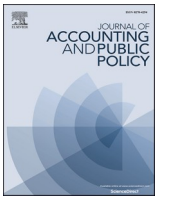
J. Account. Public Policy 46 (2024) 107227

Contents lists available at ScienceDirect

Journal of Accounting and Public Policy

journal homepage: www.elsevier.com/locate/jaccpubpol



Full length article

Use of comment letters for mergers and acquisitions in a setting with weak investor protection: The Chinese experience

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ARTICLE INFO

Keywords:
Public enforcement
Countries with weak investor protection
China
Comment letter
Mergers and acquisitions

ABSTRACT

We adopt a principal–principal perspective to examine whether comment letters for mergers and acquisitions (M&A) protect shareholders, particularly minority shareholders, of acquiring firms in China, where investor protection is weak. This public enforcement tool has several features: (i) regulators provide detailed comments on various matters, (ii) various stakeholders are called upon to respond, and (iii) failure to adequately address the comments to the satisfaction of regulators results in M&A applications being rejected. Our main results show that M&A comment letters affect the outcome of M&A transactions by reducing acquisition premium and improving the fulfillment of performance commitment. Furthermore, this effect is more pronounced when the principal–principal conflict is more severe, as indicated by a greater divergence between cash flow rights and control rights, along with weaker monitoring by multiple large shareholders. Our results suggest that M&A comment letters, if used appropriately, effectively enhance investor protection in less developed economies. We contribute to the literature by providing new evidence of the effects of M&A comment letters in settings with weak investor protection.

1. Introduction

Comment letters, important public enforcement tools used to help ensure market efficiency and protect investors, have increasingly attracted scholars' attention. The literature, however, focuses predominantly on the United States (e.g., Bozanic, Dietrich, and Johnson, 2017; Duro, Heese, and Ormazabal, 2019; Cunningham, Johnson, Johnson, and Lisic, 2020). Yet the effectiveness of public enforcement takes on additional significance in less developed economies, where private enforcement mechanisms are unlikely to be effective at protecting investors because of the lack of an independent judiciary (Ke and Zhang, 2021). More important, less developed economies have institutional environments that differ from those of developed economies, and they use comment letters to address issues rooted in their own unique institutional settings. Insights derived from the U.S. market may not be applicable to less developed economies. Therefore, we investigate whether M&A comment letters help protect investors in a less developed economy.

This study aims to examine the efficacy of comment letters for domestic mergers and acquisitions (M&A) transactions in China, the largest emerging economy in the world. We focus on China mainly for two reasons. First, China provides an interesting institutional

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https://doi.org/10.1016/j.jaccpubpol.2024.107227

Available online 19 June 2024

setting in which to study comment letters in the context of principle-principal conflict. Principal–principal conflict is defined as goal incongruence between controlling and minority shareholders, which results from concentrated ownership and weak legal protection of minority shareholders (Young, Peng, Ahlstrom, Bruton, and Jiang, 2008; Su, Xu, and Phan, 2008; Li and Qian, 2013). Instead of the traditional principal–agent conflict that occurs in developed economies, principal–principal conflict between controlling shareholders and minority shareholders is a major corporate governance concern in China because of concentrated ownership and weak institutions (Su et al., 2008; Lei, Lin, and Wei, 2013; Li and Qian, 2013). Research shows that tunneling, defined as the appropriation of a firm's assets and the expropriation of minority investors by the controlling shareholder, is an important motive behind takeovers in China (Yang, Guariglia, and Guo, 2019). Chinese regulators use M&A comment letters to address agency problems that are different from problems in developed economies. Second, China's capital market has become the second largest market for M&A in the world.[1] Chinese regulators expend extensive resources reviewing corporate filings concerning M&A, which is different from their counterpart in the United States. In the United States, comment letters issued by the Securities and Exchange Commission (SEC) concentrate primarily on compliance with corporate disclosure regulations (Brown, Tian, and Tucker, 2018). However, in China the number of comment letters related to M&A is comparable to that of comment letter related to financial reporting in China. The purpose of comment letters is to protect shareholders, minority shareholders in particular, of acquiring firms.

The objective of this study is to investigate whether M&A comment letters help protect investors in acquiring firms. We focus on two aspects of M&A outcomes, namely, the acquisition premium and the fulfillment of the performance commitment. Acquisition premium indicates the difference between the actual price paid for the target firm and the estimated real value of the firm. Fulfillment of the performance commitment indicates the extent to which the earnings forecasts included in a performance commitment agreement between the acquiring firm and the target firm are actually realized (more discussions on the use of performance commitment agreements in China appear in section 2). A low premium and better fulfillment of the performance commitment suggest the M&A transaction is more value-added and better at protecting investors' interests. We argue that M&A comment letters can be effective in China for two reasons. First, regulators are under pressure to closely oversee the acquisition process because of the political environment in China. Second, regulators use a substantive—as opposed to merely symbolic—approach to operate the M&A comment letter system. Therefore, we predict that comment letters reduce acquisition premiums and improve the fulfillment of performance commitment.

Using a sample of M&A transactions from the Shenzhen Stock Exchange (SZSE) and the Shanghai Stock Exchange (SHSE) during the period 2014 to 2022, we first examine how M&A comment letters affect the outcome of M&A transactions. Our baseline analysis shows that M&A comment letters decrease the acquisition premium and increase the likelihood that promised earnings specified in the performance commitment agreement are achieved. These results suggest that M&A comment letters are effective at improving the outcome of M&A transactions and protecting shareholders. We perform a range of robustness tests. First, regulators' use of comment letters is influenced by firm characteristics, which leads to a potential self-selection bias in this regulatory process. We apply the Entropy Balancing method to address this concern. Second, this study may suffer from endogeneity issues. For example, firms with a higher propensity to engage in questionable M&As might be more likely to receive comment letters. We use the propensity score matching (PSM) approach to address this concern. Further, we use the instrumental variable (IV) approach to address the endogeneity issue associated with reverse causality. Our IV is the geographic distance between the firm and the regulator that issues comment letters. Third, we use the number of comment letters received as an alternative measure of comment letters. Fourth, we re-run the baseline regressions using a sub-sample that only consists of M&A transactions that have been approved and completed. Our results remain robust.

We further perform tests on the mechanism. We conjecture that comment letters are more important in preventing controlling shareholders from expropriating minority shareholders when principal–principal conflict is greater (measured using divergence between control rights and cash flow rights of the controlling shareholder and monitoring of the controlling shareholder by multiple large shareholders). We find results that support our prediction. In addition, further analyses show that the effect of comment letters is stronger when comment letters pertain to *sangao* (overstatement) and tunneling issues (the appropriation of a firm's assets by the controlling shareholder). Moreover, the effect of comment letters is stronger when questions in comment letters are directed to valuers,[2] consultants, and auditors.

Our study contributes to the literature on comment letters as important components of the enforcement of securities regulation in the M&A setting. Chen, Hu, and Zhao (2022) investigate the governance effect of comment letters in China. They find that comment letters reduce M&A success rate, suggesting that comment letters are effective in preventing problematic M&A deals that might be value-decreasing. Our study shows that M&A comment letters improve the outcome of M&A transactions by reducing acquisition premium and improving the fulfillment of performance commitment from the perspective of the principal-principal conflict. The Chinese government endeavors to further develop the market for M&As. Therefore, how to use comment letters to address issues associated with the appropriation of a firm's assets by the controlling shareholder and improve M&A deals is an important research question. We provide evidence on this question. Another related study, Johnson, Lisic, Moon, and Wang (2023), find that M&A comment letters improve the accounting quality of newly merged firms in the United States, where comment letters aim to address the conflict of interest between managers and shareholders. We extend Johnson et al. (2023) to a different institutional setting in which the main purpose of using comment letters is to protect minority shareholders from potential exploitation by controlling shareholders.

[1] Address by Yi Huiman, chair of the China Securities Regulatory Commission, at the 2019 Annual Forum of the China Association for Public Companies (https://www.csrc.gov.cn/pub/newsite/zjhxwfb/xwdd/ 201905/t20190511_355618.html).

[2] Valuers issue valuation reports about target firms, which are used as the main basis for the pricing of M&As.

Furthermore, our study adds to the M&A literature on valuation of M&A deals. Previous studies show that acquisition premiums are associated with targets' information asymmetry (Cheng, Li, and Tong, 2016), targets' earnings quality (Raman, Shivakumar, and Tamayo, 2013), targets' earnings management (Farooqi, Jory, and Ngo, 2020; Missonier-Piera and Spadetti, 2023), analysts' target price forecasts (Ho, Brownen-Trinh, and Xu, 2021), and acquirers' knowledge on the industry practices governing targets' business activities (Perafán-Peña, Gill-de-Albornoz, and Giner, 2022). We extend this line of research by providing evidence on the role of monitoring by regulators in influencing acquisition premiums.

Our study also contributes more broadly to the literature on public enforcement. We respond to the call from Ke and Zhang (2021) for more research aimed at better understanding the economic consequences of public enforcement for shareholder value in countries with weak investor protection, where effective law enforcement is of particular importance. While Ke and Zhang (2021) examine a one-time governance enforcement event and find that the 2007 national campaign aiming to help enforce China's first mandatory Corporate Governance Code is effective at protecting investors, we examine a frequently used public enforcement mechanism and find that comment letters are also effective at protecting investors. We confirm Ke and Zhang (2021)'s findings that public enforcement, if properly implemented, works in countries with weak investor protection.

This paper is organized as follows. Section 2 discusses the institutional background and our hypothesis. Section 3 describes the data used in the study. Section 4 provides descriptive statistics and discusses the empirical results, and section 5 offers our conclusions.

2. Institutional environment and hypothesis

2.1. Principal–principal conflict and M&A transactions

Principal–principal conflict has important implications for M&A transactions in countries with weak institutions. Controlling shareholders can engage in questionable acquisitions to divert corporate resources from the firm and its minority shareholders to themselves, a phenomenon called *tunneling* (Johnson, La Porta, Lopez-de-Silanes, and Shleifer, 2000). Empirical studies show that M&A provides a way for controlling shareholders to increase their wealth at the expense of minority shareholders in Korea (Bae, Kang, and Kim, 2002) and India (Bhaumik and Selarka, 2012).

China also grapples with agency problems between controlling and minority shareholders because of its highly concentrated ownership structure, weak legal system, and inadequate legal protection of investor rights (Jiang, Lee, and Yue, 2010; Chen, Ke, and Yang, 2013). Tunneling is widespread in listed Chinese firms (Yang et al., 2019). M&A in particular provides opportunities for controlling shareholders to engage in expropriation to advance their own agendas while sacrificing the interests of minority shareholders. In its 2018 annual report on M&A regulation, SZSE (2019) summarizes four issues typically associated with questionable M&A transactions: *sangao* transactions (overstatements of value, goodwill, or prospective performance), *huyoushi* (fraudulent) restructuring, sham transactions, and tunneling. Such transactions severely damage the interests of minority shareholders. In a recent case, for example, Dalian Kemian Wood Industry (stock code 002354) downgraded its financial forecast for 2018 by RMB 7.8 billion on January 31, 2019, from a profit of RMB 0.5 billion to a loss of RMB 7.3 billion. The main reason cited for the change was a RMB 4.9 billion goodwill reduction associated with a number of M&A deals struck in prior years. Prior studies also document evidence of listed Chinese firms pursuing M&A deals that are not in the best interests of minority shareholders (Chen and Young, 2010; Yang et al., 2019).

2.2. The regulation of M&A in China

Recognizing the importance of M&A in driving the country's economic growth, Chinese regulators have endeavored to address issues associated with M&A deals in past decades. Key regulators of China's capital market include the China Securities Regulatory Commission (CSRC) as the main regulator of the securities industry in China and the two stock exchanges (i.e., SZSE and SHSE) as the executive organs of the CSRC. In this section we discuss two important measures, namely, the performance commitment and comment letters, used by Chinese regulators to address questionable behaviors in M&A deals.

2.2.1. Performance commitment

The CSRC issued *Administrative Measures for Major Asset Restructuring of Listed Companies* (hereafter, *Administrative Measures for M&A*) in 2008. This regulation was important and signaled the beginning of the formal regulation of M&A transactions. The key objective of this regulation was to protect the interests of listed firms and shareholders.

An important way to improve investor protection in M&A transactions is to use a performance commitment agreement. This measure addresses the prevalence of various questionable activities in M&A deals that undermine the interests of shareholders, minority shareholders in particular. The 2008 *Administrative Measures for M&A* stipulated that the target firm should sign a performance commitment agreement with the acquirer when the M&A transaction is evaluated based on future earnings expected of the acquired assets (Song, Su, Yang and Shen, 2019). In practice, a typical agreement includes earnings forecasts, usually for 3 years, after the M&A deal is consummated and compensation terms in case the promised earnings are not realized.[3] As the CSRC moved toward market-oriented regulation by relaxing control and increasing supervision, the performance commitment requirement was relaxed in the

[3] The 2014 *Administrative Measures for M&A* was the first to require listed companies to disclose in their annual reports the discrepancy between committed and actual earnings for each of the 3 years after an M&A deal is completed. This requirement was retained in the current 2016 *Administrative Measures for M&A*.

2014 *Administrative Measures for M&A*; consequently, entering into a performance commitment agreement is voluntary for most M&A transactions.[4] The practice of using a performance commitment nevertheless remains in place, and the likelihood of the promised earnings being realized is an important item addressed in comment letters.

2.2.2. M&A Comment letters

As Chinese regulators strive to deter questionable behaviors in M&A deals, they are increasingly using comment letters as warnings to correct firm behavior (SZSE, 2019). Unlike in the United States, where the SEC, the counterpart of the CSRC, issues comment letters, in China this responsibility is assumed by SZSE and SHSE. The two stock exchanges traditionally issue comment letters during their review of corporate filings to ensure compliance with applicable financial reporting and disclosure requirements. The application of this enforcement measure in M&A reviews was first put forward by SZSE in its *Guidelines on Fair Information Disclosure of Listed Companies on Small and Medium-Sized Enterprises Board of Shenzhen Stock Exchange* issued in 2006.[5] This regulation identifies information concerning M&A as material information and indicates that SZSE can use comment letters, among other things, to ensure the fair disclosure of such information.

The M&A comment letter process typically involves several phases. Listed firms are required to submit an asset restructuring plan to the stock exchange on which they are listed and simultaneously release it to newspaper and media organizations designated by the CSRC. The management discussion and analysis section of the plan provides a thorough analysis of the impact of the transaction on financial and nonfinancial performance indicators, such as the firm's ability to continue operations, future development prospects, and earnings per share for the year. The stock exchange then reviews the plan and issues a comment letter if clarification, additional information, or revision is required. The firm has 10 working days to respond. The stock exchange may issue follow-up comment letters until all issues are addressed to regulators' satisfaction. The firm revises its original plan based on feedback from the stock exchange, and the final version of the plan must be approved by the shareholders and the CSRC before the M&A deal can be executed. If the firm fails to respond, or the response does not sufficiently address regulators' comments, the proposed deal may be terminated. It is worth noting that it is the regulators' decision that which firms will be issued with comment letters. In addition, the comment letters are not open for public comments. Instead, the regulators will specify a stakeholder (or stakeholders) who need to respond to questions in the comment letter. These stakeholders include directors, auditors, lawyers, valuers, or financial consultants. Fig. 1 shows the typical process for M&A transactions subject to comment letters.

A vast amount of resources are allocated to reviewing corporate filings concerning M&A in China. Table 1 shows the distribution of comment letters during our sample period. As noted in the table, Shanghai Stock Exchange and Shenzhen Stock Exchange issued 2,308 (17.15 %) M&A comment letters from 2014 to 2022, which is just slightly less than 3,946 (29.33 %) comment letters for financial report filings during the same period. The majority of M&A comment letters (around 69 %) were issued from 2015 to 2018. The number of M&A comment letters jumped from 5 in 2014 to 530 in 2016 and then steadily declined in the following six years reaching 116 in 2022.

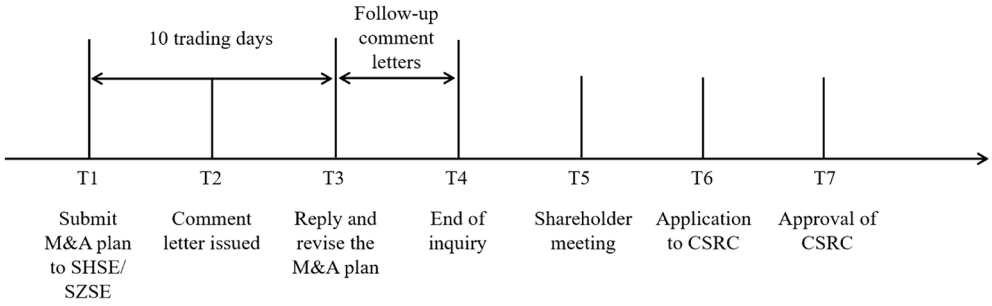
2.3. The effect of M&A comment letters

M&A comment letters may work in China for two reasons. First, the political environment in China, which is conducive to M&A, prompts regulators to closely oversee the acquisition process. Recognizing the importance of M&A for allocating resources and improving corporate performance, the Chinese government has endeavored to develop an environment supportive of M&A. Authorities especially acknowledge the role of the capital market in facilitating and furthering M&A. For instance, the State Council issued *Opinions on Promoting Enterprise Merger and Restructuring* in 2010 to eliminate institutional barriers, provide policy support, and fully leverage the function of the capital market in promoting the restructuring of enterprises. The Chinese government's support for M&A is further reflected in two important policies issued by the State Council in 2014: *Opinions on Further Improving Market Environment for Enterprise Merger and Restructuring* issued in March and *Several Opinions on Further Promoting the Sound Development of Capital Market* issued in May. These documents reiterate the role of the capital market in M&A and clearly identify this market as the main channel for M&A. The great importance attached to M&A by the Chinese government motivates regulators to properly address questionable behaviors.

Second, the M&A comment letter system suggests a substantive—as opposed to merely symbolic—approach on the part of regulators. This substantive approach is evidenced in a number of ways. Chinese regulators comment on and make inquiries about specific matters, including internal control of the acquirer, information disclosure of the acquirer, arrangement and execution of the M&A agreement, risks associated with the M&A transaction, and tax matters of the acquirer. They also specify in their M&A comment letters which stakeholders should respond to their questions, which often depends on who is in the best position to respond. Respondents can be directors, auditors, lawyers, valuers, or financial consultants. The detailed nature of the questions and clearly defined responsibility to respond likely make it difficult for these stakeholders to avoid revealing problems. Furthermore, the cycle of issuing M&A comment letters and receiving responses can occur multiple times until all issues have been resolved. This back-and-forth approach also helps elicit candid responses from relevant stakeholders. Furthermore, M&A comment letters are highly transparent. All listed firms are required to publicly disclose all matters related to M&A comment letters as they happen, including the receipt of comment letters and

[4] For example, according to Article 35, when listed companies purchase assets from parties other than controlling shareholders and their controlled related parties and the purchase will not lead to a change in control rights, the voluntary performance commitment applies.

[5] This document is available in the securities and futures law database (https://neris.csrc.gov.cn/falvfagui/).



Note: M&A = mergers and acquisitions; SHSE = Shanghai Stock Exchange; SZSE = Shenzhen Stock Exchange; CSRC = China Securities Regulatory Commission; T = time period

Fig. 1. The process for M&A transactions subject to comment letters.

Table 1
Distribution of comment letters from 2014 to 2022.

Year	Financial report		M&A		Other		Total	
	Frequency	%	Frequency	%	Frequency	%	Frequency	%
2014	0	0.00 %	5	100.00 %	0	0.00 %	5	100.00 %
2015	139	22.35 %	382	61.41 %	101	16.24 %	622	100.00 %
2016	271	20.80 %	530	40.68 %	502	38.53 %	1,303	(100.00 %
2017	374	27.08 %	362	26.21 %	645	46.71 %	1,381	100.00 %
2018	520	27.18 %	325	16.99 %	1068	55.83 %	1,913	100.00 %
2019	718	34.79 %	236	11.43 %	1110	53.78 %	2,064	100.00 %
2020	785	32.94 %	203	8.52 %	1395	58.54 %	2,383	100.00 %
2021	587	28.73 %	149	7.29 %	1307	63.97 %	2,043	100.00 %
2022	552	31.72 %	116	6.67 %	1072	61.61 %	1,740	100.00 %
2014–2022	3,946	29.33 %	2,308	17.15 %	7,200	53.52 %	13,454	100.00 %

responses provided by the firm. The nature of public disclosure may well pressure management to take effective action to address identified issues (Ke and Zhang, 2021). Duro et al. (2019) find that public disclosure of SEC comment letter reviews can strengthen public enforcement. Moreover, commented firms have a stake in adequately addressing issues identified by regulators. Failing to respond to regulators' comments to their satisfaction has economic consequences; for example, the proposed M&A deal may be rejected by the CSRC, which takes comment letter resolution into account in its decision making. Firms that receive comment letters thus have an incentive to provide substantive responses.

In summary, M&A comment letters can be effective public enforcement tools that reduce opportunities for controlling shareholders of acquiring firms to expropriate minority shareholders by compelling listed Chinese firms to disclose substantive information, which ultimately leads M&A deals to be revised toward arm's-length transactions. Specifically, we predict that comment letters likely influence two outcomes associated with M&As. First, previous discussion indicates that principal-principal conflict results in value-decreasing M&As in China. Prior studies suggests that value-decreasing M&As are typically associated with a higher premium (Harford, Humphery-Jenner, and Powell, 2012; Wangerin, 2019). Following this line of research, we predict that comment letters reduce acquisition premiums through addressing principal-principal conflict. Second, previous discussion also indicates that performance commitments are used to enhance investor protection in M&As and it constitutes a significant aspect addressed in comment letters. We thus predict that comment letters improve the fulfillment of performance commitment. Based on this discussion, we state our hypothesis as follows:

H1A: Comment letters reduce acquisition premiums and improve the fulfillment of performance commitment.

However, it is also possible that M&A comment letters might not be effective enforcement tools in China for several reasons. First, Legal protection for investors is weak in China (Ke and Zhang, 2021). The two stock exchanges lack powerful disciplinary tools to use against firms that engage in questionable M&A transactions. This suggests that the cost associated with infringing on the rights of minority shareholders is low. Prior research shows that firms find creative ways to engage in questionable behaviors when encountering increased regulatory scrutiny. For example, Cunningham et al. (2020) show that SEC comment letters induce management to switch from accrual-based earnings management, which is a focus of the SEC, to real-activities-based earnings management. Because of weak legal protection for investors and low cost of minority shareholders rights infringement in China, controlling shareholders and management of commented firms might be motivated to defeat regulators' monitoring.

Furthermore, the effect of comment letters may be compromised by the influence of state being the controlling shareholder. The literature on public enforcement in the United States suggests that the SEC may be influenced by politically connected firms (Yu and Yu, 2011; Correia, 2014). In China's context, state ownership can be viewed as a form of powerful political connection, which remains prevalent (Wang and Xiao, 2011). Chinese regulators may also hesitate when encountering powerful and politically connected firms,

especially given the weak legal protection for investors (Ke and Zhang, 2021). Therefore, we argue that the prevalent state ownership may considerably dampen the effect of comment letters.

In addition, Chinese regulators may not have sufficient resources to closely monitor M&A transactions. Ege, Glenn, and Robinson (2020) show that resource constraints result in the SEC issuing comment letters of low quality. Chinese regulators also encounter resource constraints when using comment letters to monitor listed firms (Hao and Wang, 2021). Based on the discussion, we predict that comment letters may not be effective in reducing acquisition premiums and improving fulfillment of performance commitment. Therefore, we state our hypothesis as follows:

H1B: Comment letters has no effect on acquisition premiums and the fulfillment of performance commitment.

If Hypothesis 1A holds, we further discuss how the effect of comment letters are influenced by the degree of principal–principal conflict. Previous discussion suggests that comment letters are effective because they can address conflicts of interest between controlling and minority shareholders and reduce the former's opportunities to use M&A to expropriate the latter. Following this argument, we predict that the effect of M&A comment letters is more pronounced when principal–principal conflict in acquiring firms is more severe.

Prior research suggests that principal–principal conflict in emerging economies is largely caused by the separation of cash flow rights and control rights (Claessens, Djankov, Fan, and Lang, 2002; La Porta, Lopez-de-Silanes, Shleifer, and Vishny, 2002; Dyck and Zingales, 2004). Ownership in many emerging economies is structured as a pyramid where a controlling shareholder (also referred to as an ultimate owner) controls a particular corporation through a chain of ownership (Claessens et al., 2002). Under the pyramid ownership, it is likely that formal control right of ultimate owners is greater than their ownership (cash-flow) rights. This increases the probability of expropriation of the firm by ultimate owners as the financial benefits from expropriation outweigh the financial costs (Young et al., 2008). Previous studies conducted in China also show that the divergence between control rights and cash flow rights gives controlling shareholders an incentive to pursue their own interests at the expense of minority shareholders (Cao, Pan, and Tian, 2011; Chen, Li, Su, and Sun, 2011). Greater divergence between control rights and cash flow rights engenders worse principal–-principal conflict. Therefore, we argue that comment letters play a more important role in protecting interest of minority shareholders when M&A deals involve firms with greater divergence between control rights and cash flow rights. This discussion leads to the following hypothesis.

H2A: The effect of comment letters is more pronounced for firms with greater divergence between control rights and cash flow rights**.**

The degree of principal–principal conflict is also related to multiple large shareholders, defined as blockholders other than the controlling shareholder, who provide checks and balances that mitigate the abuse of power by the controlling shareholder. Multiple large shareholders have the power and the incentives to monitor the controlling shareholder because of their relatively large shareholding (Ben-Nasr, Boubaker, and Rouatbi, 2015). They can form coalitions that improve firm governance and performance (Bennedsen and Wolfenzon, 2000).

A body of empirical studies have documented the governance role of multiple large shareholders. Boateng and Huang (2017) find that the contestability of multiple large shareholders relative to controlling shareholders reduces the adoption of excess leverage policies, tunneling and enhances capital investment. Attig, Guedhami, and Mishra (2008) show that the presence of multiple large shareholders alleviates a firm's agency costs and information asymmetry manifested in the cost of equity financing. Ben-Nasr et al. (2015) find that multiple large shareholders contain the controlling shareholder's preference for less monitoring through the use of longer maturity debt. Maury and Pajuste (2005) and Laeven and Levine (2008) show that multiple large shareholders can affect - corporate valuations.

Because monitoring by multiple large shareholders can alleviate agency conflict between controlling shareholders and minority shareholders, we predict that that comment letters play a more important role in protecting interest of minority shareholders when M&A deals involve firms with weak monitoring by multiple large shareholders. The discussion leads to the following hypothesis.

H2B: The effect of comment letters is more pronounced for firms with weaker monitoring by multiple large shareholders.

3. Method

3.1. Sample

Our study focuses on M&A transactions at SZSE and SHSE from 2014 to 2022. The sample period begins in 2014 because this is the first year the two stock exchanges publicly disclosed comment letters and firm responses. From the China Stock Market & Accounting Research database, we obtain an initial sample of 15,021 M&A transactions for which data on the trading value and estimated value of the target firms are available. We exclude observations from financial institutions, firms in financial distress, and firms with missing data. Our final sample contains 6,163 M&A transactions: 1,363 commented cases and 4,800 non-commented cases. We obtain M&A comment letters and firm responses from the information disclosure platforms of the two stock exchanges.[6] Table 2 summarizes the sample selection process.

[6] Comment letters and responses are publicly disclosed in the Comment Letter Section of the SHSE/SZSE Information Disclosure Platform at https://www.sse.com.cn/disclosure/credibility/supervision/inquiries.html and https://www.szse.cn/disclosure/supervision/inquire/index.html.

3.2. Models

We use the following equation to test the effect of comment letters:

$$\text{Premium}_t/\text{Commitment}_t = \alpha + \beta_{CL} CL\_MA_t + \beta_{CV} Controls_{t-1} + \Sigma\beta_{FE} Fixed\,Effects + \varepsilon. \quad (1)$$

We focus on two aspects of the outcome of M&A transactions, namely the acquisition premium and fulfillment of the performance commitment. Specifically, when the acquisition premium is smaller, and the associated performance commitment is better fulfilled, an M&A transaction is considered more value-added and better at protecting investors' interests. The acquisition premium (*Premium*) is calculated as the difference between the trading value and estimated value of the target firm divided by the estimated value of the target firm. Fulfillment of the performance commitment (*Commitment*) is measured as the difference between realized net profit and committed net profit divided by committed net profit. *CL_MA*, the explanatory variable, equals 1 for the year in which the M&A transaction receives a comment letter and 0 otherwise.

In line with prior accounting and finance studies on comment letters and business combination (Bonaime, Gulen, and Ion, 2018; Brown et al., 2018; Albuquerque, Brandão-Marques, Ferreira, and Matos, 2019), we include various control variables (*Controls*). First, we control for characteristics of acquiring firms including firm size (*Size*) measured as the natural logarithm of total assets, leverage (*Lev*) measured as total liabilities scaled by total assets, profitability proxied by return on assets (*ROA*), net cash flow from operation activities (*CFO*), sales growth (*Growth*) calculated as the difference in net sales for the current period over the prior period scaled by net sales for the prior period, the book-to-market ratio (*BM*) calculated as the book value of the firm's year-end equity divided by the market value of its equity, firm age (*Age*), the amount of fixed assets divided by total assets (*PPE*), and the amount of working capital divided by total assets (*WC*). Second, we control for corporate governance and ownership features of acquiring firms including the shareholding ratio of the largest shareholder (*Top1*), duality (*Dual*) that equals 1 if the chief executive officer also acts as the chairperson of the board of directors and 0 otherwise, the ratio of the number of independent directors to the number of board members (*Indratio*), and state ownership (*SOE*) that equals 1 if the firm is state owned and 0 otherwise. Third, we further control for characteristics of target firms including their size (*Tgt_Size*), leverage (*Tgt_Lev*), ROA (*Tgt_ROA*), firm age (*Tgt_Age*), sales growth (*Tgt_Growth*), and media exposure (*Tgt_Exposure*). Finally, we control for whether the acquiring firm and the target firm are from the same province or from the same industry. We also control for firm and year fixed effects. All continuous variables are winsorized at the 1 % and 99 % levels. All variables are defined in Appendix 1.

4. Results

4.1. Descriptive statistics and correlation analysis

Table 3 presents descriptive statistics for the main variables. The mean *Premium* is 0.293, which suggests that the average M&A premium is 29.3 %. In addition, the 10th and 90th percentile values are –0.095 and 0.237, respectively, which suggests wide variation in the M&A premium. The mean *Commitment* is 0.010, which suggests that on average the realized profit exceeds the target promised by 1.0 %. The 10th and 90th percentile values are –0.462 and 0.418, respectively, which suggests that fulfillment of the performance commitment varies significantly across firms. Furthermore, for the regression models where *Premium* is the dependent variable, the mean *CL_MA* is 0.221, which indicates that 22.1 % of the sample firms receive comment letters. For the regression models where *Commitment* is the dependent variable, the mean *CL_MA* is 0.111. The descriptive statistics for the other variables are largely consistent with prior studies (Chen and Chen, 2018; Chu, Qin, and Fang, 2019).

Table 4 presents the correlation matrix for the variables in our baseline regression models, with Spearman correlations above the diagonal and Pearson correlations below the diagonal. Panel A presents correlations for the variables used in models where *Premium* is the dependent variable. Panel B presents correlations for the variables used in models where *Commitment* is the dependent variable. *CL_MA* is negatively correlated with *Premium* and positively correlated with *Commitment*, both significant at the 1 % level. These results provide preliminary support for our hypothesis H1A that M&A comment letters are effective at reducing the premium and improving the fulfillment of the performance commitment, thus protecting the interests of minority shareholders in China.

4.2. Baseline regressions

Table 5 shows the main results of our baseline regressions. Columns 1 and 2 report results for *Premium* as the dependent variable with industry fixed effects controlled in Column 1 and firm fixed effects controlled in Column 2. The coefficients of *CL_MA* are –0.415 in Column 1 and –0.462 in Column 2, both significant at the 1 % level. These results suggest that comment letters significantly suppress the premium in M&A transactions. Columns 3 and 4 show the results for *Commitment* as the dependent variable with industry fixed effects controlled in Column 3 and firm fixed effects controlled in Column 4. The coefficients of *CL_MA* is 0.111 in Column 3 and 0.078 in Column 4, both significant at the 1 % level, respectively. These results suggest that comment letters significantly prompt fulfillment of the performance commitment after M&A transactions. Taken together, our results show that comment letters are effective at enhancing investor protection by reducing premium and improving fulfillment of the performance commitment in M&A transactions, which supports H1A and rejects H1B.

Table 2
Sample selection process.

Panel A: Premium as the dependent variable			
	Commented M&A	Non-commented M&A	Total
Initial sample from 2014 to 2022	1,954	13,067	15,021
Excluding:			
Financial institutions	–37	–148	–185
Firms with missing data	–554	–8,119	–8,673
Final sample	1,363	4,800	6,163
Panel B: Commitment as the dependent variable			
	Commented M&A	Non-commented M&A	Total
Initial sample from 2014 to 2022	650	7,140	7,790
Excluding:			
Financial institutions	–7	–29	–36
Firms with missing data	–34	–2,219	–2,253
Final sample	609	4,892	5,501

Table 2 summarizes the sample selection process. The initial sample contains 15,021 M&A transactions in the sample period that disclose transaction consideration information. After we exclude observations from financial institutions, firms in financial distress, and firms with missing data, the final sample contains 5,501 M&A transactions. M&A, mergers and acquisitions.

4.3. Robustness and endogeneity tests

4.3.1. Entropy Balancing method

There is the potential for self-selection bias in the comment letter process. Differences in firm characteristics between commented firms and non-commented firms impact not only on the M&A premium but also on how regulators use this monitoring tool. To address this concern, we apply the Entropy Balancing method, following prior studies (Hainmueller, 2012; Hainmueller and Xu, 2013). We assign weights to adjust for the sample's distributions, which balance the covariates on all three moments (mean, variance and skewness) of the distributions. This procedure assigns greater weight to under-represented observations and lesser weight to over-represented ones, establishing a "pseudo" control group that helps alleviate covariate discrepancies between the treatment sample ($CL\_MA = 1$) and the control sample ($CL\_MA = 0$). Appendix 2 provides the descriptive statistics of the Entropy Balanced sample with *Premium* and *Commitment* as the dependent variable in Panels A and B, respectively. The results indicate no differences between the treatment and control groups in terms of mean, variance, and skewness.

Table 6, Panel A presents the results of regression analysis using the entropy balanced sample. The coefficients of *CL_MA* remain negative and significant at the 1 % level in Columns 1 and 2 where *Premium* is the dependent variable. Furthermore, the coefficients of *CL_MA* remain positive and significant at the 1 % level in Columns 3 and 4 where *Commitment* is the dependent variable. These results are consistent with our main findings.

4.3.2. PSM approach

There could be endogeneity concerns regarding the main findings. For example, comment letters are not issued randomly, and firms with a higher propensity to engage in questionable M&As might be more likely to receive comment letters. To address this endogeneity issue, we use the PSM approach, following Shipman, Swanquist, and Whited (2017). PSM matches a treatment (commented) firm with a control (non-commented) firm based on similarity in observable relevant variables. We use one-to-one balancing with no replacement to match each firm–year observation with a comment letter to an observation without a comment letter, based on similarity in control variables used in the baseline regressions.

Appendix 3 Presents differences in mean values for each control variables between the treatment and control groups before and after the matching. Panels a and B present the results with *Premium* and *Commitment* as the dependent variable, respectively. The results show there is no significant difference in these variables between the two groups after the matching, suggesting that our matching is effective

Table 6, Panel B reports the regression results based on PSM. The coefficients of *CL_MA* remain negative and significant in Columns 1 and 2 (both at the 1 % level), in which *Premium* is the dependent variable. Furthermore, the coefficients of *CL_MA* remain and significant in Columns 3 and 4 (both at the 1 % level), in which *Commitment* is the dependent variable. These results are consistent with our baseline results, suggesting the robustness of our findings.

4.3.3. Instrumental variable approach

Next, we further use the IV approach to address endogeneity associated with reverse causation. We use the geographic distance between the firm and the regulator (SZSE or SHSE) that issues comment letters (*Distance*) as the IV for comment letters. *Distance* is calculated as the natural logarithm of 1 plus the distance (in kilometers). The distance between the firm and the regulator affects the use of comment letters but is unlikely to be related to the outcome of M&A. The two stock exchanges use a variety of means to monitor M&A. For example, in addition to comment letters, they also use site visits. If firms are located nearby, SZSE and SHSE may use site visits instead of comment letters. Furthermore, a shorter distance may also reduce information asymmetry between the regulator and

Table 3
Descriptive statistics.

Panel A: *Premium* as the dependent variable

Variable	N	Mean	SD	P10	P25	P50	P75	P90
Premium	6,163	0.293	1.518	−0.095	−0.010	0.000	0.000	0.237
CL_MA	6,163	0.221	0.415	0.000	0.000	0.000	0.000	1.000
Size	6,163	22.436	1.291	20.902	21.509	22.281	23.246	24.213
Lev	6,163	0.457	0.196	0.196	0.307	0.454	0.602	0.715
ROA	6,163	0.041	0.055	−0.005	0.015	0.038	0.069	0.102
CFO	6,163	0.045	0.065	−0.031	0.008	0.044	0.083	0.124
Growth	6,163	0.282	0.639	−0.149	−0.001	0.149	0.360	0.736
BM	6,163	0.529	0.282	0.188	0.299	0.485	0.729	0.947
Top1	6,163	0.337	0.145	0.165	0.221	0.315	0.437	0.544
Dual	6,163	0.286	0.452	0.000	0.000	0.000	1.000	1.000
Board	6,163	2.120	0.197	1.946	1.946	2.197	2.197	2.398
Indratio	6,163	0.378	0.054	0.333	0.333	0.364	0.429	0.429
SOE	6,163	0.348	0.476	0.000	0.000	0.000	1.000	1.000
Age	6,163	2.943	0.307	2.565	2.773	2.996	3.178	3.296
PPE	6,163	0.205	0.159	0.031	0.082	0.169	0.291	0.438
WC	6,163	0.175	0.222	−0.114	0.031	0.173	0.329	0.461
Tgt_Size	6,163	19.805	1.918	17.577	18.542	19.595	20.962	22.436
Tgt_Lev	6,163	0.521	0.287	0.141	0.306	0.523	0.713	0.866
Tgt_ROA	6,163	0.077	0.169	−0.044	0.003	0.048	0.131	0.254
Tgt_Age	6,163	2.810	0.580	2.079	2.565	2.890	3.178	3.401
Tgt_SOE	6,163	0.088	0.284	0.000	0.000	0.000	0.000	0.000
Tgt_Growth	6,163	0.684	3.060	−0.416	−0.139	0.064	0.393	1.233
Tgt_Exposure	6,163	0.446	0.867	0.000	0.000	0.000	0.693	1.609
CrossPro	6,163	0.378	0.485	0.000	0.000	0.000	1.000	1.000
CrossInd	6,163	0.348	0.476	0.000	0.000	0.000	1.000	1.000

Panel B: *Commitment* as the dependent variable

Variable	N	Mean	SD	P10	P25	P50	P75	P90
Commitment	5,501	0.010	0.569	−0.462	−0.044	0.033	0.142	0.418
CL_MA	5,501	0.111	0.314	0.000	0.000	0.000	0.000	1.000
Size	5,501	22.324	1.023	21.117	21.618	22.214	22.919	23.673
Lev	5,501	0.427	0.188	0.186	0.278	0.418	0.555	0.680
ROA	5,501	0.037	0.078	−0.006	0.020	0.045	0.072	0.100
CFO	5,501	0.038	0.061	−0.032	0.004	0.036	0.073	0.112
Growth	5,501	0.553	1.462	−0.118	0.054	0.239	0.516	1.066
BM	5,501	0.496	0.244	0.197	0.301	0.458	0.659	0.855
Top1	5,501	0.301	0.141	0.150	0.196	0.273	0.381	0.493
Dual	5,501	0.324	0.468	0.000	0.000	0.000	1.000	1.000
Board	5,501	2.106	0.186	1.946	1.946	2.197	2.197	2.197
Indratio	5,501	0.374	0.050	0.333	0.333	0.333	0.429	0.429
SOE	5,501	0.222	0.415	0.000	0.000	0.000	0.000	1.000
Age	5,501	2.916	0.307	2.485	2.708	2.944	3.135	3.296
PPE	5,501	0.151	0.127	0.021	0.055	0.119	0.213	0.321
WC	5,501	0.198	0.193	−0.052	0.078	0.198	0.325	0.438
Tgt_Size	5,501	18.898	2.954	16.807	18.227	19.279	20.409	21.783
Tgt_Lev	5,501	0.474	0.234	0.156	0.302	0.479	0.649	0.786
Tgt_ROA	5,501	0.145	0.198	0.000	0.040	0.102	0.198	0.354
Tgt_Age	5,501	2.748	0.553	1.946	2.565	2.833	3.091	3.296
Tgt_SOE	5,501	0.054	0.226	0.000	0.000	0.000	0.000	0.000
Tgt_Growth	5,501	0.733	2.771	−0.333	−0.055	0.124	0.494	1.565
Tgt_Exposure	5,501	0.613	0.863	0.000	0.000	0.000	1.099	1.792
CrossPro	5,501	0.463	0.499	0.000	0.000	0.000	1.000	1.000
CrossInd	5,501	0.331	0.471	0.000	0.000	0.000	1.000	1.000

Table 3 presents descriptive statistics for the variables used in our regression analyses for all completed mergers and acquisitions deals. Panel A presents descriptive statistics for the variables used in models where *Premium* is the dependent variable. All variables are defined in Appendix 1. All continuous variables are winsorized at the 1% and 99% levels.

Table 3 presents descriptive statistics for the variables used in our regression analyses for all completed mergers and acquisitions deals. Panel B presents descriptive statistics for the variables used in models where *Commitment* is the dependent variable. All variables are defined in Appendix 1. All continuous variables are winsorized at the 1% and 99% levels.

Table 4
Correlations.

Panel A: *Premium* as the dependent variable

	Premium	*CL_MA*	*Size*	*Lev*	*ROA*	*CFO*	*Growth*	*BM*	*Top1*	*Dual*	*Board*
Premium	1	−0.051***	0.120***	0.036***	0.012	0.023*	−0.038***	0.100***	0.043***	−0.023*	0.034***
CL_MA	−0.078***	1	−0.131***	−0.044***	−0.029**	−0.075***	0.041***	−0.149***	−0.061***	0.008	−0.057***
Size	−0.022*	−0.129***	1	0.521***	−0.053***	0.092***	0.023*	0.672***	0.204***	−0.190***	0.253***
Lev	−0.051***	−0.039***	0.507***	1	−0.366***	−0.099***	−0.028**	0.476***	0.104***	−0.125***	0.092***
ROA	0.027**	−0.039***	−0.001	−0.335***	1	0.375***	0.367***	−0.286***	0.092***	0.028**	0.016
CFO	−0.017	−0.077***	0.089***	−0.107***	0.373***	1	0.003	0.004	0.144***	−0.049***	0.086***
Growth	−0.007	0.097***	0.025*	0.032**	0.237***	−0.012	1	−0.119***	−0.043***	0.055***	−0.028**
BM	−0.045***	−0.144***	0.688***	0.461***	−0.214***	0.007	−0.078***	1	0.174***	−0.170***	0.165***
Top1	−0.018	−0.060***	0.243***	0.110***	0.108***	0.138***	−0.016	0.189***	1	−0.085***	0.028**
Dual	0.052***	0.008	−0.173***	−0.122***	0.021*	−0.039***	0.035***	−0.173***	−0.093***	1	−0.171***
Board	−0.004	−0.064***	0.273***	0.101***	0.030**	0.079***	−0.034***	0.174***	0.041***	−0.171***	1

Panel B: *Commitment* as the dependent variable

	Commitment	*CL_MA*	*Size*	*Lev*	*ROA*	*CFO*	*Growth*	*BM*	*Top1*	*Dual*	*Board*
Commitment	1	0.118***	0.106***	0.020	0.255***	0.083***	0.192***	−0.073***	0.106***	−0.041***	0.060***
CL_MA	0.083***	1	−0.087***	−0.022	0.004	−0.029**	0.070***	−0.104***	0.021	0.000	−0.022
Size	0.132***	−0.081***	1	0.437***	0.027**	0.017	0.040***	0.540***	0.082***	−0.142***	0.200***
Lev	−0.030**	−0.016	0.440***	1	−0.299***	−0.092***	−0.043***	0.392***	0.132***	−0.077***	0.040***
ROA	0.380***	0.042***	0.082***	−0.266***	1	0.341***	0.331***	−0.323***	0.108***	0.003	0.049***
CFO	0.093***	−0.019	0.035**	−0.101***	0.252***	1	−0.032**	−0.043***	0.122***	−0.026*	0.047***
Growth	0.106***	0.094***	0.089***	0.063***	0.168***	−0.008	1	−0.172***	−0.026*	0.029**	−0.002
BM	−0.041***	−0.096***	0.568***	0.383***	−0.197***	−0.039***	−0.049***	1	0.063***	−0.096***	0.116***
Top1	0.115***	0.015	0.208***	0.176***	0.132***	0.128***	0.050***	0.122***	1	−0.041***	−0.056***
Dual	−0.044***	0.000	−0.133***	−0.079***	−0.013	−0.019	0.006	−0.098***	−0.062***	1	−0.144***
Board	0.087***	−0.024*	0.200***	0.052***	0.066***	0.041***	−0.004	0.119***	−0.020	−0.141***	1

Table 4 presents the correlation matrix. Panel A presents corrections for the variables used in models where *Premium* is the dependent variable. Panel B presents corrections for the variables used in models where *Commitment* is the dependent variable. Pearson correlations are reported below the diagonal, and Spearman correlations are reported above the diagonal. All variables are defined in Appendix 1. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

Table 5
Baseline regressions: the impact of comment letters on the fairness of mergers and acquisitions.

	(1)	(2)	(3)	(4)
Variable	*Premium*	*Premium*	*Commitment*	*Commitment*
CL_MA	−0.415***	−0.462***	0.111***	0.078***
	(−8.47)	(−5.58)	(6.11)	(3.45)
Size	0.029	0.105	0.036**	0.192***
	(1.03)	(1.22)	(2.25)	(4.43)
Lev	−0.320*	−0.174	0.076	0.233
	(−1.74)	(−0.47)	(0.97)	(1.59)
ROA	0.341	1.016	2.567***	2.205***
	(0.65)	(1.35)	(13.40)	(9.32)
CFO	−0.494	−0.869*	−0.059	0.132
	(−1.36)	(−1.75)	(−0.37)	(0.74)
Growth	−0.048*	−0.151***	0.009*	−0.001
	(−1.88)	(−2.80)	(1.84)	(−0.11)
BM	−0.040	0.135	−0.143**	−0.335***
	(−0.34)	(0.58)	(−2.04)	(−3.15)
Top1	0.196	−0.193	0.113	0.059
	(1.16)	(−0.46)	(1.23)	(0.30)
Dual	0.098*	−0.052	−0.011	−0.081***
	(1.74)	(−0.46)	(−0.60)	(−2.84)
Board	0.129	−0.215	−0.001	0.158
	(1.10)	(−0.59)	(−0.02)	(1.41)
Indratio	−0.254	−2.665***	−0.459**	−0.513
	(−0.61)	(−2.73)	(−2.04)	(−1.32)
SOE	−0.214***	−0.161	0.062*	0.015
	(−4.30)	(−1.04)	(1.88)	(0.21)
Age	0.120	1.038	−0.023	−0.527
	(1.51)	(1.43)	(−0.64)	(−1.17)
PPE	−0.528***	−0.162	−0.143	0.107
	(−2.99)	(−0.37)	(−1.18)	(0.49)
WC	−0.279*	−0.126	−0.059	0.178
	(−1.81)	(−0.41)	(−0.72)	(1.43)
Tgt_Size	−0.010	−0.004	0.002	0.002
	(−0.61)	(−0.24)	(0.51)	(0.44)
Tgt_Lev	0.089	0.054	0.066	0.068
	(1.11)	(0.60)	(1.45)	(1.12)
Tgt_ROA	0.227	0.165	0.229***	0.212***
	(1.31)	(0.68)	(4.60)	(2.76)
Tgt_Age	−0.060	−0.100*	0.038**	0.112***
	(−1.47)	(−1.89)	(2.02)	(3.51)
Tgt_SOE	0.014	−0.018	0.224***	0.096
	(0.30)	(−0.35)	(4.10)	(1.39)
Tgt_Growth	0.006	0.013	0.000	0.006
	(0.76)	(1.36)	(0.11)	(1.00)
Tgt_Exposure	0.057**	0.054	0.005	0.015
	(2.31)	(1.63)	(0.40)	(1.13)
CrossPro	0.142***	0.074	−0.019	−0.029
	(2.95)	(1.13)	(−0.98)	(−0.92)
CrossInd	−0.051	−0.018	−0.038*	−0.069*
	(−1.20)	(−0.31)	(−1.75)	(−1.68)
Constant	−0.232	−3.037	−0.825**	−3.364*
	(−0.36)	(−1.03)	(−2.10)	(−1.70)
Industry FE	YES		YES	
Firm FE		YES		YES
Year FE	YES	YES	YES	YES
Observations	6,163	6,163	5,501	5,501
Adj_R^2	0.028	0.103	0.205	0.428

Table 5 presents results for the effects of comment letters based on the model in Eq. (1). All variables are defined in Appendix 1. All continuous variables are winsorized at the 1% and 99% levels. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively, based on two-tailed tests. Reported in parentheses are t −statistics. The estimated robust standard errors are clustered at the firm level. FE, fixed effects.

Table 6
Robustness and endogeneity tests.

Panel A: Entropy balanced analysis

	(1)	(2)	(3)	(4)
Variables	*Premium*	*Premium*	*Commitment*	*Commitment*
CL_MA	−0.370***	−0.466***	0.103***	0.109***
	(−6.24)	(−5.27)	(4.90)	(4.45)
Controls	YES	YES	YES	YES
Constant	−0.638	−3.906	−0.334	−0.778
	(−0.90)	(−1.09)	(−0.65)	(−0.44)
Industry FE	YES		YES	
Firm FE		YES		YES
Year FE	YES	YES	YES	YES
Observations	6,163	6,163	5,501	5,501
Adj_R^2	0.034	0.230	0.150	0.593

Panel B: PSM

	(1)	(2)	(3)	(4)
Variables	*Premium*	*Premium*	*Commitment*	*Commitment*
CL_MA	−0.432***	−0.475***	0.141***	0.133***
	(−5.47)	(−2.90)	(4.85)	(3.16)
Controls	YES	YES	YES	YES
Constant	−0.225	−0.936	−0.506	−3.579
	(−0.23)	(−0.18)	(−0.76)	(−1.22)
Industry FE	YES		YES	
Firm FE		YES		YES
Year FE	YES	YES	YES	YES
Observations	2,052	2,052	1,101	1,101
Adj_R^2	0.017	0.028	0.163	0.485

Panel C: IV approach

	(1)	(2)	(3)	(4)
Variable	*CL_MA*	*Premium*	*CL_MA*	*Commitment*
Distance	0.014***		0.017***	
	(4.27)		(5.08)	
CL_MA		−4.864***		0.879**
		(−5.22)		(2.14)
Controls	YES	YES	YES	YES
Constant	0.601***	3.432***	0.619***	−1.494***
	(3.27)	(3.54)	(3.43)	(−2.75)
Industry FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Observations	6,138	6,138	5,501	5,501
Adj_R^2	0.188	0.023	0.055	0.203
Cragg-Donald Wald F statistic	22.853		35.644	

Panel D: Using an alternative measure for comment letters

	(1)	(2)	(3)	(4)
Variable	*Premium*	*Premium*	*Commitment*	*Commitment*
CL_Num	−0.534***	−0.587***	0.102***	0.075***
	(−8.36)	(−5.38)	(5.90)	(3.59)
Constant	−0.228	−3.095	−0.819**	−3.399*
	(−0.35)	(−1.05)	(−2.08)	(−1.72)
Controls	YES	YES	YES	YES
Industry FE	YES		YES	
Firm FE		YES		YES
Year FE	YES	YES	YES	YES
Observations	6,163	6,163	5,501	5,501
Adj_R^2	0.027	0.102	0.205	0.428

Panel E: Using a sub-sample of the approved M&A transactions

	(1)	(2)	(3)	(4)
Variable	*Premium*	*Premium*	*Commitment*	*Commitment*
CL_MA	−0.416***	−0.476***	0.111***	0.079***
	(−8.36)	(−5.36)	(6.10)	(3.46)
Constant	0.199	−2.170	−0.831**	−3.386*
	(0.31)	(−0.75)	(−2.11)	(−1.70)

(*continued on next page*)

Table 6 (*continued*)

Panel D: Using an alternative measure for comment letters				
	(1)	(2)	(3)	(4)
Controls	YES	YES	YES	YES
Industry FE	YES		YES	
Firm FE		YES		YES
Year FE	YES	YES	YES	YES
Observations	5,735	5,735	5,495	5,495
Adj_R^2	0.030	0.108	0.205	0.427

Table 6 presents results for the effects of comment letters using the Entropy Balancing technique. the PSM approach, and the IV approach in Panels A, B, C, respectively. All variables are defined in Appendix 1. All continuous variables are winsorized at the 1% and 99% levels. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively, based on two-tailed tests. Reported in parentheses are *t* −statistics. For brevity, all control variables are suppressed. The estimated robust standard errors are clustered at the firm level. PSM, propensity score matching. IV, instrumental variable. FE, fixed effects.

Table 6 Panels D and E presents the results of robustness tests using an alternative measure of comment letters and a sub-sample of the approved M&A transactions, respectively. All variables are defined in Appendix 1. All continuous variables are winsorized at the 1% and 99% levels. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively, based on two-tailed tests. Reported in parentheses are *t* −statistics. For brevity, all control variables are suppressed. The estimated robust standard errors are clustered at the firm level. FE, fixed effects.

the firm, which in turn would also reduce the possibility of a comment letter being issued.

We run two-stage IV regressions with 6,138 and 5,501 firm-year observations for *Premium* and *Commitment* as the dependent variable, respectively. The regression results are presented in Table 6, Panel C. As noted in Columns 1 and 2, the coefficients of *Distance* are both positive and significant at the 1 % level, which suggests that the geographic distance between the firm and the regulator increases the possibility the firm will receive a comment letter, as predicted. The results in Columns 2 and 4 show that *CL_MA* is negatively associated with *Premium* (significant at the 1 % level) and positively associated with *Commitment* (significant at the 5 % level). The Cragg-Donald Wald *F* value is greater than 10, suggesting that the IV is not a weak instrument. These results suggest that our inference holds when we use the instrumental variable approach to mitigate endogeneity.

4.3.4. Other robustness tests

We further conduct two additional robustness tests. First, we use the number of comment letters received (*CL_Num*) as an alternative measure of comment letters. *CL_Num* is calculated as the natural logarithm of 1 plus the number of comment letters received.

Table 7
Heterogeneity tests.

Panel A: Test of the mechanism: the divergence between control rights and cash flow rights				
	Low divergence	High divergence	Low divergence	High divergence
	(1)	(2)	(3)	(4)
Variable	*Premium*	*Premium*	*Commitment*	*Commitment*
CL_MA	−0.266**	−0.645***	0.057*	0.098***
	(−2.55)	(−5.17)	(1.73)	(2.96)
Constant	−6.935	−0.275	−3.422	−2.790
	(−1.50)	(−0.07)	(−1.16)	(−1.34)
Firm FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Observations	2,971	3,192	2,885	2,616
Adj_R^2	0.141	0.020	0.416	0.132
Difference	0.379***		−0.041**	
p-value	0.007		0.048	
Panel B: Test of the mechanism: monitoring by multiple large shareholders				
	Strong monitoring	Weak monitoring	Strong monitoring	Weak monitoring
	(1)	(2)	(3)	(4)
Variable	*Premium*	*Premium*	*Commitment*	*Commitment*
CL_MA	−0.147**	−0.885***	0.056**	0.126***
	(−2.28)	(−5.03)	(2.24)	(3.01)
Constant	−0.640	−8.059	−1.505	−6.660**
	(−0.21)	(−1.39)	(−0.78)	(−1.97)
Firm FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Observations	3,370	2,793	3,108	2,393
Adj_R^2	0.008	0.038	0.150	0.409
Difference	0.738***		−0.070**	
p-value	0.000		0.021	

Table 8
Further analyses.

Panel A: *Premium* as the dependent variable									
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Variable	*Premium*								
Sangao × *CL_MA*	−0.737***								
	(−3.11)								
Huyoushi × *CL_MA*		−0.301							
		(−0.82)							
Sham × *CL_MA*			−0.524						
			(−0.89)						
Tunneling × *CL_MA*				−0.234*					
				(−1.72)					
Auditor × *CL_MA*					−0.592**				
					(−2.01)				
Director × *CL_MA*						0.149			
						(1.00)			
Lawyer × *CL_MA*							0.058		
							(0.54)		
Valuer × *CL_MA*								−0.991***	
								(−2.68)	
Consultant × *CL_MA*									−0.401***
									(−3.52)
CL_MA	−0.433***	−0.449***	−0.454***	−0.417***	−0.445***	−0.465***	−0.496***	−0.439***	−0.231***
	(−5.01)	(−5.31)	(−5.51)	(−4.58)	(−5.43)	(−5.57)	(−4.85)	(−5.18)	(−2.61)
Controls	YES	YES	YES	YES	YES	YES	YES	YES	YES
Constant	−2.928	−3.042	−3.154	−3.163	−3.186	−3.067	−3.051	−2.800	−3.377
	(−1.00)	(−1.03)	(−1.08)	(−1.07)	(−1.09)	(−1.04)	(−1.04)	(−0.95)	(−1.15)
Firm FE	YES	YES	YES	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES	YES	YES	YES
Observations	6,163	6,163	6,163	6,163	6,163	6,163	6,163	6,163	6,163
Adj_R^2	0.105	0.103	0.103	0.104	0.104	0.103	0.103	0.105	0.106

Panel B: *Commitment* as the dependent variable									
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Variable	*Commitment*								
Sangao×*CL_MA*	0.295***								
	(3.06)								
Huyoushi×*CL_MA*		0.060							
		(0.43)							
Sham×CL_MA			−0.139						
			(−1.02)						
Tunneling×CL_MA				0.115**					
				(2.30)					
Auditor×CL_MA					0.033				
					(0.28)				
Senior×CL_MA						0.076			
						(0.75)			
Lawyer×CL_MA							−0.011		
							(−0.29)		
Valuer×CL_MA								0.303**	
								(1.98)	
Consultant×CL_MA									0.072**
									(2.06)
CL_MA	0.059***	0.076***	0.080***	0.054**	0.077***	0.077***	0.085***	0.070***	0.029
	(2.64)	(3.40)	(3.52)	(2.30)	(3.38)	(3.38)	(2.63)	(3.10)	(0.93)
Controls	YES	YES	YES	YES	YES	YES	YES	YES	YES
Constant	−3.325*	−3.387*	−3.377*	−3.330*	−3.365*	−3.350*	−3.358*	−3.422*	−3.435*
	(−1.67)	(−1.71)	(−1.70)	(−1.68)	(−1.70)	(−1.69)	(−1.69)	(−1.72)	(−1.73)
Firm FE	YES	YES	YES	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES	YES	YES	YES
Observations	5,501	5,501	5,501	5,501	5,501	5,501	5,501	5,501	5,501
Adj_R^2	0.430	0.428	0.428	0.429	0.428	0.428	0.428	0.429	0.428

Table 7 presents the results of further tests. Panel A presents results for *Premium* as the dependent variable. All variables are defined in Appendix 1. All continuous variables are winsorized at the 1% and 99% levels. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively, based on two-tailed tests. Reported in parentheses are *t* −statistics. For brevity, all control variables are suppressed. The estimated robust standard errors are clustered at the firm level.

Table 7 presents the results of further tests. Panel B presents results for *Commitment* as the dependent variable. All variables are defined in Appendix 1. All continuous variables are winsorized at the 1% and 99% levels. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively, based

on two-tailed tests. Reported in parentheses are t −statistics. For brevity, all control variables are suppressed. The estimated robust standard errors are clustered at the firm level.

The results are reported in Table 6, Panel D, which shows that *CL_Num* is negatively associated with *Premium* (significant at the 1 % level) and positively associated with *Commitment* (significant at the 1 % level). Second, we re-run the baseline regressions using a sub-sample that only consists of M&A transactions that have been approved and completed. The results are reported in Table 6, Panel E, which shows that *CL_MA* is negatively associated with *Premium* (significant at the 1 % level) and positively associated with *Commitment* (significant at the 1 % level). These results confirm that the findings of the main analyses are robust.

4.4. Heterogeneity tests

4.4.1. Test of the mechanism: The divergence between control rights and cash flow rights

Our main results suggest that comment letters affect outcome of M&A transactions by reducing the acquisition premium and improving the fulfillment of performance commitment. We perform heterogeneity tests to shed light on the mechanism underlying the effect of comment letters on the outcome of M&A. As discussed earlier, we predict that the effect of M&A comment letters is more pronounced when principal–principal conflict in acquiring firms is more severe. In line with this prediction, hypothesis H2A posits that the effect of comment letters is more pronounced when acquiring firms have a greater divergence between control rights and cash flow rights. Following previous studies (Cao et al., 2011; Chen et al., 2011), we measure the divergence of cash flow rights and control rights as the difference between control rights and cash flow rights for the firm. The greater the divergence, the greater the agency conflict between controlling shareholders and minority shareholders. We divide our sample into two groups based on the median for the year and re-run the baseline regressions.

The results are reported in Table 7, Panel A. Columns 1 and 2 report results for *Premium* as the dependent variable. The coefficients of *CL_MA* are –0.266 in Column 1 (low divergence) and –0.645 in Column 2 (high divergence). Although both coefficients are negative and significant, the test of coefficient differences between the high and low divergence is significant at the 1 % level. These results suggest that the effect of comment letters on reduced acquisition premium is stronger when the divergence of cash flow rights and control rights is greater. Columns 3 and 4 show the results when *Commitment* is the dependent variable. The coefficients of *CL_MA* is 0.057 and marginally significant at the 10 % level in Column 3 (low divergence) and is 0.098 and significant at the 5 % level in Column 4 (high divergence). The test of coefficient differences between the high and low divergence is significant at the 5 % level. These results suggest that the effect of comment letters on ensuring fulfillment of the performance commitment is stronger when the divergence of cash flow rights and control rights is greater. Taken together, our results show that comment letters are more effective when agency conflict is more severe, as indicated by the divergence of cash flow rights and control rights.

4.4.2. Test of the mechanism: Monitoring by multiple large shareholders

Hypothesis H2B predicts that the effect of comment letters is more pronounced for firms with weak monitoring by multiple large shareholders. Monitoring by multiple large shareholders is calculated as the total shareholdings of the top nine blockholders divided by the shareholdings of the controlling shareholder. The greater the monitoring, the weaker the agency conflict between controlling shareholders and minority shareholders. We divide our sample into two groups based on the median for the year and re-run the baseline regressions.

The results are reported in Table 7, Panel B. Columns 1 and 2 report results for *Premium* as the dependent variable. The coefficients of *CL_MA* are –0.147 in Column 1 (strong monitoring) and –0.885 in Column 2 (weak monitoring). Although both coefficients are negative and significant, the test of coefficient differences between the strong and week monitoring is significant at the 1 % level. These results suggest that the effect of comment letters on containing the premium is more pronounced when monitoring by multiple large shareholders is weaker. Columns 3 and 4 show the results when *Commitment* is the dependent variable. The coefficients of *CL_MA* are 0.056 in Column 3 (strong monitoring) and 0.126 in Column 4 (weak monitoring). Although both coefficients are negative and significant, the test of coefficient differences between the strong and week monitoring is significant at the 5 % level. These results suggest that the effect of comment letters on ensuring fulfillment of the performance commitment is more pronounced when monitoring by multiple large shareholders is weaker. Taken together, our results show that comment letters are more effective when agency conflict is more severe as measured by monitoring by multiple large shareholders.

To sum up, when we measure agency conflict between controlling shareholders and minority shareholders based on the separation of cash flow rights and control rights and monitoring by multiple large shareholders, respectively, we consistently find that comment letters play a more important role for firms that face more severe agency conflict between controlling shareholders and minority shareholders. These findings demonstrate that mitigating agency conflict between controlling shareholders and minority shareholders is the mechanism through which comment letters affect the outcome of M&A transactions.

4.5. Further analyses

As discussed earlier, there are four issues typically associated with questionable M&A transactions: *sangao* transactions (overstatements of value, goodwill, or prospective performance), *huyoushi* (fraudulent) restructuring, sham transactions, and tunneling. We conduct further analyses by testing whether these four main issues associated with questionable M&A have any impact on the effect of comment letters. We add an additional interaction term *Sangao* × *CL_MA*, *Huyoushi* × *CL_MA*, *Sham* × *CL_MA*, *Tunneling* × *CL_MA*, to the main regression, respectively. *Sangao* equals 1 if the comment letter refers to any issues related to overstatements of value, goodwill, or prospective performance and 0 otherwise. *Huyoushi* equals 1 if the M&A comment letter refers to any issues related to fraudulent restructuring and 0 otherwise. *Sham* equals 1 if the M&A comment letter refers to any issues related to sham transactions. *Tunneling* equals 1 if the M&A comment letter refers to any issues related to tunneling issues and 0 otherwise. The results are reported in Table 8. Panels A and B show the results when the dependent variable is *Premium* and *Commitment*, respectively. As shown in Column 1, the effect of comments letters on reducing acquisition premium and improving the fulfillment of performance commitments is stronger when comment letters pertain to *sangao* (overstatement) issues (significant at the 1 % level). In addition, Column 4 shows that the effect of comments letters on improving fulfillment of commitments is stronger when comment letters refer to tunneling issues (significant at the 5 % level). This suggests that firms are most responsive to comment letters when regulators focus on *sangao* (overstatement) and tunneling issues.

As discussed earlier, the regulators will specify those who need to respond to questions in the comment letter, including directors, auditors, lawyers, valuers, and consultants. To provide further insights, we also explore whether the effect of comment letters would differ with different addressees of questions in the comment letter. We add an additional interaction term *Auditor* × *CL_MA*, *Director* × *CL_MA*, *Lawyer* × *CL_MA*, *Valuer* × *CL_MA*, *Consultant* × *CL_MA*, to the main regression, respectively. *Auditor* equals 1 if a question in the M&A comment letter is directed to the auditor. *Director* equals 1 if a question in the M&A comment letter is directed to the directors. *Lawyer* equals 1 if a question in the M&A comment letter is directed to the lawyer. *Valuer* equals 1 if a question in the M&A comment letter is directed to the valuer. *Consultant* equals 1 if a question in the M&A comment letter is directed to the consultant. Table 8, Panels A and B show the results when the dependent variable is *Premium* and *Commitment*, respectively. As shown in Columns 8 and 9, the effect of comments letters on reducing acquisition premium and improving the fulfillment of commitments is stronger when comment letter questions are directed to valuers or consultants (significant at the 5 % level). In addition, Column 5 shows that the effect of comments letters on reducing acquisition premium is stronger when comment letter questions are directed to auditors (significant at the 1 % level). This suggests that firms are most responsive to comment letters when regulators pose questions to valuers, consultants or auditors.

5. Conclusions

This study investigates the effects of M&A comment letters in China through the lens of principal–principal conflict. This public enforcement tool has several features: (i) Regulators provide detailed comments on various matters, (ii) various stakeholders are called on to respond, and (iii) failure to address the comments to the satisfaction of regulators results in M&A applications being rejected. We first investigate how M&A comment letters affect M&A transactions per se. Our results show that these letters are associated with a lower premium and better fulfillment of the performance commitment, which suggests that M&A comment letters improve the outcome of M&A deals and enhance investor protection. We also find that comment letters are more effective when principal–principal conflict is more severe, indicated by greater divergence between control rights and cash flow rights and weaker monitoring by multiple large shareholders. This suggests that constraining controlling shareholders' motive to expropriate minority shareholders is the mechanism underlying the effect of M&A comment letters. Taken together, these results provide robust and consistent evidence that M&A comment letters, if used appropriately, are effective at helping improve investor protection and shareholder value in countries with weak investor protection. Our findings reveal the importance of adopting a substantive—as opposed to merely symbolic—approach to using public enforcement tools. This study contributes to our understanding of the effectiveness of comment letters within the context of principal–principal conflicts.

Our findings should be of interest to regulators who wish to justify the considerable use of resources in this field, evaluate the effectiveness of these regulatory efforts, or consider adopting this regulatory tool. Our study documents the beneficial effects of M&A comment letters on the outcome of M&A transactions, which suggests the usefulness of reviewing M&A transactions. This study could also be of interest to investors who use M&A comment letters to assess M&A deals and make investment decisions in general. Managers may also find our findings useful for understanding how expert reviews add value to firms.

Our study has some limitations. First, although we provide robust evidence of the effectiveness of M&A comment letters in China, it is worth noting that the effectiveness of enforcement actions is shaped by the local regulatory environment. It would be informative for future researchers to explore the effects of M&A comment letters or comment letters on other important transactions in different settings. Second, this study focuses on the acquiring firms that receive the comment letters. Because comment letters also affect target

firms, it would be interesting for future studies to examine how comment letters affect target firms and their shareholders. Finally, similar to most prior studies on public enforcement, our study does not consider enforcement costs borne by regulators. Future studies may provide a more complete picture of the overall efficacy of M&A comment letters by taking into account regulator costs if such data become available.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

Data will be made available on request.

Acknowledgement

We are grateful for the helpful comments of Marco Trombetta (editor), two anonymous reviewers, and seminar participants of the Finance Department Seminar at the School of Management, Xiamen University. Jiaxing You acknowledges the financial support from the Major Program of National Social Science of China (23&ZD072).

Appendix 1. Definitions of variables

Variable	Definition
Premium	(Trading value of the target firm – estimated value of the target firm)/estimated value of the target firm
Commitment	(Realized net profit – committed net profit)/committed net profit
CL_MA	Equals 1 for the year in which the firm receives an M&A comment letter and 0 otherwise
CL_Num	Logarithm of 1 plus the number of M&A comment letter received in the year
Distance	The geographic distance between the acquiring firm and the CSRC, calculated as the natural logarithm of 1 plus the distance (in kilometers)
Size	The natural logarithm of total assets of the acquiring firm
Lev	Leverage; total liabilities over total assets of the acquiring firm
ROA	Return on total assets of the acquiring firm
CFO	Net cash flow from operation activities scaled by total assets of the acquiring firm
Growth	The difference in net sales for the current period over the prior period scaled by net sales for the prior period for the acquiring firm
BM	The book value of the acquiring firm's year-end equity divided by the market value of its equity
Top1	The shareholding ratio of the largest shareholder for the acquiring firm
Dual	Equals 1 if the board chairman concurrently acts as general manager and 0 otherwise for the acquiring firm
Indratio	The ratio of the number of independent directors to the number of board members for the acquiring firm
SOE	Equals 1 if the acquiring firm is state owned and 0 otherwise
Age	The natural logarithm of the age for the acquiring firm
PPE	The amount of fixed assets divided by total assets for the acquiring firm
WC	The amount of working capital divided by total assets
Tgt_Size	The natural logarithm of total assets of the target firm
Tgt_Lev	Total liabilities over total assets of the target firm
Tgt_ROA	Return on total assets of the target firm
Tgt_Age	The natural logarithm of the age for the target firm
Tgt_Growth	The difference in net sales for the current period over the prior period scaled by net sales for the prior period for the target firm
Tgt_Exposure	the natural logarithm of 1 plus the number of media reports for the target firm
CrossPro	Equals 1 if the acquiring firm and the target firm are located in different provinces and 0 otherwise
CrossInd	Equals 1 if the acquiring firm and the target firm are from different industries and 0 otherwise

Appendix 2. . Entropy balanced sample

Panel A: *Premium* as the dependent variable

	Before Matching						After Matching					
	Treat ($CL\_MA = 1$)			Control ($CL\_MA = 0$)			Treat ($CL\_MA = 1$)			Control ($CL\_MA = 0$)		
Variable	Mean	Variance	Skewness	Mean	Variance	Skewness	Mean	Variance	Skewness	Mean	Variance	Skewness
Size	22.124	1.465	0.717	22.525	1.689	0.550	22.124	1.465	0.717	22.123	1.471	0.580
Lev	0.442	0.041	0.257	0.461	0.037	0.069	0.442	0.041	0.257	0.442	0.041	0.254
ROA	0.037	0.003	−0.617	0.042	0.003	−0.429	0.037	0.003	−0.617	0.037	0.003	−0.618
CFO	0.036	0.004	−0.039	0.048	0.004	0.039	0.036	0.004	−0.039	0.036	0.004	−0.042
Growth	0.398	0.775	3.214	0.249	0.299	4.138	0.398	0.775	3.214	0.398	0.774	3.216
BM	0.453	0.070	0.764	0.551	0.080	0.449	0.453	0.070	0.764	0.453	0.070	0.773
Top1	0.321	0.019	0.690	0.342	0.021	0.486	0.321	0.019	0.690	0.321	0.019	0.676
Dual	0.293	0.207	0.911	0.284	0.203	0.957	0.293	0.207	0.911	0.293	0.207	0.911
Board	2.096	0.037	−0.499	2.126	0.039	−0.154	2.096	0.037	−0.499	2.096	0.036	−0.314
Indratio	0.380	0.003	1.144	0.377	0.003	1.233	0.380	0.003	1.144	0.380	0.003	1.145
SOE	0.320	0.218	0.772	0.356	0.229	0.601	0.320	0.218	0.772	0.320	0.218	0.772
Age	2.926	0.091	−0.436	2.948	0.095	−0.624	2.926	0.091	−0.436	2.926	0.092	−0.578
PPE	0.196	0.027	1.128	0.208	0.025	0.954	0.196	0.027	1.128	0.196	0.027	1.131
WC	0.180	0.049	−0.068	0.174	0.049	−0.011	0.180	0.049	−0.068	0.179	0.049	−0.067
Tgt_Size	20.258	3.395	0.344	19.677	3.685	0.404	20.258	3.395	0.344	20.259	3.364	0.494
Tgt_Lev	0.504	0.065	0.233	0.526	0.087	0.465	0.504	0.065	0.233	0.504	0.064	0.246
Tgt_ROA	0.108	0.029	1.128	0.069	0.028	0.794	0.108	0.029	1.128	0.108	0.029	1.128
Tgt_Age	2.833	0.366	−1.215	2.804	0.327	−0.917	2.833	0.366	−1.215	2.833	0.363	−1.181
Tgt_SOE	0.109	0.097	2.516	0.083	0.076	3.030	0.109	0.097	2.516	0.109	0.097	2.516
Tgt_Growth	0.634	7.483	6.607	0.699	9.899	6.177	0.634	7.483	6.607	0.637	7.485	6.605
Tgt_Exposure	0.636	1.024	1.779	0.392	0.661	2.610	0.636	1.024	1.779	0.637	1.021	1.782
CrossPro	0.472	0.249	0.110	0.351	0.228	0.623	0.472	0.249	0.110	0.472	0.249	0.110
CrossInd	0.337	0.224	0.687	0.351	0.228	0.625	0.337	0.224	0.687	0.337	0.224	0.687

Appendix 2 presents results for the descriptive statistics of the Entropy balanced matched sample. Panel A presents the results when *Premium* is the dependent variable.

Panel B: *Commitment* as the dependent variable

	Before Matching						After Matching					
	Treat ($CL\_MA = 1$)			Control ($CL\_MA = 0$)			Treat ($CL\_MA = 1$)			Control ($CL\_MA = 0$)		
Variable	Mean	Variance	Skewness	Mean	Variance	Skewness	Mean	Variance	Skewness	Mean	Variance	Skewness
Size	22.089	1.071	0.703	22.354	1.036	0.553	22.089	1.071	0.703	22.089	1.070	0.676
Lev	0.418	0.038	0.437	0.428	0.035	0.255	0.418	0.038	0.437	0.418	0.038	0.406
ROA	0.047	0.003	−1.624	0.036	0.006	−2.758	0.047	0.003	−1.624	0.047	0.003	−1.637
CFO	0.034	0.004	0.149	0.038	0.004	−0.111	0.034	0.004	0.149	0.034	0.004	0.143
Growth	0.943	4.897	3.894	0.504	1.774	6.292	0.943	4.897	3.894	0.940	4.896	3.890
BM	0.430	0.058	0.853	0.504	0.059	0.483	0.430	0.058	0.853	0.430	0.058	0.846
Top1	0.307	0.019	0.877	0.301	0.020	0.962	0.307	0.019	0.877	0.307	0.019	0.885
Dual	0.323	0.219	0.755	0.324	0.219	0.752	0.323	0.219	0.755	0.323	0.219	0.755
Board	2.094	0.033	−0.750	2.107	0.035	−0.561	2.094	0.033	−0.750	2.094	0.033	−0.662
Indratio	0.376	0.003	1.167	0.374	0.003	1.063	0.376	0.003	1.167	0.376	0.003	1.114
SOE	0.218	0.171	1.363	0.222	0.173	1.336	0.218	0.171	1.363	0.218	0.171	1.363
Age	2.908	0.098	−0.368	2.917	0.094	−0.444	2.908	0.098	−0.368	2.908	0.098	−0.422
PPE	0.157	0.017	1.235	0.151	0.016	1.281	0.157	0.017	1.235	0.157	0.017	1.237
WC	0.203	0.040	−0.068	0.197	0.037	−0.118	0.203	0.040	−0.068	0.203	0.040	−0.068
Tgt_Size	19.251	8.455	−1.824	18.854	8.747	−1.732	19.251	8.455	−1.824	19.252	8.396	−1.785
Tgt_Lev	0.489	0.047	−0.055	0.472	0.056	−0.079	0.489	0.047	−0.055	0.489	0.047	−0.059
Tgt_ROA	0.153	0.036	1.822	0.144	0.040	1.762	0.153	0.036	1.822	0.154	0.036	1.827
Tgt_Age	2.799	0.314	−1.138	2.742	0.305	−0.769	2.799	0.314	−1.138	2.800	0.308	−1.039
Tgt_SOE	0.061	0.057	3.678	0.053	0.050	3.984	0.061	0.057	3.678	0.061	0.057	3.678
Tgt_Growth	0.578	5.510	7.040	0.752	7.945	6.143	0.578	5.510	7.040	0.581	5.500	7.042
Tgt_Exposure	0.524	0.767	1.855	0.624	0.741	1.460	0.524	0.767	1.855	0.525	0.765	1.858
CrossPro	0.481	0.250	0.076	0.461	0.249	0.157	0.481	0.250	0.076	0.481	0.250	0.075
CrossInd	0.327	0.220	0.739	0.332	0.222	0.716	0.327	0.220	0.739	0.327	0.220	0.739

Appendix 2 presents results for the descriptive statistics of the Entropy balanced matched sample. Panel B presents the results when *Commitment* is the dependent variable.

Appendix 3. . PSM sample.

Panel A: *Premium* as the dependent variable

Before Matching					After Matching			
Variable	Mean(Treat)	Mean(Control)	MeanDiff	*t*-value	Mean(Treat)	Mean(Control)	MeanDiff	*t*-value
Size	22.124	22.525	−0.401	−10.22	22.129	22.191	−0.062	−1.32
Lev	0.442	0.461	−0.018	−3.07	0.443	0.449	−0.006	−0.75
ROA	0.037	0.042	−0.005	−3.05	0.037	0.037	0.000	0.15
CFO	0.036	0.048	−0.012	−6.06	0.036	0.037	0.000	−0.14
Growth	0.398	0.249	0.149	7.64	0.400	0.385	0.015	0.44
BM	0.453	0.551	−0.098	−11.44	0.454	0.459	−0.005	−0.49
Top1	0.321	0.342	−0.021	−4.74	0.321	0.319	0.002	0.43
Dual	0.293	0.284	0.009	0.62	0.292	0.279	0.013	0.76
Board	2.096	2.127	−0.030	−5.02	2.097	2.098	−0.001	−0.08
Indratio	0.380	0.377	0.003	1.71	0.380	0.379	0.001	0.35
SOE	0.320	0.356	−0.036	−2.47	0.321	0.315	0.006	0.33
Age	2.926	2.948	−0.022	−2.29	2.926	2.921	0.005	0.41
PPE	0.196	0.208	−0.012	−2.41	0.197	0.188	0.008	1.37
WC	0.180	0.174	0.005	0.78	0.179	0.170	0.009	1.02
Tgt_Size	20.258	19.677	0.581	9.95	20.245	20.307	−0.062	−0.85
Tgt_Lev	0.504	0.526	−0.023	−2.57	0.503	0.501	0.003	0.26
Tgt_ROA	0.108	0.069	0.039	7.57	0.107	0.099	0.008	1.28
Tgt_Age	2.833	2.804	0.029	1.64	2.832	2.830	0.003	0.11
Tgt_SOE	0.109	0.083	0.026	2.97	0.109	0.107	0.001	0.12
Tgt_Growth	0.634	0.699	−0.065	−0.69	0.636	0.633	0.003	0.03
Tgt_Exposure	0.636	0.392	0.244	9.22	0.629	0.651	−0.023	−0.57
CrossPro	0.472	0.351	0.121	8.19	0.472	0.494	−0.023	−1.19
CrossInd	0.337	0.351	−0.013	−0.91	0.338	0.330	0.007	0.41

Panel B: *Commitment* as the dependent variable

Before Matching					After Matching			
Variable	Mean(Treat)	Mean(Control)	MeanDiff	*t*-value	Mean(Treat)	Mean(Control)	MeanDiff	*t*-value
Size	22.089	22.354	−0.265	−6.04	22.093	22.156	−0.063	−1.06
Lev	0.418	0.428	−0.010	−1.22	0.417	0.428	−0.011	−1.02
ROA	0.047	0.036	0.010	3.14	0.047	0.051	−0.004	−1.08
CFO	0.034	0.038	−0.004	−1.44	0.035	0.036	−0.001	−0.31
Growth	0.943	0.504	0.439	7.01	0.907	0.969	−0.062	−0.49
BM	0.430	0.504	−0.074	−7.12	0.431	0.438	−0.007	−0.53
Top1	0.307	0.301	0.007	1.10	0.308	0.310	−0.002	−0.26
Dual	0.323	0.324	−0.001	−0.03	0.323	0.310	0.013	0.49
Board	2.094	2.108	−0.014	−1.74	2.093	2.097	−0.004	−0.33
Indratio	0.376	0.374	0.001	0.66	0.376	0.376	0.000	−0.14
SOE	0.218	0.222	−0.004	−0.21	0.219	0.234	−0.015	−0.62
Age	2.908	2.917	−0.009	−0.72	2.906	2.906	0.000	0.01
PPE	0.157	0.151	0.006	1.17	0.157	0.158	−0.001	−0.14
WC	0.203	0.197	0.006	0.71	0.205	0.196	0.009	0.79
Tgt_Size	19.251	18.854	0.397	3.13	19.248	19.363	−0.115	−0.78
Tgt_Lev	0.489	0.472	0.016	1.63	0.488	0.498	−0.009	−0.73
Tgt_ROA	0.153	0.144	0.009	1.10	0.153	0.151	0.002	0.22
Tgt_Age	2.799	2.742	0.057	2.40	2.798	2.767	0.031	0.99
Tgt_SOE	0.061	0.053	0.008	0.78	0.061	0.069	−0.008	−0.58
Tgt_Growth	0.578	0.752	−0.173	−1.46	0.580	0.515	0.065	0.53
Tgt_Exposure	0.524	0.624	−0.100	−2.71	0.524	0.557	−0.032	−0.67
CrossPro	0.481	0.461	0.020	0.95	0.479	0.491	−0.012	−0.40
CrossInd	0.327	0.332	−0.005	−0.24	0.326	0.331	−0.005	−0.18

Appendix 3 presents mean values for control variables of the treatment and control groups before and after the matching. Panel B presents the results when *Commitment* is the dependent variable.

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