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**The Determinants and Consequences of Performance Commitment  
Contracts in M&As**

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**Thesis submitted for the award of Doctor of Philosophy (PhD)**

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**April 2024**

## Abstract

Earnouts and PCCs are considered as value-creation signals because of their roles in addressing information asymmetry and retaining target management teams. However, the economic outcomes of such contracts deeply rely on the quality of legal system in a country because the litigation risks related to earnouts and PCCs are quite high. The long-term consequences of such contracts used in emerging markets have been overlooked in existing literature. To fill these gaps, this PhD thesis explores the determinants and consequences of PCCs and earnouts in China from different theoretical perspectives.

This thesis consists of three studies. The first examines the effects of PCCs and earnouts on acquiring firm post-M&A stock performances. In line with agency theory, this study shows that PCCs impair acquirers' buy-and-hold-abnormal-returns (BHARs) due to the agency issues between acquirer shareholders and target owner-managers. Acquirer monitoring helps alleviate the agency issues, but acquirers only solve such agency issues when they engage in bonding activities.

Since PCCs usually impair acquirers' interests, why do many acquirers still sign such contracts in M&As? In line with the expropriation hypothesis, the second study shows that PCCs are more likely to be used when the agency issue between acquirer controlling and minority shareholders is more serious, resulting in the wealth losses of acquirer minority shareholders. Furthermore, both acquirers' cumulative abnormal returns (CARs) and BHARs are lower when PCCs are used for multiple times.

The third study focuses on the roles of directors with foreign experience. In line with imprinting theory and learning theory, this study reports that returnee directors are associated with lower probabilities of insiders' self-serving related-party M&As and

signing PCCs. However, such directors could affect M&A decisions only when they are independent directors, reach a critical mass at the board, and their experience originates from countries with strong investor protection.

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# Chapter 1: Introduction

## 1.1 Research Questions

How to design M&A contracts to mitigate M&A risks, facilitate post-M&A integration, achieve expected synergies and create values for shareholders of the merged firms are major concerns in existing M&A studies (e.g., Bae et al., 2002; Barbopoulos et al., 2018). Previous studies (Barbopoulos and Sudarsanam, 2012; Barbopoulos et al., 2018; Kohers and Ang, 2000) has shown the positive roles of contingent payments including earnouts and performance commitment contracts (PCCs) in mitigating information asymmetry issues, reducing adverse selection risks, retaining target managers and creating short-term values for acquirers.

In U.S., U.K. and other western countries with effective legal systems, when there exists serious information asymmetry between acquirers and targets, an acquirer may worry about buying a bad-quality target firm which is typically called as a “lemon” (Akerlof, 1970) because target sellers hold private information about the true value of target firms. Therefore, acquirers are usually reluctant to accept the price presented by target sellers. It should be noted that target sellers will face the similar information asymmetry problem if acquirers want to use their stocks to pay for the M&A deals because acquirers hold private information about the true value of their stocks (Tao et al., 2022a). Thus, one or both deal parties may take advantage of their information advantages to take actions ex-post that may harm the other (Barbopoulos et al., 2018). As a result, valuable target firms may leave while ‘lemons’ stay at the M&A market, creating the classic adverse selection problem. Besides, how to retain target managers is a problem because these managers are important human capital for acquirers (Datar



et al., 2001; Kohers and Ang, 2000). Even if target managers do stay after M&A deals, they may have little incentive to generate expected synergies (Cain et al., 2011).

To address the above concerns, the existing literature (Cain et al., 2011; Datar et al., 2001; Kohers and Ang, 2000; Ragozzino and Reuer, 2009; Reuer et al., 2004; Song et al., 2019; Tao et al., 2022a) discusses the role of contingent payments including earnouts and PCCs in retaining target managers and resolving information asymmetry conflicts between acquirers and targets. Earnouts, widely used in the U.S., U.K. and other western countries, are contingent forms of payment which includes a two-stage payment – an upfront fixed payment at the time of an M&A in the first stage and a deferred contingent payment based on some observable metrics of target firms' future performances in the second stage (Barbopoulos and Sudarsanam, 2012; Cain et al., 2011; Kohers and Ang, 2000). PCCs, widely used in China, are similar to earnouts. Compared with earnouts, PCCs usually do not involve any contingent deferred payment. After signing PCCs, acquirers need to pay for targets immediately at the time of M&As, but target sellers have to pay back cash or stocks if target firms fail to reach the promised financial goals (Tao et al., 2022a). On one hand, earnouts and PCCs mitigate information asymmetry conflicts between acquirers and targets by linking the deal price with target future performances (Barbopoulos et al., 2018). On the other hand, earnouts and PCCs retain target managers and motivate them to perform better (Kohers and Ang, 2000; Tao et al., 2022a). Given these advantages, existing literature (Barbopoulos and Sudarsanam, 2012; Song et al., 2019) shows that earnouts and PCCs serve as value-creation signals because they can significantly increase acquirers' value gains during the M&A announcement period in U.S, U.K and China.

However, recent studies (e.g., Elnahas et al., 2017; Tao et al., 2022a) present opposite views because they show that earnouts and PCCs can also generate serious

agency issues between acquirer shareholders and target managers. Target managers may take actions to maximize short-term earnings to the detriment of the interests of acquirers. For example, Tao et al. (2022a) argue that target managers engage in real earnings management during the commitment period in order to avoid potential compensation and thus target firms have bad accounting performances once the PCCs expire. Also, disagreements related to the measure of target post-M&A performances usually arise from earnouts and PCCs due to the complexity of the verification of target outcomes, thus litigations are common (Viarengo et al., 2018). In emerging markets like China, target managers may delay or even refuse to pay compensation after they fail to achieve the promised performances since the default cost of a PCC is low. Therefore, earnouts and PCCs may fail to help acquirers solve information asymmetry issues in emerging markets with poor legal systems since low-quality target firms could imitate high-quality target firms and sign earnouts and PCCs. However, existing literature (Barbopoulos et al., 2018; Cain et al., 2011; Datar et al., 2001; Kohers and Ang, 2000) has ignored the negative impacts of earnouts and PCCs on the long-term acquiring firm performances in emerging markets. Furthermore, prior literature (Cain et al., 2011; Datar et al., 2001; Reuer et al., 2004) mainly focuses on the determinants of earnouts in developed countries such as U.S, U.K and Canada. Existing studies (e.g., Tao et al., 2022a) fail to show why earnouts and PCCs are widely used in emerging markets like China although the disadvantages of earnouts and PCCs may be revealed due to the poor legal systems.

Lastly, whether acquirers use PCCs may be highly related with the quality of acquiring firms' internal governance systems. In emerging markets like China, firms with excellent governance systems may detect the long-term consequences of PCCs and give up using PCCs in M&As. However, in emerging markets like China where

corporate ownership is usually concentrated (La Porta et al., 1999, Claessens et al., 2000), corporate governance systems are usually poor (Jiang and Kim, 2015). In this case, directors with foreign experience, especially those who have foreign education or work experience in developed countries, are expected to transmit knowledge about advanced corporate governance to firms in emerging markets (Giannetti et al., 2015). Recent literature has shown that directors' foreign experience is associated with better firm accounting performance (Giannetti et al., 2015), corporate transparency (Liao et al., 2022), dividend payouts (Tao et al., 2022b), and corporate governance (Iliev and Roth, 2018). Therefore, directors with foreign experience, known as returnee directors, are expected to improve corporate governance and help managers make M&A strategies. However, no existing studies show whether directors with foreign experience can affect M&A strategies.

Therefore, this thesis aims to fill these research gaps and contribute the literature by addressing the following research questions in three empirical studies:

(1) Do PCCs impair acquiring firm long-term stock performances? How do PCCs impair acquiring firm long-term stock performances? What can acquirers do to mitigate or solve such impacts? Do earnouts protect acquirers' interests better than PCCs?

(2) Why do acquirers still use PCCs even though they fail to protect their interests? Additionally, if investors suffer long-term wealth losses due to PCCs, do they still react positively to PCCs when acquirers use PCCs for the second time?

(3) Do acquirer directors with foreign experience detect the long-term negative impacts of PCCs on acquirers' values? If so, can directors with foreign experience constrain the use of PCCs?

## **1.2 Research Background**

PCCs were first used by listed firms in China during the process of the Split Share

Structure Reform from 2005 to 2007 (Hou et al., 2015). Since 2008, PCCs have been applied to M&As (Tao et al., 2022a). The similarities and differences between PCCs and earnouts are shown in Table 1.

First, the key difference between PCCs and earnouts is that most of PCCs do not involve any contingent deferred payment compared with earnouts. Thus, acquirers using PCCs may fail to get compensation from target sellers while target sellers using earnouts may fail to get second-stage payment from acquirers. Furthermore, PCCs usually last for 3 years (Tao et al., 2022a) while earnouts usually last for 2 years (Cain et al., 2011). Some PCCs provide bonus for target management if the target future performance is better than the promised performance (Tao et al., 2022a). However, earnouts do not provide this bonus.

Second, there are also many similarities between PCCs and earnouts. After signing PCCs or earnouts, the target management team usually stays after the M&A deal (Kohers and Ang, 2000; Tao et al., 2022a). Therefore, both PCCs and earnouts can generate agency issues between acquirer shareholders and target managers (Elnahas et al., 2017; Tao et al., 2022a). Also, target firms usually operate business independently during the commitment period, often with little integration occurring between the acquirer and target after the M&A is completed (Kohers and Ang, 2000; Tao et al., 2022a). Furthermore, although both PCCs and earnouts aim to reduce the valuation risks, they significantly increase the M&A premiums because of the target promised performances (Barbopoulos and Adra, 2016; Tao et al., 2022a).

Third, most of acquirers using PCCs in China only use net profits to measure target firm performances (Tao et al., 2022a) while cash flow, sales, non-financial metrics, pre-tax income or multiple metrics are widely used in earnout-financed M&As in the U.S (Cain et al., 2011). The single metric in PCCs may encourage target firms to engage in

real earnings management during the commitment period (Tao et al., 2022a).

**Table 1 The Similarities and Differences between PCCs and Earnouts**

Contract	PCCs	Earnouts
Country	China	Western countries like U.S. and U.K.
Mechanism	Full payment at the time of M&As and contingent compensation	An upfront payment and a deferred contingent payment
Essence	Put option based on target firm future performances	Call option based on target firm future performances
Bonus	Provide bonus for target managers if target future performance is better than promised performance	No bonus
Metrics	Almost single metric: only use net profits to measure target firm performances	Cash flow (32%), sales (31.5%), non-financial metrics (12.2%), pre-tax income (10.2%) or multiple metrics
Potential Risk	Acquirers may fail to get compensation	Targets may fail to get the second-stage payment
Duration	About 3 years	About 2 years
Popularity	About 25.1% in China	26.1% in U.K., 5.6% in U.S.
Similarity	(1) Aim to mitigate information asymmetry issues between acquirers and targets and reduce the valuation risks, but increase the M&A premiums (2) Retain target firm top managers and generate agency issues between acquirer shareholders and target managers	

China's M&A market provides us with an opportunity to compare the effects of PCCs and earnouts in an emerging economy setting because many Chinese listed firms use deferred contingent payment in M&A deals with PCCs and because relevant institutions for M&As are still underdeveloped, e.g., the effective legal protection for PCC holders is absent in China. After signing PCCs with deferred contingent payment

clauses, acquirers can reduce the amount of deferred contingent payment if target firms fail to achieve the promised goals. Target sellers need to pay extra compensation to acquirers if target post-M&A performances are far lower than the promised performances. Therefore, a PCC with a deferred contingent payment clause is similar to the earnout used in the U.S. and U.K. To simplify, I call PCCs with deferred contingent payment clauses “quasi-earnouts” in the following sections.

### **1.3 Research Objectives and Contributions**

The research objective of this thesis is to examine the overlooked but important determinants and consequences of earnouts and PCCs in emerging markets. To be specific, the first study aims to examine the real impacts of PCCs on the acquiring firm post-M&A stock performances in an emerging market, China. Adopting the agency theory, this study attempts to develop a theoretical framework to explain why PCCs and quasi-earnouts impair acquirers' long-term stock values when the legal protection for PCC and earnout holders is absent. Also, this study examines the key roles of acquirer monitoring and bonding in mitigating the agency issue between acquirer shareholders and target managers. This study contributes to the existing literature on the utilization of earnouts and PCCs in M&As by showing that PCCs and earnouts are actually value-destroying, rather than value-creation if acquirers do not take actions to limit target managers' opportunistic behaviors. Moreover, this study offers valuable insights into potential solutions for acquirers to mitigate these agency conflicts effectively, thereby providing practical implications for managers in emerging markets.

The second study is to explore why acquirers still use PCCs and quasi-earnouts although such contracts impair acquiring firm values. I examine the determinants of using PCCs from the expropriation view and show how PCCs become tools for acquiring firm controlling shareholders to expropriate minority shareholders. First, by

showing who benefits and who loses money from PCCs, my findings contradict traditional information asymmetry hypothesis that PCCs and earnouts are used by acquirers in order to reduce information asymmetry risks in M&As. To be specific, I provide evidence that acquirers' controlling shareholders benefit from PCCs while acquirers' minority shareholders suffer from wealth losses from PCCs. Second, I examine how investors react to the use of PCCs after they lose money. I report that PCCs increase acquirers' announcement CARs when PCCs are used by acquirers for the first time. Since investors can learn from their investment experience, both CARs and BHARs become worse when acquirers use PCCs for multiple times. Therefore, this study also contradicts signaling hypothesis presented by existing literature (Barbopoulos and Sudarsanam, 2012; Tao et al., 2022a). Overall, this study makes significant contributions to the existing literature (Song et al., 2019; Tao et al., 2022a) by showing an unnoticed dark side of PCCs. This study supports the expropriation hypothesis and reports that PCC is a beneficial triple-win for acquiring firm controlling shareholders, acquiring firm managers and target sellers to the detriment of acquiring firm minority shareholders' interests.

The third study is to examine whether directors with foreign experience can limit controlling shareholder expropriation. Apply imprinting theory and learning theory, this study reports that returnee directors are imprinted with the cognition of protecting outsider investors and learn how to detect and limit expropriation after they study or work in countries with strong investor protection environment. As a result, directors with foreign experience limit insiders' self-serving related-party M&As and the use of PCCs. Prior literature (e.g., Giannetti et al., 2015; Liao et al., 2022) has shown the knowledge spillover and international transfer of advanced corporate governance through returnee directors. This study contributes to the literature by showing the

unnoticed roles of returnee directors in transferring strong investor protection from developed countries to emerging markets.

## **1.4 Structure**

The structure of this thesis is organized as follows. This chapter introduces the research background and gaps, raises the research questions, reports the research objectives, findings and contributions. Chapters 2, 3 and 4 present three independent empirical studies to address three research questions respectively. Chapter 5 concludes the main findings, practical implications, limitations and future research.



## **Chapter 2: The Real Effects of Performance Commitment**

### **Contracts in M&As**

**Abstract:** While earnouts and performance commitment contracts are considered as value-creation signals due to their effectiveness in addressing information asymmetry and retaining top management teams of target companies during M&A transactions, my empirical tests, in line with agency theory and using hand-collected M&A data from 2008 to 2021 in China, show that PCCs actually impair acquirers' BHARs. Acquirers employing quasi-earnouts achieve higher BHARs than those with PCCs, but they fall short of outperforming acquirers without PCCs. Effective acquirer monitoring helps alleviate the negative impacts of PCCs, especially when acquirers and targets are located in the same province, reducing monitoring costs. Moreover, acquirers using PCCs achieve higher BHARs than acquirers without PCCs only when multiple metrics are utilized to assess target performance or when the metric less susceptible to manipulation is adopted. Overall, without measures to limit target managers' opportunistic behaviors, PCCs may lead to value destruction rather than value creation in China. My findings highlight the importance of carefully considering the implications of PCCs in emerging markets with weak legal systems.

**Keywords:** performance commitment contract, earnout, agency issue, BHARs

## 2.1 Introduction

In M&A transactions, both acquirers and targets often possess private information regarding their valuations, leading to a classic adverse selection problem where neither party is willing to accept the price proposed by the other (Barbopoulos et al., 2018; Tao et al., 2022a). Additionally, retaining target firm managers after M&A deals poses a challenge for acquirers (Barbopoulos and Sudarsanam, 2012; Datar et al., 2001; Kohers and Ang, 2000). Even if target managers stay with the acquiring firm, they may lack incentives to realize post-M&A integration synergies (Cain et al., 2011). To address this concern, earnouts and PCCs are utilized to retain target managers and resolve information asymmetry conflicts between acquirers and targets (Cain et al., 2011; Datar et al., 2001; Kohers and Ang, 2000; Ragazzino and Reuer, 2009; Song et al., 2019; Tao et al., 2022a).

Earnouts have been proven to substantially boost announcement value gains for acquirers in developed countries such as the U.S., U.K., and Australia. This is primarily attributed to their effectiveness in retaining target managers and mitigating information asymmetry between acquirers and targets (e.g., Barbopoulos and Sudarsanam, 2012; Barbopoulos et al., 2018; Kohers and Ang, 2000). However, in the absence of adequate legal protection for earnout holders in a country (Viarengo et al., 2018), the potential benefits of earnouts could simply become empty promises. Earnouts and PCCs have the potential to retain target firm managers (Kohers and Ang, 2000; Song et al., 2019), but they also give rise to significant agency issues as target managers may not always act in the best interests of acquirers (Elnahas et al., 2017). To meet pre-specified accounting-based goals and avoid potential compensation, target managers may resort to short-sighted decisions, such as engaging in real earnings management (Tao et al.,

2022a) and reducing R&D expense (Elnahas et al., 2017). Moreover, once the commitment period ends, target managers may lose motivation to improve target performances, leading to negative consequences like poor accounting performance and real earnings management. Additionally, target owner-managers may refuse to compensate acquirers after failing to achieve the promised performances, especially in countries like China where the default cost of a PCC is low, resulting in value losses for acquiring firms. Despite the extensive research on the short-term positive stock responses of PCCs and earnouts during the M&A announcement period (Barbopoulos and Adra, 2016; Barbopoulos and Sudarsanam, 2012; Kohers and Ang, 2000; Song et al., 2019), the long-term negative impacts on the acquiring firm's stock performance have not received sufficient attention in existing studies. The existing literature has not thoroughly examined the adverse effects of earnouts and PCCs on acquirers' post-M&A value gains, nor has it explored the strategies to mitigate such impacts. In light of this gap, I aim to investigate and shed new light on the actual implications of earnouts and PCCs in emerging markets with an inadequate legal system. This chapter aims to solve the following important questions:

- (1) Do PCCs negatively affect acquiring firms' long-term stock performances?
- (2) If so, how do PCCs impair acquiring firms' long-term stock performances, and what strategies and monitoring mechanism can acquirers adopt to mitigate such negative impacts?
- (3) In comparison to PCCs, do earnouts offer better protection of acquirers' interests?

In line with agency theory and based on manually collected M&A data in China from 2008 to 2021 on whether PCCs include deferred contingent payment clauses, I have reported several interesting findings. First, PCCs may generate agency issues

between acquirer shareholders and target managers, resulting in poor post-M&A stock performances for acquiring firms. Acquirers' BHARs decline progressively during the post-M&A period when PCCs are used in the deals. Second, acquirers utilizing quasi-earnouts experience higher post-M&A BHARs compared to those using PCCs without deferred contingent payment arrangements, yet their BHARs do not surpass those without PCCs. Thus, quasi-earnouts serve as a partial mitigation to the agency issues. Third, acquirer monitoring helps alleviate the negative impacts of PCCs. Acquirers are more likely to monitor target managers effectively when they are located in the same province, as monitoring costs are reduced. Consequently, the adverse effects of PCCs on acquiring firms are less pronounced when acquirers and targets share the same province location. Fourth, I investigate potential solutions to address agency issues. Employing multiple performance metrics by acquirers to assess target post-M&A performances limits target managers' short-sighted value-destroying decisions, leading to higher post-M&A BHARs for acquirers with PCCs. Additionally, using performance metrics less susceptible to manipulation, like operating revenues, also curbs target managers' value-destroying actions, resulting in enhanced post-M&A BHARs for acquirers with PCCs.

To enhance the robustness of my findings, I use the Heckman two-step model to address endogeneity concerns. Furthermore, my findings remain valid when I use an alternative measure of performance commitment. These findings indicate that PCCs can create long-term value for acquirers only when coupled with effective metrics to constrain target managers' value-destroying decisions.

My findings contribute to the existing literature on the utilization of earnouts and PCCs in M&As in several ways. First, I extend the work of Viarengo et al. (2018) by demonstrating that the potential benefits of earnouts may not materialize in emerging

economies like China, where effective legal protection for earnout holders is lacking. While existing literature (Barbopoulos and Sudarsanam, 2012; Barbopoulos et al., 2018; Kohers and Ang, 2000) has demonstrated the positive effects of earnouts on acquirer value gains in developed countries like the U.S., U.K., and others, and the positive effects of PCCs on acquirer announcement value gains in China, no studies have examined the effects of earnouts and PCCs on acquirers' post-M&A value gains in emerging economies with poor legal systems and law enforcement quality. I fill this gap by demonstrating that in emerging markets lacking effective legal protection for PCC and earnout holders, earnouts and PCCs can become empty promises and adversely impact acquirers' post-M&A BHARs if target managers' opportunistic behaviors are not constrained. My research highlights the importance of considering the legal environment when employing earnouts and PCCs in M&A deals, especially in emerging economies.

Moreover, building upon Viarengo et al. (2018) that the quality of the enforcement system can influence the corporate decisions to utilize earnout agreements and the positive relationship between the use of earnouts and the level of enforcement quality, my study further demonstrates that the enforcement system quality influences the design of earnout agreements and PCCs. I reveal that quasi-earnouts can better safeguard acquirers' interests than PCCs when legal protection for PCC and earnout holders is lacking in a country. However, quasi-earnouts alone are insufficient in addressing the agency issues between acquirer shareholders and target managers. To mitigate these agency issues, acquirers should adopt a multi-metric approach to assess target performances or use metrics that are less susceptible to manipulation by target managers. By employing such strategies, acquirers can enhance the effectiveness of earnouts and quasi-earnouts in aligning the interests of both parties and mitigating the

negative impacts on long-term value gains in an emerging market context. My research provides valuable insights into the design and implementation of earnout agreements and PCCs, particularly in countries with a weak legal system.

Finally, my study has important theoretical implications regarding the utilization of earnouts and PCCs. While existing literature posits the signaling hypothesis (Barbopoulos and Sudarsanam, 2012; Kohers and Ang, 2000; Song et al., 2019; Spence, 1973) to explain the positive effects of earnouts and PCCs on acquirers' value gains, I reveal that in emerging markets with a weak legal system, where default costs of contracts are exceptionally low, earnouts and PCCs lose their effectiveness as signaling mechanisms for acquirers to identify valuable targets. I apply agency theory to illuminate the negative impact of earnouts and PCCs on acquirers' long-term value gains. My research sheds light on how these contractual arrangements lead to agency issues between acquirer shareholders and target managers in an emerging market context. By addressing this issue, I offer valuable insights into potential solutions for acquirers to mitigate these agency conflicts effectively.<sup>1</sup>

Overall, my study differs from previous findings by providing evidence that earnouts and PCCs are not effective value-creation signals (Barbopoulos and Sudarsanam, 2012; Song et al., 2019) but rather contribute to long-term value destruction in China due to its weak legal system and inadequate law enforcement. The failure to limit target managers' opportunistic behaviors further exacerbates this negative impact on acquirers' post-M&A BHARs. Given that earnouts are prevalent in emerging markets like South Africa, India, Brazil, and Mexico (Viarengo et al., 2018), my results hold significant economic implications for M&As. By highlighting the

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<sup>1</sup> Elnahas et al. (2017) show that earnouts violate Islamic law, result in agency issues and thus lead to low BHARs of target firms in Islamic countries. However, Elnahas et al. (2017) do not show whether earnouts have negative impacts on the bidder's value gains and how to mitigate the negative impacts of earnouts.

potential risks associated with earnouts and PCCs in emerging markets with a weak legal system, my research can aid in facilitating M&A integration in such contexts. Understanding the drawbacks of these contractual arrangements can guide acquirers in devising better strategies to protect their interests and mitigate agency issues in M&A deals within emerging economies.

The remainder of the chapter is organized as follows. In Section 2, I discuss the institutional background of PCCs in China. In Section 3, I develop my hypotheses. In Section 4, I describe the data, sample, variables and descriptive statistics. I report the empirical results in Section 5. Finally, I conclude in Section 6.

## **2.2 Background, Literature Review and Hypotheses**

### **2.2.1 Background of PCCs and Legal System in China**

Viarengo et al. (2018) particularly point out that the use of earnouts in M&As is significantly linked to a country's enforcement quality, as the potential benefits of earnouts could turn out to be false hopes in the absence of adequate legal protection for earnout holders. Consequently, the legal system of a country can significantly impact contract outcomes. In the case of China, its legal system is notably weaker when compared to that of the U.S., U.K., and other developed countries (Allen et al., 2005; Pistor and Xu, 2005). China's ability to effectively implement existing laws is limited (Kato and Long, 2006), with its law enforcement ranking significantly below average compared to other countries (Allen et al., 2005).

As for the regulations on PCCs in M&As, the China Securities Regulatory Commission (CSRC) issued “Measures for the Administration of Major Asset Restructuring of Listed Companies” in 2008 and required that all listed firms must sign PCCs with target sellers if the M&A deal price is determined by discounting target

future earnings for major M&As since May 18th, 2008. On October 23rd, 2014, the CSRC revised this requirement: “listed firms can decide whether to sign PCCs with target sellers if the M&A deal price is determined by discounting target future earnings but target sellers are not their related parties.” On June 17th, 2016, the CSRC issued new regulations: “both target firms and acquiring firms cannot change PCCs after PCCs have been signed.”

However, until now, China has not issued any laws on the use of PCCs. PCC is considered an innominate contract prescribed in the Contract Law of China, its enforcement is not compulsory, providing limited legal protection for acquirer shareholders (Li et al., 2019). Moreover, punishments and fines for violations of securities regulations and company laws are relatively light in China (Jiang and Kim, 2015). For example, on October 18th, 2019, the CSRC revised “Measures for the Administration of Major Asset Restructuring of Listed Companies” which reported that the CSRC can require one deal party to fulfill PCCs and take regulatory measures such as supervisory interviews, issuance of warning letters and orders for public explanation if one deal party fails to fulfill PCCs or violates PCCs<sup>2</sup>. On January 19th, 2024, the Shanghai Stock Exchange revised “Self-Regulatory Guidelines for Listed Companies No. 10—Disciplinary Implementation Standards”<sup>3</sup> which reported that the Shanghai Stock Exchange can publicly condemn the target owner-managers if a target firm fails to achieve its promised performances and actual compensation value is less than 50% of the value that should be compensated. Therefore, the punishment is public criticism if target owner-managers refuse compensation. Consequently, the default cost of a PCC is very low due to the country's poor legal system. This circumstance may lead target

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<sup>2</sup> For details, please see the website: [https://www.gov.cn/gongbao/content/2020/content\\_5469718.htm](https://www.gov.cn/gongbao/content/2020/content_5469718.htm)

<sup>3</sup> See: [http://www.sse.com.cn/lawandrules/sselawsrules/stocks/mainipo/c/c\\_20240119\\_5734830.shtml](http://www.sse.com.cn/lawandrules/sselawsrules/stocks/mainipo/c/c_20240119_5734830.shtml)

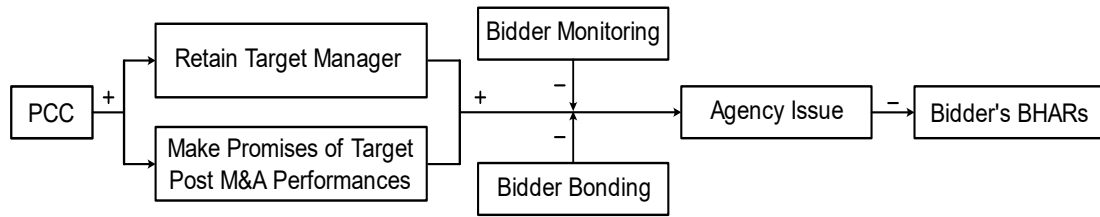


owner-managers to delay or even refuse compensation after failing to achieve the promised performances, making it challenging for acquirers to retrieve the money if target owner-managers refuse to comply.

In this context, the signaling hypothesis proposed by the existing literature (Spence, 1973; Barbopoulos and Sudarsanam, 2012; Kohers and Ang, 2000; Song et al., 2019) may not fully explain the effects of PCCs on acquiring firm performances in China. According to the signaling hypothesis, both PCCs and earnouts act as value-creation "signals" because valuable target firms can accept these contracts to demonstrate their quality and differentiate themselves from inferior targets (Akerlof, 1970). Through PCCs, valuable target firms can signal their worth to acquirers, aiding in distinguishing them from other potential targets (Tao et al., 2022a). However, this signaling mechanism can be imitated by low-quality target firms, particularly when the default cost of a PCC is low. Low-quality target firms are incentivized to mimic valuable targets by signing PCCs, as they can manage earnings to achieve the promised performances and evade potential compensation obligations or refuse to pay compensation if the goals are not met. Consequently, PCCs may not effectively serve as signals to help acquirers differentiate valuable target firms from other targets in China, given the constraints posed by the country's poor legal system.

### 2.2.2 The Consequences of Using PCCs: Agency Issues

To investigate the impacts of PCCs on acquirers' post-M&A performances, I develop a theoretical framework (Figure 1) that outlines how performance commitment negatively impacts acquiring firm post-M&A performances in China.



**Figure 1 How PCCs lead to agency issues (Study 1)**

As shown in Figure 1, earnouts and PCCs are commonly perceived as mechanisms to help acquirers retain talented target managers (Kohers and Ang, 2000; Song et al., 2019) and motivate them to enhance target firm financial performances (Pan et al., 2017). Despite these potential benefits, PCCs can give rise to significant agency issues between acquirer shareholders and target managers.

First, low-quality target firms in China have strong incentives to mimic valuable target firms by signing PCCs, aiming to secure high M&A premiums. However, this imitation may lead to opportunistic behaviors during the commitment period, as predicted by agency theory when target managers act in their self-interest (Jensen and Meckling, 1976). To avoid potential compensation, target managers prioritize short-term profits over the long-term interests of acquirers, leading to value-destroying decisions like real earnings management and reduced R&D investment (Elnahas et al., 2017). These short-sighted actions directly harm the value of acquiring firms (Li et al., 2019). For example, real earnings management negatively impacts a firm's operations and future cash flows (Kothari et al., 2016).

Second, agency issues can significantly impact the decision-making process of both acquirer and target managers, leading to suboptimal outcomes (Elnahas et al., 2017). Target managers may prioritize the interests of the target firm over post-M&A integration with the acquirer, potentially hindering the achievement of expected synergies. Additionally, many PCCs have compensation ceilings and lack bonus provisions for target managers if post-M&A performances exceed promised goals (Pan

et al., 2017). Consequently, target managers may not be incentivized to exert their best efforts to enhance target firm performances, and they might even forego positive net present value projects if the benefits accrue mainly to the acquirer (Elnahas et al., 2017), leading to under-investment issues (Myers, 1977). The transformation from owning a firm to becoming a subsidiary of an acquiring firm can also be challenging for target owner-managers (Barbopoulos and Sudarsanam, 2012), potentially hindering the realization of synergistic benefits (Reum and Steele, 1970).

Third, agency issues generated by PCCs have long-term negative consequences. Once the commitment period concludes, target managers lose incentives to improve target performances and are no longer motivated to conceal real outcomes, leading to poor accounting performances during the post-commitment period (Tao et al., 2022a). Additionally, the complexity of implementing earnouts and PCCs, and the potential for costly negotiations to design their terms, pose challenges (Viarengo et al., 2018). Disagreements arising from measurement issues and discretion could also result in expensive and time-consuming litigation for acquirers (Viarengo et al., 2018). With the low default cost of PCCs in China, acquirers may encounter difficulties in obtaining compensation. Therefore, I develop my first hypothesis as follows:

***Hypothesis 1: PCCs are associated with lower acquirers' post-M&A BHARs.***

### 2.2.3 Which One is Better for Acquirers, PCC or Earnout?

The key difference between a PCC and an earnout lies in the presence of deferred contingent payment. PCCs with deferred contingent payment clauses can be viewed as analogous to earnouts utilized in the U.S. and U.K. This raises the question of whether an earnout is more advantageous than a PCC.

The presence of deferred contingent payment in both earnouts and PCCs can

introduce litigation risk, particularly in cross-border M&As where varying accounting rules may lead to disputes over the measurement of target firms' future performances (Viarengo et al., 2018; Datar et al., 2001). Additionally, the achievement of promised performances by target firms is influenced by factors such as acquiring firms' governance, business environment, and efforts to enhance target business (Kohers and Ang, 2000; Viarengo et al., 2018). As Judge Trevis Laster once remarked, "an earnout often converts today's disagreement over price into tomorrow's litigation over outcome." Likewise, the litigation risks associated with PCCs are also prevalent, especially in the context of China's weak legal system and law enforcement quality, where target owner-managers may refuse to compensate in the event of disagreements<sup>4</sup>. In such cases, deferred contingent payment can serve as a mechanism to mitigate the moral hazard, reducing the risk for acquirers of not receiving the compensation they are entitled to. As a result, deferred contingent payment offers a certain degree of protection for acquirers' interests.

Moreover, the presence of an earnout as a deferred payment mechanism can be beneficial for financially constrained acquirers, particularly when access to external capital is limited or costly. An earnout allows such acquirers to manage their liquidity effectively by reducing the immediate financial burden at the time of M&As (Bates et al., 2018). Additionally, the deferred contingent payment characteristic of earnouts may serve as a motivational tool for target managers to exert their best efforts in enhancing post-M&A performances, as they are not receiving full payments at the time of M&As. Based on the above discussions, my second hypothesis is formulated as follows:

***Hypothesis 2: Acquirers employing quasi-earnouts achieve higher post-M&A BHARs***

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<sup>4</sup> For example, daily economic news reported the litigation on behalf of Super Telecom Co., Ltd. (Stock Code: SH.603322). For details, please see the website: [https://m.sohu.com/a/555713651\\_115362/](https://m.sohu.com/a/555713651_115362/)

*compared to those using PCCs without deferred contingent payment.*

#### 2.2.4 The Roles of Acquirers' Monitoring and Bonding

Agency issues can be alleviated through two main approaches (Jensen and Meckling, 1976): (1) employing monitoring efforts to oversee managers and restrict their opportunistic actions, and/or (2) implementing bonding mechanisms to ensure that managers refrain from actions that could harm owners' interests or to secure compensation for owners if such actions are taken. Accordingly, I contend that agency issues between acquirer shareholders and target managers can be mitigated through effective monitoring and bonding strategies.

First, acquirers can deploy various monitoring mechanisms, such as auditing, internal control systems, and budget restrictions, to constrain target owner-managers' self-maximizing decisions (e.g., Jensen and Meckling, 1976). For instance, post-M&A annual audits of target firms enable acquirers to identify pure accrual manipulation and deter earnings management by target managers. To address concerns regarding real earnings management, acquirers can also monitor key aspects, including the quantity, quality, price, and sales of target firm products, as firms often boost short-term profits through overproduction and price discounts (Roychowdhury, 2006). Additionally, acquirers can keep track of targets' advertising campaigns and the number of R&D employees, as cutting these expenses is a common tactic to increase short-term profits (Roychowdhury, 2006; Elnahas et al., 2017). These monitoring strategies enhance acquirer oversight and promote the alignment of target managers' actions with the long-term interests of acquirers.

Second, acquirers can also engage in bonding activities to limit target managers' self-maximizing decisions. By adding specific clauses to the contract, acquirers can

ensure compensation if target managers violate these provisions. One effective approach is to utilize multiple performance metrics to assess whether target managers achieve the promised goals. For example, many PCCs set a maximum receivables threshold to incentivize target managers to improve real accounting performances. If the proportion of receivables to profits surpasses the specified limit during the commitment period, target managers must compensate the acquirers, even if they meet the promised profit target. Similarly, some PCCs include a minimum net asset requirement, wherein excessive liabilities trigger compensation for the acquirers. These clauses act as safeguards, guaranteeing compensation for acquirers in cases where target managers' actions jeopardize the acquirers' interests. Therefore, I propose the third hypothesis:

***Hypothesis 3:** Acquirers using PCCs experience higher BHARs when they actively engage in monitoring or bonding activities.*

## **2.3 Data, Sample and Variables**

### **2.3.1 Sample and Data**

My sample consists of China's listed firms (acquiring firms) that have announced M&As between January 1st, 2008 and December 31st, 2021 from the WIND database. I restrict acquirers to A-share listed firms. Following Song et al. (2019) and Tao et al. (2022a), I exclude the M&As (1) whose purposes are backdoor listing deals; (2) where acquirers belong to the finance industry; (3) whose data are missing; (4) where targets are patents, land or equipment; (5) which involve assets replacement. To ensure that M&As have significant impacts, I also exclude the M&As with deal values less than 1 million Chinese Yuan. I obtain a final sample of 14,316 M&As conducted by 2,793 acquiring firms, among which 3,518 (24.57%) M&A deals use PCCs. Among 3,518

PCCs, 364 (10.35%) PCCs are quasi-earnouts. I obtain firm financial accounting and stock data from the China Stock Market & Accounting Research (CSMAR) database. By checking each M&A deal, I manually collect data on the clauses such as the performance metrics and whether deferred payment is involved.

Table 2 shows a significant increase in the number of M&A deals involving PCCs, rising from 3 in 2008 to 609 in 2015. Similarly, the number of M&As with quasi-earnouts witnessed a notable surge from 0 in 2008 to 64 in 2015. However, in more recent years, there has been a gradual decline in the proportion of M&As with PCCs, decreasing from 31.03% in 2016 to 21.99% in 2021.

**Table 2 Sample Distribution**

Year	Total M&As	PCCs	Quasi-earnouts	% PCCs	% Quasi-earnouts
	(1)	(2)	(3)	(4) = (2) / (1)	(5) = (3) / (2)
2008	250	3	0	1.20%	0.00%
2009	247	18	1	7.29%	5.56%
2010	369	21	1	5.69%	4.76%
2011	482	38	3	7.88%	7.89%
2012	441	74	9	16.78%	12.16%
2013	828	210	33	25.36%	15.71%
2014	1,401	378	32	26.98%	8.47%
2015	2,045	609	64	29.78%	10.51%
2016	1,692	525	52	31.03%	9.90%
2017	1,753	517	60	29.49%	11.61%
2018	1,626	434	44	26.69%	10.14%
2019	1,237	290	28	23.44%	9.66%
2020	981	189	19	19.27%	10.05%
2021	964	212	18	21.99%	8.49%
Total	14,316	3,518	364	24.57%	10.35%

Table 3 presents the characteristics of M&As involving PCCs. In Panel A, the distribution of various performance metrics is reported. Among all the M&A deals with PCCs, 3,315 M&A deals (94.23%) solely utilize net profits to assess target firm performances. Additionally, 92 M&A deals (2.62%) employ a combination of net profits and receivables as their performance metrics. Other metrics include cash flow

from operating activities, operating revenues, sales income, net assets, the growth rate of target firm value, non-financial metrics, and combinations of at least two of the above metrics.

In Panel B of Table 3, I present statistics on the duration of time for which performance is measured. Panel B reveals that 70.15% of PCCs last for a duration of 3 years, while 14.07% extend for 4 years. Only a minimal percentage, 0.80%, of PCCs span more than 5 years.

**Table 3 The Characteristics of PCCs**

Panel A: Target Performance Metrics		
Performance Metrics	Number	Percentage
Net Profits	3,315	94.23%
Net Profits and Receivables	92	2.62%
Net Profits and Operating Revenues	18	0.51%
Net Profits and Non-financial Metrics	9	0.26%
Net Profits and Sales Income	12	0.34%
Net Profits and Cash Flow from Operating Activities	11	0.31%
Net profits and Net Assets	3	0.09%
Operating Revenues and Non-financial Metrics	3	0.09%
Operating Revenues	17	0.48%
Sales Income	7	0.20%
Non-financial Metrics	7	0.20%
Cash Flow from Operating Activities	2	0.06%
The Growth Rate of Target Firm Value	1	0.03%
Combination of at least 3 Metrics	21	0.60%
Total	3,518	100.00%
Panel B: Distribution of Performance Commitment Period		
The Length of Commitment Period	Number	Percentage
< 1 Year	3	0.09%
1 Year	132	3.75%
>1 Year and < 2 Year	6	0.17%
2 Year	207	5.88%
>2 Year and < 3 Year	30	0.85%
3 Year	2,468	70.15%
>3 Year and < 4 Year	33	0.94%
4 Year	495	14.07%
>4 Year and < 5 Year	5	0.14%
5 Year	111	3.16%
>5 Year	28	0.80%
Total	3,518	100.00%



### 2.3.2 Variables

#### *Dependent variable*

*Acquiring Firm Post-M&A Stock Performance.* To measure the stock performances of acquiring firms during the post-M&A period, I use BHAR which is the most commonly used to measure the long-run return. BHAR is derived as the difference between the buy-and-hold-return of the acquiring firm and the buy-and-hold-return of the benchmark portfolio. The benchmark portfolio is the capitalization-weighted A-share stock market index. *BHAR1*, *BHAR2*, *BHAR3*, *BHAR4* and *BHAR5* are the buy-and-hold abnormal returns of bidding firms in the next one, two, three, four and five years after the M&A announcement date respectively.

#### *Independent variables*

Two independent variables are used to investigate the effects of PCCs on acquirers' BHARs. The first variable is *Promise*. I use a dummy variable to indicate whether a PCC is signed in a M&A deal, consistent with Tao et al. (2022a). If acquirers and targets sign PCCs, *Promise* takes 1; otherwise, it takes 0. To ensure the robustness of my findings, I use the variable *Promise Value* to measure the level of performance commitment. *Promise Value* is defined as the natural logarithm of the value of target firm's total promised performances.

If deferred contingent payment is involved in M&A deals, *Deferred Payment* takes 1; otherwise, it takes 0. Furthermore, if PCCs provide bonus for target managers when targets' actual performances are higher than the promised performances, *Bonus* takes 1; otherwise, it takes 0. If impairment test of target assets is involved in PCCs, *Impairment Test* takes 1; otherwise, it takes 0. If more than one metrics are used by acquirers to assess whether target firms achieve promised performances, *Multiple Metrics* takes 1; otherwise, it takes 0. I use a variable: *Promise Length* to measure the length of

performance commitment period.

I manually collect data on the performance metrics. If acquirers use sales incomes to measure target performances, *Sales Incomes* takes 1, otherwise, it takes 0. If acquirers use operating revenues to measure target performances, *Operating Revenues* takes 1, otherwise, it takes 0. If acquirers use cash flows to measure target performances, *Cash Flows* takes 1, otherwise, it takes 0. If acquirers specify targets' maximum receivables, *Receivables* takes 1, otherwise, it takes 0. If acquirers use non-financial metrics to measure target performances, *Non-Financial Metrics* takes 1, otherwise, it takes 0.

#### *Control variables*

I construct the following variables to capture the characteristics of acquiring firms, target firms and M&A deals: (1) the ratio of shares held by the acquiring firm largest shareholder to total shares of acquiring firm at the end of the latest fiscal year before the M&A announcement or *Top1* (2) the ratio of shares held by acquiring firm managers to total shares of acquiring firm at the end of the latest fiscal year before the M&A announcement or *Managers' Shares* (3) *M&A Size*, defined as the ratio of M&A deal values to total assets of the acquiring firm; (4) *Tobin Q*, defined as the market value of the acquiring firm over its total assets; (5) M&A payment method or *Stock Payment* which takes 1 if acquirers use stocks to pay, and it takes 0 if otherwise; (6) an indicator of whether targets are the related parties of acquirers (*Related Party*); (7) an indicator of whether the acquirer and target are in the different industries (*Cross-industry*); (8) an indicator of whether the acquisition is classified by the WIND database as a cross-border acquisition (*Cross-border*); (9) an indicator of whether the acquirer is a state-owned enterprise (SOE) (*Acquirer SOE*); (10) an indicator of whether the target is a listed firm (*Listed Target*); (11) the age of the acquiring firm (*Acquirer Age*); (12) *Same Province* takes 1 if the target and acquiring firms are located in the same province, and

it takes 0 if otherwise. (13) *Acquirer ROA*, defined as the return on assets of the acquiring firm before the M&A; (14) *Acquirer Size*, the size of the acquiring firm before the M&A, defined as the natural logarithm of total assets of the acquiring firm; (15) *Acquirer LEV*, defined as the leverage ratio of the acquiring firm before the M&A; (16) an indicator of whether the target is a listed firm (*Listed Target*). (17) *Distance*, defined as the standardized distance between the acquiring firm and the target firm. To avoid the impacts of extreme values, all continuous variables are winsorized at the 1% and 99% level in each year. I provide detailed definitions of all variables in Appendix.

Table 4 shows the descriptive statistics for the main variables. The means of *BHAR1*, *BHAR2*, *BHAR3*, *BHAR4* and *BHAR5* are 0.033, 0.057, 0.013, -0.054 and -0.127 respectively, suggesting that acquirers experience declining BHARs during the post-M&A period. *Acquirer SOE* have averages of 0.248, showing that 24.8% of the acquiring firms are stated-owned enterprises. *Related Party* has an average of 0.294, indicating that 29.4% of the acquirers have relations with the targets. The average of *Stock Payment* is 0.097, showing that 9.7% of M&As are paid by stocks in China. The means of *Cross-industry* and *Cross-border* are 0.163 and 0.091, showing that 16.3% M&As are cross-industry M&As and 9.1% M&As are cross-border M&As. *Listed Target* has an average of 0.056, indicating 5.6% of the targets are listed firms. *Same Province* has a mean of 0.385, indicating that the acquirers and targets are located in the same province in 38.5% M&As.

**Table 4 Descriptive Statistics**

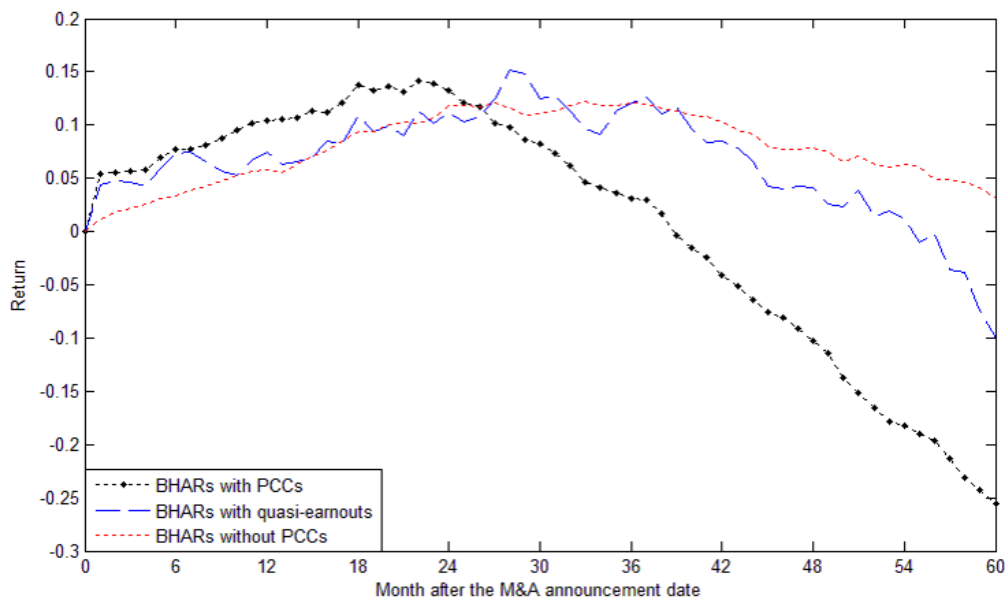
Variables	MEAN	STD	MIN	MED	MAX	N
<i>BHAR1</i>	0.033	0.444	-0.734	-0.059	1.836	14,307
<i>BHAR2</i>	0.057	0.682	-0.885	-0.117	3.065	13,927
<i>BHAR3</i>	0.013	0.824	-1.059	-0.209	3.843	12,909
<i>BHAR4</i>	-0.054	0.904	-1.185	-0.287	4.097	11,866
<i>BHAR5</i>	-0.127	0.965	-1.257	-0.385	4.276	10,486
<i>Promise</i>	0.246	0.431	0.000	0.000	1.000	14,316
<i>Promise Length</i>	0.748	1.349	0.000	0.000	4.083	14,316
<i>Promise Value</i>	4.358	7.821	0.000	0.000	20.734	14,178
<i>Bonus</i>	0.073	0.260	0.000	0.000	1.000	14,316
<i>Deferred Payment</i>	0.025	0.157	0.000	0.000	1.000	14,316
<i>Policy</i>	0.056	0.230	0.000	0.000	1.000	14,316
<i>Top1</i>	0.341	0.146	0.083	0.320	0.730	14,316
<i>M&amp;A Size</i>	0.121	0.331	0.000	0.022	2.480	14,316
<i>Managers' Shares</i>	0.083	0.145	0.000	0.003	0.605	14,316
<i>Stock Payment</i>	0.097	0.296	0.000	0.000	1.000	14,316
<i>Related Party</i>	0.294	0.455	0.000	0.000	1.000	14,316
<i>Acquirer SOE</i>	0.248	0.432	0.000	0.000	1.000	14,316
<i>Acquirer ROA</i>	0.046	0.050	-0.174	0.043	0.193	14,316
<i>Acquirer Size</i>	20.986	5.420	0.134	22.027	26.171	14,316
<i>Acquirer LEV</i>	1.696	4.958	0.055	0.446	21.954	14,316
<i>Acquirer Age</i>	17.406	5.941	4.997	17.056	32.847	14,316
<i>Cross-border</i>	0.091	0.287	0.000	0.000	1.000	14,316
<i>Cross-industry</i>	0.163	0.369	0.000	0.000	1.000	14,316
<i>Same Province</i>	0.385	0.487	0.000	0.000	1.000	14,316
<i>Tobin Q</i>	2.144	1.378	0.892	1.698	8.790	14,316
<i>Distance</i>	0.004	0.982	-3.160	0.413	1.520	5,779
<i>Listed Target</i>	0.056	0.230	0.000	0.000	1.000	14,316
<i>Multiple Metrics</i>	0.012	0.108	0.000	0.000	1.000	14,316
<i>Impairment Test</i>	0.083	0.276	0.000	0.000	1.000	14,316
<i>Sales Incomes</i>	0.002	0.041	0.000	0.000	1.000	14,316
<i>Operating Revenues</i>	0.003	0.058	0.000	0.000	1.000	14,316
<i>Cash Flows</i>	0.001	0.036	0.000	0.000	1.000	14,316
<i>Receivables</i>	0.007	0.082	0.000	0.000	1.000	14,316
<i>Non-Financial Metrics</i>	0.002	0.043	0.000	0.000	1.000	14,316

## 2.4 Results

### 2.4.1 BHARs

Then I study the impacts of PCCs on acquirers' post-M&A BHARs. To ensure that M&As have significant impacts on the acquirers' post-M&A long-term stock performances, I only retain completed M&As whose deal values are at least 1% of the

acquirers' total asset values in this section. In Figure 2, which illustrates the acquirers' BHARs, I observe that acquirers with PCCs exhibit higher BHARs than those without PCCs in the first post-M&A year and there are no significant differences between BHARs with and without PCCs in the 24th month following the M&A announcement date. However, beyond this point, there is a rapid decline in BHARs for acquirers with PCCs. In fact, after the second post-M&A year, BHARs for acquirers with PCCs fall significantly below those without, indicating that PCCs have adverse long-term effects on acquirers' BHARs. Also, it should be noted that BHARs with quasi-earnouts fall more slowly than BHARs with PCCs, suggesting that quasi-earnouts can help acquirers get higher BHARs than PCCs.



**Figure 2 PCCs and Acquirers' Post-M&A BHARs (Study1)**

## 2.4.2 The Baseline Regression Model of BHARs

I construct the following model to study the impacts of PCCs on acquirers' BHARs:

$$\begin{aligned}
 BHAR = & \alpha + \beta_1 Promise + \beta_2 Top1 + \beta_3 M\&A\ Size + \beta_4 Managers' Shares \\
 & + \beta_5 Stock\ Payment + \beta_6 Related\ Party + \beta_7 Acquirer\ SOE + \beta_8 Acquirer\ ROA \\
 & + \beta_9 Acquirer\ Size + \beta_{10} Acquirer\ LEV + \beta_{11} Acquirer\ Age + \beta_{12} Cross-border \\
 & + \beta_{13} Cross-industry + \beta_{14} Same\ Province + \beta_{15} Tobin\ Q
 \end{aligned}$$

$$+\beta_{16}Listed\ Target + \beta_{17}Year + \beta_{18}Industry + \varepsilon \quad (1)$$

Table 5 shows the regression results of model (1) for acquirers' BHARs after I control for the industry and year fixed effects and cluster the errors at the firm level. First, I find that the coefficients of *Promise* are significantly negative in columns (2) - (5), indicating that acquirers with PCCs have lower BHARs during the post-M&A period than acquirers without PCCs. This result confirms my first hypothesis and provides preliminary evidence that PCCs are associated with lower BHARs for acquiring firms during the post-M&A period. This could be attributed to the agency issue between acquirer shareholders and target managers which leads to the failure of the achievement of expected synergies. Furthermore, the poor legal enforcement accelerates the agency issue. With the low default cost of PCCs in China, acquirers may fail to obtain the compensation when target firms fail to achieve the promised performances. Therefore, PCCs fail to protect the acquirers' interests.

Second, I observe a gradual decrease in the coefficient of *Promise* from column (1) to column (5). Regarding the economic significance, *BHAR2*, *BHAR3*, *BHAR4* and *BHAR5* experience reductions of 4.3%, 8.9%, 13.3% and 18.8%, respectively, with the use of PCCs. This result demonstrates that the negative impacts of PCCs on the stock performances of acquiring firms are increasingly evident after the completion of M&A deals. This could be attributed to target firms managing earnings upward and achieving performance rates close to 100% during the commitment period (Elnahas et al., 2017). Additionally, acquiring firm managers might manipulate earnings upward to meet investors' expectations during the commitment period. However, once PCCs expire, target managers no longer have incentives to conceal their real performances (Tao et al., 2022a). As a result, acquirers are more likely to experience significant value losses during the post-commitment period compared to the commitment period. Thus, I

observe a gradual decline in acquirers' BHARs over the post-M&A period.

**Table 5 PCCs and Acquirers' BHARs**

Model	(1)	(2)	(3)	(4)	(5)
Variables	<i>BHAR1</i>	<i>BHAR2</i>	<i>BHAR3</i>	<i>BHAR4</i>	<i>BHAR5</i>
<i>Promise</i>	-0.015 (-1.148)	-0.043** (-2.057)	-0.089*** (-3.204)	-0.133*** (-4.255)	-0.188*** (-5.081)
<i>Top1</i>	0.096** (2.181)	0.203*** (2.669)	0.243** (2.409)	0.142 (1.262)	0.289** (2.114)
<i>M&amp;A Size</i>	0.145*** (5.989)	0.151*** (4.301)	0.114** (2.577)	0.076* (1.699)	0.046 (0.932)
<i>Managers' Shares</i>	0.069 (1.470)	0.141* (1.702)	0.199* (1.823)	0.131 (1.065)	0.089 (0.552)
<i>Stock Payment</i>	0.078*** (3.485)	0.081** (2.334)	0.123*** (3.139)	0.138*** (3.323)	0.117** (2.501)
<i>Related Party</i>	0.017 (1.212)	0.044** (2.122)	0.041 (1.561)	0.018 (0.638)	0.031 (0.869)
<i>Acquirer SOE</i>	-0.026 (-1.566)	-0.053** (-2.004)	-0.097*** (-2.802)	-0.084** (-2.131)	-0.058 (-1.165)
<i>Acquirer ROA</i>	-0.140 (-1.018)	-0.222 (-0.957)	0.156 (0.550)	0.064 (0.177)	0.170 (0.390)
<i>Acquirer Size</i>	-0.022*** (-3.547)	-0.058*** (-5.657)	-0.063*** (-4.755)	-0.076*** (-4.931)	-0.084*** (-4.246)
<i>Acquirer LEV</i>	-0.024*** (-3.812)	-0.063*** (-5.814)	-0.070*** (-5.098)	-0.083*** (-5.179)	-0.090*** (-4.470)
<i>Acquirer Age</i>	0.003** (2.359)	0.001 (0.278)	-0.003 (-1.130)	-0.006* (-1.686)	-0.005 (-1.125)
<i>Cross-border</i>	0.010 (0.454)	0.008 (0.233)	0.088* (1.715)	0.111* (1.857)	0.130* (1.870)
<i>Cross-industry</i>	-0.004 (-0.256)	-0.023 (-1.018)	-0.008 (-0.282)	-0.044 (-1.323)	-0.058 (-1.511)
<i>Same Province</i>	0.001 (0.109)	0.003 (0.139)	0.011 (0.449)	0.007 (0.252)	0.011 (0.330)
<i>Tobin Q</i>	-0.027*** (-4.995)	-0.037*** (-4.198)	-0.032*** (-2.635)	-0.034** (-2.024)	-0.044** (-2.028)
<i>Listed Target</i>	0.013 (0.449)	0.078 (1.599)	0.099* (1.738)	0.166** (2.229)	0.210** (2.277)
<i>Year</i>	Yes	Yes	Yes	Yes	Yes
<i>Industry</i>	Yes	Yes	Yes	Yes	Yes
<i>R<sup>2</sup></i>	0.133	0.156	0.166	0.165	0.152
<i>N</i>	6,676	6,490	5,992	5,547	4,898

Note: \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

### 2.4.3 Quasi-earnouts vs. PCCs

I then examine whether earnouts can better protect acquirers' interests compared to PCCs. My focus lies on the impact of deferred contingent payment on acquirers' BHARs, which is a key difference between earnouts and PCCs. I add the variable *Deferred Payment* to model (1) and conduct the following regression analysis to test my hypothesis.

$$\begin{aligned} BHAR = & \alpha + \beta_1 Promise + \beta_2 Deferred Payment + \beta_3 Top1 + \beta_4 M\&A Size \\ & + \beta_5 Managers' Shares + \beta_6 Stock Payment + \beta_7 Related Party \\ & + \beta_8 Acquirer SOE + \beta_9 Acquirer ROA + \beta_{10} Acquirer Size + \beta_{11} Acquirer LEV \\ & + \beta_{12} Acquirer Age + \beta_{13} Cross-border + \beta_{14} Cross-industry + \beta_{15} Same Province \\ & + \beta_{16} Tobin Q + \beta_{17} Listed Target + \beta_{18} Year + \beta_{19} Industry + \varepsilon \end{aligned} \quad (2)$$

The regression results of model (2) are shown in Table 6. As shown in Table 6, the coefficients of *Deferred Payment* are consistently positive in columns (2) - (5), indicating a favorable effect of deferred contingent payment on acquirers' BHARs. Moreover, I observe that the coefficient of *Deferred Payment*, initially insignificant in column (1), becomes larger and statistically significant in subsequent columns (2) to (5). This indicates that the positive impact of deferred contingent payment gradually becomes evident during the post-M&A period.

These results provide support for my second hypothesis, suggesting that acquirers utilizing quasi-earnouts experience higher post-M&A BHARs compared to those using PCCs without deferred contingent payment arrangements. However, I note that the sum of the coefficient of *Deferred Payment* and the coefficient of *Promise* remains negative for columns (5). This implies that the negative impact of PCCs cannot be fully offset by the positive effect of deferred contingent payment. As a result, quasi-earnouts, while capable of mitigating agency issues to some extent, do not entirely resolve the challenges posed by PCCs.



**Table 6 Quasi-earnouts vs. PCCs**

Model	(1)	(2)	(3)	(4)	(5)
Variables	<i>BHAR1</i>	<i>BHAR2</i>	<i>BHAR3</i>	<i>BHAR4</i>	<i>BHAR5</i>
<i>Promise</i>	-0.018 (-1.301)	-0.049** (-2.192)	-0.110*** (-3.773)	-0.162*** (-5.110)	-0.217*** (-5.865)
<i>Deferred Payment</i>	0.020 (0.693)	0.036 (0.887)	0.130** (2.402)	0.183*** (2.864)	0.171** (2.228)
<i>Control Variables</i>	Yes	Yes	Yes	Yes	Yes
<i>Year</i>	Yes	Yes	Yes	Yes	Yes
<i>Industry</i>	Yes	Yes	Yes	Yes	Yes
<i>R</i> <sup>2</sup>	0.133	0.156	0.167	0.167	0.153
<i>N</i>	6,676	6,490	5,992	5,547	4,898

Note: \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

#### 2.4.4 Effects of Acquirer Monitoring on BHARs

In this section, I focus on how to effectively mitigate agency issues between acquirer shareholders and target managers in M&As involving PCCs or earnouts. I propose two approaches for acquirers to achieve this: acquirer monitoring and bonding. First, I examine the impact of acquirer monitoring on BHARs. As discussed earlier, effective monitoring of target managers requires substantial resources, such as closely monitoring the quality and quantity of target products. Notably, the cost of monitoring increases significantly when the geographic distances between target firms and acquiring firms are greater. Therefore, I hypothesize that acquirers are more likely to monitor target managers effectively when the distances between target firms and acquiring firms are geographically closer. This geographic proximity is expected to mitigate agency issues between acquirer shareholders and target managers. To empirically test my hypothesis, I conduct a regression analysis to examine the relationship between geographic proximity and BHARs, seeking to identify the extent to which agency issues are alleviated when effective monitoring is in place.

I add *Promise*  $\times$  *Same Province* to model (1) and conduct the following regression analysis to test my hypothesis.

$$\begin{aligned}
BHAR = & \alpha + \beta_1 Promise + \beta_2 Promise \times Same\ Province + \beta_3 Top1 + \beta_4 M\&A\ Size \\
& + \beta_5 Managers' Shares + \beta_6 Stock\ Payment + \beta_7 Related\ Party + \beta_8 Acquirer\ SOE \\
& + \beta_9 Acquirer\ ROA + \beta_{10} Acquirer\ Size + \beta_{11} Acquirer\ LEV + \beta_{12} Acquirer\ Age \\
& + \beta_{13} Cross-border + \beta_{14} Cross-industry + \beta_{15} Same\ Province + \beta_{16} Tobin\ Q \\
& + \beta_{17} Listed\ Target + \beta_{18} Year + \beta_{19} Industry + \varepsilon \quad (3)
\end{aligned}$$

Panel A of Table 7 reports the result of regression model (3) after I control for the industry and year fixed effects and cluster the errors at the firm level. The coefficients of *Promise*  $\times$  *Same Province* are significantly positive for columns (3) to (5). This finding highlights the importance of geographic proximity in enhancing acquirer monitoring and ultimately leading to higher BHARs. However, despite the positive effects of acquirer monitoring, I note that the sum of the coefficient of *Promise* and the coefficient of *Promise*  $\times$  *Same Province* remains negative for columns (3) – (5). This finding implies that while acquirer monitoring can alleviate agency issues, it may not completely solve the challenges posed by PCCs.

To enhance the robustness of my findings, I calculate the geographic distances (*Distance*) between target firms and acquiring firms by using the latitudes and longitudes of the addresses of acquiring firms and target firms<sup>5</sup>. I add *Distance* and *Promise*  $\times$  *Distance* to model (1) to test my hypothesis. As shown in the Panel B of Table 7, the coefficients of *Promise*  $\times$  *Distance* are significantly negative for columns (3) – (5), showing that acquirers' BHARs are lower when the geographic distances between target firms and acquiring firms are greater. This finding is consistent with my above results, implying the importance of geographic proximity.

Overall, these findings demonstrate the significant role of acquirer monitoring in enhancing M&A performance in the context of PCCs. By identifying the impact of geographic proximity on BHARs, my research sheds light on practical strategies to

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<sup>5</sup> I use Qichacha to get the addresses of acquiring firms and target firms. Then I use Google map and AMAP to get their longitudes and latitudes and calculate the geographic distances.

mitigate agency issues and enhance the overall effectiveness of M&A transactions involving PCCs.

**Table 7 Acquirers' Monitoring and Acquirers' BHARs**

Panel A: Using the Same Province					
Model	(1)	(2)	(3)	(4)	(5)
Variables	<i>BHAR1</i>	<i>BHAR2</i>	<i>BHAR3</i>	<i>BHAR4</i>	<i>BHAR5</i>
<i>Promise</i>	-0.017 (-1.088)	-0.063** (-2.535)	-0.129*** (-4.028)	-0.180*** (-4.910)	-0.238*** (-5.309)
<i>Promise</i> × <i>Same Province</i>	0.006 (0.230)	0.053 (1.359)	0.106** (2.241)	0.131** (2.463)	0.137** (2.243)
<i>Control Variables</i>	Yes	Yes	Yes	Yes	Yes
<i>Year</i>	Yes	Yes	Yes	Yes	Yes
<i>Industry</i>	Yes	Yes	Yes	Yes	Yes
$R^2$	0.133	0.157	0.167	0.166	0.153
$N$	6,676	6,490	5,992	5,547	4,898
Panel B: Using the Geographic Distance					
Model	(1)	(2)	(3)	(4)	(5)
Variables	<i>BHAR1</i>	<i>BHAR2</i>	<i>BHAR3</i>	<i>BHAR4</i>	<i>BHAR5</i>
<i>Promise</i>	-0.025* (-1.865)	-0.051** (-2.370)	-0.109*** (-3.818)	-0.149*** (-4.666)	-0.200*** (-5.180)
<i>Distance</i>	0.000 (0.047)	0.012 (0.757)	0.006 (0.319)	0.009 (0.443)	-0.001 (-0.028)
<i>Promise</i> × <i>Distance</i>	-0.002 (-0.149)	-0.028 (-1.356)	-0.054** (-1.979)	-0.064** (-2.222)	-0.074** (-2.106)
<i>Control Variables</i>	Yes	Yes	Yes	Yes	Yes
<i>Year</i>	Yes	Yes	Yes	Yes	Yes
<i>Industry</i>	Yes	Yes	Yes	Yes	Yes
$R^2$	0.145	0.169	0.175	0.175	0.163
$N$	5,776	5,617	5,168	4,784	4,211

Note: \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

#### 2.4.5 Effects of Acquirer Bonding on BHARs

To investigate the impact of acquirer bonding on BHARs, I focus on the inclusion of certain clauses in PCCs that ensure acquirers are compensated in case target managers act in a way that may harm acquirer interests. Specifically, I consider the effects of two key clauses in PCCs: (1) whether more than one metric is utilized by acquirers to assess whether target managers have achieved the promised goals. For instance, combining net profits and receivables as metrics to judge target performance;

and (2) whether a value impairment test of target assets is conducted. This clause stipulates that target sellers need to pay additional compensation to acquirers if the value impairment is higher than the compensation already paid by target sellers.

I conduct the following regression analysis:

$$\begin{aligned}
 BHAR = & \alpha + \beta_1 Promise + \beta_2 Multiple Metrics + \beta_3 Impairment Test + \beta_4 Top1 \\
 & + \beta_5 M\&A Size + \beta_6 Managers' Shares + \beta_7 Stock Payment + \beta_8 Related Party \\
 & + \beta_9 Acquirer SOE + \beta_{10} Acquirer ROA + \beta_{11} Acquirer Size + \beta_{12} Acquirer LEV \\
 & + \beta_{13} Acquirer Age + \beta_{14} Cross-border + \beta_{15} Cross-industry + \beta_{16} Same Province \\
 & + \beta_{17} Tobin Q + \beta_{18} Listed Target + \beta_{19} Year + \beta_{20} Industry + \varepsilon \quad (4)
 \end{aligned}$$

Table 8 reports the result of regression model (4) after I control for the industry and year fixed effects and cluster the errors at the firm level. The coefficients of *Multiple Metrics* are significantly positive for columns (3) - (5), indicating that acquirers experience higher post-M&A BHARs when multiple metrics are used. This finding validates my third hypothesis, suggesting that employing both monitoring and bonding mechanisms can safeguard acquirers' interests in M&A transactions involving PCCs.

I note that the combined coefficient of *Multiple Metrics* and *Promise* remains positive in columns (2) - (5), indicating that acquirers utilizing PCCs can achieve higher BHARs than those without PCCs when employing multiple metrics. This suggests that the use of multiple metrics can effectively address agency issues. One potential explanation is the difficulty for target managers to manipulate earnings upward to satisfy multiple goals simultaneously. Consequently, target managers may be inclined to exert their best efforts to enhance the actual performance of the target firm to achieve multiple objectives. For instance, if target managers need to meet both the promised net profits and cash flows from operating activities, they may refrain from engaging in activities that manipulate real activities and earnings upward, as these actions, such as offering excessive price discounts to inflate total earnings, can lead to abnormally low cash flows from operations (Roychowdhury, 2006). Hence, target managers are more

likely to enhance the real performance of the target firm when acquirers use more than one metrics.

Furthermore, my findings reveal that the coefficients of *Impairment Test* are not statistically significant across all columns, indicating that the value impairment test does not effectively safeguard acquirers' interests. One possible explanation for this result is that target sellers are obligated to provide additional compensation to acquirers only if the value of impairment exceeds the compensation already paid by them. Consequently, the value impairment test may not sufficiently curtail opportunistic decisions made by target managers, as the threshold for triggering additional compensation may not be stringent enough to discourage such behavior.

**Table 8 Acquirers' Bonding and Acquirers' BHARs**

Model	(1)	(2)	(3)	(4)	(5)
Variables	<i>BHAR1</i>	<i>BHAR2</i>	<i>BHAR3</i>	<i>BHAR4</i>	<i>BHAR5</i>
<i>Promise</i>	-0.016 (-1.171)	-0.044** (-1.966)	-0.087*** (-2.977)	-0.139*** (-4.242)	-0.200*** (-5.271)
<i>Multiple Metrics</i>	0.033 (0.711)	0.098 (1.433)	0.195** (2.130)	0.360*** (3.054)	0.396*** (3.054)
<i>Impairment Test</i>	0.000 (0.009)	-0.017 (-0.474)	-0.055 (-1.356)	-0.052 (-1.162)	-0.027 (-0.556)
<i>Control Variables</i>	Yes	Yes	Yes	Yes	Yes
<i>Year</i>	Yes	Yes	Yes	Yes	Yes
<i>Industry</i>	Yes	Yes	Yes	Yes	Yes
$R^2$	0.133	0.157	0.167	0.168	0.154
$N$	6,676	6,490	5,992	5,547	4,898

Note: \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

## 2.5 Robustness check and further analyses

### 2.5.1 Robustness

To strengthen the robustness of my conclusions, first, I use an alternative variable *Promise Value* to replace the dummy variable *Promise* in model (1) as I argue that the impacts of PCCs are larger when the values of target firm's total promised

performances are larger. Second, I add *Deferred Payment*, *Multiple Metrics* and *Promise Value × Same Province* to model (1) and conduct the following regression analysis:

$$\begin{aligned}
 BHAR = & \alpha + \beta_1 Promise\ Value + \beta_2 Deferred\ Payment + \beta_3 Multiple\ Metrics \\
 & + \beta_4 Promise\ Value \times Same\ Province + \beta_5 Top1 + \beta_6 M\&A\ Size \\
 & + \beta_7 Managers'\ Shares + \beta_8 Stock\ Payment + \beta_9 Related\ Party \\
 & + \beta_{10} Acquirer\ SOE + \beta_{11} Acquirer\ ROA + \beta_{12} Acquirer\ Size \\
 & + \beta_{13} Acquirer\ LEV + \beta_{14} Acquirer\ Age + \beta_{15} Cross-border \\
 & + \beta_{16} Cross-industry + \beta_{17} Same\ Province + \beta_{18} Tobin\ Q \\
 & + \beta_{19} Listed\ Target + \beta_{20} Year + \beta_{21} Industry + \varepsilon
 \end{aligned}
 \tag{5}$$

Table 9 shows the regression results of model (5). I find that the coefficients of *Promise Value* are significantly negative for columns (2) - (5). Also, the coefficients of *Deferred Payment*, *Multiple Metrics* and *Promise Value × Same Province* are significantly positive for columns (3) - (5). These results are consistent with my conclusions and demonstrate that my findings are robust to the alternative measure of performance commitment.

**Table 9 Robustness Check**

Model	(1)	(2)	(3)	(4)	(5)
Variables	<i>BHAR1</i>	<i>BHAR2</i>	<i>BHAR3</i>	<i>BHAR4</i>	<i>BHAR5</i>
<i>Promise Value</i>	-0.001 (-1.343)	-0.004*** (-2.943)	-0.009*** (-4.549)	-0.012*** (-5.813)	-0.015*** (-6.243)
<i>Deferred Payment</i>	0.020 (0.699)	0.036 (0.841)	0.119** (2.102)	0.159** (2.367)	0.155* (1.943)
<i>Multiple Metrics</i>	0.028 (0.597)	0.087 (1.236)	0.176* (1.842)	0.338*** (2.756)	0.370*** (2.825)
<i>Promise Value × Distance</i>	0.000 (0.243)	0.003 (1.463)	0.006** (2.288)	0.008*** (2.614)	0.009** (2.546)
<i>Control Variables</i>	Yes	Yes	Yes	Yes	Yes
<i>Year</i>	Yes	Yes	Yes	Yes	Yes
<i>Industry</i>	Yes	Yes	Yes	Yes	Yes
<i>R</i> <sup>2</sup>	0.133	0.158	0.168	0.168	0.155
<i>N</i>	6,602	6,418	5,925	5,485	4,843

Note: \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

## 2.5.2 Heckman two-step model

My above findings may suffer from potential selection bias, because whether acquirers and targets decide to sign a PCC is not random (Song et al., 2019). In particular, PCCs are more likely to be signed when acquiring firms have bad pre-M&A accounting performances (Tao et al., 2022a). Therefore, following previous studies (Hou et al., 2015; Song et al., 2019), I use the Heckman two-step model to address the potential selection bias.

In the first step, Heckman's estimator requires exogenous variables that are correlated with acquirers' propensity to use PCCs, but not with acquiring firm post-M&A performances. I consider the M&A policy implemented by the Chinese government as the exogenous variables in the Heckman first-step model. The China Securities Regulatory Commission (CSRC), which is the counterpart of the Securities and Exchange Commission (SEC) in the U.S., mandated that all listed firms must sign PCCs with target sellers if the M&A deal price is determined by discounting target future earnings for major M&As since May 18th, 2008.<sup>6</sup> Hence, I consider this policy as an excellent exogenous variable. On one hand, it compelled certain firms to adopt PCCs in their M&A transactions. On the other hand, this policy is unrelated to post-M&A stock performances of the acquiring firms. I construct a variable *Policy*. If an M&A deal is impacted by this policy, then *Policy* takes 1; otherwise, it takes 0.

With this exogenous variable, I first estimate the likelihood of using PCCs in M&A transactions. I construct the following model as the Heckman first step model to estimate the likelihood of using PCCs:

$$Promise = \alpha + \beta_1 Policy + \beta_2 Top1 + \beta_3 M\&A\ Size + \beta_4 Managers' Shares$$

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<sup>6</sup> For details, please see the website: [https://www.gov.cn/flfg/2008-04/21/content\\_949975.htm](https://www.gov.cn/flfg/2008-04/21/content_949975.htm). On October 23rd, 2014, the CSRC revised this requirement: "listed firms can decide whether to sign PCCs with target sellers if the M&A deal price is determined by discounting target future earnings but target sellers are not their related parties." For details, please see the website: <http://www.csrc.gov.cn/csrc/c106256/c1653959/content.shtml>.

$$\begin{aligned}
& + \beta_5 \text{Stock Payment} + \beta_6 \text{Related Party} + \beta_7 \text{Acquirer SOE} + \beta_8 \text{Acquirer ROA} \\
& + \beta_9 \text{Acquirer Size} + \beta_{10} \text{Acquirer LEV} + \beta_{11} \text{Acquirer Age} + \beta_{12} \text{Cross-border} \\
& + \beta_{13} \text{Cross-industry} + \beta_{14} \text{Same Province} + \beta_{15} \text{Tobin Q} + \beta_{16} \text{Listed Target} \\
& + \beta_{17} \text{Year} + \beta_{18} \text{Industry} + \varepsilon
\end{aligned} \tag{6}$$

Column (1) in Table 10 shows the result for model (6). The coefficient of *Policy* is significantly positive in column (1). I calculate the inverse Mills ratio and include it in the following regression model to investigate the impact of PCCs on the acquirers' BHARs:

$$\begin{aligned}
\text{BHAR} = & \alpha + \beta_1 \text{Promise} + \beta_2 \text{Top1} + \beta_3 \text{M\&A Size} + \beta_4 \text{Managers' Shares} \\
& + \beta_5 \text{Stock Payment} + \beta_6 \text{Related Party} + \beta_7 \text{Acquirer SOE} + \beta_8 \text{Acquirer ROA} \\
& + \beta_9 \text{Acquirer Size} + \beta_{10} \text{Acquirer LEV} + \beta_{11} \text{Acquirer Age} + \beta_{12} \text{Cross-border} \\
& + \beta_{13} \text{Cross-industry} + \beta_{14} \text{Same Province} + \beta_{15} \text{Tobin Q} + \beta_{16} \text{Listed Target} \\
& + \beta_{17} \text{Inverse Mills Ratio} + \beta_{18} \text{Year} + \beta_{19} \text{Industry} + \varepsilon
\end{aligned} \tag{7}$$

Columns (2) - (6) in Table 10 show the regression result of model (7). I find that the coefficients of *Promise* are significantly negative in columns (4) - (6), indicating that acquirers with PCCs have lower BHARs after the third post-M&A year than acquirers without PCCs. This result confirms my first hypothesis that PCCs are associated with lower post-M&A BHARs of acquiring firms.



**Table 10 Heckman Two-Step Model**

Model	(1)	(2)	(3)	(4)	(5)	(6)
Variables	<i>Promise</i>	<i>BHAR1</i>	<i>BHAR2</i>	<i>BHAR3</i>	<i>BHAR4</i>	<i>BHAR5</i>
<i>Promise</i>		0.021 (0.351)	0.028 (0.328)	-0.251** (-2.337)	-0.412*** (-3.573)	-0.648*** (-4.314)
<i>Policy</i>	1.293*** (12.466)					
<i>Top1</i>	0.092 (0.700)	0.095** (2.163)	0.201*** (2.652)	0.246** (2.447)	0.148 (1.315)	0.298** (2.182)
<i>M&amp;A Size</i>	0.608*** (7.046)	0.139*** (5.171)	0.140*** (3.762)	0.139*** (2.897)	0.118** (2.420)	0.114** (2.089)
<i>Managers' Shares</i>	-0.007 (-0.060)	0.069 (1.467)	0.140* (1.697)	0.200* (1.837)	0.134 (1.091)	0.093 (0.583)
<i>Stock Payment</i>	1.371*** (24.547)	0.060* (1.709)	0.045 (0.862)	0.205*** (3.257)	0.281*** (4.151)	0.353*** (4.273)
<i>Related Party</i>	0.026 (0.728)	0.016 (1.191)	0.043** (2.101)	0.042 (1.603)	0.021 (0.708)	0.034 (0.959)
<i>Acquirer SOE</i>	-0.159*** (-3.238)	-0.026 (-1.505)	-0.052* (-1.937)	-0.101*** (-2.895)	-0.090** (-2.269)	-0.067 (-1.349)
<i>Acquirer ROA</i>	0.391 (1.210)	-0.141 (-1.028)	-0.224 (-0.969)	0.168 (0.591)	0.084 (0.232)	0.209 (0.479)
<i>Acquirer Size</i>	-0.185*** (-11.475)	-0.020*** (-3.023)	-0.055*** (-5.074)	-0.070*** (-5.020)	-0.088*** (-5.447)	-0.103*** (-4.990)
<i>Acquirer LEV</i>	-0.175*** (-10.294)	-0.023*** (-3.347)	-0.060*** (-5.302)	-0.076*** (-5.341)	-0.094*** (-5.643)	-0.108*** (-5.126)
<i>Acquirer Age</i>	-0.001 (-0.272)	0.003** (2.371)	0.001 (0.296)	-0.003 (-1.159)	-0.006* (-1.722)	-0.005 (-1.157)
<i>Cross-border</i>	-0.761*** (-11.869)	0.016 (0.654)	0.020 (0.519)	0.062 (1.110)	0.065 (1.021)	0.055 (0.742)
<i>Cross-industry</i>	0.053 (1.383)	-0.004 (-0.292)	-0.024 (-1.064)	-0.005 (-0.193)	-0.040 (-1.195)	-0.052 (-1.335)
<i>Same Province</i>	-0.180*** (-5.687)	0.003 (0.259)	0.006 (0.321)	0.003 (0.110)	-0.007 (-0.247)	-0.011 (-0.323)
<i>Tobin Q</i>	-0.064*** (-4.180)	-0.026*** (-4.856)	-0.036*** (-4.088)	-0.034*** (-2.786)	-0.037** (-2.244)	-0.050** (-2.296)
<i>Listed Target</i>	-0.061 (-0.994)	0.014 (0.469)	0.079 (1.622)	0.097* (1.692)	0.161** (2.158)	0.201** (2.186)
<i>Inverse Mills Ratio</i>		-0.021 (-0.614)	-0.042 (-0.861)	0.097 (1.529)	0.168** (2.475)	0.275*** (3.184)
<i>Year</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i>Industry</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i>(Pseudo) R<sup>2</sup></i>	0.285	0.133	0.156	0.167	0.166	0.154
<i>N</i>	14,316	6,676	6,490	5,992	5,547	4,898

Note: \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

### 2.5.3 Further Analysis

Then I consider the effects of some clauses on acquirers' BHARs. First, I examine whether acquirers provide bonuses to target management teams when target future performances exceed the promised performances. This aspect is particularly important as it serves as a motivational factor for target managers to exert their best efforts to increase target firm post-M&A performances.

Additionally, it is noteworthy that U.S. acquirers in earnout-financed M&As widely adopt cash flows, sales, non-financial metrics, pre-tax incomes, and combinations of at least two metrics to assess target post-M&A performances (Cain et al., 2011). Moreover, existing studies have not demonstrated that earnouts result in earnings management issues for targets in the U.S. market. Hence, I posit that the selection of metrics less prone to manipulation may play crucial roles in constraining target managers' opportunistic decisions that can lead to value destruction. Additionally, shorter horizons for the measurement period could potentially curb target managers' propensity for earnings manipulation (Viarengo et al., 2018). Consequently, I employ the following model to conduct further tests:

$$\begin{aligned}
 BHAR = & \alpha + \beta_1 Promise + \beta_2 Clause + \beta_3 Deferred Payment + \beta_4 Top1 + \beta_5 M\&A Size \\
 & + \beta_6 Managers' Shares + \beta_7 Stock Payment + \beta_8 Related Party + \beta_9 Acquirer SOE \\
 & + \beta_{10} Acquirer ROA + \beta_{11} Acquirer Size + \beta_{12} Acquirer LEV + \beta_{13} Acquirer Age \\
 & + \beta_{14} Cross-border + \beta_{15} Cross-industry + \beta_{16} Same Province + \beta_{17} Tobin Q \\
 & + \beta_{18} Listed Target + \beta_{19} Inverse Mills Ratio + \beta_{20} Year + \beta_{21} Industry + \varepsilon \quad (8)
 \end{aligned}$$

where *Clause* is the variable that captures the bonus clause, or the length of commitment period, or the types of metrics.

Table 11 presents the results regarding the effects of bonus clause, the length of the commitment period and the types of metrics on acquirers' post-M&A BHARs. Given that PCCs typically have a duration of 3 years, I only consider *BHAR3* and *BHAR4* in Table 11. As evident from columns (1) and (4) of Table 11, I observe that

the coefficient of *Bonus* is not statistically significant, indicating that providing bonuses to target managers does not effectively safeguard acquirers' interests. The underlying reason could be that offering bonuses serve as a motivation for target managers to engage in further earnings manipulation, aiming to surpass the promised performances and gain additional benefits (Tao et al., 2022a). Consequently, instead of mitigating agency issues, bonuses may exacerbate them, leading to more serious challenges for acquirers in M&A deals with PCCs.

Also, as evident from columns (2) and (5) of Table 11, the length of the commitment period does not exhibit significant impacts on acquirers' BHARs. This suggests that shorter horizons for the measurement period may not be effective in constraining target managers' opportunistic decisions.

Finally, I show the effects of the type of metrics on acquirers' BHARs in column (3) and (6) of Table 11. I find that the coefficients of *Operating Revenues* are significantly positive. Also, the sum of the coefficient of *Promise* and the coefficient of *Operating Revenues* remains positive, suggesting that acquirers enjoy higher BHARs when they use operating revenues to measure target performances compared with acquirers using other metrics. Performance metrics like operating revenues are more effective in limiting target managers' opportunistic decisions and motivating them to enhance target real performances, compared to other metrics like net profits, cash flows, and non-financial metrics. The use of operating revenues as the metric appears to play a crucial role in encouraging target managers to act in ways that align with the goals of the M&A deal and ultimately benefit the acquiring firms.

**Table 11 Further Analysis**

Model	(1)	(2)	(3)	(4)	(5)	(6)
Variables	<i>BHAR3</i>			<i>BHAR4</i>		
<i>Promise</i>	-0.264** (-2.419)	-0.261* (-1.880)	-0.262** (-2.419)	-0.410*** (-3.489)	-0.343** (-2.300)	-0.436*** (-3.777)
<i>Bonus</i>	-0.006 (-0.165)			-0.043 (-0.994)		
<i>Promise Length</i>		-0.002 (-0.071)			-0.028 (-0.946)	
<i>Operating Revenues</i>			0.416** (1.998)			0.751** (2.321)
<i>Sales Incomes</i>			0.366 (1.008)			0.125 (0.341)
<i>Cash Flows</i>			0.133 (0.303)			0.416 (0.787)
<i>Receivables</i>			-0.073 (-1.013)			0.073 (0.652)
<i>Non-Financial Metrics</i>			0.093 (0.462)			0.182 (0.776)
<i>Deferred Payment</i>	0.129** (2.361)	0.128** (2.370)	0.121** (2.204)	0.186*** (2.892)	0.176*** (2.745)	0.168** (2.551)
<i>Inverse Mills Ratio</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i>Year</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i>Industry</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i>(Pseudo) R<sup>2</sup></i>	0.167	0.167	0.169	0.168	0.168	0.170
<i>N</i>	5,992	5,992	5,992	5,547	5,547	5,547

Note: \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

## 2.6 Discussion and conclusions

### 2.6.1 Conclusions

Previous studies (e.g., Barbopoulos and Sudarsanam, 2012; Barbopoulos et al., 2018; Kohers and Ang, 2000) have shown that earnouts significantly increase acquirers' post-M&A value gains in developed countries such as the U.S., U.K. and Australia. However, they overlook the long-term consequences of PCCs and earnouts on acquirers' post-M&A value gains in emerging markets with an inadequate legal system. To address this gap in the literature, my study aims to shed light on the long-run effects of PCCs and earnouts in such emerging markets.

In line with agency theory and using hand-collected M&A data in China from 2008 to 2021, my study investigates the effects of PCCs on acquirers' BHARs in the context of an emerging market. Employing the Heckman two-step model to address endogeneity concerns, I uncover that the negative impacts of PCCs on acquirers' post-M&A stock performances manifest over the long term due to agency issues arising between acquirer shareholders and target managers. Also, I observe that acquirers utilizing quasi-earnouts experience higher post-M&A BHARs compared to those employing PCCs without deferred contingent payment. However, their BHARs still fall short of acquirers who opt not to use PCCs at all. This implies that the advantages of retaining target managers through PCCs may not materialize fully in emerging markets with limited legal safeguards. In such an environment, the presence of agency issues between acquirer shareholders and target managers becomes more pronounced, as target managers might prioritize personal gains over safeguarding acquirers' interests, given the low default cost of the contract. This further underscores the complexities of using PCCs in such contexts and calls for a more nuanced approach to mitigate potential agency problems.

Subsequently, I delve into the important roles played by acquirers' monitoring and bonding mechanisms in safeguarding their interests. My analysis reveals that the adverse effects of PCCs on the post-M&A stock performances of acquiring firms are mitigated when acquirers and targets are situated in the same province. Additionally, I unveil that acquirers achieve higher BHARs when they employ multiple performance metrics. I also find that using operating revenues as the performance metrics is particularly effective in limiting target managers' opportunistic decisions and subsequently enable acquirers to attain higher BHARs, outperforming other metric choices.

## 2.6.2 Theoretical implications

This study has some theoretical implications. In U.S., U.K. and other developed countries with good legal systems, earnouts could serve as effective signals because the default cost of an earnout contract is relatively high and thus only high-quality target firms accept earnouts in M&As. Thus, acquirers are able to distinguish valuable target firms from all the targets through earnout contracts. However, in emerging markets with poor legal systems, the default cost of a PCC is relatively low, thus the low-quality target firms may imitate high-quality target firms and sign PCCs. These target owner-managers may manage earnings upward to achieve the promised performances. Also, due to law enforcement quality, they may refuse to pay the compensation after they fail to achieve the goals, exacerbating the negative impacts of the agency issue between target owner-managers and acquirer shareholders. Therefore, contrary to prevailing literature (e.g., Kohers and Ang, 2000; Barbopoulos and Sudarsanam, 2012) focusing on the benefits of retaining target managers in M&A deals with earnouts, this study demonstrate that such retention may not always be advantageous for acquirers, as it can lead to serious agency issues. In emerging markets like China, acquirers may fail to achieve expected synergies due to the agency issue between acquirer shareholders and target managers.

Overall, my findings challenge the conventional signaling hypothesis (e.g., Barbopoulos and Sudarsanam, 2012; Song et al., 2019) that advocates earnouts and PCCs as reliable positive signals. This study reports that this signaling mechanism can be imitated by low-quality target firms, particularly when the default cost of a PCC is low in emerging markets. Therefore, earnouts and PCCs are actually value-destroying, rather than value-creation in emerging markets without effective legal systems.

### 2.6.3 Managerial and societal implications

My findings present valuable implications for market participants and regulatory authorities in enhancing the effectiveness and efficiency of M&A deals in such contexts. Contrary to prevailing literature (e.g., Kohers and Ang, 2000; Barbopoulos and Sudarsanam, 2012) focusing on the benefits of retaining target managers in M&A deals with earnouts, I demonstrate that such retention may not always be advantageous for acquirers, as it can lead to serious agency issues. To address these concerns, I propose that acquirers employ a multi-metric approach to evaluate target performances, with a particular focus on using operating revenues—metrics less susceptible to manipulation. This strategy serves as an effective means for acquirers to counteract agency problems and ensure positive outcomes in post-M&A stock performances.

Furthermore, in cases where effective legal protection for earnout and PCC holders is lacking, I recommend acquirers to prioritize earnouts over PCCs. My analysis suggests that M&A deals involving PCCs are associated with a higher likelihood of acquirers failing to receive compensation. Therefore, the adoption of earnouts can provide greater assurance for acquirers, making it a more preferable choice in such legal contexts. Additionally, policymakers need to address the issue of empty promises arising from the absence of effective legal protection for earnout and PCC holders. By enhancing the legal system and the quality of enforcement, regulators can bolster the credibility and enforceability of these mechanisms, safeguarding the interests of all parties involved in M&A transactions.

### 2.6.4 Limitations and future research directions

This study also has some limitations, which may offer directions to future research.

First, this study demonstrates that employing a multi-metric approach to evaluate

target performances could help acquirers achieve higher stock returns than those without using PCCs. However, this study fails to show whether using multiple metrics or using operating revenues as the performance metric can limit target firm post-M&A earnings management because the detailed data on the target firm accounting performances only range from 1998 to 2013 but acquirers start to use multiple metrics from 2012. Therefore, if Chinese Industrial Enterprises Database can provide detailed firm-level accounting data from 2014 to 2022, I could study the relationship between the use of different performance metrics and the level of target firm post-M&A earnings management in future research.

Second, some acquirers appoint their managers as target firms' board directors or top managers after they sign PCCs with target firms and complete the M&A deals. Since target firm post-M&A governance systems may also affect target firm post-M&A earnings management and accounting performances, the relationship between target firm governance system and the outcomes of PCCs should be studied in future research.



## **Chapter 3: The Dark Side of Performance Commitment**

### **Contracts in M&As**

**Abstract:** Previous studies report that earnouts are used in the U.S. and U.K. to create value for acquirers by addressing information asymmetry and retaining target management teams. However, in China, performance commitment contracts (PCCs) similar to earnouts are often exploited by acquirer controlling shareholders to expropriate acquirer minority shareholders. Applying the expropriation hypothesis and analyzing M&A data from China (2008-2021), I show that PCCs are more prevalent when acquirer controlling shareholders have greater opportunities to benefit from them, resulting in adverse consequences for acquirer minority shareholders. Both acquirers' BHARs and CARs are lower when acquirers use PCCs for multiple times. My argument differs from the traditional information asymmetry hypothesis and signaling hypothesis but supports expropriation hypothesis, as I posit that PCCs lack deterrent power against opportunistic behaviors of acquirer and target owner-managers who exploit their informational advantages. PCCs result in a triple-win for acquirer controlling shareholders, acquirer managers, and target sellers, but impact acquirer minority shareholders negatively, particularly in weak legal and governance environments like China.

**Key words:** Performance commitment contract, earnout, CARs, BHARs

### **3.1 Introduction**

Due to the agency issue between controlling and minority shareholders, controlling shareholders may have strong incentives to divert firm resources for their personal benefit at the expense of minority shareholders' interests (Jensen, 1986; Johnson et al., 2000). They employ various self-serving tactics, such as overpayments, related-party transactions, and selective targeting, to carry out such expropriation. This phenomenon of controlling shareholder expropriation is particularly prevalent in emerging markets such as South Korea and China, where investor protection and corporate governance systems are weak (e.g., Bae et al., 2002; Yang et al., 2019; Yan et al., 2020). Johnson et al. (2000) have coined the term “tunneling” to describe this practice. However, detecting such behavior can be challenging, especially when controlling shareholders resort to subtle methods such as performance commitment contracts to expropriate minority shareholders for personal gains. In this chapter, I investigate how controlling shareholders in China, one of the largest emerging markets, use PCCs to expropriate minority shareholders, and examine the response of minority shareholders to this form of expropriation.

Both earnouts and PCCs can serve as short-term value-creation signals due to their effectiveness in resolving information asymmetry and retaining target management teams (Cain et al., 2011; Datar et al., 2001; Kohers and Ang, 2000; Song et al., 2019; Tao et al., 2022a). Previous studies have shown that the use of PCCs can significantly enhance the gains for acquirers upon the announcement of M&A deals in China (Song et al., 2019; Tao et al., 2022a; Wu et al., 2022). However, despite their potential short-term benefits, PCCs may have adverse consequences on the long-term interests of acquirers (Li et al., 2019; Wu et al., 2022). The key problem of PCCs is that there exist

serious agency issues between acquirer shareholders and target managers. Prior studies (Elnahas et al., 2017; Tao et al., 2022a) have shown that target managers do not act in the best interests of acquirers after they stay at target firms during the commitment period. Specifically, target managers may prioritize short-sighted decisions and manipulate financial statements to meet pre-determined accounting-based goals, resulting in value destruction for acquirers (Tao et al., 2022a). Moreover, the legal framework in China is relatively weak compared to developed countries such as the U.S. and the U.K., with low default costs associated with PCCs, leading to delays or refusals to pay compensation by target owner-managers who fail to achieve promised performance goals. As a result, acquirers may encounter challenges in recovering owed compensation, particularly when target owner-managers refuse to comply (Li et al., 2019).

The use of earnouts in M&As has been found to be associated with a country's enforcement quality, as effective legal protection is crucial for earnout holders to realize potential benefits (Viarengo et al., 2018). However, despite China's weak enforcement quality (Allen et al., 2005; Kato and Long, 2006), PCCs have become increasingly popular. This presents a puzzle: why do acquirers still use PCCs even though they fail to protect their interests? Additionally, if investors suffer long-term wealth losses due to PCCs, do they still react positively to M&A announcements with PCCs when acquirers use them for the second time? These questions have not been addressed in the existing literature (Cain et al., 2011; Datar et al., 2001; Kohers and Ang, 2000; Song et al., 2019; Tao et al., 2022a), and my study aims to fill this gap. Specifically, I aim to address several key questions related to the use of PCCs in M&As in China. First, I investigate whether PCCs consistently result in positive CARs for acquirers, and whether the effects of PCCs on CARs change when acquirers use PCCs multiple times.

Second, given that PCCs have become increasingly popular in China despite their potential negative impact on firm value, I explore why acquirers continue to use PCCs. Third, I aim to identify which stakeholders benefit from the use of PCCs and which stakeholders experience wealth losses in M&As. Overall, my study aims to provide a comprehensive analysis of the use of PCCs in the context of M&A deals in China.

Applying expropriation hypothesis and using M&A data in China from 2008 to 2021, I explore the underlying reasons why acquirers continue to use PCCs despite their negative impact on acquiring firm values. I reveal that PCCs are employed as a means for controlling shareholders of the acquiring firms to expropriate minority shareholders, as evidenced by the higher likelihood of PCC usage when controlling shareholders of acquiring firms have more opportunities to benefit from PCCs. Furthermore, it is the minority shareholders of the acquiring firm who bear the long-term consequences of PCCs. Specifically, PCCs are more commonly used when controlling shareholders of acquiring firms hold a substantial quantity of pledged stocks prior to M&As. Since previous studies (e.g., Song et al., 2023) have shown that controlling shareholders of the acquiring firms tend to sell their stocks to cash out after the announcement of M&As with PCCs, controlling shareholders reap benefits from the short-term stock reactions. However, it is the minority shareholders of the acquiring firm who ultimately suffer the long-term consequences of PCCs, as dividend payouts of the acquiring firm significantly decrease in the post-M&A period. Therefore, my argument differs from the traditional information asymmetry hypothesis but supports the expropriation hypothesis.

In addition to highlighting the expropriation nature of PCCs, my study also examines the cost of this kind of expropriation. This study demonstrates that investors tend to overreact positively to M&A announcements with PCCs only when acquirers

use PCCs for the first time. In contrast, when acquirers employ PCCs more than once, both CARs and BHARs are lower. Notably, when acquiring firms use PCCs for the third time or more, CARs even become negative. This evidence contradicts the traditional signaling hypothesis which argues that PCCs and earnouts always increase CARs because they serve as signals in mitigating information asymmetry issues between acquirers and targets. Furthermore, I provide new evidence to support my expropriation hypothesis that acquiring firm controlling shareholders use M&As with PCCs primarily to benefit themselves, rather than to resolve information asymmetry conflicts between acquirers and targets. Specifically, I demonstrate that acquirers will cease utilizing PCCs when CARs are relatively low during the announcement period, further highlighting the self-serving nature of their use.

To enhance the robustness of my findings, I use the Heckman two-step model to address endogeneity concerns. My results remain consistent after I use an alternative measure of performance commitment.

I make several significant contributions to the existing literature (Song et al., 2019; Tao et al., 2022a; Wu et al., 2022). First, I shed light on the negative aspects of earnouts and PCCs. While prior research has shown that earnouts can create value by addressing information asymmetry issues and retaining target management teams in developed countries like the U.S. and the U.K. (Cain et al., 2011; Datar et al., 2001; Kohers and Ang, 2000), my findings indicate that this potential benefit may not materialize in emerging markets with weak legal systems, where effective legal protection for earnout holders may be lacking (Viarengo et al., 2018). Moreover, low-quality target firms in these markets may imitate valuable firms by utilizing PCCs, which have a low default cost that fails to deter opportunistic behavior. This practice can mislead acquirers and undermine their long-term value.

Second, I contribute to the literature by uncovering a previously unexplained phenomenon: the persistent use of PCCs by acquirers despite their adverse effects on firm value. I demonstrate that PCCs can be wielded by controlling shareholders of acquirers as tools to expropriate minority shareholders, taking advantage of the weak legal protection in China. Thus, my findings contradict the information asymmetry hypothesis proposed by prior studies (e.g., Tao et al., 2022a; Wu et al., 2022) which suggest that PCCs are more likely to be signed when there are significant information asymmetry issues between acquirers and targets. My study suggests that the expropriation hypothesis could explain why PCCs are widely used in emerging markets.

Third, my findings complement the literature related to tunneling in emerging markets (Bae et al., 2002; Jiang et al., 2010; Yan et al., 2020; Wu et al., 2022). A large number of previous studies (e.g., Jiang et al., 2010) have shown how controlling shareholders exploit minority shareholders to gain private benefits. For example, controlling shareholders may expropriate wealth from minority shareholders through subtle means such as salary, subsidized personal loans, favorable transfer pricing for related companies, non-arms-length asset transactions, intercorporate loans, non-operational fund occupancy and loan guarantees for related companies. However, few studies show how investors react to the tunneling behaviors. My study contributes to the literature by showing how minority shareholders lose their wealth and how investors react to this expropriation through the M&As with PCCs.

Fourth, I contribute to the literature on the consequences of earnouts and PCCs in emerging markets (Elnahas et al., 2017; Tao et al., 2022a; Wu et al., 2022). While earlier research (Song et al., 2019; Tao et al., 2022a; Wu et al., 2022) has suggested that PCCs are signals of value creation in China, leading to increased announcement value gains for acquirers, my study reveals that investors may learn from the wealth losses resulting

from PCC use, which negatively impacts acquirers' long-term value gains. I demonstrate that CARs and BHARs worsen when PCCs are used multiple times, with CARs even turning negative when PCCs are used for the third time or more. This finding suggests that PCCs may not always result in short-term value creation for acquirers. Thus, my findings contradict the signaling hypothesis put forward in previous studies (Barbopoulos and Sudarsanam, 2012; Song et al., 2019; Tao et al., 2022a).

Fifth, I contribute to the literature on controlling shareholder expropriation through M&As, showing that controlling shareholders can use PCCs to benefit themselves at the expense of minority shareholders' interests in emerging markets with weak legal systems. My findings add to prior studies that have documented controlling shareholders' use of M&As to tunnel cash flows, engage in related-party transactions, overpay for M&A deals, and gain political benefits (Bae et al., 2002; Cheung et al., 2006; Thraya and Hamza, 2019; Yang et al., 2019).

Finally, I note that my results have important economic and practical implications for policy makers in emerging markets such as South Africa, India, Brazil, and Mexico, where earnouts are also used. My study sheds light on the negative effects of PCCs and the potential for controlling shareholders to expropriate minority shareholders in these markets due to weak legal systems. My results thus underscore the need for improved legal protection for earnout holders in these countries, and the importance of vigilant monitoring of the usage of PCCs in M&A deals.

The remainder of the study is organized as follows. In Section 2, I develop my hypotheses. I describe the data, sample, and variables in Section 3. I report the empirical results in Section 4. In Section 5, I make further analyses. Finally, I conclude in Section 6.

## 3.2 Hypothesis Development

### 3.2.1 Background of Legal Environment in China

Compared to the U.S., the U.K., and other developed countries, controlling shareholder expropriation of minority shareholders' interests is prevalent in China due to its poor legal and governance environment (Yang et al., 2019; Yan et al., 2020). I compare the legal and governance environment of China and developed countries in the following manner:

First, regarding the legal origin, China has the civil law legal origin, while the U.S. and the U.K. have the common law legal origin. According to La Porta et al. (1998), countries with the common law legal origin protect minority shareholders better than countries with civil law legal origin. In common law countries, judicial philosophies empower judges to interpret certain principles (e.g., fiduciary duty) broadly, thereby granting them the power to prohibit a greater variety of minority expropriation (Johnson et al., 2000). Additionally, common law countries better protect minority shareholders because corporate owners have less political influence (La Porta et al., 2002).

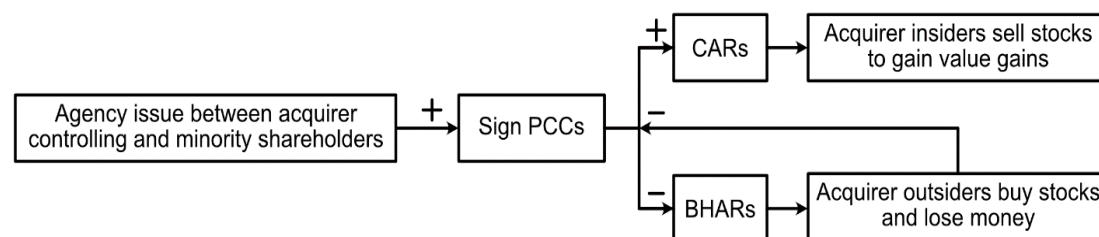
Second, concerning the legal system, the legal system in China is very weak in protecting investors despite issuing many new company laws and securities regulations (Allen et al., 2005; Pistor and Xu, 2005). China has only limited legal rules to protect minority shareholders, and it lacks the ability to effectively implement the existing laws (Kato and Long, 2006). For instance, China does not allow cumulative voting and proxy voting by mail, whereas class action lawsuits are common in the U.S. (Liao et al., 2022). Moreover, after 2003, only 25.7% of firms that committed fraud were sued by shareholders (Huang, 2013). According to Allen et al. (2005), China's creditor and shareholder protections are below average among 49 countries in LaPorta et al. (1998).



They also reveal that China’s law enforcement is significantly below average among the countries in LaPorta et al. (1998). The punishments and fines for violating securities regulations and company laws are also lenient in China (Jiang and Kim, 2015). Therefore, the legal environment in China is considerably weak.

### 3.2.2 Theoretical Framework of the use of PCCs

To investigate the determinants of using PCCs, I develop a theoretical framework (Figure 3) that outlines why acquirers use PCCs even if PCCs lead to poor long-term performances of acquirers in China by employing the expropriation hypothesis.



**Figure 3 The Determinants of Using PCCs in China (Study 2)**

In the U.S. and many other western countries where the ownership is dispersed and managers control the firm and make corporate decisions, a main agency problem is the conflict of interest between managers and shareholders (Jensen and Meckling, 1976), which is typically called the “vertical agency problem”. However, in most Asian countries such South Korea and China, corporate ownership is highly concentrated and almost every firm has a controlling shareholder who can control the firm (Tan and Tang, 2016). In China, on average, a listed-firm’s controlling (largest) shareholder owns at least 30% of the firm. In such a context, controlling shareholder has the power to easily appoint or remove a manager (Jiang and Kim, 2015). Also, due to this ownership structure, controlling shareholders usually have excess cash-flow rights which exceed their voting rights, so the agency conflicts between the controlling and minority shareholders, typically called the “horizontal agency problems”, are more significant

than the traditional agency problems between managers and shareholders in China (Jiang and Kim, 2020). For example, a controlling shareholder has only 30% shares but has complete cash-flow rights. If the stock market is totally efficient, this controlling shareholder could get a net benefit of 70 dollars after he simply takes 100 dollars from the firm, because his stock value loss is only 30 dollars while other shareholders lose 70 dollars. In other words, during this process, the firm wealth owned by other shareholders is transferred into the pocket of controlling shareholder because of the controlling shareholder's excessive cash-flow rights. Therefore, if a country is lack of sufficient legal protection for minority shareholders, controlling shareholders have both the motivation and capability to exploit minority shareholders at little cost and risk (Johnson et al. 2000; Jiang et al., 2010).

To summarize this phenomenon, prior literature (e.g., Bae et al., 2012; Yan et al., 2020) presents the expropriation hypothesis which suggests that the conflicts between controlling and minority shareholders lead the controlling shareholders to engage in various forms of tunneling among firms with high concentration of ownership in countries with poor investor protection. The nature of expropriation hypothesis is that, because of the divergence of cash flow rights and voting rights, the controlling shareholder has more incentive but lower costs to engage in tunneling to gain private benefits at the expense of minority shareholders (e.g., Yan et al., 2020). Given the severe horizontal agency problems, controlling shareholders are more prone to making poor investment decisions, particularly self-interested M&As (e.g., Bae et al., 2002; Yan et al., 2020). Through self-interested M&As, controlling shareholders may use their decisive voting power to obtain cash flows (Bae et al., 2002), engage in related-party deals (Cheung et al., 2006) and overpay to gain private benefits at the expense of minority shareholders (Thraya and Hamza, 2019). Besides, because minority

shareholders usually take positive attitudes toward the use of PCCs and buy more stocks after the M&A announcements with PCCs (Dou and Zhai, 2020), controlling shareholders could take advantage of their positive sentiment and cater to their preferences by signing PCCs to gain benefits (Song et al., 2023). On one hand, PCCs could increase acquirers' CARs during the M&A announcement period (Tao et al., 2022a), and hence controlling shareholders could sell their stocks at high prices to obtain benefits (Dou and Zhai, 2020; Song et al., 2023). On the other hand, the long-term negative effects of PCCs are not easily observed in the first post-M&A year as shown in Chapter 2, so controlling shareholders have strong incentives to agree to the use of PCCs as a means to increase their wealth at the expense of minority shareholders.

Besides, with the increasing popularity of stock pledges in China, the agency issue between controlling and minority shareholders has become more pronounced in listed firms in recent years (Pang and Wang, 2020). By pledging stocks, controlling shareholders cash out from the capital providers such as banks and security firms, transfer the cash flow rights of their pledged stocks to the pledgee but maintain their voting power on corporate decisions as long as their pledge does not default (Li et al., 2019; Yan et al., 2020). Thus, stock pledge allows controlling shareholders to have complete control of a listed company, even with a small portion of shares, resulting in a further division of cash-flow rights and voting rights. As a result, due to the controlling shareholder's stock pledge, the cost of the controlling shareholder expropriation is further reduced since the firm value losses driven by tunneling are shared by all the shareholders. However, private benefits that controlling shareholder gain from tunneling are not shared by minority shareholders (Shleifer and Vishny, 1997). Yan et al. (2020) report that controlling shareholders increasingly expropriate minority shareholders through self-serving M&As after they pledge their stocks, and these self-

serving M&As usually experience lower announcement returns.

Furthermore, acquiring firm managers also have strong incentives to use PCCs because they can benefit from short-term stock price outperformance as a result of using PCCs. On one hand, in the short-term, managers experience improved career development prospects following M&A deals, which can boost the value of acquiring firms (Harford and Schonlau, 2013). On the other hand, the short-term stock price outperformance can help them meet the conditions for earning potential profits from the equity incentives. The direct evidence of this is that acquiring firm managers receive increased stock awards after signing PCCs (Wu et al., 2022). Consequently, acquiring firm managers also have strong incentives to use PCCs.

Also, previous studies (Barbopoulos and Adra, 2016; Tao et al., 2022a) have shown that both PCCs and earnouts can enable target sellers to obtain high M&A premiums. Additionally, target owner-managers can manipulate earnings to meet the promised performance levels and avoid potential compensation (Tao et al., 2022a). Even if target owner-managers fail to achieve the promised performances, they may refuse to pay the compensation due to the weak legal system in China. As a result, target sellers have strong incentives to accept PCCs as part of the deal.

Moreover, acquiring firm controlling shareholders and managers are likely to escape the consequences of PCCs due to their possession of private information that enables them to sell their stocks at high prices (Song et al., 2023). However, due to the information asymmetry between owner-managers and minority shareholders, minority shareholders of acquiring firms suffer wealth losses in the long term as they lack insider information about the true values of the firms compared to owner-managers (Johnson et al., 2000; Li et al., 2019). Direct evidence of this is that large shareholders typically sell their stocks after M&A announcements with PCCs to gain value, while minority

shareholders usually buy stocks after these announcements and ultimately incur losses in the long term (Dou and Zhai, 2020).

Therefore, both acquiring firm managers and controlling shareholders have strong incentives to utilize M&As with PCCs to benefit themselves. I posit that PCCs result in a beneficial triple-win for acquiring firm controlling shareholders, acquiring firm managers, and target sellers, at the expense of the interests of minority shareholders of acquiring firms in China. Hence, I propose the following hypothesis:

*Hypothesis 1: PCCs are more likely to be used when acquiring firms' controlling shareholders have higher stock pledges before M&As.*

### 3.2.3 The Cost of Using PCCs Multiple Times

PCCs may not be a reliable signal for investors and can be detrimental to long-term value creation, leading to potential losses for acquiring firm investors (Dou and Zhai, 2020). Despite some studies showing that PCCs can increase acquirer's announcement value gains (Song et al., 2019; Tao et al., 2022a), there exists a puzzle regarding whether investors always react positively to PCCs and if they can learn from wealth losses.

When acquiring firms use PCCs for the first time, target firms' promised performances can inflate the target valuation and help acquiring firms obtain higher goodwill (Wu et al., 2022). The goodwill from M&As appeals to investors seeking increased equity value (Jennings et al., 1996). Moreover, due to information disadvantages compared to owner-managers, investors may be unable to assess the long-term negative impacts of PCCs on acquiring firm values (Wu et al., 2022). Furthermore, as small individual investors dominate China's stock market, their irrational behavior may result in positive reactions or overreactions to M&A

announcements with PCCs (Li et al., 2019). Therefore, I argue that investors initially react positively to PCCs due to irrationality and information disadvantages.

However, the negative impacts of PCCs may manifest in the post-M&A period, resulting in high stock crash risks for acquiring firms (Li et al., 2019), and investors may experience long-term losses (Dou and Zhai, 2020). These firsthand losses may make investors more risk-averse (Andersen et al., 2019). Consequently, when an acquirer uses PCCs for the second time, investors may learn from previous experiences and lower their expectations of acquiring firms' post-M&A performances. They may evaluate the long-term risks and not react positively to M&A announcements with PCCs when acquirers use PCCs repeatedly. Therefore, I expect that, compared to acquirers using PCCs for the first time, acquirers using PCCs multiple times will have lower CARs and BHARs. Therefore, I present the second hypothesis:

*Hypothesis 2: Both BHARs and CARs are lower when acquirers use PCCs multiple times.*

### **3.3 Data, Sample, and Variables**

#### **3.3.1 Data and Sample Construction**

My sample consists of China's listed firms (acquiring firms) that have announced M&As between January 1st, 2008 and December 31st, 2021 from the WIND database. I restrict acquirers to A-share listed firms. Following Song et al. (2019) and Tao et al. (2022a), I exclude M&As involving (1) acquirers from the financial industry; (2) incomplete data; and (3) targets such as patents, land, or equipment. To ensure that my sample includes only significant M&A deals, I further exclude those with deal values less than 1 million yuan. After applying these criteria, my final dataset consists of

14,316 M&As carried out by 2,793 acquiring firms, with 3,518 (24.57%) of these M&A deals involving PCCs. I obtain the stock and accounting data of the listed firms from the China Stock Market & Accounting Research (CSMAR) database. I collect data on whether PCCs are canceled after the M&A announcements.

Table 12 presents the frequency distribution of PCC usage in my sample. I argue that acquirer managers should stop conducting M&As with PCCs if their first M&A with PCC results in huge losses. If managers continue to make M&As with PCCs, they may be punished or even fired by their controlling shareholders. However, I observe that PCCs are used for the first time in 1,658 (47.13%) of the M&A cases, for the second time in 863 (24.53%) of the M&A cases, and for the third time or more in 997 (28.34%) of the M&A cases. These findings reveal that many acquirers continue to utilize PCCs even after their first M&A deal with PCCs. Therefore, I argue that acquirer controlling shareholders may sacrifice the firm value for their private benefits. The frequency of using PCCs may report the expropriation nature of PCCs.

**Table 12 The Usage Count of PCCs**

The Usage Count of PCCs	Number	Percentage (%)
Use PCCs For the First Time	1,658	47.13%
Use PCCs For the Second Time	863	24.53%
Use PCCs For the Third Time	448	12.73%
Use PCCs For the Fourth Time	244	6.94%
Use PCCs For the Fifth Time	133	3.78%
Use PCCs For More than a Fifth Time	172	4.89%
Total	3,518	100.00%

### 3.3.2 Key Variables

I employ a binary variable to indicate the presence of a PCC in M&A transactions. Specifically, I set the *Promise* variable to 1 if acquirers and targets sign PCCs, and to 0 otherwise. Additionally, I utilize an alternative variable, *Promise Value*, to gauge the degree of performance commitment. *Promise Value* is obtained by taking the natural

logarithm of the value of target firm's total promised performance. To capture the frequency of PCC usage, I construct two variables: *Second* and *Third or More*. *Second* takes a value of 1 if acquirers use PCCs for the second time, and 0 otherwise. Similarly, *Third or More* is set to 1 if acquirers use PCCs for the third time or more, and 0 otherwise.

To measure the impact of M&A announcements on acquiring firms' stock prices, I use an event study method to calculate CARs based on the market model. The estimation window is (-200, -21), with the event windows of (-10, +10). I use CARs (-5, +5), and CARs (-5, +10) to measure the acquiring firm shareholder value gains during the M&A announcement period.

To evaluate acquiring firms' stock performance in the post-M&A period, I use BHAR which is the most commonly used to measure the long-run returns. BHAR is calculated as the difference between the buy-and-hold return of the acquiring firm and the buy-and-hold return of the benchmark portfolio. I use the CSI 300 Index, a capitalization-weighted stock market index representing the top 300 stocks traded on the Shenzhen Stock Exchange and Shanghai Stock Exchange, as the benchmark portfolio. I calculate *BHAR1*, *BHAR2*, *BHAR3*, *BHAR4*, and *BHAR5* as the buy-and-hold abnormal returns of acquiring firms in the next one, two, three, four, and five years after the M&A announcement date, respectively.

I construct the variable *Pledge* to capture the numbers of stocks pledged by the acquiring firms' controlling shareholders. *Pledge* is defined as the total number of shares pledged by the controlling shareholder for an acquiring firm before M&As divided by the total number of shares held. Other variables and their definitions are provided in Appendix. To avoid the impacts of some extreme values of the variables, the values of all the continuous variables are winsorized at the 1% and 99% level. Since



the descriptive statistics for the main variables in this study is the same as Chapter 2, I do not report the descriptive statistics in this study.

### 3.4 Empirical Results

#### 3.4.1 The Determinants of Using PCCs in M&As

I construct the following model to investigate the determinants of using PCCs in M&As:

$$\begin{aligned}
 Promise = & \alpha + \beta_1 Pledge + \beta_2 Top1 + \beta_3 M\&A\ Size + \beta_4 Managers' Shares \\
 & + \beta_5 Stock\ Payment + \beta_6 Related\ Party + \beta_7 Acquirer\ SOE + \beta_8 Acquirer\ ROA \\
 & + \beta_9 Acquirer\ Size + \beta_{10} Acquirer\ LEV + \beta_{11} Acquirer\ Age + \beta_{12} Cross-border \\
 & + \beta_{13} Cross-industry + \beta_{14} Same\ Province + \beta_{15} Tobin\ Q + \beta_{16} Listed\ Target \\
 & + \beta_{17} Year + \beta_{18} Industry + \varepsilon
 \end{aligned}
 \tag{1}$$

Table 13 presents the results of the regression analysis. The first column exhibits the coefficients obtained from the probit regression, while the second column demonstrates the marginal effects. According to Table 13, the coefficients of *Pledge* are significantly positive at the 1% confidence level in columns (1) – (2), indicating that PCCs are more likely to be employed by acquirers when acquiring firm controlling shareholders have a large quantity of stock pledges before M&As. The estimated marginal effects in column (2) demonstrate that when the proportion of stocks pledged by the acquiring firm controlling shareholder increases by 1%, the probability of using PCCs increases by 0.03%. Thus, when stocks pledged by the controlling shareholders are more significant, and the attendant agency issues between controlling shareholders and minority shareholders are more serious, PCCs are more likely to be used by acquirers since the majority of the long-term consequences of PCCs will be suffered by minority shareholders rather than controlling shareholders. These results support my first hypothesis that PCCs are more likely to be employed when acquiring firm controlling shareholders have more opportunities to gain benefits. Also, these findings

support the expropriation hypothesis, indicating that PCCs are used by acquiring firm controlling shareholders to expropriate minority shareholders.

**Table 13 The Determinants of PCCs in M&As**

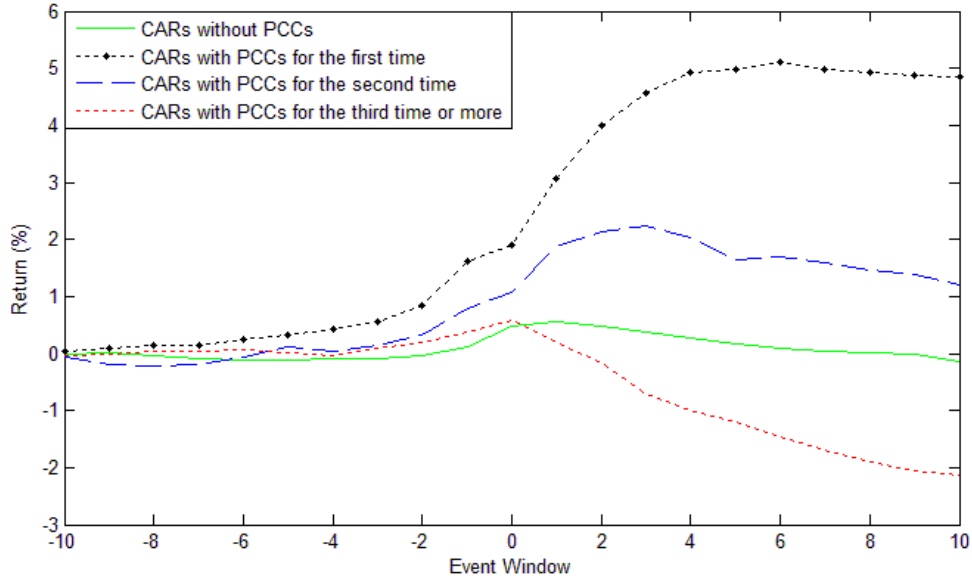
Model	(1)	(2)
	Probit Model	Marginal Effect
Variables	<i>Promise</i>	
<i>Pledge</i>	0.133*** (2.750)	0.030*** (2.759)
<i>Top1</i>	0.103 (0.799)	0.024 (0.799)
<i>M&amp;A Size</i>	0.745*** (8.140)	0.170*** (8.372)
<i>Managers' Shares</i>	0.005 (0.045)	0.001 (0.045)
<i>Stock Payment</i>	1.591*** (30.375)	0.363*** (32.732)
<i>Acquirer SOE</i>	-0.109** (-2.074)	-0.025** (-2.069)
<i>Related Party</i>	0.051 (1.453)	0.012 (1.454)
<i>Acquirer ROA</i>	0.386 (1.182)	0.088 (1.181)
<i>Acquirer Size</i>	-0.198*** (-12.190)	-0.045*** (-12.403)
<i>Acquirer LEV</i>	-0.188*** (-11.013)	-0.043*** (-11.152)
<i>Acquirer Age</i>	-0.001 (-0.418)	-0.000 (-0.418)
<i>Cross-border</i>	-0.735*** (-11.347)	-0.167*** (-11.352)
<i>Cross-industry</i>	0.059 (1.557)	0.013 (1.558)
<i>Same Province</i>	-0.193*** (-6.140)	-0.044*** (-6.140)
<i>Tobin Q</i>	-0.061*** (-4.065)	-0.014*** (-4.065)
<i>Listed Target</i>	-0.067 (-1.104)	-0.015 (-1.104)
<i>Year</i>	Yes	Yes
<i>Industry</i>	Yes	Yes
<i>Pseudo R<sup>2</sup></i>	0.269	
<i>N</i>	14,316	14,316

Note: \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Regarding the control variables, I find that PCCs are more likely to be used when stock payment is utilized in M&A deals. This finding contradicts the information asymmetry hypothesis proposed by prior research (e.g., Tao et al., 2022a; Wu et al., 2022) which suggest that PCCs are more likely to be employed when there are significant information asymmetry issues between acquirers and targets. If PCCs are used to mitigate such issues, I should expect to observe that PCCs are less likely to be used when stock payment is used to pay for the deals since stock payment can also reduce information asymmetry issues. However, my results show the opposite. The reason for this could be that acquirers frequently utilize private placements to issue stocks to pay for M&A deals in China, and acquiring firm controlling shareholders can purchase stocks at low prices in such placements. Consequently, acquiring firm controlling shareholders can obtain more benefits if both PCCs and private placements are used in M&A deals.

### 3.4.2 CARs

I now investigate the impact of the frequency of PCC usage on both CARs and BHARs. I present the CARs (-10, +10) in Figure 4. The chart exhibits that when PCCs are employed for the first time, M&As tend to generate higher CARs in contrast to those without PCCs. However, when PCCs are employed for the second time, the CARs appear to drop. In fact, the CARs (-10, +10) with PCCs are even inferior to those without PCCs when PCCs are utilized for the third time or more. These findings preliminarily suggest that PCCs cannot invariably enhance acquirers' CARs, and PCCs may not always function as short-term positive signals.



**Figure 4 PCCs and Acquirers' Announcement CARs (Study 2)**

I then proceed with the following regression analysis to investigate the effects of PCC use frequency on acquirers' short-term stock returns. I use *CARs* (-5, +5), and *CARs* (-5, +10) as the dependent variables. The regression model is specified as follows:

$$\begin{aligned}
 CARs = & \alpha + \beta_1 Promise + \beta_2 Second + \beta_3 Third\ or\ More + \beta_4 Deferred\ Payment \\
 & + \beta_5 Pledge + \beta_6 Top1 + \beta_7 M\&A\ Size + \beta_8 Managers'\ Shares + \beta_9 Stock\ Payment \\
 & + \beta_{10} Related\ Party + \beta_{11} Acquirer\ SOE + \beta_{12} Acquirer\ ROA + \beta_{13} Acquirer\ Size \\
 & + \beta_{14} Acquirer\ LEV + \beta_{15} Acquirer\ Age + \beta_{16} Cross-border + \beta_{17} Cross-industry \\
 & + \beta_{18} Same\ Province + \beta_{19} Tobin\ Q + \beta_{20} Listed\ Target + \beta_{21} Year + \beta_{22} Industry + \varepsilon \quad (2)
 \end{aligned}$$

Table 14 presents the regression results after controlling for industry and year fixed effects. In column (1), and (3), the coefficients of *Promise* are positive but not statistically significant. This suggests that the use of PCCs may not always have a significant positive effect on acquirers' CARs, which contradicts previous studies (Song et al., 2019; Tao et al., 2022a; Wu et al., 2022). On the other hand, in columns (2) and (4), the coefficients of *Promise* are significantly positive, but the coefficients of *Second* and *Third or More* are significantly negative. The coefficients of *Third or More* are smaller than the coefficients of *Second*, indicating that CARs decrease as the frequency of PCCs use increases. For instance, in column (2), acquirers' CARs (-5, +5) increase

by 1.140% when PCCs are signed for the first time, but drop by 1.378% and 3.062% when PCCs are used for the second time and third time or more, respectively. Moreover, the sum of the coefficient of *Third or More* and the coefficient of *Promise* is negative in columns (2) and (4), implying that PCCs fail to increase CARs when acquirers use PCCs more than twice. These findings support my second hypothesis that acquirers' CARs are lower when PCCs are used more than once. Consequently, my results suggest that investors should consider the experience of losses and lower the valuations of acquiring firms when acquirers use PCCs more than once.

In summary, my findings contradict the signaling hypothesis put forward in previous studies (Barbopoulos and Sudarsanam, 2012; Song et al., 2019; Tao et al., 2022a). According to this hypothesis, if PCCs serve as a signal of target quality, I would expect that CARs remain the same or increase when PCCs are used repeatedly according to organizational learning theory. However, I observe the opposite result. I suggest that the initial usage of PCCs may temporarily increase acquirers' CARs due to investors' irrationality and information asymmetry. However, as acquirers continue to use PCCs, investors become more rational and informed about the long-term negative impacts of PCCs on acquiring firm values, leading to a decline in CARs. My findings indicate that investors can learn from past experiences of wealth loss and adjust their valuations of acquiring firms accordingly.

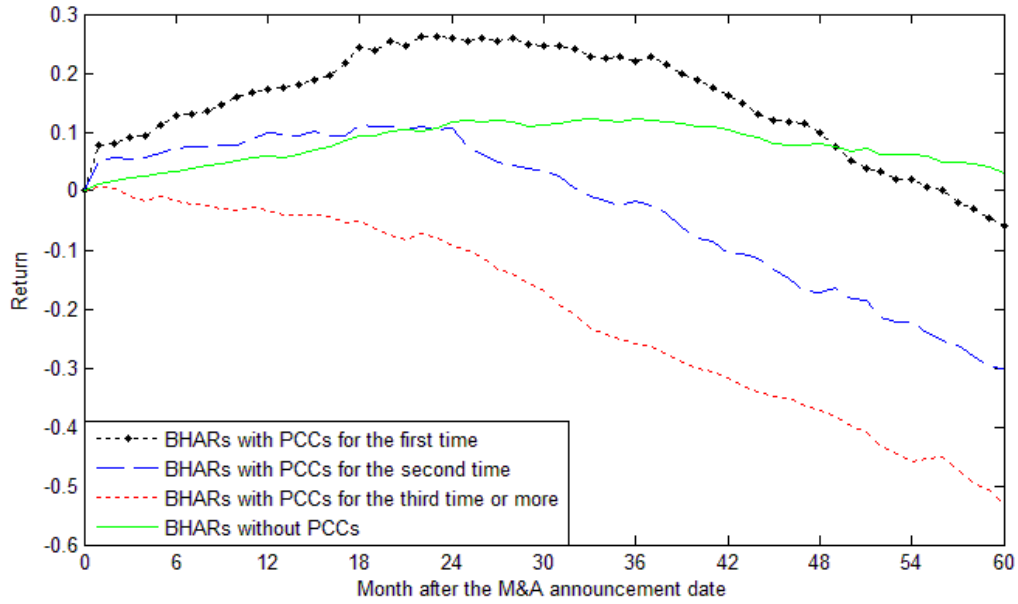
**Table 14 Frequency of Use of PCCs and Acquirers' CARs**

Model	(1)	(2)	(3)	(4)
Variables	CARs (-5,+5)		CARs (-5,+10)	
<i>Promise</i>	-0.178 (-0.569)	1.140*** (2.581)	-0.416 (-1.145)	1.124** (2.217)
<i>Second</i>		-1.378** (-2.137)		-1.565** (-2.060)
<i>Third or More</i>		-3.062*** (-5.128)		-3.614*** (-5.097)
<i>Deferred Payment</i>	0.229 (0.327)	0.251 (0.358)	0.645 (0.734)	0.671 (0.764)
<i>Pledge</i>	-0.687* (-1.911)	-0.566 (-1.590)	-0.689 (-1.611)	-0.546 (-1.289)
<i>Top1</i>	-0.491 (-0.666)	-0.533 (-0.722)	-0.103 (-0.115)	-0.152 (-0.170)
<i>M&amp;A Size</i>	6.611*** (10.482)	6.381*** (10.108)	7.503*** (9.974)	7.232*** (9.593)
<i>Managers' Shares</i>	-0.037 (-0.041)	-0.019 (-0.020)	-0.409 (-0.378)	-0.387 (-0.357)
<i>Stock Payment</i>	0.942 (1.578)	0.777 (1.304)	0.264 (0.382)	0.071 (0.103)
<i>Acquirer SOE</i>	-0.117 (-0.383)	-0.134 (-0.438)	-0.106 (-0.299)	-0.126 (-0.356)
<i>Related Party</i>	0.062 (0.259)	0.028 (0.119)	-0.148 (-0.528)	-0.188 (-0.670)
<i>Acquirer ROA</i>	-0.308 (-0.122)	-0.354 (-0.140)	-4.581 (-1.535)	-4.631 (-1.556)
<i>Acquirer Size</i>	-0.192** (-2.183)	-0.159* (-1.808)	-0.231** (-2.173)	-0.192* (-1.807)
<i>Acquirer LEV</i>	-0.202** (-2.148)	-0.174* (-1.848)	-0.245** (-2.153)	-0.211* (-1.860)
<i>Acquirer Age</i>	0.006 (0.305)	0.007 (0.328)	-0.001 (-0.057)	-0.001 (-0.034)
<i>Cross-border</i>	-0.378 (-1.036)	-0.428 (-1.173)	-0.338 (-0.789)	-0.396 (-0.927)
<i>Cross-industry</i>	0.459 (1.578)	0.445 (1.536)	0.618* (1.833)	0.602* (1.790)
<i>Same Province</i>	-0.210 (-0.969)	-0.230 (-1.058)	0.016 (0.061)	-0.007 (-0.028)
<i>Tobin Q</i>	-0.725*** (-6.864)	-0.698*** (-6.637)	-0.908*** (-6.993)	-0.877*** (-6.791)
<i>Listed Target</i>	0.089 (0.196)	0.045 (0.100)	0.422 (0.782)	0.370 (0.688)
<i>Year</i>	Yes	Yes	Yes	Yes
<i>Industry</i>	Yes	Yes	Yes	Yes
<i>R<sup>2</sup></i>	0.065	0.067	0.061	0.064
<i>N</i>	13,947	13,947	13,947	13,947

Note: \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

### 3.4.3 BHARs

I proceeded to examine the effects of the use frequency of PCCs on acquirers' BHARs. Figure 5 reveals that when acquirers make use of PCCs for the first time, their BHARs are higher in comparison to those without PCCs during the initial post-M&A year. Their BHARs surge to a peak (approximately 25%) in the 24th month following the M&A announcement date. However, after that, their BHARs plummet swiftly and the gap between BHARs with and without PCCs diminishes. Following the fourth post-M&A year, BHARs with PCCs are lower than those without PCCs, signifying that PCCs may have negative repercussions on acquirers' BHARs over the long term. Furthermore, it becomes evident from Figure 5 that acquirers experience inferior stock performances when they make use of PCCs more than once, indicating that investors of the acquiring firm may learn from the previous losses and reduce their expectations of acquiring firms' post-M&A performances when acquirers employ PCCs more than once. Consequently, I also observe that BHARs are lower when acquirers use PCCs for more than a second time when compared with the BHARs with PCCs for the second time. In conclusion, my findings provide initial evidence that PCCs have adverse effects on acquirers' post-M&A BHARs, and the BHARs tend to decline as the frequency of PCC usage increases.



**Figure 5 Frequency of PCC Usage and Acquirers' BHARs (Study 2)**

I next construct the following model to examine the effects of the use frequency of PCCs on acquirers' BHARs:

$$\begin{aligned}
 BHARs = & \alpha + \beta_1 Promise + \beta_2 Second + \beta_3 Third\ or\ More + \beta_4 Deferred\ Payment \\
 & + \beta_5 Pledge + \beta_6 Top1 + \beta_7 M\&A\ Size + \beta_8 Managers'\ Shares + \beta_9 Stock\ Payment \\
 & + \beta_{10} Related\ Party + \beta_{11} Acquirer\ SOE + \beta_{12} Acquirer\ ROA + \beta_{13} Acquirer\ Size \\
 & + \beta_{14} Acquirer\ LEV + \beta_{15} Acquirer\ Age + \beta_{16} Cross-border + \beta_{17} Cross-industry \\
 & + \beta_{18} Same\ Province + \beta_{19} Tobin\ Q + \beta_{20} Listed\ Target + \beta_{21} Year + \beta_{22} Industry + \varepsilon \quad (3)
 \end{aligned}$$

Table 15 presents my regression results, which control for industry and year fixed effects. My findings indicate that coefficients for *Promise*, *Second*, and *Third or More* generally decrease from column (1) to column (5), which suggests that BHARs tend to decrease when PCCs are utilized during the post-M&A period. This result is consistent with the result in Chapter 2. Also, this result is consistent with Viarengo et al. (2018) which show that the potential benefits of earnouts could be empty promises if the effective legal protection for earnout holders is absent in a country.



**Table 15 Frequency of Use of PCCs and Acquirers' BHARs**

Model	(1)	(2)	(3)	(4)	(5)
Variables	<i>BHAR1</i>	<i>BHAR2</i>	<i>BHAR3</i>	<i>BHAR4</i>	<i>BHAR5</i>
<i>Promise</i>	0.008 (0.435)	-0.003 (-0.101)	-0.026 (-0.733)	-0.065* (-1.702)	-0.107*** (-2.620)
<i>Second</i>	-0.018 (-0.737)	-0.042 (-1.251)	-0.083** (-2.046)	-0.108*** (-2.579)	-0.098** (-2.363)
<i>Third or More</i>	-0.078*** (-3.625)	-0.130*** (-3.716)	-0.227*** (-5.611)	-0.240*** (-5.196)	-0.278*** (-5.925)
<i>Deferred Payment</i>	0.022 (0.780)	0.039 (0.957)	0.130** (2.440)	0.179*** (2.844)	0.158** (2.079)
<i>Pledge</i>	0.016 (0.833)	0.012 (0.381)	-0.053 (-1.419)	-0.121*** (-2.845)	-0.234*** (-4.513)
<i>Top1</i>	0.095** (2.158)	0.200*** (2.633)	0.235** (2.337)	0.132 (1.180)	0.278** (2.055)
<i>M&amp;A Size</i>	0.140*** (5.769)	0.142*** (4.067)	0.100** (2.248)	0.062 (1.392)	0.036 (0.715)
<i>Managers' Shares</i>	0.072 (1.526)	0.143* (1.724)	0.188* (1.719)	0.109 (0.885)	0.046 (0.288)
<i>Stock Payment</i>	0.077*** (3.388)	0.078** (2.225)	0.124*** (3.078)	0.140*** (3.371)	0.109** (2.397)
<i>Acquirer SOE</i>	-0.023 (-1.344)	-0.054* (-1.919)	-0.128*** (-3.537)	-0.141*** (-3.333)	-0.153*** (-2.829)
<i>Related Party</i>	0.016 (1.152)	0.043** (2.087)	0.043 (1.619)	0.023 (0.795)	0.037 (1.028)
<i>Acquirer ROA</i>	-0.129 (-0.930)	-0.223 (-0.959)	0.066 (0.230)	-0.119 (-0.329)	-0.146 (-0.332)
<i>Acquirer Size</i>	-0.021*** (-3.360)	-0.056*** (-5.364)	-0.055*** (-4.178)	-0.065*** (-4.183)	-0.066*** (-3.394)
<i>Acquirer LEV</i>	-0.023*** (-3.642)	-0.060*** (-5.546)	-0.062*** (-4.562)	-0.072*** (-4.461)	-0.073*** (-3.638)
<i>Acquirer Age</i>	0.003** (2.350)	0.001 (0.301)	-0.003 (-0.980)	-0.005 (-1.451)	-0.004 (-0.798)
<i>Cross-border</i>	0.009 (0.414)	0.006 (0.176)	0.083 (1.605)	0.102* (1.716)	0.119* (1.729)
<i>Cross-industry</i>	-0.005 (-0.317)	-0.024 (-1.056)	-0.008 (-0.264)	-0.041 (-1.238)	-0.053 (-1.389)
<i>Same Province</i>	0.001 (0.109)	0.002 (0.122)	0.009 (0.367)	0.005 (0.163)	0.008 (0.247)
<i>Tobin Q</i>	-0.026*** (-4.879)	-0.036*** (-4.038)	-0.028** (-2.304)	-0.027* (-1.650)	-0.034 (-1.605)
<i>Listed Target</i>	0.012 (0.402)	0.076 (1.555)	0.098* (1.724)	0.164** (2.224)	0.207** (2.268)
<i>Year</i>	Yes	Yes	Yes	Yes	Yes
<i>Industry</i>	Yes	Yes	Yes	Yes	Yes
<i>R<sup>2</sup></i>	0.134	0.158	0.171	0.172	0.163
<i>N</i>	6,676	6,490	5,992	5,547	4,898

Note: \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Additionally, the coefficients for *Second* are not significant in columns (1) and (2) but become significant in columns (3) - (5), indicating that more and more investors gain experience and lower acquiring firm valuations as they lose wealth during the post-M&A period. Also, the coefficients for both *Second* and *Third or More* are significant and negative across columns (3) - (5), indicating that BHARs are lower when PCCs are used more than once. For instance, in the third year following an M&A, the BHAR of an acquirer drops by 8.3% when PCCs are used for the second time and by 22.7% when PCCs are used for the third time or more. This finding supports the notion that investors tend to lower their expectations and valuations of acquiring firms when PCCs are repeatedly utilized. Furthermore, the coefficients for *Third or More* are consistently lower than those for *Second* in all columns, indicating that investors gain more experience and as a result, acquiring firm valuations decline when the usage count of PCCs increases. My results thus confirm my second hypothesis, that BHARs are lower when acquirers use PCCs more than once.

#### 3.4.4 Alternative Measure

To enhance the validity of my findings, I use an alternative variable, *Promise Value*, to replace the dummy variable *Promise* in models (2) and (3). My rationale behind this is that the effects of PCCs are more significant when the values of target firms' total promised performances are larger.

Table 16 presents the outcomes of my robustness tests for acquirers' CARs and BHARs. In Panel A, I find that the coefficients of *Promise Value* are significantly positive for all columns, while the coefficients of *Second* and *Third or More* are significantly negative for all columns. These results are consistent with my conclusions from the above sections. Similarly, the results in Panel B are also consistent with my

earlier findings. As a result, I can confirm that my conclusions are robust to the alternative measure of performance commitment.

**Table 16 Robustness Check**

Panel A: Robustness check for acquirers' CARs					
Model	(1)	(2)	(3)	(4)	
Variables	CARs (-5,+5)		CARs (-5,+10)		
<i>Promise Value</i>	-0.010 (-0.540)	0.063** (2.471)	-0.024 (-1.113)	0.058** (1.980)	
<i>Second</i>		-1.202* (-1.811)		-1.320* (-1.685)	
<i>Third or More</i>		-3.166*** (-5.203)		-3.563*** (-4.920)	
<i>Controls</i>	Yes	Yes	Yes	Yes	
<i>Year</i>	Yes	Yes	Yes	Yes	
<i>Industry</i>	Yes	Yes	Yes	Yes	
<i>R<sup>2</sup></i>	0.065	0.068	0.062	0.064	
<i>N</i>	13,811	13,811	13,811	13,811	
Panel B: Robustness check for acquirers' post-M&A BHARs					
Model	(1)	(2)	(3)	(4)	(5)
Variables	<i>BHAR1</i>	<i>BHAR2</i>	<i>BHAR3</i>	<i>BHAR4</i>	<i>BHAR5</i>
<i>Promise Value</i>	0.000 (0.395)	-0.000 (-0.245)	-0.001 (-0.552)	-0.003 (-1.346)	-0.005** (-2.243)
<i>Second</i>	-0.018 (-0.742)	-0.040 (-1.181)	-0.092** (-2.271)	-0.117*** (-2.783)	-0.105** (-2.537)
<i>Third or More</i>	-0.079*** (-3.600)	-0.128*** (-3.606)	-0.231*** (-5.641)	-0.252*** (-5.393)	-0.288*** (-6.035)
<i>Controls</i>	Yes	Yes	Yes	Yes	Yes
<i>Year</i>	Yes	Yes	Yes	Yes	Yes
<i>Industry</i>	Yes	Yes	Yes	Yes	Yes
<i>R<sup>2</sup></i>	0.135	0.159	0.171	0.171	0.163
<i>N</i>	6,602	6,418	5,925	5,485	4,843

Note: \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

### 3.4.5 Heckman two-step model

My above findings may suffer from the potential sample selection bias, because whether acquirers and targets decide to sign a PCC is not random. Therefore, similar to Chapter 2, this study uses the same exogenous variable *Policy* and employs the Heckman two-step model to address the potential selection bias. I construct the following model as the Heckman first-step model to estimate the likelihood of using

PCCs:

$$\begin{aligned} \text{Promise} = & \alpha + \beta_1 \text{Pledge} + \beta_2 \text{Top1} + \beta_3 \text{M\&A Size} + \beta_4 \text{Managers' Shares} \\ & + \beta_5 \text{Stock Payment} + \beta_6 \text{Related Party} + \beta_7 \text{Acquirer SOE} + \beta_8 \text{Acquirer ROA} \\ & + \beta_9 \text{Acquirer Size} + \beta_{10} \text{Acquirer LEV} + \beta_{11} \text{Acquirer Age} + \beta_{12} \text{Cross-border} \\ & + \beta_{13} \text{Cross-industry} + \beta_{14} \text{Same Province} + \beta_{15} \text{Tobin Q} + \beta_{16} \text{Listed Target} \\ & + \beta_{17} \text{Policy} + \beta_{18} \text{Year} + \beta_{19} \text{Industry} + \varepsilon \end{aligned} \quad (4)$$

Panel A of Table 17 shows the result of Heckman first-step model. The coefficient of *Policy* is significantly positive, consistent with the result in Chapter 2. I calculate the inverse Mills ratio from Heckman first-step model, include it in the regression model (2) and (3) and the regression results are shown in Panel B and Panel C. In Panel B, I find that the coefficients of *Promise* are not significant for all columns, while the coefficients of *Second* and *Third or More* are significantly negative for columns (2) and (4). These results are consistent with my conclusions from the above sections. Similarly, the results in Panel C are also consistent with my earlier findings. Thus, my conclusions are robust after employing the Heckman two-step model to solve the endogeneity issues.

**Table 17 The Heckman Two-step Model**

Panel A: Heckman first-step model	
Model	(1)
Variables	<i>Promise</i>
<i>Policy</i>	1.289*** (12.418)
<i>Pledge</i>	0.126** (2.574)
<i>Top1</i>	0.094 (0.722)
<i>M&amp;A Size</i>	0.600*** (6.984)
<i>Managers' Shares</i>	0.011 (0.094)
<i>Stock Payment</i>	1.373*** (24.558)
<i>Acquirer SOE</i>	-0.111** (-2.096)
<i>Related Party</i>	0.022 (0.620)
<i>Acquirer ROA</i>	0.527 (1.603)
<i>Acquirer Size</i>	-0.190*** (-11.615)
<i>Acquirer LEV</i>	-0.180*** (-10.464)
<i>Acquirer Age</i>	-0.002 (-0.452)
<i>Cross-border</i>	-0.760*** (-11.855)
<i>Cross-industry</i>	0.050 (1.290)
<i>Same Province</i>	-0.178*** (-5.608)
<i>Tobin Q</i>	-0.065*** (-4.229)
<i>Listed Target</i>	-0.064 (-1.045)
<i>Year</i>	Yes
<i>Industry</i>	Yes
<i>Pseudo R<sup>2</sup></i>	0.285
<i>N</i>	14,316

Panel B: Heckman second-step model for acquirers' CARs					
Model	(1)	(2)	(3)	(4)	
Variables	CARs (-5,+5)		CARs (-5,+10)		
<i>Promise</i>	0.560 (0.327)	1.949 (1.115)	-0.917 (-0.469)	0.700 (0.350)	
<i>Second</i>		-1.384** (-2.147)		-1.562** (-2.055)	
<i>Third or More</i>		-3.064*** (-5.132)		-3.612*** (-5.092)	
<i>Inverse Mills Ratio</i>	Yes	Yes	Yes	Yes	
<i>Controls</i>	Yes	Yes	Yes	Yes	
<i>Year</i>	Yes	Yes	Yes	Yes	
<i>Industry</i>	Yes	Yes	Yes	Yes	
$R^2$	0.064	0.067	0.061	0.064	
$N$	13,947	13,947	13,947	13,947	
Panel C: Heckman second-step model for acquirers' BHARs					
Model	(1)	(2)	(3)	(4)	(5)
Variables	BHAR1	BHAR2	BHAR3	BHAR4	BHAR5
<i>Promise</i>	0.040 (0.651)	0.068 (0.784)	-0.188* (-1.708)	-0.334*** (-2.867)	-0.544*** (-3.635)
<i>Second</i>	-0.018 (-0.742)	-0.042 (-1.266)	-0.082** (-2.011)	-0.106** (-2.527)	-0.094** (-2.268)
<i>Third or More</i>	-0.077*** (-3.610)	-0.130*** (-3.699)	-0.229*** (-5.647)	-0.242*** (-5.245)	-0.279*** (-5.984)
<i>Inverse Mills Ratio</i>	Yes	Yes	Yes	Yes	Yes
<i>Controls</i>	Yes	Yes	Yes	Yes	Yes
<i>Year</i>	Yes	Yes	Yes	Yes	Yes
<i>Industry</i>	Yes	Yes	Yes	Yes	Yes
$R^2$	0.134	0.158	0.172	0.173	0.165
$N$	6,676	6,490	5,992	5,547	4,898

Note: \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

### 3.4.6 Further Evidence: The Drop of Dividend Payouts

Since Dou and Zhai (2020) find that major shareholders usually sell their stocks with PCCs after M&A announcements to achieve value gains, while minority shareholders usually buy stocks with PCCs and eventually suffer long-term losses, this leads us to question whether minority shareholders of acquiring firms will also experience a drop in dividend payouts during the post-M&A period. Therefore, I

construct the following model to examine the impacts of PCCs on acquirers' post-M&A dividend payouts:

$$\begin{aligned}
 \text{Dividends} = & \alpha + \beta_1 \text{Promise} + \beta_2 \text{Deferred Payment} + \beta_3 \text{Pledge} + \beta_4 \text{Top1} \\
 & + \beta_5 \text{M\&A Size} + \beta_6 \text{Managers' Shares} + \beta_7 \text{Stock Payment} + \beta_8 \text{Related Party} \\
 & + \beta_9 \text{Acquirer SOE} + \beta_{10} \text{Acquirer ROA} + \beta_{11} \text{Acquirer Size} + \beta_{12} \text{Acquirer LEV} \\
 & + \beta_{13} \text{Acquirer Age} + \beta_{14} \text{Cross-border} + \beta_{15} \text{Cross-industry} + \beta_{16} \text{Same Province} \\
 & + \beta_{17} \text{Tobin Q} + \beta_{18} \text{Listed Target} + \beta_{19} \text{Year} + \beta_{20} \text{Industry} + \varepsilon \quad (5)
 \end{aligned}$$

In column (1) of Table 18, I find that the coefficient of *Promise* is significantly negative at a 5% confidence level, suggesting that PCCs are associated with lower post-M&A dividend payouts for acquirers. Therefore, as a result of using PCCs, minority shareholders of acquirers not only experience a loss in the value of their stocks, but also in the form of reduced dividend payouts during the post-M&A period. My conclusion remains unchanged even after conducting a robustness check in column (2) of Table 18.

Also, making dividend payouts is an important way to protect minority shareholders, especially in China where controlling shareholders usually use direct or indirect ways to transfer corporate assets to their pockets (e.g., Jiang et al., 2010). Therefore, the drop of dividend payouts implies the expropriation of minority shareholders by controlling shareholders.

In summary, I show that PCCs create a beneficial triple-win situation for acquiring firm controlling shareholders, acquiring firm managers, and target sellers at the expense of the interests of the minority shareholders of acquiring firms in China.

**Table 18 PCCs and Acquirers' Dividends Payouts**

Model	(1)	(2)
Variables	<i>Dividends</i>	$\Delta$ <i>Dividends</i>
<i>Promise</i>	-0.033** (-2.563)	-0.031*** (-2.730)
<i>Pledge</i>	-0.201*** (-7.954)	-0.139*** (-6.554)
<i>Top1</i>	0.327*** (4.401)	0.239*** (3.945)
<i>M&amp;A Size</i>	0.091*** (4.255)	0.066*** (3.656)
<i>Managers' Shares</i>	0.012 (0.219)	-0.035 (-0.722)
<i>Stock Payment</i>	0.014 (0.769)	0.024 (1.493)
<i>Acquirer SOE</i>	-0.044 (-1.465)	-0.025 (-1.020)
<i>Related Party</i>	-0.010 (-0.669)	0.005 (0.366)
<i>Acquirer ROA</i>	3.236*** (15.985)	1.821*** (11.144)
<i>Acquirer Size</i>	0.089*** (7.677)	0.070*** (7.430)
<i>Acquirer LEV</i>	0.087*** (7.416)	0.069*** (7.224)
<i>Acquirer Age</i>	0.001 (0.909)	0.002 (1.510)
<i>Cross-border</i>	0.016 (0.712)	0.012 (0.591)
<i>Cross-industry</i>	-0.007 (-0.577)	0.000 (0.023)
<i>Same Province</i>	0.028** (1.974)	0.024** (2.027)
<i>Tobin Q</i>	-0.006 (-0.939)	0.006 (1.099)
<i>Listed Target</i>	0.036 (1.356)	0.024 (1.084)
<i>Year</i>	Yes	Yes
<i>Industry</i>	Yes	Yes
<i>R<sup>2</sup></i>	0.262	0.184
<i>N</i>	8,301	8,301

Note: \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$



### 3.4.7 Further Evidence: The Stop of the Use of PCCs

Some may contend that acquirers ought to refrain from utilizing PCCs repeatedly, as acquirer controlling shareholders and managers may cease to reap benefits when PCCs are employed for the third time or beyond. However, acquirer controlling shareholders and managers can either nullify PCCs or directly halt M&As with PCCs following M&A announcements if the CARs are very low.

To validate my supposition, I compare the CARs of acquirers among three groups. The first group consists of acquirers who have accomplished M&As with PCCs. The second group comprises acquirers who terminated M&As with PCCs. The third group includes acquirers who declared M&As with PCCs, completed the M&As, but nullified PCCs after M&A announcements. Table 19 exhibits the comparison of acquirers' CARs among these three groups. I observe that CARs are higher for the first group in contrast to the other two groups, which implies that acquirers typically persist in M&As with PCCs when the announcement CARs are relatively high. Nonetheless, when the CARs are relatively low, and acquirer controlling shareholders and managers might fail to derive benefits from PCCs, acquirers may nullify PCCs or terminate M&As with PCCs in this situation, suggesting that acquirer controlling shareholders and managers might recognize the long-term detrimental effects of PCCs on the acquirers' values and discontinue PCCs when their potential benefits are somewhat minor. Thus, acquirer controlling shareholders and managers determine whether to continue PCCs according to their prospective benefits from the announcement CARs. The above outcomes further corroborate my contention that acquirer controlling shareholders and managers use PCCs to benefit themselves, rather than to resolve information asymmetry conflicts between targets and acquirers.

**Table 19 Further Evidence**

	Group 1	Group2	Group3	Difference1	Difference2
	(1)	(2)	(3)	(4) = (1) - (2)	(5) = (1) - (3)
<i>CARs (-5,+5)</i>	2.609	0.521	2.460	2.088***	0.149
<i>CARs (-5,+10)</i>	2.298	-1.112	2.908	3.409***	-0.611
<i>Observations</i>	2,472	505	61		

Note: \*\*\*  $p < 0.01$

### 3.4.8 SOEs vs. Private Firms

Finally, 24.8% of acquirers are SOEs in my sample, thus I want to know the role of the ownership of acquiring firms in M&As with PCCs. In China, the managers of listed SOEs are appointed by the government and thus they are often required by the government to absorb the small and medium-sized enterprises and engage in administrative restructuring plans to achieve political objectives, avoid unemployment, and maintain social stability (Yang et al., 2019). Thus, tunneling usually happens in non-SOEs, rather than SOEs (Jiang and Kim, 2015).

Therefore, since my results show that PCCs are tools for controlling shareholders to tunnel for private benefits, I guess that stated-owned acquiring firms are less likely to use PCCs to expropriate minority shareholders' interests. To test my guess, I rerun the regression model (1) and (5) for stated-owned acquiring firms and private acquiring firms respectively. Table 20 shows the regression results.

From Table 20, I find that the coefficient of *Pledge* is only significantly positive in column (1), but not significant in column (2). Similarly, the coefficient of *Promise* is only significantly negative in column (3), but not significant in column (4). These findings suggest that controlling shareholders of stated-owned acquiring firms are less likely to use PCCs to tunnel for private benefits than those of private acquiring firms.

**Table 20 SOEs vs. Non-SOEs**

Model	(1)	(2)	(3)	(4)
	SOEs	Non-SOEs	SOEs	Non-SOEs
Variables	<i>Promise</i>		<i>Dividends</i>	
<i>Promise</i>			-0.034** (-2.423)	-0.013 (-0.457)
<i>Pledge</i>	0.119** (2.318)	0.022 (0.137)	-0.204*** (-7.129)	-0.121* (-1.780)
<i>Controls</i>	Yes	Yes	Yes	Yes
<i>Year</i>	Yes	Yes	Yes	Yes
<i>Industry</i>	Yes	Yes	Yes	Yes
<i>(Pseudo) R<sup>2</sup></i>	0.250	0.317	0.250	0.338
<i>N</i>	10,768	3,548	6,300	2,001

Note: \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

### 3.5 Discussions and Conclusions

#### 3.5.1 Conclusions

In this study, I use M&A data from China between 2008 and 2021 to illustrate how PCCs have become a tool for controlling shareholders of acquirers to exploit minority shareholders, and how minority shareholders react to this exploitation in an emerging market. I first investigate why PCCs are still employed by acquirers despite impairing their long-term value, and I find that PCCs are more likely to be used when controlling shareholders have greater opportunities to benefit from them. However, it is the minority shareholders who primarily suffer the consequences of PCCs. I present evidence that they not only experience losses in stock values but also face drops in dividend payouts. I contend that the key reason is that the default cost of PCCs is too low to prevent opportunistic behavior by acquirer and target owner-managers to benefit from their information advantages in a legal system lacking proper regulation.

Next, I examine the effects of the frequency of PCC usage on acquirers' CARs and BHARs. After addressing the selection bias using the Heckman two-step model, I find that both CARs and BHARs of acquirers deteriorate as PCCs are used more often,

suggesting that investors learn from the losses and lower valuations of acquiring firms resulting from repeated PCC usage. When PCCs are used for the third time or more, CARs become negative. These results contradict the traditional signaling hypothesis, which posits that PCCs are reliable positive signals. Instead, I argue that controlling shareholders and target owner-managers can deceive investors to maximize their interests with impunity in a weak legal system like China. Thus, PCCs are not reliable signals that can be trusted by investors.

Finally, I show that controlling shareholders and managers may cease the use of PCCs when their potential benefits are relatively small due to the long-term negative impacts of PCCs on acquirers' values. Overall, this study has significant economic implications for earnout-financed M&As and practical implications for policymakers in emerging markets.

### 3.5.2 Theoretical Implications

This study provides theoretical implications by uncovering the previously unnoticed dark side of earnouts and PCCs in an emerging market with a weak legal system. Unlike the U.S., Japan and some other developed countries where the ownership is well-dispersed and the central agency problem is the conflict between managers and shareholders, the main agency problem has been the risk of controlling shareholder expropriation of minority investors in countries like China. In countries where controlling shareholders control the firms and the legal protection of outside investors is poor, managers and controlling shareholders have strong incentives to reap benefits from the short-term stock reactions driven by earnouts and PCCs, while the long-term negative impacts of such contracts are mainly suffered by minority shareholders. Overall, without enough legal protection of minority shareholders, PCC

and earnout holders, the long-term consequences of earnouts and PCCs become the long-term wealth losses of acquiring firm minority shareholders. Thus, information asymmetry hypothesis and signaling hypothesis could only explain the determinants and consequences of earnouts in U.S., U.K. and some other developed countries but fail to explain the determinants and consequences of earnouts and PCCs in emerging markets like China. This study argues that the expropriation hypothesis, rather than information asymmetry hypothesis and signaling hypothesis could better explain the determinants and consequences of earnouts and PCCs in emerging markets.

### 3.5.3 Practical Implications

This study provides practical implications for policymakers in emerging markets. First, improving law enforcement quality can not only effectively protect acquirers' interests but also protect investors' interests. Second, I advise acquirer stakeholders, especially acquirer minority shareholders, to detect tunneling by observing whether PCCs are used by acquirers for multiple times. Third, I suggest that policy makers pay particular attention to the use of PCCs, especially when target sellers make a high-performance commitment and acquirers overpay for the deals. Lastly, I also recommend that regulators improve the corporate governance environment because managers and controlling shareholders are lack of enough external monitor in emerging markets like China. Regulators should also provide minority shareholders with effective mechanisms to monitor managers and controlling shareholders.

### 3.5.4 Limitations and Future Research

This study shows that minority investors can learn from their investment experience. However, minority investors may also learn from others' experience, or

they may detect the negative impacts of PCCs on acquirers' stock values by observing other acquiring firms' post-M&A stock performances following the use of PCCs in M&As. But this study ignores these factors and only considers the impacts of investors' first-hand wealth losses on acquirers' CARs and BHARs. Furthermore, not all investors suffer stock value losses because of acquirers' use of PCCs since Chapter 2 has shown that some acquirers indeed get long-term stock value gains from the use of PCCs. Therefore, the impacts of investors' experience on acquirers' CARs and BHARs need more discussions in future studies.

Lastly, different types of investors may show different reactions to the use of PCCs. For example, institutional investors may react negatively to the use of PCCs when PCCs are used by acquirers for the first time because previous studies (e.g., Puckett and Yan, 2011) have shown that institutional investors are usually smarter than small individual investors. I could study the impacts of different types of investors on acquirers' CARs in future studies

## **Chapter 4: Directors' Foreign Experience and Corporate**

### **M&As**

**Abstract:** Using M&A data in China from 2009 to 2021 and in line with imprinting theory and learning theory, I show that directors with foreign experience constrain controlling shareholder expropriation through M&As. To be more specific, directors with foreign experience are associated with a lower likelihood of insiders' self-serving related-party M&As and a lower likelihood of signing performance commitment contracts. However, such directors could affect M&A strategies only when they (1) are independent directors rather than non-independent directors, (2) reach a critical mass at the board, and (3) their experience originates from countries with strong investor protection. Overall, this study shows the unnoticed roles of returnee directors in transferring strong investor protection, limiting controlling shareholder expropriation, and has important practical implications for policy makers in emerging markets.

**Key words:** Foreign experience, returnees, M&As, performance commitment contract

## 4.1 Introduction

Traditional agency literature in the U.S. reports the agency conflict between managers and shareholders (Jensen and Meckling, 1976). However, in most European and Asian countries, controlling shareholders control firms, and the central agency conflict has been the risk of insiders' expropriation of minority investors, a phenomenon known as "self-dealing" (Djankov et al., 2008) or "tunneling" (Johnson et al., 2000). Tunneling through self-interested M&As by means of overpayments, related-party transactions and self-serving target selections is severe in emerging markets with weak investor protection and poor corporate governance systems (e.g., Bae et al., 2002; Yang et al., 2019; Yan et al., 2020). While prior literature suggests that independent directors without political connection limit the expropriation of minority investors (Wang, 2015) and boards with an odd number of directors are more likely to be strong monitors and constrain tunneling (He and Luo, 2018), in this study, I examine whether a new director characteristic "foreign experience" can help constrain tunneling in emerging markets.

Board directors are critical for corporate strategy. An extensive literature documents the benefits that emerging market firms derive from appointing directors who have foreign education or work experience in developed countries (e.g., Giannetti et al., 2015; Yuan and Wen, 2018; Liao et al., 2022). For example, recent literature has shown that directors' foreign experience is associated with better firm innovation outcome (Yuan and Wen, 2018), accounting performance (Giannetti et al., 2015), investment efficiency (Dai et al., 2018), corporate social responsibility (Zhang et al., 2018), stock price informativeness (Cao et al., 2019), corporate transparency (Liao et al., 2022), dividend payouts (Tao et al., 2022b), and corporate governance (Iliev and Roth, 2018) because returnee directors can transmit knowledge about advanced management practices and corporate governance to firms in emerging markets



(Giannetti et al., 2015). However, despite considerable studies on the effects of directors with foreign experience, little systematic evidence is available on whether directors with foreign experience transfer strong investor protection and limit the expropriation of insiders which includes controlling shareholder and managers.

It is worth to explore the roles of returnee directors in corporate M&A decisions for emerging markets like China. On one hand, China is still an emerging market with weak legal institutions and investor protection although it has experienced rapid economic development during past decades (Tao et al., 2022b). Tunneling through M&As is popular in China (Yan et al., 2020). Controlling shareholder and managers may expropriate minority shareholders through two types of M&As. The first is self-serving related-party M&As. In these M&As, target firms are usually owned by acquirers' controlling shareholders or managers, or their relatives. Through these M&As, controlling shareholders or managers directly gain private benefits by transferring corporate assets to themselves. However, this type of M&A is closely monitored by China Securities Regulatory Commission (CSRC) because it can be easily detected. Therefore, controlling shareholders and managers may take indirect ways to expropriate minority shareholders to gain private benefits from M&As. As shown in Chapter 3, the negative impacts of using performance commitment contracts (PCCs) cannot be easily detected in the short-term and PCCs have become important subtle ways for controlling shareholders and managers to expropriate minority shareholders in China. Therefore, I examine whether returnee directors can constrain these two types of tunneling in the following sections.

On the other hand, many Chinese students study and/or work abroad to get superior management practices and most of them choose developed countries such as the U.S., U.K. and Australia (Yuan and Wen, 2018). Many of them become directors in Chinese

listed firms after studying and/or working abroad. However, regarding the huge population in China, directors with foreign experience are still scarce (Tao et al., 2022b). In recent years, the Chinese government has issued lots of policies to provide individuals with foreign experience with lots of benefits in order to attract them to return to China (Yuan and Wen, 2018). In this regard, studying whether returnee directors transfer good a governance system and strong investor protection is particularly important to policy makers in China and other emerging markets.

However, to what extent returnee directors affect corporate M&As is still a puzzle for firms in developing countries. On one hand, although directors are expected to monitor management and protect minority shareholders' rights, they are often nominated and appointed by the controlling shareholders, and hence they may be easily captured by executives and controlling shareholders, hindering their possibilities of protecting minority shareholders and limiting the tunneling. This issue is particularly severe in emerging markets where corporate ownership is usually concentrated (La Porta et al., 1999, Claessens et al., 2000). On the other hand, although foreign ties help firms acquire targets in the countries where the directors obtained their foreign experience, foreign experience is acquired at the opportunity cost of local social capital such as local political and business ties (Duan and Hou, 2018). Weak local ties increase the independence and effectiveness of board while the lack of local ties may also hinder returnee directors' abilities to affect corporate decisions (Liao et al., 2022).

In this chapter, I collect M&A data in China from 2009 to 2021 to study the effects of directors with foreign experience on corporate M&As in line with imprinting theory and learning theory. According to the imprinting theory, foreign experience largely shapes individuals' cognitions, the cognition of protecting outside investors would be imprinted on the minds of individuals after individuals are exposed to strong investor

protection environments abroad. To examine whether directors with foreign experience obtain the “imprint” of protecting outside investors, I study the relationship between the proportion of directors with foreign experience at the boards and the likelihood of insiders’ self-serving related-party M&As since detecting this kind of direct tunnels does not require any competency because CSRC mandated that all the listed firms in China must report the relationship between targets and acquirers when announcing M&As. By using hand-collected data on the relationship between targets and acquirers, I find that directors with foreign experience are associated with a lower likelihood of insiders’ self-serving related-party M&As. Thus, returnee directors restrain insiders’ direct tunnels through M&As.

However, as shown above, controlling shareholders and managers may also take subtle ways to expropriate minority shareholders and directors need to have enough competencies to detect this kind of indirect tunnels. Since learning theory (e.g., Quan et al., 2023) suggests that foreign experience improves the competencies of returnee directors, I examine whether returnee directors could detect and limit indirect tunnels. By employing probit models, I find that PCCs are less likely to be used when there are more directors with foreign experience at the boards of acquirers. Thus, returnee directors also restrain insiders’ indirect tunnels through M&As.

Importantly, the nature of directors’ foreign experience matters. Imprinting theory suggests that the imprinting effects are largely shaped by the differences between the individual’s home country and the country where individual gains foreign experience. Consistent with imprinting theory, I report that returnee directors could only limit tunneling when directors obtain their foreign experience from countries with strong investor protection.

Furthermore, under what circumstances are such directors more empowered to

limit tunneling? First, the number of returnee directors matters. Employing the critical mass framework, I report that returnee directors need to reach a critical mass at the board before they can affect M&A strategies. Specifically, at least two returnee directors are needed for the board to constrain tunneling. Second, the board position of returnee directors affects their independence and monitoring effectiveness. I find that only independent returnee directors could monitor managers and constrain tunneling well because returnee directors may lose their independence when they are non-independent directors. Finally, to ensure the robustness of my results, I follow Ang et al. (2014) and Tao et al. (2022b) to apply an instrumental variable approach to alleviate possible endogeneity problems. Also, my results are robust to the alternative measure of directors with foreign experience.

Overall, this study contributes to the existing literature in three ways. First, it enriches the growing literature on the effects of directors' foreign experience. Existing literature mainly focus on the role of returnee directors in transferring advanced governance practices (Giannetti et al., 2015; Iliev and Roth, 2018). However, no literature reports whether returnee directors can transfer a strong investor protection environment from developed countries. This study is the first to show that returnee directors can constrain controlling shareholder expropriation and demonstrate that returnee directors improve investor protection environments of their home countries.

Second, my study reports that not all returnee directors can transfer strong investor protection. Returnee directors only limit tunneling when they are independent directors, reach a critical mass at the board and their experience originates from countries with strong investor protection. Without these three prerequisites, returnee directors may fail to affect corporate decisions and constrain tunneling.

Third, my study contributes to the understanding of how returnee directors affect

corporate M&As. Existing literature (e.g., Giannetti et al., 2015) only shows that returnee directors increase firms' likelihood of conducting cross-border M&As because returnee directors help connect their firms with the countries where they get their foreign experience. However, no studies focus on whether returnee directors can affect target selections and M&A contract design. This study fills this gap and shows that returnee directors can limit the use of PCCs and constrain insiders' self-serving related-party M&As.

Finally, this study has important economic and practical implications for policy makers in emerging markets. Despite rapid economic development, China's growth is still hampered by the weak investor protection (Tao et al., 2022b). Many developing countries are suffering the same problem experienced by China, that is, the weak investor protection environment. This study shows the roles of returnee directors in improving the investor protection environment of their home countries and highlights the importance of individual foreign experience. In emerging markets, the consequences arising from poor external governance mechanisms such as poor legal systems in protecting investors and the lack of enough regulations may be offset by the positive effects of the effective internal governance mechanisms formed by returnee directors.

The remainder of this chapter is organized as follows. In Section 2, I develop my hypotheses. I describe the data, sample, and variables in Section 3. I report the empirical results in Section 4. In Section 5, I make further analyses. Finally, I conclude in Section 6.

## **4.2 Theories and Hypotheses**

Finance and international business (IB) scholars have documented that poor investor protection and the attendant expropriation of by the controlling shareholders

and managers are prevalent in the emerging markets, impairing the growth of these developing countries. To help overcome the negative consequences arising from the weak investor protection environment, I argue that developing countries can “import” strong investor protection by appointing individuals with foreign experience as board directors.

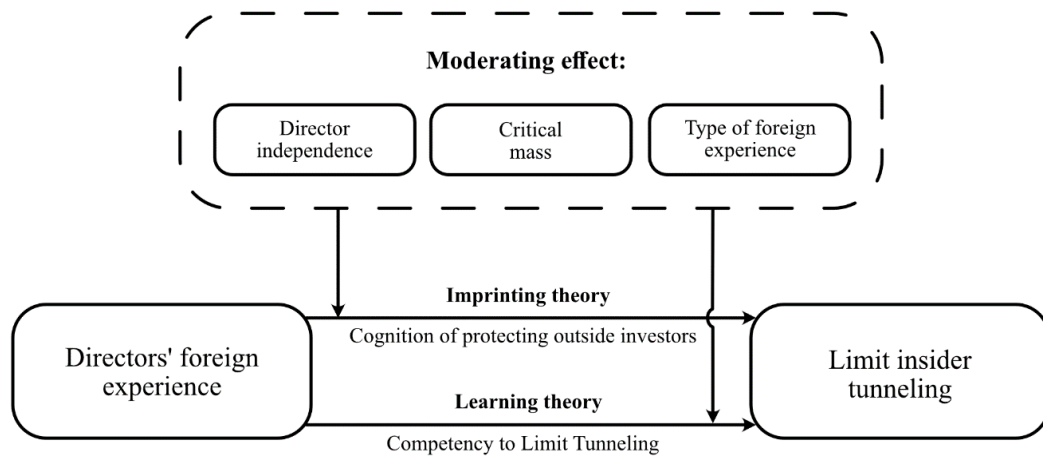
My view rests on the growing finance and IB literature studying the transfer of corporate governance and investor protection. Previous IB and finance research has indicated that advanced governance practices can be transferred across countries by cross-border M&As (Ellis et al., 2017), foreign ownership (Aggarwal et al., 2011) and human capital (Miletkov et al., 2017; Liao et al., 2022). However, in developing countries like China, restrictions on foreign ownership, cross-border capital flows and human capital migration are strict (Liao et al., 2022). Also, the costs of appointing foreign individuals as directors are considerable, and different cultures and languages create barriers for foreign directors to effectively improve corporate governance (Masulis et al., 2012).

Therefore, appointing directors with foreign experience may be an important way for firms in developing countries to gain advanced corporate governance systems and strong investor protection environments from developed countries. These returnee directors are key human capital for developing countries like China. With a better understanding of the value of investor protection, such directors are expected to limit controlling shareholder expropriation.

### **Directors’ Foreign Experience and Corporate M&As**

To limit tunneling, directors should have the cognition of investor protection. Besides, to detect indirect tunneling, directors may also need enough competencies. Therefore, I develop the hypotheses along two lines: (1) how foreign experience affects

returnee directors' attitudes toward investor protection and (2) how foreign experience influences returnee directors' competencies. Then I examine the factors that moderate the relation between director foreign experience and insider tunneling. To theoretically investigate the impacts of returnee directors on the tunneling, I develop a theoretical model (Figure 6) that explains how returnee directors transfer strong investor protection environment and limit tunneling.



**Figure 6 How Returnee Directors Limit Tunneling (Study 3)**

### The “Imprint” of Investor Protection

Imprinting theory implies that foreign experience largely shapes directors' cognitions (Quan et al., 2023). Marquis and Tilcsik (2013) provide a three-part definition of imprinting, highlighting the following aspects: (1) the presence of temporally sensitive periods during which the focal entity is highly sensitive to external environmental influences; (2) the process whereby the focal entity reflects elements of its environment during these sensitive periods; and (3) the enduring nature of imprints which remain intact despite subsequent environmental changes. Foreign education or work experience can be considered as the transition period for an individual (Quan et al., 2023). Anxiety usually arises from the large cultural and institutional differences between home country and the country where individuals obtain foreign experience

(Higgins, 2005). This anxiety could induce individuals to become especially open to environmental stimuli during this period (Schein, 1971). To mitigate this anxiety, individuals usually imitate others' behaviors to adapt to environmental changes (Higgins, 2005). As a result, individuals are very likely to adopt new social norms, values and cognitions, causing their subsequent behaviors to undertake the stamp of the environment they experienced during this sensitive period (Azoulay et al., 2017).

Large amounts of previous studies (La Porta et al., 1998; Johnson et al., 2000) have shown that the quality of legal systems determine the extent of investor protection across different countries. Since investor protection is widely institutionalized in developed countries, individuals are likely to recognize investor protection as a norm after being exposed to strong investor protection environment when studying or working abroad. For example, Tao et al. (2022b) report that returnees learn the importance of dividend payouts during their foreign experience and distribute more dividends to shareholders after they become corporate directors in their home countries. Therefore, this study argues that the cognition of protecting outside investors would be imprinted on the minds of returnees and this imprint will affect their decisions after they become corporate directors in their home countries.

Also, compared with the stock markets in developed countries like U.K. and U.S., the stock markets in emerging markets like China usually exhibit speculative characteristics (Liu and Shrestha, 2008). Lots of existing literature (e.g., Giannetti et al., 2015; Yuan and Wen, 2018) has demonstrated that studying or working in developed countries help individuals' cognitive and behavioral patterns be imprinted with long term orientation involving pursuing long-term rewards. For example, Giannetti et al. (2015) report that returnee directors usually pursue long-term profitability rather than pleasing politicians and local groups and a higher proportion of returnee directors



improve corporate total factor productivities and long-term accounting performances (e.g., ROE). Xiang and Biao (2022) further show that a higher proportion of returnee directors is associated with more corporate innovation outcomes which need long-term inputs and involve huge risks. Since tunneling is usually associated with losses of long-term corporate profits and values, it can be expected that returnee directors have incentives to monitor managers and constrain tunneling in order to pursue long-term profitability.

If directors with foreign experience have the “imprint” of protecting outside investors, it could be observed that returnee directors limit insiders’ self-serving related-party M&As since detecting this kind of direct tunnels does not require any competency. Thus, my first hypothesis is shown as follows:

***Hypothesis 1:** A higher proportion of directors with foreign experience is associated with a lower probability of insiders’ self-serving related-party M&As.*

### **The Competency to Detect Indirect Tunneling**

However, insiders may also conduct indirect tunneling which is difficult to be detected. Thus, the competencies to detect indirect tunneling are also important. In this section, I show why returnee directors have the competencies to limit indirect tunneling.

Learnings theory suggests that foreign experience improves the competencies of individuals (e.g., Caligiuri and Tarique, 2009). When studying or working abroad, individuals will meet cognitive dissonance because new information and behaviors emerged from new environment is usually contradictory to their existing beliefs, ideas or values (Quan et al., 2023). Since this contradictory information is unable to be understood within their existing knowledge (Endicott et al., 2003), cognitive dissonance could induce individuals to learn and adapt to the new environment to diminish the dissonance (DeRue and Wellman, 2009). Learning theory indicates that learning takes

place through two processes: (1) assimilation which means adding to existing knowledge and cognitions; and (2) accommodation which means obtaining new knowledge and making fundamental cognitive changes (Fee et al., 2013). Assimilation usually improves domain-specific knowledge while accommodation usually brings cognitive competencies (Endicott et al., 2003). Regarding individuals' foreign experience, the huge institutional differences in investor protection environments are expected to create cognitive dissonance. This cognitive dissonance could stimulate individuals to enhance the knowledge related with investor protection and obtain the competencies that help them detect some subtle tunneling ways which may not be found by individuals without foreign experience. For example, a country's enforcement quality shapes the economic outcomes of earnouts and PCCs (Viarengo et al., 2018). Returnee directors may anticipate that the use of contingent payments will impair the firm values in emerging markets with poor legal systems. If managers and controlling shareholders decide to use contingent payments in M&A deals in emerging markets, returnee directors are more likely to find that PCCs are actually tools for managers and controlling shareholders to exploit minority shareholders compared with directors without foreign experience.

Furthermore, since returnee directors share the same country of origin with their domestic firms, they do not meet cultural and language barriers which often hinder the ability of foreign directors to improve corporate governance and transfer strong investor protection (Liao et al., 2022). As a result, they may have a better understanding of how to limit local firms' tunneling compared with foreign directors and local non-returnee directors.

Thus, my second hypothesis is presented as follows:

***Hypothesis 2: A higher proportion of directors with foreign experience is associated***

*with a lower probability of using PCCs in M&As.*

However, several factors may affect the effects of returnee directors. First, not all the directors actively monitor managers. Prior studies (e.g., Fama and Jensen, 1983) show that independent directors are more effective in monitoring managers than non-independent directors. Liao et al. (2022) report that the monitoring effectiveness of board directors depends on the directors' incentives (e.g., board independence). Although returnee directors are more independent than directors without foreign experience due to their relatively weaker local ties (Giannetti et al., 2015), they are likely to lose their independence when they are non-independent directors at the boards. In other words, when they have chances to collude with managers and controlling shareholders to gain private benefits, the imprinting effects of foreign experience may disappear.

Second, the nature of foreign experience matters. Imprinting theory (e.g., Marquis and Tilcsik, 2013) suggests that the imprinting effects of foreign experience depend on the individuals' exposure to institutional differences while learning theory (e.g., Quan et al., 2023) suggests that the learning effects of foreign experience depend on the extent of cognitive dissonance between individuals' existing cognitions and new cognitions emerged from new environment. For example, Tao et al. (2022b) record that the positive effects of returnee directors on corporate dividend payouts are greater if they gain foreign experience from common law countries. Similarly, Liao et al. (2022) report that the positive effects of returnee directors on corporate information environment are more prominent when directors obtain their foreign experience from countries with better corporate governance practices and higher transparency standards. Thus, it can be expected that the effectiveness of returnee directors in limiting tunneling would be stronger when they are highly exposed to strong investor protection environments in

countries with strong investor protection.

Third, existing literature (Kanter, 1977; Schwartz-Ziv, 2017; Liao et al., 2022) reports that the voices of minority directors are only heard when they reach a certain critical mass on the board. Schwartz-Ziv (2017) assumes that the effect of women directors closely resembles a step function. In other words, once a certain minimal threshold of gender balance is achieved, gender balance will increase the board productivity. Literature (e.g., Shrader et al., 1997) argues that a critical mass of at least 3 women directors (approximately 33% of most boards) will enhance board activeness in board meetings. Similarly, the monitoring effectiveness of returnee directors may also rely on the number of returnee directors on the board (Liao et al., 2022). For example, Liao et al. (2022) suggests that at least two returnee directors (approximately 22% of most boards) is needed to alter corporate information environment.

Therefore, the set of hypotheses can be presented as follows:

***Hypothesis 3a:** Independent directors with foreign experience limit tunneling better than non-independent directors with foreign experience.*

***Hypothesis 3b:** Directors with foreign experience limit tunneling only when their experience origins from countries with strong investor protection.*

***Hypothesis 3c:** Directors with foreign experience limit tunneling only when they reach a certain critical mass on the board.*

## **4.3 Data, Sample and Variables**

### **4.3.1 Sample Construction**

My sample consists of China's listed firms (acquiring firms) that have announced M&As between January 1st, 2009 and December 31st, 2021 from the WIND database. I restrict acquirers to A-share private listed firms. I exclude the M&As (1) where

acquirers belong to the finance industry; (2) whose data is missing; (3) where targets are patents, land or equipment. To ensure that M&As have significant impacts on acquirers' long-term profitability, I also exclude the M&As whose deal values are smaller than 1% of the acquirers' total asset values. I obtain a final sample of 7,548 M&As conducted by 2,054 acquiring firms, among which 2,767 (36.66%) M&A deals involved PCCs and 444 (5.88%) M&A deals are self-serving target-selection M&As.

I obtain corporate governance data including directors' bios, stock data and accounting data of listed firms from the China Stock Market & Accounting Research (CSMAR) database. For returnee directors, I manually collect information on the countries where they gain their foreign education and/or work experience. My M&A sample begins in 2009 because the CSMAR data on directors' bios begin in 2008. By checking each M&A deals, I manually collect data on the relationship between acquirers and targets.

#### 4.3.2 Key Variables

The key explanatory variable is directors' foreign experience. A director is considered to have foreign experience if he or she has studied or worked outside of mainland China (Giannetti et al., 2015). Following Giannetti et al. (2015), I use the proportion of directors with foreign experience on the boards (*Returnee*) to measure directors' foreign experience, including education and work experience. Also, I use the number of directors with foreign experience (*Number Returnee*) to make robustness tests.

I use two variables to measure whether controlling shareholders exploit minority shareholders through M&As. First, although related-party M&As are likely to result in expropriation, the M&A deals that are driven by strategic rationales such as joint

venture stake acquisitions and the M&A deals between a listed firm and one of its subsidiaries may not be expropriation (Cheung et al., 2006). To detect related-party M&As where controlling shareholders or managers gain private benefits, I consider those related-party M&As where target sellers are controlling shareholders or managers, or their relatives as insiders' self-serving related-party M&As. If the self-serving M&As happen, *Self-Serving* takes 1; otherwise, it takes 0.

Second, controlling shareholder and managers may also take subtle ways to exploit minority shareholders. As shown in Chapter 3, PCCs are very likely to be tools for controlling shareholders and managers to indirectly exploit minority shareholders. I use a dummy variable to indicate whether a PCC is signed in a M&A deal, consistent with Tao et al. (2022a). If acquirers and targets sign PCCs, *Promise* takes 1; otherwise, it takes 0.

The control variables in this chapter are the same with those used in Chapter 3. To avoid the impacts of some extreme values of the variables, the values of all the continuous variables are winsorized at the 1% and 99% level. All the variables and their definitions are provided in Appendix.

### 4.3.3 Descriptive Statistics

Panel A of Table 21 shows the distribution of M&A deals with PCCs and self-serving target-selection M&As. Panel A reports that the number of M&A deals with PCCs significantly increased from 12 in 2009 to 495 in 2015. Also, the proportion of M&As with PCCs increased gradually from 12.37% in 2009 to 43.88% in 2016. The proportion of self-serving target selection M&As dropped gradually from 15.46% in 2009 to 5.52% in 2021.

Panel B of Table 21 shows the distribution of directors with foreign experience.

The proportion of directors with foreign experience increased gradually from 7.03% in 2009 to 12.06% in 2021. In my sample, returnee directors occupy 11.41% of the board of a firm on average. Among all the acquiring firms, approximately 57.13% have at least one director with foreign experience on average.

**Table 21 Distribution of M&As and Directors with Foreign Experience**

Panel A: Distribution of M&As					
Year	Total M&As	PCCs	Self-serving M&As	% PCCs	% Self-serving M&As
	(1)	(2)	(3)	(4) = (2) / (1)	(5) = (3) / (1)
2009	97	12	15	12.37%	15.46%
2010	148	12	21	8.11%	14.19%
2011	214	27	21	12.62%	9.81%
2012	251	57	27	22.71%	10.76%
2013	467	169	50	36.19%	10.71%
2014	757	309	32	40.82%	4.23%
2015	1,184	495	45	41.81%	3.80%
2016	964	423	33	43.88%	3.42%
2017	955	415	35	43.46%	3.66%
2018	899	350	56	38.93%	6.23%
2019	622	211	53	33.92%	8.52%
2020	465	132	27	28.39%	5.81%
2021	525	155	29	29.52%	5.52%
Total	7,548	2,767	444	36.66%	5.88%

Panel B: Directors with foreign experience		
Year	% Directors with foreign experience	% Firms which have at least one director with foreign experience
2009	7.03%	35.05%
2010	10.35%	49.32%
2011	8.71%	46.26%
2012	9.92%	55.78%
2013	10.23%	52.68%
2014	11.15%	55.75%
2015	11.07%	55.66%
2016	10.69%	55.60%
2017	11.87%	57.91%
2018	13.26%	62.74%
2019	11.91%	61.58%
2020	12.73%	63.01%
2021	12.06%	59.05%
Total	11.41%	57.13%

## 4.4 Empirical Results

#### 4.4.1 The Baseline Regression

To explore whether directors with foreign experience constrain tunneling through M&As, I construct the following model to study the effects of returnee directors on corporate M&A strategies:

$$\begin{aligned}
 \text{Promise} = & \alpha + \beta_1 \text{Returnee} + \beta_2 \text{Pledge} + \beta_3 \text{Managers' Shares} + \beta_4 \text{Top1} \\
 & + \beta_5 \text{M\&A Size} + \beta_6 \text{Stock Payment} + \beta_7 \text{Related Party} + \beta_8 \text{Acquirer ROA} \\
 & + \beta_9 \text{Acquirer Size} + \beta_{10} \text{Acquirer LEV} + \beta_{11} \text{Acquirer Age} + \beta_{12} \text{Cross-border} \\
 & + \beta_{13} \text{Cross-industry} + \beta_{14} \text{Same Province} + \beta_{15} \text{Tobin Q} + \beta_{16} \text{Listed Target} \\
 & + \beta_{17} \text{Year} + \beta_{18} \text{Industry} + \varepsilon
 \end{aligned} \tag{1}$$

$$\begin{aligned}
 \text{Self-Serving} = & \alpha + \beta_1 \text{Returnee} + \beta_2 \text{Pledge} + \beta_3 \text{Managers' Shares} + \beta_4 \text{Top1} \\
 & + \beta_5 \text{M\&A Size} + \beta_6 \text{Stock Payment} + \beta_7 \text{Acquirer ROA} + \beta_8 \text{Acquirer Size} \\
 & + \beta_9 \text{Acquirer LEV} + \beta_{10} \text{Acquirer Age} + \beta_{11} \text{Cross-border} + \beta_{12} \text{Cross-industry} \\
 & + \beta_{13} \text{Same Province} + \beta_{14} \text{Tobin Q} + \beta_{15} \text{Listed Target} \\
 & + \beta_{16} \text{Year} + \beta_{17} \text{Industry} + \varepsilon
 \end{aligned} \tag{2}$$

I include industry and year fixed effects to control for industry-specific and time-specific characteristics. The standard errors are clustered at the firm level.

Table 22 reports that the proportion of returnee directors is always significantly and negatively related to the possibility of insiders' self-serving target-selection M&As and signing PCCs, supporting H1 and H2 that returnee directors constrain both direct and indirect tunneling. Regarding the economic significance, the estimated marginal effects in the columns (3) - (4) indicate that when the proportion of returnee directors increases by 1%, the probabilities of entering PCCs and making self-serving target-selection M&As reduce by 0.190% and 0.084% respectively. Therefore, both the imprinting and learning effects exist and help returnee directors play important roles in limiting both direct and indirect tunneling. After being imprinted with the cognition of protecting outside investors and learning the knowledge about investor protection, returnee directors indeed transfer the strong investor protection environment from developed countries to emerging markets.



**Table 22 Directors with Foreign Experience and Corporate M&As**

Model	(1)	(2)	(3)	(4)
	Regression Results		Marginal Effects	
Variables	<i>Promise</i>	<i>Self-Serving</i>	<i>Promise</i>	<i>Self-Serving</i>
<i>Returnee</i>	-0.672*** (-4.175)	-0.846*** (-3.660)	-0.190*** (0.045)	-0.084*** (0.023)
<i>Pledge</i>	0.092 (1.641)	0.252*** (3.294)	0.026 (0.016)	0.025*** (0.008)
<i>Top1</i>	-0.001 (-0.757)	0.010*** (4.639)	-0.000 (0.000)	0.001*** (0.000)
<i>M&amp;A Size</i>	0.542*** (5.767)	0.173*** (2.978)	0.153*** (0.026)	0.017*** (0.006)
<i>Managers'</i> <i>Shares</i>	0.000 (0.125)	-0.017*** (-6.634)	0.000 (0.000)	-0.002*** (0.000)
<i>Stock Payment</i>	1.542*** (24.052)	0.404*** (5.222)	0.436*** (0.016)	0.040*** (0.008)
<i>Related Party</i>	0.094** (2.063)		0.027** (0.013)	
<i>Acquirer ROA</i>	0.197 (0.542)	-0.476 (-0.994)	0.056 (0.103)	-0.047 (0.048)
<i>Acquirer Size</i>	-0.145*** (-6.467)	0.128*** (4.108)	-0.041*** (0.006)	0.013*** (0.003)
<i>Acquirer LEV</i>	-0.143*** (-6.158)	0.134*** (4.142)	-0.040*** (0.007)	0.013*** (0.003)
<i>Acquirer Age</i>	-0.007 (-1.585)	0.008 (1.455)	-0.002 (0.001)	0.001 (0.001)
<i>Cross-border</i>	-0.861*** (-11.437)	-0.434*** (-3.254)	-0.243*** (0.021)	-0.043*** (0.013)
<i>Cross-industry</i>	0.026 (0.551)	-0.147** (-2.058)	0.007 (0.013)	-0.015** (0.007)
<i>Same Province</i>	-0.181*** (-4.529)	0.473*** (8.059)	-0.051*** (0.011)	0.047*** (0.006)
<i>Tobin Q</i>	-0.058*** (-3.670)	0.003 (0.118)	-0.016*** (0.004)	0.000 (0.002)
<i>Listed Target</i>	-0.135* (-1.807)	-0.142 (-1.225)	-0.038* (0.021)	-0.014 (0.011)
<i>Year</i>	Yes	Yes		
<i>Industry</i>	Yes	Yes		
<i>Pseudo R<sup>2</sup></i>	0.240	0.171		
<i>N</i>	7,548	7,532		

Note: \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

#### 4.4.2 Solving the Endogeneity Issues

My above findings may suffer from the potential endogeneity issue. First, the self-selection bias may exist because firms with certain characteristics may attract directors with foreign experience (Tao et al., 2022b). For example, firms with excellent corporate governance systems may attract returnee directors. Second, some omitted variables may also affect my results. Therefore, following previous studies (e.g., Tao et al., 2022b), I construct instrumental variables, estimate a two-stage least squares (2SLS) regression and use the Heckman two-step model to mitigate the potential endogeneity problem.

Following Ang et al. (2014) and Tao et al. (2022b)<sup>7</sup>, I use *Christian colleges*, the existence of colleges established by Christian missionaries in the Chinese province by 1920 as the exogenous variable. I manually obtain data about 14 Christian colleges from the China Continuation Committee. 14 Christian colleges in China are Fukien Christian University, Ginling College, Hangchow Christian University, Huachung University, Hwa Nan University, Lingnan University, University of Nanking, St. John's University, Shanghai University, Shantung Christian University, Soochow University, West China Union University, Yenching University, College of Yale-in-China. Prior studies (e.g., Tao et al., 2022b; Xiang and Biao, 2022) report that provinces with Christian colleges are more likely to be exposed by western culture, thus people who live in these provinces such as Shanghai, Beijing, Jiangsu and Guangdong are more likely to study or work abroad and to be employed by local firms after returning home. Also, the existence of Christian colleges in a province has no impact on corporate M&As because these Christian colleges were established around 100 years ago. Ang et al. (2014)

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<sup>7</sup> It should be noted that I do not follow Liao et al. (2022) to use the staggered adoption of provincial policies to attract overseas returnees because these provincial policies have been implemented from 1992 to 2007 and my sample begins at 2009.

demonstrate that the GDP per capita for areas characterized by Christian colleges was not significantly different from that of other Chinese provinces before 1985. Ang et al. (2014) alleviates the concern that provinces with Christian colleges are already more developed. Therefore, I use *Christian College*, a dummy variable set to one for firms headquartered in a province where has at least one Christian college as the first instrument variable.

Furthermore, firms that possess more foreign subsidiaries within a specific region tend to appoint more independent directors with foreign work experience from that region (Belaounia et al., 2023). Also, there is no evidence which can demonstrate the association between the existence of foreign subsidiaries and tunneling. Therefore, I introduce *Foreign Subsidiaries* as the second instrument variable and construct the following model as the first-stage model. *Foreign Subsidiaries* is defined as the number of a firm's foreign subsidiaries.

$$\begin{aligned}
 \text{Returnee} = & \alpha + \beta_1 \text{Christian College} + \beta_2 \text{Foreign Subsidiaries} + \beta_3 \text{Pledge} \\
 & + \beta_4 \text{Managers' Shares} + \beta_5 \text{Top1} + \beta_6 \text{Acquirer ROA} + \beta_7 \text{Acquirer Size} \\
 & + \beta_8 \text{Acquirer LEV} + \beta_9 \text{Acquirer Age} + \beta_{10} \text{Tobin Q} \\
 & + \beta_{11} \text{Year} + \beta_{12} \text{Industry} + \varepsilon
 \end{aligned} \tag{3}$$

The regression result of 2SLS regression is reported in Panel A of Table 23. For brevity, the estimated coefficients of the control variables are not reported. Column 1 shows the result of the first-stage model and confirms that firms which are surrounded by Christian colleges and have more foreign subsidiaries are more likely to attract returnee directors. Thus, this evidence demonstrates that my instrument variables are valid. Then I calculate the predicted value of *Returnee* from the first-stage model and run the second-stage regression.

Columns 2 and 3 of Table 23 present the second-stage regression result and reveal that the relationship between returnee directors and two measures of tunneling are still negative and significant. Therefore, the above findings confirm H1 and H2 and

demonstrate that returnee directors constrain tunneling and transfer strong investor protection to emerging markets.

Furthermore, following previous studies (Tao et al., 2022b), I use the Heckman two-step model to mitigate the self-selection bias. As shown in the above section, I introduce *Christian colleges* and *Foreign Subsidiaries* as the two exogenous variables and construct the following model as the Heckman first-stage model. *Returnee Dummy* takes 1 if an acquiring firm has at least one returnee director, otherwise, it takes 0.

$$\begin{aligned}
 \textit{Returnee Dummy} = & \alpha + \beta_1 \textit{Christian College} + \beta_2 \textit{Foreign Subsidiaries} + \beta_3 \textit{Pledge} \\
 & + \beta_4 \textit{Managers' Shares} + \beta_5 \textit{Top1} + \beta_6 \textit{Acquirer ROA} + \beta_7 \textit{Acquirer Size} \\
 & + \beta_8 \textit{Acquirer LEV} + \beta_9 \textit{Acquirer Age} + \beta_{10} \textit{Tobin Q} \\
 & + \beta_{11} \textit{Year} + \beta_{12} \textit{Industry} + \varepsilon
 \end{aligned} \tag{4}$$

Then I calculate the inverse Mills ratio from the Heckman first-stage model and control the inverse Mills ratio in the Heckman second-stage model to solve the self-selection bias. Panel B of Table 23 present the result of Heckman two-step model and reveal that the relationship between returnee directors and two measures of tunneling are still negative and significant. These findings are consistent with the above findings, implying that my results are not driven by potential endogeneity issues. In the following sections, I always control the inverse Mills ratio in regression models to solve the self-selection bias.

**Table 23 Results of the 2SLS regressions and Heckman Two-step model**

Panel A: Result of the 2SLS regressions			
Model	(1)	(2)	(3)
	First-stage	Second-stage	
Variables	<i>Returnee</i>	<i>Promise</i>	<i>Self-Serving</i>
<i>Christian College</i>	0.029*** (4.438)		
<i>Foreign subsidiaries</i>	0.005*** (5.883)		
<i>Predicted Returnee</i>		-2.000* (-1.937)	-2.253* (-1.678)
<i>Control Variables</i>	Yes	Yes	Yes
<i>Year</i>	Yes	Yes	Yes
<i>Industry</i>	Yes	Yes	Yes
<i>(Pseudo) R<sup>2</sup></i>	0.072	0.238	0.168
<i>N</i>	7,548	7,548	7,532
Panel B: Result of Heckman Two-step model			
Model	(1)	(2)	(3)
	First-stage	Second-stage	
Variables	<i>Returnee Dummy</i>	<i>Promise</i>	<i>Self-Serving</i>
<i>Christian College</i>	0.261*** (3.755)		
<i>Foreign subsidiaries</i>	0.039*** (4.560)		
<i>Returnee</i>		-0.428* (-1.731)	-1.386*** (-3.499)
<i>Inverse Mills Ratio</i>		-0.049 (-1.292)	0.097* (1.736)
<i>Control Variables</i>	Yes	Yes	Yes
<i>Year</i>	Yes	Yes	Yes
<i>Industry</i>	Yes	Yes	Yes
<i>Pseudo R<sup>2</sup></i>	0.042	0.240	0.172
<i>N</i>	7,548	7,548	7,532

Note: \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

#### 4.4.3 Independent Directors vs Non-independent Directors

To test hypothesis 3a, I construct two variables: *Independent Returnees* and *Non-independent Returnees*, computed as the fraction of independent (non-independent) directors with foreign experience on the boards. Then I use *Independent Returnees* and *Non-independent Returnees* to replace the variable *Returnee* in model (1) and (2). Table

24 presents the regression results.

Consistent with hypothesis 3a, the coefficients of *Independent Returnees* are significantly negative and smaller than the coefficients of *Non-independent Returnees* in both columns (1) and (2), implying that independent directors with foreign experience could constrain tunneling better than non-independent directors with foreign experience. Therefore, the board position of returnee directors determines the monitoring effectiveness of returnee directors. The coefficient of *Non-independent Returnees* is significantly negative in column (2) but becomes insignificant in column (1), showing that returnee directors could be captured by the controlling shareholders when they lose their independence. These findings indicate that the first prerequisite of returnee directors' transfer of strong investor protection is their independence.

**Table 24 Independent Directors vs. Non-independent Directors**

Model	(1)	(2)
Variables	<i>Promise</i>	<i>Self-Serving</i>
<i>Independent Returnees</i>	-0.583* (-1.671)	-1.791*** (-3.289)
<i>Non-independent Returnees</i>	-0.291 (-1.074)	-1.051** (-2.441)
<i>Inverse Mills Ratio</i>	Yes	Yes
<i>Control Variables</i>	Yes	Yes
<i>Year</i>	Yes	Yes
<i>Industry</i>	Yes	Yes
<i>Pseudo R<sup>2</sup></i>	0.240	0.172
<i>N</i>	7,548	7,532

Note: \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

#### 4.4.4 The Nature of Foreign Experience

My findings so far report the importance of directors with foreign experience in limiting tunneling. Next, I examine whether certain types of directors' foreign experience moderate the effects on the tunneling.

To test hypothesis 3b, I identify the countries where directors gain their foreign

experience. To measure the level of investor protection, I first consider whether the countries where directors gain their foreign experience are developed countries since investor protection is widely institutionalized in developed countries. It can be expected that both the imprinting and learning effects of returnee directors are stronger when their experience is gained in developed countries according to the imprinting theory and learning theory. I construct two variables: (1) the proportions of directors with foreign experience gained in developed countries (*Returnee Developed*) and (2) the proportions of directors with foreign experience gained in developing countries (*Returnee Developing*). I then use *Returnee Developed* and *Returnee Developing* to replace *Returnee* and rerun the regression models. The results are reported in columns (1) and (2) of Table 25. I observe that the estimated coefficients for *Returnee Developed* are negative and significant in both columns. In contrast, the estimated coefficients for *Returnee Developing* are insignificant in both columns. These findings confirm H3b and suggest that returnee directors limit tunneling only when their experience is gained in countries with strong investor protection.

Second, to enhance the robustness of my results, following Tao et al. (2022b), I employ the anti-director rights index provided by La Porta et al. (1998) to measure the level of investor protection since La Porta et al. (1998) report that countries with a higher anti-director rights index value have better investor protection. The La Porta et al. (1998)'s anti-director rights index ranges from 0 to 5 and have a median value of 3, so I construct two variables: (1) the proportions of directors with foreign experience gained in the countries with the scores of 4 or 5 in La Porta et al. (1998)'s anti-director rights index (*Returnee High*) and (2) the proportions of directors with foreign experience gained in other countries (*Returnee Low*). I then use *Returnee High* and *Returnee Low* to replace *Returnee* and rerun the regression models. The results are

shown in columns (3) and (4) of Table 25. Consistent with hypothesis 3b, the coefficients of *Returnee High* are significantly negative while the coefficients of *Returnee Low* are not significant in both columns (3) and (4), implying that my findings are robust.

Therefore, the above results indicate the level of directors' exposure to strong investor protection determines the imprinting and learning effects, suggesting that the second prerequisite of returnee directors' transfer of strong investor protection is their exposure to strong investor protection.

**Table 25 The Nature of Foreign Experience**

Model	(1)	(2)	(3)	(4)
Variables	<i>Promise</i>	<i>Self-Serving</i>	<i>Promise</i>	<i>Self-Serving</i>
<i>Returnee Developed</i>	-0.678** (-2.235)	-1.789*** (-3.762)		
<i>Returnee Developing</i>	-0.510 (-0.394)	-1.857 (-0.863)		
<i>Returnee High</i>			-0.688** (-2.199)	-1.791*** (-3.673)
<i>Returnee Low</i>			-0.332 (-0.490)	-1.192 (-1.375)
<i>Inverse Mills Ratio</i>	Yes	Yes	Yes	Yes
<i>Control Variables</i>	Yes	Yes	Yes	Yes
<i>Year</i>	Yes	Yes	Yes	Yes
<i>Industry</i>	Yes	Yes	Yes	Yes
<i>Pseudo R<sup>2</sup></i>	0.235	0.170	0.235	0.170
<i>N</i>	6,407	6,392	6,407	6,392

Note: \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

#### 4.4.5 The Critical Mass

Liao et al. (2022) suggest that it is essential to achieve a critical mass of at least two returnee directors to improve corporate information environment. Similar to Liao et al. (2022), I examine whether there exists a critical mass for returnee directors to affect corporate M&A strategies. Specifically, I regress the corporate M&A choices of signing PCCs and making self-serving target-selection M&As on indicator variables for



a firm to have one, two, and at least three returnee directors.

Table 26 presents the results of these probit regression analyses. The coefficients of *One Returnee* are not significant while the coefficients of *Two Returnees* and *At Least Three Returnees* are significantly negative in columns (1) - (2), suggesting that at least two returnee directors are needed for the board directors to constrain tunneling. This result confirms H3c and suggests that returnee directors are unable to monitor managers and limit the expropriation well if they serve as a token minority. Therefore, the third prerequisite of returnee directors' transfer of strong investor protection is that boards should have at least two returnee directors.

**Table 26 Critical Mass**

Model	(1)	(2)
Variables	<i>Promise</i>	<i>Self-Serving</i>
<i>One Returnee</i>	-0.488 (-1.471)	-0.588 (-1.376)
<i>Two Returnees</i>	-0.574* (-1.731)	-0.769* (-1.811)
<i>At Least Three Returnees</i>	-0.594* (-1.779)	-0.906** (-2.085)
<i>Inverse Mills Ratio</i>	Yes	Yes
<i>Control Variables</i>	Yes	Yes
<i>Year</i>	Yes	Yes
<i>Industry</i>	Yes	Yes
<i>Pseudo R<sup>2</sup></i>	0.241	0.172
<i>N</i>	7,548	7,532

Note: \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

## 4.5 Robustness Check

To strengthen the robustness of my findings, following Tao et al. (2022b), I use an alternative variable *Number Returnee* to replace the variable *Returnee* in model (1) and (2) because the effect of returnees would be larger when a firm's board has more returnee directors.

Table 27 shows the results of robustness tests for acquirers' M&A choices. The coefficients of *Number Returnee* are significantly negative for both column (1) and (2). This finding is consistent with my conclusions in above sections. Therefore, my findings are robust to the alternative measure of directors' foreign experience.

**Table 27 Robustness Test**

Model	(1)	(2)
Variables	<i>Promise</i>	<i>Self-Serving</i>
<i>Number Returnee</i>	-0.053* (-1.660)	-0.155*** (-3.226)
<i>Inverse Mills Ratio</i>	Yes	Yes
<i>Control Variables</i>	Yes	Yes
<i>Year</i>	Yes	Yes
<i>Industry</i>	Yes	Yes
<i>Pseudo R<sup>2</sup></i>	0.240	0.171
<i>N</i>	7,548	7,532

Note: \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

## 4.6 Discussion and Conclusions

### 4.6.1 Conclusions

In this study, by using the M&A data in China from 2009 to 2021, I find that hiring directors with foreign experience can improve the investor protection environment of local firms. Specifically, directors with foreign experience play important roles in constraining insiders' self-serving related-party M&As and limiting the use of PCCs. However, the effect of directors' foreign experience manifests itself only when returnee directors are independent directors, gain their foreign experience from countries with strong investor protection, and the board has at least two returnee directors. Finally, I solve the endogeneity issue by applying the 2SLS regressions. I also use an alternative measure of directors' foreign experience to enhance the robustness of my results.

#### 4.6.2 Theoretical Implications

Prior finance and IB studies report the knowledge spillover and international transfer of advanced corporate governance through cross-border M&As, foreign ownership and foreign directors. Recent literature (e.g., Liao et al., 2022; Tao et al., 2022b) has shown that individuals with foreign experience could also transfer knowledge and management practices. However, no studies focus on whether individuals with foreign experience could transfer strong investor protection from developed countries to emerging markets.

This study contributes to the finance and IB literature by uncovering unnoticed positive effects of returnee directors in transferring strong investor protection from developed countries to emerging markets. Using imprinting theory and learning theory, this study suggests that the directors' exposure to strong investor protection is the key for directors to limiting tunneling in emerging markets.

#### 4.6.3 Policy Implications

Since poor investor protection environment is a major contributor to hinder the development of financial markets, this study has important practical implications for policymakers in emerging markets. This study indicates that governments in emerging markets should adopt policies to attract talents with foreign experience, especially individuals with foreign work and education experience in developed countries, since they are the key to improve the investor protection environment in their home countries. For example, in December 2008, China's central government issued the policy called the "High-level Overseas Talent Introduction Plan" which successfully attract more than 4,000 top talents to work in China (Yuan and Wen, 2018). The policymakers in other developing countries could adopt similar policies to attract talents with foreign

experience to work in their home countries.

#### 4.6.4 Limitation and Future Research

This study also has some limitations. First, controlling shareholders usually engage in various forms of tunneling (e.g., intercorporate loans). This study only examines whether returnee directors could limit tunneling through M&As. Whether returnee directors could limit other forms of tunneling could be studied in future research. Second, many directors are appointed by controlling shareholders, thus directors with foreign experience may fail to limit tunneling in such contexts. Third, whether a returnee director serves on the audit committee or serves as the chairman of the board may also affect its effect on corporate decisions. More studies about the relationship between the position of returnee directors and corporate decisions are expected.

## **Chapter 5: Conclusions**

### **5.1 Summary of the Findings**

In this thesis, three chapters study the determinants and consequences of using PCCs and how to constrain the use of PCCs. Chapter 2 shows why PCCs lead to bad post-M&A BHARs of acquiring firms and argues that poor legal enforcement is the key reason. Besides, Chapter 2 reports that acquirer monitoring and bonding are two main ways to mitigate the agency issues between target managers and acquirer shareholders.

Chapter 3 reports that acquirer controlling shareholders use PCCs to gain private benefits from the short-term positive stock response while acquirer minority shareholders suffer from the wealth losses. PCCs become tools for acquirer controlling shareholders to exploit minority shareholders. When PCCs are used for more than once, acquirers' CARs and BHARs will be lower and lower.

Chapter 4 shows the roles of directors with foreign experience. Directors with foreign experience can detect and limit tunneling because of their imprint of protecting outside investors and their competencies to detect tunneling. To be more specific, directors with foreign experience limit both insiders' self-serving related-party M&As and the use of PCCs.

Overall, in this thesis, three chapters study (1) the determinants of using PCCs, (2) the consequences of using PCCs and (3) how to constrain the use of PCCs and limit insiders' self-serving related-party M&As. Table 28 shows the summary of three empirical studies.

**Table 28 Summary of Three Empirical Studies**

Research Focus	Theoretical perspective	Theoretical Framework	Empirical Methods	Main findings
<p><b>Chapter 2:</b> The Real Effects of PCCs in M&amp;As</p>	<p>Agency theory</p>	<pre> graph LR     PCC -- "+" --&gt; RTM[Retain Target Manager]     PCC -- "+" --&gt; MP[Make Promises of Target Post M&amp;A Performances]     RTM -- "+" --&gt; BM[Bidder Monitoring]     RTM -- "+" --&gt; BB[Bidder Bonding]     MP -- "+" --&gt; BB     BM -- "-" --&gt; AI[Agency Issue]     BB -- "-" --&gt; AI     AI -- "-" --&gt; BBHARs[Bidder's BHARs]         </pre>	<p>Sample: 14,316 M&amp;As</p> <p>Models: fixed-effect OLS models</p>	<p>PCCs impair acquirers' BHARs.</p>
<p><b>Chapter 3:</b> The Dark Side of PCCs in M&amp;As</p>	<p>Horizontal agency theory and expropriation hypothesis</p>	<pre> graph LR     AI[Agency issue between acquirer controlling and minority shareholders] -- "+" --&gt; SignPCCs[Sign PCCs]     SignPCCs -- "+" --&gt; CARs[CARs]     SignPCCs -- "-" --&gt; BHARs[BHARs]     CARs --&gt; AIInsiders[Acquirer insiders sell stocks to gain value gains]     BHARs --&gt; AIOutsiders[Acquirer outsiders buy stocks and lose money]         </pre>	<p>Sample: 14,316 M&amp;As</p> <p>Models: fixed-effect OLS models and probit models</p>	<p>PCCs become tools for controlling shareholders to tunnel.</p>
<p><b>Chapter 4:</b> Directors' Foreign Experience and Corporate M&amp;As</p>	<p>Imprinting theory and learning theory</p>	<pre> graph TD     subgraph Moderating_effect [Moderating effect]         DI[Director independence]         CM[Critical mass]         TFE[Type of foreign experience]     end     DFE[Directors' foreign experience] --&gt; Imprinting theory: Cognition of protecting outside investors  LIT[Limit insider tunneling]     DFE --&gt; Learning theory: Competency to Limit Tunneling  LIT     Moderating_effect -.-&gt; Moderating effect  DFE_LIT_path         </pre>	<p>Sample: 8,605 M&amp;As</p> <p>Models: probit models</p>	<p>Returnee directors limit tunneling.</p>

## 5.2 Contributions

The contributions of this thesis can be shown in Table 29.

**Table 29 The Main Contributions**

<b>Chapter</b>	<b>Contributions</b>	<b>The Literature</b>
<b>Chapter 2</b>	Show the negative impact of PCCs and earnouts on acquirers' BHARs in emerging markets with poor legal systems	The literature on the consequences of PCCs and earnouts
	Show how acquirers' monitoring and bonding mitigate the agency issue	
<b>Chapter 3</b>	Contradict the signaling hypothesis and show the relationship between the usage count of PCCs and acquirers' CARs	The literature on the consequences of PCCs
	Show how PCCs become tunneling tools in emerging markets with poor legal systems	The literature on tunneling and the determinants of PCCs
<b>Chapter 4</b>	Show how returnee directors limit tunneling	The literature on the roles of returnee directors in emerging markets
	Show how returnee directors affect corporate M&As	

Chapter 2 shows that earnouts and PCCs are unable to become effective signals for acquirers to select valuable targets when the default costs of contracts become very low in emerging markets with a poor legal system. Therefore, Chapter 2 contradicts signaling hypothesis which is presented by prior studies (e.g., Song et al., 2019) to explain the positive effects of earnouts and PCCs on acquirers' value gains. Chapter 2 applies the agency theory to explain why earnouts and PCCs negatively impact acquirers' long-term value gains and how to solve the agency issues between acquirer shareholders and target managers in an emerging market. Therefore, Chapter 2 mainly contributes the literature on the consequences of PCCs and earnouts.

Chapter 3 examines the determinants of using PCCs. Chapter 3 demonstrates that

PCCs are used by controlling shareholders of acquirers to expropriate minority shareholders, taking advantage of the weak legal protection in China. Therefore, Chapter 3 contradicts the information asymmetry hypothesis proposed by prior studies (e.g., Tao et al., 2022a) which suggest that PCCs are more likely to be signed when there are significant information asymmetry issues between acquirers and targets, but supports the expropriation hypothesis. Chapter 3 contributes the literature on the determinants of PCCs and earnouts. Also, Chapter 3 provides evidence that PCCs and earnouts cannot always increase acquirers' CARs because minority investors learn from their experience of losing money in the stock market. Therefore, Chapter 3 also contradicts the signaling hypothesis.

Chapter 4 mainly examines the role of returnee directors in limiting tunneling and transferring strong investor protection. Chapter 4 reports that returnee directors limit insiders' self-serving related-party M&As and constrain the use of PCCs. Compared with prior studies showing the role of returnee directors in transferring advanced governance practices, Chapter 4 shows the unnoticed roles of returnee directors in transferring strong investor protection. Chapter 4 mainly contributes to the growing literature on the effects of directors' foreign experience in emerging markets and contributes to the understanding of how returnee directors affect corporate M&As.

To summarize, this thesis enriches studies on the determinants and consequences of PCCs, and also makes contributions to the literature on the roles of returnee directors in emerging markets.

### **5.3 Practical Implications**

This thesis provides practical implications for firm managers and policymakers in emerging markets.

As for firm managers in emerging markets, this thesis reports that acquirer



managers need take actions such as engage in monitoring and bonding activities to limit target managers' earnings management if they sign PCCs or earnouts. For example, multiple performance metrics should be widely used to measure target post-M&A performances in order to limit target firms' earnings management. Besides, firms should encourage their directors to obtain foreign education and work experience since directors' exposure to strong investor protection environment is important for firms to improve governance systems.

As for policymakers in emerging markets, first, improving law enforcement quality can effectively protect acquirers' interests and facilitate the development of M&A market. Second, policymakers should require that controlling shareholders report the amounts of their shares which will be sold after the M&A announcement in advance. Also, the punishments for the tunneling should not be light. Otherwise, controlling shareholders may use direct or indirect ways to gain private benefits. Third, in emerging markets, policymakers should adopt policies to attract talents with foreign experience in developed countries because these talents could help their home countries improve the investor protection environment.

## **5.4 Limitations and Future Research**

Limitations and the future research of this thesis are provided as follows:

First, in Chapter 2, whether some target performance metrics such as sales income and operating revenue can limit target firm post-M&A earnings management should be discussed since Tao et al. (2022a) report that PCCs could lead to target firm post-M&A earnings management. Also, some acquirers appoint their managers as target board members or top managers during the post-M&A integration after they sign PCCs. This arrangement may affect target firm post-M&A earnings management and the final economic outcomes of PCCs. However, existing literature has ignored the roles of target

firm post-M&A governance systems in achieving M&A synergies.

Second, Chapter 3 shows that minority investors can learn from their investment experience. However, minority investors may also learn from others' experience, or they may detect the negative impacts of PCCs on acquirers' stock values by observing other acquiring firms' stock performances following the use of PCCs in M&As. Furthermore, not all investors suffer stock value losses because of acquirers' use of PCCs since chapter 2 has shown that some acquirers indeed get long-term stock value gains from the use of PCCs. Therefore, the impacts of investors' experience on acquirers' CARs and BHARs need more discussions in future studies.

Third, Chapter 4 shows the roles of returnee directors in constraining the use of PCCs and insiders' self-serving related-party M&As. However, controlling shareholders may engage in various forms of tunneling, thus whether returnee directors could limit other forms of tunneling could be studied in future research. Besides, whether returnee directors could enhance acquirers' post-M&A performances should be studied and discussed in the future. Also, lots of existing literature reports that returnee directors improve corporate governance systems, but fails to show how returnee directors affect corporate governance. More studies about how returnee directors affect corporate M&A decisions, corporate investment, the quality of corporate governance systems are expected in the future.

Lastly, in the cross-border M&As, different culture, languages, institutions, accounting standards could accelerate the disagreements related to the measure of target outcomes. Thus, the agency issue between acquirer shareholders and target managers may be enhanced in the context of cross-border M&As. The long-term economic outcomes of earnouts and PCCs may be worse for acquirers engaging in the cross-border M&As compared with acquirers engaging in domestic M&As. However,

existing literature (Reuer et al., 2004; Barbopoulos et al., 2018) only focuses on the roles of earnouts and PCCs in resolving information asymmetry conflicts between acquirers and targets and ignores the possible issues of earnouts and PCCs in the cross-border M&As. The impacts of earnouts and PCCs on acquirers' value gains in the context of cross-border M&As should be studied and discussed in the future.

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## Appendix: Variable Definitions

Notation	Definition
<i>Promise</i>	If acquirers and targets sign PCCs, <i>Promise</i> it takes 1, otherwise, it takes 0.
<i>Promise Length</i>	The length of the performance commitment period
<i>Promise Value</i>	Natural logarithm of the value of target firm's total promised performances
<i>Bonus</i>	if PCC provides bonus for target managers when targets' actual performances are higher than the promised performances, <i>Bonus</i> takes 1; otherwise, it takes 0.
<i>Multiple Metrics</i>	If multiple metrics of target firm performances are used by acquirers to judge whether target firms achieve promised performances, <i>Multiple Metric</i> takes 1; otherwise, it takes 0.
<i>Deferred Payment</i>	If contingent deferred payment is involved in M&A deals, <i>Deferred Payment</i> takes 1; otherwise, it takes 0.
<i>Impairment Test</i>	If impairment test of target assets is involved in the PCCs, <i>Impairment Test</i> takes 1; otherwise, it takes 0.
<i>Managers' Shares</i>	The ratio of shares held by acquiring firm managers to total shares of acquiring firms before M&As
<i>M&amp;A Size</i>	The ratio of M&A deal values to total assets of the acquiring firm
<i>Stock Payment</i>	It takes 1 if acquirers use stocks to pay, and takes 0 if otherwise.
<i>Tobin Q</i>	The market value of the acquiring firm over its total assets
<i>Top1</i>	The ratio of shares held by the acquiring firm largest shareholder to total shares of acquiring firm at the end of the latest fiscal year before the M&A announcement
<i>Acquirer SOE</i>	If acquirer is a stated-owned enterprise, <i>Acquirer SOE</i> takes 1, otherwise, it takes 0.
<i>Acquirer Age</i>	The age of an acquiring firm, measured as the number of years between M&A announcement date and the firm foundation date
<i>Acquirer Size</i>	Natural logarithm of acquiring firms' total assets at the year before the M&As

<i>Acquirer LEV</i>	Leverage ratio, measured as acquiring firms' total debts over total assets, both measured at the year before the M&As.
<i>Acquirer ROA</i>	Return on total assets, measured as acquiring firms' net return over total assets, both measured at the year before the M&As.
<i>Related Party</i>	It takes 1 if targets are the related parties of acquirers, it takes 0 if otherwise.
<i>Same Province</i>	It takes 1 if target firms and acquiring firms are located in the same province, it takes 0 if otherwise.
<i>Listed Target</i>	If the target is a listed firm, <i>Listed Target</i> takes 1, otherwise, it takes 0.
<i>Cross-border</i>	If M&A is classified by WIND as a cross-border M&A, <i>Cross-border</i> takes 1, otherwise, it takes 0.
<i>Cross-industry</i>	If M&A is classified by WIND as a cross-industry M&A, <i>Cross-industry</i> takes 1, otherwise, it takes 0.
<i>CARs (-5, +5)</i>	Eleven-day cumulative abnormal return around the M&A announcement, calculated by the market model.
<i>CARs (-5, +10)</i>	Sixteen-day cumulative abnormal return around the M&A announcement, calculated by the market model.
<i>BHAR1, BHAR2, BHAR3, BHAR4, BHAR5</i>	The buy-and-hold abnormal returns of bidding firms in the next one, two, three, four, five years after the M&A announcement date respectively
<i>Policy</i>	The CSRC mandated that all listed firms must sign PCCs with target sellers if the M&A deal price is determined by discounting target future earnings for major M&As since May 18th, 2008. If an M&A deal is impacted by this policy, <i>Policy1</i> takes 1; otherwise, it takes 0.
<i>Sales Incomes</i>	If acquirers use sales incomes to measure target performances, <i>Sales Income</i> takes 1, otherwise, it takes 0.
<i>Operating Revenues</i>	If acquirers use operating revenues to measure target performances, <i>Operating Revenues</i> takes 1, otherwise, it takes 0.
<i>Cash Flows</i>	If acquirers use cash flows to measure target performances, <i>Cash Flow</i> takes 1, otherwise, it takes 0.
<i>Receivables</i>	If acquirers specify targets' maximum receivables, <i>Receivables</i> takes 1, otherwise, it takes 0.
<i>Non-Financial Metrics</i>	If acquirers use non-financial metrics to measure target performances, <i>Non-Financial Metrics</i> takes 1, otherwise, it takes 0.

<i>Pledge</i>	The total number of shares pledged by the controlling shareholder divided by the total number of shares held by the controlling shareholder for an acquiring firm before M&As
<i>Second</i>	<i>Second</i> takes a value of 1 if acquirers use PCCs for the second time, and 0 otherwise.
<i>Third or More</i>	<i>Third or More</i> is set to 1 if acquirers use PCCs for the third time or more, and 0 otherwise.
<i>Dividends</i>	The total amount of dividends per 10 shares for the acquiring firms during the first three post-M&A years
<i>Δ Dividends</i>	The total amount of dividends per 10 shares for the acquiring firm during the first three post-M&A years minus the total amount of dividends per 10 shares for the acquiring firms during the year before M&As
<i>Self-Serving</i>	I consider those related-party M&As where target sellers are controlling shareholders or managers, or the relatives of controlling shareholders or managers as the self-serving target-selection M&As. If the self-serving M&As happen, <i>Self-Serving</i> takes 1; otherwise, it takes 0.
<i>Returnee</i>	The fraction of directors with foreign experience on the boards
<i>Christian College</i>	It takes a value of 1 for firms headquartered in a province where has at least one Christian college. Otherwise, it takes the value of 0.
<i>Foreign Subsidiaries</i>	<i>Foreign Subsidiaries</i> is defined as the number of a firm's foreign subsidiaries.
<i>Independent Returnees</i>	The fraction of independent directors with foreign experience on the boards
<i>Non-independent Returnees</i>	The fraction of non-independent directors with foreign experience on the boards
<i>Returnee Developed</i>	The fraction of directors with foreign experience gained in developed countries on the boards
<i>Returnee Developing</i>	The fraction of directors with foreign experience gained in developing countries on the boards
<i>Returnee High</i>	The fraction of directors with foreign experience gained in the countries with the scores of 4 or 5 in La Porta et al. (1998)'s anti-director rights index on the boards

<i>Returnee Low</i>	The fraction of directors with foreign experience gained in the countries with the scores below 4 in La Porta et al. (1998)'s anti-director rights index on the boards
<i>One Returnee</i>	It takes 1 if an acquirer has one returnee directors, it takes 0 if otherwise.
<i>Two Returnees</i>	It takes 1 if an acquirer has two returnee directors, it takes 0 if otherwise.
<i>At Least Three Returnees</i>	It takes 1 if an acquirer has at least three returnee directors, it takes 0 if otherwise.
<i>Number Returnee</i>	The number of directors with foreign experience on the boards
<i>Distance</i>	I use Qichacha to get the addresses of acquiring firms and target firms. Then I use Google map and AMAP to get their longitudes and latitudes and calculate the geographic distances between acquiring firms and target firms. <i>Distance</i> is defined as the standardized distance between the acquiring firm and the target firm.