

The Impact of Merger and Acquisition Premiums on Corporate Growth

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Abstract: As one of the crucial ways to achieve rapid growth for business, mergers and acquisitions (M&A) in China often involve the payment of premiums by the acquiring company for reasons such as synergies and growth motivations. This study focuses on A-share listed companies in China that underwent significant asset restructuring from 2011 to 2021 as the sample, aiming to investigate the impact of premiums in M&A transactions on corporate growth. The research finds a significant positive correlation between premiums in M&A and corporate growth. Further analysis reveals that the impact of M&A premiums on corporate growth exhibits heterogeneity. The promoting effect of M&A premiums on corporate growth is more pronounced in non-state-owned enterprises, cash-paid acquisition enterprises, and non-affiliated acquisition enterprises.

Keywords: M&A; Premiums; Corporate Growth.

1. Introduction

In October 2020, the State Council of China issued the "Opinions on Further Improving the Quality of Listed Companies," which proposed, "Fully leverage the role of the capital market as the main channel for mergers and acquisitions, encourage listed companies to revitalize existing assets, improve quality and efficiency, and transform and develop." It is evident that actively utilizing M&A is a necessary tool to achieve industrial transformation, as well as corporate growth (Chen et al., 2015). M&A has always been a hot topic in the capital market, and the number of M&A events involving listed companies in China reached 868 in 2020 and 917 in 2021, with the proportion of M&A premiums reaching 80% and 83%, respectively. Therefore, it is clear that M & A, as an important investment method, plays a significant role in China's capital market, with premiums M&A comprising the majority. It is consistent with the findings that the transaction pricing paid by acquiring companies is often much higher than the target company's stock market value or fair value, resulting in a high premiums rate for M&A (Wang and Xu, 2022).

Prior studies mainly focus on three aspects: the motives behind M&A premiums, the factors influencing M&A premiums, and the economic consequences of M&A premiums. For example, Bruner (2002) analyzed 130 classic M&A-related literature published from 1971 to 2001 and found that only 20% to 30% of M&A events created value. However, there is still a gap in discussing the M&A premiums in the listed-firms of China. Then our question is that since M&A premiums have become mainstream in the capital market of China, is it worthwhile to pay a certain premium? Is it helpful for the corporate growth?

The marginal contribution of this article may exist in the following two aspects: From a research perspective, based on the common phenomenon of M&A premiums in China, this paper fills a gap in the literature regarding the effect of premiums in M&A transactions on corporate growth. From a practical perspective, this study offers the following implications: Firstly, in corporate M&A, a high premium can facilitate the success of the M&A, help companies obtain high-quality resources, expand their business, and achieve

rapid growth. Secondly, concerning corporate mergers and acquisitions, in China, utilizing cash payments and pursuing non-related M&As are more advantageous. Moreover, to achieve genuine success in mergers and acquisitions, it is essential to overcome speculative tendencies and focus on factors conducive to business expansion, operational efficiency enhancement, and profitability enhancement from the perspective of corporate growth.

2. Theoretical Analyses and Hypotheses

2.1. The Impact of Merger and Acquisition Premiums on Corporate Growth

Premiums in M&A refer to the potential synergistic value transferred from the acquiring company to the target company during the merger process (Liu, 2014). On the one hand, the acquiring company may choose premium mergers and acquisitions based on growth objectives. For instance, Chen et al. (2015) argues that when state-owned enterprise executives face high pressure for corporate growth, they tend to choose mergers and acquisitions as a means of expansion and pay higher premiums. Similarly, Kim et al. (2011) found that companies with higher growth demands are more likely to pay higher premiums when undertaking acquisitions. On the other hand, premium M&A help reduce transaction costs, bring advantages in technology and business resources, which enhance competitive advantage and promote the growth of the acquiring company. Khanna (1985) argues that a high premium can lead other competing bidders to withdraw due to the prohibitive acquisition costs, thereby reducing the threat from other bidders. Which indirectly lowers transaction costs and secures a competitive advantage. To maintain technological capabilities and continually enhance competitive advantage, acquiring companies often achieve this through internalization methods such as mergers and acquisitions. Therefore, they are willing to pay relatively high premiums to avoid higher external transaction costs (Liu Jia, 2014). Pei et al. (2022) suggest that the potential value brought by M&A premiums and related mitigation policies are crucial for the survival of acquiring companies. Based on this, the following hypothesis is proposed in this paper.

H1: The higher the premiums paid in mergers and acquisitions, the stronger the corporate growth.

3. Research Design

3.1. Research Sample and Data Source

This paper uses M&A transactions of Shanghai and Shenzhen A-share listed companies from 2011 to 2021 as the initial sample. The following criteria are applied to select the sample: (1) samples with ST, ST*, and PT labels are excluded; (2) samples from the financial and insurance industries are excluded; (3) samples with undisclosed transaction data are excluded; (4) samples with transaction amounts less than 10 million RMB are excluded; (5) failed transaction samples are excluded; (6) in cases of multiple M&A restructurings within the same year, only the sample with the largest transaction amount is retained. The M&A transactions selected for this study are all completed in the same year. Ultimately, the study obtains a sample size of 2076. The data required for this research is sourced from CSMAR and Wind databases, as well as financial statements disclosed by listed companies. Data analysis is conducted using Stata 16 software. Additionally, this paper applies 1% winsorization to continuous variables to prevent the influence of extreme values on the research results.

3.2. Variable Definition

Dependent Variable: Tobin's Q (TobinQ). This paper measures corporate growth using Tobin's Q value, following the practices of Wang et al (2023) and Xue (2019). Tobin's Q is a comprehensive evaluation index that combines a company's performance with the stock market's expectations of its development. It can comprehensively assess the growth of a listed company. According to Tobin's Q theory, if a listed company has good growth prospects, investors will have confidence in it, be willing to buy its stocks or bonds, and this will indirectly drive up the company's stock or bond prices, resulting in an increase in Tobin's Q. Meanwhile, based on the market theory of information efficiency, when M&A information is disseminated to the market, the information is reflected through stock prices. M&A restructuring is one of

the areas that investors pay close attention to. It can affect the allocation of investor attention, thus changing their judgment of the original value of the acquiring company (Adra & Barbopoulos, 2018). Tobin's Q value is the ratio of a company's market value to its asset replacement cost, and stock prices directly impact the calculation of a company's market value. This paper holds the view that M&A information can affect Tobin's Q value. Furthermore, based on the research by Kothari & Warner (2016), M&A news typically leaks to investors before the event, and if the event window is too large, the effects strongly related to the M&A event cannot be captured. Therefore, this paper selects Tobin's Q value in the year of the M&A as the measure of corporate growth.

Independent Variable: M&A Premiums (Pre). This paper uses the M&A premiums indicator to measure the premiums paid in M&A transactions. M&A premiums refer to the difference paid by the acquiring company above the asset price of the target company. Regarding the valuation of the target company's assets, some scholars use the target company's stock price as a measure of asset price, such as Yang (2021), who measures the M&A premiums as the proportion of the difference between the transaction price and the stock price to the stock price. Since M&A transactions in China are primarily based on the net asset appraisal value of the target company, carried out through agreement transfer (Wang and Xu, 2022), this paper follows the approach of Tang and Jiang (2002) and uses the net assets of the target company to measure the asset price. Therefore, the calculation formula for the M&A premiums in this paper is:

$$\text{M\&A Premiums} = (\text{Total Transaction Price} - \text{Net Asset}) / \text{Net Asset}.$$

Control Variables: To control for the impact of other factors on corporate growth, this paper selects financial leverage (Lev), firm size (Size), operating gross profit margin (Opr), research and development expense ratio (Rde), management expense ratio (Mer), payment method (Payment), related deals (RelatedDeals), and property rights nature (Pr) as control variables.

Details of the relevant variables are shown in Table 1.

Table 1. Related variable description

Variable type	variable name	variable symbol	Variable description
Explained variable	Tobin's Q value	TobinQ	(circulating shares market value + number of non-tradable shares* net assets per share + liabilities book value)/ total assets
Explanatory variables	M&A premiums	Pre	M&A premiums = (total transaction price - net assets of the transaction target) / net assets of the transaction target. The greater the calculation result, the higher the premiums paid by the merging company to the target company, and vice versa.
Control variables	financial leverage	Lev	total liabilities /total assets
	Enterprise size	Size	natural logarithm of total assets
	operating margin	Opr	(Operating revenue - Operating costs)/Operating revenue
	R&D expense ratio	Rde	R&D expenses /operating income
	overhead rate	Mer	Administrative expenses/operating income
	payment method	Payment	1 for pure cash payments, 0 otherwise
	Related party transactions	RelatedDeals	Related transactions are 1, non-related transactions are 0
Nature of property rights	Pr	State-owned enterprises take the value 1, non-state-owned companies take the value 0	

3.3. Model

To investigate the impact of M&A premiums on corporate

growth and validate hypothesis H1 the study incorporated industry fixed effects and year fixed effects into the following model to ensure the robustness of the results.

$$TobinQ_{i,t} = \alpha_0 + \alpha_1 Pre_{i,t} + ControlVari + \sum Industry + \sum Year + \varepsilon$$

$TobinQ_{i,t}$ represents the Tobin's Q value of company i in year t , $Pre_{i,t}$ represents the merger premium of company i in year t ; $ControlVari$ represents control variables, $\sum Industry$ represents industry dummy variables, and $\sum Year$ represents year dummy variables; α_0 represents the constant term, and ε represents the random disturbance term. If the impact of the merger premium on corporate growth is consistent with the original hypothesis H1 proposed in this paper, then the coefficient α_1 of the merger premium in the expected regression results should be significantly positive.

4. Empirical Results

4.1. Descriptive Statistical Analysis

According to Table 2, the average value of Tobin's Q for growth is 2.047, indicating that the sample companies, on average, create value and have relatively good growth prospects. The maximum Tobin's Q value is 8.020, the minimum is 0.857, and the standard deviation is 1.254, suggesting that many sample companies have Tobin's Q values clustered around the mean. The maximum value of M&A premiums is 104.287, the minimum is 0.002, the average is 5.608, and the standard deviation is 13.583, indicating significant data fluctuations. At the same time, the average value of the payment method indicator in M&A is 0.660, indicating that pure cash payments account for 66%, which is the majority. This indirectly confirms the determination of acquiring companies to finish M&A deals. In contrast, the average value of related deals in M&A is 0.147, indicating that there are not many related transactions in M&A, accounting for only 14.7% of the total transactions. This further suggests that the majority of acquiring companies in M&A are attempting to achieve growth objectives such as business expansion and entry into new areas.

Table 2. Statistical Analysis

Variable	Obs	Mean	Std. Dev.	Min	Max
Lev	2076	0.449	0.189	0.069	0.908
Size	2076	22.430	1.173	20.192	25.820
Opr	2076	0.274	0.162	0.015	0.802
Mer	2076	0.088	0.067	0.010	0.401
Rde	2076	0.038	0.042	0.0001	0.275
Payment	2076	0.660	0.474	0	1
RelatedDeals	2076	0.147	0.354	0	1
Pr	2076	0.341	0.474	0	1
TobinQ	2076	2.047	1.254	0.857	8.020
Pre	2076	5.608	13.583	0.002	104.287

4.2. Baseline Regression Analysis

This paper conducts regression analysis using Stata 16 for the model established in this study. The regression results are presented in columns (1) and (2) of Table 3. Column (1) represents the regression results without the inclusion of control variables, while column (2) represents the results after including control variables. In the model without control variables, there is a significant positive correlation between M&A premiums and corporate growth at the 1% significance level. The regression coefficient for M&A premiums is 0.006, indicating that for every 1 unit increase in M&A premiums, corporate growth will increase by approximately 0.006 units.

In the model with control variables, the relation is still positive. The regression coefficient for M&A premiums is 0.005, indicating that for every 1 unit increase in M&A premiums, corporate growth will increase by approximately 0.005 units. This suggests that premiums M&A behavior can significantly impact the corporate growth of acquiring companies and has a promoting effect on corporate growth. Therefore, hypothesis 1 is proved.

Table 3. Regression Analysis

VARIABLES	(1) TobinQ	(2) TobinQ
Pre	0.006*** (3.34)	0.005*** (2.96)
Lev		0.103 (0.65)
Size		-0.395*** (-15.34)
Opr		1.043*** (4.83)
Mer		0.976** (1.98)
Rde		1.805** (2.19)
Payment		-0.115** (-2.29)
RelatedDeals		0.069 (1.06)
Pr		0.122** (2.20)
Constant	1.854*** (4.26)	9.906*** (15.00)
Industry	YES	YES
Year	YES	YES
Observations	2,076	2,076
R-squared	0.250	0.384

Note: ***, **, * represent significance at the 1%, 5%, 10% levels respectively, with T-values in parentheses.

Additionally, control variables that influence corporate growth are included in regressions. Among these variables, larger companies (Size) tend to have slower growth. Companies with higher operating profit margins (Opr) tend to exhibit better growth prospects. Corporate growth is also influenced by management level (Mer) and research and development expenditure (Rde), where higher management levels are associated with better corporate growth, and higher R&D investment reflects a greater emphasis on technological innovation, resulting in better growth performance. Meanwhile, the method of payment for mergers and acquisitions (Payment) and the nature of property rights (Pr) also affects corporate growth.

4.3. Robustness Checks

4.3.1. Variable Replacement

To avoid potential measurement errors, this paper conducted a robustness test by replacing the independent variable. following the approach of Wang et al. (2023),

OutPrice is used as a proxy variable for M&A premiums in this paper. The calculation formula for the OutPrice indicator is: $\text{OutPrice} = (\text{total transaction value} - \text{net assets of the target} \times \text{transfer ratio}) / (\text{net assets of the target} \times \text{transfer ratio})$. Then, OutPrice was added to model (1) and multiple regression was performed again. The regression results are shown in Table 4, column (1). The estimated coefficient for OutPrice is significantly positive, indicating a significant positive correlation between M&A premiums and corporate growth. Therefore, the original hypothesis H1 in this paper still holds.

4.3.2. Subsample Regression

The COVID-19 pandemic had a significant impact on global capital markets, causing stock market volatility and affecting investor risk preferences and confidence. To mitigate the potential influence of external economic factors on the empirical results, this paper follows the approach of Wang and Liu (2023) by excluding samples from 2019 to 2021 and conducting a regression analysis again. The regression results are shown in Table 4, column (2), where M&A premiums still significantly correlated with corporate growth. This demonstrates the robustness of the research results.

4.3.3. Lagging one-period test

Considering that the impact of M&A premiums on corporate growth may have a certain lag period, this paper lagged the explanatory variable Tobin's Q by one period and then included it in Model (1) for multiple regression analysis. As shown in Column (3) of Table 4, the regression results indicate that the M&A premiums remain significantly positively correlated with the lagged Tobin's Q, further demonstrating the robustness of the research findings.

Table 4. Robustness Check

VARIABLES	(1)	(2)	(3)
	TobinQ	TobinQ	TobinQ_1
Pre	0.011*** (3.48)	0.007*** (4.03)	0.003* (1.74)
Constant	9.862*** (14.84)	10.773*** (16.60)	7.308*** (10.86)
Control variables	YES	YES	YES
Industry	YES	YES	YES
Year	YES	YES	YES
Observations	2,061	1,801	2,076
R-squared	0.384	0.441	0.314

Note: ***, **, * represent significance at the 1%, 5%, 10% levels respectively, with T-values in parentheses.

4.4. Further Analysis

4.4.1. The Heterogeneity of Ownership Structure

Generally, ownership structure determines the specific goal of corporate investment. In China, state-owned enterprises (SOEs) not only have a commercial nature but also serve a public interest purpose, which means they are established to meet national or local economic goals. Therefore, the government in China holds significant decision-making power over the M&A activities of SOEs, often directly participating in or influencing major asset restructuring and M&A transactions involving SOEs. Consequently, M&A transactions by SOEs may be motivated by public interest rather than corporate growth objectives or pressures. This

suggests that premiums in M&A transactions by state-owned enterprises may have a limited impact on corporate growth. To analyze and validate the differences in M&A premiums and corporate growth between state-owned and non-state-owned enterprises, this study divides the samples into two groups based on ownership structure and conducted separate multiple regressions. The results, as shown in Table 5, columns (1) and (2), indicate that there is no significant correlation between M&A premiums by state-owned enterprises and corporate growth, while M&A premiums by non-state-owned enterprises shows a significant positive correlation with corporate growth.

4.4.2. The impact of payment methods in mergers and acquisitions

The different payment methods in M&A activities have varying impacts on the post-merger companies. Rau and Vermaelen (1998) found that different payment methods convey different signals of corporate value expectations to the market. Cash payments signal to the market that the target company is undervalued, leading investors to expect an increase in the post-merger stock value. Conversely, stock payments convey the opposite signal to the market. Meanwhile, using cash payment during the merger and acquisition process also indirectly indicates that the acquiring company possesses ample cash flow and determination for a successful acquisition. Therefore, it is advantageous for enhancing investor confidence, fostering a virtuous cycle of corporate development. The paper aims to further analyze and validate the impact of M&A premiums on corporate growth under different payment methods. It divides the acquisitions into two groups based on whether they are purely cash transactions and conducts multiple regressions accordingly. The regression results are presented in Table 5, columns (3) and (4). The results indicate a significant positive correlation between cash-paid M&A premiums and corporate growth, whereas there is no correlation between stock-based or non-cash asset transactions and corporate growth. This suggests that, compared to non-cash payments, cash payments in M&A transactions are more advantageous for company growth.

4.4.3. The impact of Related-party mergers and acquisitions

Related-party mergers and acquisitions generally refer to the M&A activities between a company and its affiliated entities. Currently, some studies suggest that related-party mergers and acquisitions, with a certain speculative nature, can erode corporate value. According to Song and Zhou's (2007) research, related-party mergers and acquisitions exhibit a strong speculative nature, with related acquiring companies showing primarily negative excess returns, while non-related acquiring companies demonstrate significant excess returns, indicating clear competitive advantages. Based on this, this paper divides the mergers and acquisitions into non-related M&A and related M&A groups, and conducts multiple regressions separately for each group using regression model (1). The regression results are shown in columns (5) and (6) of Table 5. There is a significant positive correlation between the M&A premiums and the growth of the firm in non-related M&A, while in related M&A, the correlation between the M&A premiums and the firm's growth is negative but not significant. The empirical results indicate that related M&A has a certain speculative nature. Compared to related M&A, non-related M&A is more beneficial for firms to integrate resources and achieve better development.

Table 5. Further Analysis

	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	non-state-owned	state-owned	cash payment	non-cash payment	non-related M&A	related-party M&A
Pre	0.005**	0.004	0.004*	0.003	0.006***	-0.001
	(2.35)	(1.06)	(1.93)	(1.12)	(3.36)	(-0.12)
Constant	9.754***	9.852***	7.245***	14.056***	9.049***	16.110***
	(9.90)	(11.71)	(8.69)	(11.86)	(12.83)	(8.07)
Control variables	YES	YES	YES	YES	YES	YES
Industry	YES	YES	YES	YES	YES	YES
Year	YES	YES	YES	YES	YES	YES
Observations	1,369	707	1,370	706	1,771	305
R-squared	0.379	0.481	0.390	0.464	0.392	0.516

Note: ***, **, * represent significance at the 1%, 5%, 10% levels respectively, with T-values in parentheses.

5. Conclusions

5.1. Conclusions

This study utilizes A-share listed companies in China that underwent major asset restructuring from 2011 to 2021 as samples to investigate the impact of M&A premiums on corporate growth. Research has found a significant positive correlation between M&A premiums and corporate growth, indicating that M&A premiums can significantly promote corporate growth. Further analysis reveals that the impact of M&A premiums on corporate growth varies significantly. Specifically, the promotion effect of M&A premiums on corporate growth is more pronounced in non-state-owned enterprises, M&As paid for in cash, and non-related M&As. This paper provides evidence to help managers ensure the success of M&A premiums. In China, it is advisable for managers to engage in M&A transactions by paying cash and acquiring non-related businesses.

5.2. Limitations and Future Research

The following limitations exist in the study and are also our directions for further research: Firstly, overall, our research has found that M&A premiums significantly affect corporate growth. However, further refinement is needed in the research to explore how different degrees of M&A premiums impact corporate growth. Secondly, corporate growth is a comprehensive evaluation indicator. The practice of using Tobin's Q value as its proxy indicator in our study seems simplistic. In the future, we will continue to explore more effective measures for assessing corporate growth. Finally, the post-merger growth performance of companies is influenced by various factors such as management capabilities, corporate culture, technological innovation, and resource integration. Therefore, we will actively explore the mechanism of how different factors affect post-merger corporate growth through quantitative empirical methods.

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