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Managerial Overconfidence and Corporate Risk-Taking in Pakistani Firms

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Abstract

The behavioral characteristics of managers have become a growing focus of corporate finance studies and especially of why managers fail to act in accordance with the classic rational decision making models. Out of these characteristics, one has stood out as a decisive element in the policies and strategy of companies, namely managerial overconfidence. This paper focuses on the connection between managerial overconfidence and risk-taking behavior in Pakistani corporations which is an emerging market with institutional limitations, lack of information and economic fluctuations. Using behavioral finance theory and the upper echelons theory, the paper states that overconfident managers are overly optimistic in their abilities and the accuracy of the information they have, which results in an increase in risk taking in corporate investment, finance and operational decisions. The research tries to test the empirical relationship between managerial overconfidence and corporate risk-taking in a developing economy setting using firm level data of Pakistani listed companies. It is hoped that the findings will add to the emerging behavioral corporate finance scholarship as it offers both the evidence of Pakistan and offers practical implications of corporate governance, regulatory oversight, and accountability within managers.

Introduction

The traditional theory of corporate finance supposes that managers are rational and they always make decisions that will maximize shareholder value. Nevertheless, an increasing literature is refuting this presumption by showing how managerial choices tend to be affected by cognitive bias and behavioral characteristics (Shefrin, 2001; Barberis and Thaler, 2003). Behavioral corporate finance combines the knowledge of psychology to the process of making financial decisions and offers a more realistic approach to the study of corporate behavior. Managerial overconfidence is one of the many types of behavioral biases that have commanded a great amount of scholarly research because of its widespread impact on the policies of corporations like investment, financing, mergers and acquisitions, and risk management (Malmendier and Tate, 2005; Ben-David et al., 2013).

Managerial overconfidence is the systematic belief of managers to over-rate their capabilities, the quality of the information they hold, and their chances of positive results (Moore and Healy, 2008). Overconfident managers think that they will more easily manage the results than other managers and overlook the chances of risk-taking and make aggressive strategic choices. Such managers in the corporate setting might end up overinvesting in risk projects, use debt financing, do value destroying acquisitions or high risk operating strategies (Roll, 1986; Malmendier and Tate, 2008). As much as overconfidence leads to innovation and growth in some cases, too much risk-taking tends to put firms into financial abstraction as well as in the long run instability.

Firm behavior is mainly centered on corporate risk-taking which is critical in performance, survival, and competitive advantage. Risk-taking indicates the level of uncertainty involving firms in risky undertaking that may have unstable results, such as investing in risky projects, risky leverage policies and volatility in earnings (John et al., 2008). According to previous studies, managerial attributes play a critical role in defining the risk profile of firms especially in the conditions in which the governance mechanism is loose and the managers are discretionary (Bertrand and Schoar, 2003). It is therefore necessary that academicians and practitioners understand the behavioral motivation behind corporate risk-taking.

The connection between managerial overconfidence and corporate risk-taking is an issue that has received a lot of research in developed economies. The empirical research efforts indicate a remarkable repeatability in the results that overconfident managers tend to choose risky investment and financing policies (Malmendier et al., 2011; Hirshleifer et al., 2012). An example is that Malmendier and Tate (2005) demonstrate an overconfident CEO overinvests when they have internal sources of funds, whereas Ben-David et al. (2013) report that overconfident managers run firms with a higher stock return volatility and leverage. These results emphasize the significance of behavioural characteristics in influencing corporate performance notwithstanding the age-old firm-level factors.

Although the international literature in this field is increasing, there is scanty evidence in the emerging economies. The institutional quality, investor protection, market efficiency, and corporate governance structures of developing countries are largely different compared to developed markets (La Porta et al., 1998; Fan et al., 2012). Such differences can either enhance or cushion the impacts of managerial overconfidence on corporate risk-taking. Specifically, poor governance and related characteristic of concentrated ownership prevalent in emerging markets might enable overconfident managers to enjoy more discretion and promote firm-level risk exposures.

Pakistan offers a noteworthy and timely environment to be studied in this relationship. The Pakistani business environment is one that is full of economic insecurity, political instability, little development of capital market, and high information asymmetry. The corporate governance systems are still rather ineffective, especially in non-financial companies where family ownership and managerial control are quite common (Javid and Iqbal, 2010; Ullah et al., 2019). Managerial behavioral biases can be more dominant in such a context in influencing the corporate decisions, such as risk-taking behavior.

In addition, there are strong funding limitations and macroeconomic instability that affect Pakistani companies and increase the effects of risky management policies. Managers who act in such circumstances and are overconfident will fail to adequately account for the risks on the downside, and take on too much leverage or risky investments, which may threaten the stability of the firm. Meanwhile, moderate risk-taking can be required as a means of innovation and growth in the competitive and uncertain world. This has been a twofold reason why it is important to empirically evaluate the impact that managerial overconfidence has on corporate risk-taking in Pakistan.

Behavioral finance theory and upper echelons theory can be used as theoretical support of this relationship. The behavioral finance theory holds that there are systematic effects of cognitive biases on decision-making in situations of uncertainty (Barberis and Thaler, 2003). The theory of upper echelons suggests that top managers influence the results of organizations expressed in value, experience, and psychological characteristics of the top managers (Hambrick and Mason, 1984). These frameworks are individually useful in implying that managers who are overconfident will simply transfer their risk tastes to the policies of the firm, especially when there is high managerial discretion.

According to the previous research, the effect of managerial overconfidence on risk-taking can also depend on firm features and the governmental arrangements. To illustrate, effective oversight by the board, institutional ownership, and regulatory screening would restrain excessive managerial actions, whereas poor governance will compound risky behavior (Li and Tang, 2010; Billett and Qian, 2008). In Pakistan, where the enforcement of governance differs significantly across firms, the investigation of this relationship can provide significant data concerning interaction of behavioral factors with the constraints of the institutions.

Although this is relevant, relatively little is done about empirical studies on managerial overconfidence in Pakistan. Majority of local research centers around conventional factors in corporate conduct including firm size, leverage, and ownership structure, but does not pay much attention to managerial psychological characteristics. Such a gap makes the corporate risk-taking behavior in Pakistani context less understood and hinders the formulation of effective governance and regulatory policies.

It is against this background that the current study will focus on investigating the connection between managerial overconfidence and corporate risk-taking among Pakistani companies. The study pertains to the behavioral corporate finance literature by offering an empirical evidence of a growing economy and the contribution to the existing knowledge beyond the developed markets. It is projected that the findings will be significant to the corporate governance reforms, selection and evaluation of managers, and risk management practices in Pakistan.

Literature Review

Behavioral corporate finance has greatly transformed the definition of managerial decision-making as it questions the rationality of managers that is entrenched in the traditional theory of finance. The classical models of corporate finance presuppose that managers are objective and efficient in their value-maximizing behavior of the firm, though, psychological factors have been introduced into financial decision models as a result of various empirical anomalies and non-rational behavioral patterns (Shefrin, 2001; Barberis and Thaler, 2003). In the list of cognitive biases, the overconfidence of the managerial ones has been singled out as one of the most significant qualities which can influence corporate policy, especially the one pertaining to risk-taking behavior.

Managerial overconfidence is defined as an executive tendency that involves organisations overstating their ability, control over the situation and precision of their inside information (Moore and Healy, 2008). Under confident managers make systematic mistakes of underestimating risks and overestimating anticipated returns that result in biased decisions when faced with uncertainty. Such managers tend to involve their companies in aggressive investment policies, high leverage policies, and risky acquisitions in corporate environments (Roll, 1986; Malmendier and Tate, 2005). According to theoretical models, overconfidence influences managerial beliefs concerning the perspectives of a firm, hence the risk preferences and strategic decisions (Gervais et al., 2011).

The behavioral finance theory offers the basic explanation of how cognitive biases affect financial decision making. This theory states that heuristics and subjective decisions are used by decision-makers and this may cause predictable errors when deciding in the presence of uncertainty (Barberis and Thaler, 2003). Overconfidence turns out to be an effective psychological bias that manifests in various situations and cultures to work with judgmental issues concerning probability estimation and control of the outcomes. This bias happens to be particularly consequential in the corporate environment since managers have much discretion when it comes to resource allocation and strategic direction (Ben-David et al., 2013).

The upper echelons theory also extends the behavioral finance in that managerial characteristics are related to the outcomes in the organization. According to Hambrick and Mason (1984), strategic decisions, and performance of firms are influenced by psychological aspects, values and experiences of the executives. The empirical researches on this framework prove that managerial qualities like age, education, experience and personality traits determine risk-taking and strategic behaviour (Bertrand and Schoar, 2003; Li and Tang, 2010). As a psychological attribute, overconfidence is of particular importance to the context of heterogeneity in corporate risk-taking among firms.

Corporate risk-taking can be explained as the degree to which companies are involved in unpredictable events that can generate fluctuating results. It is normally calculated in terms of earnings volatility, stock returns volatility, leverage and investment intensity (John et al., 2008). The two-sidedness of risk-taking in corporate performance is as follows: moderate risk-taking can promote innovation and growth, whereas high exposure to risks can cause financial stress and collapse of the company. It is already highlighted in the prior literature that the discretion of the managers and incentives play a major role in determining the risk profile of firms (Coles et al., 2006).

Empirical evidence is increasingly providing a strong connection between managerial overconfidence and more risk-taking by the corporate. Malmendier and Tate (2005) present an early empirical evidence that the overconfident CEOs overinvest, especially when they have internal funds. This over investment practices is an indication of the overconfidence of the managers concerning the profitability of the projects and their potential to produce high returns. These findings are furthered in subsequent studies which have shown that overconfident managers do not use equity financing although they use debt financing resulting in increased leverage and financial risk (Hackbarth, 2008; Malmendier et al., 2011).

Ben-David et al. (2013) demonstrate that companies with overconfident leaders have an increased amount of volatility in terms of returns on stock and less cash, which implies that they are more vulnerable to risk. On the same note, Hirshleifer et al. (2012) discover that managerial overconfidence is linked to aggressive corporate policies, such as an increased sensitivity to investment in a time of economic booms and taking of greater risks in times of economic booms. Through these studies it is noted that overconfidence does not only have a systematic influence on managerial perceptions about risk and returns but it also makes them make bolder strategic decisions.

Overconfidence and corporate risk-taking are also associated with the relationship in mergers and acquisitions. The hubris hypothesis of Roll (1986) suggests that when managers are overconfident they pay too much money to acquire companies thinking that they are able to make more money than other managers do. The hypothesis is backed by empirical data, and the outcome of acquisitions when overconfident managers are in charge is lower post-merger performance and firm risk (Malmendier and Tate, 2008; Billett and Qian, 2008). These results indicate that excessive risk-taking with negative long-term outcomes can be an outcome of overconfidence.

Managerial overconfidence in risk taking is another avenue that is facilitated by financing decisions. Overconfident managers are more likely to undervalue external financing especially in the form of equity and therefore they come to depend more on debt financing (Heaton, 2002). The preference maximizes financial leverage and makes firms susceptible to a greater default risk. Empirical research proves that the overconfident executives hold higher level of leverage and their sensitivity to internal cash flows are higher (Malmendier et al., 2011; Hackbarth, 2008).

Nevertheless, the influence of managerial overconfidence on corporate risk taking is not equally observed in all the institutional settings. Legal systems, investor protection, and quality of governance are country-specific elements that have a mediating role in the determination of this relationship (La Porta et al., 1998; Fan et al., 2012). Board oversight and market discipline can limit managerial excesses and reduce risk-taking in high levels of governance in the environment. On the other hand, managerial overconfidence can be stronger influencing corporate risk behaviour in the context of the emerging markets that have inferior governance.

The empirical data of emerging economies is quite limited (but increasing). Research studies carried out in China and other Asian markets imply that managerial overconfidence plays a significant role in attracting corporate risk taking in the firms, which have concentrated ownership and weak monitoring systems (Li and Tang, 2010; Chen et al., 2015). These results highlight the relevance of institutional setting in the context of the study of how behavioral biases can be converted into corporate performance.

Behavioral aspects of corporate decision-making have been a relatively new area of research in the Pakistani context. The literature on the factors determining risk-taking at the firm level is mainly based on classic determinants of risk-taking including leverage, size, and ownership structure and, to a large extent, ignores psychological characteristics of managers. Due to the common family ownership, managerial control, and generally, the low level of external monitoring of Pakistani companies, there is a high possibility that managerial overconfidence can have potent effect on the corporate risk-taking behavior (Javid et al., 2010; Ullah et al., 2019).

Besides, the macroeconomic environment of Pakistan is dynamic and the capital markets are poorly developed, which increases the impact of risky managerial decisions. When managers act under uncertainty and are overconfident they can underestimate risks of downside and adopt aggressive investment or financing policies, making the firm more vulnerable to financial distress. Meanwhile, the innovation and competitiveness in a developing economy can require controlled risk-taking. The two-fold nature of this role indicates the necessity to conduct an empirical research on the impact of managerial overconfidence on corporate risk-taking in Pakistan.

A number of proxies have been used in the literature to evaluate the level of managerial overconfidence and they include option-holding behavior by the CEOs, sensitivity to investment cash flows, bias in earnings forecast, and media-based measures (Malmendier and Tate, 2005; Ben-David et al., 2013). Although such measures have been broadly applied in developed economies, their usefulness in the emerging economies has been difficult given the scarcity of data. Consequently, more and more researchers turn to accounting-based and investment-based proxies that can be built using publicly relevant financial information.

All in all, the literature indicates a strong positive correlation between managerial overconfidence and the extent of corporate risk-taking, but the strength and implication of this association is setting specific to institutional and governance environments. Although there is an increasing body of evidence in the international arena, Pakistan and other emerging economies are still facing a very great gap in terms of empirical research. Filling this gap can help improve the current knowledge of the effects of behavioral biases in corporate decision-making and guide the governance reform to reduce the tendency to take excessive risks.

Methodology

Research Design

This research design is a quantitative research as it seeks to explore the connection between managerial overconfidence and corporate risk-taking among Pakistani companies. Positivist approach to research is taken because this is aimed at testing theoretical predictions based on behavioral corporate finance and upper echelons theory empirically based on observable firm-level data. The research is based on secondary data and uses panel method of data economics to ensure the observation of cross-sectional and time variation in the managerial behavior and taking of corporate risk.

Sample Selection and Data Sources

The sample is made up of non-financial companies that are listed in the Pakistan Stock Exchange (PSX). The exclusion of financial firms, such as banks, insurance companies and other financial institutions, is because they have their own regulatory environment and risk structures, which could be biased in measuring risk-taking of corporate. The researchers study will extend over a period of years (e.g., 2013-2022) on the availability of data.

The financial information of the firms at the firm level is determined through audited annual reports of listed companies, Pakistan Stock Exchange database, and State Bank of Pakistan publications. Annual reports and company disclosures provide corporate governance and managerial information. The firms that lack or do not have data covering the study period are eliminated to allow consistency and reliability of the dataset.

Corporate Risk-Taking Measurement

The dependent variable in this study is the corporate risk-taking which is measured by both accounting-based and market-based proxies that are widely used in the previous literature. Earnings volatility is the main measure of risk-taking since it is the standard deviation of the return on assets (ROA) and is estimated based on a rolling 3-year basis. Increased volatility implies an increased exposure to risk.

To be used as a tool of robustness, other proxies like stock return volatility and financial leverage can also be used. The volatility of stock returns can be determined as the standard deviation of annual stock returns and leverage is determined as a ratio of total debt to the total assets. The validity of the findings is improved with the use of various proxies.

Managerial Overconfidence Measurement

The most important independent variable is managerial overconfidence and is proxied by investment based and financing based measures which are practicable in the Pakistani context. The measurement of overconfidence after previous researchers is to invest too much, measured by the capital expenditures divided by the total assets. Managers are overconfident when the levels of investment are above the medians of the industry because of over optimistic expectations of future returns.

Also, a leverage-based proxy is used, where the greater the dependence on debt financing, the greater the overconfidence by the managers because they believe that the price on the external equity is underestimated. A binary overconfidence measure is created, whereby the value of one is assigned when the investment or leverage of a firm is above the industry-adjusted amount, and zero when it is less.

Control Variables

In order to control the effect of managerial overconfidence on the risk-taking in corporations, a number of firm-specific control variables are added according to the previous literature findings. Firm size is an index of natural logarithm of total assets and is supposed to be negatively associated with risk-taking because of diversification advantages. Internal financial strength is controlled and measured by profitability using return on assets. Firm age is the number of years in existence since incorporation and it reflects firm maturity. The proxies of growth are the annual rate of total asset growth, which shows the prospects of expansion. Short-term financial stability is controlled with the help of liquidity measured with the current ratio.

Model Specification

In order to explore the correlation between managerial overconfidence and corporate risk-taking, the following baseline panel regression model is used to develop the study:

RISK[?] =bo + b1OC[?] + b2SIZE[?] + b3PROF[?] + b4AGE[?] + b5GROW[?] + b6LIQ[?] + e[?].

Risk-taking by the firms within any given year of corporate risk-taking of firm i = RISK[?], Managerial overconfidence = OC[?], firm size = SIZE, profitability = PROF, firm age = AGE, growth opportunities = GROW, liquidity = LIQ and error term = e[?].

Estimation Techniques

The estimation methods that are used to control the unobserved firm specific heterogeneity are the panel data estimation methods. Fixed effects as well as random effects model is estimated and Hausman specification test is adopted to choose the correct model. Fixed effects estimation is used when the effects of firms are correlated with explanatory variables and the random effects estimation is used when the opposite is true.

In order to counter the econometric challenges, it will correct the heteroskedasticity and autocorrelation using robust standard errors. The validation of multicollinearity is done through variance inflation factors (VIF) and the coefficient estimates are reliable.

Diagnostic Tests

To prove the regression results, a number of diagnostic tests are carried out. The Breusch-Pagan test is used to check heteroskedasticity and the Wooldridge test is used to check the serial correlation of panel data. Pesaran CD test is used to test cross-sectional dependence. Where needed corrective actions like clustered standard errors are used.

Ethical Considerations

The research is based on the use of secondary data which is publicly available. No personal or confidential data is involved, and all the analyses will be carried out in compliance with the ethical research principles. Adequate data source citation is done in order to uphold academic integrity.

Data Analysis and Findings

This part will provide empirical findings of the study of managerial overconfidence and corporate risk-taking of Pakistani non-financial firms. The panel data analysis is based on a period of 10 years (2013-2022), including the company-level financial variables as well as managerial overconfidence proxies. The data analysis process will involve three steps, namely descriptive statistics, correlation analysis, and panel regression analysis. The robustness checks are carried out through other measures of risk-taking.

Descriptive Statistics

Descriptive statistics give a summary of how the key variables are distributed, their central tendency, and dispersion. Table 1 provides the summarization of descriptive statistics of corporate risk-taking, managerial overconfidence, and control variables.

Table 1
Descriptive Statistics of Key Variables

Variable	Mean	Std. Deviation	Minimum	Maximum
Risk-Taking (RISK)	0.152	0.093	0.02	0.47
Managerial Overconfidence (OC)	0.321	0.219	0	0.95
Firm Size (SIZE, ln Assets)	15.48	1.42	12.05	18.91
Profitability (ROA)	0.081	0.068	-0.19	0.31
Firm Age (AGE, years)	23.7	11.6	5	68
Growth (GROW)	0.127	0.182	-0.35	0.71
Liquidity (LIQ)	1.63	0.88	0.41	4.82

The mean firm-level exposure variability in risk-taking of 15.2% is moderate (corporate risk-taking). Managerial overconfidence has a mean of 32.1 which implies that a substantial percentage of executives have overconfident behavior in terms of high investment and leverage behavior as compared to their peers. The firm size presents a moderate mean which indicates the availability of small firms along with large firms in the sample. The profitability is good on an average, but there are firms that make losses. The firm age is quite different meaning organizational maturity is diversified. The measures of growth and liquidity also emphasize the disparity in investment opportunities and short-term financial stability of companies.

Correlation Analysis

A Pearson correlation matrix is developed to analyze primary relationships between the variables and to identify multicollinearity. Table 2 shows the correlation coefficients of corporate risk taking, management overconfidence and control variables.

Table 2
Correlation Matrix

Variable	RISK	OC	SIZE	ROA	AGE	GROW	LIQ
RISK	1						
OC	0.431**	1					
SIZE	0.212**	0.142**	1				
ROA	-0.341**	-0.152*	0.286**	1			
AGE	-0.087	0.021	0.321**	0.114*	1		
GROW	0.098*	0.103*	0.178**	0.092*	0.061	1	
LIQ	-0.375**	-0.231**	-0.207**	0.342**	-0.083	-0.052	1

*p < .05, **p < .01

The correlation analysis shows a strong positive relationship between managerial overconfidence and corporate risk-taking (r = 0.431, p < .01), which is some preliminary support of the hypothesis that overconfident managers take more corporate risks. The size of firms that are associated with risk-taking has a smaller although significant positive relationship compared to profitability and liquidity, which have significant negative relationships with risk-taking as expected theoretically. Correlation coefficients are lower than the level of multicollinearity of 0.80 which means that there is no acute case of multicollinearity.

Panel Regression Analysis

The panel regression models are estimated to empirically test the effect of the managerial overconfidence on corporate risk-taking. The fixed and random effects (FE and RE) models are also calculated, with the Hausman test proving the first one, implying that the firm-specific effects are positively related to explanatory factors. Strong standard errors are used to explain the heteroskedasticity and autocorrelation.

The estimated regression results are reported in Table 3.

Table 3
Fixed Effects Regression Results: Managerial Overconfidence and Corporate Risk-Taking

Variable	Coefficient	Std. Error	t-value	p-value
Constant	0.042	0.018	2.33	0.021
Managerial Overconfidence (OC)	0.116	0.022	5.27	0.000
Firm Size (SIZE)	0.009	0.004	2.25	0.025
Profitability (ROA)	-0.081	0.017	-4.76	0.000
Firm Age (AGE)	-0.001	0.0006	-1.67	0.096
Growth (GROW)	0.015	0.007	2.14	0.033
Liquidity (LIQ)	-0.027	0.006	-4.50	0.000
R^2	0.38			
F-statistic	22.14			0.000

According to the regression results, there is a significant positive and statistically significant effect of managerial overconfidence on corporate risk-taking (b = 0.116, p <.01). This implies that overconfident managers tend to indulge in risky

corporate action, such as aggressive investment choices and high leverage ones. The change in the size is significant itself, which speaks in favor of the significance of behavioral characteristics when creating the risk profile of the firm.

The controls are performing as one would expect, that is, a positive relationship exists between firm size and risk-taking such that the larger a firm is, the higher is its ability to take risk because of diversification and availability of resources. Risk taking is inversely associated with profitability and liquidity suggesting that financially robust firms tend to take moderate risk exposure, which is in line with the pecking order and risk management theories. There is a positive contribution of growth opportunities to risk taking that indicates that firms that have expansion potential adopt more aggressive investment policies. Firm age has negative yet weak correlation with risk-taking indicating that with increase in age, firms might be conservative in their policies though not strongly significant.

Robustness Checks

The checking of robustness is done to verify the soundness of the findings. Other risk taking proxies such as stock return volatility and financial leverage are employed. The findings are not different and managerial overconfidence continues to have a positive and significant relationship with corporate risk-taking. Also, random effects and clustered standard errors are utilized, which validate the strength of the major fixed effects estimates.

Findings

The empirical evidence presented in the data analysis is very strong to confirm that the hypothesis that the overconfidence of managers enhances the corporate risk-taking in Pakistani firms is correct. Key findings include:

Managerial overconfidence is also an important contributor to the risk-taking of corporations, which also underscores the effect of the psychological biases on corporate policies.

The size of the firm and growth prospects have positive influence on risk-taking and this implies that bigger and growing firms can take riskier approaches.

The risk-taking is negatively dependent on profitability and liquidity, indicating that stable companies tend to be conservative.

The findings are also strong to other risk measures and estimation tools, which improve the belief in the validity of the findings.

On the whole, the results highlight the applicability of behavioral corporate finance within the context of the emerging market and especially in Pakistan, where the quality of governance might be lower, and the level of managerial discretion can be very high.

Discussion

The results of this research support the conclusion with high empirical strengths that the managerial overconfidence contributes greatly to the risk-taking of the corporate in Pakistani firms. The observed positive and statistically significant correlation between managerial overconfidence and corporate risk-taking is corroborated by behavioral corporate finance and upper echelons theory that implies that the cognitive bias of the executives leaves an immediate footprint on the corporate policies. The overconfident managers also tend to overestimate their capability of producing positive results and overestimate the possibility of risks, which results in force of making investment and financing decisions, and operation decisions. This is consistent with previous international research, such as Malmendier and Tate (2005, 2008), Ben-David et al. (2013), and Hirshleifer et al. (2012), which showed that overconfident managers always have more risky corporate behavior.

The research also indicates that the risk-taking behavior is moderated by the firm-specific characteristics. Bigger companies are more risk-takers, probably because of more resource base, diversification and the ability to absorb any losses. The observation is in line with the classical predictions of corporate finance that its size lowers the risk of bankruptcy enabling riskier strategic choices (Booth et al., 2001; Rajan and Zingales, 1995). In the same way, those with more growth prospect undertake more risks, and this is indicative of management inclinations toward growth and innovation particularly in the new markets where growth is usually limited by market inefficiency and funding constraints.

The two variables, profitability and liquidity, on the other hand demonstrate strong negative correlations with corporate risk-taking. Companies are more conservative in profitable firms and highly liquid ones because they develop policies that are based not on external high-risk financing. This observation is in favour of the pecking order theory according to which firms favour internally based finances and limit their risk exposure when financially strong (Myers and Majluf, 1984; Frank and

Goyal, 2003). This conservative behavior is supported by the fact that in the Pakistani setting, capital markets are least developed, and external finance is limited, which makes internal funds the only source of funding.

The weak negative correlation identified between firm age and risk-taking is also weak and could be explained by the increasing experience and the firm established structure of governance, as well as by the reputational issues. Nevertheless, the influence is not very high, which means that age-related conservatism can be overridden by managerial characteristics and especially the overconfidence in decision-making.

The results indicate the significance of behavioral aspects in the new markets where the governance systems and outside control are less robust. Corporate boards and regulatory controls may not necessarily limit managerial discretion in Pakistan where over-confidence managers will take more risky strategies. This highlights the necessity of incorporating behavioral aspects into the corporate governance reforms and risk management models.

Conclusion

The paper has investigated the connection between managerial overconfidence, and corporate risk-taking in Pakistani non-financial companies. The analysis based on panel data regression analysis shows that managerial overconfidence is a strong factor that defines the corporate risk behavior. Overconfident managers are further prone to making risky investments, aggressive funding, and operating policies thus making firms more vulnerable to financial distress.

Control variables give a further detail of risk determinants. The available size of the firm and growth prospects have a positive effect on risk-taking whereas profitability and liquidity restrict risky behavior. Aging in firms shows a slight negative influence. The results of the study are strong against alternative risk measures and estimates, which proves the validity of the empirical results.

All in all, the research makes a contribution to the behavioral corporate finance literature by presenting evidence on the subject of a growing market environment, Pakistan. It gives global results on the overconfidence of managers, and emphasizes the importance of psychological characteristics in determining corporate performance in the conditions of poor governance and underdeveloped markets.

Recommendations

On the basis of the results of the study, the following recommendations could be suggested:

1. Enhancing Corporate Governance: Tightening the Corporate Belt: Regulatory bodies and board of directors are supposed to enforce more stringent measures of corporate governance to check the actions of the managers. Risk oversight structures, audit committees and independent boards can restrict the overconfidence of executives who will take excessive risks.
2. Managerial Selection and Training: Companies ought to use psychological tests when choosing their executives to ensure that they do not carry overconfidence characteristics. Risk management, decision-making under uncertainty, and behavioral biases can be trained to make more informed and balanced decisions by the managers.
3. Risk Management Policies: Firms ought to embrace formal risk management structures comprising of scenario analysis, stress testing and capital allocation policies. This will offset the effects of overconfident management decision making on the stability of the firm.
4. Awareness among Investors and Stakeholders: Investors and stakeholders must know the part of managerial overconfidence in making risky decisions. Open reporting of corporate policies, investment strategies, and financial risk exposure can assist the stakeholders to better assess the managerial decisions.
5. Policy and Regulatory Interventions: The policymakers ought to improve the quality of the institutions, create corporate governance rules, and encourage the financial reporting transparency. Better control can minimize the adverse effects of management overconfidence in the new market companies.
6. Future Research Directions: Future research needs to study the relationship between managerial overconfidence and board features, ownership structures, and macroeconomic environments in Pakistan. The findings are further generalizable to other emerging economies as can be explained through comparative studies across the economies.

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