

Three Essays on Family Firms and Institutional Enforceability

by

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ABSTRACT

Family firms are one of the most prevalent forms of business organization globally, yet their distinctive characteristics, rooted in the founding family's long-term orientation and socioemotional wealth preservation motives, remain poorly understood across institutional environments. While prior research has established that family involvement shapes firm behavior, less attention has been paid to its influence on reputational standing, capital market information environments, and the alignment between market expectations and investment decisions. This dissertation addresses these gaps through three interconnected essays drawing on socioemotional wealth (SEW) theory, agency theory, institutional perspectives, and property rights theory, using international samples of publicly listed firms.

The first essay examines the relationship between reputational risk and firm performance. Family firms exhibit significantly lower reputational risk and are better able to mitigate its negative performance consequences. However, these relationships differ in weak regulatory environments, where reputational risk is positively associated with firm performance and family involvement further amplifies this association, a pattern consistent with a rent-seeking interpretation. The second essay investigates whether and why family involvement shapes sell-side analysts' long-term forecasting behavior. Analysts are more likely to issue long-term growth forecasts for family firms. This association is attenuated when external monitoring and country-level regulatory environments are stronger, supporting an information-demand explanation: analysts' long-term forecasts have greater incremental value when alternative sources of credible long-horizon information are limited. The third essay examines divergence between analysts' long-horizon expectations and family firms' investment decisions. This gap is attributed to a property rights asymmetry that produces a Global North-South divide: strong institutional enforcement fosters

alignment between external expectations and investment, whereas weak enforcement is associated with more conservative investment despite relatively optimistic market forecasts.

Taken together, these essays develop an institutionally grounded explanation for the mixed consequences of family involvement. They identify institutional enforceability not merely as a contextual moderator, but as a central condition shaping whether family-based governance produces reputational discipline, generates demand for long-horizon information, and allows ownership rights to be translated into investment. By showing when SEW, agency, and property-rights logics become salient, this dissertation offers a cumulative framework for understanding family firms across institutional environments.

CONTRIBUTIONS OF AUTHORS

This dissertation is prepared in a grouped manuscript format and comprises three essays. The research questions, theoretical frameworks, empirical designs, data analyses, and writing were developed and completed by Yuying Sun under the supervision of Dr. Zhenyu Wu, with guidance and contributions from Dr. Mingzhi Liu, Dr. Changqiu Yu, Dr. Hanqing “Chevy” Fang, and Dr. James J. Chrisman, as described below.

Chapter 1 develops the overarching framework of the dissertation and connects the three essays through the common theme of institutional enforceability, was written by Yuying Sun. Essay 1 in Chapter 2, *Reputational Risk and Firm Performance: Family versus Nonfamily Firms in Different Regulatory Environments*, was co-authored by Yuying Sun and Dr. Zhenyu Wu. Yuying Sun led the research development, empirical analyses, and took primary responsibility for writing the essay. Dr. Zhenyu Wu contributed to the research development and revisions. This essay has been published in the *Journal of International Financial Markets, Institutions and Money*. Essay 2 in Chapter 3, *Family Firms and Analysts’ Long-Term Growth Forecasts*, was co-authored by Yuying Sun, Dr. Mingzhi Liu, Dr. Zhenyu Wu, and Dr. Changqiu Yu. Yuying Sun led the development of the research, sample construction, empirical analyses, and writing. Dr. Mingzhi Liu, Dr. Zhenyu Wu, and Dr. Changqiu Yu contributed to the development and refinement of the research questions, empirical design, and interpretation of the findings. Essay 3 in Chapter 4, *Priced for Growth, Bound by Enforcement: The Global North-South Divide in Family Firms*, was co-authored by Yuying Sun, Dr. Zhenyu Wu, Dr. Hanqing “Chevy” Fang, and Dr. James J. Chrisman. Yuying Sun led the empirical development, data analysis, and writing of the essay. Dr. Zhenyu Wu, Dr. Hanqing “Chevy” Fang, and Dr. James J. Chrisman contributed to the theoretical development, interpretation of the findings, and refinement of the essay. Chapter 5

integrates the findings of the three essays and presents the general discussion and conclusions, was written by Yuying Sun.

Yuying Sun was responsible for integrating the three essays into the dissertation and developing the common framework that connects them. In addition to the co-authors' contributions described above, Dr. Zhenyu Wu, as supervisor, and Dr. Depeng Jiang, as co-advisor, provided academic guidance and feedback throughout the development of the dissertation.

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CHAPTER 1: GENERAL INTRODUCTION

Family business is a major form of business organization and plays a substantial role in economic activity across both developed and developing economies (Faccio & Lang, 2002; La Porta et al., 1999), yet decades of research have produced no consensus on whether family firms outperform or underperform their nonfamily counterparts, reflecting a lack of consensus that presents deeper theoretical tensions regarding the objectives and decision-making processes of family-controlled firms. Two perspectives have anchored this debate. One stream, rooted in socioemotional wealth (SEW) theory, emphasizes the preservation of non-economic endowments such as family's control, identity, and transgenerational continuity (Berrone et al., 2012; Gómez-Mejía et al., 2007). These motives can encourage reputational stewardship, patient ownership, and long-horizon decisions (Dyer & Whetten, 2006; Miller & Le Breton-Miller, 2005; Zellweger et al., 2012a). Agency theory, by contrast, warns that concentrated family ownership may enable dominant family owners and managers to seize private benefits at the expense of minority investors through tunneling, entrenchment, and rent-seeking, particularly when legal protection for outside shareholders is weak (Claessens et al., 2002; Jensen & Meckling, 1976; Morck & Yeung, 2004). The central puzzle motivating this dissertation is therefore not providing more inconclusive evidence for whether family firms outperform nonfamily firms. This dissertation aims to answer why the same family-control structure can be associated with stewardship and discipline in one setting but with opportunism, defensive behavior, or underinvestment in another.

I address this puzzle by treating family involvement as a source of latent potential whose realization is conditioned by institutional enforceability. Family ownership and management can create the motivation and capacity to protect reputation, behave on a long-horizon basis, preserve control, and appropriate future returns. But potential does not guarantee realization. Comparative institutional research shows that legal enforcement, investor protection, regulatory quality, and the

credibility of formal rules shape whether corporate governance mechanisms work as intended (La Porta et al., 1997, 1998; North, 1990). In this dissertation, institutional enforceability refers to the practical ability to protect claims, verify information, and appropriate returns at an acceptable cost that makes an action worthwhile. This common boundary condition gives the three theoretical lenses distinct roles rather than treating them as competing explanations. SEW theory explains what controlling families seek to preserve. Agency theory explains when concentrated control can create conflicts or private benefits. Property rights theory explains whether control rights can be defended and converted into strategic action. Institutional enforceability determines which of these mechanisms becomes economically consequential in a particular setting. The resulting framework treats the mixed evidence as an expected consequence of conditional description on family firms, rather than as an unresolved contest between inherently ‘good’ and ‘bad’ family involvement.

Chapter 2 examines the outcome layer of this framework and provides answers to the research question whether family involvement disciplines reputational risk and protects firm performance, and whether the findings change with regulatory quality. Drawing on SEW theory and the resource-based view, essay 1 tests more than 5,000 listed firms across 40 countries from 2007 to 2019. Generally, family firms carry significantly lower level of reputational risk and are better positioned to buffer its performance consequences. Crucially, however, I find that this relationship reverses under weak institutional enforceability: where ESG failures carry no reliable regulatory penalty, reputational risk is positively associated with firm performance, showing a pattern consistent with rent-seeking, and family firms amplify rather than attenuate this effect (Morck & Yeung, 2004; Tullock, 1980b). The same ownership structure that generates discipline under strong institutions facilitates regulatory capture under weak ones. Essay 1 therefore establishes the outcome layer of the dissertation that, institutional enforceability does not merely

moderate the magnitude of family effects; in some contexts it shapes and reverses their direction entirely.

Chapter 3 shifts from what family firms do to how capital-market intermediaries interpret family involvement. Essay 2 examines how family involvement shapes sell-side analysts' decision to issue long-term growth forecasts, which can carry distinct informational content and generate stronger market reactions than short-term forecasts (Copeland et al., 2004). Using 317,532 analyst-firm-year observations from 2007 to 2019, I document that analysts have significantly higher possibility to issue long-term growth forecasts for family firms. I distinguish two competing explanations: an information demand channel, in which investors seek long-horizon guidance about family firms' transgenerational strategies, and a cost-reduction channel, in which family firms' superior transparency lowers analyst production costs. My evidence favors the demand channel by providing evidence that the family-firm effect weakens when external monitoring is stronger or when country-level governance is stronger, where investors are positioned in a richer and more credible information environment. Hence, essay 2 forms the expectation layer of the dissertation that, family involvement is read by the market as a long-term signal, but the informational value of that signal depends on the institutional environment.

Chapter 4 examines the final link between external expectations and internal enactments. The first two essays create a natural question. If family involvement is associated with lower reputational risk and with stronger long-horizon expectations, why do family firms often remain conservative in durable investment? Existing work documents that family firms can invest less than their valuations imply and may respond more strongly to threats than to growth opportunities (Anderson et al., 2012; Chrisman & Patel, 2012; Fang, Memili, et al., 2021). These patterns suggest that the optimism analysts embed in long-term forecasts for family firms is not reliably realized in

investment decisions, indicating a valuation-enactment divergence. Essay 3 develops a property-rights explanation for this valuation-enactment divergence (Chrisman et al., 2025; Grossman & Hart, 1986; Hart & Moore, 1990). I argue that this divergence reflects a structural asymmetry between how external observers price family rights and how internal decision-makers bear the costs of enforcing them. I propose that external analysts capitalize the latent exclusion potential of concentrated ownership—the capacity to appropriate long-term returns under frictionless enforcement—while internal decision-makers face the real enforcement costs in practice. When those costs are high, family owners rationally constrain investment to preserve control, even as analysts price in long-term growth potential. Using 89,445 observations from more than 30 countries, I document a Global North-South divide: in high-enforceability environments, investment follows analyst forecasts; in low-enforceability environments, conservative investment persists despite optimistic external expectations. I also find that family management produces alignment in both contexts, because governance through operational oversight does not require the durable capital commitment that exposes ownership-based control to enforcement failure.

Taken together, my three essays advance an institutionally grounded theory of family firms that challenges the generalizability of the preference-based explanations. More precisely, I show that the core predictions of SEW theory, that family firms maintain lower reputational risk, longer investment horizons, and greater governance discipline, are not stable outcomes of stable preferences; they are institutionally conditional realizations of governance potential that obtain only where institutional enforceability is sufficient to discipline reputation, enable independent information production, and make property rights credibly deployable. Where enforceability is weak, I reveal that the same ownership structure is, however, associated with regulatory capture, underinvestment, and the exploitation of enforcement gaps. My argument is that SEW theory and

agency theory are not competing statements of family firm behavior but complementary descriptions of what family firms do under different enforcement regimes, contributing a perspective that integrates institutional economics as the missing link between them. The remainder of the dissertation is structured as follows. Chapter 2 presents my first essay on reputational risk, firm performance, and regulatory environments. Chapter 3 presents my second essay on family firms and analysts' long-term growth forecasts. Chapter 4 presents my third essay on the family firms' valuation-enactment divergence and the Global North-South divide. Chapter 5 presents the general discussion and conclusions.

CHAPTER 2: ESSAY 1¹

Reputational Risk and Firm Performance: Family versus Nonfamily Firms in Different Regulatory Environments

Abstract

This essay explores the relationship between reputational risk and firm financial performance in both family and nonfamily businesses. Relying on an international sample of over 5,000 listed firms from 2007 to 2019, we find that family firms have significantly lower reputational risk, and the impact of reputational risk on financial performance is lower in family firms. However, these findings vary across different macro-regulatory environments. In countries with poor regulatory quality, the effect of reputational risk on performance becomes positive, and family firms strengthen this positive influence. We attribute the findings to socioemotional wealth (SEW) theory and rent-seeking theory.

Keywords: Family firms, Reputational risk, Regulatory environment, Socioemotional wealth (SEW)

¹ This essay has been published in Journal of International Financial Markets, Institutions and Money with Dr. Zhenyu Wu.

2.1 Introduction

Corporate reputation is a valuable resource that can provide sustainable competitive advantages and benefits for firms, such as financial improvement, better investment performance, easier access to capital, and higher productivity (Barney, 1991; Fombrun, 1996; Sarstedt, Wilczynski, and Melewar, 2013; Gatzert, 2015; Deephouse, Newbury, and Soleimani, 2016). Consumers are more willing to purchase products or services from corporations with better reputations, even if they come at higher costs (Fombrun and Shanley, 1990). Studies indicate that a business's reputation is directly associated with its success (Roberts and Dowling, 2002; Lee and Jungbae Roh, 2012).

However, founders and managers can give diverse attention to corporate reputation. The presence of the founding family is crucial for family businesses, which can significantly influence the corporate identity and external perception of the organization (Zellweger et al., 2012a). According to Danes et al. (2008) and Zellweger et al. (2013), family firms often exhibit a long-term goal and a strong identification between the founding family and the firm. Consequently, these businesses prioritize the development of a distinct image and a strong reputation.

Several studies have demonstrated the significance of reputation as a socioemotional wealth (SEW) objective for family enterprises (Dyer and Whetten, 2006; Berrone et al., 2010), as well as its potential to offer added value to both family members and nonfamily stakeholders (Zellweger et al., 2013). SEW theory is formulated as an expansion of the behavioral agency theory, and indicates that family businesses, in contrast to nonfamily businesses, consider not just financial performance but also non-financial goals during their decision-making processes (Gómez-Mejía, Núñez-Nickel, and Gutierrez, 2001; Gómez-Mejía et al., 2007). Therefore, while all firms have motivations to develop and maintain their reputation, family firms tend to have much stronger concern for their reputation risk (Anderson and Reeb, 2003).

A growing number of studies demonstrate the importance of firm reputation risk (Santiago, Pandey, and Manalac, 2019; Jiang et al., 2020; Hasan, Habib, and Zhao, 2022); they mainly examine the performance-related impact of a firm's reputation (such as future stock price crash risk) and a firm's decision-making behavior. The reputation of family firms has been a topic raised by academic studies in a wide range of publications since the mid-1990s, indicating the large interest in this topic. However, only specific elements of reputation have been considered, and are sometimes only examined as a negligible part of other research lines (Sageder, Mitter, and Feldbauer-Durstmüller, 2018).

While some studies examine the determinants of family firms' reputations and provide evidence of how family firms' reputations differ from those of nonfamily firms, the findings on the outcomes induced by family firms' reputations remain ambiguous (Memili et al., 2010; Zellweger et al., 2013). Based on the SEW perspective and behavioral agency theory, we believe that stronger identification within family firms can motivate family stock owners to desire a more favorable corporate reputation. Since a better reputation leads to better financial performance (Santiago, Pandey, and Manalac, 2019), we presume that family firms have lower reputational risk and therefore achieve better firm financial performance.

Using international datasets, this essay investigates the relationship between reputational risk and financial performance in both family and nonfamily businesses. Moreover, several studies show that deficient legal enforcement and poor investor protection can exacerbate family firms' Type II agency problems, that is, problems that arise when majority shareholder interests conflict with the interests of minority shareholders. This situation generates increased reputation risk pressure (Li, 2010; Yang, 2010; Sue, Chin, and Chan, 2013). But exactly how reputation risk impacts family and nonfamily firm performance under a strong or weak legal enforcement and

investor protection remains largely unexamined. As well, there is insufficient research on how regulation affects a firm's reputation risk, so we further test the impact of reputational risk on financial performance for both family and nonfamily firms under different regulatory quality environments.

Applying a three-step model, we find that, in general, a family firm has lower reputational risk, and the impact of reputational risk on firm performance is weakened by family firms. This finding is supported by the existing family business literature, which shows that family firms and more family involvement in firms' operations are related to better reputations (Deephouse and Jaskiewicz, 2013; Jiang et al., 2020), and according to reputation-related studies, better reputation leads to better financial performance (Santiago, Pandey, and Manalac, 2019). Although reputational risk can significantly damage firm performance, our conditional subsample tests indicate that in high and medium regulatory environments where legal enforcement and investor protection are strong, family firms do not have a significant advantage in reducing reputational risk and can only modestly reduce the bad influence of reputational risk. By contrast, in a low regulatory environment where legal enforcement and investment protection are weak, family firms can exploit their advantages and mitigate reputational risk. However, reputational risk plays a totally different role in such a poor regulatory environment, indicating that firm performance is enhanced by higher reputational risk and family firms are able to significantly strengthen this enhancement.

This study makes several contributions to the existing literature on family business and reputation risk, as well as to regulatory practices. First, this study provides empirical evidence supporting the notion that family firms exhibit lower levels of reputational risk than nonfamily firms, and that family firms can effectively manage and lessen the adverse consequences of

reputational risk for overall company performance. Second, although Santiago, Pandey, and Manalac (2019) provide similar evidence in the Philippines, this essay extends their work by expanding the finding to an international scope, and finds significant differences when introducing the macro-regulatory conditions into the functions. Dyer (2018) proposes that the inquiry of whether family enterprises exhibit superior performance compared to nonfamily firms is less crucial in contemporary family business studies; one of the more interesting questions is to find conditions that enable family firms to perform better. Third, this study provides some answers to the new question Dyer raised. Thus, the findings of this essay provide a significant contribution to the existing body of literature for family business research. Specifically, our research sheds light on the interplay between micro-level and macro-level elements and their collective influence on the financial performance of firms. Hence, our experiments in different regulatory environments enrich SEW theory and agency theory by finding significant differences in the results of reputational risk among family and nonfamily firms. Fourth, previous studies which examine the regulatory function of corporate reputation are limited to a single country or region (such as Sue, Chin, and Chan, 2013; Santiago, Pandey, and Manalac, 2019), and lack any comparison between strong and poor regulatory quality environments. Using an international sample, we are able to fill in this gap and compare distinct effects in different regulatory environments in one work. Fifth, this essay provides practical implications for governments and policymakers who are pursuing sustainable development in their countries.

The rest of the essay proceeds as follows: In Section 2.2, we offer a comprehensive review of the existing literature and state our hypotheses. Section 2.3 provides an in-depth description of the data we used and the analysis techniques we employed in the study. Section 2.4 examines the

hypotheses and discusses the empirical results. In Section 2.5, we provide a comprehensive conclusion to the work.

2.2 Literature Review and Hypothesis Development

2.2.1 Corporate Reputational Risk and Family Firms

It is generally accepted that family firms exhibit notable distinctions from nonfamily firms (see the literature review by Prencipe, Bar-Yosef, and Dekker, 2014). According to Chua, Chrisman, and Sharma (1999), family enterprises have distinct characteristics in terms of their vision, strategies, governance, and management due to the direct participation of the controlling family. Gomez-Mejia et al. (2007) develop socioemotional wealth (SEW) theory, which argues that the decisions made by family firms are shaped by their perceived impact on SEW. The SEW perspective is widely applied to explain the various differences found between family and nonfamily enterprises.

Family firms also show a willingness to forgo economic advantages in order to preserve the non-monetary and social worth associated with their family identity. Corporate reputation, which is an important intangible asset related to a firm's competitive position and performance according to the resource-based view (RBV), is also suggested as one of the key elements of SEW (Berrone, Cruz, and Gomez-Mejia, 2012). Ali, Chen, and Radhakrishnan (2007) document that the stronger concern for reputation motivates family firms to report accounting information with higher quality.

Zellweger et al. (2012a) note that family firms are characterized by a long-term orientation; that orientation encourages family members to recognize the firm not as short-term wealth to be consumed during their lifetime but as a legacy to pass on to later generations instead (Dyer and Whetten, 2006). The presence of a long-term focus also encourages family enterprises to actively

cultivate a positive firm reputation, which is seen as an attractive investment opportunity for later generations (Le Breton-Miller and Miller, 2006).

Prior studies show that family businesses do have a more favorable image than nonfamily businesses. For example, family firms receive higher consumer evaluations because they are more customer-oriented, trustworthy, and more concerned about their employees (e.g., Binz et al., 2013; Sageder, Duller, and Mitter, 2015). Comparing family and nonfamily firms within eight countries, Deephouse and Jaskiewicz (2013) find that family firms' outstanding reputations can be attributed to the family's identity with the business, which drives them to be more protective of its reputation. Based on that research, and using a much broader worldwide sample, we propose the first hypothesis as follows:

***H1:** Family firms are associated with lower reputational risk.*

2.2.2 Reputational Risk, Firm Performance, and Family Firms

The resource-based view (RBV) indicates that intangible assets can create competitive advantages and enhance financial performance when they possess the characteristics of scarcity, inimitability, and non-substitutability (Barney, 1991). As one element of firms' intangible value, reputation provides benefits that competitors cannot easily copy from other firms that have earned it (Iwu-Egwuonwu, 2011). Reputation is non-substitutable since it cannot be traded among firms but must be cultivated by each firm (Lee and Jungbae Roh, 2012). Such a unique and irreplaceable asset helps a company develop a competitive advantage that enhances financial performance.

The regular release of social responsibility reports by corporations demonstrates the importance of reputation. Scholars also find that a good reputation is beneficial to attract high-quality workers and investments, as well as to provide general bargaining advantages across a variety of stakeholder connections (see Roberts and Dowling, 2002; Rose and Thomsen, 2004; and

Boyd, Bergh, and Ketchen, 2010). These benefits facilitate the transformation of corporate reputation into firm financial rewards (Barney, 1991). Roberts and Dowling (2002) reveal that firms that enjoy comparatively stronger reputations demonstrate a greater capacity to maintain outperforming profits over time. According to Cao, Myers, and Omer (2012), a better reputation implies higher quality financial reports, and hence reduces the risk for investors. Miller, Eden, and Li (2020) conclude that changes in CSR reputation have predictable, asymmetric, and substantial effects on firm performance, with a negative CSR reputation leading to a decline in profits. There is a well-supported positive correlation between firms' reputation and their performance, and we predict that a firm's performance will decline with higher exposure to reputational risk.

Recall that since families perceive the family business as an extension of themselves (Kashmiri and Mahajan, 2010), they strive to preserve the family business's reputation and therefore face lower reputational risk. Combined with the above proposed negative correlation between reputational risk and firm financial performance, we propose the following hypothesis:

***H2:** While reputational risk generally has a negative influence on firm financial performance, family firms can mitigate the performance decline that is normally caused by the exposure to reputational risk.*

2.2.3 The Regulatory Environment

While commercial activities are restricted by a wide range of mandatory requirements and regulations, processes, and policies (environmental protection rules, employment regulations, taxation, emergency responses, etc.), there are significant variations in regulations across different countries. A number of studies document that country-level macro governance can affect firm-level corporate governance. For example, Barniv, Myring, and Thomas (2005) find that analysts can provide more accurate forecasts in common law countries where corporate governance

mechanisms and investor protection are more effective. Ding, Qu, and Wu (2016) find that cross-country regulatory environments play different roles in moderating family involvement's effect on firm bribery behavior.

The country-level legal framework can influence firms' reputations by forcing corporations to take actions or implement means, such as corporate social responsibility (CSR) programs, to protect shareholders (Blodgett, Dumas, and Zanzi, 2011; Othman, Darus, and Arshad, 2011). Hence, we propose that different country-level regulatory environments can influence the relationships among reputational risk, firm performance, and family involvement.

Several studies find that family firms exhibit a greater degree of sensitivity towards a weak regulatory environment than nonfamily firms do. According to Chen et al. (2014), the impact of a less supportive regulatory environment on sales and workforce growth rates is more pronounced in family businesses than it is in nonfamily businesses. Ding, Qu, and Wu (2016) indicate that the effect of family control on a firm's involvement in bribery activities is observed exclusively in countries characterized by inferior macro-governance conditions. By contrast, the influence imposed by family control is very limited in nations that have well-established and transparent regulatory mechanisms. Hence, our prediction is that in a weak regulatory environment, family firms are more sensitive and show lower reputational risk exposure, while in stronger regulatory environments, the difference between family and nonfamily firms is slight.

The characteristics of a macro-regulatory environment can affect the outcome of reputational risk exposure. In general, exposure to reputational risk hurts firm performance. In a strong regulatory environment, where the macro-governance mechanisms and monitoring framework are more extensive, reputational decline and CSR-related bad news can lead to punishments from both the public and the government, thus damaging firm performance. But in a

weak regulatory environment, the story differs. According to rent-seeking theory, firms or individuals engage in rent-seeking activities such as lobbying or bribery in order to gain access to valuable resources or government favors (Tullock, 1980a, 1980b; Tollison, 2012). In a poorly regulated environment, government officials are more susceptible to corrupt practices, and firms are more likely to exploit the defects in regulations in order to gain preferential treatment.

The institutional economics perspective places significant emphasis on the role of the institutional context within which economic activity takes place. It suggests that in countries with weak regulatory frameworks, firms are able to exploit the absence of clear rules and regulations to prioritize their own interests over those of the general public (Lambsdorff, 2007). According to Murphy and Dacin (2011), firms in inferior macro-governance countries are more likely to commit fraud because (1) there are many opportunities for fraudulent activities, and the likelihood of these firms being detected and held responsible is relatively low, (2) fraudulent activities are justified (bribes are seen as normal) because competitors also engage in them, and (3) the motivation behind fraudulent behavior stems from the desire to pursue economic gains, such as acquiring government contracts. In a weak regulatory environment, firms are able to obtain higher financial performance by ignoring their environmental, social, and governance (ESG) responsibilities. Even if their bad acts are publicized, firms are able to exploit the poor regulations and bribe government officials to escape punishment. Hence, we expect that the negative influence of reputational risk is easier to avoid in poorly regulated environments than it is in highly regulated environments.

Family and nonfamily firms also show distinct differences in their relationships with governments. Existing research suggests that family businesses typically cultivate relationships with government officials because they view such relationships as long-term investments (Gómez-Mejía, Nuñez-Nickel, and Gutierrez, 2001) and as an essential component of resource stock

(Sirmon and Hitt, 2003). Moreover, family firms are able to utilize public sector connections more effectively than nonfamily firms, which can lead to greater concessions from the government (Faccio and Parsley, 2009). The stronger relationship between family firms and the government can lead to preferential treatment, such as looser monitoring and fewer restrictions or lesser punishments. In a strong regulatory environment, these influence attempts cannot be very successful because effective monitoring and stricter regulations are in place. But in a weak regulatory environment, family firms can pay less attention to their ESG values and reputation risk, and focus more on financial performance, since they perceive a reduced threat of consequences from weak ESG behavior. Hence, if firms in a weak regulatory environment can generally obtain better performance by sacrificing their non-economic ESG reputation, then family firms are likely to achieve more benefits since they have tighter informal connections with governments, and the cost of damaging their ESG value is lower.

Due to the concentration of ownership and the desirability of control, family firms incur a higher cost of equity (Boubakri, Guedhami, and Mishra, 2010). Using data on Taiwanese firms, Kuo and Hung (2012) conclude that family firms have a higher dependence on available cash flows, which indicates that family firms either face limited financing access, or they choose to restrict their access. Therefore, in a weak regulatory environment with poor investor protection and high uncertainty, family firms face more obstacles in external financing and tend to hold more cash, which makes them care more about their financial performance to ensure survival. Considering all of the foregoing points, we hypothesize that in a poor regulatory environment, family firms will try to strengthen their economic performance by sacrificing their non-economic ESG reputation. We therefore propose the following hypotheses:

H3a: Family firms have lower reputational risk than nonfamily firms in a weak macro-regulatory environment, while such a reputational risk difference is not evident in a stronger macro-regulatory environment.

H3b: Reputational risk negatively influences firm performance in a strong macro-regulatory environment, but reputational risk positively influences firm performance in a weak macro-regulatory environment.

H3c: Family firms can strengthen the positive relationship between reputational risk and firm performance in a weak macro-regulatory environment.

2.3 Sample and Methodology

2.3.1 Sample and Data

To obtain international evidence, our sample is based on several international datasets. We start with NRG Metrics, which provides comprehensive information (beginning in 2007) for firms across the world, including data on corporate governance, ownership structure, directors' information, and family firm characteristics. NRG Metrics covers 7,986 listed firms around the world. We merge the NRG family firm dataset—which initially has 53,414 observations from 2007 to 2019—with RepRisk data. RepRisk is a third-party business specializing in sustainability consulting and monitoring; it conducts daily screenings of 80,000 media, regulatory, and commercial documents in 15 different languages. These screenings aim to identify unfavorable occurrences related to ESG factors. Since RepRisk generates firms' reputational risk exposure index (RRI) based on news of negative ESG incidents, we treat the unmatched observations from the initial NRG data as no bad news and hence zero reputational risk exposure. After merging with the Compustat dataset for firms' financial characteristics, 39,253 observations with no missing variables remain in the sample. We also exclude financial and utility firms from our sample, and

rule out countries and industries with less than 50 observations. In addition, to test the effect of a macro-regulatory environment, we add Worldwide Governance Indicators (WGI) data from the World Bank to the sample. WGI data cover all countries in our sample and are uninterrupted during the sample period, so adding these data does not influence our sample size. Eventually, we obtain an international sample with 37,332 observations for 5,083 firms across 40 countries and 58 industries (identified by two-digit SIC codes) over the period from 2007 to 2019. Table 2.1 presents our sample distributions by country and year.

Table 2.1 Sample Distribution by Country and Year

Country	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
Australia	52	52	55	57	118	120	136	143	144	197	204	211	214	1,703
Austria	16	21	25	27	31	30	29	28	27	29	25	25	25	338
Belgium	26	29	31	30	59	55	54	55	57	63	61	59	57	636
Brazil	1	3	24	25	27	26	27	26	28	28	25	24	24	288
Canada	13	12	14	14	28	28	31	32	32	36	33	34	34	341
Croatia	2	3	5	5	5	5	5	5	5	5	5	5	5	60
Czech Republic	4	5	6	6	6	6	5	5	5	5	5	4	4	66
Denmark	16	17	17	17	52	53	52	50	47	64	53	51	47	536
Finland	23	24	24	25	79	77	75	73	76	87	78	82	82	805
France	114	122	133	136	141	140	142	143	140	295	304	301	297	2,408
Germany	157	179	198	195	196	192	181	180	176	202	211	208	210	2,485
Greece	139	158	171	162	129	130	122	118	110	107	101	96	88	1,631
Hong Kong	20	21	21	23	54	55	57	59	58	58	56	60	60	602
India	0	0	40	42	68	71	70	68	70	66	68	67	68	698
Indonesia	0	0	0	0	25	33	35	34	34	34	34	40	42	311
Ireland	10	11	13	13	22	19	18	17	15	16	17	17	17	205
Israel	0	0	0	0	11	13	13	14	13	12	11	11	10	108
Italy	82	89	90	93	94	89	92	92	88	128	134	137	130	1,338
Japan	161	164	166	167	173	178	173	174	173	173	173	169	180	2,224
Malaysia	0	0	0	0	15	15	19	19	23	23	23	31	31	199
Mexico	0	0	0	0	9	10	12	14	17	16	14	14	11	117
Netherlands	26	28	30	28	61	57	56	55	50	58	58	58	59	624
New Zealand	0	0	0	0	7	8	9	9	10	11	11	13	17	95
Norway	21	21	20	22	104	100	91	84	76	100	92	93	99	923
Philippines	0	0	0	0	17	20	21	22	23	24	24	25	25	201

Table 2.1 Cont.

Country	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
Poland	13	16	17	17	19	18	18	18	17	17	17	15	16	218
Portugal	16	17	18	20	19	22	19	18	20	32	33	30	27	291
Qatar	0	0	0	0	6	7	8	8	8	8	7	8	8	68
Russia	1	2	2	1	1	24	28	29	30	29	27	27	28	229
Singapore	16	16	16	17	47	56	58	55	55	47	44	40	40	507
South Africa	25	27	26	26	26	27	27	27	26	26	26	28	27	344
South Korea	0	0	19	19	20	19	18	18	18	17	17	18	17	200
Spain	51	54	57	55	53	56	57	55	54	75	83	83	80	813
Sweden	45	56	55	56	106	108	111	108	106	138	131	135	142	1,297
Switzerland	51	56	56	57	85	84	84	85	84	117	113	106	109	1,087
Taiwan	0	0	0	0	18	18	17	16	16	16	15	14	18	148
Thailand	0	0	0	0	24	30	33	34	35	36	36	38	41	307
Turkey	29	33	33	33	36	36	38	39	39	42	38	38	39	473
United Kingdom	188	212	229	225	291	292	292	293	280	311	314	307	296	3,530
United States of America	233	256	255	275	771	813	800	785	780	800	797	1,177	1,136	8,878
Total	1,551	1,704	1,866	1,888	3,053	3,140	3,133	3,107	3,065	3,548	3,518	3,899	3,860	37,332

This table presents the country and year distributions of the sample used in this essay. In the sample cleaning process, financial and utility firms are excluded. We also rule out the countries and industries with less than 50 observations. Eventually, the sample contains 37,332 observations for 5,083 firms across 40 countries over the period from 2007 to 2019.

The NRG Metrics provide up to 19 family firm indicators with different identifications, so we cautiously select one definition. In this study, the identification of a family firm is based on the criteria that the founder or a family member is an officer, director, or owns at least 5% of the firm's equity, either individually or as a group. While the study of family business is growing rapidly, there is no dominating definition for family firms (Kraus, Harms, and Fink, 2011). Scholars have varying definitions of a family business, with some emphasizing family ownership and family visibility in the firm, and others taking into account a firm's self-perception (Diéguez-Soto, López-Delgado, and Rojo-Ramírez, 2015). According to a review conducted by Sageder, Mitter, and Feldbauer-Durstmüller (2018), most family firm studies use the classification based on the equity ownership and the control rights held by the family. Among the 59 papers they analyzed, 29 studies apply the classification of at least 50% family ownership and family involvement in the governance or board. But 24 of them (29 studies using 50% family ownership criteria) are case studies or interviews, and only 5 papers are based on archival data analyses. The second-largest cluster of studies contains 20 papers which use the definition of at least 5% family ownership and/or family members involved on the board, all of those studies conduct archival data analyses, and 15 of them compare family firms with nonfamily firms. Hence, we follow the second definition, which is widely applied in archival data studies, and use a family officer, director, and/or 5% ownership benchmark as the classification of a family firm.

The media has the power to affect companies' reputations by raising public awareness and encouraging monitoring of the company's behavior (Baloria and Heese, 2018). Consistent with this idea, our measurement of reputational risk is RepRisk's index of risk exposure to negative ESG incidents (RRI). RepRisk is an emerging resource for studies that try to capture the firms' ESG and reputation risk; it provides structured media coverage data on ESG incidents (Kölbel,

Busch, and Jancso, 2017; Hawn, 2021). RepRisk monitors firm-specific daily news, and once an incident is detected, analysts will carry out a screening to confirm that the incident is indeed related to ESG issues, determine the nature of the news, and ensure that duplications are eliminated. Based on a formula of the count, severity, and reach distance of the negative ESG incident news, RepRisk develops a current Reputational Risk Index (the current RRI) for each firm on a monthly basis. The current RRI ranges from 0 (lowest) to 100 (highest), with the higher value representing higher ESG-related reputational risk. Following Cheng and Micale (2022), we compute the annual average of the monthly current RRI to measure the reputational risk for each firm in each year. We also replace the RRI with 0 if the firm in NRG is found not to have negative incidents in RepRisk.

Following a large body of studies (e.g., Anderson and Reeb, 2003; Lee and Jungbae Roh, 2012; Pham and Tran, 2020; Li et al., 2022), we use Tobin's Q to measure the firms' financial performance. According to Gompers, Ishii, and Metrick (2003), Tobin's Q is measured by the market value to the book value of assets. To calculate the market value of assets, we use the sum of book value of assets and the market value of equity minus the book value of equity.

To capture the macro-regulatory environment, we use the Worldwide Governance Indicators (WGI) created by Kaufmann et al. (2003) and provided by the World Bank. These country-level indicators include the following 6 dimensions: voice and accountability, political stability and absence of violence, government effectiveness, regulatory quality, rule of law, and control of corruption. The value of each indicator spans from -2.5 to 2.5, with higher values representing better macro-governance mechanisms (Kaufmann et al., 2003). Similar to prior studies, which compute one aggregate indicator for all six dimensions (Chen et al., 2014; Ding, Qu, and Wu, 2016; Jacoby et al., 2019), we use the average across the six indicators to generate the WGI for each country in each year. To more precisely compare strong, medium, and weak

regulatory environments, we first find the 25th percentile and 75th percentile points of WGI across all countries. Then, we define the countries with a WGI higher than the 75th percentile benchmark as a strong regulatory environment, countries with a WGI lower than the 25th percentile benchmark as a weak regulatory environment, and countries between the 25th and 75th percentiles as a medium regulatory environment².

In this study, five control variables which can affect both the reputational risk and firm financial performance are included. Following Lee and Jungbae Roh (2012) and Li et al. (2022), we include the Altman Z-score (*Zscore*), firm size (*FirmSize*), financial leverage (*Leverage*), fixed assets ratio (*Tangibility*), and sales change rate (*SaleGrowth*). The *Zscore*, developed by Altman (1968), is the weighted average of five accounting ratios, including operating efficiency, total asset turnover, leverage, asset liquidity, and earning power. *FirmSize* is the natural logarithm of a firm's market value. Following Gorodnichenko and Weber (2016), *Leverage* is generated by the ratio of total debt to total equity. *Tangibility* is the property, plant, and equipment scaled by total assets. *SaleGrowth* is the growth rate of sales to turnover from the past year. We also control for year, industry (identified by two-digit SIC codes), and country fixed effects. More details about the variable measurements can be found in Appendix 2.A.

Using 1% winsorizing on both sides for all continuous variables, Table 2.2 presents the descriptive statistics for our variables; the correlations between variables are shown in Table 2.3. Firm-level ESG related *RRI*, which theoretically ranges from 0 to 100 (but which actually ranges from 0 to 46.5), has a mean of 7.309. With the definition of at least 5% family ownership and/or family officer or director, 33.9% of the observations are family firms. With mean and median tests

² The 2025 WGI release recalculated the historical series back to 1996. To preserve consistency with the published analysis reported in this essay, as well as the sample period throughout our three essays, we retain the old WGI used in the original study.

between family and nonfamily firms, we observe a significantly lower reputational risk in family firms. Family and nonfamily observations are also distributed somewhat differently across industries, as family firms are relatively more represented in services and retail and less represented in manufacturing. Therefore, we include industry fixed effects to account for systematic differences in multivariate specifications.

Table 2.2 Descriptive Statistics

Panel A: Full sample						
Variable	N	Mean	SD	p25	p50	p75
TobinQ	37,332	1.917	1.810	1.021	1.371	2.058
RRI	37,332	7.309	10.74	0	0	15
FamFirm	37,332	0.339	0.473	0	0	1
WGI	37,332	1.163	0.533	1.088	1.257	1.483
Zscore	37,332	3.781	4.614	1.599	2.639	4.233
FirmSize	37,332	7.895	2.870	6.052	7.651	9.496
Leverage	37,332	0.790	1.402	0.165	0.500	0.991
Tangibility	37,332	0.272	0.216	0.096	0.220	0.398
SaleGrowth	37,332	0.069	0.221	-0.023	0.049	0.132
Family sales ratio by industry	37,332	0.194	0.248	0.029	0.085	0.277

Panel B: Subsample						
Variables	Family Firm (N = 12,667)		Nonfamily Firm (N = 24,665)		Mean diff. t-statistics	Median diff. Chi2-statistics
	Mean	Median	Mean	Median		
TobinQ	1.962	1.351	1.893	1.381	-3.488***	9.980***
RRI	5.723	0	8.124	0	20.564***	465.208***
WGI	1.022	1.230	1.236	1.310	37.282***	908.532***
Zscore	4.078	2.696	3.628	2.619	-8.923***	7.408***
FirmSize	7.211	7.040	8.247	7.950	33.491***	715.475***
Leverage	0.785	0.457	0.793	0.518	0.480	57.716***
Tangibility	0.260	0.211	0.278	0.225	7.418***	23.662***
SaleGrowth	0.083	0.061	0.062	0.043	-8.354***	132.490***
Family sales ratio by industry	0.226	0.099	0.177	0.077	-18.127***	229.739***

This table presents the descriptive statistics of variables used in the main regressions. Panel A provides the descriptive statistics for the full sample. Panel B provides the descriptive statistics for family firms and nonfamily firms separately, as well as the mean and median difference tests between family and nonfamily firms. *TobinQ* is measured by the market value to the book value of assets, while the market value of assets is the sum of book value of assets and the market value of equity minus the book value of equity; *FamFirm* is a dummy variable which equals 1 if a firm is identified as a family firm with the proxy that the founder or a member of the family is officer, director, or owns at least 5% of the firm's equity, otherwise 0; *RRI* is the annual average of monthly current RRI from RepRisk; *Family sales ratio by industry* is the ratio of industry sales by family firms in a two-digit SIC industry to the sales of all firms in that industry; *Zscore* is a simple weighted average of five accounting ratios developed by Altman (1968); *FirmSize* is the natural logarithm of market value of equity; *Leverage* is generated by total debt to total equity; *Tangibility* is the property, plant, and equipment scaled by total assets; *SaleGrowth* is the growth rate of sales to turnover from the past year. More details about the variable measurements can be found in Appendix 2.A. All continuous variables are winsorized at the 1st and 99th percentiles. ***, **, * indicate significance at 1%, 5%, and 10% levels, respectively.

Table 2.3 Correlation Matrix

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(1) TobinQ	1									
(2) RRI	-0.006	1								
(3) FamFirm	0.018***	-0.106***	1							
(4) WGI	-0.025***	-0.035***	-0.189***	1						
(5) Zscore	0.763***	-0.045***	0.046***	-0.018***	1					
(6) FirmSize	0.227***	0.465***	-0.171***	-0.145***	0.198***	1				
(7) Leverage	-0.100***	0.049***	-0.002	-0.091***	-0.190***	-0.003	1			
(8) Tangibility	-0.094***	0.124***	-0.038***	-0.136***	-0.120***	0.102***	0.098***	1		
(9) SaleGrowth	0.103***	-0.043***	0.043***	0.003	0.107***	0.048***	-0.022***	-0.030***	1	
(10) Family firm sales ratio by industry	0.037***	0.050***	0.093***	-0.039***	0.038***	-0.017***	0.001	-0.036***	-0.001	1

This table reports the correlation matrix of key variables used in our primary tests. *TobinQ* is measured by the market value to the book value of assets, while the market value of assets is the sum of book value of assets and the market value of equity minus the book value of equity; *FamFirm* is a dummy variable which equals 1 if a firm is identified as a family firm with the proxy that the founder or a member of the family is officer, director, or owns at least 5% of the firm's equity, otherwise 0; *RRI* is the annual average of monthly current RRI from RepRisk; *Family sales ratio by industry* is the ratio of industry sales by family firms in a two-digit SIC industry to the sales of all firms in that industry; *Zscore* is a simple weighted average of five accounting ratios developed by Altman (1968); *FirmSize* is the natural logarithm of market value of equity; *Leverage* is generated by total debt to total equity; *Tangibility* is the property, plant, and equipment scaled by total assets; *SaleGrowth* is the growth rate of sales to turnover from the past year. More details about the variable measurements can be found in Appendix 2.A. All continuous variables are winsorized at the 1st and 99th percentiles. ***, **, * indicate significance at 1%, 5%, and 10% levels, respectively.

2.3.2 Methodology

In this study, we adopt a three-step model as follows. First, since we use a global sample of listed firms, we assess the potential selection bias and survival bias related to family firms involved in our sample. Similar to Fang, Chrisman, and Holt (2021), Fang, Shi, and Wu (2021), and Fang, Memili, et al. (2021), we apply the Heckman (1979) two-step technique to control for selection bias caused by family firms. To do this, one instrument variable (*Family sales ratio by industry*) is introduced, since it is directly associated with family firms, but is unrelated to reputational risk. According to previous studies (Amit et al., 2015; Fang, Chrisman, and Holt, 2021; Fang, Memili, et al., 2021), *Family sales ratio by industry*, which refers to the proportion of total sales generated by family firms within a given industry, should have a strong correlation with the likelihood of a firm within the industry being a family firm, while it is not anticipated to have an association with reputational risk. In our first step, we conduct a Probit model in which a family firm dummy variable (*FamFirm*) is regressed against an instrument variable and control variables. Based on the estimation of the Probit model, we then compute the Inverse Mills Ratio (*IMR*) and include it in the next steps as an additional control variable. The Probit model in the first step of the model is as follows:

$$\begin{aligned} FamFirm = & a_0 + a_1 Instrument + a_2 Controls + Year Dummies \\ & + Country Dummies + Industry Dummies \\ & + \varepsilon_1 \end{aligned} \tag{1}$$

To further explain the instrument, the two-step Heckman approach often relies on instrumental variables in the first-stage probit model. According to the summary and discussion in Wolfolds and Siegel (2019), the instrument in Heckman refers to a variable which meets the exclusion restriction and is pertinent in predicting selection, so that it differs from an instrument

variable method. In other words, Heckman employs the excluded variable to generate an estimation of the IMR and control for it in the outcome equation, whereas 2SLS uses the excluded variable to separate out the exogenous portion of the predictor to use in the outcome equation. In short, the instrument applied in this essay simply refers to the excluded and relevant variable, rather than an instrumental variable which is typically used in 2SLS method.

Second, we examine the relationship between family businesses and reputational risk, for which we include the *IMR* calculated from the first step to control for potential selection bias. We estimate the following OLS regression:

$$RRI = b_0 + b_1FamFirm + b_2IMR + b_3Controls + Year\ Dummies \\ + Country\ Dummies + Industry\ Dummies + \varepsilon_2 \quad (2)$$

Third, using a similar methodology from Kim and Shi (2012), and Chen et al. (2014), we estimate the fitted value of *RRI* from the regression of equation (2) and use it to replace *RRI* in the final step as the independent variable in the circumstance that *RRI* is significantly affected by *FamFirm* in step 2. Otherwise, we directly use raw *RRI* and *FamFirm* in the third step. Step 3 regressions are as follows:

$$TobinQ = c_0 + c_1fitRRI + c_2FamFirm + c_3IMR + c_5Controls + Year\ Dummies \\ + Country\ Dummies + Industry\ Dummies + \varepsilon_3 \quad (3)$$

$$TobinQ = d_0 + d_1fitRRI + d_2FamFirm + d_3FamFirm * fitRRI + d_4IMR \\ + d_5Controls + Year\ Dummies + Country\ Dummies \\ + Industry\ Dummies + \varepsilon_4 \quad (4)$$

Based on our discussion leading up to the hypotheses, we expect that generally, b_1 , c_1 , and d_1 should be significantly negative, while d_3 should be positive. To test the third set of hypotheses

about the influence of a macro-regulatory environment, we rerun the whole model for strong, medium, and weak regulatory environment subsamples.

2.4 Empirical Results

2.4.1 General Results

To test the first and second hypotheses, we apply the three-step model to the entire sample and report the results in Table 2.4. Column 1 shows the result of the first step, and column 2 presents the negative effect of family firms on *RRI*, with a -0.241 coefficient which is significant at the 5% level. This finding supports H1. Column 2 also shows a significant coefficient of *IMR*, implying that after controlling for selection bias, family firms have relatively lower reputational risk than nonfamily firms. Since the relationship between *FamFirm* and *RRI* is significant in step 2, we estimate the fitted value of *RRI* and use it as an independent variable in the third step. Columns 3 and 4 show the results of equations (3) and (4) in step 3. We observe that *fitRRI* has a significant negative impact on *TobinQ* in both columns 3 and 4, with coefficients of -0.021 and -0.019, respectively; both are significant at the 10% level. More importantly, the interaction of *FamFirm* and *fitRRI* has a positive coefficient (0.007), which is significant at the 1% level in column 4. This indicates that while reputational risk hurts firm financial performance, family firms can weaken this negative effect and ease the performance reduction. This finding supports H2, i.e., that family firms can mitigate the performance damage caused by their exposure to reputational risk.

Table 2.4 Results of Family Firm and RRI

	(1) FamFirm	(2) RRI	(3) TobinQ	(4) TobinQ
FamFirm		-0.241** (-2.43)	-0.041*** (-3.07)	-0.084*** (-4.66)
fitRRI			-0.021* (-1.85)	-0.019* (-1.65)
FamFirm*fitRRI				0.007*** (3.56)
Family firm sales ratio by industry	0.174*** (2.66)			
IMR		20.954*** (16.02)	-0.160 (-1.15)	-0.161 (-1.15)
Zscore	0.024*** (14.35)	0.026 (1.08)	0.270*** (90.55)	0.271*** (90.30)
FirmSize	-0.072*** (-16.96)	1.856*** (25.83)	0.175*** (6.07)	0.162*** (5.59)
Leverage	-0.006 (-1.20)	0.058* (1.79)	0.053*** (11.92)	0.053*** (11.78)
Tangibility	0.045 (1.00)	1.019*** (3.67)	-0.026 (-0.72)	-0.027 (-0.74)
SaleGrowth	0.299*** (9.18)	1.522*** (4.46)	-0.008 (-0.22)	0.003 (0.08)
Constant	-1.141*** (-7.66)	-51.045*** (-22.32)	-0.638** (-1.97)	-0.545* (-1.68)
N	37,332	37,332	37,332	37,332
Year FE	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Pseudo R ²	0.137			
R ²		0.409	0.634	0.635
Adjusted R ²		0.407	0.633	0.633

This table presents the results of three-step regressions of equation (1) to (4) for the full sample. *TobinQ* is measured by the market value to the book value of assets, while the market value of assets is the sum of book value of assets and the market value of equity minus the book value of equity; *FamFirm* is a dummy variable which equals 1 if a firm is identified as a family firm with the proxy that the founder or a member of the family is officer, director, or owns at least 5% of the firm's equity, otherwise 0; *RRI* is the annual average of monthly current RRI from RepRisk; *Family sales ratio by industry* is the ratio of industry sales by family firms in a two-digit SIC industry to the sales of all firms in that industry; *Zscore* is a simple weighted average of five accounting ratios developed by Altman (1968); *FirmSize* is the natural logarithm of market value of equity; *Leverage* is generated by total debt to total equity; *Tangibility* is the property, plant, and equipment scaled by total assets; *SaleGrowth* is the growth rate of sales to turnover from the past year. More details about the variable measurements can be found in Appendix 2.A. All continuous variables are winsorized at the 1st and 99th percentiles. In all regressions, we include year, country, and (two-digit SIC) industry fixed effects (not shown). ***, **, * indicate significance at 1%, 5%, and 10% levels, respectively.

2.4.2 Results in Different Macro-Regulatory Environments

The general hypotheses H1 and H2 are supported within the whole sample, so we now move on to the macro-regulatory environment condition tests. Tables 2.5, 2.6, and 2.7 show the results of a three-step model in high, medium, and low regulatory environments, respectively. In Table 2.5, we report the results observed from countries which have a high (strong) regulatory quality, i.e., those in the highest 25% WGI in the sample. Table 2.6 uses the subsample of observations in the medium regulatory environment, which is between the 25th and 75th percentiles of WGI. Table 2.7 provides evidence for the weak (low) regulatory quality environment, which includes the lowest 25% WGI across the countries in the sample.

In the strong regulatory environment subsample results shown in Table 2.5, we find that *FamFirm* does not have a significant effect on reducing RRI (see column 2). Similarly, in column 2 of Table 2.6, *FamFirm* also shows an insignificant coefficient. These results show that in the countries with high or medium regulatory quality, family firms do not significantly differ from nonfamily firms in terms of controlling their reputational risk. However, in Table 2.7, column 2 shows a negative coefficient of *FamFirm* on *RRI*, which is significant at the 1% level ($t = -2.76$), implying that in a poor regulatory environment, family firms have lower reputational risk compared with nonfamily firms. Taken together, these results support H3a, that is, family firms that have a lower reputational risk than nonfamily firms in a weak macro-regulatory environment, but no significant reputational risk difference exists between family and nonfamily firms in strong and medium macro-regulatory environments. Since no significant effect of *FamFirm* on *RRI* is found in column 2 of Tables 2.5 and 2.6, we use the raw *RRI* instead of the fitted *RRI* in further tests for strong and medium regulatory environments.

Table 2.5 Results of Family Firm and RRI, within High Regulatory Quality Environment

	(1)	(2)	(3)	(4)
	FamFirm	RRI	TobinQ	TobinQ
FamFirm		-0.094 (-0.50)	-0.026 (-0.84)	-0.098*** (-2.78)
RRI			-0.005*** (-2.97)	-0.009*** (-4.58)
FamFirm*RRI				0.014*** (4.35)
Family firm sales ratio by industry	0.419*** (2.66)			
IMR		3.805* (1.82)	-0.762** (-2.21)	-0.708** (-2.05)
Zscore	0.018*** (6.15)	-0.208*** (-6.55)	0.267*** (50.84)	0.268*** (50.96)
FirmSize	-0.043*** (-4.95)	2.736*** (33.84)	0.138*** (9.77)	0.138*** (9.75)
Leverage	0.019 (1.38)	0.008 (0.09)	0.032** (2.39)	0.033** (2.46)
Tangibility	-0.085 (-0.93)	-0.331 (-0.64)	0.138 (1.61)	0.135 (1.58)
SaleGrowth	0.157*** (2.84)	-1.936*** (-4.85)	0.075 (1.13)	0.077 (1.17)
Constant	-0.443 (-1.25)	-26.307*** (-8.56)	0.589 (1.16)	0.528 (1.04)
N	9,356	9,356	9,356	9,356
Year FE	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Pseudo R ²	0.095			
R ²		0.398	0.633	0.634
Adjusted R ²		0.392	0.630	0.631

This table presents the results for a subsample of observations within the highest 25% *WGI* countries. *TobinQ* is measured by the market value to the book value of assets, while the market value of assets is the sum of book value of assets and the market value of equity minus the book value of equity; *FamFirm* is a dummy variable which equals 1 if a firm is identified as a family firm with the proxy that the founder or a member of the family is officer, director, or owns at least 5% of the firm's equity, otherwise 0; *RRI* is the annual average of monthly current RRI from RepRisk; *Family sales ratio by industry* is the ratio of industry sales by family firms in a two-digit SIC industry to the sales of all firms in that industry; *Zscore* is a simple weighted average of five accounting ratios developed by Altman (1968); *FirmSize* is the natural logarithm of market value of equity; *Leverage* is generated by total debt to total equity; *Tangibility* is the property, plant, and equipment scaled by total assets; *SaleGrowth* is the growth rate of sales to turnover from the past year. More details about the variable measurements can be found in Appendix 2.A. All continuous variables are winsorized at the 1st and 99th percentiles. In all regressions, we include year, country, and (two-digit SIC) industry fixed effects (not shown). ***, **, * indicate significance at 1%, 5%, and 10% levels, respectively.

Table 2.6 Results of Family Firm and RRI, within Medium Regulatory Quality Environment

	(1)	(2)	(3)	(4)
	FamFirm	RRI	TobinQ	TobinQ
FamFirm		-0.040 (-0.27)	0.016 (1.01)	0.016 (0.84)
RRI			-0.007*** (-9.34)	-0.007*** (-8.52)
FamFirm*RRI				0.00003 (0.02)
Family firm sales ratio by industry	0.063 (0.63)			
IMR		38.588*** (16.60)	0.777*** (3.14)	0.778*** (3.14)
Zscore	0.041*** (14.09)	0.630*** (9.71)	0.250*** (36.37)	0.250*** (36.28)
FirmSize	-0.088*** (-13.52)	1.118*** (7.33)	0.106*** (6.58)	0.106*** (6.56)
Leverage	-0.043*** (-5.28)	-1.036*** (-11.33)	0.007 (0.76)	0.007 (0.76)
Tangibility	0.192*** (2.71)	4.834*** (8.92)	-0.093 (-1.63)	-0.093 (-1.62)
SaleGrowth	0.502*** (9.32)	10.647*** (11.68)	0.480*** (4.97)	0.480*** (4.96)
Constant	-0.606** (-2.48)	-65.095*** (-20.40)	-1.444*** (-4.24)	-1.444*** (-4.23)
N	18,204	18,204	18,204	18,204
Year FE	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Pseudo R ²	0.128			
R ²		0.442	0.572	0.572
Adjusted R ²		0.439	0.570	0.570

This table presents the results for a subsample of observations within the medium 50 percents between the 25th percentile and 75th percentile *WGI* countries. *TobinQ* is measured by the market value to the book value of assets, while the market value of assets is the sum of book value of assets and the market value of equity minus the book value of equity; *FamFirm* is a dummy variable which equals 1 if a firm is identified as a family firm with the proxy that the founder or a member of the family is officer, director, or owns at least 5% of the firm's equity, otherwise 0; *RRI* is the annual average of monthly current RRI from RepRisk; *Family sales ratio by industry* is the ratio of industry sales by family firms in a two-digit SIC industry to the sales of all firms in that industry; *Zscore* is a simple weighted average of five accounting ratios developed by Altman (1968); *FirmSize* is the natural logarithm of market value of equity; *Leverage* is generated by total debt to total equity; *Tangibility* is the property, plant, and equipment scaled by total assets; *SaleGrowth* is the growth rate of sales to turnover from the past year. More details about the variable measurements can be found in Appendix 2.A. All continuous variables are winsorized at the 1st and 99th percentiles. In all regressions, we include year, country, and (two-digit SIC) industry fixed effects (not shown). ***, **, * indicate significance at 1%, 5%, and 10% levels, respectively.

Table 2.7 Results of Family Firm and RRI, within Low Regulatory Quality Environment

	(1)	(2)	(3)	(4)
	FamFirm	RRI	TobinQ	TobinQ
FamFirm		-0.501*** (-2.76)	-0.017 (-0.60)	-0.085** (-2.18)
fitRRI			0.100*** (4.30)	0.103*** (4.45)
FamFirm*fitRRI				0.010*** (2.60)
Family firm sales ratio by industry	0.196* (1.69)			
IMR		10.736*** (6.65)	-0.503*** (-3.86)	-0.476*** (-3.64)
Zscore	0.012*** (3.93)	-0.171*** (-7.62)	0.347*** (54.28)	0.349*** (54.17)
FirmSize	-0.064*** (-7.72)	1.541*** (19.34)	-0.104** (-2.30)	-0.122*** (-2.67)
Leverage	0.036*** (4.01)	0.325*** (5.28)	0.035*** (4.08)	0.035*** (4.05)
Tangibility	-0.318*** (-3.61)	0.297 (0.48)	0.184* (1.90)	0.158 (1.62)
SaleGrowth	0.208*** (3.21)	-1.091** (-2.55)	0.069 (0.88)	0.090 (1.14)
Constant	-0.882*** (-3.37)	-23.907*** (-8.86)	0.557** (2.23)	0.635** (2.52)
N	9,720	9,720	9,720	9,720
Year FE	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Pseudo R ²	0.183			
R ²		0.433	0.719	0.720
Adjusted R ²		0.427	0.717	0.717

This table presents the results for a subsample of observations within the lowest 25% *WGI* countries. *TobinQ* is measured by the market value to the book value of assets, while the market value of assets is the sum of book value of assets and the market value of equity minus the book value of equity; *FamFirm* is a dummy variable which equals 1 if a firm is identified as a family firm with the proxy that the founder or a member of the family is officer, director, or owns at least 5% of the firm's equity, otherwise 0; *RRI* is the annual average of monthly current RRI from RepRisk; *Family sales ratio by industry* is the ratio of industry sales by family firms in a two-digit SIC industry to the sales of all firms in that industry; *Zscore* is a simple weighted average of five accounting ratios developed by Altman (1968); *FirmSize* is the natural logarithm of market value of equity; *Leverage* is generated by total debt to total equity; *Tangibility* is the property, plant, and equipment scaled by total assets; *SaleGrowth* is the growth rate of sales to turnover from the past year. More details about the variable measurements can be found in Appendix 2.A. All continuous variables are winsorized at the 1st and 99th percentiles. In all regressions, we include year, country, and (two-digit SIC) industry fixed effects (not shown). ***, **, * indicate significance at 1%, 5%, and 10% levels, respectively.

Column 3 in Tables 2.5, 2.6, and 2.7 provides support for H3b, which tests the different effects of reputational risk on firm performance in specific regulatory conditions. In column 3 of Tables 2.5 and 2.6, *RRI* shows negative effects on *TobinQ* with coefficients of -0.005 and -0.007, respectively, and both are significant at the 1% level. But in a weak regulatory environment, Table 2.7 shows a significantly positive effect of *fitRRI* on *TobinQ*, with a coefficient of 0.100 which is significant at the 1% level. These reversed results support H3b, implying that in countries with higher regulatory quality, reputational risk can result in decreasing firm performance. However, in countries with a weak regulatory environment, higher reputational risk is associated with better firm performance, meaning that ESG-related reputation can be sacrificed in order to achieve higher financial performance in such situations. This different finding in a weak regulatory environment is consistent with our hypothesis and hence not very surprising. Based on rent-seeking theory and the work of Murphy and Dacin (2011), firms in inferior macro-governance countries find it easier to capitalize on the loose regulations, and can engage in questionable behavior (e.g., bribery of officials) so that they can achieve higher financial benefits at the cost of their ESG image, with few subsequent punishments.

Finally, we explore how family firms moderate the effects of reputational risk on firm performance differently in three regulatory environment subsamples. From column 4 of Table 2.5, we observe that as *RRI* negatively influences the *TobinQ*, family firms can weaken such influence with a positive coefficient (0.014) of *FamFirm***RRI*, which is significant at the 1% level. This finding in a strong regulatory environment is similar to the general results. But in a medium regulatory environment, the moderating effect of family firms is not found in Table 2.6. In the examination of a weak regulatory environment presented in column 4 of Table 2.7, we find that *fitRRI* has a positive effect (0.103) on *TobinQ* at the 1% level of significance level, while the

coefficient of the interaction between *FamFirm* and *fitRRI* (0.010) is significantly positive. This result supports H3c that family firms can strengthen the positive relationship between reputational risk and firm performance in a weak macro-regulatory environment.

There are two drivers for this finding in the weak regulatory environment. First, family firms have stronger connection with the government and the public sector, and this allows them to get preferential treatment, such as looser monitoring and fewer punishments. These preferential treatments are hard to accomplish in strong regulatory environments that have more complete monitoring frameworks and regulations. However, with feasible preferential treatment and the low cost of sacrificing their ESG reputation in the weak regulatory environment, family firms can enhance the sacrifice and obtain more benefits due to their tighter informal connections with governments.

Second, due to the concentration of ownership and the tendency of control, family firms incur higher cost of equity (Boubakri, Guedhami, and Mishra, 2010), and have a higher dependence on available cash flows (Kuo and Hung, 2012). Especially in weak regulatory environment that have poor investor protection and high uncertainty, family firms tend to hold more cash and show much more interest in their financial performance to assure their survival, since they face more obstacles in external financing than nonfamily firms. Therefore, with the combined forces of the distinguishing characteristics of family firms and the special features of a weak regulatory environment, family firms are willing to risk their ESG reputation because they can strengthen their performance in a poor regulatory environment.

2.4.3 Robustness Check

Since there is no single dominating definition for family firms (Kraus, Harms, and Fink, 2011), we repeat the examinations for two alternative family firm identifications which are also

provided by NRG. The first alternative definition identifies a family firm as such if there are descendants or family members (second generation) acting as directors or officers or large shareholders; the second alternative classifies a family firm as such if at least one family member is an officer, director, or blockholder. The first alternative identifies about 17.68% of our sample as family firm observations, while the second one identifies 34% as family firm observations. With these two different *FamFirm* variables, Table 2.8 shows significant robust results which only have slight magnitude differences.

To gain more confidence in our results, we conduct one additional examination using a propensity score matching (PSM) approach. Using the *Zscore* and the market-to-book ratio, we one-to-one match family firms with nonfamily firms and obtain a subsample with 12,667 family observations and 12,667 nonfamily observations. Then the full model is re-tested within this subsample (see Table 2.9). In column 2, family firms have a significantly lower reputational risk, and *fitRRI* has a significant negative coefficient (-0.114) on *TobinQ* in column 3. In column 4, the coefficient of *FamFirm*fitRRI* is positive (0.015), which is significant at the 1% level. These results are consistent with our above findings.

Table 2.8 Robustness Check for Alternative Family Firm Definition

	Alternative FamFirm1				Alternative FamFirm2			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	FamFirm1 RRI		TobinQ	TobinQ	FamFirm2 RRI		TobinQ	TobinQ
FamFirm (Alternatives)		-0.546*** (-4.42)	-3.816*** (-6.43)	-3.891*** (-6.55)		-0.273*** (-2.76)	-0.041*** (-3.08)	-0.087*** (-4.79)
fitRRI			-6.759*** (-6.24)	-6.836*** (-6.30)			-0.022* (-1.86)	-0.019* (-1.65)
FamFirm (Alternatives)*fitRRI				0.005** (2.20)				0.007*** (3.73)
Family firm sales ratio by industry	0.122* (1.66)				0.178*** (2.73)			
IMR		2.343 (1.19)	17.353*** (6.31)	17.560*** (6.38)		20.335*** (15.55)	-0.158 (-1.14)	-0.159 (-1.15)
Zscore	0.004** (2.02)	-0.316*** (-25.31)	-1.850*** (-5.42)	-1.874*** (-5.49)	0.024*** (14.48)	0.018 (0.74)	0.270*** (88.33)	0.271*** (88.12)
FirmSize	0.000 (0.09)	2.935*** (113.53)	19.948*** (6.27)	20.171*** (6.34)	-0.071*** (-16.71)	1.906*** (26.93)	0.177*** (5.93)	0.163*** (5.42)
Leverage	-0.008 (-1.35)	0.142*** (4.03)	0.992*** (6.53)	1.003*** (6.59)	-0.007 (-1.38)	0.047 (1.44)	0.054*** (11.96)	0.053*** (11.81)
Tangibility	0.378*** (7.02)	1.158* (1.78)	8.253*** (6.25)	8.353*** (6.33)	0.047 (1.03)	0.995*** (3.58)	-0.026 (-0.71)	-0.027 (-0.72)
SaleGrowth	-0.045 (-1.10)	-2.975*** (-13.84)	-20.083*** (-6.21)	-20.312*** (-6.28)	0.288*** (8.85)	1.249*** (3.75)	-0.009 (-0.24)	0.003 (0.09)
Constant	-2.091*** (-12.98)	-22.420*** (-4.63)	-155.768*** (-6.27)	-157.544*** (-6.34)	-1.143*** (-7.68)	-50.036*** (-21.87)	-0.654** (-2.00)	-0.553* (-1.68)
N	36,918	36,918	36,918	36,918	37,332	37,332	37,332	37,332
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R ²	0.163				0.138			
R ²		0.405	0.637	0.637		0.409	0.634	0.635
Adjusted R ²		0.404	0.635	0.636		0.407	0.633	0.633

This table presents the robustness check for two alternative family firm definitions. *Alternative FamFirm1* is a dummy variable which equals 1 if a firm is defined as a family firm according to the proxy that there are descendants or family members (2nd generation) acting as director or officer or large shareholders, otherwise 0; *Alternative FamFirm2* is a dummy variable which equals 1 if a firm is defined as a family firm according to the proxy of existence of one or more family members who are officers, directors, or blockholders, otherwise 0; *TobinQ* is measured by the market value to the book value of assets, while the market value of assets is the sum of book value of assets and the market value of equity minus the book value of equity; *FamFirm* is a dummy variable which equals 1 if a firm is identified as a family firm with the proxy that the founder or a member of the family is officer, director, or owns at least 5% of the firm's equity, otherwise 0; *RRI* is the annual average of monthly current RRI from RepRisk; *Family sales ratio by industry* is the ratio of industry sales by family firms in a two-digit SIC

industry to the sales of all firms in that industry; *Zscore* is a simple weighted average of five accounting ratios developed by Altman (1968); *FirmSize* is the natural logarithm of market value of equity; *Leverage* is generated by total debt to total equity; *Tangibility* is the property, plant, and equipment scaled by total assets; *SaleGrowth* is the growth rate of sales to turnover from the past year. More details about the variable measurements can be found in Appendix 2.A. All continuous variables are winsorized at the 1st and 99th percentiles. In all regressions, we include year, country, and (two-digit SIC) industry fixed effects (not shown). ***, **, * indicate significance at 1%, 5%, and 10% levels, respectively.

Table 2.9 Robustness Check Using PSM

	(1) FamFirm	(2) RRI	(3) TobinQ	(4) TobinQ
FamFirm		-0.293*** (-2.58)	0.066*** (2.76)	-0.035 (-1.06)
fitRRI			-0.114*** (-4.62)	-0.111*** (-4.49)
FamFirm*fitRRI				0.015*** (4.42)
Family firm sales ratio by industry	0.231*** (2.97)			
IMR		16.347*** (12.20)	0.920*** (3.24)	0.927*** (3.27)
FirmSize	-0.064*** (-12.96)	1.982*** (32.43)	0.515*** (8.97)	0.487*** (8.43)
Leverage	-0.002 (-0.25)	0.293*** (7.44)	-0.085*** (-7.74)	-0.088*** (-8.03)
Tangibility	-0.034 (-0.63)	1.087*** (3.28)	-0.715*** (-9.87)	-0.729*** (-10.06)
SaleGrowth	0.338*** (8.84)	0.206 (0.56)	0.342*** (4.82)	0.372*** (5.23)
Constant	-0.773*** (-4.53)	-38.350*** (-18.57)	-2.886*** (-4.69)	-2.661*** (-4.31)
N	25,334	25,334	25,334	25,334
Year FE	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Pseudo R ²	0.132			
R ²		0.382	0.247	0.248
Adjusted R ²		0.379	0.244	0.245

This table presents the robustness test for a one-to-one matched family and nonfamily firms subsample (12,667 family firms and a matched sample of 12,667 nonfamily firms). The variables used in the matching process are *Zscore* and *Mkt/Book*, which is the firm's market value of equity to the book value, and hence *Zscore* is not included as a control in the subsequent regressions. *TobinQ* is measured by the market value to the book value of assets, while the market value of assets is the sum of book value of assets and the market value of equity minus the book value of equity; *FamFirm* is a dummy variable which equals 1 if a firm is identified as a family firm with the proxy that the founder or a member of the family is officer, director, or owns at least 5% of the firm's equity, otherwise 0; *RRI* is the annual average of monthly current RRI from RepRisk; *Family sales ratio by industry* is the ratio of industry sales by family firms in a two-digit SIC industry to the sales of all firms in that industry; *Mkt/Book* is calculated by the firm's market value of equity to the book value of equity; *Zscore* is a simple weighted average of five accounting ratios developed by Altman (1968); *FirmSize* is the natural logarithm of market value of equity; *Leverage* is generated by total debt to total equity; *Tangibility* is the property, plant, and equipment scaled by total assets; *SaleGrowth* is the growth rate of sales to turnover from the past year. All continuous variables are winsorized at the 1st and 99th percentiles. In all regressions, we include year, country, and (two-digit SIC) industry fixed effects (not shown). ***, **, * indicate significance at 1%, 5%, and 10% levels, respectively.

2.5 Conclusions

Using an international sample across 40 countries from 2007 to 2019, we show that family firms generally have lower reputational risk, which can be driven by family firms' SEW pursuits. While reputational risk can significantly damage a firm's financial performance, family firms show the ability to mitigate such a performance decline. Since the regulatory environment is a key factor that can determine firms' governance and reaction to reputational risk, and since this varies substantially across different countries, we divide our observations into three subsamples: strong, medium, or weak regulatory environments. With the subsample tests, we find that in a strong regulatory environment, family firms show no difference in reputational risk compared to nonfamily firms, but they are able to mitigate the negative effect of reputational risk on firm performance. In a medium regulatory environment, family firms experience no effect on reputational risk or the negative influence of reputational risk. However, in a weak regulatory environment, while family firms have lower reputational risk than nonfamily firms, the effect of reputational risk on firm performance turns out to be positive and family firms can strengthen such a positive influence.

Besides enriching the literature of family business and reputation, we expect that the interesting findings on regulatory environment can provide some practical implications for regulators and policymakers. With the opposite results we find in the effects of reputational risk on firm performance, we propose that a better regulatory environment enables family firms to do better in ESG related activities, which reflects their lower ESG-related reputational risk, and incentivizes all firms to reduce their ESG related reputational risk to avoid damage to the firm's performance. However, a weak regulatory environment leaves room for firms to pursue benefits at the cost of ESG, and such a reality results in the potential loss of non-economic value and

destruction of the sustainable development of the whole country. Governments and regulators in weak regulatory environments should be aware of the above macro-cost, and not only be pleased by the short-term economic growth generated by low reputation firms that sacrifice sustainability.

CHAPTER 3: ESSAY 2

Family Firms and Analysts' Long-Term Growth Forecasts

Abstract

We examine whether and why family firm involvement influences sell-side equity analysts' long-term forecasting behavior. Using an international sample of publicly listed firms from 2007 to 2019, we uncover that analysts are more inclined to issue long-term growth forecasts for family firms than for nonfamily firms. We propose two explanations: a long-term information demand channel, whereby investors demand long-horizon information for family firms due to their long-term orientation, and a long-term forecast cost-reduction channel, whereby family firms' superior information environments lower analysts' costs of producing long-term forecasts. To distinguish between the two mechanisms, we exploit cross-sectional variation in firm-level external monitoring and country-level regulatory environments. We observe that the positive relation between family firms and long-term growth forecasts is attenuated in settings with stronger monitoring and regulatory environments, which is consistent with the information demand channel. Overall, our study highlights how ownership structure and institutional environments shape analysts' incentives of providing long-term forecasts.

Keywords: Family firms, Analysts, Long-term forecasts, Information demand, External monitors, Regulatory environment

3.1 Introduction

Controlling or managerial involvement by a founding family is the defining characteristic of a family firm. Such involvement typically accompanies a stated intention to transfer the enterprise across generations (Chua et al., 1999). The distinguishing features of family firms have significant implications for their financing choices (Anderson et al., 2003), disclosure policies (Ali et al., 2007; Chen et al., 2008; Gomez-Mejia et al., 2014; Wang, 2006), diversification strategies (Gomez-Mejia et al., 2010; Gomez-Mejia et al., 2011) and CSR performance (Berrone et al., 2010; Cui et al., 2018; Dyer & Whetten, 2006). However, despite the extensive research on family firms, our understanding of how family firm involvement affects analysts' long-term growth forecasts, a key source of forward-looking information in capital markets, remains limited.

The analyst literature has overwhelmingly concentrated on short-horizon outputs: earnings forecasts, stock recommendations, and price targets (e.g., Brav & Lehavy, 2003; DeFond & Hung, 2003, 2007; Givoly & Lakonishok, 1979; Givoly et al., 2009; Lys & Sohn, 1990; Womack, 1996). Only a handful of studies have examined analysts' long-term forecasts for the underlying firms. Copeland et al. (2004) demonstrate that market reacts more strongly to long-term forecast revisions than to corresponding adjustments in one-year-ahead earnings estimates. Jung et al. (2012) show that investors react more strongly to analysts' stock recommendations when those recommendations are accompanied by an explicit long-term growth projection. These findings collectively establish that long-term forecasts convey incremental value. However, little is known about why some analysts choose to issue long-term forecasts while others do not.

The socioemotional wealth (SEW) argument by Gomez-Mejia et al. (2007) suggests that family firms make decisions based on whether their actions help develop and preserve the family's social impact such as legacy, identity, and reputation. One of the central dimensions of the SEW

statement is family firms' intention to pass their enterprise to future generations (Zellweger & Astrachan, 2008; Zellweger et al., 2012c). This sense of family dynasty suggests that founding families view their business as a long-term investment and therefore prioritize long-term performance rather than short-term results. The long-term orientation of family firms is a unique feature to test whether this orientation affects analysts' forecast horizons. Our study links the literature on family firms and analysts by examining whether analysts align their forecast horizons with the long-term orientation of family firms.

Family firms' long-term orientation can affect analysts' forecasting behavior through two channels. First, as family firms emphasize long-term value creation, external stakeholders place greater weight on their long-term performance. As a result, long-term oriented information is more value-relevant than short-term oriented information for investors' decision-making in these firms. Sell-side equity analysts, as an important informational intermediary in the capital market, have incentives to cater to investors' information needs by supplying value-relevant forecasts (Brown et al., 2015). Therefore, stronger demand for long-horizon information increases analysts' likelihood of issuing long-term forecasts for family firms relative to nonfamily firms. We label this line of reasoning as the *information demand channel*.

Second, the classic agency problem arising from the separation of ownership and control is generally mitigated in family firms relative to nonfamily firms. As a result, managerial incentives for myopic behavior, such as earnings management, are weaker in family firms (Ali et al., 2007; Wang, 2006). Moreover, family firms have strong incentives to preserve firm value and pass the business to future generations. Consequently, opportunistic financial reporting becomes less attractive in this context, as it threatens the preservation of family reputation, wealth, and long-term firm value. This commitment to long-term value creation fosters a better information

environment, which reduces analysts' information acquisition and processing costs, and makes long-term forecasting less costly and more feasible. Accordingly, analysts have higher tendency to issue long-term forecasts for family firms. We refer to this line of reasoning as the *cost-reduction channel*.

Following established definitions in the literature (Anderson & Reeb, 2003; Villalonga & Amit, 2006; Sageder et al., 2018), we classify a firm as a family firm if the founder or a family member serves as an officer or director or holds at least 5% of the firm's equity. We measure analysts' long-term forecasts with long-term growth forecast indicators from Institutional Brokers' Estimate System (I/B/E/S) following Jung et al. (2012). Our sample consists of 317,532 analyst-firm-year observations for 2,907 firms across 42 countries from 2007 to 2019, with around 28.3% being family firm observations. Our empirical results show that analysts exhibit a higher likelihood of providing long-term growth forecasts for family firms than for nonfamily firms after controlling for other firm-level and analyst-level factors. Specifically, the odds of analysts providing long-term growth forecasts is 5.2% higher for family firms than for nonfamily firms. This evidence indicates that analysts tend to tailor their forecast horizons to match family firms' long-term orientation.

We implement several robustness tests to verify the stability of our main results. First, our results remain robust in a propensity score matched sample, in which each family firm is matched with a comparable nonfamily firm based on observable characteristics. Second, to address potential endogeneity and selection concerns, we implement a Heckman two-step procedure. Our main inferences remain unchanged. Third, our findings remain robust when alternative definitions of family firms are used. Finally, because U.S. firms account for more than one-third of our sample, we separately examine U.S. and non-U.S. subsamples. The results are qualitatively similar across

both subsamples, suggesting that our findings are not driven by U.S. firms.

We next explore the mechanisms behind analysts' long-term forecasting behavior for family firms by distinguishing between the information demand channel with the cost-reduction channel. We conduct cross-sectional analyses that examine whether the positive association between family firms and analysts' long-term growth forecasts varies with the strength of (i) firm-level external monitoring and (ii) country-level regulatory environments. If analysts' long-term forecasts primarily reflect investors' demand for long-term information, the main effect would be weaker in firms with greater external monitoring or in countries with stronger regulatory environments, where investors can obtain long-term information from alternative sources and the incremental demand for sell-side analyst forecasts is reduced. In contrast, if analysts' long-term forecasting is primarily driven by lower information acquisition costs, the effect of family firm involvement would be stronger in these settings, as enhanced monitoring and stronger regulatory environments improve information transparency and further reduce the costs of producing long-term forecasts.

We capture firm-level external monitoring with analyst coverage and the number of institutional investors. Both proxies reflect the intensity of outside scrutiny and have been widely shown to enhance firms' information environments (Bushman et al., 2004; Chen et al., 2015), thereby shaping investors' demand for long-term information from sell-side analysts. We show that stronger external monitoring attenuates the positive relation between family firms and analysts' issuance of long-term growth forecasts, consistent with the information demand channel.

We then examine country-level regulatory environments, which shape both firms' information environment and investors' reliance on analysts. Prior research shows that stronger regulatory environments improve disclosure quality and constrain managerial opportunism,

thereby enhancing firms' information environment (Chen et al., 2015; Leuz et al., 2003), and weaker institutional settings increase investors' reliance on sell-side analysts to mitigate information asymmetry (Lang et al., 2004). We capture country-level regulatory environments using measures of governance quality, economic freedom, and financial market development. Consistent with the information demand channel, we document that the positive association between family firms and analysts' likelihood of issuing long-term growth forecasts is attenuated in countries with stronger regulatory environments, where institutional and market-based disclosure mechanisms facilitate access to long-term information and reduce investors' demand for such information from sell-side analysts. Overall, these findings suggest that analysts' long-term forecasting behavior is primarily driven by investors' demand for long-term information about family firms rather than by the reduced forecasting costs.

Our study contributes in several important ways. First, we advance the growing family firm literature grounded in the SEW theory. While prior research applies the SEW framework to explain a wide range of family firm decisions, such as managerial appointments and contract design (Cruz et al., 2010), strategic choices (Gomez-Mejia et al., 2010; Gomez-Mejia et al., 2011; Miller et al., 2013), and financial reporting choices (Gomez-Mejia et al., 2014), we extend this literature by examining how family firm involvement shapes sell-side analysts' forecast horizons. In particular, we investigate two potential mechanisms—long-term information demand and long-term forecast cost reduction—through which family firms' characteristics influence the behavior of capital market intermediaries.

Second, our study adds to the literature on sell-side equity analysts by examining their long-term forecasting behavior. Prior research has largely focused on analysts' short-term forecasts, with only a limited number of studies examining the implications of analysts' long-term forecasts

for market reactions to analysts' investment opinions (Copeland et al., 2004; Jung et al., 2012). Moreover, these studies largely overlook the determinants of analysts' long-term forecasting behavior. By leveraging the distinctive long-term orientation of family firms, our study sheds light on analysts' incentives to issue long-term forecasts, showing that analysts are more likely to provide long-term forecasts when investor demand for long-horizon, value-relevant information is stronger. More broadly, our findings provide corroborating evidence to the analyst literature that analysts tailor information provision to investor demand (Brown et al., 2015), extending this insight to the provision of long-term forecasts.

Furthermore, our study bridges the literature on family firms and sell-side analysts by examining whether and how family firm involvement shapes analysts' forecasting behavior. Although prior research has developed rich insights into family firms and analysts separately, relatively little is known about how family firm involvement affects analysts' forecasts. Prior research suggests that agency conflicts related to ownership-management separation are less severe in family firms, which is reflected in more transparent disclosure practices, broader analyst coverage, and greater forecast accuracy (Ali et al., 2007). Building on this insight, we examine how the long-term orientation of family firms shapes analysts' forecasting behavior, and show that it is positively associated with their propensity to issue long-term forecasts. By further incorporating firm-level external monitoring and country-level regulatory environments, our study offers a more nuanced view of the mechanisms underlying this relation.

This study proceeds as follows. Section 3.2 reviews the related literature and develops our hypotheses. Section 3.3 describes the sample construction, variable measurement, and regression models. Section 3.4 presents and discusses empirical results, and Section 3.5 concludes the study.

3.2 Literature Review and Hypotheses Development

3.2.1 Family Firms and Analysts' Long-Term Growth Forecasts

Prior research consistently documents that family firms show systematic difference from nonfamily firms in their governance structures and strategic priorities (Prencipe et al., 2014). In particular, family-controlled firms place greater emphasis on preserving family reputation and ensuring intergenerational continuity (Gomez-Mejia et al., 2007; Zellweger & Astrachan, 2008; Zellweger et al., 2012b, 2012c). These priorities are also reflected in governance choices, as family firms tend to appoint family-affiliated executives and directors, even when such decisions may not be efficiency-maximizing (Bennedsen et al., 2007; Schulze et al., 2001, 2003). Moreover, reputational and legacy concerns often translate into stronger engagement in corporate social responsibility activities, sometimes at the expense of short-term economic outcomes (Berrone et al., 2010; Cui et al., 2018; Dyer & Whetten, 2006).

Socioemotional wealth (SEW) theory offers an explanation for these differences (Gomez-Mejia et al., 2007). It suggests that family firms consider not only financial outcomes but also the impact of decisions on non-economic objectives such as control, identity, reputation, and intergenerational continuity. This focus on continuity contributes to a pronounced long-term orientation in family firms (Zellweger & Astrachan, 2008; Zellweger et al., 2012c), which is likely to shape analysts' forecasting behavior.

Prior studies indicate that analysts' forecasting behavior is influenced by both information demand and supply conditions (Bhushan, 1989; O'Brien & Bhushan, 1990). The long-term orientation of family firms is reflected in more persistent relationships between controlling owners and external stakeholders, such as suppliers, customers, creditors, and investors (Anderson et al., 2003). As a result, long-term information is likely to be more decision-relevant for these stakeholders. In addition, family firms often reinforce their long-term orientation by sending

visible and credible signals, such as multi-generational leadership, enduring customer relationships, and messaging that emphasizes continuity and stability (Dyer & Whetten, 2006). Organizational identity theory suggests that such signals communicate core firm values to outsiders, making long-term commitments salient and interpretable (Gioia et al., 2000; Nag et al., 2007). Consequently, analysts and investors may perceive family firms as having greater long-term viability and strategic persistence (Craig et al., 2008; Miller et al., 2008), increasing the usefulness of long-term forecasts.

The analyst literature emphasizes that information demand plays a central role in shaping forecasting behavior (Brown et al., 2015). Prior studies show that analysts adjust both the content and form of their forecasts in response to investors' informational needs. For instance, demand for cash flow information increases the likelihood that analysts issue cash flow forecasts (DeFond & Hung, 2003, 2007), while higher valuation uncertainty leads analysts to rely more heavily on discounted cash flow models and to provide more detailed discussion of underlying assumptions (Huang et al., 2023). In a similar vein, the long-term orientation of family firms is likely to increase the demand for long horizon information. Accordingly, analysts are more likely to respond to this heightened demand by providing long-term forecasts for family firms. We refer to this line of reasoning as *the information demand channel*.

In addition to information demand, analysts' forecast horizons are shaped by the costs and feasibility of making long-term forecasts. Because forecast accuracy declines as the horizon lengthens, analysts face a trade-off between the benefits of meeting investor demand for long-term information, and the increased uncertainty and efforts of making such forecasts. The distinctive features of family firms help mitigate these costs by fostering a more transparent and reliable information environment, thereby facilitating analysts' forecasting activities. Specifically, the alignment of ownership and control in family firms mitigates agency problems and reduces

managerial incentives for myopic behavior (Jensen & Meckling, 1976), contributing to a superior information environment relative to nonfamily firms. Evidence suggests that family firms exhibit higher-quality financial reporting, characterized by more informative earnings, lower abnormal accruals, and stronger links between earnings and future cash flows (Ali et al., 2007; Wang, 2006). They are also less likely to issue short-term guidance or engage in opportunistic reporting that could harm their reputation (Achleitner et al., 2014; Chen et al., 2008). These features improve the transparency and reliability of financial information, reducing the costs faced by analysts in producing long-term forecasts.

Moreover, family owners and managers often maintain close and stable relationships with their key stakeholders, including analysts, and may be more willing to engage with analysts and share relevant information (Chen et al., 2008). Such relationships further reduce the incremental costs of producing long-term forecasts by enhancing analysts' understanding of firms' long-term strategies and growth prospects. Taken together, the superior information environment in family firms is expected to lower the costs of long horizon forecasting, increasing analysts' willingness to issue long-term forecasts. We refer to this line of reasoning as *the cost-reduction channel*.

We note, however, an alternative explanation associated with the superior information environment in family firms. When firm information is more transparent and readily available from alternative sources, investors may rely less on analysts for long-term information. In such settings, the marginal usefulness of analysts' long-term forecasts may be reduced, potentially weakening analysts' incentives to issue long horizon forecasts despite the lower information-processing costs. This competing view highlights the need for empirical tests that distinguish whether the superior information environment in family firms primarily lowers the costs of long-term forecasting or instead diminishes analysts' incentives by reducing the incremental value of

their long-term forecasts. Nevertheless, we propose the first hypothesis as follows:

***Hypothesis 1:** Analysts are more likely to issue long-term growth forecasts for family firms than for nonfamily firms.*

3.2.2 External Monitoring and Analysts' Long-Term Growth Forecasts

To explore whether the information demand or the cost-reduction channel dominates, we examine whether the relationship between family firms and analysts' long-term forecasts varies across institutional settings that shape firms' information environments and investors' information demand. Specifically, we consider two sources of variation: firm-level external monitoring and country-level regulatory environments. Both dimensions influence the availability of information, and the marginal costs and benefits of producing long-term forecasts. We first examine firm-level external monitoring, captured by analyst coverage and the number of institutional investors, both of which capture the breadth of outside scrutiny and are widely shown to enhance firms' information environments (Bushman et al., 2004; Chen et al., 2015).

Prior literature shows that analyst coverage plays a central role in improving information transparency and disciplining managerial behavior (Bushman et al., 2004). Analysts monitor firms directly by scrutinizing financial statements and questioning management during earnings calls, and indirectly by disseminating firm-specific information through research reports. This monitoring increases detection costs and constrains opportunistic behavior. Yu (2008) reveals that higher analyst coverage is associated with reduced accrual-based earnings management. Chen et al. (2015) further confirm that decreases in analyst coverage are associated with a range of adverse governance outcomes, including lower valuation of internal cash holdings, higher excess CEO compensation, more value-destroying acquisitions, and increased earnings management. Derrien et al. (2016) show that losing analyst coverage due to exogenous broker closure increases firms'

cost of debt by 25 basis points, equivalent to about \$7 million in annual interest expense, highlighting analysts' role in reducing information risk and improving contracting outcomes.

Institutional investors also serve as an important external monitoring mechanism. A larger institutional investor base implies broader scrutiny by sophisticated market participants and greater information production and dissemination. Previous research indicates that institutional investors play an active monitoring role by constraining managerial myopia and opportunistic behavior. Bushee (1998) suggests that managers are less inclined to reduce research and development expenditures to reverse short-term earnings declines when institutional ownership is high, suggesting that institutional investors mitigate pressures for managerial myopia. Chung et al. (2002) find that large institutional shareholdings constrain managers' ability to manipulate reported earnings toward desired targets. Hartzell and Starks (2003) document that more concentrated institutional ownership exhibit higher pay-performance sensitivity and lower levels of executive compensation, suggesting that institutional investors enhance governance effectiveness through active monitoring. Kang et al. (2018) show that institutional investors with greater governance experience and information advantages serve as effective monitors, strengthening CEO turnover-performance sensitivity. These findings suggest that institutional investors contribute to a more transparent and reliable information environment through enhanced monitoring.

Taken together, greater analyst coverage and a larger number of institutional investors reflect stronger external monitoring and a more transparent information environment. These settings yield distinct predictions for the two channels mentioned above. Under the information demand channel, stronger external monitoring attenuates the positive association between family firms and the likelihood of issuing long-term forecasts. When firms are subject to intensive analyst scrutiny and institutional oversight, investors have less demand for long-term information to

supplement or verify short-term disclosures, or they can obtain long-term information through alternative channels. As a result, the incremental demand for long-term growth forecasts from sell-side analysts declines, reducing their incentives to issue such forecasts. In contrast, under the cost-reduction channel, stronger external monitoring reinforces the positive relation between family firms and analysts' long-term growth forecasts. Enhanced monitoring further improves information quality and reduces uncertainty, thereby further lowering the marginal cost of producing long-term growth forecasts. Therefore, we propose our second hypothesis in a nondirectional form as follows.

***Hypothesis 2:** The positive relation between family firms and analysts' issuance of long-term growth forecasts varies with the strength of firms' external monitoring.*

3.2.3 Regulatory Environments and Analysts' Long-Term Growth Forecasts

We next examine the role of country-level regulatory environments in shaping the relation between family firms and analysts' long-term growth forecasts. Prior research shows that national legal and institutional frameworks influence firms' information environments and, in turn, affect both the supply of and demand for analysts' forecasts. We capture regulatory environments using country-level measures of governance quality, economic freedom, and financial development.

Cross-country evidence highlights the importance of regulatory environments in shaping corporate behavior and information quality. Differences in legal origin, investor protection, and regulatory quality systematically influence financial market development, governance structures, and the degree of information asymmetry between firms and external stakeholders (La Porta et al., 1997, 2000). Stronger enforcement mechanisms are associated with more effective governance, reflected in greater performance sensitivity in CEO turnover and lower levels of earnings management (DeFond & Hung, 2004; Leuz et al., 2003). Chen et al. (2015) further demonstrate

that greater economic freedom enhances firm value through more efficient investment decisions.

Overall, these studies suggest that stronger regulatory environments improve firms' information environments, thereby facilitating analysts' forecasting activities. Indeed, Barniv et al. (2005) find higher analysts' forecast accuracy in common law countries, which are characterized by stronger investor protection and governance mechanisms, indicating that better regulatory environments reduce information frictions and enhance analysts' forecast performance. Consistent with the cost-reduction channel, stronger regulatory environments strengthen the positive relation between family firms and analysts' issuance of long-term growth forecasts by improving disclosure quality and reducing information risk, which lowers analysts' forecasting costs.

On the other hand, the demand for information from sell-side analysts is greater in countries with weaker institutional environments. When investor protection and regulatory oversight are limited, analysts play a more critical role in reducing information asymmetry. Consistent with this view, Lang et al. (2004) show that analyst coverage is more valuable in countries with weaker investor protection, indicating that investors rely more heavily on analysts when country-level institutions are less developed. Moreover, prior research indicates that family firms are particularly sensitive to the surrounding regulatory environments, which further shapes investors' demand for long-term information. Chen et al. (2014) show that family firms experience sharper declines in sales and employment growth in suboptimal regulatory environments relative to nonfamily firms. Ding et al. (2016) find that the relation between family control and firms' engagement in bribery depends critically on macro-governance conditions: family control has a stronger influence in weak institutional environments but becomes less consequential in countries with strong and transparent regulatory systems.

Together, this evidence suggests that investors' demand for long-term information from

sell-side analysts is likely to be stronger for family firms operating in countries with weaker regulatory environments. Consistent with the information demand channel, stronger regulatory environments weaken the positive relation between family firms and analysts' long-term forecasts, as investors face fewer information frictions and rely less on analysts for long-term information.

Since the two arguments yield different predictions regarding the incremental role of regulatory environments in Hypothesis 1, we propose our third hypothesis in a nondirectional form as follows.

***Hypothesis 3:** The positive relation between family firms and analysts' issuance of long-term growth forecasts varies with firms' country-level regulatory environments.*

3.3 Data and Methodology

3.3.1 Data

Our family firm data is from NRG Metrics, a global dataset covering firm-level governance, ownership, and board characteristics since 2007. The Family Firm dataset in NRG Metrics includes up to 19 indicators used to identify family firms. We obtain analyst forecast data and analyst-level control variables from the Institutional Brokers' Estimate System (I/B/E/S) Detail History files, which provide extensive information on analysts' forecasts, including long-term growth forecasts. Firm-level financial data are collected from Compustat.

We merge NRG Metrics with Compustat using International Securities Identification Numbers (ISIN) as the primary identifier. We then link I/B/E/S data to the merged sample using the GVKEY-IBES ticker linking matrix from WRDS. The initial sample contains 373,011 analyst-firm-year observations. We exclude firms in the financial, utilities, and public administration sectors (two-digit SIC codes 60–67, 49, and 90–99), resulting in the deletion of 36,644 observations. We then require non-missing values for dependent, independent, and control

variables used in the baseline specification. This requirement drops 18,835 observations with and leaves a final sample of 317,532 analyst-firm-year observations, spanning 2,907 firms across 42 countries from 2007 to 2019.

3.3.2 Measurement for Family Firms and Analysts' Long-Term Forecasts

Despite the growing literature on family firms, there is no consensus on what constitutes a family firm (Kraus et al., 2011). Existing studies adopt varying definitions, with some emphasizing family ownership and the presence of founding families in firm leadership, and others relying on firms' self-identification as family or nonfamily firms (Diéguez-Soto et al., 2015). A review by Sageder et al. (2018) reveals that most studies define family firms based on family equity ownership and control. Specifically, a substantial body of archival research applies a threshold of at least 5% family ownership and/or family member involvement on the board when comparing family with nonfamily firms. Consistent with this approach, we measure family firm status using *FamFirm*, an indicator variable equal to one if the founder or a family member serves as an officer or director, or owns at least 5% of the firm's equity, and zero otherwise.

I/B/E/S defines long-term growth forecasts as the expected annual increase in operating earnings over the firm's next full business cycle, typically spanning three to five years (Bordalo et al., 2019; Sharpe, 2005). Following Jung et al. (2012), we measure analysts' long-term forecasts using long-term growth forecast indicator from I/B/E/S. *LTG* is an indicator variable equal to one if an analyst issues a long-term growth forecast for a firm-year and zero otherwise.

3.3.3 Model Specifications

We estimate the following logistic regression model to test Hypothesis 1, which examines the effect of family firm involvement on analysts' likelihood of issuing long-term growth forecasts.

$$\ln\left(\frac{P(LTG = 1)}{1 - P(LTG = 1)}\right)$$

$$= \alpha_1 + \alpha_2 FamFirm + \alpha_3 \sum Controls + \alpha_4 Year + \alpha_5 Country + \alpha_6 Industry \quad (1)$$

where *LTG* is an indicator variable that equals one if an analyst issues a long-term growth forecast about a firm in a given year, and zero otherwise. *FamFirm* is an indicator variable equal to one if a firm is classified as a family firm, and zero otherwise. Consistent with Hypothesis 1, we expect to find a significantly positive coefficient on α_2 .

Controls denotes a vector of firm-level and analyst-level variables. Following Srinidhi et al. (2009) and Jung et al. (2012), we control for firms' growth opportunities using the market-to-book ratio (*MTB*), firm size using the natural logarithm of market value (*Size*), profitability using return on assets (*ROA*), measured as income before extraordinary items divided by total assets, financial leverage using total debt scaled by total shareholders' equity (*Leverage*), and bankruptcy risk using the Altman Z-score (*Altman-Z*) (Altman, 1968).

Following Bradley et al. (2017), Hilary and Hsu (2013), and Jung et al. (2012), we include a set of analyst-level characteristics as controls. We control for analyst-firm experience using the number of years an analyst has followed the firm (*Experience*), and for forecast horizon using the natural logarithm of one plus the number of days between the analyst's report date and the actual earnings announcement date (*Horizon*). We further control for forecast accuracy, measured as the absolute difference between an analyst's earnings forecast and actual earnings scaled by the firm's stock price at the beginning of the year (*AFE*). To capture analyst workload, we include the natural logarithm of the number of firms an analyst follows in a given year (*#FirmFollow*). Finally, to account for analysts' information resources, we control for brokerage house size (*BrokerSize*),

measured as the natural logarithm of the number of active analysts³ employed by the analyst's brokerage house in a given year. We also control for year, industry, and country fixed effects. Standard errors are clustered by year. Appendix 3.A provides detailed definitions of all variables.

To test whether the positive association between family firms and analysts' long-term forecasts is primarily driven by the information demand or the cost-reduction channel, we estimate the following Models (2) and (3). Model (2) tests Hypothesis 2 by assessing how firm-level external monitoring moderates the relation between family firms and analysts' long-term growth forecasts.

$$\begin{aligned} & \ln \left(\frac{P(LTG = 1)}{1 - P(LTG = 1)} \right) \\ &= \beta_1 + \beta_2 FamFirm + \beta_3 ExtMon + \beta_4 FamFirm * ExtMon + \beta_5 \sum Controls \\ &+ \beta_6 Year + \beta_7 Country + \beta_8 Industry \quad (2) \end{aligned}$$

where *ExtMon* captures the extent of firm-level external monitoring and is measured using analyst coverage (*#Analyst*) and the number of institutional investors (*#Ins_Investor*). *#Analyst* is the unique number of analysts following the firm, and *#Ins_Investor* is the unique number of institutional investors holding the firm's shares in a given year.⁴ Higher values of both variables reflect stronger external monitoring.

Our coefficient of interest is the interaction term β_4 on *FamFirm * ExtMon*. If the information demand channel dominates, we expect β_4 to be significantly negative, as stronger external monitoring reduces investors' incremental demand for long-term forecasts from analysts. In contrast, if the cost-reduction channel dominates, we expect β_4 to be positive, as stronger

³ Active analysts are those who issue at least one forecast in a given year.

⁴ We collect institutional investor data from FactSet in 2019, when access was available through the authors' institutional subscription.

monitoring improves the firm's information environment and further lowers analysts' costs of producing long-term forecasts. All other control variables and fixed effects are consistently defined as in Model (1).

Model (3) tests Hypothesis 3 by examining whether country-level regulatory environments moderate the relation between family firms and analysts' long-term growth forecasts.

$$\ln\left(\frac{P(LTG = 1)}{1 - P(LTG = 1)}\right) = \lambda_1 + \lambda_2 FamFirm + \lambda_3 RegEnv + \lambda_4 FamFirm * RegEnv + \lambda_5 \sum Controls + \lambda_6 Year + \lambda_7 Country + \lambda_8 Industry \quad (3)$$

where *RegEnv* denotes a set of variables capturing country-level regulatory environments, including *GovIndex*, *EconFreedom*, and *FinDevelop*. *GovIndex* is derived from the World Bank's Worldwide Governance Indicators (WGI), a widely used measure of country-level institutional quality (Kaufmann et al., 2003). The WGI include six governance dimensions, and each indicator is scaled from -2.5 to 2.5 , with higher values reflecting stronger governance. Consistent with prior studies (Chen et al., 2014; Ding et al., 2016; Jacoby et al., 2019), we construct *GovIndex* as the average of the six indicators for each country-year.

EconFreedom is proxied by the Fraser Institute's Economic Freedom Index, which measures the degree of economic freedom across countries (Gwartney et al., 2025). The index spans five areas and ranges from 0 to 10, with higher values indicating greater economic freedom. *FinDevelop* is derived from the IMF's Financial Development Index, which aggregates indicators of financial institutions and financial markets to reflect overall financial system development (Svirydzenka, 2016). The index ranges from 0 to 1, with higher values indicating more developed financial systems. All other control variables and fixed effects are consistently defined as in Model

(1).

Our inference for the interaction term $FamFirm * RegEnv$ hinges on the relative importance of the information demand channel versus the cost-reduction channel. A significantly negative λ_4 would support the information demand channel, suggesting that stronger country-level regulatory environments reduce investors' reliance on analysts for long-term forecasts. Conversely, a positive λ_4 would be consistent with the cost-reduction channel, indicating that more stringent regulatory environments enhance firms' information environments and further lower analysts' costs of issuing long-term forecasts.

3.3.4 Sample Descriptions

Panel A of Table 3.1 presents the sample distribution by year, including the number of observations, the number of unique firms and analysts, and the yearly means of LTG and family firm ratios. The mean value of *LTG* reaches its lowest level, 0.118, in 2008. This is likely associated with heightened economic uncertainty following the financial crisis, which may have increased the difficulty of issuing long-term forecasts. Accordingly, we include year fixed effects to control for unobserved time-specific factors that may influence analysts' propensity to issue long-term forecasts.

Panel B of Table 3.1 presents the sample distribution by country. The United States accounts for over one-third of the sample. The mean value of LTG varies substantially across countries, ranging from a lowest of 0.080 in South Korea to a highest of 0.306 in Australia. Similarly, the average prevalence of listed family firms varies substantially across countries, reaching as high as 0.745 in India. These pronounced cross-country differences in long-term growth forecasting and family firm presence highlight the importance of examining country-level factors in our analysis.

Table 3.1 Sample Description

<i>Panel A: Description of Sample by Year</i>					
Year	# Observations	#Firms	#Analysts	LTG	FamFirm
2007	15,639	1,022	5,210	0.124	0.266
2008	17,023	1,065	5,448	0.118	0.259
2009	18,603	1,121	5,892	0.154	0.282
2010	20,194	1,142	6,234	0.196	0.289
2011	30,126	1,909	7,844	0.215	0.300
2012	21,671	1,403	6,420	0.205	0.293
2013	29,436	1,924	7,199	0.178	0.295
2014	28,467	1,919	6,955	0.171	0.290
2015	28,286	1,917	6,913	0.185	0.289
2016	27,815	1,983	6,528	0.192	0.282
2017	26,420	1,972	6,051	0.185	0.266
2018	27,684	2,274	5,682	0.177	0.275
2019	26,168	2,223	5,367	0.164	0.272

<i>Panel B: Description of Sample by Country</i>					
Country	# Observations	#Firms	#Analysts	LTG	FamFirm
USA	125,576	1,357	5,272	0.196	0.292
United Kingdom	31,147	256	2,852	0.137	0.176
Japan	25,692	164	999	0.123	0.088
Germany	20,250	133	2,113	0.228	0.245
France	15,388	110	2,086	0.195	0.355
Australia	13,594	148	866	0.306	0.242
India	10,111	40	1,075	0.107	0.745
Spain	6,695	45	910	0.141	0.417
Switzerland	6,055	48	973	0.217	0.178
Canada	5,533	43	818	0.124	0.462
Sweden	5,249	50	930	0.216	0.2
Norway	5,142	57	887	0.101	0.233
Italy	4,525	61	722	0.118	0.554
Finland	4,514	37	675	0.156	0.125
Hong Kong	4,434	28	952	0.167	0.593
Netherlands	4,388	46	785	0.141	0.254
South Korea	3,470	11	681	0.08	0.137
Taiwan	2,529	18	428	0.131	0.495
Belgium	2,388	24	531	0.165	0.202
Singapore	2,331	18	456	0.154	0.199
South Africa	2,292	20	335	0.205	0.127
Denmark	1,975	18	451	0.211	0.204
Thailand	1,827	17	287	0.13	0.354

Austria	1,801	17	411	0.173	0.209
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Table 3.1 Cont.

Panel B: Description of Sample by Country

Country	# Observations	#Firms	#Analysts	<i>LTG</i>	<i>FamFirm</i>
Turkey	1,608	13	246	0.135	0.506
Brazil	1,263	13	251	0.107	0.605
Other 15 countries	6,109	103	1,518	0.139	0.325

This table reports the sample distribution by year (Panel A) and by country (Panel B). Countries with fewer than 1,000 observations are aggregated for reporting purposes. *LTG* equals 1 if an analyst issues a long-term growth forecast for a firm in a given year, and 0 otherwise; *FamFirm* is an indicator variable which equals 1 if a firm is identified as a family firm and 0 otherwise.

Table 3.2 Summary Statistics

Variable	N	Mean	p50	SD	p25	p75
<i>LTG</i>	317,532	0.178	0	0.382	0	0
<i>FamFirm</i>	317,532	0.283	0	0.450	0	1
<i>MTB</i>	317,532	3.341	2.094	4.856	1.174	3.671
<i>Altman-Z</i>	317,532	3.725	2.752	3.647	1.746	4.340
<i>Size</i>	317,532	9.305	8.990	2.322	7.668	10.60
<i>ROA</i>	317,532	0.052	0.050	0.073	0.021	0.087
<i>Leverage</i>	317,532	0.816	0.551	1.274	0.246	1.034
<i>Experience</i>	317,532	4.519	2.893	5.115	0.860	6.797
<i>#FirmFollow</i>	317,532	2.689	2.708	0.790	2.303	2.996
<i>BrokerSize</i>	317,532	3.884	3.912	1.128	3.045	4.745
<i>Horizon</i>	317,532	4.977	4.898	0.586	4.595	5.425
<i>AFE</i>	317,532	9.611	0.449	39.78	0.115	1.885

This table presents summary statistics of variables used in our main regressions. *LTG* is an indicator variable that equals 1 if an analyst issues a long-term growth forecast for a firm in a given year, and 0 otherwise; *FamFirm* is an indicator variable which equals 1 if a firm is identified as a family firm and 0 otherwise; *MTB* is the market value of equity to the book value of equity; *Altman-Z* is a weighted average of five accounting ratios developed by Altman (1968); *Size* is the natural logarithm of market value of equity; *ROA* is the return on assets, which is measured as the income before extraordinary items over total assets; *Leverage* is the long-term debt and debt in current liabilities divided by total shareholders' equity; *Experience* is the number of years an analyst has followed the firm; *#FirmFollow* is the natural logarithm of the number of firms the analyst follows in a given year; *BrokerSize* is the natural logarithm of the number of analysts employed by analyst's brokerage house; *Horizon* is the logarithm of one plus the number of days between analyst report date and actual earnings announcement date; *AFE* is the absolute difference of earnings forecasts and actual earnings, scaled by stock price at the beginning of the year. ***, **, and * indicate statistical significance at 1%, 5%, and 10% levels, respectively.

Summary statistics for the main variables are presented in Table 3.2. All continuous variables are winsorized at the 1st and 99th percentiles. In the sample, long-term growth forecasts are issued in 17.8% of observations, while family firms represent 28.3% of the sample. The mean market-to-book ratio (*MTB*) is 3.341, and the average Altman Z-score is 3.725. The mean logarithm of firm market value (*Size*) is 9.305, corresponding to an average market capitalization of approximately \$10,993 million. Firms have an average return on assets (*ROA*) of 0.052 and a debt-to-equity ratio (*Leverage*) of 0.816. Analysts follow a firm for an average of 4.5 years (*Experience*). The average value of *#FirmFollow* is 2.689, indicating that an analyst follows approximately 15 firms per year. The mean brokerage size (*BrokerSize*) is 3.884, corresponding to roughly 49 active analysts per brokerage in our sample. The average forecast horizon (*Horizon*) is 4.977, implying an average of 145 days between the report date and the earnings announcement date. Finally, the mean absolute forecast error (*AFE*) is 9.611, measured as the absolute forecast error scaled by the beginning-of-year stock price.

3.4 Empirical Analyses

3.4.1 The Effect of Family Firms on Analysts' Long-Term Growth Forecasts

Baseline

Table 3.3 examines whether family firm involvement affects analysts' likelihood of issuing long-term growth forecasts. The coefficient on *FamFirm* is significantly positive ($\beta = 0.052$, $p < 0.01$), indicating that analysts are more likely to issue long-term growth forecasts for family firms than for nonfamily firms. Economically, the odds of analysts issuing long-term growth forecasts are 5.34% higher for family firms. This result supports our Hypothesis 1 and suggests that analysts adjust their forecast horizons to reflect the long-term orientation of family firms by issuing long-term growth forecasts.

Table 3.3 Baseline: Family Firms and Analysts' Long-Term Growth Forecasts

	LTG
<i>FamFirm</i>	0.052*** (3.68)
<i>MTB</i>	-0.004** (-2.23)
<i>Altman-Z</i>	-0.002 (-0.41)
<i>Size</i>	0.114*** (17.24)
<i>ROA</i>	1.127*** (7.40)
<i>Leverage</i>	-0.004 (-0.59)
<i>Experience</i>	-0.002 (-0.79)
<i>#FirmFollow</i>	-0.009 (-0.17)
<i>BrokerSize</i>	0.581*** (10.79)
<i>Horizon</i>	-0.041*** (-3.52)
<i>AFE</i>	-0.001*** (-3.41)
Observations	317,532
Year FE	Yes
Country FE	Yes
Industry FE	Yes
Pseudo R-sq	0.085

This table reports the results of logit regression which tests the effect of family firm on the likelihood of analysts issuing long-term forecasts. We include firm- and analyst-level controls, as well as the year, country, and industry fixed effects. *LTG* is an indicator variable that equals 1 if an analyst issues a long-term growth forecast for a firm in a given year, and 0 otherwise; *FamFirm* is an indicator variable which equals 1 if a firm is identified as a family firm and 0 otherwise; *MTB* is the market value of equity to the book value of equity; *Altman-Z* is a simple weighted average of five accounting ratios developed by Altman (1968); *Size* is the natural logarithm of market value of equity; *ROA* is the return on assets, which is measured as the income before extraordinary items over total assets; *Leverage* is generated by the long-term debt and debt in current liabilities to stockholders' equity; *Experience* is the number of years an analyst has followed the firm; *#FirmFollow* is the natural logarithm of the number of firms the analyst follows in a given year; *BrokerSize* is the natural logarithm of the number of analysts employed by analyst's brokerage house; *Horizon* is the logarithm of 1 plus the number of days between analyst report date and actual earnings announcement date; *AFE* is the absolute difference of earnings forecasts and actual earnings, scaled by stock price. Standard errors are clustered by year, t-statistics are reported in parentheses. ***, **, and * indicate statistical significance at 1%, 5%, and 10% levels, respectively.

The estimated coefficients on the control variables are generally consistent with expectations. Larger firms are more likely to receive long-term growth forecasts, reflecting greater visibility and lower information uncertainty. Similarly, profitability is positively associated with the issuance of long-term forecasts, suggesting that firms with stronger performance and more stable operations are easier for analysts to evaluate over extended horizons. In contrast, firms with higher market-to-book ratios are less likely to receive long-term forecasts. This pattern may reflect the greater uncertainty surrounding growth opportunities in such firms, as their valuations are more heavily driven by future investment prospects that are difficult to assess over longer horizons. Consequently, analysts may be more cautious in issuing long-term projections for these firms due to elevated uncertainty and higher forecast risk. No significant relation is observed between the likelihood of issuing long-term forecasts and either the Altman Z-score or the debt-to-equity ratio.

Among analyst characteristics, affiliation with larger brokerage houses is positively associated with the issuance of long-term growth forecasts, suggesting that greater analytical resources and institutional support facilitate the production of long-horizon information. In contrast, the likelihood of issuing long-term forecasts declines as the earnings announcement date approaches. This pattern is consistent with analysts relying more heavily on recent information and short-term signals, a behavior often described as “piggybacking” on current news (Feng & McVay, 2010). Forecast accuracy also plays an important role. Analysts with larger forecast errors are less likely to issue long-term forecasts, consistent with the view that more capable analysts are more willing to provide such projections as a signal of superior ability and confidence (Jung et al., 2012). No significant relation is found between the issuance of long-term forecasts and analysts’ firm-specific experience or workload.

Robustness

We perform additional analyses to examine the robustness of the baseline results. First, to mitigate concerns that our findings are driven by systematic differences in observable characteristics between family and nonfamily firms, we employ a propensity score matching (PSM) approach following Rosenbaum and Rubin (1983). We construct a one-to-one matched sample of family and nonfamily firm observations based on firm size, return on assets, leverage, market-to-book ratio, and Altman Z-score within the same country. The matching procedure yields 89,762 family firm observations and an equal number of matched nonfamily firm observations. Column (1) of Table 3.4 reports the PSM results. The coefficient on *FamFirm* remains positive and statistically significant ($\beta = 0.059$, $p < 0.01$), indicating that the positive association between family firm involvement and analysts' likelihood of issuing long-term growth forecasts is robust to controlling for selection on observable firm characteristics.

Table 3.4 Robustness Tests

	<u>Propensity Score Matching</u>	<u>Heckman two-step</u>		<u>Alternative family firm definitions</u>	
	(1)	Step 1 (Probit)	Step 2 (Probit)	(4)	(5)
	<i>LTG</i>	<i>FamFirm</i>	<i>LTG</i>	<i>LTG</i>	<i>LTG</i>
<i>FamFirm</i>	0.059*** (3.64)		0.031*** (3.92)		
<i>FamSale_Ind</i>		0.260*** (5.15)			
<i>IMR</i>			0.295* (1.84)		
<i>FamFirm1</i>				0.102*** (6.66)	
<i>FamFirm2</i>					0.025*** (2.66)
<i>MTB</i>	-0.003 (-1.57)	0.003* (1.76)	-0.001 (-1.31)	-0.004** (-2.24)	-0.004** (-2.22)
<i>Altman-Z</i>	-0.003 (-0.90)	0.046*** (11.58)	0.008 (1.54)	-0.001 (-0.22)	-0.001 (-0.17)
<i>Size</i>	0.104*** (12.92)	-0.082*** (-10.03)	0.045*** (3.85)	0.114*** (16.83)	0.113*** (16.61)
<i>ROA</i>	1.217*** (4.50)	-0.335* (-1.69)	0.587*** (5.83)	1.097*** (7.30)	1.113*** (7.30)
<i>Leverage</i>	-0.005 (-0.62)	-0.028*** (-2.69)	-0.009 (-1.56)	-0.005 (-0.68)	-0.005 (-0.66)
<i>Experience</i>	-0.001 (-0.38)	-0.006*** (-5.66)	-0.002 (-1.32)	-0.002 (-0.85)	-0.002 (-0.81)
<i>#FirmFollow</i>	-0.002 (-0.05)	-0.018*** (-3.65)	-0.003 (-0.10)	-0.008 (-0.16)	-0.009 (-0.17)
<i>BrokerSize</i>	0.575*** (11.29)	-0.013*** (-10.42)	0.320*** (11.26)	0.581*** (10.78)	0.581*** (10.78)
<i>Horizon</i>	-0.042*** (-3.02)	0.089*** (9.64)	-0.004 (-0.27)	-0.041*** (-3.54)	-0.040*** (-3.43)
<i>AFE</i>	-0.001*** (-2.83)	-0.000*** (-2.66)	-0.001*** (-4.43)	-0.001*** (-3.29)	-0.001*** (-3.45)
Observations	179,524	317,252	317,252	317,532	317,532
Year FE	Yes	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes
Pseudo R-sq	0.085	0.108	0.085	0.085	0.084

Column (1) reports the propensity score matching (PSM) results based on a one-to-one matched subsample of family and nonfamily firms. Family and nonfamily firm observations are matched by *MTB*, *Altman-Z*, *Size*, *ROA*, and *Leverage* within the same country. Columns (2) and (3) are tests for the Heckman two-step. In the first step, we estimate a Probit regression of the family firm indicator (*FamFirm*) on the instrument, the family sales ratio by industry

(*FamSale_Ind*), and control variables. *FamSale_Ind* is the proportion of industry sales generated by family firms within an industry. Based on the first-stage estimates, we compute the inverse Mills ratio (IMR) and include it as an additional control in the second-stage Probit regression. Columns (4) and (5) report results using alternative definitions of family firms. *FamFirm1* is an indicator variable equal to 1 if second-generation family members or descendants serve as directors, officers, or large shareholders, and 0 otherwise. *FamFirm2* is an indicator variable equal to 1 if a family, an individual or an unlisted firm is the ultimate owner with greater than 20% cash flow rights, and 0 otherwise. *LTG* is an indicator variable that equals 1 if an analyst issues a long-term growth forecast for a firm in a given year, and 0 otherwise; *FamFirm* is an indicator variable which equals 1 if a firm is identified as a family firm and 0 otherwise; Detailed variable definitions are listed in Appendix 3.A. All continuous variables are winsorized at the 1st and 99th percentiles. Standard errors are clustered by year, t-statistics are reported in parentheses. ***, **, and * indicate statistical significance at 1%, 5%, and 10% levels, respectively.

Second, we implement the Heckman (1979) two-step procedure to address potential endogeneity concerns arising from the non-random selection of family firms. We use the industry-level family sales ratio (*FamSale_Ind*) as an instrumental variable following Amit et al. (2015) and Fang, Memili, et al. (2021). *FamSale_Ind* is calculated as the proportion of total industry sales generated by family firms within a given industry. In the first step, we estimate a probit model in which the family firm indicator (*FamFirm*) is regressed on *FamSale_Ind* and the control variables. Based on the first-step estimation, we compute the inverse Mills ratio (IMR), which is then included as an additional control in the second-step regression. The results are reported in columns (2) and (3) of Table 3.4. We find that *FamFirm* remains significantly positively associated with *LTG* ($\beta = 0.031$, $p < 0.01$) after controlling for potential selection bias.

Third, we re-estimate our main tests using alternative definitions of family firms. As discussed earlier, there is no consensus regarding the definition of a family firm (Diéguez-Soto et al., 2015; Kraus et al., 2011; Sageder et al., 2018). Therefore, we assess whether our main findings are sensitive to the definition of a family firm. Following Miller et al. (2007), we consider two alternative measures. First, we adopt a succession-based definition. *FamFirm1* is an indicator variable equal to one if second-generation family members or descendants serve as directors, officers, or large shareholders, and zero otherwise. Second, we employ an ownership-concentration definition. *FamFirm2* identifying family firms as those in which a family, an individual, or an unlisted firm is the ultimate owner with more than 20% cash-flow rights. Columns (4) and (5) of Table 3.4 report the results. Our inference remains unchanged: family firm indicators are positively and significantly associated with the likelihood of issuing long-term growth forecasts, indicating that our results are robust to alternative definitions of family firms.

Finally, we examine whether our main findings are driven by U.S. firms, which account

for more than one-third of the sample. We re-estimate Model (1) separately for U.S. and non-U.S. firms. As reported in Table 3.5, the coefficients on *FamFirm* are positive and statistically significant in both subsamples. A test of coefficient differences on *FamFirm* is insignificant ($p = 0.543$), indicating that our results are not driven by U.S. observations and hold across institutional contexts.

Table 3.5 Non-U.S. versus U.S. Subsamples

	Non-U.S. Firms	U.S. Firms
	(1)	(2)
	LTG	LTG
<i>FamFirm</i>	0.061*** (3.12)	0.035** (2.29)
<i>MTB</i>	-0.002 (-0.66)	-0.003 (-1.60)
<i>Altman-Z</i>	-0.010* (-1.85)	0.002 (0.57)
<i>Size</i>	0.112*** (17.07)	0.105*** (14.10)
<i>ROA</i>	1.594*** (11.66)	0.604*** (2.72)
<i>Leverage</i>	-0.029*** (-4.48)	0.015* (1.77)
<i>Experience</i>	0.009*** (4.30)	-0.014*** (-3.99)
<i>#FirmFollow</i>	0.002 (0.03)	-0.095*** (-3.15)
<i>BrokerSize</i>	0.563*** (11.16)	0.637*** (6.90)
<i>Horizon</i>	-0.034** (-2.14)	-0.048*** (-4.09)
<i>AFE</i>	-0.000** (-2.50)	-0.004*** (-5.68)
Observations	191,956	125,576
Year FE	Yes	Yes
Country FE	Yes	No
Industry FE	Yes	Yes
Pseudo R-sq	0.103	0.070

This table reports logit regression results examining the effect of family firm involvement on analysts' likelihood of issuing long-term forecasts for U.S. and non-U.S. subsamples. Difference tests on the coefficients of *FamFirm* across the two subsamples yield a non-significant result ($p = 0.543$), indicating no substantial difference between the U.S. and non-U.S. subsamples. For consistency, we include firm- and analyst-level controls, as well as the year, country, and industry fixed effects. *LTG* is an indicator variable that equals 1 if an analyst issues a long-term growth forecast for a firm in a given year, and 0 otherwise; *FamFirm* is an indicator variable which equals 1 if a firm is identified as a family firm and 0 otherwise; Detailed variable definitions are listed in Appendix 3.A. All continuous variables are winsorized at the 1st and 99th percentiles. Standard errors are clustered by year, t-statistics are reported in parentheses. ***, **, and * indicate statistical significance at 1%, 5%, and 10% levels, respectively.

3.4.2 Mechanism: Information Demand versus Cost-Reduction

As discussed in the development of Hypothesis 1, the positive association between family firms and analysts' likelihood of issuing long-term growth forecasts may arise from two competing channels: a long-term information demand channel and a long-term forecast cost-reduction channel. To disentangle the two mechanisms, we exploit cross-sectional variations in firm-level external monitoring and country-level regulatory environments. These settings influence firms' information environments and, in turn, investors' incremental demand for, as well as analysts' costs of producing, long-term growth forecasts.

Cross-sectional tests of external monitoring

We measure firm-level external monitoring using analyst coverage and the number of institutional investors, both of which capture the intensity of outside scrutiny. To test Hypothesis 2, we interact these monitoring measures with the family firm indicator to assess whether external monitoring attenuates or amplifies the positive relation between family firms and analysts' likelihood of issuing long-term growth forecasts. Under the information demand channel, stronger monitoring increases the availability of firm-specific information, thereby reducing investors' incremental demand for long-term forecasts and suggesting an attenuated effect. In contrast, under the cost-reduction channel, stronger monitoring improves firms' information environments and reduces uncertainty, lowering analysts' marginal forecasting costs and suggesting an amplified effect.

Table 3.6 reports the results of the firm-level external monitoring tests specified in Model (2). External monitoring is measured by *#Analyst*, the number of analysts following a firm, and *#Ins_Investor*, the number of institutional investors holding a firm's shares in a given year. Columns (1) and (3) present the main effects with the inclusion of *#Analyst* and *#Ins_Investor*, respectively. The coefficients on *FamFirm* remain positive and statistically significant after

controlling for analyst coverage and the number of institutional investors. Columns (2) and (4) report the interaction results that test Hypothesis 2. The coefficients on *FamFirm*#Analyst* ($\beta = -0.041, p < 0.01$) and *FamFirm*#Ins_Investor* ($\beta = -0.046, p < 0.01$) are both significantly negative, indicating that stronger external monitoring attenuates the positive association between family firms and analysts' likelihood of issuing long-term growth forecasts.

Table 3.6 Cross-Sectional Tests of External Monitoring

	(1)	(2)	(3)	(4)
	LTG	LTG	LTG	LTG
<i>FamFirm</i>	0.052*** (3.61)	0.053*** (3.50)	0.064*** (4.37)	0.068*** (4.87)
<i>#Analyst</i>	0.022 (0.80)	0.037 (1.30)		
<i>FamFirm * #Analyst</i>		-0.041*** (-2.98)		
<i>#Ins_Investor</i>			0.136*** (6.39)	0.152*** (6.67)
<i>FamFirm * #Ins_Investor</i>				-0.046*** (-4.25)
<i>MTB</i>	-0.003** (-2.19)	-0.003** (-2.16)	-0.003* (-1.76)	-0.003* (-1.90)
<i>Altman-Z</i>	-0.002 (-0.40)	-0.001 (-0.37)	0.001 (0.23)	0.002 (0.42)
<i>Size</i>	0.109*** (12.99)	0.109*** (12.90)	0.054*** (4.58)	0.054*** (4.51)
<i>ROA</i>	1.134*** (7.26)	1.133*** (7.28)	1.070*** (7.40)	1.052*** (7.33)
<i>Leverage</i>	-0.004 (-0.57)	-0.004 (-0.57)	-0.006 (-0.87)	-0.006 (-0.83)
<i>Experience</i>	-0.002 (-0.78)	-0.002 (-0.79)	-0.002 (-0.83)	-0.002 (-0.84)
<i>#FirmFollow</i>	-0.009 (-0.17)	-0.009 (-0.17)	-0.006 (-0.11)	-0.006 (-0.11)
<i>BrokerSize</i>	0.581*** (10.79)	0.581*** (10.79)	0.579*** (10.87)	0.579*** (10.87)
<i>Horizon</i>	-0.041*** (-3.49)	-0.041*** (-3.49)	-0.043*** (-3.42)	-0.042*** (-3.37)
<i>AFE</i>	-0.001*** (-3.56)	-0.001*** (-3.51)	-0.001*** (-3.66)	-0.001*** (-3.63)
Observations	317,532	317,532	309,334	309,334
Year FE	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Pseudo R-sq	0.085	0.085	0.085	0.085

This table reports logit regression results examining whether firm-level external monitoring moderates the association between family firms and the likelihood of analysts issuing long-term forecasts. We proxy for external monitoring using analyst coverage (*#Analyst*) and the number of institutional investors (*#Ins_Investor*). For consistency, we include firm- and analyst-level controls, as well as the year, country, and industry fixed effects. Detailed variable definitions are listed in Appendix 3.A. All continuous variables are winsorized at the 1st and 99th percentiles. Standard errors are clustered by year, t-statistics are reported in parentheses. ***, **, and * indicate statistical significance at 1%, 5%, and 10% levels, respectively.

The results suggest that enhanced external monitoring reduces investors' incremental demand for long-term information from analysts, thereby decreasing analysts' incentives to issue long-term growth forecasts, consistent with the information demand channel. Together, the negative moderating effects across both monitoring measures indicate that analyst coverage and institutional investor oversight act as substitutes rather than complements to family firm involvement in shaping analysts' long-term forecasting behavior.

Cross-sectional tests of regulatory environments

Country-level regulatory environments shape the baseline transparency and investor protection faced by firms. To test Hypothesis 3, we interact country-level regulatory environment measures with the family firm indicator to examine whether regulatory environments moderate the association between family firms and analysts' likelihood of issuing long-term growth forecasts. If the information demand channel dominates, stronger regulatory environments reduce investors' incremental demand for long horizon information from analysts, attenuating the positive association between family firms and long-term forecasts. In contrast, if the cost-reduction channel dominates, stronger regulatory environments improve firms' information environments and further lower analysts' costs of producing long-term forecasts, thereby intensifying the family firm effect. The interaction term therefore allows us to distinguish between the information demand and cost-reduction mechanisms.

Table 3.7 reports the results of the country-level regulatory environment tests specified in Model (3). We capture country-level regulatory environments using three measures: governance quality (*GovIndex*), economic freedom (*EconFreedom*), and financial development (*FinDevelop*). *GovIndex* is based on the World Bank's Worldwide Governance Indicators (WGI) and reflects a country's regulatory and institutional quality. *EconFreedom* is drawn from the Fraser Institute's

Economic Freedom Index, which measures the extent to which a country's policies and institutions support economic freedom. *FinDevelop* is the Financial Development Index. For all three measures, higher values indicate better regulatory environments. Our primary interest lies in the interaction terms between *FamFirm* and each regulatory environment measure.

Table 3.7 Moderating Effects of Country-level Conditions

	(1)	(2)	(3)	(4)	(5)	(6)
	LTG	LTG	LTG	LTG	LTG	LTG
<i>FamFirm</i>	0.053*** (3.69)	0.054*** (3.74)	0.053*** (3.75)	0.059*** (4.69)	0.054*** (3.72)	0.057*** (4.04)
<i>GovIndex</i>	0.540 (1.25)	0.566 (1.31)				
<i>FamFirm * GovIndex</i>		-0.082*** (-5.52)				
<i>EconFreedom</i>			0.767 (1.25)	0.810 (1.31)		
<i>FamFirm * EconFreedom</i>				-0.102*** (-4.77)		
<i>FinDevelop</i>					-3.156** (-2.24)	-3.105** (-2.21)
<i>FamFirm * FinDevelop</i>						-0.232** (-2.34)
<i>MTB</i>	-0.004** (-2.22)	-0.004** (-2.25)	-0.004** (-2.28)	-0.004** (-2.29)	-0.003** (-2.17)	-0.003** (-2.21)
<i>Altman-Z</i>	-0.002 (-0.43)	-0.002 (-0.40)	-0.002 (-0.62)	-0.002 (-0.52)	-0.002 (-0.63)	-0.002 (-0.58)
<i>Size</i>	0.114*** (17.70)	0.114*** (17.60)	0.113*** (18.18)	0.114*** (18.00)	0.115*** (18.87)	0.115*** (18.83)
<i>ROA</i>	1.130*** (7.45)	1.138*** (7.48)	1.146*** (8.12)	1.134*** (7.98)	1.131*** (7.72)	1.128*** (7.70)
<i>Leverage</i>	-0.004 (-0.56)	-0.004 (-0.51)	-0.005 (-0.61)	-0.004 (-0.57)	-0.005 (-0.61)	-0.005 (-0.59)
<i>Experience</i>	-0.002 (-0.82)	-0.002 (-0.83)	-0.002 (-0.81)	-0.002 (-0.82)	-0.002 (-0.79)	-0.002 (-0.80)
<i>#FirmFollow</i>	-0.009 (-0.18)	-0.009 (-0.18)	-0.009 (-0.18)	-0.009 (-0.18)	-0.011 (-0.22)	-0.011 (-0.22)
<i>BrokerSize</i>	0.582*** (10.80)	0.582*** (10.80)	0.581*** (10.74)	0.581*** (10.74)	0.578*** (10.79)	0.578*** (10.79)
<i>Horizon</i>	-0.041*** (-3.51)	-0.041*** (-3.50)	-0.042*** (-3.54)	-0.041*** (-3.52)	-0.041*** (-3.32)	-0.040*** (-3.30)
<i>AFE</i>	-0.001*** (-3.40)	-0.001*** (-3.42)	-0.001*** (-3.47)	-0.001*** (-3.50)	-0.001*** (-3.32)	-0.001*** (-3.33)
Observations	317,440	317,440	317,532	317,532	315,003	315,003
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R-sq	0.085	0.085	0.085	0.085	0.084	0.084

This table reports logit regression results examining whether country-level regulatory environments moderate the association between family firm involvement and analysts' likelihood of issuing long-term forecasts. We measure

country-level regulatory environments using the Worldwide Governance Indicators (*GovIndex*) developed by Kaufmann et al. (2003), the Economic Freedom Index (*EconFreedom*) from the Fraser Institute, and the Financial Development Index (*FinDevelop*) constructed by Svirydzenka (2016) at the International Monetary Fund. For consistency, we include firm- and analyst-level controls, as well as the year, country, and industry fixed effects. Detailed variable definitions are listed in Appendix 3.A. All continuous variables are winsorized at the 1st and 99th percentiles. Standard errors are clustered by year, t-statistics are reported in parentheses. ***, **, and * indicate statistical significance at 1%, 5%, and 10% levels, respectively.

Columns (1), (3), and (5) report the main effects with the inclusion of the three regulatory environment measures, respectively. We find that *FamFirm* remain significantly positively associated with *LTG* after including these additional controls. Columns (2), (4), and (6) report the interaction results testing Hypothesis 3. Across all three specifications, the interaction terms between *FamFirm* and country-level regulatory environment measures are negative and statistically significant. Specifically, the coefficient on *FamFirm*GovIndex* is negative and significant ($\beta = -0.082, p < 0.01$), indicating that the positive association between family firms and analysts' likelihood of issuing long-term growth forecasts is attenuated in countries with stronger regulatory and institutional quality. Similarly, the significantly negative coefficient on *FamFirm*EconFreedom* ($\beta = -0.102, p < 0.01$) suggests that in economies with greater economic freedom, characterized by limited government intervention, sound monetary policy, trade openness, and lighter regulation, the incremental likelihood of analysts issuing long-term forecasts for family firms is reduced. Finally, the coefficient on *FamFirm*FinDevelop* is also significantly negative ($\beta = -0.232, p < 0.05$), indicating that more developed financial systems diminish analysts' tendency to issue long-term growth forecasts for family firms.

Overall, these findings support the information demand channel. In countries with stronger governance, higher economic freedom, and better financial development, investors can obtain richer and more credible long-term information through sources such as corporate disclosure, management guidance, and investor communications, reducing the incremental value of and demand for sell-side analysts' long-term growth forecasts. In contrast, when institutional environments are weaker, analysts play a more central role in supplying long-term information about family firms.

3.5 Conclusions

Family firms are characterized by concentrated ownership, long-term orientation, and distinctive governance structures, which shape both firms' information environments and investors' demand for long-term information. This study examines how family firm involvement influences analysts' incentives to issue long-term growth forecasts. We develop two competing arguments. The information demand channel posits that, because family firms typically emphasize transgenerational control and long-term value creation, investors have stronger demand for long-term information, incentivizing analysts to issue long-term growth forecasts. In contrast, the cost-reduction channel suggests that family firms tend to have superior information environments due to lower agency conflicts between owners and managers, thereby reducing analysts' costs of producing long-term forecasts.

Using an international sample of 317,532 analyst firm year observations from 2007 to 2019, we document that analysts are more likely to issue long-term growth forecasts for family firms than for nonfamily firms. This finding remains robust in a propensity score matched sample, after addressing potential selection concerns using a Heckman two-step procedure, and when employing alternative definitions of family firms. To shed light on the underlying mechanism, we examine whether this relation varies with firm-level external monitoring and country-level regulatory environments. We find that the family firm effect is weaker when external monitoring is stronger and when regulatory environments provide greater investor protection and information transparency. These findings are consistent with the information demand channel than with the cost-reduction channel.. When credible long-term information is more readily available, investors' incremental demand for it from analysts diminishes, thereby weakening analysts' incentives to issue long-term growth forecasts.

This study contributes to the family firm literature by showing that family firm involvement

influences sell-side analysts' forecast horizons. By developing and testing the information demand and the cost-reduction mechanisms, we provide evidence that the long-term orientation associated with family firms shapes analysts' incentives to supply long-term information. Our findings also extend the analyst literature by documenting that analysts trade off the benefits and costs of providing long-term forecasts. Specifically, analysts are more likely to issue long-term forecasts for family firms in settings where investors exhibit stronger demand for long-term information from analysts. Our results highlight the role of family firm involvement in shaping the production of long-term information in capital markets.

This study is subject to several limitations. First, our analysis focuses on analysts' decisions to issue long-term growth forecasts, rather than on the accuracy of those forecasts. Because long-term growth forecasts in I/B/E/S are reported with vague horizons, we are unable to directly assess their accuracy. Future research could examine additional outcomes related to forecast performance to provide a more comprehensive understanding of analysts' long-term forecasting behavior for family firms. Second, while our study treats family firm involvement as a single construct, further research could explore how different forms of family involvement influence analyst behavior, thereby offering a more granular perspective on family firm heterogeneity. Despite these limitations, our study takes an important step toward bridging family business research and the analyst forecasting literature by providing novel evidence on the relation between family firms and analysts' incentives to issue long-term growth forecasts.

CHAPTER 4: ESSAY 3

Priced for Growth, Bound by Enforcement: The Global North-South Divide in Family Firms

Abstract

Family firms are often valued as long-term growth vehicles, yet their realized investment behavior often remains conservative. We attribute this valuation-enactment divergence to a property rights asymmetry such that analyst's price latent exclusion potential, while internal decision-makers are constrained by enforcement costs. Analyzing 89,445 observations across more than 30 countries, we find that family ownership elevates long-term growth forecasts but does not stimulate corresponding investment. Crucially, this relationship exhibits a Global North-South divide. In the North, strong institutional property rights facilitate capital deployment, fostering alignment between valuation and investment. In the South, weak institutional enforcement compels owners to restrict investment to safeguard control despite optimistic forecasts, resulting in pronounced divergence. Conversely, family management fosters consistent alignment across contexts. These findings demonstrate that institutional enforceability influences when family ownership translates into strategic action.

Keywords: Family Business, Value-Enactment Divergence, Institutional Enforceability, Long-Term Growth, Global North-South Divide

4.1 Introduction

Family firms are widely viewed as long-term oriented organizations characterized by patient capital, stable ownership, and intergenerational commitment (Anderson et al., 2012; Miller & Le Breton-Miller, 2005). Analysts and investors often interpret family involvement as a signal of durability and growth potential, leading to optimistic long-term expectations (Anderson & Reeb, 2003; Villalonga & Amit, 2006). Yet an empirical puzzle remains: despite favorable external valuations, many family firms enact conservative investment strategies, particularly in durable and irreversible assets (Chrisman & Patel, 2012; Fang, Chrisman & Holt, 2021; Gomez-Mejia et al., 2014). This divergence between external valuation and strategic enactment raises a fundamental question: *why do family firms that are valued as long-term growth vehicles so often refrain from acting that way?*

Existing research has primarily explained this gap through preference-based accounts centered on the unique set of goals or objectives held by the family. Scholars have emphasized socioemotional wealth preservation, risk aversion, and long-term orientation as drivers of conservative behavior in family firms (Gómez-Mejía et al., 2007; Miller et al., 2010; Zahra, 2005). While these explanations offer important insights, they struggle to account for two recurring patterns. First, optimistic external valuation frequently coexists with restrained internal action, even when controlling families ostensibly value growth and continuity (Berrone et al., 2012). Second, similar ownership structures generate markedly different investment responses across institutional environments (Fan & Wong, 2002; La Porta et al., 1998). These patterns suggest that valuation-enactment divergence cannot be fully explained by family preferences or goal-based reasoning alone.

In this study, we advance a property rights explanation for the valuation-enactment divergence in family firms. Drawing on property rights theory (Alchian & Demsetz, 1972; Barzel, 1997; Grossman & Hart, 1986), we argue that family involvement creates *latent exclusion potential*—the observable capacity to control assets, restrict access, and appropriate future returns. External observers capitalize this exclusion potential into long-term growth expectations (e.g., Lude & Prügl, 2019), effectively valuing what family firms *could* do under frictionless enforcement (Anderson et al., 2012; Demsetz, 1967). Internal decision-makers, however, bear the costs of enforcing exclusion. Long-term growth strategies often require durable, visible, and contract-intensive investments that heighten exposure to expropriation, hold-up, and control dilution (Shleifer & Vishny, 1993; Williamson, 1985). To the extent property rights are incomplete and costly to enforce, family owners rationally restrict investment to preserve effective control. Valuation-enactment divergence thus arises from a structural asymmetry: analysts price exclusion potential, whereas firms act on what can be credibly enforced.

This perspective implies that family heterogeneity matters not only because families differ in preferences, but because different forms and levels of family involvement configure property rights in distinct ways. Particularly, family ownership and family management represent qualitatively different control architectures (Fama & Jensen, 1983; Villalonga & Amit, 2006). Ownership concentrates residual control rights and amplifies exclusion potential, expanding the perceived opportunity set. Management embeds control within ongoing governance and operational oversight, constraining strategic discretion to what can be enforced with relatively low marginal cost (Chrisman et al., 2012; Miller & Le Breton-Miller, 2005). These differences generate systematic variation in how valuation and enactment align or diverge.

However, whether latent exclusion potential can be translated into strategic action also depends on institutional context. Institutions govern the enforceability of property rights and therefore determine when control can be exercised (La Porta et al., 1998; North, 1990). We exploit cross-national variations to examine this mechanism, using the contrast between the Global North and the Global South as a diagnostic setting rather than a descriptive comparison. While family ownership tends to generate alignment between valuation and enactment in environments with strong property-rights protection, it produces pronounced divergence where enforcement is weak (Acemoglu & Johnson, 2005; Fan & Wong, 2002). To unpack this contrast, we further examine how specific institutional and cultural dimensions, such as political corruption, governance quality, economic policy uncertainty, and hierarchical norms, shape the deployability of ownership-based control (Baker et al., 2016; Hofstede, 2001; Shleifer & Vishny, 1993).

Using a large international sample of 89,445 analyst-firm-year observations drawn from 991 publicly listed family firms across more than 30 countries over the period 2007–2019, we show that family ownership increases analysts' propensity to issue favorable long-term growth forecasts but does not, on average, increase firms' long-term investment decisions, producing systematic valuation-enactment divergence. Family management, by contrast, exhibits aligned negative effects on both forecasts and investment, reflecting a shared interpretation of family management as a source of discipline and control preservation rather than a propensity for expansion (Hilary & Hsu, 2013; Jung et al., 2012).

This study makes at least three contributions. First, we extend property rights theory by demonstrating that property rights shape not only internal investment incentives but also external valuation processes. We identify a structural decoupling where external actors price latent exclusion potential as what family firms *could do* under frictionless enforcement, while internal

decision-makers are constrained by the costs of enforcement acting only on what they safely *can do*. This distinction reveals that the gap between analyst expectations and firm decisions is not an error, but a predictable consequence of incomplete property rights. Second, we challenge preference-based explanations of family-firm conservatism. Rather than attributing restrained investment simply as a response to excessive risk aversion or socioemotional wealth preservation, we reframe it as a rational enforcement response. Instead of signaling a lack of growth ambition, we show that restrained investment is a strategic necessity to prevent expropriation and the dilution of control in high-cost enforcement environments. Third, we offer a unified explanation for cross-national heterogeneity in family firm behavior by identifying enforceability as a mechanism linking institutional context to strategic outcomes. By treating the Global North-South contrast as a diagnostic setting rather than a descriptive boundary, we demonstrate that institutional environments function as enforceability filters that determine when ownership-based exclusion potential can be successfully translated into realized strategic action. Ultimately, a property-rights perspective resolves the valuation-enactment puzzle by distinguishing between the possession of control rights and the feasibility of their deployment.

4.2 A Property Rights Perspective on Family Firms

Property rights theory (PRT) provides an economic framework for understanding the existence, boundaries, and strategic behavior of family firms by shifting the unit of analysis from production activities to the allocation, enforcement, and protection of rights, particularly the right to exclude others from valued resources (Chrisman et al., 2025). While early formulations of PRT emphasized residual claimancy, the right to appropriate income, as a source of efficiency, subsequent work clarifies that effective exclusion is the foundational condition for ownership and contracting, because economic value can only be realized when claims are credibly defended against imitation

and expropriation (Demsetz, 1967; Grossman & Hart, 1986; Hart & Moore, 1990). From this perspective, firm behavior reflects not only the distribution of residual returns but also the costs of exclusion, which shape whether potential opportunities can be safely enacted.

Recent advances extend this logic to family firms by identifying three complementary exclusion mechanisms through which families seek to protect and deploy their property rights (Chrisman et al., 2025). Goal-based exclusion arises when family owners are willing to trade off pecuniary returns for family-centered nonpecuniary (FCN) benefits, thereby accessing opportunities that nonfamily firms would rationally reject (Berrone et al., 2012; Gómez-Mejía et al., 2007). Governance-based exclusion stems from the unification of ownership and management, which lowers internal enforcement and monitoring costs while limiting exposure to external appropriation (Foss et al., 2021; Jaskiewicz et al., 2013; Schulze et al., 2001). Resource-based exclusion relies on imperfectly tradable assets—such as tacit knowledge and family social capital—that are difficult for rivals to replicate or seize (Habbershon et al., 2003). Collectively, these mechanisms generate latent exclusion potential, but their economic consequences also critically depend on the costs of enforcing property rights in a given institutional environment.

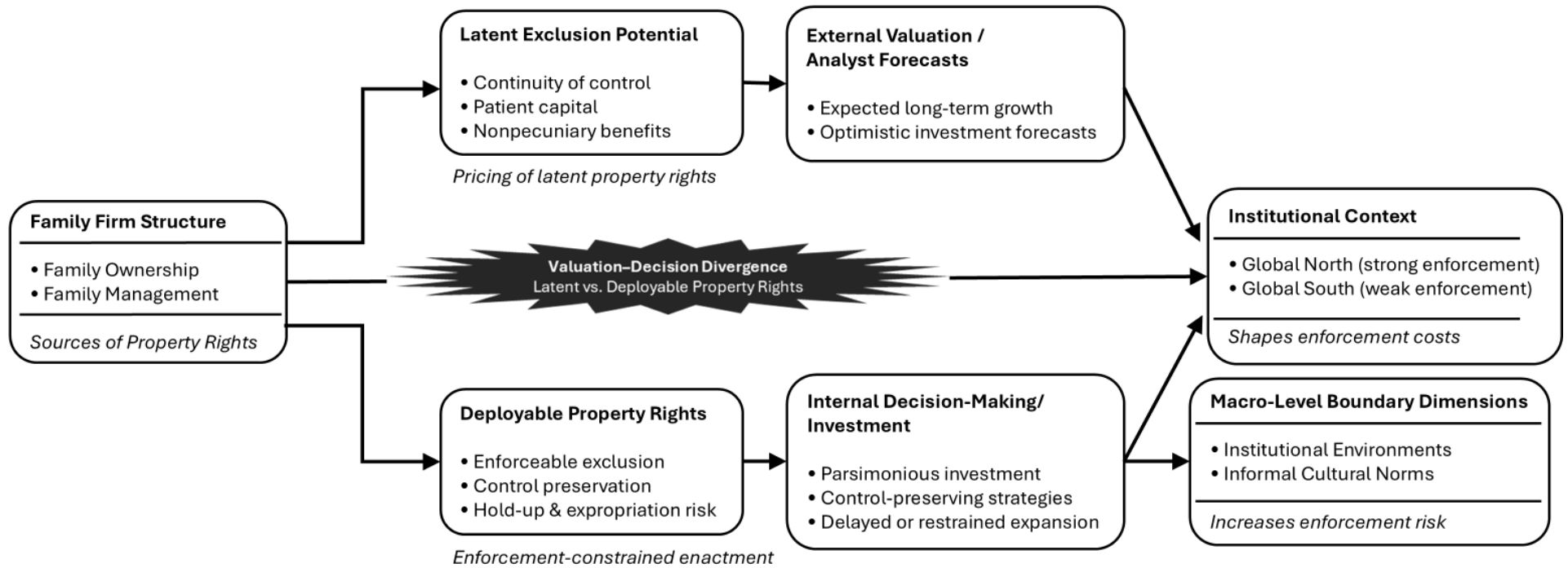
4.3 Divergence between External Valuation and Internal Enactment

Property rights theory implies that economic value depends not only on the rights a firm potentially controls, but also on the costs of protecting those rights (Barzel, 1989; Demsetz, 1967; Hart & Moore, 1990; Kim & Mahoney, 2005). Because property rights are inherently incomplete, the same bundle of rights may appear valuable *ex ante* yet remain difficult to deploy *ex post* (Barzel, 1989; Foss & Foss, 2005). This asymmetry produces a systematic divergence between external valuation and internal enactment.

External observers infer firm value from observable indicators of exclusion potential, including ownership concentration and long investment horizons (Anderson & Reeb, 2003; Shleifer & Vishny, 1997; Villalonga & Amit, 2006; Zellweger et al., 2012a). In family firms, these signals reflect goal-based exclusion, whereby family owners accept lower pecuniary returns for nonpecuniary benefits (Chua et al., 1999; Gómez-Mejía et al., 2007). Because enforcement costs are often unobservable, external valuations capitalize this latent exclusion potential into optimistic expectations without taking the costs of strategic enactment into account.

Internal enactment follows a different logic as shown in Figure 4.1. Family owners and managers bear the actual costs of enforcing property rights, including exposure to hold-up and expropriation (Grossman & Hart, 1986; Hart & Moore, 1990; Williamson, 1985). Realizing growth opportunities often requires committing to durable investments; when enforcement costs are substantial, families rationally favor restraint over expansion (Carney, 2005; Chrisman et al., 2025). The resulting divergence is structural: external valuation is anchored in potential value, whereas internal enactment is constrained by the feasibility of enforcing exclusion (Barzel, 1989; Chrisman et al., 2025). Consequently, what appears as underinvestment reflects a rational response to incomplete property rights rather than preference inconsistency. External actors price what family firms could do under frictionless exclusion, while internal actors act on what they can safely do.

Figure 4.1. Theoretical Model



4.4 The Impact of Institutional Context on Valuation-Enactment Divergence

A property rights perspective implies that the magnitude of valuation-enactment divergence is contingent on institutional context, because institutions fundamentally shape the costs of enforcing exclusion and residual control (Barzel, 1989; Demsetz, 1967; North, 1990). While family firms may possess similar exclusion potential across settings, the extent to which these rights can be credibly enforced varies systematically with the quality of formal legal and regulatory institutions (La Porta et al., 1998, 2000).

In environments characterized by strong formal institutions, such as robust investor protection and low corruption, enforcement costs are relatively low and predictable (Djankov et al., 2008; La Porta et al., 1998, 1999). Under these conditions, family owners can confidently convert latent exclusion potential into strategic action. Investments in durable assets are less likely to expose the firm to opportunistic appropriation or control dilution (Claessens et al., 2002). Consequently, internal enactment more closely reflects the opportunities implied by external valuation, attenuating divergence (Banalieva et al., 2015).

Conversely, in environments with weak formal institutions, property rights are costly to enforce and vulnerable to expropriation. Limited investor protection and politicized markets raise the risks of committing to visible and irreversible investments (Acemoglu & Robinson, 2012; La Porta et al., 1999; Morck et al., 2005). In such contexts, exclusion shifts from an instrument of opportunity capture to a mechanism of wealth defense. Family owners rationally prioritize control preservation over expansion, even when growth opportunities appear attractive (Carney, 2005; Chrisman et al., 2025). Thus, internal enactment becomes increasingly conservative relative to external expectations.

Crucially, institutional context does not alter goals or exclusion potential but conditions the feasibility of enforcing rights (North, 1990). External observers, lacking insight into enforcement costs, continue to price family ownership as a value signal. This asymmetry is particularly pronounced in weak environments, where rising exclusion costs are difficult to observe, resulting in a systematic widening of divergence driven by institutional constraints rather than strategic intent.

4.5 Hypothesis Development

In the family business literature, divergence between optimistic external expectations and restrained internal behavior is often attributed to long-term orientation (LTO). Family ownership and continuity of control are commonly interpreted as signals of patient capital and extended time horizons, leading analysts to expect sustained investment and long-term value creation (Anderson & Reeb, 2003; Miller & Le Breton-Miller, 2005; Zellweger, 2007).

Consistent with our property-rights framework, however, LTO is better understood as an external interpretation of latent exclusion potential, rather than a direct determinant of strategic action (Chua et al., 2025; Lumpkin et al., 2010). While family ownership signals access to long-term opportunities, whether these opportunities are enacted depends on the costs of enforcing property rights, which vary systematically across institutional contexts (Chrisman et al., 2025). When enforcement costs are high, family owners rationally prioritize asset preservation over expansion despite externally inferred long-term orientations (Carney, 2005). This distinction—between externally valued potential and internally deployable control—provides the foundation for the hypotheses that follow.

4.5.1 Family Ownership and Valuation-Enactment Divergence

From an external perspective, family ownership is commonly interpreted as a signal of long-term value creation. Analysts associate concentrated family ownership with patient capital and access to opportunities that nonfamily firms are unable or unwilling to exploit, embedding optimistic expectations regarding growth and investment into their forecasts (Anderson & Reeb, 2003; Miller & Le Breton-Miller, 2005; Villalonga & Amit, 2006; Zellweger, 2007). In property rights terms, these expectations reflect the valuation of goal-based exclusion—the willingness of family owners to trade off pecuniary returns for family-centered nonpecuniary benefits such as control, legacy, and transgenerational continuity (Berrone et al., 2012; Chua et al., 1999; Gómez-Mejía et al., 2007). Because such preferences lower the required pecuniary return threshold, family ownership is inferred to expand the firm’s feasible opportunity set.

Internal enactment, however, is constrained by the costs of enforcing property rights. While family ownership generates latent exclusion potential, growth-oriented strategies require commitment to observable and durable investments that increase exposure to control dilution, hold-up, and expropriation (Grossman & Hart, 1986; Hart & Moore, 1990). To preserve effective exclusion, family owners often adopt parsimonious investment strategies that limit reliance on external capital or governance arrangements that resemble those used by nonfamily firms (Carney, 2005; Chrisman et al., 2025). Consequently, access to long-term opportunities and even long-term orientation does not always translate into long-term investment (Chua et al., 2025).

This asymmetry can produce a systematic valuation-enactment divergence. External observers capitalize the potential value of family ownership, whereas internal decision-makers discount the same opportunities once high enforcement costs are incorporated into decision-making (Barzel, 1989). The divergence thus reflects a structural mismatch between the valuation

of latent exclusion potential and the enactment of deployable property rights, rather than analytical error or preference inconsistency. Accordingly, we propose:

***Hypothesis 1:** Family ownership is positively associated with valuation-enactment divergence, such that analyst forecasts exceed firms' realized investment decisions.*

4.5.2 Family Management and Valuation-Enactment Divergence

In contrast to family ownership, family management conveys a different bundle of property rights and thus generates a different relationship between external valuation and internal enactment. From an external perspective, family management is typically interpreted as a governance arrangement that emphasizes, continuity, and risk containment rather than aggressive growth. Analysts recognize that while family managers may reduce classic agency problems through aligned ownership and management, they also face potential costs associated with entrenchment, nepotism, limited managerial talent, and adverse selection (Chrisman et al., 2017; Jaskiewicz et al., 2015; Schulze et al., 2001; Shleifer & Vishny, 1997; Villalonga & Amit, 2006). As a result, external expectations surrounding family firms characterized by extensive family management tend to be comparatively conservative, reflecting anticipated stability rather than expansion.

Internal enactment follows a closely aligned logic. From a property rights perspective, family management can strengthen governance-based and resource-based exclusion by allowing families to directly monitor, protect, and deploy firm-specific assets that are difficult to handle with formal contracts, such as tacit knowledge, relational capital, and firm-specific routines (Habbershon et al., 2003; Sirmon & Hitt, 2003; Williamson, 1985). To preserve effective exclusion over these nontradable family-endowed assets (Chrisman et al., 2025; Fang et al., 2025; Gedajlovic & Carney, 2010), family managers tend to prioritize continuity and asset protection over risky, irreversible investments that could expose the firm to dilution or external appropriation (Grossman

& Hart, 1986; Hart & Moore, 1990). Thus, conservative strategic behavior under family management reflects, rational responses to the need to safeguard property rights rather than foregone opportunities (Fang, Chrisman & Holt, 2021).

Because both external observers and internal decision-makers interpret family management through a similar lens of preservation and enforcement discipline, valuation and enactment are more closely aligned. Unlike family ownership, which inflates external expectations by signaling latent exclusion potential, family management signals the active defense of deployable property rights through direct strategic and operational oversight, limiting the scope for systematic overvaluation (Chrisman et al., 2025). As a result, valuation-enactment divergence is attenuated when family members occupy key managerial positions. Accordingly, we propose:

***Hypothesis 2:** Family management is negatively associated with valuation-enactment divergence, such that analyst forecasts more closely align with firms' realized investment decisions.*

4.5.3 Institutional Context as a Moderator

Valuation-enactment divergence associated with family ownership varies systematically between the Global North and the Global South because institutional environments shape the costs of enforcing property rights (La Porta et al., 1998; North, 1990). Family ownership generates latent exclusion potential—the ability to pursue opportunities that trade off pecuniary returns for family-centered nonpecuniary benefits—but whether this potential can be enacted depends on the level of exclusion the institutional environment offers (Chrisman et al., 2025).

In the Global North, strong formal institutions and reliable contract enforcement lower enforcement costs, enabling family owners to commit to visible and durable investments without excessive risk of expropriation or control dilution (Djankov et al., 2008; La Porta et al., 1999). As

a result, the growth and long-term investment strategies implied by family ownership are more likely to be realized, reducing divergence between analyst expectations and firm behavior (Banalieva & Eddleston, 2011).

In the Global South, by contrast, weaker property rights protection and higher enforcement costs increase exposure to predation and opportunistic redistribution (Morck et al., 2005). Although analysts are expected to continue to interpret family ownership as a signal of long-term growth potential, family owners face strong incentives to restrict investment to protect control, SEW, and family wealth (Carney, 2005; Eddleston et al., 2020). Consequently, institutional weakness amplifies the mismatch between external valuation based on exclusion potential and internal enactment constrained by the risk that exclusion will not be enforceable. We therefore propose:

Hypothesis 3: *The positive valuation-enactment divergence associated with family ownership will be larger in the Global South than in the Global North.*

Institutional context affects the exclusion associated with family management differently because family management reflects an approach that focuses on the defense of property rights through governance and resource-based exclusion rather than goal-based exclusion (Chrisman et al., 2025). As a result, valuation-enactment alignment under family management is expected to persist across both institutional settings.

In the Global North, analysts typically associate family management with stability, control preservation, and risk containment, and family managers usually enact correspondingly conservative strategies (Miller & Le Breton-Miller, 2005; Villalonga & Amit, 2006). In the Global South, weak formal institutions increase reliance on family management as a mechanism for

safeguarding firm-specific, nontradable assets (Chrisman et al., 2025; Fang et al., 2025; Sirmon & Hitt, 2003), often through close monitoring and relational governance (Gedajlovic & Carney, 2010; La Porta et al., 1999; Morck et al., 2005). External observers in these contexts are expected to also interpret family management as a defensive arrangement rather than a source of latent growth potential (Jaskiewicz et al., 2015).

Because both valuation and enactment under family management are shaped by the same enforcement-oriented logic in the Global North and the Global South, institutional weakness does not systematically inflate valuation-enactment divergence (Chrisman et al., 2025). Alignment therefore remains stable across contexts. We therefore propose:

***Hypothesis 4:** The valuation-enactment divergence associated with family management will remain in both the Global North and the Global South.*

4.6 Methodology

To examine valuation-enactment divergence across institutional contexts, we constructed a large international panel combining family firm characteristics, analyst forecasts, and firm investment behavior. Our sample originates from the NRG Metrics' Family Firms dataset, which covers 7,620 publicly listed firms worldwide. Consistent with dominant archival research, we classify a firm as a family firm if the founder or a family member holds at least 5% of equity and/or occupies a senior governance or management role. This operationalizes family involvement through ownership and control rather than self-identification. Although we include lone-founder firms in the initial tests, they are excluded in robustness tests with no impact on the results.

Analyst forecast data were obtained from the Institutional Brokers' Estimate System (I/B/E/S) Detail History files. We use the issuance of long-term growth forecasts, defined as

expectations of average annual operating earnings growth over the next three to five years, as our primary measure of external valuation. Firm-level financial data were drawn from Compustat.

After merging the NRG Metrics, I/B/E/S, and Compustat datasets, we excluded firms in financial services, utilities, and public administration (SIC codes 49, 60–67, and 90–99). We removed observations with missing data and dropped country-industry cells with fewer than 50 observations. The final sample consists of 89,445 analyst-firm-year observations covering 991 family firms across more than 30 countries over the period 2007–2019. We concluded the sample in 2019 to avoid data contamination from the COVID-19 pandemic, an exogenous shock that would confound our analysis of stable institutional mechanisms.

Table 4.1 reports the distribution. The proportion of long-term forecast reports was lowest in 2008 due to the financial crisis. The United States accounts for over one-third of the sample, yet the frequency of long-term forecasts in the U.S. (19.9%) is only marginally higher than the sample average of 17.5%. Overall, Australia had the highest long-term forecast ratio at 29.8% and Portugal the lowest at 3.4%.

Table 4.1 Sample Distribution*Panel A: Description of Sample by Year*

Year	# Observations	#Firms	#Analysts	LTG
2007	4,115	282	2,703	0.133
2008	4,389	292	2,800	0.120
2009	5,222	319	3,261	0.158
2010	5,831	334	3,482	0.202
2011	8,996	589	4,812	0.218
2012	6,326	426	3,577	0.206
2013	8,664	573	4,494	0.174
2014	8,223	562	4,353	0.168
2015	8,163	559	4,330	0.183
2016	7,814	564	4,127	0.179
2017	7,006	531	3,703	0.169
2018	7,596	646	3,596	0.163
2019	7,100	623	3,382	0.151

Panel B: Description of Sample by Country

Country	# Observations	#Firms	#Analysts	LTG
Australia	3,268	43	575	0.298
Austria	377	7	86	0.151
Belgium	482	9	111	0.095
Brazil	764	8	186	0.098
Canada	2,558	22	539	0.133
Czech	77	1	26	0.052
Denmark	402	2	121	0.216
Finland	565	5	143	0.175
France	5,460	54	986	0.199
Germany	4,960	53	922	0.230
Greece	445	9	89	0.054
Hong Kong	2,631	20	651	0.158
India	7,536	28	986	0.115
Ireland	512	7	133	0.211
Israel	146	1	37	0.130
Italy	2,482	39	459	0.101
Japan	2,258	17	371	0.134
Malaysia	208	2	73	0.096
Mexico	289	5	96	0.166
Netherlands	1,116	11	258	0.134
New Zealand	93	3	35	0.280
Norway	1,200	20	227	0.058
Philippines	237	3	63	0.262
Poland	183	2	64	0.077
Portugal	174	3	58	0.034
Russia	60	3	33	0.067
Singapore	464	6	139	0.153
South Africa	292	3	74	0.236
South Korea	475	2	149	0.091
Spain	2,794	18	437	0.129
Sweden	1,049	10	303	0.221
Switzerland	1,078	10	282	0.269
Taiwan	1,252	10	357	0.124
Thailand	646	7	179	0.149
Turkey	814	7	183	0.139
USA	36,727	481	3,765	0.199
United Kingdom	5,371	60	1,182	0.109

4.6.1 Dependent Variables

We examine valuation-enactment divergence using two dependent variables that capture external valuation and internal strategic enactment, respectively.

Analysts' long-term growth forecasts (LTG). To measure external valuation, we use a binary indicator, *LTG*, which equals one if an analyst issues a long-term growth forecast for a firm in a given year, and zero otherwise. Obtained from the Institutional Brokers' Estimate System (I/B/E/S) Detail History files, these forecasts represent analysts' expectations of average annual operating earnings growth over the firm's next three-to-five-year business cycle. Consistent with prior research, we employ the issuance of a long-term forecast as an observable proxy for external long-term valuation.

Firms' long-term decision-making (LTD). To capture enacted long-term investment behavior, we construct LTD as a factor score derived from a principal component analysis of two measures: asset durability and capital expenditures. Asset durability reflects managers' choice of asset lifespan and is calculated following Souder and Bromiley (2012) using depreciation expense and net property, plant, and equipment. Capital expenditures capture investments in tangible assets with long useful lives that involve substantial upfront costs while generating benefits over time.

We restrict the sample to firms using straight-line depreciation with asset durability between 1 and 40 years. Although research and development (R&D) expenditure is frequently used as an indicator of long-term orientation, we exclude it from our measure due to substantial missing data resulting from cross-country variation in disclosure requirements.

4.6.2 Independent Variables

Our key independent variables capture family heterogeneity by distinguishing between two types of family involvement, each representing a distinct bundle of property rights. *Family Ownership*

(*FFown*) measures the percentage of equity held by the founding family. It serves as a proxy for ownership-based control rights, reflecting the family's residual claimancy and latent exclusion potential. *Family Management (FFman)* is a binary indicator equal to one if family members occupy top management positions, and zero otherwise. This variable reflects the family's involvement in governance.

4.6.3 Moderator: Global North vs. Global South

To examine whether valuation-enactment divergence varies systematically with institutional context, we distinguish between the Global North and the Global South. Drawing on property rights theory, this classification proxies for cross-national variation in the enforceability of ownership and control rights.

Countries are classified as *Global South* based on their membership in the Group of 77 (G77), an intergovernmental organization of developing economies. The Global South subsample includes Brazil, India, Malaysia, Mexico, the Philippines, South Africa, Thailand, and Turkey, whose environments typically characterized by weaker investor protection, less reliable contract enforcement, and higher expropriation risk. The remaining countries constitute the *Global North*, as listed in Panel B of Table 4.1, representing institutional environments with stronger legal protections, more developed capital markets, and greater transparency.

4.6.4 Control Variables

Following Srinidhi et al. (2009) and Jung et al. (2012), we control for a comprehensive set of firm-level characteristics that may influence investment behavior and analyst coverage. These include growth opportunities, measured as the ratio of the market value of equity to the book value of equity (MTB); firm size, defined as the natural logarithm of the firm's market value (Size); profitability, calculated as income before extraordinary items scaled by total assets (ROA); and

financial leverage, measured as total debt divided by total shareholders' equity (Leverage). We also control for the information environment using the natural logarithm of the number of analysts covering the firm (#Analyst) and for financial distress using Altman's (1968) Z-score (Altman-Z).

To account for analyst heterogeneity, we follow Jung et al. (2012), Hilary and Hsu (2013), and Bradley et al. (2017) by including analyst-level controls. We control for experience (Experience), the number of years an analyst has followed the firm; forecast frequency (EPSFreq), the number of forecasts issued for the firm in a given year; and forecast horizon (Horizon), the natural logarithm of one plus the number of days between the report date and the earnings announcement. Additionally, we control for forecast accuracy (AFE), defined as the absolute difference between the forecast and actual earnings scaled by stock price, and coverage capacity (#FirmFollow), the natural logarithm of the number of firms an analyst follows. When multiple analysts exist, we use the average forecast accuracy for AFE. We also control for information resources, proxied by the size of the brokerage house (BrokerSize). All models include year and country fixed effects, with standard errors clustered by year. Appendix 4.A provides detailed definitions for all variables.

4.6.5 Measuring Forecast-Decision Alignment versus Divergence

To systematically interpret the relationship between analysts' long-term growth forecasts (*LTG*) and firms' long-term decisions (*LTD*), we establish specific criteria for classifying alignment and divergence. Baseline alignment is indicated when *LTG* and *LTD* exhibit the same directional relationship—meaning both are significantly positive or both are negative—or when both are statistically indistinguishable from zero. Conversely, baseline divergence is indicated when *LTG* and *LTD* exhibit opposite signs, or when one outcome is statistically significant while the other is insignificant, suggesting a decoupling of external expectations from realized decision-making.

We further examine how institutional context conditions this relationship, distinguishing between the Global North and Global South. We expect divergence to be attenuated in the Global North, where lower enforcement costs enable the effective deployment of family control. In contrast, we anticipate greater divergence in the Global South, where higher enforcement costs limit the credibility of such control. In testing moderation, we characterize a moderator as “alignment-enhancing” if it narrows the gap between *LTG* and *LTD* by harmonizing their directional signals. Conversely, a moderator is “divergence-enhancing” if it widens this gap, pushing valuation and enactment further apart in magnitude or direction.

Methodologically, given the binary nature of the dependent variable, we employ logistic regression for all models involving *LTG*. For models involving the continuous variable *LTD*, we use ordinary least squares (OLS) regression. All models include year and country fixed effects to absorb time-specific global shocks and time-invariant country characteristics. Finally, standard errors are clustered by year to account for potential cross-sectional correlation within time periods.

4.7 Empirical Results

4.7.1 Descriptive Statistics

Table 4.2 provides descriptive statistics for the key variables, and Table 4.3 reports the correlation matrix. The average family ownership (*FFown*) is 18.2%, with substantial variation across the sample, while active family management (*FFman*) is present in approximately 44.2% of observations. The overall issuance rate for long-term growth forecasts (*LTG*) is 17.5%. In terms of correlations, *LTG* and *LTD* exhibit a marginally significant negative correlation, providing preliminary evidence of potential divergence between analyst forecasts and firm decisions.

Table 4.2 Descriptive Statistics

Variable	N	Mean	p50	SD	p25	p75
LTG	89,445	0.175	0.000	0.380	0.000	0.000
LTD	69,233	0.000	-0.292	1.000	-0.763	0.480
FFown	89,445	0.182	0.089	0.209	0.009	0.305
FFman	89,445	0.442	0.000	0.497	0.000	1.000
MTB	89,445	3.853	2.340	5.633	1.274	4.228
Altman-Z	89,445	4.650	3.078	5.351	1.808	5.293
Size	89,445	9.091	8.800	2.298	7.462	10.270
Leverage	89,445	0.237	0.223	0.175	0.098	0.351
ROA	89,445	1.288	0.149	3.269	0.042	0.962
#Analyst	89,445	2.980	3.045	0.601	2.639	3.401
Experience	89,445	4.092	2.537	4.592	0.748	6.005
EPSFreq	89,445	4.019	4.000	2.476	2.000	5.000
#FirmFollow	89,445	2.621	2.708	0.597	2.303	2.996
BrokerSize	89,445	3.816	3.829	1.117	2.944	4.718
Horizon	89,445	5.013	4.970	0.571	4.615	5.481
AFE	89,445	6.162	0.360	26.410	0.100	1.354

This table reports descriptive statistics for the main variables used in the analysis. *LTG* is an indicator equal to 1 if an analyst issues a long-term growth forecast for a firm in a given year, and 0 otherwise. *LTD* is a continuous measure capturing firms' long-term decision-making based on asset durability and capital expenditure. *FFown* denotes family ownership, and *FFman* indicates active family management. Control variables include firm-level and analyst-level characteristics as defined in Appendix 4.A. All continuous variables are winsorized at the 1st and 99th percentiles.

Table 4.3 Correlation Matrix

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(1) LTG	1.000								
(2) LTD	-0.007*	1.000							
(3) FFown	0.001	-0.005	1.000						
(4) FFman	-0.014***	-0.043***	-0.074***	1.000					
(5) MTB	0.011***	-0.024***	-0.010***	0.024***	1.000				
(6) Altman-Z	0.028***	-0.025***	-0.011***	0.061***	0.526***	1.000			
(7) Size	0.013***	0.078***	-0.059***	-0.023***	0.255***	0.253***	1.000		
(8) Leverage	-0.031***	0.100***	0.026***	0.011***	-0.057***	-0.443***	0.004	1.000	
(9) ROA	0.012***	-0.022***	-0.138***	0.041***	0.046***	0.071***	-0.002	-0.073***	1.000
(10) #Analyst	0.036***	0.029***	-0.064***	-0.066***	0.139***	0.124***	0.613***	-0.046***	0.033***
(11) Experience	0.005	0.013***	-0.034***	-0.032***	-0.008**	-0.022***	0.085***	0.019***	0.036***
(12) EPSFreq	0.076***	0.038***	-0.064***	-0.040***	-0.050***	-0.011***	0.034***	-0.032***	0.082***
(13) #FirmFollow	0.016***	0.004	-0.114***	0.041***	0.019***	0.032***	-0.001	-0.028***	0.097***
(14) BrokerSize	0.217***	0.009**	0.015***	-0.025***	0.014***	-0.018***	0.021***	0.013***	-0.029***
(15) Horizon	-0.002	0.022***	-0.007**	-0.033***	0.017***	0.003	0.044***	0.016***	-0.053***
(16) AFE	-0.044***	0.016***	-0.006*	-0.049***	-0.086***	-0.114***	-0.176***	0.098***	-0.056***

	(10)	(11)	(12)	(13)	(14)	(15)	(16)
(10) #Analyst	1.000						
(11) Experience	0.025***	1.000					
(12) EPSFreq	0.137***	0.146***	1.000				
(13) #FirmFollow	0.008**	0.164***	0.158***	1.000			
(14) BrokerSize	0.041***	-0.021***	0.097***	0.024***	1.000		
(15) Horizon	-0.023***	-0.008**	-0.204***	-0.039***	-0.005	1.000	
(16) AFE	-0.074***	-0.041***	-0.038***	-0.036***	0.011***	0.089***	1.000

This table presents Pearson correlation coefficients among the key variables. Variable definitions follow those in Appendix 4.A. All continuous variables are winsorized at the 1st and 99th percentiles.

4.7.2 Multivariate Results

Baseline results.

Table 4.4 presents baseline regression results examining how family heterogeneity influences analysts' long-term forecasts (*LTG*) and firms' long-term decisions (*LTD*). Consistent with Hypothesis 1, family ownership generates significant valuation-enactment divergence. The coefficient of *FFown* on *LTG* is positive and significant ($\beta = 0.159$, $p = 0.007$), indicating that a one standard deviation increase in family ownership raises the likelihood of long-term forecasts by 4.41 percentage points, whereas the coefficient on *LTD* is statistically insignificant ($\beta = 0.025$). This reveals a fundamental misalignment: analysts interpret ownership as a signal of patient capital, yet family owners do not correspondingly increase investment. While pooled coefficient-equality tests impose a stronger null than the directional Hypothesis 1, non-rejection in such diagnostics does not invalidate this divergence⁵.

⁵ As a supplementary diagnostic, we also estimate pooled models that directly test family ownership's coefficient equality across forecast and decision outcomes. Pooled coefficient-equality tests impose a stronger null than Hypothesis 1, which is directional rather than symmetric, and therefore non-rejection in such tests does not invalidate the predicted valuation-enactment divergence.

Table 4.4 Family Firm Heterogeneity Effects on Long-term Forecasts and Long-term Decisions

	(1) LTG	(2) LTG	(3) LTG	(4) LTD	(5) LTD	(6) LTD
FFown	0.159*** (0.059)		0.154*** (0.060)	0.025 (0.092)		0.015 (0.090)
FFman		-0.041** (0.021)	-0.039* (0.021)		-0.089** (0.037)	-0.089** (0.037)
MTB	-0.003 (0.002)	-0.004 (0.002)	-0.003 (0.002)	-0.014** (0.005)	-0.015** (0.005)	-0.015** (0.005)
Altman-Z	0.007** (0.003)	0.008** (0.003)	0.008** (0.003)	0.006 (0.004)	0.007* (0.004)	0.007* (0.004)
Size	0.094*** (0.014)	0.096*** (0.013)	0.094*** (0.014)	0.052*** (0.013)	0.052*** (0.014)	0.051*** (0.013)
Leverage	-0.132* (0.077)	-0.127* (0.077)	-0.129* (0.077)	0.645*** (0.119)	0.665*** (0.121)	0.665*** (0.121)
ROA	-0.001 (0.004)	-0.001 (0.004)	-0.000 (0.004)	-0.008 (0.008)	-0.008 (0.008)	-0.008 (0.008)
#Analyst	-0.029 (0.028)	-0.035 (0.027)	-0.030 (0.028)	-0.074 (0.042)	-0.076* (0.042)	-0.075* (0.041)
Experience	-0.002 (0.003)	-0.002 (0.003)	-0.002 (0.003)			
EPSFreq	0.051*** (0.007)	0.051*** (0.007)	0.051*** (0.007)			
#FirmFollow	-0.071*** (0.026)	-0.071*** (0.025)	-0.070*** (0.026)			
BrokerSize	0.571*** (0.056)	0.571*** (0.056)	0.571*** (0.056)			
Horizon	0.043** (0.017)	0.040** (0.017)	0.042** (0.017)			
AFE	-0.001** (0.000)	-0.001** (0.000)	-0.001** (0.000)			
_cons	-4.659*** (0.340)	-4.608*** (0.345)	-4.629*** (0.346)	-0.369** (0.136)	-0.320** (0.130)	-0.322** (0.133)
N	89,445	89,445	89,445	69,233	69,233	69,233
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	Yes	Yes
pseudo R-sq	0.085	0.085	0.085			
R-sq				0.063	0.065	0.065
adj. R-sq				0.063	0.064	0.064

This table reports logit regression and OLS regression results examining the effects of family heterogeneity on the likelihood of analysts issuing long-term growth forecasts (*LTG*) and firms' long-term decisions (*LTD*), respectively. The key independent variables include family ownership (*FFown*) and family management (*FFman*). The logit regression models include both firm-level and analyst-level controls, and the OLS regression models include firm-level controls. All models include both year and country fixed effects. Detailed variable definitions are provided in Appendix 4.A. Standard errors are

clustered by year and reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

In contrast, and consistent with Hypothesis 2, family management (*FFman*) is associated with forecast-decision alignment. The coefficients for *FFman* are negative and significant for both *LTG* ($\beta = -0.041$, $p = 0.05$) and *LTD* ($\beta = -0.089$, $p = 0.035$), meaning family-managed firms are relatively 3.1% less likely to receive long-term forecasts and decrease 8.91% of a standard deviation in long-term decision making. With a direct pooled test following Chrisman et al. (1990), the equality restriction cannot be rejected ($F = 2.64$, $p = 0.13$). Assuming a threshold of $\delta = 0.20$, the test statistic provides power well above conventional levels at $\alpha = 0.05$ ($z = 3.72$). Given the precision of the pooled estimate, divergences larger than 0.106 can be ruled out at the 95% confidence level, indicating the null result is not attributable to limited statistical power. These results indicate analysts correctly anticipate that family-managed firms will pursue more conservative strategies.

Institutional context: Global North versus Global South.

Table 4.5 presents subsample analyses testing Hypotheses 3 and 4 regarding institutional context. For family ownership, results reveal a stark contrast. In the Global North, *FFown* exhibits an aligned positive relationship with both *LTG* ($\beta = 0.184$, $p = 0.004$) and *LTD* ($\beta = 0.243$, $p = 0.012$); the equality restriction cannot be rejected ($F = 0.82$, $p = 0.38$). This suggests that in developed economies, ownership translates into both optimistic forecasts and realized investment. Conversely, in the Global South, *FFown* has an insignificant effect on *LTG* but a strongly negative effect on *LTD* ($\beta = -0.871$, $p = 0.008$), presenting a sizable difference with modest statistical evidence ($F = 3.85$, $p = 0.073$). This supports Hypothesis 3, showing divergence is amplified in emerging economies where owners restrict investment despite optimistic analyst expectations.

Table 4.5 Family Firm Heterogeneity Effects in Global North/South

	Global North						Global South					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	LTG	LTG	LTG	LTD	LTD	LTD	LTG	LTG	LTG	LTD	LTD	LTD
FFown	0.184*** (0.063)		0.180*** (0.063)	0.243** (0.082)		0.235** (0.082)	0.042 (0.103)		0.041 (0.099)	-0.871*** (0.273)		-0.850*** (0.272)
FFman		-0.048** (0.022)	-0.046** (0.023)		-0.115*** (0.038)	-0.113** (0.037)		-0.005 (0.058)	-0.003 (0.057)		0.143 (0.113)	0.102 (0.112)
Analyst Control	Yes	Yes	Yes	No	No	No	Yes	Yes	Yes	No	No	No
Firm Control	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
_cons	-4.390*** (0.347)	-4.325*** (0.351)	-4.354*** (0.352)	-0.502*** (0.121)	-0.406*** (0.110)	-0.444*** (0.114)	-8.675*** (0.560)	-8.686*** (0.543)	-8.676*** (0.549)	1.248** (0.530)	1.667** (0.554)	1.248** (0.530)
N	78,659	78,659	78,659	60,792	60,792	60,792	10,786	10,786	10,786	8,441	8,441	8,441
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
pseudo R-sq	0.074	0.074	0.074				0.193	0.193	0.193			
R-sq				0.059	0.060	0.062				0.250	0.226	0.252
adj. R-sq				0.058	0.060	0.061				0.248	0.223	0.249

This table reports logit and OLS regressions examining family heterogeneity effects on analysts' long-term forecasts (*LTG*) and firms' long-term decisions (*LTD*) separately for the Global North and Global South subsamples. The model specifications, control variables, and fixed effects are consistent with the baseline regressions. Standard errors are clustered by year and reported in parentheses. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

For family management, alignment persists across contexts, supporting Hypothesis 4. In the Global North, family management negatively predicts both valuation and enactment. The equality restriction cannot be rejected ($F = 1.04$, $p = 0.33$); power calculations ($z = 3.62$) assuming a threshold of $\delta = 0.20$ indicate this null result is not driven by insufficient power. Divergences larger than 0.108 can be ruled out. In the Global South, neither relationship is significant, and the coefficient difference is indistinguishable from zero ($F = 0.71$, $p = 0.42$). Crucially, family management does not generate systematic divergence in either context, confirming management-based control remains robust to institutional heterogeneity.

4.7.3 Robustness Tests

Controlling for endogeneity.

A key endogeneity concern in our cross-institutional analyses is non-random selection, as firms in the Global South differ systematically from those in the Global North. We address this using propensity-score matching (PSM) and inverse-probability weighting (IPW) to rebalance covariates.

We implement kernel-based PSM following Heckman et al. (1998) and Dehejia and Wahba (2002). A logit model predicts Global South membership using standard firm-level covariates (market-to-book ratio, Z-score, size, leverage, profitability, and analyst coverage). Kernel matching is preferred to avoid discarding Global North observations in sparsely populated covariate regions. Imposing common support yields 10,775 Global South observations matched to 78,659 Global North observations, with good post-matching balance (standardized bias = 2.5%; $p = 0.138$). Matched-sample results (Table 4.6, Panel A) show no qualitative changes.

Table 4.6 Robustness Check: PSM and IPW

Panel A: PSM						
	(1) LTG	(2) LTG	(3) LTG	(4) LTD	(5) LTD	(6) LTD
FFown	0.159*** (0.059)		0.154*** (0.060)	0.025 (0.092)		0.015 (0.090)
FFman		-0.041* (0.021)	-0.039* (0.021)		-0.088** (0.037)	-0.088** (0.037)
Analyst Control	Yes	Yes	Yes	No	No	No
Firm Control	Yes	Yes	Yes	Yes	Yes	Yes
_cons	-4.657*** (0.341)	-4.607*** (0.346)	-4.627*** (0.346)	-0.367** (0.136)	-0.319** (0.129)	-0.321** (0.132)
N	89,434	89,434	89,434	69,222	69,222	69,222
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	Yes	Yes
pseudo R-sq	0.085	0.085	0.085			
R-sq				0.064	0.065	0.065
adj. R-sq				0.063	0.064	0.064

Panel B: IPW						
	(1) LTG	(2) LTG	(3) LTG	(4) LTD	(5) LTD	(6) LTD
FFown	0.163*** (0.055)		0.159*** (0.056)	-0.322* (0.159)		-0.331* (0.158)
FFman		-0.030 (0.021)	-0.025 (0.022)		-0.059 (0.039)	-0.068 (0.038)
Analyst Control	Yes	Yes	Yes	No	No	No
Firm Control	Yes	Yes	Yes	Yes	Yes	Yes
_cons	-5.176*** (0.335)	-5.146*** (0.338)	-5.157*** (0.340)	-0.195 (0.187)	-0.160 (0.194)	-0.157 (0.192)
N	89,445	89,445	89,445	69,233	69,233	69,233
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	Yes	Yes
pseudo R-sq	0.102	0.102	0.102			
R-sq				0.089	0.086	0.090
adj. R-sq				0.088	0.085	0.089

This table reports robustness tests using PSM and IPW. The dependent variables and model specifications follow the baseline analysis. Standard errors are clustered by year and reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Complementarily, we employ IPW to retain the full sample while correcting for imbalance (Hirano et al., 2003; Wooldridge, 2007). IPW constructs a pseudo-population where institutional context is independent of observed characteristics (Robins et al., 2000). Results from IPW-weighted regressions (Table 4.6, Panel B) are substantively similar.

Alternative family ownership thresholds.

Because prior research employs varying ownership cutoffs to identify family firms (Claessens et al., 2000; Faccio & Lang, 2002; La Porta et al., 1999), we re-estimate all models using 10% and 20% ownership thresholds in addition to our 5% baseline. As reported in Table 4.7, the core findings remain unchanged.

Alternative family management measures.

Prior research adopts multiple operationalizations of family management, including founder CEO status (Anderson & Reeb, 2003; Fahlenbrach, 2009), family CEO presence encompassing founders and descendants (Pérez-González, 2006; Villalonga & Amit, 2006), and broader family executive involvement (Miller et al., 2007). To ensure that our results are not driven by a specific measurement choice, we re-estimate the baseline models using *FounderCEO* (the CEO is the founder of the firm), *FFCEO* (the CEO is either the founder of the firm or a descendent of the founder), and *FFExecutive* (the CEO and/or the Chairman of the Board is either the founder of the firm or a descendent of the founder). As shown in Table 4.7, no qualitative changes have been found in the empirical results.

Table 4.7 Robustness Check: Alternative Family Ownership Thresholds and Family Management Measurements

Panel A: 5% Threshold (Baseline)						
	Full Sample		Global North		Global South	
	(1) LTG	(2) LTD	(3) LTG	(4) LTD	(5) LTG	(6) LTD
FounderCEO	-0.091*** (0.020)	-0.256*** (0.063)	-0.085*** (0.019)	-0.275*** (0.061)	-0.340*** (0.114)	0.170 (0.194)
FFCEO	-0.032* (0.018)	-0.095** (0.040)	-0.039** (0.020)	-0.118** (0.040)	-0.002 (0.063)	0.087 (0.126)
FFExecutive	-0.042*** (0.014)	-0.020 (0.027)	-0.041** (0.017)	-0.005 (0.035)	-0.019 (0.069)	-0.103 (0.159)
Panel B: 10% Threshold						
	Full Sample		Global North		Global South	
	(1) LTG	(2) LTD	(3) LTG	(4) LTD	(5) LTG	(6) LTD
FFown	0.149*** (0.058)	-0.001 (0.092)	0.176*** (0.063)	0.213** (0.087)	0.037 (0.100)	-0.847*** (0.275)
FFman	-0.050* (0.029)	-0.103** (0.039)	-0.059** (0.029)	-0.130*** (0.040)	0.005 (0.059)	0.130 (0.124)
FounderCEO	-0.100*** (0.026)	-0.271*** (0.062)	-0.093*** (0.024)	-0.294*** (0.061)	-0.343*** (0.116)	0.178 (0.193)
FFCEO	-0.039 (0.025)	-0.112** (0.040)	-0.048* (0.026)	-0.134*** (0.041)	0.005 (0.061)	0.070 (0.135)
FFExecutive	-0.045*** (0.015)	-0.012 (0.030)	-0.043** (0.018)	0.007 (0.037)	-0.025 (0.069)	-0.126 (0.151)
Panel C: 20% Threshold						
	Full Sample		Global North		Global South	
	(1) LTG	(2) LTD	(3) LTG	(4) LTD	(5) LTG	(6) LTD
FFown	0.135** (0.055)	0.011 (0.105)	0.164*** (0.060)	0.241** (0.104)	0.042 (0.125)	-0.834** (0.286)
FFman	-0.032 (0.033)	-0.117*** (0.035)	-0.035 (0.034)	-0.152*** (0.037)	-0.022 (0.070)	0.135 (0.113)
FounderCEO	-0.118*** (0.028)	-0.257*** (0.067)	-0.104*** (0.025)	-0.288*** (0.062)	-0.484*** (0.137)	0.206 (0.204)
FFCEO	-0.018 (0.030)	-0.126*** (0.037)	-0.021 (0.031)	-0.155*** (0.039)	-0.016 (0.065)	0.068 (0.126)
FFExecutive	-0.063*** (0.015)	0.013 (0.041)	-0.061*** (0.016)	0.029 (0.043)	-0.061 (0.081)	-0.030 (0.158)

This table reports robustness tests using alternative family ownership thresholds of 10% and 20%, as well as alternative family management measurements. *FounderCEO* equals 1 if the firm's CEO is the original founder of the firm, and 0 otherwise. *FFCEO* equals 1 if the firm's CEO is either the founder or a descendant of the founder, and 0 otherwise.

FFExecutive equals 1 if any of the following conditions hold: the CEO is the founder, the CEO is a descendant of the founder, the Chairman is the founder, or the Chairman is a descendant of the founder, and 0 otherwise. The dependent variables and model specifications follow the baseline analysis. Standard errors are clustered by year and reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Exclusion of lone-founder firms.

As pointed out earlier, the main sample includes lone-founder firms as do other studies (e.g., Anderson & Reeb, 2003, 2004). However, the work of Miller et al. (2007) makes it unclear if lone founder firms are family firms. Therefore, in the robustness tests reported in Tables 4.8 and 4.9 we exclude lone-founder firms and re-test the models. No qualitative changes in the empirical results were found.

Table 4.8 Robustness Check: Family Firm Heterogeneity Effects (Excluding Lone-Founder Firms)

	(1) LTG	(2) LTG	(3) LTG	(4) LTD	(5) LTD	(6) LTD
FFown	0.122* (0.065)		0.119* (0.065)	0.076 (0.107)		0.071 (0.105)
FFman		-0.071** (0.029)	-0.070** (0.029)		-0.093** (0.041)	-0.092** (0.040)
Analyst Control	Yes	Yes	Yes	No	No	No
Firm Control	Yes	Yes	Yes	Yes	Yes	Yes
_cons	-4.761*** (0.363)	-4.683*** (0.366)	-4.715*** (0.367)	-0.077 (0.159)	-0.024 (0.142)	-0.036 (0.151)
N	56,481	56,481	56,481	43,997	43,997	43,997
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	Yes	Yes
pseudo R-sq	0.087	0.087	0.087			
R-sq				0.067	0.069	0.069
adj. R-sq				0.066	0.068	0.068

This table reports robustness tests of family heterogeneity effects within the sample excluding the lone-founder firms. The dependent variables and model specifications follow the baseline analysis. Standard errors are clustered by year and reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 4.9 Robustness Check: Family Firm Heterogeneity Effects in Global North/South (Excluding Lone-Founder Firms)

	Global North						Global South					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	LTG	LTG	LTG	LTD	LTD	LTD	LTG	LTG	LTG	LTD	LTD	LTD
FFown	0.119*		0.119*	0.388***		0.387***	0.119		0.136	-0.977***		-0.953***
	(0.072)		(0.072)	(0.119)		(0.120)	(0.136)		(0.131)	(0.273)		(0.268)
FFman		-0.084***	-0.084***		-0.136***	-0.136***		0.044	0.053		0.154	0.107
		(0.031)	(0.030)		(0.038)	(0.038)		(0.048)	(0.044)		(0.130)	(0.129)
Analyst Control	Yes	Yes	Yes	No	No	No	Yes	Yes	Yes	No	No	No
Firm Control	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
_cons	-4.426***	-4.335***	-4.371***	-0.311*	-0.154	-0.256	-8.099***	-8.126***	-8.073***	1.087	1.663**	1.072
	(0.386)	(0.390)	(0.391)	(0.157)	(0.128)	(0.146)	(0.687)	(0.664)	(0.684)	(0.622)	(0.600)	(0.625)
N	47,403	47,403	47,403	36,877	36,877	36,877	9,078	9,078	9,078	7,120	7,120	7,120
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
pseudo R-sq	0.074	0.074	0.074				0.184	0.184	0.184			
R-sq				0.070	0.069	0.074				0.254	0.226	0.256
adj. R-sq				0.069	0.068	0.073				0.251	0.223	0.253

This table reports robustness tests of family heterogeneity effects within the Global North/South subsamples excluding the lone-founder firms. The dependent variables and model specifications follow the baseline analysis. Standard errors are clustered by year and reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Boundary analyses: diagnosing the sources of North-South differences.

Our baseline analyses show pronounced valuation-enactment divergence between the Global North and the Global South. To identify its sources, we decompose the North-South contrast into dimensions of enforceability, uncertainty, and culture. We examine four institutional dimensions—economic policy uncertainty, political corruption, governance quality, and financial development—and five Hofstede cultural dimensions, power distance, uncertainty avoidance, masculinity, long-term orientation, and indulgence versus restraint, which capture informal institutions that may either amplify enforcement frictions or substitute in part for weak formal governance.

Family ownership and valuation-enactment divergence. Family ownership continues to generate valuation-enactment divergence, but only along dimensions that heighten enforcement and appropriation risks. *Political corruption* significantly reduces long-term investment ($\beta = -1.772$, $p = 0.0009$; Table 4.10, Panel B, Model 4) without affecting analyst forecasts, while *power distance* similarly suppresses enacted investment ($\beta = -2.629$, $p = 0.0016$; Table 4.11, Panel B, Model 1) with no valuation response.

Table 4.10 Institutional Dimensions and Forecast-Decision Divergence

Panel A: Long-Term Growth Forecasts (LTG)												
Moderators	Policy Uncertainty (EPU)			Political Corruption (CORR)			Governance Indicators (WGI)			Financial Development (FD)		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	LTG	LTG	LTG	LTG	LTG	LTG	LTG	LTG	LTG	LTG	LTG	LTG
FFown	0.116**		0.108**	0.182***		0.177***	0.165***		0.160***	0.185***		0.180***
	(0.055)		(0.055)	(0.058)		(0.058)	(0.060)		(0.060)	(0.061)		(0.061)
	0.864***		0.823**	-0.260		-0.276	0.113		0.117*	0.652**		0.677***
FFown* Moderator	(0.323)		(0.337)	(0.196)		(0.194)	(0.070)		(0.070)	(0.265)		(0.255)
FFman		-0.046*	-0.039*		-0.043**	-0.040*		-0.042**	-0.040*		-0.041**	-0.039*
		(0.024)	(0.021)		(0.021)	(0.021)		(0.021)	(0.021)		(0.020)	(0.020)
FFman* Moderator		-0.163**	-0.113		-0.004	-0.000		0.003	0.005		0.016	0.031
		(0.070)	(0.076)		(0.130)	(0.129)		(0.047)	(0.047)		(0.158)	(0.153)
Analyst Control	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm Control	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	83,193	83,193	83,193	89,445	89,445	89,445	89,445	89,445	89,445	88,193	88,193	88,193
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
pseudo R-sq	0.081	0.081	0.082	0.085	0.085	0.085	0.085	0.085	0.085	0.085	0.085	0.085

This table reports regression results examining the moderating effects of institutional dimensions on the relationship between family heterogeneity and valuation-enactment outcomes. All models include baseline controls and fixed effects. Constants and moderators are included in all models but not reported for brevity. Standard errors are clustered by year and reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 4.10 Cont.

Panel B: Long-Term Decisions (LTD)												
Moderators	Policy Uncertainty (EPU)			Political Corruption (CORR)			Governance Indicators (WGI)			Financial Development (FD)		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	LTD	LTD	LTD	LTD	LTD	LTD	LTD	LTD	LTD	LTD	LTD	LTD
FFown	0.012		0.006	0.103		0.100	0.127		0.120	0.165*		0.159*
	(0.094)		(0.093)	(0.080)		(0.078)	(0.084)		(0.083)	(0.082)		(0.081)
FFown* Moderator	0.886**		0.891***	-1.772***		-1.695***	0.643***		0.623***	2.316***		2.182***
	(0.291)		(0.288)	(0.404)		(0.405)	(0.140)		(0.136)	(0.560)		(0.538)
FFman		-0.095**	-0.090**		-0.084**	-0.090**		-0.088**	-0.092**		-0.083*	-0.088**
		(0.040)	(0.040)		(0.036)	(0.036)		(0.037)	(0.037)		(0.038)	(0.038)
FFman* Moderator		0.074	0.112		0.571**	0.460**		-0.163**	-0.128*		-0.797***	-0.675**
		(0.115)	(0.109)		(0.190)	(0.187)		(0.075)	(0.071)		(0.246)	(0.229)
Analyst Control	No	No	No	No	No	No	No	No	No	No	No	No
Firm Control	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	64,506	64,506	64,506	69,233	69,233	69,233	69,233	69,233	69,233	68,506	68,506	68,506
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-sq	0.057	0.054	0.059	0.069	0.068	0.072	0.069	0.067	0.072	0.067	0.067	0.071
adj. R-sq	0.056	0.053	0.058	0.068	0.067	0.072	0.069	0.066	0.071	0.067	0.066	0.071

This table reports regression results examining the moderating effects of institutional dimensions on the relationship between family heterogeneity and valuation-enactment outcomes. All models include baseline controls and fixed effects. Constants and moderators are included in all models but not reported for brevity. Standard errors are clustered by year and reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 4.11 Cultural Dimensions and Forecast-Decision Divergence

Panel A: Long-Term Growth Forecasts (LTG)															
Moderators	Power Distance (PDI)			Masculinity (MAS)			Uncertainty Avoidance (UAI)			Long-Term Orientation (LTO)			Indulgence versus Restraint (IVR)		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
	LTG	LTG	LTG	LTG	LTG	LTG	LTG	LTG	LTG	LTG	LTG	LTG	LTG	LTG	LTG
FFown	0.169*** (0.057)		0.164*** (0.057)	0.164*** (0.057)		0.160*** (0.057)	0.154*** (0.055)		0.150*** (0.055)	0.154** (0.060)		0.149** (0.061)	0.184*** (0.058)		0.180*** (0.058)
FFown* Moderator	-0.368 (0.363)		-0.391 (0.354)	0.667 (0.414)		0.578 (0.441)	0.207 (0.284)		0.225 (0.279)	0.086 (0.181)		0.088 (0.179)	0.512*** (0.177)		0.521*** (0.169)
FFman		-0.042** (0.021)	-0.040* (0.021)		-0.043** (0.021)	-0.038* (0.022)		-0.042** (0.021)	-0.040* (0.021)		-0.043** (0.021)	-0.040* (0.021)		-0.041** (0.021)	-0.039* (0.021)
FFman* Moderator		-0.053 (0.195)	-0.051 (0.188)		0.129 (0.095)	0.108 (0.112)		-0.024 (0.111)	-0.035 (0.112)		-0.036 (0.105)	-0.032 (0.106)		-0.027 (0.180)	-0.027 (0.176)
Analyst Control	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm Control	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	89,445	89,445	89,445	89,445	89,445	89,445	89,445	89,445	89,445	89,445	89,445	89,445	89,299	89,299	89,299
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
pseudo R-sq	0.085	0.085	0.085	0.085	0.085	0.085	0.085	0.085	0.085	0.085	0.085	0.085	0.085	0.085	0.085

This table reports regression results examining the moderating effects of cultural dimensions on the relationship between family heterogeneity and valuation-enactment outcomes. All models include baseline controls and fixed effects. Constants and moderators are included in all models but not reported for brevity. Standard errors are clustered by year and reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 4.11 Cont.

Panel B: Long-Term Decisions (LTD)															
Moderators	Power Distance (PDI)			Masculinity (MAS)			Uncertainty Avoidance (UAI)			Long-Term Orientation (LTO)			Indulgence versus Restraint (IVR)		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
	LTD	LTD	LTD	LTD	LTD	LTD	LTD	LTD	LTD	LTD	LTD	LTD	LTD	LTD	LTD
FFown	0.147		0.137	0.023		0.008	0.028		0.020	0.051		0.042	0.196***		0.190**
	(0.085)		(0.084)	(0.091)		(0.089)	(0.097)		(0.094)	(0.099)		(0.098)	(0.086)		(0.085)
FFown* Moderator	-2.629***		-2.518***	-0.125		-0.082	-0.146		-0.102	-0.408		-0.399	2.497***		2.420***
	(0.649)		(0.651)	(0.504)		(0.531)	(0.488)		(0.485)	(0.459)		(0.451)	(0.591)		(0.584)
FFman		-0.088**	-0.090**		-0.087**	-0.087**		-0.090**	-0.090**		-0.082**	-0.082**		-0.082**	-0.084**
		(0.036)	(0.036)		(0.037)	(0.037)		(0.037)	(0.037)		(0.036)	(0.035)		(0.035)	(0.035)
FFman* Moderator		0.821***	0.727***		-0.472*	-0.468*		-0.157	-0.159		0.375**	0.375**		-0.775***	-0.724***
		(0.195)	(0.189)		(0.249)	(0.246)		(0.230)	(0.229)		(0.166)	(0.167)		(0.197)	(0.188)
Analyst Control	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Firm Control	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	69,233	69,233	69,233	69,233	69,233	69,233	69,233	69,233	69,233	69,233	69,233	69,233	69,100	69,100	69,100
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-sq	0.070	0.068	0.074	0.063	0.066	0.066	0.063	0.065	0.065	0.064	0.066	0.067	0.070	0.069	0.075
adj. R-sq	0.069	0.067	0.073	0.063	0.065	0.065	0.063	0.065	0.065	0.063	0.066	0.066	0.069	0.068	0.074

This table reports regression results examining the moderating effects of cultural dimensions on the relationship between family heterogeneity and valuation-enactment outcomes. All models include baseline controls and fixed effects. Constants and moderators are included in all models but not reported for brevity. Standard errors are clustered by year and reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

By contrast, dimensions related to volatility or commitment capacity attenuate divergence. *Economic policy uncertainty* strengthens both analyst valuation ($\beta = 0.864$, $p = 0.0074$; Table 4.10, Panel A, Model 1) and investment ($\beta = 0.886$, $p = 0.0101$; Table 4.10, Panel B, Model 1). *Governance quality* raises investment ($\beta = 0.643$, $p = 0.0006$; Table 4.10, Panel B, Model 7) without affecting valuation, while *financial development* strengthens both valuation ($\beta = 0.652$, $p = 0.0138$; Table 4.10, Panel A, Model 10) and investment ($\beta = 2.316$, $p = 0.0014$; Table 4.10, Panel B, Model 10). *Indulgence-oriented cultures* similarly amplify valuation ($\beta = 0.512$, $p = 0.0038$; Table 4.11, Panel A, Model 13) and investment ($\beta = 2.497$, $p = 0.0012$; Table 4.11, Panel B, Model 13). Together, these results indicate that divergence is driven by enforcement frictions rather than uncertainty or culture per se.

Family management and valuation-enactment divergence: For family management, baseline alignment between valuation and enactment is largely preserved across contexts. Robustness analyses in Table 4.10 and Table 4.11 indicate that most institutional and cultural dimensions do not fundamentally disrupt this alignment, suggesting that management-based control is comparatively less sensitive to cross-national variation in enforcement conditions.

Where differences do emerge, they are again concentrated in specific dimensions and operate primarily through the decision channel. *Governance quality* ($\beta = -0.163$, $p = 0.0499$; Table 4.10, Model 8 in Panel B) and *financial development* ($\beta = -0.797$, $p = 0.0071$; Table 4.10, Model 11 in Panel B) reinforce conservative investment behavior under family management without inflating analyst expectations, thereby maintaining valuation-enactment alignment. *Economic policy uncertainty* similarly reduces analyst valuation ($\beta = -0.163$, $p = 0.0195$; Table 4.10, Model 2 in Panel A) while leaving investment behavior unchanged, tightening alignment.

Certain cultural dimensions modestly relax managerial conservatism. *Power distance* weakens the negative association between family management and long-term investment ($\beta = 0.821$, $p = 0.0012$; Table 4.11, Model 2 in Panel B), and *long-term orientation* has a similar effect ($\beta = 0.375$, $p = 0.0431$; Table 4.11, Model 11 in Panel B). However, because these effects operate almost exclusively through the investment channel and do not significantly alter analyst valuation, they introduce only limited divergence.

4.8 Discussion

This study documents a systematic gap between how family firms are valued by external observers and how they enact long-term investment decisions internally. Across a large international sample, we find that family ownership increases analysts' propensity to issue long-term growth forecasts but does not translate into higher long-term family firm investment, generating persistent valuation-enactment divergence. Family management, by contrast, leads to aligned negative effects on both forecasts and investment, reflecting a shared interpretation of managerial control as emphasizing enforcement discipline and control preservation rather than expansion.

These patterns vary sharply across institutional contexts. In the Global North, family ownership produces alignment: optimistic external expectations are matched by increased long-term investment. In the Global South, the same ownership structure generates pronounced divergence, with family owners investing significantly less than analysts' expect. Below we further discuss the theoretical and managerial implications of our study, and its limitations.

4.8.1 Valuation-Enactment Divergence as a Property Rights Problem

The empirical patterns point to a structural explanation rooted in property rights rather than preferences. Existing accounts attributing conservative behavior to socioemotional wealth or risk aversion (Gómez-Mejía et al., 2007; Miller & Le Breton-Miller, 2005; Zahra, 2005) cannot explain

why optimistic external valuations coexist with restrained internal action. Our findings suggest divergence arises from the distinction between *latent exclusion potential* and *deployable property rights* (Barzel, 1997; Demsetz, 1967).

Ownership signals exclusion potential—the ability to control assets and appropriate returns (Alchian & Demsetz, 1972; Hart & Moore, 1990)—which external observers capitalize into long-term expectations, effectively valuing what firms could do under frictionless enforcement (Anderson et al., 2012; Grossman & Hart, 1986). However, internal decision-makers bear the costs of exclusion. Growth strategies requiring durable investments heighten exposure to expropriation and hold-up (Shleifer & Vishny, 1993; Williamson, 1985). When enforcement is costly, firms rationally limit investment to preserve control (Barzel, 1997; North, 1990).

Thus, divergence reflects a structural asymmetry: analysts price exclusion potential without observing its costs, whereas firms act on what can be credibly enforced. This implies restrained investment is not a lack of ambition, but a rational response to incomplete property rights (Acemoglu & Johnson, 2005), where action depends on the ability to exclude (cf., Chrisman et al., 2025).

4.8.2 Family Ownership/Management as Property-Rights Configurations

The contrasting effects of family ownership and family management reflect qualitatively different configurations of control rather than differences in the extent of family involvement. Although both embed family influence, they differ in how exclusion potential is exercised and in the costs of deploying it (Barzel, 1997; Hart & Moore, 1990). Prior research often treats them as complementary indicators (Anderson & Reeb, 2003; Villalonga & Amit, 2006), yet property rights theory suggests they affect exclusion differently.

Family ownership concentrates residual control rights, making exclusion potential highly salient. Concentrated equity signals discretion and the ability to appropriate long-term returns, which external observers interpret as enabling growth and long-term commitment (Anderson et al., 2012; Carney, 2005; Demsetz & Lehn, 1985). However, ownership-based control exposes families to enforcement costs when strategic action requires large, irreversible investments. Such investments heighten exposure to expropriation and hold-up because property rights can only be imperfectly enforced (Barzel, 1997; Williamson, 1985). Ownership therefore expands the potential opportunity set without ensuring enactment, creating scope for valuation-enactment divergence.

Family management, by contrast, embeds control within ongoing governance and operational oversight. It relies less on episodic, high-commitment investments and more on continuous monitoring and incremental adjustment (Fama & Jensen, 1983; Miller & Le Breton-Miller, 2005). Because exclusion operates through day-to-day authority, strategic discretion is constrained to actions enforceable with low marginal cost. Consequently, both internal and external actors converge on a conservative interpretation, producing aligned effects on valuation and enactment (Chrisman et al., 2012; Mazzelli et al., 2018).

Importantly, these differences do not reflect divergent preferences (Gómez-Mejía et al., 2007). What differs is the mode of control: ownership amplifies upside potential while heightening enforcement risk, whereas management prioritizes feasibility. They generate different dynamics because they represent distinct property-rights architectures. Whether these configurations translate into strategic action ultimately depends on the institutional conditions governing the enforceability of property rights, and it is a question we examine next.

4.8.3 Institutions as Enforceability Filters

Whether family control translates into strategic action depends on institutional conditions governing property rights enforceability. Institutions operate as enforceability filters that determine when exclusion potential is deployable (Acemoglu & Johnson, 2005; North, 1990). Formal institutions shape enforcement costs: where governance quality is high and legal enforcement credible, ownership-based control is deployed with low risk, enabling long-term investment (Djankov et al., 2008; La Porta et al., 1998). Conversely, where corruption or weak rule of law prevails, visible investments become costly to enforce, leading owners to restrain investment even as observers value latent potential (Barzel, 1997; Shleifer & Vishny, 1993).

Other dimensions affect commitment capacity. Economic policy uncertainty increases volatility but allows family ownership to function as a resilience signal (Baker et al., 2016; Gulen & Ion, 2016). Financial development lowers financing constraints, reducing the cost of committing to long-term investment (Rajan & Zingales, 1998). Informal institutions further condition these effects. Hierarchical norms, such as high power distance, amplify enforcement frictions by legitimizing discretionary intervention, suppressing investment (Hofstede, 2001). By contrast, uncertainty avoidance may either constrain or stabilize commitment depending on whether it complements or substitutes for legal enforcement (Williamson, 2000).

4.8.4 Concluding Remarks, Limitations and Future Research

This study applies a property-rights lens to resolve the systematic divergence between how family firms are valued and how they behave. More specifically, it explains why family firms, despite strong long-term valuations by analysts, often pursue conservative investment strategies. By distinguishing between latent exclusion potential and deployable property rights, we show that this valuation-enactment divergence arises because external observers price the upside of family influence, while the decisions of internal decision-makers are tempered by the costs of

enforcement. Using 89,445 analyst-firm-year observations, we demonstrate that institutional environments function as enforceability filters that determine when ownership-based potential can be safely enacted. In other words, although family ownership signals growth potential that analysts consistently value, its translation into investment depends on the capacity to exclude competitors. In the Global South, high enforcement costs compel family owners to restrict investment despite external optimism, not as a result of risk aversion or socioemotional bias but as a rational defense against expropriation or control dilution. Conversely, in the Global North, strong property rights enable the effective deployment of exclusion potential, and as a result, generating alignment between valuation and investment.

Although a family's socioemotional preferences are important determinants of family firm decision-making (Chrisman et al., 2012; Gómez-Mejía et al., 2007), our findings shift the theoretical focus from preference- or culture-based explanations toward the economic consequences of institutional enforceability. For investors, valuing family ownership requires accounting for the often-invisible costs of enforcing control. For scholars, the results highlight that ownership and management represent distinct property-rights configurations with different implications for aligning market expectations and corporate behavior. Ultimately, latent growth potential becomes realized only when exclusion rights are sufficiently enforceable to be deployed.

Despite its contributions, this study has several limitations that suggest avenues for future research. First, our measures of long-term strategic enactment focus on capital expenditure and asset durability. Although these proxies capture durable and irreversible investments central to our property-rights argument (Souder & Bromiley, 2012), long-term orientation may also manifest in other decisions such as R&D innovation, human capital development, or international market expansion. Future research could examine whether valuation-enactment divergence extends to

these domains, particularly investigating if intangible investments are less visible or perhaps less exposed to enforcement risks that constrain tangible asset deployment (Lundstrum, 2002; Miller & Xu, 2020).

Second, while our framework emphasizes the costs of exclusion as the primary driver of divergence, we infer these costs indirectly from institutional conditions rather than observing them directly. Prior research links formal institutions, corruption, and governance quality to enforcement and appropriation risk (North, 1990; Shleifer & Vishny, 1993), but this macro-level approach effectively treats the internal calculation of the costs of exclusion as a black box. Future studies could more directly examine how family owners perceive and manage enforcement risk using surveys, experiments, or qualitative approaches (Bruton et al., 2010; Gómez-Mejía et al., 2007), thereby clarifying the cognitive mechanisms that bridge objective institutional constraints and subjective investment restraint.

Third, our analysis focuses on publicly listed family firms, where analyst valuation is observable and market scrutiny is high. Private family firms may face fundamentally different enforcement constraints and evaluative processes, particularly in less developed capital markets where information asymmetry is more severe (Bertrand & Schoar, 2006). Extending this framework to private firms could clarify whether valuation-enactment divergence persists in the absence of public market scrutiny, or if private equity and debt providers utilize different enforcement mechanisms that better align valuation with feasible enactment.

Fourth, although we exploit cross-national variation to isolate the effect of the enforceability of exclusion, our design does not explicitly model institutional change over time. Because institutions evolve and enforcement conditions shift (North, 1990), analysis over a limited time frame cannot fully capture the dynamic adjustment process between external expectations

and internal actions. Future research could examine how governance reforms or political shocks alter the translation of ownership-based control into strategic action, specifically testing whether valuations adjust instantaneously while enactment exhibits a lag due to the stickiness of enforcement perceptions.

Finally, while we focus on family ownership and management, the property-rights logic may extend to other forms of concentrated control, such as the ownership of banks, insurance companies, the state, or business groups. These organizational forms similarly possess high latent exclusion potential that may be constrained by unique bureaucratic or political enforcement costs. Examining valuation-enactment divergence in these settings would help assess the generalizability of the framework and clarify how different ownership structures interact with institutional enforceability to shape the gap between potential value and realized strategy (Khanna & Yafeh, 2007; Morck et al., 2005).

CHAPTER 5: GENERAL DISCUSSION AND CONCLUSIONS

This dissertation sets out to resolve a central puzzle in the family firm literature: why does family involvement generate divergent and often contradictory outcomes across contexts? While prior research has alternately portrayed family firms as disciplined, long-term oriented organizations or as vehicles for entrenchment and private benefit extraction, the empirical record has remained inconclusive. Rather than treating this inconsistency as a problem of measurement or model specification, I argue that it reflects a deeper theoretical issue, that the consequences of family involvement are fundamentally contingent on the institutional environments in which firms operate. Across the dissertation, I treat family involvement as governance potential and institutional enforceability as the filter that determines how that potential is realized. This perspective also gives the three essays a cumulative structure. Essay 1 examines realized outcomes, Essay 2 examines how capital-market intermediaries interpret family involvement, and Essay 3 examines whether those expectations are actually converted into long-term strategic action. The dissertation therefore moves from behavior, to belief, to the gap between belief and behavior.

Essay 1 establishes the outcome layer. It shows that reputational discipline in family firms is not universal but conditional. Family firms generally exhibit stronger incentives to protect corporate reputation, consistent with socioemotional wealth considerations. However, I find that this pattern reverses in weak institutional environments, where reputational risk can be associated with improved financial performance and where family firms amplify this relationship. This finding suggests that reputational mechanisms do not inherently constrain opportunistic behavior; instead, they depend on external enforcement. When institutions fail to impose credible penalties, reputational considerations can be subordinated to short-term gains, transforming governance structures that promote discipline in one context into mechanisms that enable rent-seeking in

another. More importantly, essay 1 provides implication that institutions can change the payoff structure of family involvement, not simply modify the effect's magnitude with a stable family-firm preference.

Essay 2 moves to the expectation and information layer. I find that analysts are more likely to issue long-horizon forecasts for family firms, reflecting the perception that family involvement signals durability, continuity, and access to long-term opportunities. Importantly, the mechanism tests explain why and when this signal matters. When analyst coverage, institutional monitoring, governance quality, and other features of the information environment are stronger, family firms' self-released long-term information is more visible and credible to investors. The demand and incremental value of long-term forecasts from the analyst's side therefore decline. As a result, I argue that the perceived long-term orientation of family firms is not simply an intrinsic attribute but an interpretation moderated by institutional conditions.

Essay 3 completes the chain by asking whether the long-horizon potential perceived by outsiders matches the investment enacting inside the firm, and reveals a systematic divergence between the two. The findings show an important distinction between family ownership and family management. In the pooled sample, the divergence between external expectations and internal enactment is caused by family ownership concentration rather than family management. Importantly, this pattern varies across institutional conditions. In the Global North, where property rights are more reliably protected, the divergence is narrowed, suggesting that ownership-based potential can be more translated into strategic action. In the Global South, however, the divergence becomes wider. Property rights theory helps explain this asymmetry. Family ownership creates goal-based exclusion potential, but realizing that potential requires owners to protect future returns from expropriation, hold-up, and control dilution. When enforcement is costly, restraining durable

investment can therefore become a rational means of preserving effective control. Family management, by contrast, produces greater alignment between expectations and actions because direct managerial involvement allows families to exercise control through ongoing governance and operational oversight without relying as heavily on externally exposed, irreversible capital commitments.

Taken together, this dissertation identifies three distinct layers on which institutional enforceability operates. In Essay 1, it changes the family firms' outcome of reputation discipline. In Essay 2, it changes the incremental value of family firms' long-horizon information provided by analysts. In Essay 3, it changes the enforcing cost of converting family ownership rights into investment actions. These empirical settings differ, but they are jointly supporting that, family involvement creates potential, while institutions determine whether and to what extent that potential can be realized. This cumulative interpretation also clarifies the different questions answered by the theories used in the dissertation. SEW theory explains what controlling families seek to preserve, including identity, reputation, continuity, and control. Agency theory explains how those intentions fail when external constraints are weak. Property rights theory explains why possessing control is not equivalent to being able to deploy it and appropriate its returns. Institutional enforceability links these mechanisms by determining what can be protected, punished, verified, and converted at an acceptable cost.

This dissertation contributes to the family firm literature. First, it reframes family business research by shifting attention from stable family preferences to the conditions under which those preferences can be translated into different observable outcomes. I propose the central argument that family involvement creates latent potential, but the realization of that potential depends on institutional enforceability by providing evidence that similar ownership structures, long-term

orientations, reputational concerns, and control motives can generate very different outcomes when the surrounding institutional environment differs. Second, this dissertation extends property rights theory from internal investment decisions to external valuation processes, explaining why capital markets overestimate realizable long-term opportunity under weak institutions. Third, this dissertation integrates SEW, agency, and property rights perspectives rather than treating them as competing explanations. More importantly, I introduce institutional enforceability as the missing boundary condition which can string the existing theories together.

My findings carry important implications for investors, managers, and policymakers. For investors and analysts, my results suggest that long-term growth expectations for family firms should be evaluated in light of institutional enforceability rather than governance structure alone. The market's tendency to assign long-term growth premiums to family firms may systematically overestimate realized investment activity in weak enforcement environments, and I encourage analysts to account for this divergence explicitly in their valuation models. For managers and family business owners, my findings indicate that conservative investment behavior may reflect rational adaptation to environmental constraints rather than a lack of strategic ambition; understanding this distinction is essential for both self-evaluation and external communication. For policymakers, I highlight the importance of strengthening legal and regulatory frameworks to ensure that governance mechanisms translate into productive economic outcomes rather than being diverted into opportunistic behavior.

Despite its contributions, this dissertation has several limitations. It captures institutional variation at a broad, cross-country level but does not directly observe the micro-level mechanisms through which property rights are enforced or circumvented within firms. The focus on publicly listed firms may also limit generalizability to private family firms, where ownership structures and

information environments differ substantially. This dissertation is based primarily on international archival evidence, so the findings are interpreted as associations rather than as definitive causal estimates. Endogeneity concerns may arise from reverse causality, omitted variables, and selection effects. For example, firm performance, reputation, analyst information production, ownership arrangements, and investment decisions may influence one another, while unobserved political, governance, or family-specific characteristics may affect both the explanatory variables and outcomes. Although I apply fixed effects, alternative family-firm definitions, matching procedures, Heckman corrections, weighting approaches, and subsample analyses to help mitigate some of these concerns, they cannot eliminate them entirely. Moreover, although the consistent sample period from 2007 to 2019 provides convenience to link three essays and exclude the pandemic shock naturally, extending the sample to more recent data would bring more research possibilities such as exploring the effects with exogenous shocks. Future research could strengthen identification by exploiting regulatory reforms, brokerage closures, changes in investor protection, or transitions in family control. Extending the data beyond 2019 would allow examination of the post-pandemic environment, while further work could explore generational transitions, founder-versus descendant-led firms, informal governance mechanisms, and analysts' long-term forecast accuracy and revisions. More direct examination of the micro-level mechanisms through which property rights are enforced, protected, or circumvented within firms could also deepen our understanding of property rights enforceability.

In short, my dissertation advances an institutionally grounded understanding of family firms by demonstrating that the outcomes are contingent on enforceability rather than determined by ownership structure alone. My three essays, taken together, show that the same governance structure, characterized by family ownership and control, can function as a mechanism of

discipline, a signal of opportunity, or a source of strategic constraint, depending on the context in which it operates. I hope that this integrated framework I develop across this dissertation provides a productive foundation for future research on family firms, property rights, and the institutional determinants of governance effectiveness.

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Appendix 2.A. Variable Definitions

Variable	Definition	Data Source
Dependent Variable		
<i>TobinQ</i>	TobinQ is the market value to the replacement costs of total assets. According to Gompers, Ishii, and Metrick (2003), Tobin's Q = (Total Asset + Market value of equity - Book value of equity)/(Total Asset).	Compustat
Independent Variables		
<i>RRI</i>	RRI is the reputational risk index, which is calculated by the annual average of the monthly current RRI from RepRisk.	RepRisk
<i>FamFirm</i>	FamFirm is a dummy variable which equals 1 if a firm is identified as a family firm with the proxy that the founder or a member of the family is officer, director, or owns at least 5% of the firm's equity, otherwise 0.	NRG Metrics
Condition Variables and Instrumental Variable		
<i>WGI</i>	Worldwide Governance Indicators (WGI) created by Kaufmann et al. (2003) indicate the country-level macro-regulatory environment with six dimensions. To achieve the overall indicator, we use the average across six indicators to generate the WGI for each country in each year. The value spans from -2.5 to 2.5, with higher values representing better macro-governance mechanisms.	World Bank
<i>HighWGI</i>	HighWGI is an indicator which equals 1 if the firm is located in a country with a WGI higher than the 75th percentile benchmark of all countries in the sample.	World Bank
<i>MediumWGI</i>	MediumWGI is an indicator which equals 1 if the firm is located in a country with a WGI that falls into the medium 50 percentages of all countries in the sample.	World Bank
<i>LowWGI</i>	LowWGI is an indicator which equals 1 if the firm is located in a country with a WGI lower than the 25th percentile benchmark of all countries in the sample.	World Bank
<i>Family sales ratio by industry</i>	Family sales ratio by industry is the ratio of industry sales by family firms in a two-digit SIC industry to the sales of all firms in that industry, i.e., Family firm sales/Industry sales.	Compustat
Control Variables		
<i>Zscore</i>	Zscore is developed by Altman (1968), and is the weighted average of five accounting ratios, including the operating efficiency, total asset turnover, leverage ratio, asset liquidity, and earning power. The calculation is $[1.2 \times \text{net working capital}/\text{total assets} + 1.4 \times \text{retained earnings}/\text{total assets} + 3.3 \times \text{earnings before interest and taxes}/\text{total assets} + 0.6 \times \text{market value of equity}/\text{book value of liabilities} + 1.0 \times \text{sales}/\text{total assets}]$.	Compustat
<i>FirmSize</i>	FirmSize is the natural logarithm of a firm's market value.	Compustat
<i>Leverage</i>	Following Gorodnichenko and Weber (2016), Leverage is generated by the long-term debt and debt in current liabilities to stockholders' equity.	Compustat
<i>Tangibility</i>	Tangibility is the ratio of property, plant, and equipment to the total asset.	Compustat
<i>SaleGrowth</i>	SaleGrowth is the growth rate of sales to turnover from the past year.	Compustat

Appendix 3.A. Variable Definitions

Variables	Definitions	Data Source
Long-term growth forecast		
<i>LTG</i>	An indicator variable that equals one if an analyst issues a long-term growth forecast for a firm in a given year, and zero otherwise.	I/B/E/S
Family firms		
<i>FamFirm</i>	An indicator variable equal to one if a firm is classified as a family firm, defined as having the founder or a family member serving as an officer or director, or owning at least 5% of the firm's equity, and zero otherwise.	NRG Metrics
<i>FamFirm1</i>	An alternative measure for family firms. An indicator variable equal to one if second-generation family members or descendants serve as directors, officers, or large shareholders, and zero otherwise.	NRG Metrics
<i>FamFirm2</i>	An alternative measure for family firms. An indicator variable equal to one if a family, an individual or an unlisted firm is the ultimate owner with greater than 20% cash flow rights, and zero otherwise.	NRG Metrics
Control Variables		
<i>MTB</i>	Market value of equity to the book value of equity.	Compustat
<i>Size</i>	The natural logarithm of a firm's market value.	Compustat
<i>ROA</i>	Income before extraordinary items divided by total assets.	Compustat
<i>Leverage</i>	Total long-term debt plus debt in current liabilities, divided by total shareholders' equity.	Compustat
<i>Altman-Z</i>	Altman's (1968) Z-score, calculated as $1.2 \times (\text{net working capital} / \text{total assets}) + 1.4 \times (\text{retained earnings} / \text{total assets}) + 3.3 \times (\text{earnings before interest and taxes} / \text{total assets}) + 0.6 \times (\text{market value of equity} / \text{book value of liabilities}) + 1.0 \times (\text{sales} / \text{total assets})$.	Compustat
<i>Experience</i>	The number of years an analyst has covered a firm, calculated as the difference between the forecast date and the analyst's initial coverage date, divided by 365.	I/B/E/S
<i>#FirmFollow</i>	The natural logarithm of the number of firms an analyst follows in a given year.	I/B/E/S
<i>BrokerSize</i>	The natural logarithm of the number of active analysts in our sample employed by the analyst's brokerage house in a given year.	I/B/E/S
<i>Horizon</i>	The logarithm of one plus the number of days between the analyst's report date and the actual earnings announcement date.	I/B/E/S
<i>AFE</i>	The absolute value of the difference between the analyst's earnings forecast and the actual earnings scaled by stock price at the beginning of the year.	I/B/E/S
External Monitoring		
<i>#Analyst</i>	The natural logarithm of the number of analysts covering the firm in a given year.	I/B/E/S
<i>#Ins_Investor</i>	The natural logarithm of the number of institutional investors for the firm in a given year.	FactSet
Regulatory Environments		
<i>GovIndex</i>	Worldwide Governance Indicators that capture the country-level regulatory environment with six dimensions: voice and accountability, political stability and absence of violence/terrorism, government effectiveness, regulatory quality, rule of law, and control of corruption. We construct an overall governance index (<i>GovIndex</i>) by averaging these six components. The value spans from -2.5 to 2.5, with higher values representing better governance mechanisms.	World Bank
<i>EconFreedom</i>	The Economic Freedom Index from the Fraser Institute (Gwartney et al., 2025) measures the extent to which a country's policies and institutions support economic freedom. The index captures five areas: size of government, legal system and property rights, sound money, freedom to trade internationally, and regulation. Higher values indicate policies and institutions that are more consistent with economic freedom.	Fraser Institute
<i>Fin Develop</i>	Financial Development index measures the development of financial institutions and systems across three dimensions: depth, access, and efficiency. The value of financial development index span from 0 to 1, with higher values representing more developed financial institutions and systems.	International Monetary Fund (IMF)

Appendix 4.A. Variable Definitions

Variable	Definition	Data Source
Dependent Variable		
LTG	Long-term growth forecast is an indicator variable that equals 1 if an analyst issues a long-term growth forecast for a firm in a given year, and 0 otherwise.	I/B/E/S
LTD	Long-term decision making is represented by a factor generated from two variables: asset durability and capital expenditure.	Compustat
Independent Variable (Family Heterogeneity Variables)		
FFown	Family ownership is the ratio of the number of shares of all classes held by the family to total shares outstanding.	NRG Metrics
FFman	Equals 1 if any two of the following three criteria were met: (1) a founding family member was the CEO of the firm; (2) a member of the founding family was an executive director; and/or (3) more than one member of the founding family were executive directors, 0 otherwise.	NRG Metrics
Firm Control Variables		
MTB	Market value of equity to the book value of equity.	Compustat
Altman-Z	Altman's (1968) Z-score, which is $[1.2 \times \text{net working capital}/\text{total assets} + 1.4 \times \text{retained earnings}/\text{total assets} + 3.3 \times \text{earnings before interest and taxes}/\text{total assets} + 0.6 \times \text{market value of equity}/\text{book value of liabilities} + 1.0 \times \text{sales}/\text{total assets}]$.	Compustat
Size	Firm size, which is the natural logarithm of the firm's market value.	Compustat
Leverage	Leverage is generated by the long-term debt and debt in current liabilities to book assets.	Compustat
ROA	Return on assets, which is measured as net income over total assets, adjusted by industry mean using 2-digit SIC.	Compustat
#Analyst	The natural logarithm of the number of analysts covering the firm in a given year.	I/B/E/S
Analyst Control Variables		
Experience	The number of years an analyst has followed a firm, using forecast date minus the earliest date when the analyst started to forecast the firm, divided by 365 to convert it into years.	I/B/E/S
EPSFreq	The number of forecasts an analyst issues for the firm in a given year	I/B/E/S
#FirmFollow	The natural logarithm of the number of firms the analyst follows in a given year.	I/B/E/S
BrokerSize	The natural logarithm of the number of analysts employed by the analyst's brokerage house in a given year.	I/B/E/S
Horizon	The logarithm of one plus the number of days between the analyst's report date and the actual earnings announcement date.	I/B/E/S
AFE	The absolute value of the difference between the analyst's earnings forecast and the actual earnings scaled by stock price at the beginning of the year.	I/B/E/S

Appendix 4.A Cont.

Variable	Definition	Data Source
Hofstede Cultural Dimensions		
EPU	The Economic Policy Uncertainty (EPU) index is developed by Baker et al. (2016) derives from news data from over 2000 newspapers. Annual EPU is the natural logarithm of the average of the monthly EPU index over a year (Attig et al., 2021; Baker et al., 2016; Gulen & Ion, 2016). Higher score indicates higher policy-related economic uncertainty.	Economic Policy Uncertainty Database
CORR	Political Corruption (CORR) is measured using the V-Dem Political Corruption Index conducted by Coppedge et al. (2023), which captures the pervasiveness of corruption across the executive, legislative, and judicial branches, including both petty and grand corruption. The index ranges from 0 to 1, with higher values indicating greater political corruption.	Varieties of Democracy (V-Dem) Dataset
WGI	Worldwide Governance Indicators (WGI) that capture the country-level macro-regulatory environment with six dimensions: voice and accountability, political stability and absence of violence/terrorism, government effectiveness, regulatory quality, rule of law, and control of corruption. We achieve the overall indicator by calculating the average across six indicators. The value spans from -2.5 to 2.5, with higher values representing better macro-governance mechanisms.	World Bank
FD	Financial Development index (FD) measures the development of financial institutions and systems across three dimensions: depth, access, and efficiency. The value of financial development index span from 0 to 1, with higher values representing more developed financial institutions and systems.	International Monetary Fund (IMF)
PDI	Power Distance (PDI) measures the extent to which less powerful members of a society accept and expect that power is distributed unequally. Higher values indicate a greater acceptance of hierarchical order and unequal power distribution within institutions and organizations.	Hofstede National Culture Database
MAS	Masculinity (MAS) reflects the extent to which a society favors achievement, competition, assertiveness, and material success over cooperation, modesty, and quality of life. Higher MAS scores indicate more masculine cultures with stronger performance orientation and gender role differentiation.	Hofstede National Culture Database
UAI	Uncertainty Avoidance (UAI) measures the extent to which members of a culture feel uncomfortable with ambiguity, uncertainty, and unstructured situations. It captures societal tolerance for uncertainty and reliance on formal rules and procedures. Higher values indicate stronger preferences for predictability, rules, and risk avoidance.	Hofstede National Culture Database
LTO	Long-Term Orientation (LTO) reflects the extent to which a society emphasizes future-oriented values such as perseverance, thrift, and adaptation over short-term traditions and immediate outcomes. Higher scores indicate a stronger focus on long-term planning, persistence, and delayed gratification.	Hofstede National Culture Database
IVR	Indulgence versus Restraint (IVR) measures the degree to which societies allow relatively free gratification of basic and natural human desires related to enjoying life and having fun. It captures attitudes toward leisure, pleasure, and self-control. Higher values indicate more indulgent societies that emphasize personal happiness and freedom of expression.	Hofstede National Culture Database