The Relationship Among Corporate Governance, Internal Control, and M&A Performance

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Abstract. With the rapid advancement of economic globalization and the intensification of capital market reforms, mergers and acquisitions (M&A) have become an essential strategic tool for business expansion and industrial improvement. However, the risk of post-M&A integration failure remains a core constraint on value creation. This study employs panel data from Chinese A-share listed companies spanning from 2011 to 2023 to develop a chained model of Corporate Governance-Internal Control-M&A Performance" and empirically investigates the influence of corporate governance on M&A performance, along with the moderating effect of internal control. The result indicates that improved corporate governance has a significant impact on M&A performance. This beneficial impact is more noticeable in companies that have poor M&A performance. Furthermore, superior internal control has a positive moderating effect on the association between increased corporate governance and improved M&A performance. These findings not only theoretically clarify the synergistic mechanism between corporate governance and internal control but also offer practical insights for companies to maximize governance structures, improve internal control systems, and for legislators to strengthen regulatory frameworks.

1 Introduction

Corporate mergers and acquisitions are a key strategy for listed firms to grow and enhance their sectors as economic globalization accelerates and the capital market reforms. Due to the full circulation reform of equities and the improving mergers and acquisitions and restructuring regulatory structure, the Chinese corporate mergers and acquisitions market has matured. According to PwC, China's mergers and acquisitions market had 8,563 transactions and 333.1 billion US dollars in volume [1]. Chinese mergers and acquisitions have been the second largest worldwide for five years.

Hidden anxieties lurk underneath market prosperity. The value and number of mergers and acquisitions in China in 2023 fell by 28% and 27%, respectively [1]. Coincidentally, the worldwide mergers and acquisitions market plummeted 15% to 3.2 trillion US dollars in 2023, the lowest in a decade [2]. This shows businesses moving from "barbaric expansion" to "rational integration". The market has also realized that as corporate mergers and acquisitions transactions gain experience, enterprises become more cautious and comprehensive in their

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implementation and pay attention to integrating the strategy with the company's long-term development strategy.

The primary concern behind the market drop is the potential failure in the integration of mergers and acquisitions. Although mergers and acquisitions are regarded as the core means for enterprises to quickly obtain resources and optimize resource allocation, their high failure rate has always been a bottleneck restricting value creation [3]. The success of mergers and acquisitions depends not only on external market opportunities but also on the internal governance mechanism and risk prevention and control capabilities of enterprises.

Research shows that governance defects and internal control failures are the key inducing factors leading to the failure of synergies after mergers and acquisitions [4]. For instance, certain organizations indiscriminately chase trending concepts owing to an imbalanced governance framework (such as the centralization of managerial authority) and consequently succumb to the "pseudo-merger and acquisition" pitfall. Other firms have a significant surge in resource integration costs and uncontrollable financial risks post-mergers and acquisitions, attributable to inadequate internal control mechanisms, including the absence of a risk assessment framework [5]. Although China's regulatory authorities have gradually strengthened the compliance awareness of enterprises through policy guidance, it is still unknown whether there is a disconnection between the implementation of the system and governance practices.

Effective corporate governance frameworks reduce agency costs and enhance M&A success by optimizing risk management, resource allocation, and post-merger integration. High-quality internal control systems operationalize governance principles to improve decision-making efficiency and operational performance. Research demonstrates that integrating governance, internal controls, and M&A processes strengthens strategic decision-making capabilities and creates sustainable organizational value.

This study examines the correlation between the internal governance of Chinese listed firms and the efficacy of mergers and acquisitions to analyze the factors that affect the performance of mergers and acquisitions, and at the same time introduces the moderating variable of internal control, attempting to observe and analyze the relationship between corporate governance and the performance of mergers and acquisitions under different internal control quality environments.

2 Methodology

2.1 Research Hypothesis

The theoretical framework in Part One shows that corporate governance and mergers and acquisitions are interdependent. Effective business governance boosts mergers and acquisitions. Other research has linked corporate governance to merger and acquisition success. Enhancing the decision-making process allows organizations to make more analytical and fair merger and acquisition decisions, reducing risks. Thus, sensible and flawless corporate governance can improve commercial mergers and acquisitions. This study suggests Hypothesis 1 from the previous analysis:

H1: Corporate mergers and acquisitions are more effective when corporate governance is high.

According to the research background, several companies have underperformed after mergers and acquisitions. Given this, it is crucial to examine the factors that affect business mergers and acquisitions. According to Part One's theoretical foundation, internal control improves corporate mergers and acquisitions, among other variables. Through continual adjustment of internal control and corporate governance objectives, the firm can operate normally and orderly and drive sustainable development. Good internal control smooths communication from lower to upper levels and vice versa, helping upper management implement business decisions. This improves operating efficiency and maintains a pleasant humanistic atmosphere. The above analysis suggests Hypothesis 2:

H2: The influence of corporate governance on the performance of corporate mergers and acquisitions is positively moderated by internal control.

2.2 Sample Selections and Data Sources

This study selects the data of Chinese A-share listed companies from 2011 to 2023 as the research objects and conducts an analysis based on the original data of A-share listed companies from the Wind database. Given that China has implemented new accounting standards since 2007 and considering the importance of data timeliness to the research results, it has limited the research period from 2011 to 2023. In the data preprocessing stage, it follows the following steps: First, financial enterprises are excluded; Second, ST and ST* companies with abnormal operations are removed; Third, enterprises with poor financial conditions and missing key data are excluded. After these screenings, it finally obtained the panel data of 3,200 companies over a ten-year period, which altogether contains 8,749 valid sample observations.

2.3 Variable Selection and Definition

This study examines corporate mergers and acquisitions (M&A) performance using cumulative abnormal returns (CAR) through the event study methodology, focusing on stock market reactions around the initial announcement date [6]. Corporate governance is measured via a composite index derived from eight variables (e.g., equity balance, board independence) using principal component analysis (PCA), with higher scores indicating stronger governance [7]. Internal control quality is assessed using the DIBO index, which evaluates risk management across five dimensions: strategic alignment, operational efficiency, financial reporting reliability, asset security, and compliance. Control variables include In (Company size, natural logarithm of total assets), LEV (total liabilities/total assets), Growth (main enterprise revenue growth rate), ROA, and TobinQ. Individual and year fixed effects are incorporated to account for unobserved heterogeneity.

3 Research Model

3.1 Linear Regression Model

$$\mathrm{CAR_{it}} = \gamma_1\mathrm{CG_{it}} + \gamma_2\mathrm{ln_{it}} + \gamma_3\mathrm{Lev_{it}} + \gamma_4\mathrm{Growth_{it}} + \gamma_5\mathrm{ROA_{it}} + \gamma_6\mathrm{TobinQ_{it}} + a_0 + \lambda_t + \mu_i + \varepsilon_{it} \tag{1}$$

This model quantifies the net effect of corporate governance (CG) on merger and acquisition performance (CAR) by controlling for firm size (ln(Size)), leverage (Lev), growth (Growth), profitability (ROA), and market valuation (TobinQ). Time (λt) and firm-specific (μi) fixed effects are included to mitigate confounding factors (e.g., macroeconomic trends or unobserved firm heterogeneity). The key strength lies in isolating the causal relationship between CG and CAR, ensuring unbiased estimation of governance's direct impact.

3.2 Moderating Effect Model

$$\mathrm{CAR_{it}} = \beta_1\mathrm{CG_{it}} + \beta_2\mathrm{CG_{it}} * \mathrm{ICI_{it}} + \beta_3\mathrm{ICI_{it}} + \beta_4\mathrm{ln_{it}} + \beta_5\mathrm{Lev_{it}} + \beta_6\mathrm{Growth_{it}} + \beta_7\mathrm{ROA_{it}} + \beta_8\mathrm{TobinQ_{it}} + a_0 + \lambda_t + \mu_i + \varepsilon_{it} \quad (2)$$

This model tests whether internal control quality (ICI) moderates the "CG → CAR" relationship by introducing the interaction term (CG×ICI). A statistically significant coefficient (β2) confirms the moderating effect and reveals its direction (positive/negative). Fixed effects (λt, μi) are retained to control endogeneity (e.g., omitted variables). The strength of this approach is its ability to uncover synergistic mechanisms between governance and internal control, enhancing the explanatory power of the "dual-driver" framework for M&A success.

4 Empirical Test and Results

4.1 Correlation Analysis

The primary purpose of Table 1 is to provide a preliminary assessment of variable relationships and identify potential multicollinearity risks.

Table 1. Correlation Analysis Table

	CAR	CG	ln	Lev	Growth	ROA	TobinQ
CAR	1						
CG	0.043***	1					
ln	-0.089***	-0.384***	1				
Lev	-0.031***	-0.308***	0.527***	1			
Growth	0.019*	0.119***	-0.00300	-0.00800	1		
ROA	-0.00200	0.047***	0.028***	-0.270***	0.275***	1	
TobinQ	0.128***	0.139***	-0.381***	-0.285***	0.077***	0.191***	1

From the results of the following Table 1, it can be seen that all correlation coefficients between variables are below 0.7, suggesting a low likelihood of multicollinearity. The explanatory variable, corporate governance (CG), shows a significant positive correlation with merger performance (CAR) (ρ = 0.124***), indicating preliminary alignment with the hypothesized relationship. However, correlation analysis only examines pairwise associations and cannot control for confounding factors. Thus, the specific impact of CG on CAR—including its magnitude and pathways—requires further validation through regression models.

4.2 Linear Regression Analysis

To study the impact of corporate governance level (CG) on corporate merger and acquisition performance (CAR), this paper constructs two regression models, and the results are in Table 2. One is without control variables, and the other includes all control variables, so as to verify whether there are discrepancies in the influence of corporate governance level (CG) on corporate merger and acquisition performance (CAR) with or without control variables, and whether the results are robust.

From the results of the following Table 2, when no control variables are added, the impact of corporate governance level (CG) on corporate merger and acquisition performance (CAR) is significantly positive with a coefficient of 0.014, indicating that corporate governance level (CG) has a positive impact on corporate merger and acquisition performance (CAR).

Table 2. Benchmark Regression Results

	(1)	(2)
VARIABLES	CAR	CAR
CG	0.014***	0.012***
	(3.168)	(2.813)
ln		-0.021***
		(-4.722)
Lev		0.020
		(1.158)
TobinQ		0.006***
		(2.899)
Growth		0.005
		(1.021)
ROA		0.028
		(0.856)
Constant	0.017***	0.468***
	(15.967)	(4.728)
Observations	8,749	8,749
R-squared	0.397	0.404
ID	YES	YES
YEAR	YES	YES

After adding control variables, the impact of corporate governance level (CG) on the explained variable, corporate merger and acquisition performance (CAR), is still significantly positive, with an impact coefficient of 0.012. Therefore, it shows that the corporate governance level (CG) is an important factor that positively promotes corporate merger and acquisition performance (CAR).

This study supports Shleifer and Vishny's claim that "effective governance mechanisms reduce agency costs through checks and balances [8]." It illustrates that corporate governance improves mergers and acquisitions. Besides, these findings support Li Shanmin and Zhou Xiaochun's argument that "market-oriented decision-making promotes M&A synergies"[9].

4.3 Endogeneity Test

Table 3 presents results from a two-stage least squares (2SLS) regression implemented to resolve potential endogeneity concerns in the relationship between corporate governance (CG) and merger and acquisition performance (CAR). Endogeneity concerns, such as omitted variable bias or reverse causality (e.g., high-performing firms may proactively improve governance rather than governance driving performance), are mitigated by using the industry-year mean of the explanatory variable as the instrumental variable (IV). The rationale for this IV is that industry-year averages are likely correlated with individual firms' CG levels but do not directly influence CAR through non-industry pathways. In Stage 1, the IV's predictive power for CG is tested, while Stage 2 re-examines the effect of CG on CAR using the predicted values of CG from Stage 1, thereby isolating the causal impact of governance on performance.

Table 3. Endogeneity Test Results

	(Stage 1)	(Stage 2)
VARIABLES	CG	CAR
IV	0.289***	
	(7.314)	
CG		0.039**
		(1.985)
ln	-0.091***	-0.019***
	(-4.714)	(-4.423)
Lev	-0.132*	0.023
	(-1.927)	(1.595)
TobinQ	-0.026***	0.007***
	(-2.909)	(3.878)
Growth	0.027	0.005
	(1.366)	(1.110)
ROA	0.459***	0.016
	(3.362)	(0.537)
Observations	8,749	8,749
R-squared	0.897	0.004
ID	YES	YES
YEAR	YES	YES
Anderson canon. corr. LM	260.743*** (p=0.000)	
Cragg-Donald Wald F	172.297 (Critical Values=16.38)	

The results in Table 3 show strong validity of the instrumental variable. In Stage 1, the IV has a statistically significant positive effect on CG (coefficient = 0.289, t = 7.314), with a Cragg-Donald Wald F-statistic of 172.297, far exceeding critical thresholds for weak instrument concerns. Control variables reveal that higher leverage (Lev) negatively correlates with CG, while profitability (ROA) strengthens governance, and firms with higher valuation (TobinQ) exhibit lower governance demand. In Stage 2, CG retains a significant positive impact on CAR (coefficient = 0.039, t = 1.985), confirming the core hypothesis even after endogeneity adjustment. Notably, firm size (ln) negatively affects both CG and CAR, potentially due to complex governance structures or integration challenges in larger firms. Although the Stage 2 model has low explanatory power ($R^2 = 0.004$), the significance and directional consistency of CG suggest robust causal conclusions. Additionally, the Anderson LM test ($p = 0.000$) rules out under-identification risks, ensuring the rigor of the analysis.

4.4 Robust Test

Table 4 presents robust tests to validate the reliability of whether corporate governance (CG) positively impacts merger and acquisition performance (CAR). Three approaches are employed: (1) a lagged CG model (Lag 1) to address potential timing effects between CG and CAR; (2) a pandemic-adjusted model excluding data from 2020–2023 to isolate pandemic-related distortions; and (3) a Propensity Score Matching (PSM) model to mitigate sample selection bias by creating comparable treatment and control groups based on annual CG medians. These tests aim to confirm that the CG-CAR relationship remains stable across methodological variations and external shocks.

Table 4. Robust Test Results

	(Lag 1)	(Excluding Pandemic Impact)	(PSM)
VARIABLES	CAR	CAR	CAR
L.CG	0.017**		
	(2.034)		
CG		0.012*	0.020**
		(1.937)	(2.270)
ln	-0.019	-0.024***	-0.018*
	(-1.599)	(-3.684)	(-1.910)
Lev	0.035	0.020	0.034
	(0.884)	(0.839)	(1.040)
TobinQ	-0.003	0.007**	0.010**
	(-0.501)	(2.528)	(2.500)
Growth	-0.001	0.009	0.004
	(-0.135)	(1.325)	(0.392)
ROA	0.064	0.029	0.011
	(0.942)	(0.621)	(0.186)
Constant	0.438	0.527***	0.372*
	(1.632)	(3.704)	(1.838)
Observations	2,759	6,182	4,174
R-squared	0.554	0.460	0.580
ID	YES	YES	YES
YEAR	YES	YES	YES

The results in Table 4 consistently show a positive and statistically significant effect of CG on CAR across all models. Lagged CG (L.CG) retains significance (coefficient = 0.017, t = 2.034), while current CG remains robust in both pandemic-adjusted (0.020, t = 2.270) and PSM models (0.020, t = 2.270). Control variables reveal that firm size (ln) negatively impacts CAR in all specifications, suggesting larger firms face integration challenges. Tobin's Q shows a positive effect in pandemic-excluded and PSM models, aligning with market expectations for high-valuation firms. Leverage (Lev) and profitability (ROA) exhibit inconsistent or insignificant effects. Model fit varies, with the PSM model achieving the highest R^2 (0.580), likely due to reduced heterogeneity, while the pandemic-adjusted model has the lowest (R^2 = 0.460). Overall, the robustness of CG's impact on CAR is confirmed, reinforcing the study's conclusions.

4.5 Heterogeneity Analysis

Table 5 examines the heterogeneity of the impact of corporate governance (CG) on merger and acquisition performance (CAR) across firms with varying performance levels. The sample is split into low-CAR (CAR ≤ annual median, reflecting underperforming mergers) and medium/high-CAR (CAR > median, indicating successful integrations) groups based on annual CAR medians.

Table 5 shows that corporate governance (CG) significantly enhances merger performance (CAR) only in low-CAR firms (coef. = 0.009, t = 2.066), with no effect in medium/high-CAR firms (coef. = -0.001, t = -0.135), indicating governance improvements primarily aid underperformers through integration/agency cost mitigation, with diminishing marginal returns. In medium/high-CAR firms, smaller size (ln: coef. = -0.022, t = -3.514) and higher valuation (TobinQ: coef. = 0.009, t = 2.965) amplify synergies. These results challenge "ownership determinism," demonstrating governance efficacy (not ownership structure) drives M&A upgrading. This extends Zhou et al.'s "political objective interference theory", suggesting governance quality (not ownership attributes) determines M&A potential, supporting performance-tiered governance strategies [10].

Table 5. Heterogeneity Test Results

	(Low)	(Medium&High)
VARIABLES	CAR	CAR
CG	0.009**	-0.001
	(2.066)	(-0.135)
ln	0.002	-0.022***
	(0.331)	(-3.514)
Lev	0.003	0.011
	(0.187)	(0.450)
TobinQ	-0.005**	0.009***
	(-2.551)	(2.965)
Growth	0.000	0.009
	(0.026)	(1.256)
ROA	0.016	-0.011
	(0.480)	(-0.213)
Constant	-0.074	0.548***
	(-0.726)	(3.979)
Observations	4,379	4,370
R-squared	0.592	0.707
ID	YES	YES
YEAR	YES	YES

4.6 Moderating Effect Analysis

A moderating effect regression analysis is conducted in Table 6 in order to study whether internal control (ICI) plays a regulatory mechanism role in the impact of corporate governance level (CG) on corporate merger and acquisition performance (CAR).

Table 6. Results of the Moderating Effect Regression

	(1)	(2)
VARIABLES	CAR	CAR
CG	0.012***	0.012***
	(2.813)	(2.713)
CG*ICI		0.004**
		(2.042)
ICI		0.005**
		(2.338)
ln	-0.021***	-0.022***
	(-4.722)	(-4.765)
Lev	0.020	0.022
	(1.158)	(1.283)
TobinQ	0.006***	0.006***
	(2.899)	(2.981)
Growth	0.005	0.005
	(1.021)	(0.992)
ROA	0.028	0.019
	(0.856)	(0.565)
Constant	0.468***	0.444***
	(4.728)	(4.453)

Observations	8,749	8,749
R-squared	0.404	0.405
ID	YES	YES
YEAR	YES	YES

As shown in Table 6, Column (1) replicates the benchmark regression results analyzed earlier. When introducing the moderating variable, internal control quality (ICI), and its interaction term with corporate governance (CG×ICI) in Column (2), the interaction coefficient is significantly positive (0.004, $p < 0.05$), indicating that internal control acts as a positive moderator in the relationship between CG and merger performance (CAR). Specifically, high-quality internal control amplifies governance's impact on CAR by standardizing processes (e.g., due diligence protocols) and mitigating integration risks (e.g., financial transparency). In firms with robust governance, strong internal control accelerates post-M&A resource integration (e.g., human capital and cultural alignment). Conversely, even well-designed governance mechanisms may fail without effective internal control (e.g., audit deficiencies), highlighting their synergistic interdependence. This study is the first to demonstrate that governance and internal control function as "twin pillars" for M&A success: governance sets strategic direction (e.g., checks and balances), while internal control ensures tactical execution (e.g., risk management). These findings extend Goh and Li's theory that "internal control ensures strategic execution" and contextualize the COSO framework's "risk management" principles within M&A [11, 12]. They also align with Xie Zhuyun and Wei Wei's work linking board independence to internal control efficacy, offering novel insights into the dynamic interplay between governance and control mechanisms [13]

5 Suggestion

Enterprises should optimize governance structures (e.g., enhancing board oversight, improving executive incentives, separating chairman/CEO roles) and strengthen internal control systems (e.g., standardizing audits, risk management) to boost M&A performance. Low-performing firms should prioritize governance reforms, while high-performing ones must also address market and industry factors. Regulators should refine M&A regulations, mandate disclosure of governance and internal control practices, and incentivize structural improvements to ensure market fairness and transparency. The synergy between governance (strategic direction via checks and balances) and internal control (execution efficiency via risk control) forms the "twin pillars" of M&A success. Differentiated governance strategies and robust internal controls mitigate integration risks, unlock synergies, and foster a healthier M&A market.

6 Conclusion

This study advances M&A governance research through three dimensions: mechanistically, it shifts focus from static structural analyses (e.g., ownership ratios) to dynamic process-level explanations (e.g., decision-making efficiency), clarifying how governance mechanisms operate in practice; contextually, it proposes performance-tiered governance strategies tailored to China's institutional hybridity (e.g., state-private ownership dynamics), offering actionable insights for emerging markets; theoretically, it integrates internal control into governance frameworks, constructing a dual-driver "strategy-execution" model. These contributions validate classical theories while enriching global governance research with localized evidence, positioning China's transitional economy as a critical case for institutional hybridity studies.

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