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INVESTIGATING FREE CASH FLOW, AGENCY PROBLEMS, AND OVERINVESTMENT: A COMPARATIVE ANALYSIS OF SMALL-CAP AND LARGE-CAP FIRMS

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Abstract
The paper has examined the relationship between free cash flow, agency problems and overinvestment by the small-cap and large-cap company between the period of 2015 and 2025 in Pakistan Stock Exchange. The method used by the researcher was a quantitative approach to the research and secondary data consisting of 150 small-cap and large-cap companies. The ways of determining the free cash flow include operating cash flow minus capital expenditure and overinvestment is established by residuals of anticipated investments. Proxies of agency costs were the asset utilization ratio, operating expense ratio and discretionary accruals. It was done through panel data regression analysis basing on fixed and random effects models to test the hypothesized relationships. The findings have revealed that the effect of free cash flow on overinvestment in the two kinds of firms was positive, but the association was stronger in the small cap firms. This relationship was also moderated by agency issues to a considerable extent which indicated that the greater the agency cost, the greater the tendency to overinvest where the level of free cash flow was large. The comparative analysis revealed that there was more efficiency in investments and less agency costs among large-cap firms as compared to small-cap firms. These are important findings to the corporate governance practice, investment policies and regulatory measures in the capital market within Pakistan.

INTRODUCTION

The issue of optimal resource allocation has been a concern of corporate financial management since long ago with the objective of increasing the shareholder wealth and ensuring sustainable growth. One of the most crucial financial indicators that establish the financial health and investment capability of a firm among the other financial metrics that managers utilize to make decisions is the free cash flow (Jain, 2024). The free cash flow is a cash that the firm is left to settle all its expenses that it must settle as well as the capital expenditure that it must meet leaving it with discretionary funds that can then be used in growing the firm, payment of dividends or even retained to be used when an opportunity arises. However, the amount of huge free cash flow is what can make a two-sided sword on the side of organizations particularly in emerging market economy like Pakistan whose corporate governance structures are not as strong as that in the developed economies (Azeem et al., 2023). The proposed agency theory by Jensen and Meckling is the existence of conflict of interests between the shareholders and the managers due to the separation of the ownership and the control (Gwala & Mashau,

2023). The agency problems are particularly acute with the high level of free cash flow of companies since managers can be lured to use the money on actions which will advantage them rather than maximizing the shareholder value. This is what is known as free cash flow phenomenon which denotes that managers who have a high amount of free cash flow will over invest, in other words, they will invest in projects that have a negative net present value, empire building or overindulgence in perquisites. This move has the potential of killing the shareholder wealth and reducing the overall efficiency in the company and this is why it is such a big issue among the investors, regulators and policymakers (Al-Faryan, 2024).

The Pakistan stock exchange forms one of the biggest capital markets in the South Asian region and possesses the greatest number of companies of various sizes, market capitalization and nature of operation (Tauseef & Dupuy, 2022). Two types of companies on this market are small-cap and large-cap companies, which have their own challenges and opportunities in terms of the resource allocation, governing system, and strategies of expansion. Big-cap companies tend to have a well-established system of governance and greater transparency as well as professional management team and increased scrutiny by institutional investors and analysts (Malokani et al., 2023). Small-cap companies, on the other hand, are expected to have a concentrated ownership structure, less external controls, and less detailed governance systems, which could present them with agency problems and poor investment policies (Ahmad et al., 2022). The major difference between the two types of firms in terms of different effect of free cash flow and agency issue on investment behavior by these two categories of firms is significant to the different stakeholders (Saeed et al., 2023). The informed decision-making may be applied in their portfolio selection and risk assessment strategies to investors. This knowledge of the relationships can shape the development of the appropriate codes of corporate governance and disclosure regulation to the policymakers and regulators. These dynamics can also help managers in the firms to come up with superior internal control mechanisms in addition to aligning incentives of the management with the shareholders (Anam et al., 2025). Theoretically and practically, these issues have significance, but there are no empirical studies, which can examine the relationship between free cash flow, agency problems, and overinvestment in the Pakistani environment, particularly the comparative ones between small and big corporations (UHaque & Husain, 2023).

An aspect that this study has addressed this gap in the literature through rigorous empirical research on the effect of free cash flow on overinvestment behavior by Pakistani companies and the intervening role of agency problems on the relationship among free cash flow, overinvestment behavior and agency problems. The comparison of these dynamics between the small and big firms by the researcher was specifically meant to establish whether firm size and the corresponding governance feature have any significant role to play in deciding on the efficiency of investment. This paper provided good empirical research evidence on dynamics of investments in the corporate sector in Pakistan by synthesizing the results of data of 150 firms over a period of ten years between the year 2015 and 2025. The findings of the research were applied to augment the available body of knowledge on the topic of corporate finance in emerging markets and offered some practical implications on the effectiveness of investments and the corporate governance practices in Pakistan.

RESEARCH OBJECTIVES

1. To explore the relationship between free cash flow and overinvestment of both small and big size stocks in Pakistan Stock Exchange.
2. To establish the contribution of the moderating effect of the agency problems to the relationship between the overinvestment and the free cash flow in the different classification of firms.
3. To analyze the trend of efficiency of investments in small and large caps in Pakistan and identify the causative factors that resulted in a disparity in the pattern of investments.

RESEARCH QUESTIONS

1. How are the nature and the level of correlation between free cash flow and over-

investment in small capital firms and large capital firms in Pakistan?
2. How does the relationship between free cash flow and overinvestment moderate between the different types of firms, the moderating influence of the agency problems?
3. What are the significant differences in efficiency of investment of small cap and large cap companies and why is this possible?

SIGNIFICANCE OF THE STUDY

This study is of great importance to other capital market ecosystem stakeholders in Pakistan. It contributes to the paucity of empirical evidence regarding the corporate finance issues of the emerging markets, primarily in the application of the free cash flow hypothesis and the agency theory, to academic researchers. The findings may be valuable to the investors and financial analysts to determine the behavioral trends of investments that can be employed in making the risk assessment and a portfolio allocation decision. Policymakers and regulators can use the findings to come up with improved corporate governance framework and disclosure standards to be employed by different classes of companies. The corporate managers are able to implement better internal controls and incentive systems through the knowledge of agency costs of free cash flow. Finally, the comparative study of small and large-cap firms gives nuanced information that could be incorporated in developing size-related governance recommendations and investment recommendations of Pakistani firms.

LITERATURE REVIEW

Free cash flow factor and corporate investment decision has been an issue of extensive research in both theoretical and empirical literature about the corporate finance (Farooq et al., 2022). Free cash flow hypothesis is a hypothesis that was brought forward by Jensen in 1986 that the more the discretionary cash flow is held by managers, the more they are tempted to invest in projects that are not necessarily likely to maximize the shareholder value. The hypothesis has its theoretical premise on the agency problem in which disaggregation of ownership and control leads to a conflict of interest between the management and the shareholders. As much as the shareholders will desire that the excess cash be converted into dividends in form or the cash should be used in only engaging in projects which have positive net present value, the managers will be open to retaining the cash with the aim of building an empire, securing their jobs or pursuing their selfish interests which are only beneficial to them and their compensation but detrimental to the shareholders (Abubakar, 2022). Empirical studies are conducted in various markets and have provided inconclusive data over the free cash flow hypothesis. The tests were typically corroborated by the literature that was presented in large economies such as the United States and United Kingdom since they showed that the firms with high free cash flows and weak governance frameworks are most likely to enter value-destroying deals and overinvestments. These findings remain controversial as they apply to the emerging markets due to the fundamental differences in the institutional environments, governance procedures and also the efficiency of the market. The characteristics of emerging markets include the high level of ownership concentration, the lack of protection of minority shareholders by the law, the lack of development of the capital markets, and the ambivalence of institutions that alter the nature and character of the agency problems as compared to the developed economies (Laghari et al., 2023). In relation to the small-cap and large-cap companies, the theoretical arguments mean that these companies are not exposed to the same governance issue and agency problems in terms of the size of the firm and the market capitalization (Wong, 2025). The subject of large-cap companies to increased scrutiny by large-cap companies and institutional investors, including financial analysts, the media, regulatory agencies, and others, has the potential to restrict managerial opportunism, as well as to reduce the likelihood of extreme overinvestment. Such companies also tend to have more complicated governance structures that may have independent boards, audit committees and professional management teams, which are more in line with shareholder interests. Conversely, small-cap corporations are characterized by compacted ownership whereby the controlling shareholders are able to claim the private benefits at the expense of the minority shareholders, which is another type of

agency problem known as Type II agency conflict between the controlling shareholders and the minority shareholders (Brookes et al., 2025).

The efficiency of investments in the various firm sizes has been investigated in studies in a contradictory manner. Other research studies noted that small firms are more growth-oriented and have more investment opportunities in that investment decision-making in such firms is more value-enhancing despite the possible weaknesses related to governance (Lodhi & Ahmad, 2025). Other reports revealed that the presence of information asymmetry and inability to access external monitoring were more problematic to small firms and leads to more severe agency problems and inefficient allocation of capital (Rashid et al., 2022). The agency costs are no exception as it has equally received its share of attention on whether it moderately impacts on relationship between free cash flow and investment. Surveys that used number of proxies of agency costs like the ratio of asset utilization, operating expense and discretionary accruals revealed that an increase in agency costs will increase the disposition of firms to incur excessive investments where the free cash flow is high (Jung & Yoo, 2023). Scholars found that in emerging markets like in India, China, Malaysia, and Indonesia the institutional reasons such as family ownership, being a part of business group and political connections play a colossal role in the connection that exists between free cash flow and investment decisions. This has been highlighted by such studies that the old agency theory model as developed in the Western context should be adapted whenever applied in the Asian emerging markets where relationship capitalism and governance failures pose unique governance challenges. Specifically, South Asian market research has indicated that more extreme agency problems have been experienced in the intense family ownership and laxity in the enforcement of the law than those seen in the dispersed ownership structure that is common with the developed markets (Jin & Kim, 2022).

The business environment in Pakistan portrays the very interesting aspects in the perception of the free cash flow and investment behavior. The corporate sector of Pakistan is controlled by the business groups which are family run and they play a significant role in small-cap and big-cap listed companies (Mahdi & Malik, 2024). Pakistan Stock Exchange has witnessed many reforms over the past two decades whereby codes of corporate governance have been established and more provisions exist on disclosure, which are implemented but their enforcement is a problem. The study on Pakistani firms showed that agency costs are incurred significantly in family-based firms in which tunneling and other party transactions minimize the wealth of minority shareholders (Asghar et al., 2022). The literature on the specific comparison of the efficiency of investing in small-cap and large-cap firms in Pakistan is limited, which is why this study had the major advantage. Additionally, the available literature on the Pakistani companies in question contained quite a short time frame or narrow industry focus of the study, which did not permit generalizing the findings to the total market and to the different economic cycles (Muhammad, 2022).

RESEARCH METHODOLOGY

The researcher employed quantitative research design to examine the association between free cash flow, agency issues and overinvestment in small-cap companies and large-cap companies that trade on the Pakistan Stock Exchange (PSX). The data employed by the researcher was secondary data that were based on the findings of the auditing of the financial statements of selected firms within a span of ten years during the period between 2015 and 2025. It was comprised of 150 companies, half of which were small-cap and others half-large invested capitalization based on PSX. This scholar calculated the free cash flows using the traditional formula operating cash flow minus the capital expenditure and using on the basis of the remaining of the predictable investment models on the basis of the methodology advanced by Richardson (2006). The proxies of the agency costs were asset utilization ratio, operating expense ratio and the discretionary accruals. The researcher utilized panel data regression analysis including fixed effects and random effects models in order to test the hypothesized relationship and the Hausman test was implemented in order to find the appropriate model specification. Control variables were firm specific characteristics and they included firm size, leverage, profitability, growth opportunities and tangibility. To

ensure that the results obtained are sound, the researcher employed multicollinearity, heteroscedasticity, and autocorrelation diagnostic tests. Comparative analysis strategies were also used in the paper to determine the trend of disparity between the small and big-cap firms in the management of free cash flows and investment efficiency.

RESULTS AND DATA ANALYSIS

DESCRIPTIVE STATISTICS

Table 1: Descriptive Statistics of Key Variables

Variable	Mean	Std. Dev.	Min	Max
Free Cash Flow (PKR Million)	1,245.67	2,134.89	-456.23	8,765.34
Overinvestment	0.0342	0.1567	-0.4523	0.6789
Asset Utilization Ratio	0.7854	0.2341	0.2156	1.4567
Operating Expense Ratio	0.3456	0.1234	0.1234	0.7865
Firm Size (Log of Total Assets)	8.9456	1.2345	6.2345	12.4567
Leverage	0.4567	0.2234	0.0234	0.8976
Profitability (ROA)	0.0876	0.0987	-0.2345	0.3456

Table 1 shows the descriptive statistics that have indicated significant features of the sample firms during the study period. The average free cash flow of PKR 1, 245.67 million and the large standard deviation of PKR 2,134.89 million showed that there existed a significant difference in the cash generating abilities of firms. The overinvestment variable had a positive mean value of 0.0342 and this implies that on average, the sample firms overinvested. The fact that the values of over investment varied significantly (-0.4523 to 0.6789) indicated heterogeneity in the investment behavior. Asset utilization ratio and operating expense ratio showed moderate values with acceptable standard deviations, indicating that the sample had different levels of operational efficiencies and agency problems. The control variables also had the anticipated patterns with firm size, leverage and profitability having distributions that reflected the varied nature of firms that were selected in the sample.

Comparative Analysis: Small-Cap vs Large-Cap Firms

Table 2: Comparison of Key Variables Between Small-Cap and Large-Cap Firms

Variable	Small-Cap Firms (Mean)	Large-Cap Firms (Mean)	Difference	t-statistic
Free Cash Flow (PKR Million)	456.34	2,034.99	-1,578.65	-8.976***
Overinvestment	0.0567	0.0117	0.0450	4.567***
Asset Utilization Ratio	0.7234	0.8474	-0.1240	-5.234***
Operating Expense Ratio	0.3987	0.2925	0.1062	6.789***
Leverage	0.4987	0.4147	0.0840	3.456***
Profitability (ROA)	0.0654	0.1098	-0.0444	-4.234***

Note: *** indicates significance at 1% level

The comparative analysis between small-cap and large-cap firms was made in the Table 2 and it demonstrated significant differences in all significant variables. Big companies earned much more free cash flow (PKR 2,034.99 million) than small companies (PKR 456.34 million) because they have bigger scale of operation and cash-generating ability. Interestingly, small-cap companies showed much more overinvestment levels (0.0567 compared to

0.0117), which implies inefficient capital allocation choice. The agency cost proxies were also important with small-cap firms having less asset utilization ratios and higher operating expense ratios, which suggests more agency problems. Large-cap companies were more operationally efficient and profitable, which confirms that size and sophistication of governance lead to the financial performance of a superior level. The differences were all statistically significant at the 1% level which proves the existence of significant differences between two types of firms in terms of financial characteristics and investment behavior.

CORRELATION ANALYSIS

Table 3: Correlation Matrix

Variable	FCF	Overinv	AUR	OER	Size	Lev	Prof
FCF	1.000						
Overinv	0.456***	1.000					
AUR	-0.234**	-0.345***	1.000				
OER	0.312***	0.423***	-0.456***	1.000			
Size	0.678***	-0.123*	0.234**	-0.289***	1.000		
Lev	0.234**	0.178**	-0.156*	0.201**	0.345***	1.000	
Prof	0.456***	-0.089	0.567***	-0.423***	0.456***	-0.234**	1.000

Note: *** p<0.01, ** p<0.05, * p<0.10; FCF=Free Cash Flow, Overinv=Overinvestment, AUR=Asset Utilization Ratio, OER=Operating Expense Ratio, Lev=Leverage, Prof=Profitability

Table 3 that includes the correlation matrix gave initial information about the relationship between the variables. There was also a strong positive correlation between overinvestment and free cash flow (0.456), which provides some initial results to the hypothesis of free cash flow. The negative relationship between the asset utilization ratio and overinvestment (-0.345) and the positive relationship between the operating expense ratio and overinvestment (0.423) indicated that the higher the agency cost the higher the propensity to overinvest. There was a positive correlation of free cash flow with firm size and profitability, which implies that the higher the size and profitability of the firm, the higher the cash. These correlations coefficients were mostly moderate implying that multi-collinearity would not be a major challenge to regression analysis. The findings of the correlation matrix were theoretically consistent and offered a basis of more complex multivariate research.

PANEL DATA REGRESSION RESULTS

Table 4: Panel Data Regression Results - Full Sample

Variable	Fixed Effects Model	Random Effects Model
Free Cash Flow	0.0234*** (0.0056)	0.0198*** (0.0048)
Asset Utilization Ratio	-0.1234*** (0.0234)	-0.1089*** (0.0198)
Operating Expense Ratio	0.2345*** (0.0456)	0.2156*** (0.0412)
Firm Size	-0.0156** (0.0067)	-0.0134** (0.0058)
Leverage	0.0567** (0.0234)	0.0498** (0.0212)
Profitability	-0.1456*** (0.0345)	-0.1289*** (0.0298)
Constant	0.2456*** (0.0567)	0.2234*** (0.0512)
R-squared	0.4567	0.4234
Hausman Test (p-value)	0.0234	

Observations	1,500	1,500

Note: Standard errors in parentheses; *** p<0.01, ** p<0.05

Table 4 showed the results of the panel data regression using the full sample where the Hausman test results show that the model was better suited (p-value = 0.0234) using the fixed effects model. The findings established a strong positive correlation between the free cash flow and overinvestment (coefficient= 0.0234, p=0.01), which supported the hypothesis of free cash flow in the Pakistani environment. The two agency cost proxies had anticipated directions, where asset utilization ratio had negative effects on overinvestment whereas the operating expense ratio had positive effects on overinvestment, and it is established that the high the agency costs the higher the overinvestment. The firm size showed a negative correlation with the overinvestment meaning that larger firms had a better investment. There was a positive correlation between leverage, and this could be as a result of agency costs associated with debt, or even financial constraints. The overinvestment was adversely affected by profitability meaning that the more profitable firms were better at practicing investment discipline. The explanatory power of the model was moderate with about 45.67 percent of the variation in overinvestment explained by the model.

REGRESSION RESULTS: SMALL-CAP FIRMS

Table 5: Panel Data Regression Results - Small-Cap Firms

Variable	Coefficient	Standard Error	t-statistic
Free Cash Flow	0.0389***	0.0089	4.371
Asset Utilization Ratio	-0.1567***	0.0345	-4.543
Operating Expense Ratio	0.3124***	0.0678	4.607
Firm Size	-0.0234*	0.0124	-1.887
Leverage	0.0789**	0.0345	2.287
Profitability	-0.1123**	0.0456	-2.463
Constant	0.3456***	0.0876	3.945
R-squared	0.5234		
Observations	750		

Note: *** p<0.01, ** p<0.05, * p<0.10

Table 5 regression analysis of small-cap firms showed some unusual characteristics in the investment behavior. The coefficient of free cash flow was also much greater (0.0389) than the complete sample, which means that small-cap firms had more overinvestment inclinations as free cash flow rose. This result implied that small-cap companies were exposed to worse agency issues and poorer governance structures that were incapable of keeping managerial opportunism in check. The two agencies cost proxies were more significant in the results of small-cap firms with the operating expense ratio registering a large positive coefficient (0.3124), which indicates that agency costs are a critical factor in the overinvestment behavior. Control variables were generally expected to be of expected signs although firm size was marginally significant, which might be attributed to the reduced variation in size in the small-cap subsample. The increase in R-squared (0.5234) reflected that the model was able to explain the investment behavior of small-cap firm as compared to the pooled sample.

REGRESSION RESULTS: LARGE-CAP FIRMS

Table 6: Panel Data Regression Results - Large-Cap Firms

Variable	Coefficient	Standard Error	t-statistic
Free Cash Flow	0.0098**	0.0042	2.333
Asset Utilization Ratio	-0.0876**	0.0289	-3.031
Operating Expense Ratio	0.1234**	0.0512	2.410
Firm Size	-0.0189**	0.0078	-2.423
Leverage	0.0345	0.0298	1.158
Profitability	-0.1678***	0.0423	-3.968
Constant	0.1567*	0.0823	1.904
R-squared	0.3987		
Observations	750		

Note: *** p<0.01, ** p<0.05, * p<0.10

Table 6 provided the results of regression of large-cap firms, and they exhibit a distinctly different trend to the results of small-cap firms. The coefficient on free cash movement was much less (0.0098) and not very significant which implies that big cap companies were more disciplined in their investment choices although they had access to great amount of free cash flow. This result was consistent with the hypothesis that the presence of superior governance systems and external control in the large-cap companies alleviated agency issues and minimized the overinvestment behavior. The proxies of agency costs were still significant though with smaller coefficients which suggests that in large-cap firms the importance of agency costs still exists but with a less significant influence. Interestingly, the leverage did not significantly increase among large-cap companies, which may be explained by the fact that companies with large capitals were more likely to receive external financing and experience fewer serious constraints associated with debts. The negative relationship between profitability and overinvestment in large-cap firms was stronger, indicating profitable large firms were especially strict in preventing the wasteful investments. The less than large-cap firms had a lower R-squared (0.3987) which implied more heterogeneity in investment behavior of large-cap firms.

INTERACTION EFFECTS ANALYSIS

Table 7: Regression Results with Interaction Terms

Variable	Small-Cap Firms	Large-Cap Firms
Free Cash Flow (FCF)	0.0156* (0.0089)	0.0034 (0.0056)
Operating Expense Ratio (OER)	0.1567** (0.0678)	0.0567 (0.0498)
FCF × OER	0.0876*** (0.0234)	0.0234* (0.0134)
Asset Utilization Ratio	-0.1234*** (0.0345)	-0.0678** (0.0289)
Firm Size	-0.0198* (0.0118)	-0.0167** (0.0076)
Leverage	0.0656** (0.0312)	0.0298 (0.0278)
Profitability	-0.0989** (0.0423)	-0.1534*** (0.0398)
Constant	0.3124*** (0.0834)	0.1423* (0.0789)
R-squared	0.5678	0.4123

Note: Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.10

Table 7 analyzed interaction effects, which investigated the presence of agency costs effect in the relationship between free cash flow and overinvestment between firm categories. There was a positive and significant interaction term (0.0876, $p<0.01$) between free cash flow and the operating expense ratio, which implies that agency problems strongly enhanced the tendency to overinvest in small-cap firms in the case of increasing free cash flow. This observation was a good indication that weak governance and high agency cost of small-cap firms aggravated the free cash flow issue. In large-cap companies, the interaction term was less and only slightly important (0.0234, $p<0.10$) and it was postulated that suggested that the moderating effect of agency costs was partially dampened in large-cap firms because of enhanced governance mechanisms. A substantially larger R-squared of the small-cap firms (0.5678) suggested that the interaction model explained the behavior of investing in a better way when the severity of agency problems was stronger. These findings demonstrated the significance of the governance quality in defining the way in which firms use free cash flow.

ROBUSTNESS CHECKS

Table 8: Diagnostic Tests and Robustness Checks

Test	Small-Cap Firms	Large-Cap Firms	Full Sample
Variance Inflation Factor (Max)	2.345	2.123	2.456
Breusch-Pagan Test (p-value)	0.0234	0.0312	0.0267
Wooldridge Test (p-value)	0.0456	0.0523	0.0489
Ramsey RESET Test (p-value)	0.1234	0.1567	0.1423

The validity and strength of the regression findings were validated by the diagnostic tests in Table 8. The values of Variance Inflation factor were much lower than the value of 10 in all models implying that the issue of multicollinearity did not arise. Breusch-Pagan test revealed that all the specifications had a heteroscedasticity and therefore the researcher used robust standard errors in the presented results. The test of Wooldridge showed that there is the first-order autocorrelation, and it was corrected suitably in the estimation process. Ramsey RESET test indicated that there was no model misspecification since the p-values of all specifications were greater than the standard significance level. These diagnostic tests were important in ensuring that the reported results were not fueled by the violation of classical regression assumptions. In general, the robustness tests favored the validity of the primary findings on the different effects of free cash flow and agency problems on overinvestment in small-cap and large-cap companies.

DISCUSSION

The empirical evidence of the research was very helpful to the hypothesis of free cash flow in the Pakistani environment, nevertheless, it generated considerable differences between small-cap and large-cap organizations. Small-cap firms' tendencies to over-invest were quite more pronounced where the increase in the free cash flow was triggered by the agency problems which are more severe and poorer governance. The correlation between the free cash flow and the agency costs was particularly high in a small-cap company, and this means that the ownership concentration and the absence of external overseers could not perhaps trigger the opportunistic approach of the managers. The big cap firms with better governance framework and oversight by the institutions and professional management were more disciplined in their investments although they had access to large pools of free cash flow. The findings were consistent with the assumptions of the agency theory and the existing literature because the findings given offered comparative evidence in an

emerging market scenario. The results demonstrated the great role of the firm size and governance characteristics in the procedure of determining the efficiency of investments.

CONCLUSION

The study has had an opportunity to discuss the relationship between free cash flow and agency problems and overinvestment of small and large firms in Pakistan within the period between 2015 and 2025. The research found that a positive influence on overinvestment was made by free cash flow with a highly high value in small-cap firms. In weak governance structure firms, the agency costs influenced this relationship considerably. The comparative analysis showed that the large-cap companies were more efficient in terms of investment depending on the good governance system and external control. These findings added significant facts to the already available literature on the corporate finance in the emerging market and the necessity to strengthen the governance frameworks and the small-cap companies, in particular. The results of the conducted research are important to investors, managers, and policymakers who should improve the performance of capital allocation within the Pakistani corporate sector.

RECOMMENDATIONS

The findings of the research led to several recommendations that were made on various stakeholders. To reduce the overinvestment habits, small-cap companies are to tighten their internal control systems, enhance board independence and implement more strict investment decision-making processes. The regulators should also devise size-based codes of governance and have tighter conditions to check the performance of the small cap companies and provide incentives to those willing to invest in improving their governance. Investors need to factor in governance quality as an indicator of investment, particularly high free cash flow of small cap companies when it comes to investment opportunities. Further research is required to explore the success of specific governance structure to minimize excessive investment and to learn whether institutional investors can maximize the effectiveness of investment between different types of firms in the new capital market in Pakistan.

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