Family's promise: Evidence from contingent contract fulfillment

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in M&As

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Abstract

This paper finds that family firms are more likely to fulfill committed performance targets in M&As' contingent contracts than nonfamily firms, and this effect is stronger in family firms with higher socioemotional endowment, firms with weaker corporate governance and riskier M&A transactions. Mechanism tests reveal that family acquirers achieve superior performance through more post-deal effort instead of pre-deal conservatism. Further analyses show that family firms' outperformance cannot be explained by earnings manipulations but by deal success. We present evidence on the differences in business ethical behaviors between family and nonfamily firms in contingent contracts' performance.

Keywords: family firms; socioemotional wealth; performance commitment; mergers and acquisitions; informal institutions

JEL classification: G32, G34, D86, L14

1. Introduction

Commitment is the cornerstone of business (Carroll, 2004) and plays an important role in the success of mergers and acquisitions (M&As) (Cumming et al., 2023; Graebner, 2009). In the past two decades, more than 790 thousand M&As have been announced globally with a value exceeding \$57 trillion.¹ However, the long-term success of M&As is often unsatisfactory, as many fail to meet financial expectations (Renneboog & Vansteenkiste, 2019). Thus, to attract capital, businesses often make promises on future performance in the form of contingent contracts.² Although contingent contracts are common and useful tools to manage information asymmetry and risk (Battigalli et al., 2024; Cain et al., 2011; Kohers & Ang, 2000), promise violations can damage corporate integrity, firm value, and stakeholder support (Hou et al., 2015), and jeopardize business ethics (Doty & Kouchaki, 2015). Breach of business ethics might lead to deterioration of business relationships, loss of trust, and potential financial disturbances (Carroll, 2004). Thus, it is important to understand the determinants of contingent contract fulfillment that are nested within firms' commitment and ethical caution. As family firms are characterized by high moral standards and better social performance (Doty & Kouchaki, 2015; Gómez-Mejía et al., 2007), we investigate how acquirers' family ownership influences contingent contract fulfillment in M&As.³

Family firms significantly impact the global economy and represent more than 40% of publicly traded firms in the United States and China (Jiang et al., 2020; Villalonga & Amit, 2006). Family owners differ from others in their preservation of socioemotional wealth (hereafter, SEW), which is the firms' nonfinancial aspects that meet the family's affective needs, such as providing identity confirmation, a sense of belonging, social respect, and family

¹ https://imaa-institute.org/

² Earnouts, for example, are explicit commitments included in M&As contracts in which deferred payment is contingent on pre-determined performance goals.

³ Acquirers can affect the fulfillment of contingent performance contract through controlling the target-turned-subsidiaries and thus have great influence to enforce the contract (Kohers & Ang, 2000). While the outcome of contract fulfillment also relies on target firms' effort, we focus on family acquirers' role in fulfilling committed performance due to data availability and the acquirers' strong influence.

dynasty (Gómez-Mejía et al., 2007). Socioemotional endowment embeds higher reputational concern and longer-term horizon in family firms, which may lead to differences in the performance of M&As between family firms and nonfamily firms (Chrisman et al., 2004). Thus, family acquirers may spend more effort to help target firms facilitate post-deal integration.

Firstly, family firms emphasize more on reputation due to the identity overlap between the family owners and the firms (Anderson et al., 2003). The failure to deliver committed goals is a sign of incompetence and untrustworthiness through public disclosure of M&A performance, which can severely damage corporate reputation. Thus, family owners have stronger incentives to avoid reputational loss than nonfamily owners (Dyer & Whetten, 2006), which incentivizes them to strive for contingent contract fulfillment in M&As to keep their promises and business ethics.

In addition, the SEW theory posits that family firms have a longer-term orientation for their business. The delivery of performance targets relies on the investment horizon, as firms plan and implement strategies to be consistent with their perspectives on the business horizon. Compared to nonfamily firms, family firms have longer-term orientation and strategic perspectives on the business due to the aspiration of multigenerational succession. This forward-looking vision may push family owners to facilitate the timely success of projects and fulfill organizational promises to stakeholders to improve long-term performance (Lumpkin & Brigham, 2011; Nicholson, 2008). Therefore, family firms' extended horizon may contribute to the higher likelihood of contingent contract fulfillment in M&As.

Secondly, family owners have lower rent-seeking tendencies than nonfamily firms due to their heightened personal attachment and altruism to the firms (Anderson et al., 2003; Chrisman et al., 2004). Contingent contracts may invite self-serving behavior at the expense of minority shareholders which can lead to the failure to fulfill committed targets (Song et al., 2019). Family owners show altruism and stewardship (Karra et al., 2006; Lumpkin & Brigham, 2011) for the aspiration of building and passing a family legacy, which provides moral insurance for communities and protects minority shareholders and other stakeholders (Dyer & Whetten, 2006). As a result, family owners are reluctant to sacrifice firms' interests for personal expropriation. Therefore, we expect this reduced agency conflicts to have a positive effect on the likelihood of fulfilling committed targets in M&As for family firms.

China's unique regulatory and cultural environment makes it an ideal setting for investigating our question. First, China is a developing country with weaker formal institutions, which highlights the importance of informal institutions (Dau et al., 2022).⁴ Social obligations, a major type of informal institutions, are fundamental for the Chinese business environment and strongly valued by managers (Kim & Gao, 2013) due to the deep-seated traditional value of collectivism and familism (Chen et al., 2021). Second, the unique regulations prompt data availability. Fulfillment of contingent contracts is hard to observe as acquirers are not required to disclose the performance of their target-turned-subsidiaries in western countries. However, in China, the regulators mandate firms to annually disclose the committed and actual performances during the contractual period of performance commitment embedded in M&As. Third, as the second largest economy, China's business ethics and M&A prospects are important to the global outlook (Lu, 2009). ⁵ China has increasingly influenced other economies through cross-border M&As.⁶ The performance of these interwoven investments may impact prospects in other capital markets and cause global contagion (Allen & Gale, 2000), which makes it valuable to understand the M&A performance in China.

Using a sample of 6,544 performance commitment-year observations of Chinese A-share listed firms from 2009 to 2020, we compare the contingent contract fulfillment of M&As

⁴ China has weaker legal protection for investors and moderate punishment for violating corporations (Allen et al., 2005).

⁵ IMF's World Economic Outlook Update in 2022 states that the world's three largest economies, the United States, China, and the European area, have important consequences for the global outlook.

https://www.imf.org/en/News/Articles/2022/07/27/tr072622-weo-uptate-july-22-press-briefing-transcript

⁶ A clear trend in the global M&As arena is the increasing involvement of firms from emerging economies, both in domestic and cross-border M&As (Hoskisson et al., 2013).

between family firms and nonfamily firms. We find that family firms are associated with a higher likelihood of successful fulfillment. As family ownership might be endogenous (Villalonga & Amit, 2006), we use the Heckman treatment effect model, applying the regional clan culture as the instrumental variable to address this problem. To alleviate the sample selection bias concern, we use the propensity score matching method (PSM) and find our results hold. Our results are also robust to multiple alternative sample constructions. Specifically, to address the potential confounding effect of state ownership, we re-estimate the main regression model using an alternative sample that excludes SOEs, and find robust results. In addition, the results remain robust using alternative definitions of key variables, alternative sets of fixed effects, and additional control variables.

Next, we explore heterogeneity in family firms regarding contract fulfillment. Firstly, family firms have a stronger willingness to promote family-oriented goals such as social reputation preservation by fulfilling commitment. As SEW is the core reference point of family firms' decision-making (Kim & Gao, 2013; Leitterstorf et al., 2014), family firms with richer socioemotional endowments and stronger concerns about SEW losses may be more proactive to meet contingent contracts. We refer to families' willingness (i.e., founder control and born family firms) and ability (i.e., family management) as proxies for the family's social concerns (Chrisman et al., 2015; De Massis et al., 2014).⁷ Consistently, we find that family firms with stronger socioemotional endowments (i.e., founder family firms, born family firms, and family dual leadership) are associated with a higher likelihood of fulfilling contingent contracts.

Secondly, family firms pursue non-economic goals that protect minority shareholders and other stakeholders in the community (Anderson et al., 2003), resulting in less self-serving

⁷ Our choice of proxies is based on the framework of SEW, which posits that the influence of family ownership on firm performance is based on willingness (disposition to act) and ability (discretion to act), two drivers that lead to heterogeneity among family firms (Chrisman et al., 2015; De Massis et al., 2014). The willingness to protect SEW is stronger among founder firms and born family firms, and family dual leadership elevates the ability of the family to exert control over the firm and promote SEW. Section 3.2 includes an in-depth explanation.

behaviors compared to nonfamily firms. In M&As' contingent contract fulfillment, family acquirers may be less likely to sign unachievable performance hurdles (Song et al., 2019) and be more likely to strive to achieve their pre-determined performance targets for the interest of the family dynasty. Thus, this positive governance effect of the family owner should be stronger for firms with weaker corporate governance. Consistent with this prediction, we find that under weaker corporate governance (i.e., less institutional monitoring and board monitoring), family firms have a much higher chance of achieving committed performance than nonfamily firms.

In addition, we perform tests on M&A types to explore how transaction complexity amplifies the family owners' role in improving M&A investment. For M&As with higher uncertainty, creating positive synergy and meeting ex-ante performance targets are more difficult due to the severe asymmetric information embedded in the transactions (Kohers & Ang, 2000). Family firms' socioemotional endowment and emphasis on firms' long-term value can be more prominent and beneficial in facilitating integration and fulfilling pre-specified targets for these complex and riskier transactions. Supporting this conjecture, results show that family firms have a higher likelihood of achieving committed performance than nonfamily firms for riskier M&A deals (i.e., unrelated party transactions and cross-industry M&As).

Next, we examine the channels that enable family firms' superior performance. We first explore the pre-deal target-setting channel to see if family firms are more cautious in choosing better targets or setting profit targets constrained by realistic synergy expectations, which may lead to fewer benchmark misses. Empirical results do not support a relationship between family firms and pre-deal conservatism. Next, we explore the post-deal effort channel of whether family firms endeavor to improve performance. As acquisition profitability depends on the degree of integration and the monitoring effectiveness from acquirers (Birkinshaw et al., 2002), family firms may be more likely to have their executives join target firms to better integrate the target into their established networks (Palm et al., 2023). Empirical results based on the manually collected data of executives in acquirers and target firms support this prediction.

Lastly, we conduct further analyses to rule out the alternative explanation that family firms might "cook the book" to achieve higher performance fulfillment instead of fundamentally improving performance. This alternative explanation predicts a higher level of earnings manipulation in family firms and more resulting regulator interventions. Contradicting the predictions, we find family firms are not associated with a higher likelihood of marginally exceeding the pre-determined targets and they receive fewer comment letters from regulators.⁸ The results indicate that family firms do not achieve fulfillment through opportunistically inflating earnings or invoking misbehaviors. In addition, we find that family firms are less likely to record goodwill impairment than nonfamily firms. As goodwill impairment indicates failure in M&A integration and long-term profit decline (Cadman et al., 2014), the results further verify that family firms essentially outperform nonfamily firms in meeting financial expectations after acquisitions.

Our study makes several contributions to the literature on ethics, contingent contracts, family business, and informal institutions. First, building upon studies on the impact of *including* contingent contracts in M&A agreements (Barbopoulos et al., 2018; Cain et al., 2011; Kohers & Ang, 2000), we extend the understanding of contingent contracts by focusing on their fulfillment, which is an important yet largely neglected aspect that directly affects business ethics (Doty & Kouchaki, 2015). Our findings address this gap by showing that family firms can better fulfill the contingent contract and promote business ethics due to their heightened reputational concern and long-term orientation.

⁸ In untabulated tests, we find that family firms who achieve performance targets do not engage in more earnings management than nonfamily firms, which further rules out the alternative explanation. The results are consistent with the findings of Martin et al. (2016) and are available upon request.

Second, we contribute to the literature on family firms. Prior studies show that family firms are more ethical in terms of environmental protection (Berrone et al., 2010; Dou et al., 2019), social responsibility (Dyer & Whetten, 2006), information disclosure (Martin et al., 2016), bad news hoarding (Jiang et al., 2020), and employee relationship management (Kang & Kim, 2020). Family owners are also more altruistic with lower self-serving tendencies (Anderson et al., 2003; De Massis et al., 2014). Despite the rich discussions, it remains an important issue in the business ethics field to identify direct measures to evaluate the ethical conduct of organizations (Toro-Arias et al., 2021), as traditional measures often rely on subjective evaluations and may not accurately reveal firms' intentions for ethics. For example, CSR and environmental activities might be strategically used to conceal misbehaviors (Walker & Wan, 2012). In contrast, contingent contracts can provide an objective and precise measure of a firm's trustworthiness indicated by the firm's promise-keeping resolution. In addition, breach of contingent contracts in M&As may cause severe financial loss and business relationship deterioration, which is critical to firms' immediate business and survival, while CSR may be valued differently and selectively adopted by firms (McWilliams & Siegel, 2001). Thus, our study on firms' performance commitment fulfillment not only adds to the research on family business ethics (Vazquez, 2018) but also provides direct evidence for the moral insurance of family firms, expanding our understanding of the economic consequences of family ownership.

Finally, our study echoes the call by Dau et al. (2022) for further research on informal institutions in emerging markets where they play a more prominent role in facilitating business. Our findings support their proposition that informal institutions (i.e., social reputation concern) can facilitate contract enforcement and promote business ethics. We expect our findings can be generalized to family firms in other countries where collectivism and familism prevail, such as Singapore, Japan, and Korea (Chen et al., 2021).

The remainder of the paper proceeds as follows. Section 2 introduces the institutional background. Section 3 presents a literature review and hypothesis development. Section 4 describes our data, variables, and models. Section 5 presents the empirical results. Section 6 concludes.

2. Institutional Background

2.1 Earnouts

Earnouts are one type of contingent contracts, which prevail in other domains such as labor markets and venture capital (Ragozzino & Reuer, 2009). A famous example is the contract between the Chicago Bulls basketball team and the controversial star forward Dennis Rodman in 1997 (Bazerman & Gillespie, 1999). As Rodman had a historical pattern of missing games, Bulls negotiated a contingent contract that offered him \$ 4.5 million during the season and an extra payment of up to \$ 6 million if he achieved certain attendance and performance. This contingent arrangement motivated Rodman to play in most games with good performance, collect a total of \$10.1 million, and help the Bulls win the league championship.

In business practice, earnouts split total acquisition payment into an upfront payment and deferred payment contingent on M&As' realized performance. Earnouts have become increasingly popular over time (Bates et al., 2018) as they effectively reduce information asymmetry by aligning the long-term interests of the acquirers and the targets. Target firms use earnouts to release private information (Datar et al., 2001) about their good quality ex-ante, and they are also motivated to perform well to obtain future payments after acquisitions (Cain et al., 2011). Thus, with earnouts embedded in the M&A contracts, targets obtain larger premiums and retain talented staff, and bidders enjoy higher announcement returns and post-acquisition value growth (Cadman et al., 2014; Barbopoulos et al., 2018).

2.2 Performance commitments in China

Performance commitments, a subtype of contingent contracts, were first introduced in China during the Split Share Structure Reform in 2005 as a means to mitigate information asymmetry. In this arrangement, controlling shareholders pledge to minority shareholders to achieve certain performance in the future (Hou et al., 2015). In 2008, performance commitments were formally applied to M&As. For M&As using discounted future cash flows evaluation, China Securities Regulatory Commission (CSRC) issued "Administration Measures for Significant Asset Restructuring of Listed Companies", which requires target firms to enter into performance commitments with acquirers to facilitate informed decision-making. Performance commitments outline the performance goals (e.g., net profit) for each year following the acquisition and map out the compensation if the goals are not realized. In 2009, CSRC developed a memorandum to clarify various scenarios requiring share compensation. In 2011, CSRC published explanations concerning the applicability of performance commitments. In 2014, following the State Council's announcement that non-affiliated M&As are no longer required to sign performance commitments, CSRC issued "Administrative Measures for Material Asset Restructuring of Listed Companies (2014 Revision)", which removed the mandatory requirement for performance commitments between non-affiliated M&A participants. Despite the lift of the mandate, performance commitments have become an assurance for transactions and remain prevalent (Song et al., 2019). In 2016 and 2017, CSRC reiterated its stance that committed performance should not be altered once signed.

Regulators require companies involved in performance commitments to annually disclose the committed and realized performance figures during the commitment period. In public disclosure, firms who fail to fulfill pre-specified targets admit and often apologize for the poor performance. The mandated disclosure not only enables investors to track investment performance but also provides a direct lens to examine firms' business ethics.

2.3 Comparing performance commitments to earnouts

Earnouts are commonly used in western markets such as the U.S. and U.K., and performance commitments are widely used in China. Both are part of the contingent contracts that reduce information asymmetry in M&As. There are a few practical differences.

In earnouts, acquirers make partial payments to the target, and deferred payment is contingent on future performance. In performance commitments, acquirers pay in full upfront and are entitled to receive compensation from the target firm if performance goals are missed. For example, in 2016, *Kuaijishan (601579.SH)*, a publicly traded alcohol company, purchased 100% shares of *Tangsongjiuye*, a private alcohol company. In the performance commitment contract, *Tangsongjiuye* agreed on an annual net profit of \$ 10 million (\$ 1.5 million) for the next three years and cash payback if actual performance falls short. In 2017, *Kuaijishan* announced in mandated disclosure that *Tangsongjiuye*'s net profit was \$ 7.83 million (\$ 1.2 million), short by \$ 2.17 million (\$ 0.3 million), which triggered the payback obligation. *Kuaijishan* received compensation of \$ 2.17 million (\$ 0.3 million) in 2018.

Performance commitments have other different characteristics compared to earnouts (Cain et al., 2011; Kohers & Ang, 2000). Firstly, the average length of performance commitments in China (3 years) is slightly longer than earnouts in the U.S. (2.57 years) and in the U.K. (2 years). Secondly, almost all the measures used in performance commitments are net profit, while earnouts may use other performance metrics. Lastly, performance commitments are measured annually, while many earnouts are measured less frequently.

3. Literature Review and Hypothesis Development

3.1 Literature on contingent contracts

Contingent contracts exist in many fields (Ragozzino & Reuer, 2009). Businesses often make commitments to investors regarding earnings or growth to attract capital. Whether organizations fulfill their commitments has important consequences on corporate performance and business ethics (Doty & Kouchaki, 2015). Earnouts, for example, are a type of contingent

contracts by which acquires withhold partial payment until pre-determined performance are achieved. The explicit commitments effectively lower information asymmetry, which benefits the acquirers who are less informed about the targets, even after a thorough due diligence review (Allee & Wangerin, 2018). Consequently, acquirers of riskier transactions are more inclined to use earnouts, such as in acquisitions of small, private, high-growth, or high-tech firms, and in cross-industry deals (Datar et al., 2001; Ragozzino & Reuer, 2009). With a reduced information gap, acquirers obtain higher announcement returns, higher value creation, and lower market crash risk (Barbopoulos et al., 2018; Song et al., 2019), and targets receive a higher premium and retain key employees (Cadman et al., 2014; Cain et al., 2011).

Previous literature examines the impact of *including* contingent contracts in M&A agreements but largely neglects whether the contingent goals are fulfilled, probably due to the limited data of mostly private target firms (Barbopoulos & Sudarsanam, 2012). However, China offers valuable research opportunities as the stock exchanges require listed acquirer firms to annually disclose the committed and actual performance of target-turned-subsidiaries during the contingent contract periods. Using this unique data, studies find that CSR activities and accounting conservatism improve fulfillment in performance commitment (Zeng et al., 2020).⁹

3.2 Hypothesis development

Family firms differ from other organizations in their pursuit of SEW, which projects a positive public view of the family's name for future generations (Ernst et al., 2024; Gómez-Mejía et al., 2007). Studies have examined the impact of SEW on family firms' ethical behaviors. For example, family owners have stronger long-term orientation due to multigenerational succession plans (Nicholson, 2008), which leads to lower earnings management (Martin et al., 2016) and lower stock price crash risk (Jiang et al., 2020). Moreover,

⁹ The increase of earnings management in earnouts (Elnahas et al., 2017) also occurs in performance commitment (Hou et al., 2015).

family firms deeply value reputation and therefore have more charitable donations (Pan et al., 2018) and better environmental protection (Berrone et al., 2010) than nonfamily firms.

The preservation of SEW is crucial to family firms' decision-making in M&As. M&As are important strategic business decisions, and their failure can lead to the deterioration of firms' business and the loss of investor wealth. Therefore, acquirers attach great importance to the performance of M&As. As a signal of integration achievement in M&As, the performance commitment's fulfillment could affect firms' reputation. The positive value of reputation concerns is especially important in China, where informal institutions are becoming increasingly important due to the weak formal legal institutions (Jiang et al., 2010). As family firms have strong socioemotional endowments and thus value long-term reputation, the family acquirers have strong incentives to actively promote the M&As to ensure the fulfillment of predetermined performance goals.

Figure 1 illustrates our proposed theoretical framework based on these arguments. Firstly, mandated disclosure of violations in performance commitments attracts public attention (Barberis, 2013), which damages firms' reputation and value (Song et al., 2019). Moreover, organizational breaches of contracts associated with explicit promises (e.g., pre-specified performance commitments) are more devastating (Doty & Kouchaki, 2015). Family firms value reputation more and have higher reputational loss aversion as they view the business as an extension of their identity: they take pride when the firm reputation is good, and feel ashamed if it has a bad reputation (Berrone et al., 2010). Therefore, family firms strive to protect their reputation and often prioritize SEW, such as sacrificing economic gains to maintain a positive image (Leitterstorf & Rau, 2014; Martin et al., 2016). Considering the reputational damage of violating contingent contracts, family firms may take more proactive steps than nonfamily firms in fulfilling the contract to safeguard their reputation.

In addition, unfulfilling expected performance signals integration failure, which may have

a lingering effect on future investment and even jeopardize business survival due to negative stakeholder perceptions (Meschi & Métais, 2015). Stakeholders use commitments to evaluate whether a firm is trustworthy, and may withdraw resources and cooperation from firms that break promises (Dacin et al., 2022; Doty & Kouchaki, 2015), which may damage the long-term development of the firm. Assigning great value to long-term vision due to transgenerational control desires, family firms have an inherent goal of preserving long-lasting viability (Kim & Gao, 2013; Lumpkin & Brigham, 2011). Thus, family firms may emphasize more on achieving pre-determined performance to sustain family longevity.

Secondly, family owners have less self-serving tendencies as they have heightened personal attachment and altruism to the firms (De Massis et al., 2014; Gómez-Mejía et al., 2007). Moreover, due to the aspiration of building and preserving family dynasties (Lumpkin & Brigham, 2011), family owners resist immediate temptations that erode long-term gains for stakeholders. This suppressed exploitative urge has an important effect on the implementation of performance commitments. For example, family acquirers may be less likely to sign unachievable performance hurdles that are foreseen to fail to boost executive compensation (Song et al., 2019). They may also emphasize the integration after M&As and strive to generate synergy for minority shareholders to maintain a positive image in the community (Anderson et al., 2003). As a result, family firms may have higher contingent contract fulfillment. Taken together, we hypothesize that the likelihood of fulfilling performance commitment is higher for family firms than for nonfamily firms. Accordingly, we propose our main hypothesis:

Hypothesis 1 (H1): Ceteris paribus, the likelihood of fulfilling performance commitment is higher for family firms than for nonfamily firms.

Family firms are heterogeneous in their endowment of SEW, which depends on the alignment of interest between the family and the firm (Kim & Gao, 2013). Family firms with stronger SEW may more actively direct resources to achieve tasks that enhance reputation

(Dyer & Whetten, 2006), which may strengthen the positive effect of family ownership on firm performance in M&As (Dou et al., 2019). Differences in the level of SEW are expected to affect the pursuit of a positive reputation, the preservation of family longevity, the aversion to expropriation, and the related likelihood of contingent contract fulfillment. We use three proxies to measure the level of SEW in family firms concerning willingness and ability.

The first proxy is the founder family firm. SEW is most salient at the founder stage, as founders work hard to launch the firm and have a stronger emotional attachment and identification with the firm than their descendants (Gómez-Mejía et al., 2007; Martin et al., 2016). The "build" strategy of founders makes them place greater emphasis on reputation and long-term prospects than non-founders, as reputation is vital for attracting funding, building relationships, and creating a family dynasty (Schuster et al., 2020). Moreover, founders are charismatic and visionary leaders with great management skills to keep the family name unstained by providing better monitoring and benefiting stakeholders outside the family. In contrast, descendants who assume the family legacy are often criticized for being spoiled and less skilled with lower levels of psychological ownership, which dilutes SEW (Pérez-González, 2006).¹⁰ Bad reputation as a result of contingent contract violation can damage the building process as stakeholders may withdraw resources and cooperation from untrustworthy firms (Doty & Kouchaki, 2015). Therefore, given the unethical signal of contingent contract violation, founder family owners may care more about the negative consequences of unfulfilling contingent contracts, and thus are more driven to fulfill the contingent contracts.

Second, we separate born family firms and non-born (made) family firms. Whether a family firm is born or arrives at that stage through time has important consequences, as corporate values and culture are extremely sensitive to the conditions at inception. Born family firms have entrenched imprints of embedded family vision, goals, and strategies arising from

¹⁰ For example, founder family firms receive higher CSP ratings than descendant firms (Anderson et al., 2003).

initial family involvement, which provides stronger SEW as a sustainable competitive advantage (Chua et al., 2004). Moreover, the longer-term interaction between family members in born family firms enhances identity affirmation and interpersonal commitment, which also deepens SEW. Thus, we expect born family firms to exhibit a higher likelihood of contingent contract fulfillment compared to made family firms.

The third proxy is family dual leadership (i.e., when a family member serves as both the CEO and the chairperson). When family members take office, they are granted the legitimacy to design and implement strategies to improve SEW like corporate reputation (Chrisman et al., 2012). Family CEO-chairs have more authority and discretion to guide the organizational choices to chase SEW (Lin et al., 2023). In contrast, nonfamily managers may resist adopting these goals as socioemotional benefits are not transferrable outside the family. Thus, family dual leadership elevates the family control to substantively get involved in actions that improve performance to fulfill contingent contracts and promote reputation. We therefore expect family firms with family dual leadership to have a higher likelihood of contingent contract fulfillment.

Taken together, we expect that family firms with stronger SEW may have a higher likelihood of fulfillment in contingent contracts in M&As than other family firms. Therefore, we posit that:

Hypothesis 2 (H2): Ceteris paribus, family firms with stronger SEW (i.e., founder family firms, born family firms, and family dual leadership) are more likely to fulfill performance commitments.

Family firms are likely to pursue both economic and non-economic goals (Chrisman et al., 2004). For example, family firms exhibit altruistic tendencies such as investing in local communities, preserving respect from the community, making long-term commitments to customers and employees, and maintaining a positive social image (Karra et al., 2006; Lumpkin & Brigham, 2011). Moreover, family firms are less likely to expropriate other stakeholders'

wealth. Planning for the future of the offspring can suppress family owners' exploitative urges (Anderson et al., 2003; Lumpkin & Brigham, 2011) and enable them to resist immediate temptations and persist in far-reaching plans. This self-control may effectively mitigate agency problems in M&As by discouraging insiders from setting unrealistic performance targets for personal interests which may harm other stakeholders' interests. Thus, the disciplining effect from family firms on reducing agency conflicts in contingent contracts may be more pronounced under weak corporate governance. Thus, we expect family firms to outperform nonfamily firms in achieving contingent fulfillment when corporate governance is weak.

To proxy for the quality of outside and inside corporate governance, we use institutional ownership and board committee involvement, respectively. First, institutional investors can monitor managers by curbing managerial opportunism (Boone & White, 2015) and pushing managers to focus on long-term profitability, which might substitute for public enforcement (Glaum et al., 2018). Without institutional monitoring, the role of family ownership may be more pronounced in reducing self-serving behavior and facilitating fulfillment. Second, strong monitoring by board committees can reduce managerial misconduct and enhance shareholder value. In contrast, the absence of diligent committee monitoring allows managers to engage in rent-seeking to extract personal benefits (Kolev et al., 2019), which highlights the self-disciplining role of family ownership in reducing agency conflicts and improving fulfillment. Based on the above discussion, we hypothesize that:

Hypothesis 3 (H3): The positive effect of family ownership on the likelihood of fulfilling performance commitments is more pronounced for firms with poorer corporate governance (i.e., lower institutional monitoring and lower board committee involvement).

The uncertainty of M&A transactions also moderates the positive effect of family firms on fulfilling contingent contracts. As kinship blurs the boundary between work and nonwork, family firms have socioemotional endowments and altruistic tendencies, which build competitive advantage in the face of difficulties (Nicholson, 2008).¹¹ The positive effect of family ownership on fulfillment in contingent contracts may be more valuable for riskier M&As as the inability to predict future outcomes may increase the difficulty of reaching predetermined goals. Thus, we propose that the positive effect of family ownership on the likelihood of achieving performance commitment is more pronounced in riskier transactions, which we proxy as unrelated party transactions and cross-industry deals, respectively.

First, unrelated party transactions are harder to generate positive synergy as acquirers cannot effectively enforce substantive changes due to the lack of established communication and cooperation in related party transactions (Shi et al., 2021). To facilitate performance fulfillment in these transactions, acquirers may need to work harder and show more altruism to overcome the obstacle, which family owners tend to achieve to build a family dynasty.

Second, cross-industry deals are riskier than inter-industry deals as the level of asymmetric information is elevated in unfamiliar territories (Kohers & Ang, 2000). The dissimilarity in the knowledge base makes acquirers less familiar with the pattern of the destination industry and the conditions of target firms (e.g., management capabilities, organizational routines, and client/supplier relationships) and thus bear more risk in gauging and predicting the target firm's performance (Ragozzino & Reuer, 2009; Reuer et al., 2004). As a result, acquirers may need to put in more effort to get beyond the barrier that family owners often overcome due to altruism to meet performance goals in these deals. Therefore, we propose the following hypothesis:

Hypothesis 4 (H4): The positive effect of family ownership on the likelihood of fulfilling performance commitments is more pronounced for riskier transactions (i.e., unrelated party transactions and cross-industry transactions).

4. Research Design

¹¹ During difficult periods, family members volunteer to work long hours without vacation, and some even sleep in the factory to ensure orders are filled (Karra et al., 2006).

4.1 Sample selection

Our sample selection starts with performance commitments in M&As from A-share firms listed on the Shanghai Stock Exchange and Shenzhen Stock Exchange between 2009 and 2020 from CSMAR (China Stock Market & Accounting Research).¹² This database provides information on the identities of acquirers and targets, committed performance and actual performance figures, acquiring date, deal value, and payment method, among other financial information. We hand-collect information on the total assets, total debt, and net profit of the target firm in the year before acquisition from corporate filings disclosed in CSRC's database.¹³

We then manually collect merger and acquisition announcement filings to verify the performance targets and actual performance.¹⁴ Following existing protocols (Cadman et al., 2014; Song et al., 2019), we exclude observations that meet the following criteria: (1) the acquirer is from the financial industry; (2) the performance metrics are not net profit; (3) missing information on committed or/and actual performance figures; (4) the target firm is publicly listed; (5) the status of the acquirer is "Special Treatment (ST)"; (6) the acquirer has negative net asset; (7) missing information on control variables. Finally, we winsorize all continuous variables at the 1st and 99th percentiles of their distributions to mitigate the concern of outliers. The requirements produce a final sample consisting of 6,544 performance commitment-year observations covering 1,274 unique firms. Panel A of Table 1 summarizes the sample selection process.¹⁵

4.2 Variable definitions and model specification

To analyze the effect of family ownership on performance commitment fulfillment, we

¹² The sample starts in 2009 as Chinese regulators initiate performance commitments in the M&As from 2008.

¹³ http://www.cninfo.com.cn/new/index.

¹⁴ We improve the quality of data from CSMAR by discarding duplicates and hand-collecting data on acquisitions that are covered by the database but marked as having missing committed performance and/or missing actual performance. For these M&As, we search corporate filings in CSRC' s database (http://www.cninfo.com.cn/new/index) for any acquisition-related information.

¹⁵ Appendix 1 presents the composition of our sample by year and industry. The largest volume of performance commitments is between 2014 and 2018, and the most active industries are the manufacturing industry and software/IT services. It is comparable to the merger waves in China's capital market (Zhao & Tang, 2021).

employ the following baseline Probit regression model:

$$Fulfill_{it} = \beta_0 + \beta_1 Family_{it} + \Sigma Controls_{it} + Year FE + Industry FE + \varepsilon_{it}$$
(1)

The dependent variable is *Fulfill*, a dummy variable that denotes the outcome of performance commitment fulfillment, which equals one if the realized profits meet or beat (i.e., larger than or equal to) the promised figures, and zero otherwise (Hou et al., 2015). The variable of interest is *Family*, a dummy variable to denote the family firm, which equals one if the firm meets one of the following criteria, and zero otherwise: (1) the ultimate controller of the firm is one or more individuals; and (2) the ultimate controller is one or more persons related by blood or marriage (Liu, et al., 2023; Xu et al., 2015).

We control for several firm characteristics following previous literature (Hou et al., 2015; Song et al., 2021), including firm size (*Size*), financial leverage (*Lev*), return on equity (*Roe*), Tobin's q (*Tobin's q*), earnings management (*Abacc*), management duality (*Dual*), block ownership (*Fstholding*), firm age (*Age*), independent directors' percentage on the board (*Indep*) and analysts' attention (*Analyst*). To capture deal-level characteristics, we also control for deal value (*Deal_value*) and payment method (*Pmt_method*) (Barbopoulos & Sudarsanam, 2012; Reuer et al., 2004). We apply the probit model on regressions with binary dependent variables and use the linear model on regressions with continuous dependent variables. Year and industry dummies are included in the model, and standard errors are clustered at the firm level. Appendix 2 provides detailed variable definitions.

5. Empirical Results

5.1 Summary statistics

Panel B of Table 1 presents the descriptive statistics of main variables. There are 6,544 performance commitment-year observations from 2009 to 2020. The mean value of *Family* is 0.163, indicating that 16.3% of acquirers are family firms, consistent with family firms' lower tendency to have M&As (Caprio et al., 2011; Miller et al., 2010). Meanwhile, the mean value

of *Fulfill* is 0.697, indicating that approximately 70% of performance targets are achieved, which is consistent with Zeng et al. (2022).

Panel C of Table 1 shows the univariate analysis of the differences in fulfillment between family firms and nonfamily firms. Successful fulfillment is more likely in family firms than nonfamily firms (74.5% vs. 68.8%), with the difference statistically significant at the 1% level. Table 2 presents the Pearson correlation matrix for key variables. The coefficient between *Family* and *Fulfill* is positive 0.045 and significant at the 1% level, consistent with our prediction. We explore their relationship further in a multivariate framework.

5.2 Main results

Table 3 presents the main regression results using Eq. (1). Column (1) shows the effect of family ownership on the fulfillment of pre-specified targets after controlling for industry- and year-fixed effects, while column (2) further controls the firm characteristics. The coefficient on *Family* is positive and statistically significant at the 1% level in both columns, indicating that family firms have a higher likelihood of fulfilling performance targets in the M&A contracts. Using the more conservative specification in column (2), the coefficient on *Family* is positive 0.167, which indicates that on average, the marginal effect of being a family firm on the probability of fulfilling pre-specified performance targets is 0.054, economically significant relative to the 0.697 unconditional rate. The results are consistent with H1 that family firms are more likely to fulfill contingent contracts in M&As than nonfamily firms.

The coefficients of control variables have the expected signs, suggesting that acquirers are more likely to exhibit positive performance when they have strong free cashflow (El-Khatib et al., 2015), influential blockholders (Hou et al., 2015), high Tobin's q (Doukas, 1995), and more analysts' attention (Tehranian et al., 2014). Deals with larger amounts (Viarengo et al., 2018) and using stock payment methods (Barbopoulos et al., 2018) also tend to be associated with positive performance.

5.3 Cross-sectional results

5.3.1 Effect of family firms' level of SEW on fulfillment

H2 predicts that family firms with higher SEW are more likely to fulfill contingent contracts. To test H2, we divide family firms into two groups of high and low levels of SEW using three proxies.

Firstly, we define founder family firms as those managed by the first generation of the family. The number of generations of family owners increases by one per each time descendants inherit the firm. Panel A of Table 4 reports the results from the regressions of subsamples of firms with founder and non-founder family firms. Using observations of founder family firms and nonfamily firms, we find that the coefficient of *Family* for founder family firms is 0.199 (z=3.907) in column (1), indicating that founder family firms are more likely to achieve fulfillment than nonfamily firms. The corresponding coefficient for descendant family firms and nonfamily firms. The consists of descendant family firms and nonfamily firms. The difference between the two coefficient estimates is 0.334 and statistically significant at the 10% level, indicating that founder family firms have a higher likelihood to fulfill contingent contracts than non-founder family firms.

We then identify born family firms by comparing the IPO year and the year the firm became family-owned. If a business was classified as a family firm before IPO, we consider it to be a born family firm (Leitterstorf & Rau, 2014). In contrast, if a business evolved into a family firm after IPO, we consider it to be a made family firm. Panel B of Table 4 presents the results. We find that the coefficient for born family firms in column (1) is larger than the corresponding coefficient for non-born family firms in column (2), and the positive difference between the two coefficient estimates is statistically significant at the 10% level, suggesting that born family firms are more likely to fulfill contingent contracts than non-born family firms.

Regarding family ability, family dual leadership is defined as one if a family member

serves as both the CEO and the chairperson of the firm, and zero otherwise. We report the results in Panel C of Table 4. The coefficient estimate for family firms with family dual leadership in column (1) is significantly larger than the coefficient of non-family dual leadership firms in column (2), which indicates that the likelihood of fulfillment is higher in firms with family dual leadership. Overall, our results indicate that the level of SEW has a considerable impact on the fulfillment of performance commitments. Family firms, especially those with stronger SEW are more likely to fulfill contingent contracts in M&As.

5.3.2 Effect of family firms on fulfillment in weak corporate governance

H3 predicts that the positive effect of family ownership on the likelihood of achieving performance commitment is more pronounced for firms with poorer corporate governance.

First, we proxy the quality of external corporate governance using institutional ownership, which is defined as weak if the proportion of shares held by institutional investors of the firm is below the median of the industry-year peers. Panel A of Table 5 presents that the coefficient on *Family* is significantly larger for firms with weaker institutional ownership in column (1) than for firms with higher institutional ownership in column (2), indicating that the positive effect of family ownership on successful fulfillment is more valuable in the absence of effective institutional monitoring.

Second, we use the board committee involvement to measure the quality of internal corporate governance, which is defined as weak if the number of board committees and meetings held by committees of a firm is below the median of the industry-year peers (Kolev et al., 2019). Panel B of Table 5 shows that the coefficient on *Family* in firms with weak board monitoring from column (1) is larger than the corresponding coefficient from column (2) for firms with strong board monitoring, and the difference between the two coefficient estimates is statistically significant at the 5% level, indicating that the positive effect of family ownership on fulfillment is heightened when board monitoring is weak. These results confirm H3 that the

positive effect of family ownership on fulfillment is more pronounced under weak corporate governance.

5.3.3 Effect of family firms on fulfillment in riskier transactions

Table 6 reports the results for H4, which posits that the positive effect of family ownership on the likelihood of fulfilling performance commitments is more pronounced for riskier transactions. Panel A of Table 6 splits the sample into subgroups of unrelated and related party transactions. The acquirer and the target are defined as unrelated parties if they do not meet any of the following criteria: (1) the acquirer is the parent company of the target, or vice versa; (2) both the acquirer and the target are owned by a same company; (3) the acquirer is a major shareholder of the target, or vice versa; (4) the acquirer has a joint venture or significant influence on the target, or vice versa; (5) the acquirer's major shareholder, manager, or their relatives is the target's major shareholder or manager or relatives, or vice versa.

Panel A of Table 6 presents the results. The coefficient on *Family* in column (1) for the unrelated party transactions group is significant and statistically greater than that in column (2) for the related party transactions group, suggesting that family ownership increases the possibility of fulfillment in riskier transactions.

We report the results of cross-industry transactions in Panel B of Table 6. If the acquirer and the target are from different industries listed in the 2012 Chinese Securities Regulatory Commission (CSRC) Industry Classification, we define it as a cross-industry transaction. The coefficient on *Family* in cross-industry transactions in column (1) is significantly larger than that in inter-industry deals (column (2)), which indicates that the positive effect of family ownership on fulfillment is higher in riskier deals. In sum, Table 6 provides evidence for H4 that family firms outperform other organizations in fulfilling contingent contracts in riskier M&As.

5.4 Mechanism tests

We argue that SEW impacts the strategic behaviors of family firms and explains the influence of family acquirers on M&A performance. This section examines how family firms achieve superior M&A performance from pre-deal target choosing and post-deal integration.

5.4.1 Pre-deal target choosing

The integration process of M&As is related to decisions made in the pre-deal phase where ownership plays an important role (Welch et al., 2020). For example, due to the emotional bonds, family firms may be more diligent in investment decisions (Anderson et al., 2003; Chrisman et al., 2004) and only select targets with higher profitability. This potential selectivity bias may contribute to the higher fulfillment of performance commitment. Besides, enhanced altruism and suppressed exploitative urges (Villalonga & Amit, 2006) may make family acquirers reluctant to agree to unattainable targets compared to their non-family counterparts, whose management may sign overly optimistic commitments for acquisition-related bonuses (Palm et al., 2023; Song et al., 2019). As a result, family firms may be more cautious in setting profit targets constrained by realistic synergy expectations, leading to fewer overstated targets and thus fewer benchmark misses.

To explicitly test this possibility, using hand-collected information on target firms' total assets, total debt, and net profit in the year prior to the acquisition, we construct three variables: *Target_roa, Target_lev*, and *Setcommit.*¹⁶ *Target_roa (Target_lev)* is calculated as net profit (total debt) divided by total assets of the target firm in the year prior to the acquisition. *Setcommit* is calculated as the annual committed performance divided by the realized profit of the target firm in the year prior to the acquisition.¹⁷ The closer the value of *Setcommit* is to one, the more conservative the target is set. We examine whether family firms choose targets more diligently or set performance targets more cautiously than non-family counterparts by re-

¹⁶ We hand-collect information on target firms' total assets, total debt, and net profit in the year prior to acquisition from corporate filings disclosed in CSRC' s database (http://www.cninfo.com.cn/new/index).

¹⁷ Annual committed performance is calculated as the yearly average of the total committed profit over the performance commitment period.

estimating Eq (1) but using these three variables as the dependent variable.

Panel A of Table 7 reports the results of pre-deal target choosing. All coefficients on *Family* in columns (1) - (4) are statistically insignificant, indicating that family firms do not particularly choose targets with higher profitability or lower leverage. Furthermore, Panel B reports the results of pre-deal target setting. The coefficients on *Family* in columns (1) and (2) are both insignificant, suggesting that we do not find a significant relationship between family firms and pre-deal target setting.

5.4.2 Post-deal efforts

Acquirers have a significant impact on the fulfillment of contingent contracts as they control the targets and exercise greater influence in enforcing contracts (Kohers & Ang, 2000). Due to transgenerational tendencies, family firms show altruism and stewardship to stakeholders (Karra et al., 2006; Lumpkin & Brigham, 2011) to maintain a positive image in the community (Anderson et al., 2003). Thus, family acquirers may take on more responsibilities to help target firms integrate into the organization.

Managers of acquiring firms invest time and effort in the successful assimilation of acquired firms, as they determine the firm's strategic structure, which shapes the outcome of synergy creation. To promote integration and reduce inter-organizational friction, acquirers may choose to have their executives serve as executives of the target firms. This allows for enhanced monitoring, bilateral participation, and knowledge spillovers through the dual directorship, which helps acquirers successfully integrate the newly acquired target into their established networks (Palm et al., 2023). Moreover, corporate agents who concurrently serve as target firms' executives can effectively monitor target firms toward achieving their strategic goals (Kennerley & Neely, 2003); the success of acquisitions profitability and synergy depends on the effectiveness of management monitoring (Birkinshaw et al., 2002). Therefore, family acquirers may be more likely to appoint their own management as managers of the target firms.

To empirically examine this channel, we manually collect data from *Qichacha* database and construct a dummy variable *Appoint*, which equals one if the acquirer has its executives serve concurrently as managers of the target firm during committed years, and zero otherwise.¹⁸ Table 7 Panel C reports the results. In columns (1) and (2), the significant and positive coefficients on *Family* indicate that family firms are more likely to have their executives double as executives in target firms, consistent with our hypothesis that family firm acquirers possess stronger SEW and allocate more resources to monitoring target firms in achieving their committed performance targets. Overall, Table 7 shows that family firms do not behave differently in pre-deal target choosing and setting, but show greater effort in post-deal integration compared to their nonfamily counterparts, consistent with our argument that family firms are more likely to fulfill performance commitment due to reputational and longevity concerns.

5.5 Addressing endogeneity and robustness

Although we have shown that family ownership can have significant impacts on a firm's propensity to fulfill contingent contracts, the results may be subject to endogeneity problems. Family involvement in the listed firms may be an endogenous choice (Villalonga & Amit, 2006), some observed or unobserved firm characteristics might simultaneously affect the family control decision and post-acquisition performance. In addition, firms that fulfill promises in M&As may have better long-term performance and thus be more likely to be acquired by family businesses, raising reverse causality interpretation. In this section, we employ the difference-in-differences (DiD) analyses, Heckman treatment effect model, propensity score matching (PSM) method, and other robust tests to mitigate endogeneity concerns.

¹⁸ We hand-collect data from Qichacha database (https://www.qcc.com/), a widely accepted search engine for business and personnel information in China (Guo et al., 2023). For each target firm in our sample, we examine the career experiences of its executives (e.g., CEOs, managers, board of directors, CFOs, COOs) to locate information related to dual appointment from the acquiring and acquired companies during the commitment performance period, such as the name of companies, name of executives, job titles, year of appointment, and year of resignation.

5.5.1 Difference-in-differences analyses

In this section, we use difference-in-differences analyses to examine whether changes in ownership structure influence commitment fulfillment. The introduction of new important stakeholders can change the ownership structure and affect SEW-induced behaviors of family firms. As government ownership signals government control over firms and can strongly impact the business (Goldeng et al., 2008), SEW may be diluted when state-owned capital enters family firms (Zhou et al., 2017). We estimate Equation (2) to implement this empirical approach:

$$Fulfill_{it} = \beta_0 + \beta_1 Treat_{it} + \beta_2 Treat_{it} \times Post_{it} + \Sigma Controls_{it} + Year FE + Industry FE + \varepsilon_{it}$$
(2)

where $Post_{it}$ is an indicator variable, which equals one if family firm *i* has received state ownership in the year *t*, and zero otherwise. *Treat* is a dummy variable that equals one if the family firm received state ownership from 2009 to 2020, and zero otherwise.¹⁹ Table 8 Panel A presents the results. Columns (1) and (2) present the findings without and with firm-level control variables, respectively. The coefficients on *Treat*×*Post* are significantly negative, suggesting a decrease in fulfillment likelihood for family firms after receiving state capital.

We also adopt an event-time specification to test for parallel pre-treatment trends in fulfillment likelihood. We construct five event-time DiD estimators capturing the year of receiving state capital, two years before and three years after receiving state capital (*Treat* × *Year* (t -2), *Treat* × *Year* (t -1), *Treat* × *Year* (t), *Treat* × *Year* (t +1), *Treat* × *Year* (t +2), *Treat* × *Year* (t +3)). We present the results in Table 8 Panel B. Figure 2 plots the DiD estimators in Panel B column (2). The year of receiving state capital, t=0, is demarcated by a vertical dashed line. The pre-treatment (*Treat* × *Year* (t -2), *Treat* × *Year* (t -1)) effects are economically small and statistically indistinguishable from zero, supporting the parallel trends assumption.

¹⁹ The control group consists of family firms that never received state ownership.

5.5.2 Heckman two-step procedure

We employ the Heckman treatment effect model using clan culture as the instrumental variable for family ownership (Nicholson, 2008; Jiang et al., 2020). Business and the rest of human society are built on the psychological instincts of tribal culture aggregated by kinship groups (Nicholson, 2008). Clans are kin-based organizations made up of patrilineal households that claim a (self-proclaimed) common male ancestor (Greif & Tabellini, 2017). Clan members have heightened loyalty and team spirit to the organization and thus are more likely to work together in business. In contrast, people are less likely to do business together outside of kinship due to the low degree of interpersonal trust and cooperation (Bennedsen et al., 2015). As a result, in regions with strong clan culture, firms are more likely to be family-owned since people highly value kinship loyalty and are more inclined to work with family members. Importantly, it is unlikely that regional clan culture would directly impact firms' post-acquisition performance. Given the aim to compare inter-group differences between family firms and non-family firms, we construct the instrument variable *Clan* as the natural logarithm of one plus the number of genealogies per million people in the city where the firm is located.

In our two-step procedure, the treatment indicator is family firm (*Family*), and the outcome variable is performance fulfillment (*Fulfill*). In the first-step regression, we employ *Clan* as the exogenous instrumental variable and use *Family* as the dependent variable and the same set of control variables in the main regression as other control variables. Column (1) of Table 9 reports the results of first-step regression. The positive and significant coefficient on *Clan* confirms that stronger regional clan culture can significantly increase the likelihood of family ownership in the firms, and supports our expectation that stronger clan culture indicates elevated kinship loyalty and cooperation and thus a higher likelihood of family ownership. In addition, a $\chi 2$ significance test rejects the null hypothesis that the excluded instrument is weak.

The second-stage regression adds the inverse mills ratio obtained from the first-stage

regression in the main regression model, and the results are reported in column (2) of Table 9. The estimate on *Family* is still significantly positive, which suggests a positive effect on fulfillment from family ownership, even after addressing the possible endogeneity concerns.

5.5.3 Propensity score matching

Since the establishment of a family firm may not be random, we employ the propensity score matching method (PSM), which provides a reliable control group of nonfamily firms with similar possibilities to have family ownership. This method helps identify the effects of family ownership on the fulfillment of performance targets after controlling for differences in firm characteristics between the treatment group (family firms) and the control group (nonfamily firms), which may influence the possibility of family involvement.

We first estimate the propensity of being family firms from a probit regression of the treatment indicator (*Family*) on the same set of control variables as in the main regression. For brevity, we do not report the probit regression. Next, as multiple matches can improve the accuracy of estimates when the number of candidate control firms exceeds the number of treated firms (Stuart, 2010), we perform nearest-neighbor propensity-score matching with replacement using a standard tolerance (caliper 0.005) and allowing for three matches per treated firm, leaving a total of 1,028 observations in the treatment group (*Family* = 1) and 1,967 observations in the control group (*Family* = 0).²⁰

Panel A of Table 10 shows the mean values of matching variables in the treatment and matched control samples. The insignificant differences indicate that our matched sample produces a good balance in all covariates. Panel B of Table 10 re-estimates the main regression model using the matched sample and reports the results after correcting the propensity score bias. Family ownership continues to have a significantly positive effect on fulfillment in

 $^{^{20}}$ In untabulated tests, we perform nearest-neighbor propensity-score matching with replacement using a standard tolerance (caliper 0.005) and allowing for one and two matches per treated firm, respectively, and find qualitatively similar results, which are available upon request.

contingent contracts using our matched sample, indicating that our results remain unchanged after we control for differences in observable factors.

5.5.4 Additional robust tests

We perform a set of additional robust tests including alternative sample choices, alternative definitions of family firms, alternative sets of fixed effects, and controlling for additional control variables. Table 11 presents the result.

Firstly, we have provided empirical results for our hypotheses at the performance commitment-year level. As firms may engage in several acquisitions within a year, to verify the robustness, we aggregate the data to the firm-year level: *Fulfill_year* is an indicator variable, which equals one if all performance targets are fulfilled for the firm in a given year, and zero otherwise. The positive and significant coefficient on *Family* in column (1) of Table 11 confirms the robustness of our results.

Secondly, to address the potential confounding effect of state ownership (Goldeng et al., 2008), we re-estimate the main regression model using an alternative sample that excludes SOEs. The coefficient on *Family* in column (2) of Table 11 is 0.326 (z=4.529). The larger and more significant results compared to the main regression results in Tabe 3 show that results in our main tests, to some extent, underestimate the impact of family ownership on fulfilling business promises. The results also help rule out the alternative explanation that state ownership might play a role in the relationship between family firms and performance commitment fulfillment.

Thirdly, we restrict our sample of family firms with a 10% threshold of ownership from the controlling family (Caprio et al., 2011). The coefficient on *Family* in column (3) of Table 11 is 0.182 (z=2.713), which indicates that with a stricter definition of the family firm, we can still find a higher likelihood of fulfillment among family firms. The magnitude of the coefficient is larger than 0.167 (z=2.611) in the main regression results of Table 3, supporting

Villalonga & Amit (2006) that a higher level of family ownership can better align the interest between the family and the firm and thus affect firm performance, especially in time-based projects (Dou et al., 2019) such as contingent contracts.

Fourthly, we use an alternative definition of family firms that takes into account the young and immature stage of the Chinese stock market. Before the establishment of the Chinese stock market in 1991, private ownership was not common and state ownership dominated the business landscape. Thus, compared to family firms with decades of history in many developed countries, Chinese family firms are younger and smaller, and many are controlled by lone founders (Chen et al., 2021). To verify robustness, we exclude these firms and redefine family firms more strictly as firms that have at least one other family member by blood or marriage involved in the firm through ownership, control, or management in addition to the ultimate controller. The positive and significant coefficient in column (4) of Table 11 indicates that our main results are robust.

Fifthly, to account for time-varying factors at the industry-year level – e.g., industry growth opportunities, we further include industry-year fixed effects in the main regression (Kang & Kim, 2020). The positive and significant results in column (5) of Table 11 suggest that our findings are robust.

Sixthly, we include additional control variables that might simultaneously affect family ownership and post-acquisition performance to mitigate the concern of omitted variables. Following previous studies (Allee & Wangerin, 2018; Reuer et al., 2004), we control for the proportion of female directors (*Female*), the length of the contingent contract (*Period*), the auditing quality (*Big4*), the M&A experiences (*Nma*), and the ownership nature (*Soe*). The coefficient on *Family* in column (6) of Table 11 is positive 0.302 (z=4.454), which is significant at the 1% level and larger than the coefficient in main regression in Table 3, suggesting that the results in our main tests, to some extent, underestimate the impact of family ownership on the

fulfillment of contingent contracts in M&As. In general, the results in Table 11 strengthen our argument that family firms have a higher likelihood of fulfilling contingent contracts in M&As.

5.6 Further analyses

Thus far, we have documented a higher likelihood for family firms to fulfill contingent contracts than nonfamily firms due to reputational and longevity concerns. However, an alternative explanation could be that family firms "cook the book" to achieve performance targets (Elnahas et al., 2017) as the fulfillment is based on accounting figures which are prone to measurement issues and discretion (Viarengo et al., 2018) and family firms have a strong tendency to avoid SEW loss (Stockmans et al., 2010) resulting from unfulfillment. In this subsection, we perform further analyses from the perspectives of fulfillment ratio, regulatory monitoring, and goodwill impairment to address this concern.

5.6.1 Fulfillment ratio

Firms may manipulate earnings in contingent contracts to achieve performance targets (Allee & Wangerin, 2018). Firms that "just beat" the performance benchmarks are susceptible to earnings management (Dhaliwal et al., 2004). Thus, we investigate whether family firms are more likely to marginally beat performance targets by estimating the following regression in the subsample of successful fulfillment:

$$Marginal_{it} = \beta_0 + \beta_1 Family_{it} + \Sigma Controls_{it} + Year FE + Industry FE + \varepsilon_{it}$$
(3)

where *Marginal* is a dummy variable that equals one if the actual performance marginally exceeds the committed performance by less than 5%, and zero otherwise. The results are presented in column (1) of Table 12. The insignificant coefficient estimates of *Family* indicate that we do not find a statistically significant relationship between family ownership and marginally beating performance benchmarks, which is inconsistent with the explanation of

family firms' excessive earnings manipulation.²¹

5.6.2 Comment letters

We also test the sensitivity of our results to the presence of regulators' attention on corporate misconduct proxied by comment letters, as regulators issue comment letters to selective companies when they identify potential deficiencies in corporate behaviors (Johnston & Petacchi, 2017). If the alternative explanation holds that family firms have excessive earnings management, they may trigger regulatory attention and receive more comment letters.²²

To measure comment letters, we define *Inquiry* as a dummy variable which equals one if a company is the recipient of performance commitment-related comment letters, and zero if otherwise.²³ As the conversation in comment letters become public since 2014, we investigate family firms' propensity to receive comment letters related to nonfamily firms by replacing the dependent variable with *Inquiry* and re-estimating Eq (3) in the subsample of observations between 2014 and 2020.

The results are presented in column (2) of Table 12. In contrast to the explanation that family firms may have more misconduct and thus attract more regulatory attention, the significantly negative coefficients show that family firms are associated with a decrease in the likelihood of receiving comment letters.²⁴

5.6.3 Goodwill impairment

Goodwill impairment is closely linked to acquisition-related financial outcomes. It is a proxy for failure in post-acquisition integration (Cadman et al., 2014; Ramanna & Watts, 2012)

²¹ Results are similar if we alternatively define the variable as actual performance marginally exceeds the committed performance by less than 10%. The untabulated results are available upon request.

²² Since 2014, the issuance of comment letters becomes a substantial supervisory mechanism in China. It may be more effective to use comment letters to proxy for corporate misconduct in China as the application of comment letters is stricter than in other nations such as the United States or Australia, and Chinese comment letters frequently draw attention to mergers and acquisitions, earnings management, tunneling, and assets impairment (Hu et al., 2022).

²³ To identify performance commitment-related comment letters, we conduct a search of comment letters listed for each set of correspondence of the following words: "performance commitment", "committed performance", and "actual performance". ²⁴ Untabulated tests show that results hold if we use the natural logarithm of one plus the number of received performance commitment-related comment letters.

and indicates a decline in long-term profitability (Wangerin, 2019). Successful fulfillment entails the realization of ex-ante expectations as actual performance matches the anticipation and thus reduces the likelihood of goodwill impairment.

To measure goodwill impairment, we construct a dummy variable *GWI* which equals one if a firm records goodwill impairment in a given year, and zero otherwise. We re-estimate Eq (3) in the subsample of firms with a non-zero goodwill balance at the beginning of the year (Li & Sloan, 2017; Ramanna & Watts, 2012).

The results are presented in column (3) of Table 12. The significantly negative coefficient of *Family* implies that family ownership reduces the likelihood of goodwill impairment. Overall, our results show that family firms are not associated with more earnings manipulations, potential misconduct, or goodwill impairment than nonfamily firms, which is inconsistent with the alternative explanation.

6. Conclusion and Discussion

This study examines the role of family firms in the fulfillment of contingent contracts in M&As. We find that family firms have a higher likelihood of fulfilling contingent contracts in M&As than nonfamily firms. This finding is consistent with our main hypothesis that family firms emphasize the preservation of SEW and have lower tendencies to exploit minority shareholders' interests, which leads to their better performance of contingent contracts. This empirical pattern is robust to the difference-in-differences (DiD) analyses, Heckman two-step procedure, propensity score matching method, alternative sample constructions, alternative definitions of key variables, alternative sets of fixed effects, and additional control variables.

We further find that this positive effect of family ownership is more pronounced for family firms with stronger SEW and family firms with poor corporate governance. In addition, this relationship is stronger for riskier M&As, demonstrating that the elevated information asymmetry highlights the role of SEW in aligning interest between the family and the firm. Moreover, mechanism tests show that family firms achieve superior performance through spending more effort in the post-deal process to enhance integration and monitor target firms than non-family firms. Finally, we perform a battery of tests and find that family firms' outperformance is not driven by excessive earnings manipulation.

The results provide important theoretical and practical implications. First, our findings extend the literature on M&As using contingent contracts. Previous research primarily examines the consequence of *including* contingent provisions in M&As using short-term stock market reaction (Kohers & Ang, 2000), financial operating performance (Barbopoulos & Sudarsanam, 2012), or litigation risk (Battauz et al., 2021), but keeps silent on whether the contracts are fulfilled. Fulfilling organizational commitments not only affects individual firms but also impacts business ethics in the capital market (Doty & Kouchaki, 2015). We highlight the impact of ownership and document the positive effect of family firms on fulfillment and business ethics due to their long-term orientation and reputation concerns.

Second, the study enriches the literature on family firms' ethical performance. Previous literature shows that family firms have more charitable donations (Dyer & Whetten, 2006), better environmental protection (Berrone et al., 2010; Dou et al., 2019), more employee protection (Kang & Kim, 2020), and better information disclosure (Martin et al., 2016) than nonfamily firms. However, the search for a direct measure of corporate ethics remains a key issue in the business ethics field (Toro-Arias et al., 2021) as traditional measures often depend on subjective judgment and may not uncover a firm's true ethical intentions. For example, CSR activities might be strategically used to conceal misbehaviors, and symbolic environmental actions may have a detrimental effect on environmental quality (Walker & Wan, 2012). In contrast, contingent contracts provide an objective and precise measure of a firm's reliability by fulfilling their explicit promises. Moreover, firms may place varying degrees of importance on CSR, resulting in selective adoption of such practices (McWilliams & Siegel, 2001), but

performance commitment is crucial for a firm's immediate business and survival. Violation of performance commitment can result in severe damage to business relationships, loss of trust, and potential financial disruptions. Thus, our findings provide more direct evidence for family business ethics (Vazquez, 2018) and the moral insurance of family firms (Dyer & Whetten, 2006), which expands our understanding of family ownership.

Third, our study echoes the call by Dau et al. (2022) for further research on the informal institution in emerging markets where it may play a more prominent role in facilitating business transactions. We support their proposition by showing that family firms' reputational and longevity concerns can help firms fulfill their performance commitment and enhance business ethics. Moreover, we respond to the call for more research on the intersection between family firms and business ethics (Vazquez, 2018) by showing that family firms' reputational concern facilitates ethical behaviors.

Our study also has several practical implications. First, whether firms adhere to investment prospectuses has important consequences on investors' wealth. Our findings that family firms better keep organizational commitments and protect minority shareholders can help investors predict the outcome of contingent contracts from the aspect of ownership structure. Moreover, we expect that our research findings can be generalized to family firms in other countries where collectivism and familism prevail, such as Singapore, Japan, and Korea (Chen et al., 2021).

Second, companies should put more effort into fulfilling stakeholder expectations by integrating stated commitments and actual practice, as developing commitment-keeping competence can help companies advance their interests as well as build trust with other stakeholders (Doty & Kouchaki, 2015). To achieve the dual benefit, in light of our findings, nonfamily firms should put more attention on reputation preservation and investment horizon.

Third, our findings imply that informal institutions can serve as supplementing

mechanisms for the legal system to promote business ethics and serve the public interest (Dau et al., 2022). For example, family-based social contracts may be governance substitutes in underdeveloped formal institutions. To remedy the current low-trust business environment caused by unfulfilled commitments (Doty & Kouchaki, 2015), policymakers may design policies that evoke reputational concern to steer companies into voluntary ethical behaviors. In addition, regulators might allocate more resources to monitor nonfamily firms to improve regulatory efficiency, as family firms may have higher compliance in keeping organizational commitments.

The paper has limitations that can provide avenues for future research. First, like many studies on family firms (Chrisman et al., 2012; Gómez-Mejía et al., 2007; Lumpkin & Brigham, 2011), we use SEW as a theoretical construct without direct measurement. Nonetheless, our moderator analyses use coarse measurement to measure the level of family firms' SEW and provide empirical evidence that stronger SEW leads to stronger family-based ethical performance. Future research may use surveys, interviews, or text analysis to address this limitation (Sun et al., 2024).

Second, we use a sample of publicly traded family firms to test the effect of family ownership on the fulfillment of contingent contracts in M&As, while M&A performance in private family firms may differ. In this sense, our findings might be limitedly generalizable to private family firms. In addition, as China differs from developed countries in terms of institutional environments, the extent to which our results are generalizable to private firms or firms based in other countries requires further study.

Third, due to data availability and the decisive effect acquirers have on targets in the M&As (Kohers & Ang, 2000), we examine the impact of family acquirers on the fulfillment of contingent contracts. However, the target firms' ownership structure may also play a role. Future research may use surveys or interviews to address this data limitation and explore the

role of target firms' ownership status in M&As.

APPENDIX

	Year													
Industry	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total	%
А	0	0	2	0	4	5	12	10	14	12	11	7	77	1.18
В	0	0	2	7	14	16	14	20	22	18	15	10	138	2.11
C1	0	0	1	4	6	12	28	38	45	43	30	19	226	3.45
C2	1	0	2	10	41	67	139	159	167	180	127	102	995	15.20
C3	0	2	9	29	59	142	304	424	492	457	359	213	2,490	38.05
C4	0	1	2	2	3	10	27	41	41	24	12	7	170	2.60
D	0	0	0	1	1	7	11	26	24	26	15	20	131	2.00
Е	0	0	0	3	3	9	32	38	31	23	17	14	170	2.60
F	1	1	1	7	12	17	23	47	68	64	41	31	313	4.78
G	0	0	0	1	2	5	8	14	17	18	9	9	83	1.27
Н	0	0	0	0	0	2	2	1	0	0	0	0	5	0.08
Ι	1	1	3	14	40	83	145	213	195	142	105	61	1,003	15.33
Κ	1	0	1	2	3	2	15	13	22	20	17	9	105	1.60
L	0	0	1	5	8	23	28	27	34	17	18	13	174	2.66
М	0	0	0	0	1	8	12	15	12	27	34	24	133	2.03
Ν	0	0	0	1	2	8	11	9	9	15	16	13	84	1.28
Q	0	0	0	0	0	0	0	0	0	0	7	3	10	0.15
R	0	0	0	3	9	20	33	43	40	30	22	14	214	3.27
S	1	1	1	0	0	1	3	5	4	4	3	0	23	0.35
Total	5	6	25	89	208	437	847	1,143	1,237	1,120	858	569	6,544	
%	0.08	0.09	0.38	1.36	3.18	6.68	12.94	17.47	18.90	17.11	13.11	8.69		100.00

Appendix 1. Sample distribution by year and industry

This table presents the sample distribution by year and industry. Industries are categorized as the following: A agriculture, forestry, husbandry and fishery, B mining, C0 food and beverage, C1 textile, garment manufacturing, and products of leather and fur, C2 wood and furniture, C3 papermaking and printing, C4 petroleum, chemical, plastics, and rubber products, D production and supply of electricity, steam and tap water, E architectural service and construction, F wholesale and retail, G information technology, H wholesale and retail, I Software and IT services, K social services, L communication and culture, M conglomerates, N water conservancy, environment, and public facilities management, Q public health and healthcare, R culture, sports and entertainment, S conglomerates.

Dependent variable Fulfill A dummy variable that denotes the outcome of performance commitment fulfillment, which equals one if the realized profits meet or beat (i.e., larger than or equal to) the promised figures, and zero otherwise. Independent variable A dummy variable that denotes the family firm, which equals one if the firm meets one of the following criteria, and zero otherwise: (1) the ultimate controller of the firm is one or more individuals; and (2) the ultimate controller is one or more persons related by blood or marriage. Control variable Size The natural logarithm of the book value of total assets. Roe The ratio of total debts to total assets. The firm's market value divided by total assets. Roe The firm's market value divided by total assets. Adummy variable that equals one if the CEO also works as the chair of the board, and zero otherwise. Dual A dummy variable that equals one if the CEO also works as the chair of the board, and zero otherwise. Fstholding Precentage of shares held by the largest shareholder. Age The natural logarithm of the deal transaction value. Proportion of independent directors to the total number of directors on the board. Indep Proportion of market value divided by total assets. Adummy variable that equals one if the deal is settled in stocks only, and zero otherwise. Pronention of independent directors to the total number	Variable	Definition
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	M&A riskiness	
<i>Unrelated party</i> A dummy variable that denotes unrelated party transactions, which equals one if the	Unrelated party	A dummy variable that denotes unrelated party transactions, which equals one if the
<i>transactions</i> acquirer and the target do not meet any of the following criteria and zero otherwise:	transactions	acquirer and the target do not meet any of the following criteria and zero otherwise:
(1) the acquirer is the parent company of the target or vice verse: (2) both the		(1) the acquirer is the parent company of the target or vice versa: (2) both the
acquirer and the target are owned by a same company: (3) the acquirer is a major		acquirer and the target are owned by a same company. (3) the acquirer is a major
shareholder of the target or vice verse (Λ) the acquirer has a joint venture or		shareholder of the target or vice versa: (A) the acquirer has a joint venture or
significant influence on the target or vice versa; (5) the acquirer's major		significant influence on the target, or vice versa: (5) the acquirer's major

shareholder, manager, or their relatives is the target's major shareholder or manager

or relatives, or vice versa.

Appendix 2. Variable definition

Cross-industry transactions	A dummy variable that denotes cross-industry transactions, which equals one if the acquirer and the target are from different industries listed in the 2012 Chinese Securities Regulatory Commission (CSRC) Industry Classification, and zero
Machaniam tosts	otherwise.
Target rog	The target firm's net profit divided by total assets in the year prior to the acquisition
Target lev	The target firm's total debt divided by total assets in the year prior to the acquisition.
Setcommit	The annual committed performance divided by the realized profit of the target firm in the year prior to the acquisition. Annual committed performance is calculated as the yearly average of the total committed profit over the performance commitment period.
<i>Appoint</i>	A dummy variable that equals one if the acquirer has its executives serve concurrently as managers of the target firm during committed years, and zero otherwise. We hand-collect data from Qichacha database, a widely accepted search engine for business and personnel information in China (Guo et al., 2023). For each target firm in our sample, we examine the career experiences of its executives (e.g., CEOs, managers, board of directors, CFOs, COOs) to locate information related to dual appointment from the acquiring and acquired companies during the commitment performance period, such as the name of companies, name of executives, job titles, year of appointment, and year of resignation.
Further analyses	
Marginal	A dummy variable that denotes firms that marginally beat the performance benchmark, which equals one if the ratio of actual performance minus committed performance deflated by committed performance is between zero and five percent, and zero otherwise.
GWI	A dummy variable that denotes goodwill impairment, which equals one if a firm records goodwill impairment in a given year, and zero otherwise.
Inquiry	A dummy variable that denotes the recipient of comment letters, which equals one if a company receives performance commitment-related comment letters, and zero if otherwise.
Additional robustn	ess variables
Fulfill_year	A dummy variable that equals one if all performance targets are fulfilled for the firm in a given year, and zero otherwise.
Female	Proportion of female directors on the board, calculated as the ratio of the number of female directors over the total number of directors on the board.
Period	The length of the contingent contract, calculated as the number of years of the contingent contract.
Big4	A dummy variable that equals one if the acquiring firm uses a Big Four audit firm, zero otherwise.
Nma	M&A experience, calculated as the natural logarithm of one plus the number of acquisitions including contingent contracts a firm engaged in a given year.
Soe	A dummy variable that equals one if the firm is a state-owned enterprise, and zero otherwise.

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Figure 1 Proposed Theoretical Framework



Notes: This table presents the proposed theoretical framework of the paper.

Figure 2 The impact of receiving state ownership on the family firms' likelihood of fulfilling performance commitments in M&As



Notes: This table presents the impact of receiving state ownership on the family firms' likelihood of fulfilling performance commitments in M&As

Tab	le	1	Sam	ple	sel	lection,	summary	statistics,	and	univariate	analysis
D			C	1							

Panel A: Samp	le selection p	orocess								
						Num. of Obs.				
Firm-year level										
2009 to 2020 in	8,865									
Exclude:										
Observations	Observations pertaining to the financial industry									
Observations	whose perfor	rmance target is no	ot measured by p	profit		-29				
Observations	whose data o	on performance con	mmitment fulfil	lment is missing		-625				
Observations	whose target	firms are publicly	listed compani	es		-4				
Observations	with transact	ion status of ST of	r *ST			-839				
Observations	with negative	e net assets or equ	ity			-5				
Observations	whose data r	equired to measure	e control variable	les are missing		-538				
Final sample (U	nique firms)					6,544 (1,274)				
Panel B: Summ	nary statistic	S								
	Ν	Mean	S.D.	P25	P50	P75				
Fulfill	6,544	0.697	0.459	0	1	1				
Family	6,544	0.163	0.369	0	0	0				
Size	6,544	22.293	1.038	21.574	22.197	22.893				
Lev	6,544	0.413	0.180	0.269	0.410	0.539				
Roe	6,544	0.043	0.526	0.038	0.072	0.113				
Tobin's q	6,544	2.708	1.919	1.568	2.123	3.159				
Abacc	6,544	0.088	0.166	0.023	0.053	0.100				
Dual	6,544	0.322	0.467	0	0	1				
Fstholding	6,544	31.143	14.349	20.020	28.850	40.045				
Age	6,544	2.133	0.674	1.610	2.080	2.710				
Indep	6,544	0.374	0.051	0.333	0.333	0.429				
FCF	6,544	-0.002	0.130	-0.047	0.014	0.064				
Analyst	6,544	8.217	9.009	1	5	12				
Deal_value	6,544	19.713	1.548	18.742	19.769	20.723				
Pmt_method	6,544	0.219	0.414	0	0	0				
Panel C: Univa	riate analysi	is								
		Family = 1	Fa	mily = 0	Test of	f difference				
		Mean]	Mean	Mean I	Diff (t-test)				
Fulfill		0.745		0.688	0.0	56***				
N		1065		5479						

This table presents the sample selection process, summary statistics, and univariate analysis of the key variables. Panel A presents the sample selection process. Sample distribution by year and industry is provided in Appendix 1. Panel B presents the summary statistics for the main variables. Panel C presents the univariate analysis of fulfillment in contingent contracts between family firms and nonfamily firms. The sample consists of 6,544 performance commitment-year observations from 2009 to 2020. Variable definitions are provided in Appendix 2. ***, ** and * denote significance at 1%, 5% and 10% level, respectively.

 Table 2 Pearson correlation matrix

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
Fulfill	(1)	1														
Family	(2)	0.045***	1													
Size	(3)	0.061***	0.059***	1												
Lev	(4)	0.010	0.103***	0.515***	1											
Roe	(5)	0.078***	0.024*	0.035***	-0.090***	1										
Tobin's q	(6)	0.099***	-0.043***	-0.415***	-0.326***	0.052***	1									
Abacc	(7)	0.003	-0.004	-0.040***	0.032**	-0.067***	0.005	1								
Dual	(8)	-0.036***	-0.020	-0.140***	-0.081***	0.007	0.092***	0.028**	1							
Fstholding	(9)	0.094***	0.002	0.147***	0.159***	0.044 ***	-0.100***	0.008	-0.032**	1						
Age	(10)	< 0.001	0.210***	0.472***	0.282***	-0.019	-0.182***	-0.018	-0.199***	-0.014	1					
Indep	(11)	-0.025**	-0.017	-0.029**	-0.006	-0.016	0.025**	-0.004	0.095***	0.041***	-0.049***	1				
FCF	(12)	0.066***	0.020	0.009	0.058***	0.132***	0.057***	-0.183***	0.010	0.077***	-0.028**	0.005	1			
Analyst	(13)	0.124***	-0.039***	0.250***	0.003	0.095***	0.149***	-0.003	0.025**	-0.035***	-0.066***	-0.013	0.068***	1		
Deal_value	(14)	0.109***	0.074***	0.423***	0.159***	0.020	-0.115***	0.050***	-0.090***	0.068***	0.306***	-0.061***	-0.078***	* 0.060***	1	
Pmt_method	(15)	0.113***	0.045***	0.230***	0.069***	0.039***	-0.095***	0.022*	-0.121***	0.131***	0.235***	-0.047***	-0.045***	* 0.011	0.292***	1

This table presents the Pearson correlation matrix between main variables. The sample consists of 6,544 performance commitment-year observations from 2009 to 2020. Variable definitions are provided in Appendix 2. ***, ** and * denote significance at 1%, 5% and 10% level, respectively.

	(1)	(2)
	Fulfill	Fulfill
Family	0.167***	0.167***
	(2.721)	(2.611)
Size		0.036
		(0.981)
Lev		0.045
		(0.263)
Roe		0.079
		(1.033)
Tobin's q		0.078***
		(3.979)
Abacc		-0.040
		(-0.334)
Dual		-0.069
		(-1.354)
Fstholding		0.006***
		(3.570)
Age		-0.067
		(-1.501)
Indep		-0.432
		(-0.942)
FCF		0.619***
,		(3.691)
Analyst		0.014***
		(4.590)
Deal_value		0.082***
		(4./06)
Pmt_method		0.240^{***}
	0.177	(3.511)
Constant	0.1/7	-2.441^{***}
Le ducteur EE	(0.632) Voc	(-3.021) Vac
		I CS Vac
Observations	1 CS 6 544	1 CS 6 544
$P_{\text{Seudo}} \mathbb{R}^2$	0.025	0,044

Table 3 Main regression results

This table presents main regression results. The dependent variable Fulfill is an indicator that equals one if the performance commitment is fulfilled, and zero otherwise. The key independent variable is the indicator variable *Family*, which equals one if the firm is a family firm, and zero otherwise. The sample consists of 6,544 performance commitment-year observations from 2009 to 2020. The z-statistics reported in parentheses are based on standard errors clustered by firms. Variable definitions are provided in Appendix 2. ***, ** and * denote significance at 1%, 5% and 10% level, respectively.

Panel A: The impact of founder family	under family firms on performance commitment fulfillment					
	Dependent Variable: Fulfill					
	(1)	(2)				
	Founder family firms	Non-founder family firms				
Family	0.199***	-0.135				
2	(3.907)	(-0.983)				
Constant	-2.538***	-2.809***				
	(-4.319)	(-4.429)				
Control Variables	Yes	Yes				
Industry FE	Yes	Yes				
Year FÉ	Yes	Yes				
Observations	6,443	5,580				
Pseudo R ²	0.064	0.067				
P-value of difference	0.	.079				
Panel B: The impact of born family fin	rms on performance commitme	ent fulfillment				
¥	Dependent V	ariable: Fulfill				
	(1)	(2)				
	Born family firms	Non-born family firms				
Family	0.280***	0.045				
2	(4.046)	(0.662)				
Constant	-2.815***	-2.605***				
	(-4.546)	(-4.336)				
Control Variables	Yes	Yes				
Industry FE	Yes	Yes				
Year FE	Yes	Yes				
Observations	5,960	6,063				
Pseudo R ²	0.068	0.064				
P-value of difference	0.	061				
Panel C: The impact of family dual lea	adership on performance com	nitment fulfillment				
	Dependent V	ariable: Fulfill				
	(1)	(2)				
	Family dual leadership	Non-family dual leadership				
Family	0.283***	0.076				
	(3.579)	(1.278)				
Constant	-2.719***	-2.674***				
	(-4.352)	(-4.488)				
Control Variables	Yes	Yes				
Industry FE	Yes	Yes				
Year FE	Yes	Yes				
Observations	5,836	6,187				
Pseudo R ²	0.066	0.066				
P-value of difference	0.	074				
T1' + 11 + 41 + 60 + 60 + 100	21 - 1 CCEW ($4 \qquad 4 \qquad 6 \qquad 1 \qquad 1 \qquad 4 \qquad 1 \qquad 1 \qquad 1 \qquad 1 \qquad 1 \qquad 1 \qquad 1$				

Table 4 Effect of family firms' level of SEW on fulfillment

This table presents the effect of family firms' level of SEW on contingent contract fulfillment. We use founder family firms, born family firms, and family dual leadership to measure the level of SEW. Panel A presents the results about how founder family firms and non-founder (descendent) family firms have different effects on the fulfillment of performance commitments. We define a firm as a founder family firm if it is currently managed by the founding generation. The number of generations of family owners increases by one per each time descendants inherit the firm. Panel B presents the results comparing born family firms and non-born (made) family firms. If a firm was classified as a family firm before IPO, we consider it to be a born family firm. Panel C presents the effect of family dual leadership on the fulfillment of performance commitments. Family dual leadership is defined as one if a family member serves as both the manager and the chairperson in a family firm, and zero otherwise. P-value of difference presents whether the coefficients on the variable of interest, *Family*, are significantly different between the two subgroups reported in the corresponding columns. The z-statistics reported in parentheses are based on standard errors clustered by firms. Variable definitions are provided in Appendix 2. ***, ** and * denote significance at 1%, 5% and 10% level, respectively.

Panel A: Heterogeneity in ins	stitutional ownership and family firm's p	erformance fulfillment
	Dependent Va	riable: Fulfill
	(1)	(2)
	Institutional ownership	Institutional ownership
	<= sample median	> sample median
Family	0.253***	0.107
	(3.540)	(1.544)
Constant	-1.749*	-2.316***
	(-1.806)	(-2.973)
Control Variables	Yes	Yes
Industry FE	Yes	Yes
Year FE	Yes	Yes
Observations	3298	3246
Pseudo R ²	0.082	0.080
P-value of difference	0.0	60
Panel B: Heterogeneity in bo	ard committee involvement and family fi	rm's performance fulfillment
	Dependent Va	riable: Fulfill
	(1)	(2)
	# of board committees and	# of board committees or
	meetings <= sample median	meetings > sample median
Family	0.195***	0.009
	(3.404)	(0.077)
Constant	-1.801**	-2.731***
	(-2.283)	(-2.944)
Control Variables	Yes	Yes
Industry FE	Yes	Yes
Year FE	Yes	Yes
Observations	3624	2920
Pseudo R ²	0.074	0.076
P-value of difference	0.0	40

Table 5 Effect of family firms on fulfillment under different corporate governance

This table presents the effect of family firms on fulfillment under different corporate governance. We use the institutional ownership and the number of board committees and meetings of firms to proxy for the quality of corporate governance. Panel A uses institutional ownership to sort family firms into below and above industry-year median groups, while Panel B uses the number of board committees and meetings as the sorting variable. P-value of difference presents whether the coefficients on the variable of interest, *Family*, are significantly different between the two subgroups reported in the corresponding columns. The z-statistics reported in parentheses are based on standard errors clustered by firms. Variable definitions are provided in Appendix 2. ***, ** and * denote significance at 1%, 5% and 10% level, respectively.

Panel A: Heterogeneity in un	related party transactions and family fir	m's performance fulfillment
	Dependent Va	riable: Fulfill
	(1)	(2)
	Unrelated party transactions	Related party transactions
Family	0.268***	0.058
-	(3.971)	(0.790)
Constant	-3.423***	-0.464
	(-3.864)	(-0.548)
Control Variables	Yes	Yes
Industry FE	Yes	Yes
Year FE	Yes	Yes
Observations	3721	2823
Pseudo R ²	0.071	0.078
P-value of difference	0.0	30
Panel B: Heterogeneity in cro	oss-industry transactions and family firm	's performance fulfillment
	Dependent Va	riable: Fulfill
	(1)	(2)
	Cross-industry transactions	Inter-industry transactions
Family	0.253***	0.119**
·	(2.792)	(2.019)
Constant	-1.265	-2.717***
	(-1.244)	(-3.679)
Control Variables	Yes	Yes
Industry FE	Yes	Yes
Year FE	Yes	Yes
Observations	2290	4254
Pseudo R ²	0.067	0.076

Table 6 Effect of M&A transactions' risk on fulfillment

This table presents how family firms and nonfamily firms fulfill contracts differently under riskier transactions. We use unrelated party transactions and cross-industry transactions to proxy for riskier transactions. Panel A presents the differences in fulfillment between family and nonfamily firms in unrelated party transactions and related party transactions. Panel B presents the differences in fulfillment between family and nonfamily firms in unrelated party transactions and related party transactions and inter-industry transactions. P-value of difference presents whether the coefficients on the variable of interest, *Family*, are significantly different between the two subgroups reported in the corresponding columns. The z-statistics reported in parentheses are based on standard errors clustered by firms. Variable definitions are provided in Appendix 2. ***, ** and * denote significance at 1%, 5% and 10% level, respectively.

Panel A: Pre-deal tar	get choosing				
	(1)	(2)	(3)	(4)	
	Target_roa	Target_roa	Target_lev	Target_lev	
Family	-0.009	-0.007	0.010	0.007	
	(-1.065)	(-0.838)	(0.431)	(0.326)	
Constant	0.156***	0.081	0.514***	0.610**	
	(34.589)	(0.759)	(42.135)	(2.495)	
Control Variables	No	Yes	No	Yes	
Industry FE	Yes	Yes	Yes	Yes	
Year FE	Yes	Yes	Yes	Yes	
Observations	1,625	1,625	1,625	1,625	
R ²	0.073	0.138	0.015	0.037	
Panel B: Pre-deal tar	get setting				
		(1)		(2)	
		Setcommit	Se	etcommit	
Family		-0.059		0.044	
-		(-0.346)		(0.267)	
Constant		2.839***		0.896	
		(37.919)		(0.253)	
Control Variables		No		Yes	
Industry FE		Yes		Yes	
Year FE		Yes		Yes	
Observations		1,625		1,625	
R ²		0.052	0.074		
Panel C: Post-deal in	tegration mechanisn	n			
		(1)		(2)	
		Appoint	1	Appoint	
Family		0.289***	0	.269***	
		(3.196)		(2.941)	
Constant		-0.685**		0.248	
		(-2.343)		(0.218)	
Control Variables		No		Yes	
Industry FE		Yes		Yes	
Year FE		Yes		Yes	
Observations		2,328		2,328	
Pseudo R ²	0.047 0.056				

Table 7 Mechanism tests

This table presents evidence from mechanism tests. Panel A tests the pre-deal target choosing mechanism. Target roa (Target lev) is calculated as net profit (total debt) divided by total assets of the target firm in the year prior to the acquisition. Panel B tests the pre-deal target setting mechanism. The dependent variable, Setcommit, is calculated as the annual committed performance divided by the realized profit of the target firm in the year previous to the acquisition. Annual committed performance is measured as the average of the total committed profit over the performance commitment period. We hand-collect information on total assets, total debt, and net profit of target firms in the year previous to acquisition from corporate filings disclosed in CSRC's database. This process leaves us with 1,625 unique acquisition events in Panel A and Panel B due to missing information. Panel C tests the post-deal integration mechanism. Our full sample is aggregated to 2,328 unique acquisition events. Appoint is a dummy variable that takes the value of one if the acquirer designates its executives as members of the target firm's management during the commitment performance period, and zero otherwise. Appointment information is hand-collected from Qichacha database, a widely accepted search engine for business and personnel information in China (Guo et al., 2023). For each target firm in our sample, we examine the career experiences of its executives (e.g., CEOs, managers, board of directors, CFOs, COOs) to locate information related to dual appointment from the acquiring and acquired companies during the commitment performance period, such as the name of companies, name of executives, job titles, year of appointment, and year of resignation. The z-statistics reported in parentheses are based on standard errors clustered by firms. Variable definitions are provided in Appendix 2. ***, ** and * denote significance at 1%, 5% and 10% level, respectively.

Table 8	Difference	e-in-difference	es analyses
---------	------------	-----------------	-------------

Panel A: Difference-in-differences estimation			
	(1)	(2)	
	Fulfill	Fulfill	
Treat	0.586***	0.547***	
	(3.008)	(2.588)	
Post*treat	-0.683***	-0.669***	
	(-3.377)	(-3.088)	
Constant	0.317	0.806	
	(1.280)	(0.455)	
Control Variables	No	Yes	
Industry FE	Yes	Yes	
Year FE	Yes	Yes	
Observations	1,065	1,065	
Pseudo R ²	0.062	0.105	
Panel B: Pre-treatment trend			
	(1)	(2)	
	Fulfill	Fulfill	
Treat \times Year (t-2)	0.012	0.100	
	(0.020)	(0.175)	
Treat \times Year (t-1)	-0.191	-0.124	
	(-0.422)	(-0.294)	
Treat \times Year (t)	-0.352	-0.291	
	(-0.807)	(-0.725)	
Treat × Year (t +1)	-0.980**	-0.930**	
	(-2.113)	(-2.102)	
Treat × Year (t +2)	-1.110**	-0.982**	
	(-2.277)	(-2.127)	
Treat × Year (t +3)	-1.302***	-1.089**	
	(-2.928)	(-2.438)	
Treat	0.726*	0.615	
	(1.789)	(1.625)	
Constant	0.333	0.820	
	(1.352)	(0.424)	
Control Variables	No	Yes	
Industry FE	Yes	Yes	
Year FE	Yes	Yes	
Observations	1,065	1,065	
Pseudo R ²	0.074	0.114	

This table presents evidence from difference-in-differences analyses. Panel A presents regression results from Eq (2). *Post* is an indicator variable equal to one in the year of receiving state ownership (t) and the three years thereafter (t + 1, t + 2, t + 3), and zero otherwise. *Treat* is a dummy variable that equals one if the family firm received state ownership from 2009 to 2020, and zero otherwise (i.e., the control group consists of family firms that never received state ownership). Panel B presents results from pre-treatment trend. We construct five event-time DiD estimators capturing the year of receiving state capital, two years before and three years after receiving state capital *(Treat × Year (t-2), Treat × Year (t-1), Treat × Year (t), Treat × Year (t + 1), Treat × Year (t + 2), Treat × Year (t + 3)*). The z-statistics reported in parentheses are based on standard errors clustered by firms. Variable definitions are provided in Appendix 2. ***, ** and * denote significance at 1%, 5% and 10% level, respectively.

	(1)	(2)
	First-Stage	Second-Stage
	Family	Fulfill
Family	·	0.360***
-		(2.845)
Clan	0.024**	
	(2.479)	
Inverse Mills Ratio		-0.172**
		(-2.448)
Size	-0.149***	0.019*
	(-4.827)	(1.953)
Lev	0.790***	-0.043
	(5.606)	(-0.979)
Roe	0.545***	0.029**
	(4.327)	(2.513)
Tobin's q	0.024	0.018***
	(1.629)	(4.204)
Abacc	0.016	-0.018
	(0.127)	(-0.504)
Dual	0.086*	-0.028**
	(1.942)	(-2.212)
Fstholding	-0.003**	0.002***
	(-2.272)	(5.138)
Age	0.430***	-0.053***
	(12.312)	(-3.112)
Indep	-0.315	-0.124
	(-0.794)	(-1.099)
FCF	0.069	0.188***
	(0.429)	(4.124)
Analyst	-0.002	0.005***
	(-0.858)	(6.198)
Deal_value	0.036**	0.025***
	(2.402)	(5.661)
Pmt_method	-0.008	0.072***
	(-0.150)	(4.787)
Constant	0.657	-0.379*
	(0.995)	(-1.899)
Industry FE	Yes	Yes
Year FE	Yes	Yes
Observations	6,544	6,544
Pseudo R ²	0.103	0.065

Table 9 Heckman two-step model

This table presents the results of the Heckman two-step model. Column (1) reports the result of first-stage regression using *Family* as the dependent variable. The exogenous variable *Clan* is calculated as the natural logarithm of one plus the number of genealogies per million people in the city where the firm is located, and other variables are used as determinants of *Family*. Column (2) presents the second-stage regression with the performance fulfillment outcome *Fulfill* as the dependent variable. *Fulfill* is an indicator that equals one if the performance commitment is fulfilled, and zero otherwise. The key independent variable is the indicator variable *Family*, which equals one if the firm is a family firm, and zero otherwise. The z-statistics reported in parentheses are based on standard errors clustered by firms. Variable definitions are provided in Appendix 2. ***, ** and * denote significance at 1%, 5% and 10% level, respectively.

Panel A: Matched sample covariance balance					
	Mean		Diffe	rence	
	Treated (Family=1)	Control (Family=0)	Mean	p> t	
Size	22.438	22.444	-0.006	0.903	
Lev	0.454	0.464	-0.010	0.191	
Roe	0.072	0.068	0.004	0.652	
Tobin's q	2.498	2.438	0.060	0.446	
Abacc	0.086	0.079	0.007	0.366	
Dual	0.300	0.306	-0.006	0.794	
Fstholding	31.216	31.086	0.130	0.843	
Age	2.447	2.416	0.031	0.331	
Indep	0.372	0.373	-0.001	0.481	
FCF	0.004	0.005	-0.001	0.883	
Analyst	7.487	6.856	0.631	0.100	
Deal value	19.969	19.917	0.052	0.440	
Pmt method	0.263	0.260	0.003	0.846	
Observations	1028	1967			
Panel B: Regression	n results using matche	d sample			
		(1)	(2)		
		Fulfill	Fulfill		
Family		0.145**		0.144**	
		(2.132)	(2.104)		
Constant		0.264		-1.559	
		(0.923)		(-1.616)	
Control Variables		No	Yes		
Industry FE		Yes		Yes	
Year FE		Yes		Yes	
Observations		2,995		2,995	
Pseudo R ²		0.030	0.075		

Table 10 Propensity score matching (PSM) method

This table presents the results of the propensity score matching (PSM) method. We estimate the propensity of family firm status from a probit regression of the treatment indicator (*Family*) on the same matching variables as in the first step of Heckman model in Table 9. For brevity, these results are not reported. We perform nearest-neighbor propensity-score matching with replacement using a standard tolerance (caliper 0.005) and allowing for three matches per treated firm. Panel A presents the difference in the mean values of firm characteristics in the matched sample. Panel B re-estimates the main regression in the matched sample. The key independent variable is *Family*, which equals one if the firm is a family firm, and zero otherwise. The dependent variable is *Fulfill*, which is an indicator that equals one if the performance commitment is fulfilled, and zero otherwise. The z-statistics reported in parentheses are based on standard errors clustered by firms. Variable definitions are provided in Appendix 2. ***, ** and * denote significance at 1%, 5% and 10% level, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)
	Fulfill year	Fulfill	Fulfill	Fulfill	Fulfill	Fulfill
Family	0.192***	0.326***	0.182***	0.154*	0.167**	0.302***
·	(3.052)	(4.529)	(2.713)	(1.927)	(2.557)	(4.454)
Size	0.016	-0.019	0.038	0.033	0.030	0.002
	(0.434)	(-0.438)	(1.024)	(0.903)	(0.793)	(0.063)
Lev	-0.110	0.230	0.041	0.054	0.047	0.030
	(-0.659)	(1.241)	(0.240)	(0.321)	(0.278)	(0.180)
Roe	0.063	1.024***	0.079	0.080	0.088	0.076
	(0.963)	(5.228)	(1.030)	(1.046)	(1.213)	(1.025)
Tobin's q	0.049***	0.055***	0.078***	0.078***	0.073***	0.078***
	(2.823)	(2.803)	(3.986)	(4.006)	(3.733)	(4.063)
Abacc	0.137	0.098	-0.040	-0.041	-0.081	-0.032
	(1.167)	(0.742)	(-0.341)	(-0.347)	(-0.633)	(-0.278)
Dual	-0.062	-0.010	-0.070	-0.068	-0.065	-0.029
	(-1.141)	(-0.190)	(-1.370)	(-1.333)	(-1.271)	(-0.563)
Fstholding	0.009***	-0.000	0.006***	0.006***	0.006***	0.006***
	(4.477)	(-0.015)	(3.506)	(3.561)	(3.482)	(3.055)
Age	-0.024	-0.215***	-0.065	-0.055	-0.067	-0.133***
	(-0.565)	(-4.087)	(-1.452)	(-1.241)	(-1.487)	(-2.867)
Indep	-0.302	-0.497	-0.436	-0.469	-0.443	-0.321
	(-0.628)	(-0.975)	(-0.950)	(-1.017)	(-0.941)	(-0.708)
FCF	0.370**	0.301*	0.625***	0.628***	0.638***	0.587***
	(2.368)	(1.675)	(3.730)	(3.743)	(3.857)	(3.496)
Analyst	0.013***	0.013***	0.014***	0.014***	0.015***	0.015***
	(4.086)	(3.916)	(4.546)	(4.587)	(4.655)	(4.967)
Deal_value		0.115***	0.082***	0.083***	0.086***	0.094***
		(5.956)	(4.668)	(4.714)	(4.858)	(5.132)
<i>Pmt_method</i>		0.210***	0.240***	0.236***	0.247***	0.196***
		(2.709)	(3.509)	(3.441)	(3.600)	(2.883)
Period						-0.004
Г 1						(-0.480)
Female						-0.28/
D = 4						(-1.509)
Blg4						-0.089
Mma						(-0.398)
Nma						(2, 108)
Soc						(2.190)
500						(3.548)
Constant	-0.467	-1.440	2 168***	2 382***	-2 030*	(3.3+6)
Constant	(-0.575)	(-1.573)	(_3 048)	(-2.302)	(_1 806)	(-2.431)
Industry FF	(-0.373) Yes	(-1.575) Yes	(-3.040) Ves	(-2.973) Ves	(-1.000) No	(-2.731) Yes
Year FE	Ves	Ves	Ves	Ves	No	Ves
Year*Industry	1 05	100	105	100	110	105
FE	No	No	No	No	Yes	No
Observations	4.212	4,930	6.544	6.544	6.544	6.544
Pseudo/Adi R ²	0.045	0.088	0.065	0.064	0.085	0.071

Table 11 Additional robustness tests

This table presents the results of additional robustness tests including alternative samples, alternative definitions of family firms, alternative sets of fixed effects, and additional control variables. Column (1) reports the results using a sample aggregated at the firm-year level. Column (2) reports the results using an alternative sample that excludes SOEs. Column (3) redefines family firms in a stricter way as firms with over 10% outstanding shares controlled by the controlling family. Column (4) redefines family firms as firms whose ultimate controller is one or more persons related by blood or marriage. Column (5) controls for year-industry fixed effects using the interaction of year and industry dummies. Column (6) addresses the omitted variable concern by controlling for additional control variables. The z-statistics reported in parentheses are based on standard errors clustered by firms. Variable definitions are provided in Appendix 2. ***, ** and * denote significance at 1%, 5% and 10% level, respectively.

	(1)	(2)	(3)
	Marginal	Inquiry	ĜŴI
Family	0.007	-0.243**	-0.517***
•	(0.102)	(-2.521)	(-3.674)
Size	-0.063*	-0.115*	0.063
	(-1.646)	(-1.905)	(0.856)
Lev	-0.475***	0.405*	0.021
	(-2.644)	(1.815)	(0.071)
Roe	-0.001	-0.121	-0.176
	(-0.021)	(-1.471)	(-1.049)
Tobin's q	-0.072***	0.042*	-0.088**
	(-4.313)	(1.937)	(-2.467)
Abacc	0.136	0.531***	-0.429*
	(1.128)	(3.546)	(-1.847)
Dual	0.023	0.041	0.087
	(0.416)	(0.580)	(0.811)
Fstholding	-0.006***	-0.010***	-0.008**
0	(-3.071)	(-3.676)	(-2.137)
Age	0.001	-0.066	0.192**
0	(0.031)	(-1.228)	(2.182)
Indep	0.425	0.464	0.525
	(0.917)	(0.719)	(0.594)
FCF	-0.209	0.611***	-0.426
	(-1.026)	(2.702)	(-1.301)
Analyst	-0.003	-0.010**	-0.002
-	(-1.062)	(-2.200)	(-0.371)
Deal Value	0.052**	0.108***	-0.032
—	(2.527)	(5.048)	(-1.128)
Pmt Method	-0.063	-0.132*	-0.261**
—	(-0.888)	(-1.863)	(-2.356)
Constant	0.203	-0.212	-1.420
	(0.255)	(-0.175)	(-0.872)
Industry FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Observations	4,564	6,211	4,289
Pseudo/Adjusted R ²	0.039	0.08	0.103

Table 12 Further analyses

This table presents further evidence from fulfillment ratio, comment letters, and goodwill impairment, respectively. *Marginal* equals one if the actual performance marginally exceeds the committed performance by less than 5%, and zero otherwise. We limit our sample to firms with successful fulfillment and report the results in column (1). Column (2) presents further evidence from comment letters. *Inquiry* is a dummy variable that equals one if a company is the recipient of performance commitment-related comment letters, and zero if otherwise. We limit our sample to observations between 2014 and 2020 as conversations in comment letters become public since 2014. Column (3) presents results from goodwill impairment. *GWI* is a dummy variable that equals one if a firm records goodwill impairment in a given year, and zero otherwise. Following protocols (Li & Sloan, 2017; Ramanna & Watts, 2012), we limit our sample to firms with a positive goodwill balance at the beginning of the year. The z-statistics reported in parentheses are based on standard errors clustered by firms. Variable definitions are provided in Appendix 2. ***, ** and * denote significance at 1%, 5% and 10% level, respectively.