The Impact of Mergers on Stock Prices in the Pakistan Stock Exchange

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Abstract
This research paper focuses on investigating the impact of mergers on share prices behaviour of Pakistan Stock Exchange listed firms (PSX). The study analysed long-term stock price reactions to a merger activity based on firm-level panel data, including 2005-2021 period. The research uses descriptive statistics, correlation analysis, regression, and T comparison tests in order to assess the hypothesis that merger announcements and post-integration result in a quantifiable increase in shareholder value. The results show that the direct effect of merger activity is not statistically significant on the PSX stock prices. Rather, firm-specific factors, especially firm size and leverage are of more significance in explaining the stock price changes. The findings indicate that the information around the mergers is either quickly absorbed by the prices or that synergies after a merger are not always achieved in new markets like Pakistan. The research findings can be added to the body of literature on mergers in emerging economies and can have significant implications on investors, managers, and policymakers.

Keywords: Mergers, Stock Prices, Pakistan Stock Exchange, Firm Size, Debt Level, Emerging Markets

Introduction
Mergers can be considered one of the most noticeable strategic tools used by companies to gain growth, diversification, and competitiveness over the long run (Brealey et al., 2023). The mergers are done by firms seeking to combine complementary resources, exploit economies of scale, cut on redundancies in their operations, and increase the market power, which results in an improved financial

performance (Garrow & Awolowo, 2024). The announcement of mergers in capital markets is considered one of the key information events since these announcements indicate how the management anticipates the future cash flows, strategy, and potential value creation (Hillier et al., 2019).

Financially market-wise, the stock price response to the mergers implies a real-time evaluation of the cost-benefit implications of this transaction as seen by investors (Roe, 2018). The semi-strong version of the Efficient Market Hypothesis states that publicly available information including merger announcements is expected to be quickly reflected in stock prices with little room to make abnormal returns once the announcement is made (Maury, 2018). However, empirical studies indicate that investor reactions to mergers differ widely by country, industry, and time horizon, which shows that market efficiency can be different in institutional contexts (Edmans et al., 2022).

Although extensive research has been done on mergers in developed economies, emerging markets still show inconclusive evidence (Zhang et al., 2018). It is usual that emerging markets are more full of information asymmetry, reduced liquidity, lesser investor protection, and changing regulatory structures that can affect the way market participants process information relating to mergers (Renneboog and Vansteenkiste, 2019). As a result, mergers within the markets can not necessarily create immediate or long-term increases in shareholder value.

The Pakistan Stock Exchange (PSX) provides a very useful context in discussing the consequences of mergers because the market is characterized by transition, and the phenomenon of corporate restructuring activities is growing more common (Anagnostopoulos et al., 2024). Although there has been significant merger activity in industries like banking, energy, cement, manufacturing, and others, there is little empirical research whether such deals result in significant increase of stock prices of investors in Pakistan (Lozada et al., 2022). This literature gap has given significant concerns regarding the efficacy of mergers as a value-generating approach of the Pakistani capital market.

Problem Statement

Despite the common intent of mergers to enhance the shareholder value, their impact on stock price particularly in emerging markets is not well known and sporadic (Zhang et al., 2018). The majority of studies focus on the short-term market responses, and little and inconsistent evidence on long-term stock performance following mergers exists (Edmans et al., 2022). Moreover, numerous studies do not take into consideration company-specific variables like size and leverage that may affect the stock value regardless of the merger process (Dang et al., 2018). This absence of strong empirical support leads to an ambiguity regarding whether mergers actually increase firm value, or is merely an expression of management aims without long term market payoffs in Pakistan. The first one is a study that has a primary goal to investigate empirically the role of merger in stock prices of PSX-listed companies. To be more exact, the research will examine the short and long-term stock price performances in the context of merger activity by the factor of firm size and leverage.

Thus the research hypothesis of this study is as follows: the influence of mergers on the stock prices in PSX and to address the question: are there any significant effects of mergers on the stock prices of the Pakistani Stock Exchange listed companies? Are there statistically significant differences in the price of stocks during the pre-merger and after the merger? The research limits itself to the non-financial and financial companies listed on the Pakistan Stock Exchange and which were engaged in a merger activity within the years 2005 to 2021. The analysis concentrates solely on stock price behaviour as a metric of market valuation and makes no specific examination of the accounting-based performance metrics. The study offers context-specific information by focusing on firm-level panel data in one emerging market, with limitations of the ability to generalize to other markets.

Literature review

Mergers are one of the most important corporate events that are highly followed by investors due to the fact that they pass across essential information regarding the future strategy of a firm and future performance. In the context of financial markets, the announcement of mergers is an information indicator that operates on investor expectations of future cash flows, risk, and growth potential (Hillier et al., 2019). The Market Efficiency Theory would assume that the response of the stock prices to this publicly available information would be quick adjustment of stock prices to reflect a future benefit or cost of the merger (Maury, 2018). Empirical evidence however indicates that the stock price response to mergers differ according to markets and firm related factors especially in emerging markets where information asymmetry and investor behaviour might influence stock reactions (Edmans et al., 2022).

The long-term merger impacts on stock prices are not clear as far as short-term market responses to mergers have been extensively researched. Some of the studies indicate that post-merger stock prices do not always increase steadily over time due to the potential synergies, which can either take long to become tangible or remain unrealized at all (Zhang et al., 2018). Post-merger integration issues, regulatory restrictions, and market inefficiencies tend to affect the long-term stock price performance in emerging markets (Lozada et al., 2022). These results suggest that mergers are not a long-term guarantee of shareholder value and that investors are more likely to re evaluate firm value according to real post-merger performance rather than expected performance.

Mergers are significant in developing corporate strategy and performance of a firm as a whole. Strategically, mergers are employed to attain growth, expansion in the market, diversification, and access to beneficial resources and capabilities (Brealey et al., 2023). Resource-Based View holds that mergers are likely to increase the performance of firms when the mergers allow the effective combination and use of complementary resources, resulting in an increase in the operational efficiency and the competitive advantage of the firm (Chen et al., 2024). Nonetheless, in the real world, it is demonstrated that strategic merger gains are highly dependent on managerial potential, the quality of governance, and effective integration that a poorly

planned merger can end up destroying the value of firms (Dang et al., 2018; Renneboog & Vansteenkiste, 2019).

Several theoretical approaches have been attributed to the study of mergers and the effect on the stock prices which offers both explanations of the reaction of the market and in the long run. Market Efficiency Theory suppose that the price of shares is made up of all publicly accessible data, such as merger news, and thus the potential gain or danger of the activity are at once reflected in the market price (Maury, 2018). This view holds that the abnormal returns that are witnessed in the process of mergers are signs of what the market anticipates about value creation. Nevertheless, the experience of the developing markets indicates that information asymmetry and investor behaviour can result in delayed or weakened responses and therefore the inconsistent short-term stock price changes (Edmans et al., 2022).

The Resource-Based View (RBV) states that mergers offer companies access to unique and valuable resources, capabilities, and competencies that lead to a competitive advantage in the long run (Chen et al., 2024). In this perspective, the efficiency of integrating and utilizing these acquired resources determines the long-term stock price performance of merged firms. When firms manage to capitalise on synergies, technological resources and human capital better, there is a higher chance of them attaining greater operational efficiency and growth sustainability, which will have a positive impact on the perceptions of investors and stock prices.

Another theory, Behavioural Finance Theory, can also explain this phenomenon, indicating that investor sentiment, overconfidence, and herd behaviour could be of great importance in how stock prices react to merger announcements (Huang, 2022). In such a case, the market efficiency would not be followed because of psychological reasons where one would overreact or underreact which could not be explained with all fundamental facts. The impact of such behaviour in terms of individuals is more applicable in emerging markets where investor sophistication and regulation are relatively low.

The Agency Theory also provides information on the motivations of a merger and their impact on the stock prices. It indicates that there are cases when managerial decision-making to enter into mergers can lead to personal rewards and shareholder value, HRM can lead to value-destroying acquisitions (Brealey et al., 2023). The response of stock prices may be used to evaluate which of the two following aspects are perceived by the market the merger is a value-creating or self-interested activity. The combination of these theoretical insights gives an inclusive guiding process to explore the impacts of mergers on stock prices in the short and the long term.

Moreover, empirical research has also identified the contribution of firm-specific and deal-specific reasons in determining the outcome of mergers. Theoretical mechanisms and firm size, leverage, industry segment, payment type, and regulatory environment interact to affect the market valuation (Dang et al., 2018). Taking into account these variables in the framework enables the researcher to differentiate the factors that were directly linked with the merger and other latent causes of stock price action.

Upon these theoretical backgrounds and empirical findings, the hypotheses are as follows: H1 is that the merger activity plays a large role in influencing the stock

prices of acquiring firms in the Pakistan Stock Exchange. H 2 implies that the difference between the pre-merger and post-merger stock prices is statistically significant. H3 suggests that the size of the firm has a positive impact on the stock prices after the merger. The combination of theoretical and empirical bases offers a consistent background on discussing the effect of mergers on market valuation in an emergent market setting, and it also takes into consideration both rational and behavioural factors of investor reaction.

Methodology
Data and Sample
The research design used in this study is the quantitative research design to determine the effects of mergers on the price of the stock of the firms listed in the Pakistan Stock Exchange. Corporate finance studies have embraced a quantitative approach since they allow objective data to be measured in the market and hypotheses can be tested rigorously using statistical and econometric methods (Gujarati and Porter, 2009). The research is completely based on secondary data thus consistency and reliability of the observations.

The sample will include firms listed on the Pakistan Stock Exchange that made merger processes between the years 2005-2021. Data on merger events was gathered through official stock exchange announcements and corporate disclosure whereas the stock price data and firm-level financial indicators were retrieved through established financial databases. The stock prices are taken as a proxy of firm market worth, in line with previous works related to mergers (Lozada et al., 2022).

Model Specification

$$ST_{it} = \propto + \beta_1 M_{it} + \beta_2 FS_{it} + \beta_3 DL_{it} + \mu \ldots\ldots\ldots\ldots$$

Where:
ST = Stock Prices
M0 = Pre Merger
M1 = Post Merger
FS = Firm Size
DL = Debt Levels

Variable Measurement

Variable	Variable Type	Measurement Definition	Supporting Literature
Stock Price (SP)	Dependent Variable	Market stock price data collected from DataStream covering 2005 to 2021; closing Price is used for analysis	Maury (2018); Hillier et al. (2019)
Merger Activity (M)	Independent Variable	Dummy variable equal to 1 for the post-merger period and 0 for the pre-merger period	Zhang et al. (2018); Lozada et al. (2022)

Firm Size (FS)	Control Variable	Total market capitalization of the firm, expressed in logarithmic form	Dang et al. (2018); Chen et al. (2024)
Debt Level (DL)	Control Variable	Total liabilities divided by total assets, expressed in logarithmic form	Yang et al. (2019); Brealey et al. (2023)

The dependent variable of this research will be stock price which will be measured by last closing market prices in order to smooth long run fluctuations. The primary independent variable is the merger activity, and is a dummy variable wherein it takes the value of one during the post-merger and zero during the other periods. Control variables include firm size and debt level because the literature suggests that they can greatly influence the perception of investors and the market value (Dang et al., 2018; Yang et al., 2019).

The analysis starts with the descriptive statistics as a way of summarizing the features of the data and to gain insight into the variation among firms and time. The preliminary analysis of the relationships among variables and the possibility of multicollinearity are then investigated through correlation analysis. Ordinary Least Squares (OLS) regression and panel data estimation methods will be used to test the hypotheses proposed to enable the study to take into account the firm-specific heterogeneity. Tests of diagnostic nature are done such as variance inflation factor (VIF) and tests of heteroskedasticity to ascertain the soundness and validity of the estimated models.

Also, a two-sample t-test is conducted in order to compare subsequent stock prices after and before mergers. In order to enhance the empirical analysis, this test offers support evidence on the fact that mergers cause statistically significant distributions on stock prices.

Results and Discussion

The findings of this research are useful in understanding the response of the Pakistan Stock Exchange to the activities of mergers. The descriptive analysis indicates that firms have significant variations in terms of stock prices, size of firms, and debt level. This difference indicates the heterogeneity of firms engaging in mergers and the justification of using the firm level analysis in the new market environment.

The preliminary correlation findings have shown a weak association between merger activity and stock prices. This implies that mergers by themselves cannot have a very strong impact on the valuation of firms in the market by investors. The same results were also found before in the literature on emerging markets, where announcements of mergers do not always produce strong reaction in the market (Lozada et al., 2022).

The regression analysis also supports the fact that there is no statistically significant direct relationship between merger activity and the prices of stocks. The finding aligns with the Efficient Market Hypothesis, which proposes that publicly available information (e.g., merger announcements) is encompassed in stock prices in a short period (Maury, 2018). Because of this, investors would not anticipate that mergers

would create immediate or certain value returns. Similar evidence of other emerging economies also reveals that not all mergers result in positive performance of stock prices (Zhang et al., 2018).

Firm size however displays more meaningful relationship with stock prices. Stock prices in larger firms are higher which means that investors have more confidence with firms that have stronger market presence and wide resource bases. The result confirms the Resource-Based View according to which companies that possess more resources and capabilities are in a better position to overcome merger-related issues and attain long-term advantages (Chen et al., 2024). Most literature before it confirms that the size of firms is also a key factor determining the confidence of investors (Dang et al., 2018).

These findings regarding the level of debt indicate a poor positive relationship with the stocks. This suggests that a reasonable amount of debt utilization can be treated positively by investors perhaps because of tax benefits or an indication of financial restraint. Nevertheless, the insignificance of strong statistics indicates that leverage alone has no significant effect on post-merger stock price behaviour. This is a result of the capital structure theory that emphasizes that the debt may increase the value of a firm only to a certain optimal threshold, and after that, the financial risk starts increasing (Yang et al., 2019).

The analysis that was conducted on the stock prices prior to and after mergers shows that there is no big difference between the two time periods. This observation indicates that there are no immediate gains of merger in terms of market valuation. According to behavioural finance, this neutral response can indicate investor caution and doubts about whether any merger synergies will turn out as anticipated, particularly in new markets where there is a greater likelihood of post-merger integration risks (Huang, 2022).

In general, the results reveal that mergers alone do not have an assuring effect on the growth of stock prices in the Pakistan Stock Exchange. Rather, firm specific factors like size and financial stability seem to centralize in influencing market valuation. These findings align with the agency theory, which indicates that not all mergers can be fully guided by shareholder value maximization but instead by management interests, which makes investors react to such business decisions in a relatively conservative way (Brealey et al., 2023).

Conclusion and Recommendations

The paper reviewed how mergers influenced the stock prices of Pakistani Stock Exchange listed firms by correlating the empirical evidence to the existing corporate finance theories. The findings suggest that activity in a merger does not cause a material change in stock prices. This result aligns with the Market Efficiency Theory that indicates that information about mergers are readily integrated into stock prices, which restricts the chances of receiving abnormal returns (Maury, 2018). The same evidence in emerging markets reveals that mergers do not necessarily generate shareholder value in situations when post-merger integration issues still exist (Zhang et al., 2018; Lozada et al., 2022).

The research also indicates that firm specific factors, particularly firm size, are more critical in the determination of market valuation as compared to the occurrence of mergers. The Resource-Based View of the firm is upheld by larger firms because they are more resource-based and have greater ability to deal with integration risks (Chen et al., 2024; Dang et al., 2018). Conversely, the degree of debt indicates a weak effect on the stock prices, which points to the fact that investors can more focus on overall financial soundness than on capital structure as a factor to determine post-merger performance. These findings also coincide with the agency theory, where markets are cautious of mergers that can be motivated by management interests and not value creation (Brealey et al., 2023).

On the basis of these results, corporate managers should invest more in strategic fit, integration of operations, and effective use of resources, instead of using mergers as the only possible way to increase the value of the firm. Before making expectations regarding the performance of a post-merger, investors need to be keen on analysing the fundamentals of the firm and their integration capabilities. Regulators and policymakers can also enhance the disclosure and governance systems so as to minimize information asymmetry and enhance investor confidence in merger activities. Future studies can further expand this analysis by adding other variables into the study, including the quality of corporate governance, ownership structure, and macroeconomic conditions in order to better understand the results of the mergers in emerging markets (Edmans et al., 2022).

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