**Coefficient**	**t-test**	**Coefficient**	**t-test**	**Coefficient**	**t-test**	**Coefficient**	**t-test**
Panel A: Robustness tests – two additional return measures								
	ROE		**EBITDA ratio**		**ROE**		**EBITDA ratio**	
Constant	6.233	.564	6.858	3.272	-13.510	-.819	**7.289***	1.744
ROE/ EBITDA ratio	**-1.054*****	-10.605	.209	1.503	**1.488*****	13.779	**.715*****	4.100
BS Log	-2.300	-.268	**-2.878****	-2.000	-4.224	-.371	**-8.843*****	-3.136
ID (%)	.014	.143	.021	1.137	.130	1.056	-.041	-1.292
WD (%)	-.113	-.913	**.041***	1.634	-.031	-.157	-.049	-1.045
BM Log	**7.634***	1.651	-.891	-.914	-12.161	-1.591	**3.303****	1.994
BUSY BOARD Log	-1.795	-1.097	-.429	-1.313	1.041	.455	-.408	-.755
BT Log	7.074	1.459	.376	.395	5.100	.715	-.333	-.193
EDR Log	2.478	1.262	.043	.172	**-8.884*****	-3.837	-.408	-1.000
R^2	**54.5%**		**22.5%**		**64.2%**		**48.3%**	
Adj. R^2	**49.5%**		**17.7%**		**62.0%**		**45.0%**	
Panel B. Robustness tests – pre- and post-2013 sub-periods								
Panel B1. Pre-2013 periods								
	ROA		**CR**		**ROA**		**CR**	
Constant	**5.000***	1.924	2.269	.716	6.232	1.256	6.506	.804
ROA/CR	-.085	-1.097	**-.349*****	-5.155	**.522*****	4.963	**.424*****	3.074
BS Log	-2.481	-1.395	1.266	.592	**-4.735***	-1.500	**-6.243*****	-1.371
ID (%)	-.005	-.262	**.056****	2.390	.013	.343	.005	.104

WD (%)	.014	.513	.029	.866	-.015	-.308	-.063	-.881
BM Log	-.056	-.060	**2.095***	1.808	-.211	-.094	3.474	1.006
BUSY BOARD Log	-.153	-.399	**-1.072****	-2.326	.621	.839	1.453	1.370
BT Log	-.603	-.530	.027	.018	.469	.216	-1.900	-.627
EDR Log	.113	.277	-.092	-.188	**-1.245***	-1.858	-.833	-.735
R^2	**54.1%**		**31.3%**		**37.6%**		**46.3%**	
Adj. R^2	**50.1%**		**25.4%**		**32.3%**		**39.8%**	
Panel B2. Post-2013 periods								
Constant	5.433	1.487	**5.019***	2.021	8.679	1.872	**8.645***	1.857
ROA/CR	**-1.160*****	-15.005	**-.098***	-1.954	**.163***	1.957	.067	.969
BS Log	.293	.120	.131	.077	**-6.269***	-1.919	**-4.207***	-1.350
ID (%)	-.038	-1.217	**.042***	1.934	**.062***	1.576	**.090****	2.369
WD (%)	.047	1.109	-.007	-.227	-.069	-1.152	-.061	-1.164
BM Log	-1.346	-1.104	**-1.639***	-1.765	.786	.314	1.892	.888
BUSY BOARD Log	.112	.212	**-.584***	-1.497	**-1.509****	-2.284	-.416	-.692
BT Log	.507	.328	.447	.414	-.460	-.266	-.769	-.440
EDR Log	-.082	-.154	.256	.689	-.649	-.949	.122	.177
R^2	**55.7%**		**32.2%**		**18.9%**		**21.8%**	
Adj. R^2	**52.6%**		**27.3%**		**12.8%**		**14.3%**	

[#] The coefficients and t-test values of my firm-adjusted and industry-adjusted DFTs (1 year and 5 years respectively), control and dummy variables are not reported here for the sake of brevity.

*** Correlation is significant at the 0.01 level (2-tailed). ** Correlation is significant at the 0.05 level (2-tailed). * Correlation is significant at the 0.10 level (2-tailed).

Note: All regression models are good-fit at 0.01 significance level based on their F-test values from the ANOVA analysis. So, separately they are not shown here for the sake of brevity.

5. Discussions and conclusion

Empirical studies find two specific reasons under which a firm can show negative risk-return association in accounting context coined as Bowman's (1980) *paradox*. The first one is from the '*troubled*' firm context (Bowman 1982; Kliger and Tsur 2011; Dasgupta 2017; DasGupta and Pathak 2018; DasGupta and Singh, 2021) which implies that a poorly (low) performing firm undertakes higher operating risks to maximise operating profit, but, failed to do so. Accordingly, a negative risk-return association with high-risk and low-return occurs. On the contrary, the other reason is provided by Bowman (1980); Wiemann and Mellewigt (1998); etc. is the '*quality management*' perspective which can also cause a negative risk-return association. In this case, a firm with '*quality management*' could achieve higher performance with low operational risk-taking by using its *organizational hierarchical structure and decision-making processes* (Wiemann and Mellewigt 1998); *market power* (Cool et al. 1989); *firm-size* (Wiemann and Mellewigt 1998); and *diversification pattern* (Wiemann and Mellewigt 1998) most efficiently. However, in most cases this kind of superior (high) performing firms undertake higher risks only when there is a probability of higher expected returns. This would eventually attenuate a positive risk-return association for these firms.

To the best of my knowledge, no earlier study has examined the impact of individual corporate governance mechanisms in influencing both risk-return *paradox* and superior firms' positive risk-return association respectively for all firms. One of the only earlier study which puts some insights in this context was that of Chari et al. (2019) who present evidence that risk-return '*paradox*' is

aggravated by agency problems that contribute to CEO career concerns (Dewatripont et al. 1999), and could be mitigated (but not reversed) by various governance mechanisms (such as large block owners, market monitoring for corporate control, vigilant board, institutional owners and CEO incentive alignment). However, this study is different from Chari et al. (2019) in three contexts. Firstly, this study examines the role of individual corporate governance mechanisms in attenuating risk-return paradox and also positive association for both low (poor) and high (superior) performing firms respectively and find distinctive interesting insights unlike Chari et al. (2019) who undertake different composite measures of corporate governance for all firms at a time, and, don't find any significant impact of individual corporate governance mechanisms on firm's such risk-return associations. Secondly, here risk and return measures are calculated after adjusting for firm's own historical aspiration and its social aspiration in terms to industry peers. This implies that both firm's own heterogeneity (*market power*, *firm-size*, etc. discrepancies) and industry heterogeneity have been accounted for unlike Chari et al.'s (2019) direct measure of risk and return computed from ROA. Finally, Chari et al.'s (2019) paper is based on USA firms (i.e. developed market context) whereas this study uses Indian firms i.e. in an emerging market context with distinctive variability in regard to investors protection rights and risk-orientation in national culture. Accordingly, this study can argue that its results will portray different theoretical underpinnings for the concerned risk-return association and corporate governance literature.
One of the most significant results the study reports is that small *board size* and lower *women directors'* presence is causing the '*paradoxical*' risk-return association for low performing firms and they also develop a conventional positive one for high performing ones. On the contrary, large *board size* and higher *women directors'* presence could create a negative risk-return association for high performing firms. These results imply agency problems (Jensen 1993; Chari et al. 2019) and problemistic search behaviours (Gupta 2017; DasGupta and Pathak 2018) for low performing firms. On the contrary, for high performing firms, the study's observation is that higher women dominance in boards (Adams and Funk 2012) and large board size (contradicting empirical literature [see e.g. Sah and Stiglitz 1986; 1991; Cheng 2008; etc.]) are actually creating a risk-seeking behavior and thereby causing value-destruction (Andersen et al. 2007; and Chari et al. 2019) for these firms. Lack of quality management (Wiemann and Mellewigt 1998) is also evident in these firms.

Another interesting finding of this study is that *executive directors' remuneration* is driving a paradoxical risk-return association for both low and high performing firms. This implies that managerial compensation driven firm performance (Jensen and Meckling 1976) is evident in all Indian firms (in line with Akbar et al. 2017). However, irrespective of low (mixed under multivariate) or high performing firms, managers are risk-averse which depicts cronyism (Brick et al. 2006).

The study also reports that a *busy board*, higher *board tenure* and *board meetings* is only influencing a '*paradoxical*' risk-return association for high performing firms. The study reiterates Sarkar's (2009) findings for Indian firms as it presents negative impact of board busyness on firm-performance. On the contrary, in line with Fich and Shivdasani, (2006); Falato et al. (2014); etc., the study finds that busy directors are associated with higher risk-taking in high performing firms which might be due to less effective monitoring or implies value-reducing risk-taking (Andersen et al. 2007; and Chari et al. 2019). The study results contradict with the '*reputation hypothesis*' (Chen 2015) that higher *board tenure* mitigates the career concerns for board members with

enhanced reputation which in turn could generate higher returns at lower level of firm-risk. It rather finds that higher *board tenure* is impacting firm performance negatively whereas it has a positive influence on firm-risk. This also might depict a value-reducing risk-taking by these firm-managers (Andersen et al. 2007; and Chari et al. 2019) or complacency due to no career concerns. The study results support Jensen (1993) that in case of high performing firms which might not performing well higher *board meetings* is actually for problemistic firm risk-taking and not resulting in superior firm performance (see Lipton and Lorsch 1992; and Ntim and Oser 2011).

In this study, one of the most critical conceptualizations required is to identify a '*troubled*' firm or a firm with '*quality management*'. Accordingly, this study uses *prospect theory*'s (Kahneman and Tversky 1979) or different risk-preferences (Andersen et al., 2007) arguments to divide all firms based on cross-sectional median value of returns i.e. the *reference point* (in line with *strategic reference point theory* of Feigenbaum et al. 1996), firms above which (i.e. above-median or high performing firms) would be risk-averse, and on the contrary, below-median firms (i.e. low performing firms) would be risk-seeking. In line with *behavioural theory* (Cyert and March 1963), this study computes both firm's own *historical performance* and its *social performance* (Massini et al. 2005) based performance-aspiration gap for short-term (1 year) and long-term (5 years). This study's social performance-aspiration gap measure would also capture the weak decision-making abilities of managers who would pursue higher risk strategies with lower returns (see Anderson et al. 2007). Presumably, this study expects a negative risk-return association for low performing firms and a positive one for high performing firms. However, for high performing firms with '*quality management*' and amidst distinctive influential corporate governance mechanisms, low risk – high return situations could also entail a Bowman's '*paradox*'.

The study report**s** that low performing firms as defined from *reference point* (Fiegenbaum et al. 1996) and *behavioural theory* (Cyert and March 1963) viewpoints depict a '*paradoxical*' (i.e. negative) risk-return association. On the contrary, high performing firms overall show a conventional positive risk-return association. However, when the study does quintile study among high performing firms, it finds a negative association among the below-median ones. This has validated the study's corporate governance influence under individual mechanisms as it reports mixed impact in regard to risk-return association for both low and high performing firms.

So, in summary, the study can conclude that most of the corporate governance mechanisms are strongly influencing the '*paradoxical*' risk-return association across firms. More specifically, each of the studied corporate governance mechanisms individual influence in attenuating both *paradoxical* and conventional risk-return associations for firms in Indian context has never reported before. The study results also holds true across market cycles; strategic reference points; return measures; regulatory shifts; and also, after controlling for firm- and industry-level heterogeneities.

The study findings would be of immense help to firm-managers to understand the strengths or otherwise of their corporate governance practices, to the investors to undertake their portfolio decisions in regard to established risk-return associations under different corporate governance settings, and above all to the regulators and policy-makers to develop a more balanced corporate governance framework for firms. Its results can also be generalised especially in emerging market contexts with similar corporate governance regimes. However, one of the limitations of this study

is that in many corporate governance literature ownership patterns is used in evaluating firm performance and risk, which is ignored here in examining corporate governance role in risk-return paradox. This is because most of the sample firms are family-controlled with block holdings. Future researchers could also examine the impact of individual corporate governance mechanisms on firm's '*paradoxical*' or conventional risk-return association from a cross-country and/or development country perspective. The influence of legal system, national culture, economic development status, etc. can add further dimension to such kind of studies.

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