INTERNATIONAL EVIDENCE ON PRODUCT MARKET COMPETITION AND FIRM VALUE

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Dissertation submitted to the faculty of the Virginia Polytechnic Institute and State University in partial fulfillment of the requirements for the degree of

Doctor of Philosophy
In
Business, Accounting and Information Systems

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March 16, 2015
Blacksburg, Virginia

Keywords: Product Market Competition, Firm Value, Liquidation Risk, Agency Costs, Transparency

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ABSTRACT

Economic theory and empirical research suggests product market competition can result in both positive and negative capital market effects. Specifically, research suggests competition reduces agency costs, but also reduces profitability. I examine the relation between product market competition and firm value in an international setting, focusing on how the relation varies with firm- and country-specific characteristics. I document lower values for firms in more competitive industries. However, the negative relation between competition and firm value is less pronounced for firms with higher firm-level liquidation risk, stronger country-level investor protection mechanisms, and higher firm-level transparency. These findings are consistent with an agency cost benefit resulting from product market competition.

DEDICATION

This dissertation is dedicated to my wife, Mary Alice Rakestraw. Without you, this dissertation and my Ph.D. would have never been possible. I give thanks every day that the world conspired to bring us together.

ACKNOWLEDGEMENTS

First and foremost, I give thanks to Jesus Christ whose love has provided me with a peace that surpasses all understanding and the strength to follow my dreams. I am eternally grateful for all of the blessings He has bestowed on me.

I am grateful for the love and support of my wife, Mary Alice Rakestraw. Throughout the four years of the Ph.D. program at Virginia Tech, Mary Alice has supported me in the completion of my degree with unwavering love and commitment. I had to work late into the night many times and she never once complained. Mary Alice is the best thing that ever happened to me. I am unsure of what type of man I would be if I had never met Mary Alice. However, I am certain that I would be less of a man today if we had never met. I am also grateful to my two children, Joseph and Claire, who were both born during the Ph.D. program and are a constant source of strength and love. Pictures of my children adorn my office and were an ever-present source of encouragement. Had it not been for my wife and children, I would have never had the strength to complete this journey. Thank you!

I am thankful for the love and support of my mother and father. My mother, Rose Lewis, has been a constant source of support of my education. In fact, she does not want me to stop with my Ph.D.! How can a child go wrong with the love and support of such a wonderful mother? Thank you mom for everything you've done for me, especially for the support you have shown me during my years of higher education. My father, Russ Rakestraw II, has been a constant source of strength and discipline throughout my life. I've learned so much about the world by listening to my dad and asking him questions. Since I was a young boy, I knew that my dad was the smartest man in the world. Dad, I've learned so much from you and am grateful for having a dad like you in my life. Thank you to both my parents for your love and support!

I am also grateful for my other family members: my step-mother, Vivian Rakestraw; my siblings, James Rakestraw, Russ Rakestraw III, Jon Lewis, Chris Lewis, and Clancy Morton; my aunts and uncles, Brendan and Mona Lewis, Mike and Cheryl Lewis, and Joe and Margie Glenn; my grandparents, Joseph B. and Lila G. Lewis; my in-laws, Paula Gomez and Douglas Wood. I am also grateful for the friends my wife and I have met in Blacksburg. Thanks to you all for your love and support. I am indebted to many others whom I have inadvertently forgot and I sincerely apologize.

I am extremely thankful for the guidance of my dissertation committee, John J. Maher, Robert M. Brown, Raman Kumar, Sarah E. Stein, and Michael C. Wolfe. I am grateful to Dr. Maher, my dissertation committee chair, for the great number of hours and hard work he invested in my education. His wonderful advice has helped me become a better teacher, researcher, and father. I am grateful for coming to Virginia Tech and working with you, Dr. Maher. I am grateful to Dr. Brown who is a wonderful source of career advice. He knows everything about all the different schools that were interested in hiring me. Dr. Kumar played an instrumental role in improving the econometrics in this study as well as my overall knowledge of econometrics. I am grateful for the support provided by Dr. Stein who read several additional papers in the areas of competition, transparency, and agency costs to help elucidate my theoretical support in this dissertation. Finally, I am thankful to Dr. Wolfe who provided me with specific ideas to improve this dissertation. I am extremely grateful for all the help provided by these five people. Thank you!

I am thankful for the guidance of my late mentor, Dr. Thomas Verghese, whom I met during my years at George Washington University. He was a great source of inspiration and professional guidance in the world of academia. He opened many doors for me and I am forever

grateful for meeting him. I miss him dearly.

I am also thankful for all of the wonderful people I met during the Ph. D. program. I was blessed to have the benefit of having such great people in my Ph.D. cohort, Brandon Ater, Christine Gimbar, and John Lauck. The four of us shared some wonderful experiences. We also shared mathematical economics together which was an experience I cannot describe as wonderful. But we survived it. I am also thankful for the Ph.D. students who preceded me for providing valuable assistance throughout my years at Virginia Tech: Kerry Inger, Ryan Leece, Todd White, Owen Brown, Eric Negangard, Mike Ozlanski, John Pyzoha, Kathy Enget, Joanna Garcia, Gabe Saucedo, Alan Stancill, and Nicole Wright. I am also thankful for the other Ph.D. students who have shared this experience with me: Mark Shelton, Ian Twardus, Trent Henke, Jillian Lei, Tripp Petzel, Jamie Zhou, Jennifer Glenn, and Jennifer Parlier. It was a great four years with the above individuals. Finally, I am extremely thankful for sharing an office all four years with John Lauck. We had some hilarious moments in Pamplin 3111 and a lifelong friendship developed over that time.

I am grateful for the financial assistance from the Accounting and Information Systems Department in the Pamplin College of Business at Virginia Tech. My scholarship assistance included the Virginia Society of Certified Public Accountants Doctoral Scholarship, William S. Gay Doctoral Scholarship, Wade Boggs Scholarship, Accounting and Information Systems Faculty Scholarship, Rosalind N. Cranor Fellowship in Accounting and Information Systems, and the Virginia Society of Certified Public Accounts Virginia Tech Scholarship. Additionally, I received funding to attend multiple conferences which provided great assistance in advancing my career opportunities.

I am indebted to seminar participants at the following universities for their input that

helped me refine this dissertation: The University of Wyoming, The University of North Carolina at Charlotte, The College of William and Mary, Baylor University, The University of Kentucky, Mississippi State University, Florida Atlantic University, Oregon State University, and Eastern Michigan University. Additionally, I am grateful for conference attendees at the 2015 American Accounting Association International Accounting Section Conference in Palm Springs, California, for their input on this dissertation.

Finally, I am thankful for the support, patience, and time of Kathy Caldwell, Phyllis Neece, Arnita Perfater, and Darian Runion. These four are truly the grease that makes the gears run in the Accounting and Information Systems Department. Thank you for all you've done for me during my time at Virginia Tech.

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CHAPTER ONE

INTRODUCTION

Empirical research indicates product market competition results in both negative and positive capital market effects. On the negative side, competition decreases pricing power, causing profits to suffer (Porter 1980), and increases liquidation risk[1] (Schmidt 1997). On the positive side, competition induces managers to work harder on behalf of investors, thereby diminishing agency costs (Raith 2003). Some studies have found the incentives produced by intense competition can be powerful enough to counteract poor corporate governance (e.g., Giroud and Mueller 2011). Allen and Gale (2000) suggest that any reductions in agency costs from increased competition are limited to firms in countries with strong mechanisms to ensure managers act in investors' best interests. In countries where such mechanisms are weak, the expected negative future profitability from competition may overshadow any benefits from reduced agency costs. Related studies have found increased firm-level transparency[2] may positively influence firm value through reduced agency costs (e.g., Lang et al. 2012), by making outsiders more aware of the results of operations and of the firm's expected future cash flows (Jensen and Meckling 1976; Bushman et al. 2004). The overall effects of product market competition on firm value, incorporating liquidation risk, a country's investor protection mechanisms, and the influence of transparency, have not been explicitly examined in the literature. I add to the literature by demonstrating that product market competition has a negative effect on firm value and showing this relation is partially mitigated where agency costs are a concern. The findings support the theory that product market competition reduces agency costs

[1] Throughout this paper, I refer to the threat a firm may liquidate as *liquidation risk*.
[2] Throughout this paper, I follow Bushman et al. (2004) in defining transparency as the availability of firm-specific information to outsiders.

between investors and firms.

In this study, I examine the extent to which competition affects firm value when considered in relation to firm-level liquidation risk, country-level investor protection mechanisms, and firm-level transparency. I use an international setting consisting of diverse markets, where differential effects of competition on firm value are likely to exist and where there are substantial variations in time-, firm-, and country-level factors. First, I investigate the basic relation between firm value and industry competition. Tobin's Q and the market-to-book value of equity ratio are used as proxies for firm value.[3] Results from a large sample of firms in 74 countries, covering fiscal years 1998 to 2012, indicate a negative relation between competition and firm value.

Second, I investigate the effect of competition on firm value when incorporating firm-specific liquidation risk. Theory suggests competitive markets concentrate over time as superior firms within the industry are revealed through their superior relative performance and capture the product market of inferior firms (Allen and Gale 2000). Firms with greater liquidation risk have less ability to withstand extended periods of intense competition and are more likely to be revealed as inferior as the product market concentrates. This suggests the negative effect of competition on firm value will be more pronounced for firms with greater liquidation risk. Alternatively, theory and empirical studies suggest competition incentivizes managers to work harder when competition is intense. Competition is often cited as an effective form of corporate governance by reducing agency costs (e.g., Giroud and Mueller 2011). This suggests the negative effect of competition on firm value will be attenuated for firms with greater liquidation

[3] Numerous international studies use Tobin's Q as a proxy for firm value. See Lang et al. (2012) and Lang and Maffett (2010) for two examples. Additionally, I use the market-to-book-value of equity ratio as a secondary estimate of firm value. Results are reported using both measures; the tenor of the results remains unchanged when using either Tobin's Q or market-to-book-value of equity.

risk. My results support this alternative suggestion.

Third, I explore various country-level mechanisms meant to ensure managers act in investors' best interests. Managers of firms in competitive markets have an incentive to reduce inefficiency, so as to not lose market share and profitability (Raith 2003), and are motivated to seek out profit-maximizing, positive net-present-value projects which benefit investors. Consequently, agency costs are reduced, as the interests of managers and investors are more closely aligned. Several researchers have found product market competition acts as a substitute for strong corporate governance (e.g., Chou et al. 2011; Giroud and Mueller 2011; Byun et al. 2012; Ammann et al. 2013). These findings are consistent with theoretical research, which suggests a disciplining effect of competition (Hart 1983; Raith 2003). However, lower agency costs can arise from country-level legal and regulatory mechanisms at investors' disposal to ensure managers act in the investors' best interests. The incremental effect on firm value of intensified managerial effort, resulting from higher competition, is not well established for international product markets. To investigate this relation, I categorize countries by their level of investor protection laws and regulations (La Porta et al. 2006) and find a substitute relation between competition and country-level investor protection mechanisms on firm value.

Finally, I investigate the influence of firm-level transparency on firm value, and through my research design, allow this effect to vary based on product market competition. Research demonstrates greater transparency increases firm value (e.g., Lang et al. 2012), as outsiders (including investors) become more informed about the operations and expected cash flows of the firm, thereby reducing agency costs. Thus, transparency is an explicit mechanism through which managers can reduce agency costs. The fundamental concept underlying firm transparency is that investors in more transparent firms are better able to monitor the managers' actions, thus

ensuring managers seek profit-maximizing investments and do not accrue excess private benefits. Greater transparency provides incentives for managers to operate the firm efficiently and to maximize profitability, resulting in lower agency costs and correspondingly higher firm value. While firm-level transparency can have multiple dimensions, I combine the various elements by utilizing five different transparency measures commonly identified in the literature: the error of analysts' EPS forecasts, the number of analysts issuing EPS forecasts, evidence of earnings management, choice of accounting standard, and auditor choice (Lang et al. 2012). Results show the increase to firm value from transparency is greater for firms operating in concentrated markets which is consistent with the notion that transparency and competition have substitute effects on firm value.

This study makes several contributions to the existing literature. First, my tests are specifically designed to examine cross-setting variation regarding the importance of competition to firm value, focusing on differences in country-specific and firm-specific interactions. My results suggest a robust negative relation exists between competition and firm value. Further, the negative relation between competition and firm value is attenuated when investor protection mechanisms are low, firm-level liquidation risk is high, and firm-level transparency is low. These results are consistent with the notion that firm-specific and country-specific factors provide important interactions with the relation between competition and firm value.

Second, my analysis highlights the importance of firm-specific liquidation risk on the relation between competition and firm value. Firms with the highest liquidation risk are the ones investors deem most likely to be removed from the product market, as firm value is lowest for these firms. My results suggest that agency cost benefits from competition accrue to the firms with the greatest risk of liquidation as the relation between competition and firm value is more

positive for firms with higher liquidation risk. This suggests the negative effect of competition on firm value is especially important when liquidation risk is high, which is consistent with the notion that agency cost benefits from product market competition matters most to firm value when risks to the firm are greatest.

Third, the tests in this study show the generally negative relation of product market competition to firm value is partially dependent upon the investor protection mechanisms which exist in different countries. While theoretical and empirical research suggest competition reduces agency costs, this effect arises only in countries with weak legal and regulatory mechanisms suggesting competition and investor protection mechanisms have substitute effects on firm value.

Finally, my research complements studies of transparency and its effects on capital markets (e.g., Lang and Maffett 2011; Lang et al. 2012) by examining whether the benefits of transparency differentially influence firm value in an international setting with markets that vary in product market competition. My results are consistent with the idea that the benefits of increased transparency are greater in concentrated markets. Because commitments to transparency can be costly to firms, these results provide useful empirical evidence to managers and investors regarding the incremental benefits of greater firm-level transparency for firm value in a variety of competitive product markets.

The remainder of this paper is organized as follows. Section 2 outlines the theoretical and empirical evidence regarding competition, liquidation risk, agency costs, and transparency, and develops the hypotheses of the study. Section 3 defines the measures of competition, country-level investor protection mechanisms, and firm-level transparency. Section 4 develops the research design used to test the hypotheses. Section 5 details the sample construction. Results are described in Section 6, while Section 7 provides a summary and concluding comments.

CHAPTER TWO

RELEVANT LITERATURE AND HYPOTHESIS DEVELOPMENT

2.1 Product Market Competition and Firm Value

Competition is a multidimensional construct arising from existing firms within an industry and potential entrants. According to classic theories, competition can be thought of as a rivalry among existing firms within an industry (Porter 1980). This rivalry is expressed in several ways, including advertising, price discounts, improvements in quality, and new products. Its intensity is heightened when numerous competitors exist in one industry, when the competitors are close in size or power, when the industry faces slow or negative growth, when barriers to exiting the industry are high, or when rivals are committed to a leadership position in the industry (Porter 1980). When any of these conditions exist, industry profitability suffers.

In addition to competition from existing firms within an industry, firms face competition from potential entrants into their industry (Porter 1980). The threat of new entrants puts pressure on prices, as incumbent firms must hold down profits or boost investment to keep new firms from entering the industry. The threat of entry depends on the barriers or costs to enter the market. When barriers to entry are high, the threat of entry is low: a new firm needs to expend significant resources simply to enter the market. However, when barriers to entry are low, new firms may quickly enter the market, taking profit margin away from incumbent firms. For example, it may be easier for new firms to enter an industry with little or no fixed costs, versus an industry with significant fixed costs. It is important to note that the *threat* of entry holds down profits in the industry, not necessarily the fact of new firms *actually* entering the market.

Profitability itself is often used as a proxy for the level of competition, as demonstrated by Karuna (2007), who uses the industry-average price-cost margin to represent the level of

product substitutability, which itself is a proxy for higher competition. This theory rests on the widely employed Lerner index (Lerner 1934), which is considered a measure of a firm's monopoly power.[4] The Lerner index measures a firm's ability to price above its costs, leading to the interpretation that firms with more monopoly power can charge higher prices relative to marginal costs. Conversely, a firm with low pricing power faces higher competition and is unable to price its products significantly above marginal costs. Complementing Porter (1980), who predicts profits suffer in more competitive industries, introductory economics textbooks typically argue higher competition decreases economic profits and consequently lowers firm value (e.g., Hall and Lieberman 2008).[5] If incumbent firms begin to earn positive economic profit in a perfectly competitive market, new firms will enter the market, removing any profits earned by the incumbent firms. Alternatively, when firms oversupply the market and economic profits turn negative, some incumbent firms will exit the market, supply will decrease, prices will increase, and the market will return to the overall condition of zero economic profit.

A second stream of research hypothesizes that agency costs are reduced in competitive industries. Raith (2003) finds markets with higher product substitutability, along with free entry and exit, become more competitive, resulting in falling prices for goods sold. The reduction in prices causes firm profits to fall as well, inducing some firms to exit the market. Firms remaining in the market produce a larger relative output and, therefore, have an incentive to reduce costs to

[4] The Lerner (1934) index is measured as $\frac{\text{Price - Marginal Cost}}{\text{Price}}$ with the interpretation that firms with more (less) monopoly power have a higher (lower) index. For example, see Epifani and Gancia (2011), Kutlu and Sickles (2012), and Weyl and Fabinger (2013).

[5] Economics presents two models, representing the two opposite extremes of competition. The first model assumes perfect competition between firms, while the second is characterized by single firm monopoly. The market condition of perfect competition produces exactly zero economic profit, while monopolies can earn positive economic profits in the long run. In a perfectly competitive market, there are many buyers and sellers, each buys or sells only a fraction of the total market, products are substitutable, and there is ease of entry into the market. For example, Hall and Lieberman (2008) write, "Perfect competition is a market structure with three important characteristics: 1. There are a large number of buyers and sellers, and each buys or sells only a tiny fraction of the total quantity in the market. 2. Sellers offer a standardized product. 3. Sellers can easily enter into or exit from the market."

increase their market share and profitability. Consequently, increased competition often leads a firm to strengthen managerial incentives to reduce costs, which should result in managers working harder to ensure the firm stays profitable, and thus may lead to lower agency costs, as equity holders are reassured managers are working hard in the investors' best interests.

A third stream of research on the effects of competition employs this agency theory framework to suggest competition reduces managerial "shirking" or "slack" (e.g. Hart 1983; Giroud and Mueller 2011; Karuna 2007; Schmidt 1997). Hart (1983) develops a hidden information model to show product market competition reduces managerial slack.[6] He suggests there are two types of firms in an industry: managerial firms where a principal-agent problem exists and entrepreneurial owner-managed[7] firms. His model shows when costs fall, commonly affecting all firms within an industry, the managers at entrepreneurial firms expand their output. This expansion of output increases the aggregate industry supply, thus causing product prices to fall, which in turn puts pressure on managers at all firms within the industry (i.e., both managerial and entrepreneurial firms) to work harder. Thus, average managerial slack is lower in competitive markets, as compared to monopolistic markets.

Explicit managerial incentives are also found to be more prevalent in markets with higher levels of competition, as described by Karuna (2007). He defines managerial incentives in terms of equity-based pay-performance sensitivity, and gauges competition by using the price-cost margin as a proxy for product substitutability, market size as a measure of the density of consumers in an industry, and entry costs as a measure of the barriers to entry for new entrants to

[6] Hart (1983) makes several assumptions, including that there is no owner monitoring of managers, owners only have information related to firm performance and no information related to costs, managerial compensation is derived from a single profit target, and there exists a common component to costs across firms in the same industry (i.e., when one firm's costs are high, other firms in the same industry will have high costs).
[7] "Entrepreneurial" firms do not necessarily have to be owner-managed but are assumed to be run in the best interests of the owners, which is to maximize profit.

the industry. He finds managerial incentives increase in more competitive industries, which should lead to lower agency costs as investors in these firms are reassured managers are working harder to ensure the firm remains profitable.

Finally, some previous studies investigate the direct relation between competition and firm value. Ammann et al. (2013) show competition leads to higher firm value, measured as Tobin's Q, in a sample from the European Union. Their results suggest firm value is enhanced by competitive pressure. That is, their results suggest a positive relation between competition and firm value. Additionally, Byun et al. (2012) show competition leads to higher firm value, measured as Tobin's Q, in a sample from South Korea. Their results support the contention that competition imposes discipline on managers to work hard resulting in increased firm value.

Consistent with the Lerner index and with Porter (1980), if firms operating in competitive (concentrated) markets have lower (higher) profitability, then higher competition should lead to lower firm value. On the other hand, consistent with the notion that competition imposes discipline on managers which causes managers to work harder to maximize firm value thereby reducing agency costs, higher competition should lead to higher firm value. The competing theories suggest opposite effects from competition on firm value. Specifically, if profitability concerns (reducing agency costs) are dominant, the relation between competition and firm value will be negative (positive). These two theories (profitability concerns versus reducing agency costs) lead to my first hypothesis is null form:

H1: *No relation exists between product market competition and firm value.*

2.2 Product Market Competition and Liquidation Risk

While hypothesis 1 predicts a non-directional relation between product market competition and firm value, theory predicts the relation might be negative for firms closer to the

point of liquidation. Allen and Gale (2000) present a life-cycle theory of product market competition which suggests that, over time, firms with better management reveal their superiority over inferior firms by demonstrating superior relative performance. Before superior firms reveal themselves, the market is competitive, and investors are unsure which firm is superior, leading to higher uncertainty and lower firm values. As superior firms reveal themselves, they dominate and overcome the inferior firms, and the product market concentrates. Superior firms are able to take over inferior firms by progressively taking over their product market. A superior firm doesn't necessarily need to take possession of an inferior firm, but can simply take over its product market share.

Following the theory posited by Allen and Gale (2000), one can expect certain firms to lose market share in competitive markets. Firms likely to lose market share are those with financial difficulties (i.e., firms with the highest liquidation risk). Highly competitive markets are often accompanied by increased liquidation risk for the firms involved. Schmidt (1997) develops a model examining liquidation risk on managerial incentives, which shows competition reduces the profit of firms to the point where some firms may liquidate if efforts to reduce costs are unsuccessful. The models of Schmidt (1997) and Allen and Gale (2000) suggest increased product market competition has a more pronounced negative effect on firm value for firms with the highest liquidation risk, compared to firms with lower liquidation risk. Firms with high liquidation risk are the ones most likely to be identified, over time, as inferior and to be removed from the product market by superior firms. If true, the relation between competition and firm value should be negative as liquidation risk increases.

Contrary to this suggestion, theory predicts competition is associated with a reduction in agency costs. As previously discussed, Raith (2003) develops a model which results in higher

competition leading to managers working harder for the firm to remain profitable which would lead to lower agency costs as investors are reassured managers are working hard in investors' interests. Additionally, Hart (1983) develops a model suggesting competition reduces managerial slack. These theories suggest competition reduces agency costs. When a firm is under more uncertainty, as is the case when a firm has heightened liquidation risk, a reduction in agency costs becomes more important. When incorporating firm-specific liquidation risk in the relation between competition and firm value, if competition reduces managerial slack, then firms in more competitive industries should have higher firm value when liquidation risk is greater compared to high liquidation risk firms in less competitive industries. If true, the relation between competition and firm value should be positive as liquidation risk increases.

Summarizing both streams of research, incorporating liquidation risk into the life cycle theory of Allen and Gale (2000) suggests the relation between firm value and competition is particularly negative when liquidation risk is high. Alternatively, incorporating liquidation risk into the reduced agency cost theory suggests the relation between firm value and competition is particularly positive when liquidation risk is high. This leads to my second hypothesis, in null form:

H2: *The effect of liquidation risk on firm value is not affected by differential levels of industry competition.*

2.3 Product Market Competition and Country-Level Investor Protection Mechanisms

Giroud and Mueller (2011) provide empirical evidence based on a U.S. sample suggesting firms in noncompetitive industries benefit more from good corporate governance than firms in competitive industries. The authors document the stock market return from a high-low

corporate governance hedge portfolio,[8] as measured by the G-Index (Gompers et al. 2003), is small and insignificant (large and significant) in industries with the highest (lowest) competition. They find firms with poor corporate governance have lower firm value, make more value-destroying acquisitions, and are more likely to be targeted by activist hedge funds – but these results hold true only in low or noncompetitive industries. Their findings suggest a substitute relation between corporate governance and competition. Specifically, competition and corporate governance each discipline managers to act in the best interests of investors.[9] In a similar vein, Chou et al. (2011) use sales concentration as a measure of competition in a sample consisting of all firms listed on the NYSE, AMEX, and NASDAQ from 1990-2005 and find firms in competitive industries have relatively weak corporate governance, supporting the prediction that competition acts as a substitute for corporate governance mechanisms. Their findings suggest a substitute relation between competition and corporate governance mechanisms.

While these studies suggest product market competition has positive agency cost effects, an alternative theory suggests any reduction in agency costs from increased managerial effort may depend on the strength of the legal and regulatory mechanisms forcing managers to act in the best interests of investors. This suggestion is consistent with Allen and Gale (2000), who posit that firms in countries with the strongest mechanisms to ensure managers act in the best interests of investors experience the greatest benefits from any reduced agency costs that result from higher competition. While these mechanisms are strong in the U.S., they may be less so internationally, due to institutional and cultural differences. Thus, potentially important

[8] That is, a hedge portfolio which buys long (sells short) firms with a G-Index less than 5 (greater than 14).
[9] See also: Byun et al. (2012), who find in a sample of Korean firms that members of business groups enjoy increased firm value from internal corporate governance mechanisms regardless of competitive pressure, while non-member firms only experience increased firm value from internal corporate governance mechanisms if the product market is less competitive.

differences may exist between countries with respect to the extent by which product market competition reduces agency costs. Their theory suggests a complementary relation between competition and *country-level* corporate governance mechanisms.

Summarizing both streams of research, incorporating country-level corporate governance into the theories finding a substitute relation between competition and agency costs suggests the relation between firm value and corporate governance is negative when competition is high. Alternatively, incorporating country-level corporate governance into the theories suggesting a complementary relation between competition and agency costs suggests the relation between firm value and corporate governance is positive when competition is high. This leads to my third hypothesis, in null form:

H3: *The effect of country-level corporate governance regulations on firm value is not affected by differential levels of industry competition.*

2.4 Product Market Competition and Firm-Level Transparency

As described in previous sections, several theoretical and empirical studies suggest competition leads to lower agency costs. In this section, I posit that firm-level transparency, which unambiguously reduces agency costs, is most important to investors during periods of low competition. Managers operating in firms with limited transparency have more opportunity to consume private benefits at the cost of investors, resulting in increased agency costs (Jensen and Meckling 1976). Transparency can help mitigate these agency costs, such as inefficient investment and asset expropriation, by increasing the ability of outside stakeholders to detect excess costs. Much of the empirical research on the effects of transparency confirms these theoretical underpinnings and demonstrates that increased firm-level transparency produces

many positive firm value benefits.[10] Transparency provides investors with information about the investment decisions of management (Stulz 2009), and better-informed investors make improved judgments related to the overall performance of managers. Consequently, transparency disciplines managers to act in the best interests of investors. Increased transparency can also result in managers themselves becoming better informed about the resource allocation of the firm. If managers are encouraged to compile and assimilate incremental information for external reporting, this information can be beneficial for improved decision-making within the firm itself (Lambert et al. 2007).

Furthermore, transparency has been shown to be most important during crisis periods. Lang and Maffett (2011) show firms with higher transparency experience fewer extreme illiquidity events, less liquidity volatility, lower correlations between firm-level liquidity and market liquidity, and lower correlations between firm-level liquidity and returns during crises. Transparency and informed trading research has also been conducted in international settings. For example, Maffett (2012) finds that firms with greater transparency experience less privately informed trading by institutional investors. His finding is more pronounced where country-level disclosure infrastructures are weakest and for those investors with greater incentives and opportunities to obtain private information. Finally, some international research has established an inverse relation between transparency and a firm's cost of capital, with greater transparency increasing firm value. For example, in an analysis of 34 countries, Bhattacharya et al. (2003) find increased country-level opacity is linked to a higher cost of equity and to significantly decreased trading in the stock market.

While these benefits of firm specific transparency are notable, theory suggests they will

[10] For example, see Stulz (2009), Lambert et al. (2007), Brennan and Subrahmanyam (1995), and Lang and Maffett (2011).

be less important in environments where agency costs are already mitigated. Recent research finds firms with greater transparency (as measured by less evidence of earnings management, better accounting standards, higher quality auditors, a greater analyst following, and more accurate analyst forecasts) have lower transaction costs and greater liquidity (Lang et al. 2012). Importantly, their findings are most pronounced where investor uncertainty is greater. In the final hypothesis, I propose that transparency has a particularly positive effect on firm value in concentrated markets, when compared to competitive markets. Accordingly, investors should value firm-level transparency most when competition is lowest, leading to my fourth hypothesis, in alternative form:

H4: *The positive relation between transparency and firm value is greatest when competition is low.*

CHAPTER THREE

COMPETITION, INVESTOR PROTECTION, AND TRANSPARENCY MEASURES

3.1 Competition Measures

As described above, competition is a multifaceted construct. Thus, I utilize multiple measures of competition, based upon sales concentration, fixed costs, and sales domination of the top firm in the industry.

3.1.1 Herfindahl-Hirschman Index

The first measure of competition used is the Herfindahl-Hirschman Index (HHI), which measures product market competition via sales concentration by industry within each country. Specifically, HHI is calculated in equation 1a as:

$$HHI_{jkt} = \sum_{i=1}^{ijkt} \left(\frac{SALES_{ijkt}}{SALES_{jkt}} \right)^2 \quad (1a)$$

where $SALES_{ijkt}$ is the total sales (Compustat: SALE) for firm *i* in industry *j* in country *k* in fiscal year *t*, $SALES_{jkt}$ is the aggregate sales for all firms in industry *j* in country *k* in fiscal year *t*.[11] The interpretation of HHI is that an industry with a higher (lower) value is more concentrated (competitive). The *COMP_CONCENTRATE* metric is the reverse-coded HHI, to facilitate the interpretation such that a higher (lower) level of *COMP_CONCENTRATE* is a proxy for a more (less) competitive industry:[12]

$$COMP\_CONCENTRATE_{jkt} = 1 - \left(HHI_{jkt} \right) \quad (1b)$$

The *COMP_CONCENTRATE* variable is calculated for each industry *j* within each country *k* for each fiscal year *t*.

[11] In all specifications in this paper, subscript *i* refers to firm, *j* refers to industry, *k* refers to country, and *t* refers to fiscal year.

[12] All sales-based competition metrics (i.e., *COMP_CONCENTRATE*, *COMP_DOMINANCE*, and *COMP_TOP4*) are estimated using the universe of observations available in Compustat Global.

3.1.2 Competition Dominance by Top Firm

The second measure of competition used is a novel measure developed for this study of the competitive dominance of the industry's sales leader. The *COMP_DOMINANCE* measure is the difference between the sales ratio of the leading firm and the median firm within an industry, country, and fiscal year. Specifically, the competition measure is defined in equation 2 below:

$$COMP\_DOMINANCE_{jkt} = 1 - \left(SALES\_RATIO_{leader,jkt} - \widetilde{SALES\_RATIO}_{jkt} \right) \quad (2)$$

with $SALES\_RATIO_{leader,jkt}$ being equal to the sales ratio for the firm with the highest sales within an industry *j*, country *k*, fiscal year *t*, and $\widetilde{SALES\_RATIO}_{jkt}$ being equal to the median sales ratio within industry *j*, country *k*, and fiscal-year *t*. This measure captures the sales dominance of the leading firm within the industry with higher (lower) levels being interpreted as higher (lower) competition within the industry.

3.1.3 Four-firm Sales Concentration Ratio

The third measure of competition used is a measure of the sales dominance of the industry's top four sales leaders. The *COMP_TOP4* measure is a ratio of the sum of the sales of the top four firms in the industry to aggregate sales in the industry (Li 2010). The calculation is defined in equation 3 below:

$$COMP\_TOP4_{jkt} = 1 - \frac{\sum_{r=1}^{4} SALES_{ijkt}}{SALES_{jkt}} \quad (3)$$

where the numerator is the sum of sales for the top four firms ranked by sales (rank denoted by *r*) in industry *j*, country *k*, and fiscal year *t*, and the denominator is equal to the aggregate sales of industry *j*, country *k*, and fiscal year *t*. This measure captures the sales dominance of the four highest ranked firms within the industry with higher (lower) levels of *COMP_TOP4* being interpreted as higher (lower) competition within the industry.

3.1.4 Competition from Existing and Potential Rivals

Competition from existing and potential rivals is measured following Li (2010), using a principal component analysis on the number of firms in an industry, the total sales within an industry, the Herfindahl-Hirschman index, four-firm concentration ratio, and industry average values of property, plant and equipment, research and development, and capital expenditures. The first two components are retained as estimates of competition from potential rivals (*COMP_POTENTIAL*) and competition from existing rivals (*COMP_EXISTING*). Appendix B has a detailed discussion of the estimation of these two competition measures.

3.1.5 Competition across Countries

The final estimate of a competitive industry uses the Herfindahl-Hirschman Index from equation 1b above but is estimated across all countries within an industry (*COMP_IND_ONLY*). It is calculated in an identical fashion to equation 1b in section 3.1.2 except it is aggregated within industry across all countries in the sample. This recognizes globalization within industries and that firms may perceive competition from other firms within their industry but in different countries.

3.2 Country-Level Investor Protection Mechanisms

Two different measures are used to capture the differential rights of investors to ensure that managers are acting in the investors' best interests. Both measures come from finance literature examining the legal rules covering shareholders and creditors in multiple countries (La Porta et al. 1998; La Porta et al. 2006).

3.2.1 Anti-Director Rights of Shareholders

The first estimate of the differential rights of investors is a measure of anti-director rights

(*ANTI_DIR*) (La Porta et al. 1998).[13] *ANTI_DIR* is formed by adding one for each of the following conditions: (1) shareholders are allowed to mail their proxy vote; (2) deposit of shares is not required prior to general shareholders' meetings; (3) cumulative voting or proportional representation of minorities on the board of directors is allowed; (4) there exists an oppressed minority mechanism; (5) the minimum percentage of share capital that allows a shareholder to request an extraordinary shareholders' meeting is less than or equal to 10 percent; or (6) shareholders' preemptive rights can only be waived by a shareholders' meeting. *ANTI_DIR* is a time-invariant country-level measure applicable to all firms within the same country across time. This measure of anti-director rights has been shown to be positively related to external capitalization which is the ratio of a country's stock market capitalization held by minorities to gross national product (La Porta et al. 1997).

3.2.2 Investor Protection

The second estimate of the overall level of investor protection existing in the country (*INV_PROTECT*) is calculated as the principal component of the indices of anti-director rights (see section 3.2.1), disclosure requirements, and liability standards (La Porta et al. 2006). Disclosure requirements are measured as the mean of six different factors, measuring: (1) the requirement of the delivery of a prospectus for new issues; (2) prospectuses disclose compensation information of key officers and directors; (3) equity ownership information is disclosed; (4) equity ownership information of key officers and directors is disclosed; (5) contracts outside the ordinary course of business are disclosed; and (6) prospectuses disclose transactions between the issuer and related parties, including large shareholders, officers, and directors. Liability standards are measured as the mean of three different factors, measuring

[13] I am grateful to Professor Raphael La Porta for making these data available on his website at Dartmouth College.

procedural difficulty in recovering losses from the issuer, the distributor, or the accountant in civil liability cases resulting from misleading statements in the prospectus. [14] *INV_PROTECT* is a time-invariant country-level measure applicable to all firms within the same country across time. This measure of investor protection has been shown to be positively related to external market capitalization, domestic firms per capita, value of IPOs to GDP within a country, and access to equity, and negatively related to ownership concentration (La Porta et al. 2006).

3.3 Firm-level Transparency

Following Lang et al. (2012) and Lang and Maffett (2011), firm-level transparency is measured using five different metrics commonly found in the literature: (1) evidence of earnings management, (2) auditor choice, (3) analyst following, (4) analyst forecast accuracy, and (5) accounting standard choice. In addition, a sixth measure is developed from the percentile rankings of these five measures. Each of these transparency measures will now be described in more detail.

3.3.1 Earnings Management

The first measure of transparency, evidence of earnings management, is captured by assessing the smoothness of the firm's earnings stream. The basic underlying logic is that insiders and managers can conceal the actual performance of the firm, reducing the variability of the firm's reported earnings by manipulating accounting accruals. Given the differences in accounting standards and the demands of different stakeholders of the firm, earnings smoothing is often an issue in any setting, but it is likely to be particularly important in an international setting, due to the variability in accounting standards and audit quality.

The level of earnings smoothness for a particular firm may not necessarily indicate

[14] For more information about the six measures of disclosure requirements or three measures of liability standards, see La Porta et al. (2006).

intentional earnings management, because some degree of smoothness will exist for each firm as a result of normal operations. To take this reality into account, expected smoothing is partitioned from unexpected smoothing using a technique employed by Lang et al. (2012). Specifically, earnings smoothness is regressed on a set of determinants of smoothness identified in the literature.[15] Following this approach, the decile-ranked predicted value of this model is *EXPECTED_SMOOTHING*, while the decile-ranked residual is *UNEXPECTED_SMOOTHING* with lower (higher) values representing more (less) earnings smoothness. This method is explained in further detail in Appendix C.

3.3.2 Auditor Choice

The second measure of firm-level transparency (*BIG_N*) is an indicator variable equal to one if a firm utilizes a Big N auditor, and zero otherwise. Prior research suggests that the information environment of a firm's financial reporting is likely to be higher when the firm uses a Big N auditor or its affiliates (Francis 2004).

3.3.3 Number of Analysts and Analysts' Accuracy

Analysts can play an important role in the information environment of firms (Roulstone 2003; Lang et al. 2004). Accordingly, two transparency measures are utilized to incorporate this aspect. The first of these (*ANALYSTS*) is the natural log of one plus the number of analysts forecasting the firm's earnings per share.[16] I utilize a natural log transformation because the marginal benefit from an additional analyst to the information environment of the firm decreases as the number of analysts issuing EPS forecasts increases.

[15] These variables (more fully described in Appendix C) include size, leverage, book-to-market ratio, the standard deviation of sales, the ratio of the number of loss years in the past three years, the log of days accounts receivable plus inventories to capture the operating cycle length; average sales growth over the past three years; net property, plant, and equipment scaled by assets; average cash flow from operations scaled by assets over the past three years; and industry and year fixed effects.

[16] Firm-years with no analyst coverage are set to zero.

The fourth measure of transparency is the accuracy of analyst forecasts (*ANALYST_ERROR*). This is measured as the absolute value of the analyst forecast error, deflated by stock price, where the analyst forecast error is defined as the average analyst estimated EPS less actual EPS, as reported in I/B/E/S and defined in equation 4:

$$ANALYST\_ERROR_{it} = \frac{|ACTUAL\_EPS_{it} - ANALYST\_EPS_{it}|}{PRICE_{it}} \quad (4)$$

where *ACTUAL_EPS* is equal to the actual EPS reported by firm *i* at time *t*, *ANALYST_EPS* is equal to average analyst estimated EPS for firm *i* at time *t*, and *PRICE* is the contemporaneous stock price for firm *i* at time *t*. It is important to control for bias and surprise when using analyst forecast error (Lang and Lundholm 1996). The bias of the forecast error (*BIAS*) is equal to the analyst forecast error, deflated by stock price,[17] while the surprise (*SURPRISE*) is equal to the value of current actual EPS minus last year actual EPS, deflated by stock price.

3.3.4 Accounting Standard Choice

The fifth measure of firm-level transparency, accounting standard choice (*ACCT_CHOICE*), is measured by whether or not the firm is a serious adopter of either International Financial Reporting Standards (IFRS) or United States Generally Accepted Accounting Principles (GAAP). Prior research suggests that accounting quality is higher for firms reporting under IFRS or GAAP (e.g., Barth et al. 2008). However, firms can be *in-name-only* adopters of IFRS. Daske et al. (2008) find capital market benefits of adoption of IFRS only in countries where firms have incentives to be transparent and in countries where legal enforcement mechanisms are strong. Accordingly, a serious adopter of accounting standards (*ACCT_CHOICE*) is coded one if the firm conforms to IFRS or GAAP (either mandatory or

[17] *BIAS* is calculated as *ANALYST_ERROR* in equation 4 without taking the absolute value of the numerator.

voluntary)[18] and has an above-median value for the average percentile ranking of the remaining four measures of transparency (*ANALYST_ERROR, BIG_N, ANALYSTS, UNEXPECTED_SMOOTHING*) (similar to Lang and Maffett (2011)).

3.3.5 Transparency Combination Measure

The final (sixth) measure of firm-level transparency (*TRANSPARENCY*) is a composite measure estimated by taking an average of the percentile rankings of the five measures enumerated in sections 3.3.1 through 3.3.4.[19] If a measure is missing for a firm-year observation, the value of *TRANSPARENCY* takes on the average percentile of the remaining firm-level transparency measures.

[18] Using Compustat Global Accounting Standard data item ACCTSTD, I code a firm as one which confirms to IFRS or GAAP if it has a code of DA, DI, DO, DT, DU, or US. Although this study is international in nature, 851 firm-year observations label their accounting standard as US (i.e., following United States GAAP), where the greatest number of firm-year observations using US GAAP are from Germany, Israel, and Switzerland comprising 393, 194, and 76 observations, respectively, of the total 851 US GAAP firm-year observations.

[19] The negative percentile ranking of *ANALYST_ERROR* is used in *TRANSPARENCY* as the relation is predicted to be opposite to the other four transparency measures. That is, all transparency measures are predicted to be positively related with firm value except for *ANALYST_ERROR*, which is expected to be negatively related. Thus, the negative percentile of *ANALYST_ERROR* ranking is used in the *TRANSPARENCY* measure.

CHAPTER FOUR

RESEARCH DESIGN

4.1 Test of First Hypothesis – Competition and Firm Value

To examine the relation between international product market competition and firm value, as hypothesized in H1, the following model is estimated:

$$FIRM\_VALUE_{i,t+1} = \alpha_0 + \alpha_1 COMPETITION_{i,t} + \sum \beta_n Controls_{n,i,t} + \varepsilon_{i,t+1} \quad (5)$$

where *FIRM_VALUE* is a measure of firm value estimated by either Tobin's Q (*TOBINS_Q*) or Market-to-Book Ratio (*MTB*) and *COMPETITION* is one of the six estimates of competition enumerated in section 3.1. I predict α_1 will be significant but make no directional prediction. Controls include *CAPEX*, defined as total capital expenditures scaled by total assets; *ADR*, defined as an indicator variable equal to one if the firm has an American Depository Receipt and zero otherwise; *DIVIDENDS*, defined as an indicator variable equal to one if the firm pays dividends and zero otherwise; *ASSETS*, defined as the natural log of total assets in USD; *LEVERAGE*, defined as financial debt scaled by total capital; *SALES_GROWTH*, defined as annual sales growth; *NET_INCOME*, defined as earnings (before extraordinary items) scaled by total assets; *CASH*, defined as total cash scaled by total assets; and Fiscal Year, Country, and Industry[20] indicator variables to control for fixed effects. The dependent variable is one year ahead to control for reverse causality bias. All variables are further defined in Appendix A.

Tobin's Q and the market to book ratio of equity are used as measures of firm value. Tobin's Q measures the total market value of the firm divided by the total book value of assets. The market to book ratio of equity measures the total market value of equity divided by the total book value of equity. I use these two measures of firm value because these measures capture the

[20] Industry is defined as 4-digit SIC code.

value of intangible aspects that are important to investors. Valuable intangible aspects of the firm create differences between the numerator and denominator in both Tobin's Q and market-to-book value. For example, if two firms are identical in all respects but one has higher transparency between the firm and investors, one can expect the firm with higher transparency would have a higher value to the extent that investors find transparency valuable.

Control variables are based on a model developed by Lang et al. (2012), with control variable predictions based on their findings. Specifically, *CAPEX*, *ADR*, *LEVERAGE*, *SALES_GROWTH*, *NET_INCOME*, and *CASH* are predicted to be positive, and *ASSETS* is predicted to be negative. I make no prediction on *DIVIDENDS*, as the Lang et al. (2012) models show different effects of this variable as specifications change. There is a minimal difference in the calculation of *LEVERAGE* between their paper and this study. Following Welch (2011), I specify *LEVERAGE* as financial debt over total capital.[21]

4.2 Test of Second Hypothesis – Liquidation Risk, Competition, and Firm Value

To examine the effect on firm value of the interactive relation between international product market competition and liquidation risk, as hypothesized in H2, the following model is estimated:

$$FIRM\_VALUE_{i,t+1} = \alpha_0 + \alpha_1 COMPETITION_{j,t} + \alpha_2 LIQ\_RISK_{i,t} + \alpha_3 COMPETITION_{j,t} * LIQ\_RISK_{i,t} + \sum \beta_n Controls_{n,i,t} + \varepsilon_{i,t+1} \quad (6)$$

where *LIQ_RISK* is a measure of the risk of firm *i* liquidating at time *t* (i.e., firm-level liquidation risk) defined as one (zero otherwise) if the Z-Score is less than 1.81 (Altman 1968). I predict α_2 will be negative and make no prediction on α_1. If α_3 is negative and significant, then this will lend support to the conjecture that the negative relation between competition and firm

[21] Financial debt is defined as Compustat variables: DLC + DLTT. Total capital is defined as Compustat variables: DLC + DLTT + MIBT + SEQ.

value is most pronounced for firms nearest liquidation (i.e., for those with the highest liquidation risk). If α_3 is positive and significant, then this will lend support to the suggestion that the negative relation between competition and firm value is attenuated for firms nearest liquidation consistent with the notion that competition reduces agency costs and this is most important when the risks to the firm are greatest. All other variables are defined in section 4.1. Z-Score is calculated in equation 7 as (Altman 1968):[22]

$$\text{Z-Score}_{i,t} = \left[\begin{array}{c} 1.2* \left(\frac{\text{Current Assets-Current Liabilities}}{\text{Total Assets}} \right) + 1.4* \frac{\text{Retained Earnings}}{\text{Total Assets}} + 3.3* \frac{\text{EBIT}}{\text{Total Assets}} \\ + 0.6* \frac{\text{Market Value of Equity}}{\text{Total Liabilities}} + 0.999* \frac{\text{Sales}}{\text{Total Assets}} \end{array} \right] \quad (7)$$

Predictions on the control variables remain identical to those enumerated in section 4.1.

4.3 Test of Third Hypothesis – Competition, Country-Level Investor Protection Mechanisms, and Firm Value

To examine the effect on firm value of the interactive relation between international product market competition and country-specific institutional mechanisms, the following model is estimated:

$$FIRM\_VALUE_{i,t+1} = \alpha_0 + \alpha_1 COMPETITION_{j,t} + \alpha_2 MECHANISM_k + \alpha_3 COMPETITION_{j,t} * MECHANISM_k + \sum \beta_n Controls_{n,i,t} + \varepsilon_{i,t+1} \quad (8)$$

where *MECHANISM* is a measure of investor protection mechanisms in country *k*. *MECHANISM* includes two different measures, described in section 3.2 (*ANTI_DIR* and *INV_PROTECT*). Importantly, I include an estimate of corruption (*CORRUPTION_INDEX*) as a control variable in equation 8 not included in any other model in this study. Corruption is included because legal and regulatory mechanisms may not be effective and may be susceptible

[22] Several studies evaluate and review business failure prediction models in international settings using Z-Score or some other variant. For example, see Altman (1984), Altman and Narayanan (1997), Balcaen and Ooghe (2006). In these papers, no single model is developed which transcends many different countries.

to circumnavigation in corrupt countries. All other variables are defined in section 4.1. I predict α_2 will be positive and make no prediction on α_1 and α_3. If α_3 is positive and significant, then this will lend support to the suggestion that the ability of product market competition to mitigate agency costs is dependent on the country-level institutional mechanisms available to investors to ensure that managers act in the investors' best interests. If α_3 is negative and significant, then this will lend support to the suggestion that country-level investor protection mechanisms and product market competition have substitute effects on firm value. I make no prediction on the direction of *CORRUPTION_INDEX*. Predictions on the other control variables remain identical to those enumerated in section 4.1.

4.4 Test of Fourth Hypothesis – Firm-Level Transparency, Competition, and Firm Value

To examine the effect on firm value of the interactive relation between product market competition and firm-level transparency, as hypothesized in H4, the following model is estimated:

$$FIRM\_VALUE_{i,t+1} = \alpha_0 + \alpha_1 COMPETITION_{j,t} + \alpha_2 TRANSPARENCY_{i,t} + \alpha_3 COMPETITION_{j,t} * TRANSPARENCY_{i,t} + \sum \beta_n Controls_{n,i,t} + \varepsilon_{i,t+1} \quad (9)$$

where *TRANSPARENCY* is equal to the composite measure of firm-level transparency, previously described in section 3.3.5, and all other variables are described in section 4.1. I predict α_2 will be positive, α_3 will be negative, and make no prediction on α_1. If α_3 is negative and significant, then this will lend support to hypothesis 4, suggesting firm-level transparency is most important to firm value when product market competition is low. Predictions on the control variables remain identical to those enumerated in section 4.1.

CHAPTER FIVE

SAMPLE

Sample data were obtained from the Compustat Global database of firms for fiscal years 1998 to 2012.[23] Financial and insurance companies were excluded from the initial data set. U.S. firms are not included in the sample because of the study's international nature. The competition measures are calculated before any subsequent data limitations are imposed to help ensure that the greatest number of firms are included in the competition measure sample.[24] The sales concentration competition measures (i.e., *COMP_CONCENTRATE, COMP_DOMINANCE, COMP_TOP4* and *COMP_IND_ONLY*) are developed using each firm with a positive value for total sales, providing a sample of 329,141 firm-year observations to estimate these competition measures. Once the competition measures are calculated, data restrictions are imposed to create a final sample. Firm-years are excluded if they are missing values for any of the required variables; firms with impaired capital are also excluded.[25] The data are truncated at the 1 and 99% distribution of *ASSETS*, *CAPEX*, *CASH*, *LEVERAGE*, *MTB*, *NET_INCOME, SALES_GROWTH,* and *TOBINS_Q* to remove outliers. Finally, industry-year (2-digit SIC) or country-year combinations with fewer than 50 total observations are removed, leaving 164,089 firm-year

[23] Ali et al. (2009) show that industry concentration measures calculated exclusively with Compustat data are poor proxies for actual levels of industry concentration; this is a known limitation of the findings in the current study. I attempt to alleviate this concern by using several different measures of product market competition. Ali et al. (2009) find U.S. Census data to be a better proxy, but data analogous to U.S. Census data are not available in all of the countries investigated here. Several studies have used private firm data to better approximate industry concentration when investigating one country (e.g., Byun et al. 2012; Ammann et al. 2013), but private firm data are also not available for all of the countries in the current study. Investigating only one country or continent limits the generalizability of a study's findings; investigating a large number of firms from different countries with diverse economies is one of the primary contributions of the current study.

[24] While a firm may be missing from the final data set due to a number of data limitations, it is best to use the maximum number of firm-year observations to calculate competition. While a firm may be missing a necessary data item (e.g., *CAPEX*) and be limited from the final analysis, it still may provide competitive pressure to the remaining firms in its industry.

[25] Firms are assumed to have impaired capital if they have a negative value of common equity (Compustat: CEQ).

observations in the final sample.[26]

Sample data by country is reported in Panel B of Table 1. The number of observations with non-missing sales is reported in the Original N column while the number of observations used in final analyses is reported in the Final N column. The percentage of original observations removed to obtain the final sample is reported in the column labeled percentage lost. The data in this table show that many countries make up the total number of observations lost and is not due to a single country or region. The sample represents 74 countries, with Japan having the largest number of firm-year observations (37,307), while Bulgaria has the smallest number (50).

Descriptive statistics for *TOBINS_Q*, *MTB*, *COMP_CONCENTRATE*, *COMP_DOMINANCE*, *COMP_TOP4*, *COMP_EXISTING*, *COMP_POTENTIAL* and *COMP_IND_ONLY* by country for the least restrictive sample are reported in Table 2, which displays the mean and standard deviation of each variable. Overall, there appears to be a sufficient distribution of observations across countries to conduct empirical tests.

Descriptive statistics for the dependent variables, competition estimates, liquidation risk variable, country-level institutional mechanism variables, firm-level transparency estimates, and control variables are reported in Table 3. The dependent variables, *MTB* and *TOBINS_Q*, have a mean of 1.845 and 1.366, respectively. These estimates appear reasonable when compared to previous international studies. The competition variables have different degrees of variance, with *COMP_POTENTIAL* and *COMP_EXISTING* having the highest variance, while *COMP_TOP4* has the lowest variance. Recall that *COMP_EXISTING* and *COMP_POTENTIAL* are decile ranked from the principal component analysis in appendix B which leads to the identical decile

[26] The total sample is further restricted in some instances due to data limitations on other variables. For example, I investigate analyst EPS estimate accuracy (*ANALYST_ERROR*; see section 3.3.3), which is not available for all 121,505 observations in the least restrictive sample because not all firms are followed by analysts.

ranked distributions shown in Table 3. The liquidation risk variable and country-level institutional mechanism variables are reported after the competition variables. As mentioned earlier, *LIQ_RISK* is equal to one (zero otherwise) if Z-Score is less than 1.81 (Altman 1968), *ANTI_DIR* is a measure ranging from zero to five measuring the anti-director rights of shareholders, and *INV_PROTECT* is a measure ranging from zero to 0.851 measuring the protections afforded to shareholders (La Porta et al. 2006). Transparency measures are listed next, with large variances reported for each variable. This is to be expected, as firm-level transparency exhibits more variance in international studies than in U.S. studies (Lang and Maffett 2010).

Correlation statistics are presented in Table 4. Almost all of the variables are correlated at the 1% significance level or better, which is largely a result of the large number of firm-year observations. Correlations not significant at the 1% level are bolded. The competition variables show high levels of correlation, suggesting that they measure similar but different constructs. Interestingly, *COMP_POTENTIAL* shows the lowest level of correlation with the remaining competition estimates, suggesting that the principal component analysis used to generate it was successful in measuring a different type of competition than the other competition estimates, which are primarily estimated through sales concentration. Unsurprisingly, the risk that a firm may liquidate (*LIQ_RISK*) is negatively correlated with firm value. The two country-level institution measures, *ANTI_DIR* and *INV_PROTECT*, show high levels of correlation, suggesting these estimates measure similar constructs. Several of the transparency measures show high correlations, which underscores the reality that many of the transparency measures are proxies for similar constructs. That is, transparency is difficult to estimate with a single variable, which is why several different estimates are combined into one overall variable in this study, an

approach consistent with prior research (e.g., Lang and Maffett 2011). The composite measure of transparency, *TRANSPARENCY*, shows high correlations in predicted directions with the five individual measures of transparency, suggesting it is an appropriate proxy for overall firm-level transparency.

CHAPTER SIX

RESULTS

6.1 Competition and Firm Value

The first set of analyses investigates the influence of product market competition on firm value, as described in hypothesis 1. Table 5 provides the regression results for Equation 5, estimating *TOBINS_Q* (*MTB*) as the dependent variable in Panel A (Panel B).[27] The primary variables of interest – the competition variables – are in boldface and are shown to be negative predictors of firm value. This is consistent with the interpretation that higher levels of product market competition negatively influences firm value. This effect is statistically and economically significant. For example, a one decile change in *COMP_EXISTING* leads to a decrease in total firm value of 1.1% of total assets, or a decrease of 2.1% of total book value of common equity. The results are robust across all measures of competition, except for *COMP_IND_ONLY*, which is a measure calculated across all countries within each industry. These results provide support for hypothesis 1, showing that higher levels of product market competition lead to lower firm value and the negative profitability effect of competition on firm value surpasses any agency cost benefit.

6.2 Competition and Liquidation Risk

The next set of analyses uses the same regressions as in the previous section, but examines whether firm-level liquidation risk has any differential influence on the negative effect of competition on firm value. Table 6 reports the regression results for Equation 6, estimating *TOBINS_Q* (*MTB*) as the dependent variable in Panel A (Panel B). The primary variables of interest – the measure of liquidation risk (*LIQ_RISK*) and the interactions with competition

[27] Recall that all dependent variables are one year ahead to help control for reverse causality bias.

variables – are in boldface. These effects show that higher levels of liquidation risk in the presence of high competition have a positive and significant effect on firm value. This effect is both statistically and economically significant. For example, for the firms not in risk of liquidating, a one decile increase in *COMP_EXISTING* leads to a decrease in firm value of 1.9% of total assets or 3.3% of common equity. However, for the firms with higher liquidation risk, this effect is completely offset. For these firms, a one decile increase in *COMP_EXISTING* leads to an increase in firm value of 0.3% of total assets or 0.4% of book value of equity. These findings support the notion that competition decreases agency costs which is valued more by investors when the risk of liquidation is greatest.

One inconsistent finding is on the interactive variable between *COMP_POTENTIAL* and *LIQ_RISK* in model 10, Panel A of Table 6. This interaction is inconsistent with all other interactions in Panel B of Table 6. Competition arising from potential entrants has been shown to motivate different managerial behaviors when compared to competition from existing rivals (Li 2010). This anomalous finding is an opportunity for further research specifically investigating the effects of different dimensions of competition on liquidation risk and firm value.

6.3 Competition and Country-Level Institutions

The next set of analyses examines whether or not country-level investor protection mechanisms have a differential effect on the relation between competition and firm value. Hypothesis 3, in the null form, predicts that the relation between competition and firm value will unaffected by country-level investor protection mechanisms. Tables 7 and 8 report parameter estimates from equation 8. The primary variables of interest – the country-level mechanism variables (*ANTI_DIR* and *INV_PROTECT*) and their interactions with the competition variables – are in boldface. The estimates show investor protection mechanisms and product market

competition have substitute effects on firm value. This is consistent with the notion that competition reduces agency costs which can substitute for formal corporate governance mechanisms (Giroud and Mueller 2011).

This effect is both statistically and economically significant. For example, a one standard deviation increase in *COMP_CONCENTRATE* (0.317) has a negative effect on firm value of 3.6% of total assets or 7.2% of total book value of common equity when the anti-director rights of investors (*ANTI_DIR*) is at the 25th percentile (4).[28] On the other hand, when the anti-director rights of investors is at the 75th percentile (6), a one standard deviation increase in *COMP_CONCENTRATE* has a negative effect on firm value of 6.3% of total assets or 14.2% of total book value of common equity.[29] A one standard deviation increase in *COMP_CONCENTRATE* (0.317) has a negative effect on firm value of 2.1% of total assets or 2.8% of total book value of common equity when the investor protection level (*INV_PROTECT*) is at the 25th percentile (0.417).[30] On the other hand, when the investor protection level is at the 75th percentile (0.729), a one standard deviation increase in *COMP_CONCENTRATE* has a negative effect on firm value of 4.0% of total assets or 8.8% of total book value of common equity.[31] These results suggest a substitute relation between country-level investor protection

[28] The effect on total assets at the 25th percentile of *ANTI_DIR* is derived from parameter estimates on Panel A of Table 7 and is calculated as 0.317 * 0.054 + 0.317 * 4 * -0.042 = -0.036. The effect on market value of equity at the 25th percentile of *ANTI_DIR* is derived from parameter estimates on Panel B of Table 7 and is calculated as 0.317 * 0.218 + 0.317 * 4 * -0.111 = -0.072.

[29] The effect on total assets at the 75th percentile of *ANTI_DIR* is derived from parameter estimates on Panel A of Table 7 and is calculated as 0.317 * 0.054 + 0.317 * 6 * -0.042 = -0.063. The effect on market value of equity at the 25th percentile of *ANTI_DIR* is derived from parameter estimates on Panel B of Table 7 and is calculated as 0.317 * 0.218 + 0.317 * 6 * -0.111 = -0.142.

[30] The effect on total assets at the 25th percentile of *INV_PROTECT* is derived from parameter estimates on Panel A of Table 8 and is calculated as 0.317 * 0.016 + 0.317 * 0.417 * -0.196 = -0.021. The effect on market value of equity at the 25th percentile of *INV_PROTECT* is derived from parameter estimates on Panel B of Table 8 and is calculated as 0.317 * 0.166 + 0.317 * 0.417 * -0.610 = -0.028.

[31] The effect on total assets at the 75th percentile of *INV_PROTECT* is derived from parameter estimates on Panel A of Table 8 and is calculated as 0.317 * 0.016 + 0.317 * 0.729 * -0.196 = -0.040. The effect on market value of equity at the 25th percentile of *INV_PROTECT* is derived from parameter estimates on Panel B of Table 8 and is calculated as 0.317 * 0.166 + 0.317 * 0.729 * -0.610 = -0.088.

mechanisms and competition on firm value.

Results are notable weaker but in the predicted direction in models 6 and 10 of Panel A of Table 7 and models 6 and 10 of Panel A of Table 8. As noted earlier, the inconsistent results from potential competition is an opportunity for future research. Also, the variance in Tobin's Q is much lower than the market-to-book value of equity which may help explain why the results in Tables 7 and 8 are not significant but are significant in panels B of both tables which uses market-to-book value of equity as the dependent variable.

6.4 Competition and Firm-Level Transparency

The next set of analyses examine whether or not firm-level transparency has a differential effect on the relation between competition and firm value. Hypothesis 4 predicts that transparency, as an explicit reduction in agency costs, has a substitute influence on the relation between competition and firm value. The results from equation 9, provided in Tables 9 and 10, provide support for hypothesis 4. The first five models in Panel A of Tables 9 and 10 confirm previous studies showing more transparent firms have higher valuations (e.g., Lang et al. 2012).

The primary variables of interest – firm-level transparency variables and their interactions with the competition variables – are in boldface in Panel B of Tables 9 and 10. The estimates show transparency and product market competition have substitute effects on firm value. This is consistent with the notion that competition reduces agency costs which can substitute for formal corporate governance mechanisms (Giroud and Mueller 2011). This effect is both statistically and economically significant. For example, at the 25^{th} percentile of TRANSPARENCY (0.382), a one standard deviation increase in *COMP_CONCENTRATE* (0.317) has a negative effect on firm value of 1.3% of total assets or 1.1% of total book value of

common equity.[32] However, at the 75th percentile of TRANSPARENCY (0.591), a one standard deviation increase in COMP_CONCENTRATE (0.317) has a negative effect on firm value of 3.2% of total assets and 7.0% of book value of equity. These findings show competition has a more negative effect on firm value when transparency is high.[33] In summary, results from models 7 and 9 provide support that firm-level competition has the most negative effect on firm value when transparency is high.

Results are notably weaker in models 4 and 12 in Panel B of Tables 9 and 10. This may be due to the novel *COMP_DOMINANCE* measure as well as *COMP_IND_ONLY* not adequately capturing competitive pressure.

6.5 Robustness Tests

The primary results may be dependent on the identification of industry at the four-digit SIC. I ran all analyses at the two-digit and three-digit levels which are included in appendices D and E, respectively. The results are qualitatively similar but lower in significance. This is most likely due to lower variance in the competition metrics. For example, at the two-digit SIC level, many firms are clustered together in the same industry which would be in different industries at the 4-digit level. Thus, the overall competition when using 2-digit or 3-digit SIC is higher than 4-digit and the variance is lower. Other considerations include whether or not fiscal-year, country, or industry effects are properly incorporated in the analyses. To address these concerns, I ran the primary analyses using *COMP_CONCENTRATE* clustering standard errors at the year, country,

[32] The effect on total assets at the 25th percentile of *TRANSPARENCY* is derived from parameter estimates on Panel B of Table 9 and is calculated as 0.317 * 0.066 + 0.317 * 0.382 * -0.281 = -0.013. The effect on market value of equity at the 25th percentile of *TRANSPARENCY* is derived from parameter estimates on Panel B of Table 10 and is calculated as 0.317 * 0.306 + 0.317 * 0.591 * -0.894 = -0.011.

[33] The effect on total assets at the 75th percentile of *TRANSPARENCY* is derived from parameter estimates on Panel B of Table 9 and is calculated as 0.317 * 0.066 + 0.317 * 0.591 * -0.281 = -0.032. The effect on market value of equity at the 75th percentile of *TRANSPARENCY* is derived from parameter estimates on Panel B of Table 9 and is calculated as 0.317 * 0.306 + 0.317 * 0.591 * -0.894 = -0.070.

and industry separately. The results (unreported) remain significant suggesting using different clustering standard errors at different levels does not materially change the overall interpretation of the results.

Additionally, results may be sensitive to the coding of the auditor identification variable. Following Francis et al. (2013), I exclude observations in Japan, South Korea, India, and Pakistan due to potential miscoding of the auditor identification variable. Excluding these observations, I ran the analyses presented in Tables 7 and 8 using the *COMP_CONCENTRATE* competition variable.[34] Results (unreported) remain qualitatively unchanged suggesting observations in these countries do not materially affect the primary findings. Finally, results may be sensitive to the inclusion of tax havens in the analysis. Firms primarily domiciled in tax haven countries may not actually operate in those countries instead using those countries to shield income from other tax jurisdictions. To investigate the effect of tax haven countries, I ran all primary analyses using the *COMP_CONCENTRATE* competition variable excluding observations from Bermuda, Cayman Islands, Ireland, and Luxembourg. Results (unreported) remain qualitatively unchanged suggesting observations in tax haven countries do not materially affect the primary findings.

[34] Results in tables 9 and 10 are the only place in the study where Big N auditor is used.

CHAPTER SEVEN

CONCLUSION

This study investigates the effects of product market competition on firm value. Two forces resulting from product market competition – increased liquidation risk and reduced agency costs – provide competing influences on firm value. The results reported in this paper are reliably consistent, showing that higher competition negatively influences firm value. This finding is consistent with the notion that it is difficult for a firm in a competitive industry to earn excess profits. Additional results show that the negative relation between firm value and competition is particularly strong when firm-level liquidation risk is low. This finding is consistent with the notion that firms with high liquidation risk are the ones most in need of reduced agency costs provided by product market competition and that investors value these firms higher than others with low liquidation risk. A third set of analyses shows the benefit of reduced agency costs from higher competition is weaker in countries where investor protection mechanisms are strong. This finding is consistent with the notion that product market competition and investor protection mechanisms act as substitute influences on firm value. The final analyses of this study show that increases in firm value from higher transparency – an explicit reduction in agency costs – are lower in more competitive product markets. This finding is consistent with the notion that product market competition and firm-specific transparency act as substitute influences on firm value.

I acknowledge several caveats related to this research. First, the results depend on the measurement of product market competition. Different measures of competition are utilized in an attempt to alleviate this concern. However, the findings in this study are limited to the extent that competition may manifest through forces not included in this study. Second, the results are

sensitive to the number of private firms within an industry. The data analyzed were gathered from firms with publicly traded equity or debt available in Compustat Global. It is conceivable that the results presented may be influenced by private firms providing competitive pressure on the public firms included in the sample. This is a potential avenue for future research. Third, although I have attempted to include the most appropriate measures of transparency identified in the extant literature, transparency measures are inherently limited. Firm-level transparency is a multifaceted construct with varying mechanisms from within both the firm and the market. Thus, my results might be affected by my particular choice of transparency measure.

My results add to the literature in several notable ways. First, I empirically document a negative relation between product market competition and firm value. Second, this relation is shown to be weaker when firms have elevated liquidation risk. Third, my analyses indicate that the negative relation between competition and firm value is greater in countries with strong investor protection mechanisms. Finally, results from my analyses of firm-level transparency and competition are consistent with the interpretation that firm-level transparency is most important to firm value when firms are operating in concentrated product markets. Overall, these findings support the notion that product market competition reduces agency costs between firm insiders and those outside the firm. These findings should be of interest to academics and practitioners who are interested in competition, liquidation risk, country-level investor protection mechanisms, and firm-level transparency effects on firm value.

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TABLES

Table 1

Panel A: Sample Selection

Description	N Removed	Total N	%
Firm-year observations used in competition measures		329,141	100.0%
Less:			
Missing Property, Plant, & Equipment	137	329,004	99.96%
Missing capital expenditure data	28,262	300,742	91.37%
Missing necessary data to calculate *ZSCORE*	57,290	243,452	73.97%
Missing necessary data to calculate *MTB* or *TOBINS_Q*	15,242	228,210	69.34%
Missing necessary data to calculate *LEVERAGE*	28,150	200,060	60.78%
Missing sales growth data	3,821	196,239	59.62%
Missing cash data	3,824	192,415	58.46%
Firm-years with impaired capital (i.e., negative common equity [Compustat: CEQ])	3,135	189,280	57.51%
ASSETS, *CAPEX*, *CASH*, *LEVERAGE*, *MTB*, *NET_INCOME*, *SALES_GROWTH*, and *TOBINS_Q* truncated at the 1st & 99th percentile	24,616	164,664	50.03%
Observations in industries (2-digit SIC) with fewer than 50 total observations	208	164,456	49.97%
Observations in countries with fewer than 50 total observations	367	164,089	49.85%
Firm-year observations used in analyses		**164,089**	49.85%

Table Notes: This table reports the number of observations removed from the sample to arrive at the sample used in analyses.

Table 1

Panel B: Observations by Country

Country	Orig N	Final N	% Lost	Country	Orig N	Final N	% Lost
Argentina	919	439	52%	Kuwait	786	221	72%
Australia	17,098	5,792	66%	Latvia	329	66	80%
Austria	1,164	624	46%	Lithuania	351	172	51%
Bahrain	142	54	62%	Luxembourg	378	185	51%
Bangladesh	400	72	82%	Malaysia	12,002	7,351	39%
Belgium	1,538	706	54%	Mauritius	219	105	52%
Bermuda	6,388	3,632	43%	Mexico	1,425	881	38%
Brazil	4,134	1,100	73%	Morocco	611	129	79%
British Virgin Islands	193	58	70%	Netherlands	2,152	1,375	36%
Bulgaria	196	50	74%	New Zealand	1,553	643	59%
Cayman Island	4,519	2,030	55%	Nigeria	634	140	78%
Chile	2,009	956	52%	Norway	2,644	1,167	56%
China	25,755	14,109	45%	Oman	696	215	69%
Colombia	370	179	52%	Pakistan	2,832	896	68%
Croatia	361	125	65%	Peru	1,057	342	68%
Cyprus	364	112	69%	Philippines	1,893	831	56%
Czech Republic	283	101	64%	Poland	4,028	1,629	60%
Denmark	1,819	983	46%	Portugal	748	346	54%
Egypt	506	173	66%	Qatar	170	82	52%
Estonia	208	59	72%	Russian Federation	2,049	319	84%
Finland	1,781	1,189	33%	Saudi Arabia	981	203	79%
France	9,431	5,073	46%	Singapore	7,701	4,530	41%
Germany	9,813	5,259	46%	Slovenia	285	157	45%
Greece	2,534	1,050	59%	South Africa	3,586	2,008	44%
Hong Kong	3,506	1,854	47%	Spain	1,804	742	59%
Hungary	301	170	44%	Sri Lanka	1,554	567	64%
India	32,503	7,806	76%	Sweden	5,273	2,444	54%
Indonesia	3,893	1,822	53%	Switzerland	2,923	2,024	31%
Ireland	802	443	45%	Taiwan	16,076	11,558	28%
Israel	2,890	1,070	63%	Thailand	5,646	3,289	42%
Italy	3,378	1,609	52%	Tunisia	237	75	68%
Jamaica	181	91	50%	Turkey	1,978	576	71%
Japan	55,708	37,307	33%	United Arab Emirates	427	183	57%
Jersey	216	79	63%	United Kingdom	20,560	9,902	52%
Jordan	1,133	65	94%	Venezuela	184	55	70%
Kenya	314	119	62%	Vietnam	1,758	287	84%
Korea	22,667	11,971	47%	Zimbabwe	216	63	71%

Table Notes: Panel A of this table reports the number of firm-year observations removed and the reason for removal from the sample to arrive at the final sample used in the analyses. Panel B of this table reports the number of original and final firm-year observations in each country followed by the percentage of original observations dropped by country.

Table 2

Firm Value and Competition Measures by Country

Country Name	*TOBINS_Q*		*MTB*		*COMP_ CONCENTRATE*		*COMP_ DOMINANCE*		*COMP_TOP4*		*COMP_EXISTING*		*COMP_POTENTIAL*		*COMP_IND_ONLY*	
	Mean	Std	Mean	Std	Mean	Std	Mean	Std	Mean	Std	Mean	Std	Mean	Std	Mean	Mean
Argentina	1.21	0.99	1.49	2.04	0.27	0.29	0.87	0.16	0.01	0.05	2.48	1.63	6.41	2.60	0.67	0.26
Australia	1.62	1.17	2.20	2.27	0.47	0.29	0.58	0.25	0.09	0.15	4.60	2.92	6.21	3.33	0.70	0.22
Austria	1.23	0.54	1.64	1.61	0.13	0.20	0.89	0.17	0.00	0.00	1.64	0.89	6.13	2.56	0.69	0.27
Bahrain	1.40	0.51	1.54	0.69	0.06	0.18	0.96	0.11	0.00	0.00	1.17	0.50	8.50	1.46	0.79	0.16
Bangladesh	2.36	1.31	3.96	3.19	0.38	0.30	0.76	0.21	0.03	0.06	3.68	1.70	6.18	1.39	0.82	0.15
Belgium	1.39	0.86	1.92	2.03	0.14	0.21	0.83	0.28	0.00	0.01	1.80	1.00	6.12	2.75	0.69	0.25
Bermuda	1.41	1.32	1.96	3.10	0.46	0.29	0.71	0.24	0.05	0.09	3.71	1.79	7.09	2.07	0.72	0.23
Brazil	1.32	0.97	1.95	2.79	0.36	0.34	0.80	0.23	0.07	0.17	3.39	2.42	4.95	2.68	0.72	0.21
British Virgin Islands	1.58	1.10	2.09	2.22	0.03	0.11	0.97	0.10	(0.00)	0.00	1.14	0.51	7.62	1.34	0.72	0.23
Bulgaria	1.10	0.60	1.53	3.15	0.25	0.23	0.88	0.17	(0.00)	0.00	2.20	1.03	7.84	1.25	0.73	0.20
Cayman Island	1.63	1.34	2.22	2.71	0.37	0.30	0.70	0.26	0.05	0.11	3.31	1.97	6.95	2.16	0.73	0.21
Chile	1.29	0.54	1.63	1.14	0.34	0.29	0.73	0.23	0.03	0.07	4.42	1.82	3.19	1.44	0.69	0.22
China	2.07	1.34	3.27	2.85	0.74	0.22	0.71	0.18	0.30	0.22	7.06	2.28	6.02	2.89	0.74	0.21
Colombia	1.25	0.63	1.44	0.95	0.20	0.26	0.93	0.11	0.00	0.01	3.96	1.32	2.82	0.87	0.71	0.22
Croatia	1.14	0.56	1.44	1.78	0.21	0.26	0.92	0.13	(0.00)	0.00	2.14	1.15	6.30	1.92	0.75	0.20
Cyprus	1.23	1.19	1.68	3.31	0.07	0.18	0.96	0.10	0.00	0.01	1.21	0.56	7.89	2.03	0.72	0.25
Czech Republic	0.87	0.31	0.78	0.52	0.25	0.27	0.82	0.21	0.02	0.05	3.22	1.58	3.56	1.86	0.66	0.19
Denmark	1.51	1.18	2.18	2.73	0.18	0.23	0.81	0.28	0.01	0.04	2.30	1.21	5.78	2.28	0.70	0.24
Egypt	1.43	0.70	2.34	2.30	0.14	0.22	0.91	0.15	0.00	0.01	2.12	1.11	5.06	2.30	0.74	0.20
Estonia	1.18	1.11	1.21	2.24	0.13	0.20	0.96	0.11	(0.00)	0.00	1.63	0.91	7.61	1.33	0.68	0.27
Finland	1.54	1.09	2.17	2.27	0.24	0.29	0.80	0.27	0.03	0.10	2.37	1.65	6.35	2.81	0.73	0.24
France	1.35	0.73	2.00	2.08	0.39	0.30	0.65	0.29	0.06	0.11	3.41	2.07	6.22	2.99	0.72	0.22
Germany	1.35	0.77	1.93	2.06	0.43	0.30	0.64	0.27	0.07	0.12	3.65	2.07	6.39	3.19	0.72	0.23
Greece	1.14	0.59	1.50	2.00	0.34	0.29	0.78	0.22	0.03	0.06	2.62	1.57	7.86	2.25	0.74	0.20
Hong Kong	1.30	1.04	1.66	2.37	0.30	0.28	0.72	0.27	0.02	0.07	3.02	1.70	5.78	2.46	0.72	0.23
Hungary	1.02	0.47	1.02	0.87	0.14	0.21	0.91	0.15	(0.00)	0.00	2.96	1.11	3.74	1.37	0.75	0.23
India	1.46	1.11	2.04	2.55	0.72	0.26	0.68	0.22	0.30	0.25	7.13	2.53	5.39	2.33	0.74	0.22
Indonesia	1.37	0.95	1.80	1.91	0.38	0.28	0.71	0.25	0.03	0.06	5.07	1.59	3.25	0.78	0.69	0.24
Ireland	1.40	0.89	2.13	2.25	0.12	0.18	0.82	0.27	0.00	0.00	1.64	0.81	6.51	2.40	0.71	0.24
Israel	2.08	1.95	3.31	3.62	0.39	0.30	0.75	0.24	0.04	0.07	3.20	1.74	7.28	2.38	0.70	0.24
Italy	1.26	0.59	1.81	1.72	0.32	0.27	0.74	0.26	0.01	0.03	2.63	1.40	6.45	2.78	0.73	0.23
Jamaica	1.25	0.63	1.37	1.02	0.00	0.00	1.00	0.00	0.00	0.00	1.85	0.36	5.04	0.76	0.69	0.21
Japan	1.10	0.67	1.27	1.48	0.75	0.20	0.68	0.19	0.28	0.21	7.68	1.88	3.70	2.10	0.74	0.23
Jersey	1.70	0.98	3.02	3.23	0.01	0.06	0.95	0.17	0.00	0.00	1.34	0.50	5.44	2.58	0.68	0.27
Jordan	1.64	0.77	1.99	1.10	0.32	0.28	0.75	0.25	0.03	0.06	2.22	1.34	8.37	1.76	0.75	0.17
Kenya	1.69	1.20	2.53	3.18	0.20	0.23	0.86	0.18	0.00	0.00	2.72	1.03	5.05	1.32	0.73	0.21
Korea	1.10	0.70	1.25	1.62	0.65	0.27	0.67	0.24	0.23	0.23	7.22	2.17	3.92	1.94	0.74	0.23
Kuwait	1.55	1.27	2.36	3.81	0.24	0.26	0.83	0.23	0.00	0.02	1.81	1.03	8.06	2.52	0.75	0.20
Latvia	0.95	0.46	0.88	0.72	0.08	0.15	0.88	0.19	(0.00)	0.00	1.12	0.33	8.91	1.36	0.69	0.26
Lithuania	1.17	0.77	1.43	1.67	0.31	0.32	0.95	0.07	0.01	0.02	2.42	1.57	7.81	1.54	0.73	0.19

Table 2 (continued)

Firm Value and Competition Measures by Country

Country Name	*TOBINS_Q*		*MTB*		*COMP_ CONCENTRATE*		*COMP_ DOMINANCE*		*COMP_TOP4*		*COMP_EXISTING*		*COMP_POTENTIAL*		*COMP_IND_ONLY*	
	Mean	Std	Mean	Std	Mean	Std	Mean	Std	Mean	Std	Mean	Std	Mean	Std	Mean	Mean
Luxembourg	2.40	2.71	4.51	6.75	0.14	0.22	0.87	0.22	(0.00)	0.00	1.86	1.04	4.95	2.58	0.65	0.25
Malaysia	1.08	0.59	1.22	1.37	0.58	0.28	0.69	0.22	0.13	0.15	4.56	2.15	8.27	2.23	0.70	0.24
Mauritius	1.41	1.16	2.55	4.20	0.23	0.25	0.88	0.16	0.00	0.00	2.53	1.29	5.62	1.17	0.69	0.19
Mexico	1.25	0.71	1.68	2.20	0.32	0.27	0.78	0.22	0.01	0.02	3.41	1.42	3.90	1.83	0.71	0.24
Morocco	1.98	0.88	2.97	1.61	0.23	0.27	0.85	0.19	(0.00)	0.00	2.51	1.21	5.82	1.99	0.73	0.16
Netherlands	1.48	0.84	2.36	2.54	0.23	0.27	0.77	0.25	0.01	0.06	2.46	1.53	5.86	2.72	0.72	0.24
New Zealand	1.49	0.88	2.16	2.54	0.15	0.22	0.86	0.23	0.00	0.00	1.67	0.90	7.43	2.13	0.69	0.23
Nigeria	2.10	1.16	4.53	5.04	0.31	0.24	0.81	0.20	0.00	0.00	3.47	1.19	4.87	1.17	0.71	0.20
Norway	1.79	1.49	2.93	3.55	0.34	0.33	0.70	0.30	0.07	0.13	3.45	2.13	5.94	2.44	0.70	0.26
Oman	1.46	0.64	1.93	1.33	0.26	0.26	0.86	0.16	(0.00)	0.00	1.70	0.86	9.10	1.53	0.72	0.23
Pakistan	1.28	0.74	1.77	2.15	0.53	0.35	0.80	0.19	0.18	0.26	5.18	2.86	6.77	2.08	0.75	0.22
Peru	1.57	1.68	2.11	3.07	0.34	0.34	0.87	0.16	0.06	0.11	3.03	2.09	7.15	2.00	0.69	0.20
Philippines	1.34	1.09	1.67	2.09	0.33	0.28	0.77	0.25	0.01	0.02	3.33	1.54	5.54	2.12	0.70	0.22
Poland	1.35	0.88	1.77	1.81	0.38	0.31	0.76	0.22	0.05	0.13	3.19	2.08	7.81	2.08	0.74	0.21
Portugal	1.19	0.45	1.89	2.01	0.24	0.27	0.92	0.13	0.00	0.02	2.34	1.40	5.74	2.72	0.74	0.21
Qatar	1.56	0.67	2.19	1.40	0.17	0.21	0.85	0.26	0.00	0.00	2.10	1.03	4.44	2.61	0.71	0.21
Russian Federation	1.75	2.10	2.76	4.62	0.49	0.33	0.75	0.22	0.12	0.20	4.84	2.89	3.17	2.01	0.73	0.18
Saudi Arabia	1.91	1.22	2.79	2.38	0.20	0.27	0.82	0.24	0.03	0.10	2.39	1.66	5.43	2.68	0.72	0.21
Singapore	1.19	0.68	1.47	1.68	0.47	0.30	0.72	0.24	0.07	0.12	3.53	1.99	8.43	2.09	0.72	0.23
Slovenia	1.08	0.48	1.11	0.83	0.06	0.16	1.00	0.01	0.00	0.00	2.07	1.04	4.87	2.03	0.67	0.28
South Africa	1.46	0.76	2.17	2.04	0.34	0.27	0.74	0.25	0.02	0.04	3.20	1.54	5.66	2.26	0.72	0.22
Spain	1.44	0.88	2.51	3.08	0.25	0.27	0.83	0.21	0.01	0.03	2.45	1.55	5.12	2.87	0.72	0.24
Sri Lanka	1.25	0.60	1.61	1.63	0.46	0.36	0.80	0.23	0.13	0.21	4.65	2.67	6.70	1.82	0.74	0.16
Sweden	1.71	1.26	2.48	2.44	0.31	0.30	0.68	0.29	0.05	0.11	3.20	1.99	6.29	2.50	0.72	0.22
Switzerland	1.54	1.07	2.21	2.26	0.26	0.27	0.77	0.24	0.02	0.05	2.53	1.51	6.00	2.47	0.71	0.23
Taiwan	1.29	0.69	1.50	1.20	0.68	0.27	0.70	0.21	0.25	0.21	6.87	2.53	5.12	2.93	0.69	0.24
Thailand	1.23	0.77	1.55	1.85	0.42	0.29	0.74	0.23	0.05	0.09	3.85	1.83	6.50	1.99	0.72	0.23
Tunisia	1.87	1.01	3.37	3.66	0.07	0.17	0.99	0.03	0.00	0.00	1.27	0.66	8.12	1.60	0.69	0.21
Turkey	1.35	0.76	1.97	2.29	0.28	0.27	0.81	0.23	0.02	0.08	3.15	1.74	5.51	2.69	0.68	0.27
United Arab Emirates	1.22	0.75	1.50	1.70	0.14	0.26	0.93	0.15	0.01	0.03	1.87	1.25	5.81	2.53	0.71	0.22
United Kingdom	1.56	1.09	2.46	2.84	0.53	0.28	0.60	0.26	0.11	0.15	4.44	2.32	6.76	3.02	0.71	0.24
Venezuela	0.91	0.63	1.08	1.82	0.10	0.19	0.95	0.12	0.00	0.00	2.69	0.96	4.35	2.30	0.77	0.13
Vietnam	1.06	0.41	1.09	0.84	0.47	0.32	0.73	0.23	0.10	0.13	5.91	2.04	3.61	0.86	0.76	0.21
Zimbabwe	1.42	1.37	1.82	2.95	0.01	0.05	0.99	0.07	0.00	0.00	1.60	0.85	6.21	2.21	0.59	0.28

Table Notes: This table describes the mean, standard deviation, 25th percentile, median, and 75th percentile for the competition measures (*COMP_CONCENTRATE*, *COMP_DOMINANCE*, *COMP_TOP4*, *COMP_EXISTING*, and *COMP_POTENTIAL*) and firm value measures (*TOBINS_Q* and *MTB*) measure by country (Panel A) and industry (Panel B). A total of 121,505 observations from 41 countries (Panel A) and 53 industries (Panel B) are represented in the sample.

Table 3

Descriptive Statistics

Variable	N	Mean	SD	P25	Med	P75
Dependent Variables						
MTB	164,089	1.845	2.216	0.686	1.184	2.143
TOBINS_Q	164,089	1.366	0.975	0.866	1.074	1.494
Competition Variables						
COMP_CONCENTRATE	164,089	0.562	0.317	0.346	0.649	0.830
COMP_DOMINANCE	164,089	0.696	0.234	0.559	0.737	0.868
COMP_TOP4	164,089	0.170	0.209	0.000	0.068	0.304
COMP_EXISTING	164,089	5.500	2.872	3.000	5.000	8.000
COMP_POTENTIAL	164,089	5.500	2.872	3.000	5.000	8.000
COMP_IND_ONLY	164,089	0.722	0.228	0.642	0.796	0.884
Liquidation Risk Variable						
LIQ_RISK	164,089	0.310	0.462	0.000	0.000	1.000
Institutional Variables						
ANTI_DIR	139,319	3.456	1.152	3.000	4.000	4.000
INV_PROTECT	139,319	0.505	0.199	0.417	0.417	0.729
Transparency Variables						
ACCT_CHOICE	164,089	0.133	0.340	0.000	0.000	0.000
ANALYST_ERROR	56,044	0.073	0.186	0.007	0.020	0.056
BIG_N	164,089	0.365	0.481	0.000	0.000	1.000
ANALYSTS	164,089	1.040	1.120	0.000	0.693	1.792
UNEXPECTED_SMOOTHING	139,712	5.527	2.802	3.000	6.000	8.000
TRANSPARENCY	164,089	0.491	0.143	0.382	0.474	0.591
Control & Other Variables						
ADR	164,089	0.021	0.143	0.000	0.000	0.000
ASSETS	164,089	5.445	1.673	4.251	5.293	6.485
BIAS	56,044	0.057	0.183	-0.005	0.009	0.047
CAPEX	164,089	0.051	0.052	0.015	0.035	0.069
CASH	164,089	0.154	0.138	0.053	0.114	0.213
CORRUPTION_INDEX	163,957	74.64	21.71	64.15	84.39	91.90
DIVIDENDS	164,089	0.698	0.459	0.000	1.000	1.000
EXPECTED_SMOOTHING	139,712	5.325	2.813	3.000	5.000	8.000
LEVERAGE	164,089	0.299	0.227	0.090	0.286	0.468
NET_INCOME	164,089	0.025	0.091	0.006	0.032	0.067
SALES_GROWTH	164,089	0.131	0.385	-0.033	0.068	0.209
SURPRISE	56,044	-0.008	0.143	-0.022	0.004	0.022

Table Notes: This table reports mean, standard deviation, and distribution statistics for the variables used in the primary analyses. All variables are defined in Appendix A.

Table 4

Variable Correlations

Variable		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)
TOBINS_Q	(1)	—																											
MTB	(2)	0.83	—																										
COMP_ CONCENTRATE	(3)	(0.03)	(0.04)	—																									
COMP_DOMINANCE	(4)	(0.03)	(0.02)	0.05	—																								
COMP_TOP4	(5)	(0.01)	(0.03)	0.76	0.23	—																							
COMP_EXISTING	(6)	(0.04)	(0.06)	0.90	0.02	0.87	—																						
COMP_POTENTIAL	(7)	0.06	0.05	0.04	0.33	(0.02)	(0.23)	—																					
COMP_IND_ONLY	(8)	**0.00**	**0.00**	0.21	0.01	0.19	0.19	0.06	—																				
ANTI_DIR	(9)	0.03	0.02	0.20	(0.07)	0.16	0.17	0.02	**0.00**	—																			
INVESTOR_ PROTECT	(10)	0.08	0.06	0.03	(0.06)	(0.02)	(0.04)	0.21	(0.02)	0.75	—																		
LIQ_RISK	(11)	(0.20)	(0.13)	**0.00**	**0.00**	(0.01)	**0.00**	(0.03)	(0.01)	(0.06)	(0.01)	—																	
ACCT_CHOICE	(12)	0.06	0.06	(0.24)	0.02	(0.22)	(0.27)	0.01	0.02	(0.15)	(0.11)	(0.03)	—																
ANALYST_ERROR	(13)	(0.10)	(0.07)	(0.05)	0.01	(0.05)	(0.06)	0.06	(0.03)	(0.07)	(0.03)	0.25	(0.02)	—															
BIG_N	(14)	0.05	0.05	(0.29)	0.04	(0.28)	(0.36)	0.15	(0.06)	(0.05)	0.19	(0.03)	0.34	0.04	—														
ANALYSTS	(15)	0.10	0.09	(0.08)	(0.04)	(0.08)	(0.07)	(0.22)	(0.02)	0.01	(0.07)	(0.08)	0.31	(0.08)	0.16	—													
UNEXPECTED_ SMOOTHING	(16)	0.03	**0.00**	**0.01**	0.01	0.02	0.03	(0.09)	0.02	0.01	(0.01)	(0.16)	0.17	(0.04)	0.04	0.14	—												
TRANSPARENCY	(17)	0.11	0.10	(0.19)	**0.00**	(0.17)	(0.20)	(0.08)	(0.01)	(0.02)	**0.00**	(0.16)	0.62	(0.17)	0.56	0.65	0.59	—											
ADR	(18)	0.05	0.06	(0.09)	**(0.01)**	(0.07)	(0.07)	(0.12)	(0.05)	(0.02)	(0.01)	0.01	0.09	**(0.01)**	0.12	0.17	0.04	0.14	—										
ASSETS	(19)	(0.05)	**0.00**	(0.06)	(0.02)	(0.06)	**0.00**	(0.42)	(0.03)	(0.03)	(0.16)	0.10	0.24	(0.09)	0.12	0.58	0.16	0.43	0.24	—									
BIAS	(20)	(0.09)	(0.06)	(0.04)	0.01	(0.04)	(0.06)	0.07	(0.02)	(0.06)	(0.02)	0.23	(0.02)	0.94	0.04	(0.05)	(0.05)	(0.17)	**(0.01)**	(0.10)	—								
CAPEX	(21)	0.08	0.07	(0.04)	0.01	(0.02)	(0.02)	(0.08)	(0.03)	**(0.01)**	0.07	(0.02)	0.01	(0.02)	0.05	0.08	0.05	0.08	0.03	0.06	(0.02)	—							
CASH	(22)	0.21	0.11	0.10	(0.05)	0.10	0.11	0.02	0.03	**0.00**	(0.03)	(0.26)	(0.03)	(0.06)	(0.04)	**(0.01)**	0.04	0.01	(0.01)	(0.18)	(0.06)	(0.11)	—						
CORRUPTION_INDEX	(23)	(0.11)	(0.09)	(0.12)	(0.08)	(0.14)	(0.14)	**(0.01)**	(0.02)	0.08	(0.11)	(0.04)	0.16	0.03	0.19	0.15	**(0.01)**	0.18	0.03	0.02	0.03	(0.14)	0.04	—					
DIVIDENDS	(24)	(0.01)	(0.02)	0.09	0.04	0.10	0.13	(0.16)	0.02	0.02	(0.12)	(0.19)	0.02	(0.20)	(0.11)	0.18	0.17	0.14	(0.01)	0.29	(0.19)	0.05	**0.00**	(0.13)	—				
EXPECTED_ SMOOTHING	(25)	**0.00**	0.03	(0.06)	(0.04)	(0.08)	(0.11)	0.14	(0.05)	**0.00**	0.06	0.33	(0.04)	0.28	0.05	(0.16)	(0.47)	(0.32)	**0.00**	(0.24)	0.28	(0.09)	(0.06)	0.11	(0.44)	—			
LEVERAGE	(26)	(0.14)	0.01	(0.03)	0.03	(0.02)	(0.01)	(0.11)	(0.01)	(0.04)	(0.06)	0.50	**0.01**	0.15	(0.02)	0.03	(0.10)	(0.06)	0.03	0.25	0.14	0.07	(0.45)	(0.06)	(0.05)	0.14	—		
NET_INCOME	(27)	0.12	0.06	(0.03)	0.05	(0.03)	(0.04)	(0.02)	**0.00**	0.02	0.04	(0.35)	0.08	(0.44)	0.07	0.14	0.20	0.23	0.02	0.16	(0.47)	0.11	0.05	(0.12)	0.31	(0.47)	(0.19)	—	
SALES_GROWTH	(28)	0.10	0.08	(0.02)	(0.02)	(0.01)	(0.02)	0.03	**0.00**	0.03	0.09	(0.06)	0.01	(0.10)	0.02	(0.02)	**0.01**	0.02	**0.00**	(0.02)	(0.12)	0.11	0.03	(0.07)	(0.07)	(0.04)	(0.01)	0.11	—
SURPRISE	(29)	0.05	0.04	**0.01**	**(0.01)**	**0.01**	0.01	(0.01)	**0.00**	0.02	**0.00**	(0.09)	**0.01**	(0.39)	(0.02)	**0.00**	(0.04)	0.08	**0.00**	**0.01**	(0.48)	(0.04)	0.03	**0.00**	(0.04)	(0.02)	(0.05)	0.29	0.13

Table Notes: This table reports Pearson correlations for all variables used in the analyses. Correlations *not* significant at the 1% level are bolded. All variables are defined in Appendix A.

Table 5

Panel A: Tests of the Influence of Competition on Firm Value Measured as Tobin's Q

Variable	Prediction	Model					
		(1)	(2)	(3)	(4)	(5)	(6)
COMP_CONCENTRATE	**?**	**-0.077*** (-4.06)**					
COMP_DOMINANCE	**?**		**-0.079*** (-4.13)**				
COMP_TOP4	**?**			**-0.182*** (-5.99)**			
COMP_EXISTING	**?**				**-0.011*** (-4.12)**		
COMP_POTENTIAL	**?**					**-0.007*** (-3.49)**	
COMP_IND_ONLY	**?**						**0.024 (1.41)**
CAPEX	+	0.816***	0.813***	0.821***	0.822***	0.797***	0.812***
		(11.68)	(11.65)	(11.77)	(11.78)	(11.40)	(11.62)
ADR	+	0.255***	0.255***	0.254***	0.256***	0.251***	0.256***
		(5.06)	(5.05)	(5.06)	(5.08)	(4.99)	(5.08)
DIVIDENDS	?	-0.050***	-0.050***	-0.050***	-0.050***	-0.051***	-0.051***
		(-5.91)	(-5.89)	(-5.88)	(-5.89)	(-5.94)	(-5.93)
ASSETS	–	-0.010***	-0.010***	-0.010***	-0.009**	-0.012***	-0.009**
		(-2.74)	(-2.71)	(-2.85)	(-2.56)	(-3.47)	(-2.56)
LEVERAGE	+	-0.076***	-0.076***	-0.074***	-0.075***	-0.077***	-0.076***
		(-3.83)	(-3.81)	(-3.72)	(-3.80)	(-3.88)	(-3.85)
SALES_GROWTH	+	0.112***	0.112***	0.112***	0.113***	0.112***	0.112***
		(13.12)	(13.02)	(13.10)	(13.14)	(13.08)	(13.09)
NET_INCOME	+	1.047***	1.051***	1.047***	1.045***	1.047***	1.047***
		(17.00)	(17.04)	(17.00)	(16.98)	(16.99)	(16.98)
CASH	+	1.059***	1.060***	1.059***	1.061***	1.057***	1.062***
		(26.96)	(26.99)	(26.98)	(27.01)	(26.87)	(27.01)
Intercept	?	1.202***	1.255***	1.189***	1.206***	1.259***	1.169***
		(10.96)	(11.25)	(10.77)	(10.93)	(11.40)	(10.63)
Country Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes
N		164,089	164,089	164,089	164,089	164,089	164,089
Adjusted R2		0.204	0.204	0.204	0.204	0.204	0.204

Table 5 (continued)

Panel B: Tests of the Influence of Competition on Firm Value Measured as Market-to-Book Ratio

Variable	Prediction	Model					
		(1)	(2)	(3)	(4)	(5)	(6)
COMP_CONCENTRATE	**?**	**-0.147*** (-3.39)**					
COMP_DOMINANCE	**?**		**-0.145*** (-3.27)**				
COMP_TOP4	**?**			**-0.347*** (-5.15)**			
COMP_EXISTING	**?**				**-0.021*** (-3.39)**		
COMP_POTENTIAL	**?**					**-0.020*** (-4.25)**	
COMP_IND_ONLY	**?**						**0.086** (2.10)**
CAPEX	+	1.166***	1.162***	1.177***	1.177***	1.118***	1.158***
		(6.90)	(6.88)	(6.96)	(6.96)	(6.60)	(6.85)
ADR	+	0.618***	0.618***	0.617***	0.619***	0.606***	0.621***
		(5.35)	(5.34)	(5.34)	(5.36)	(5.26)	(5.37)
DIVIDENDS	?	-0.058***	-0.058***	-0.058***	-0.058***	-0.058***	-0.058***
		(-2.91)	(-2.89)	(-2.89)	(-2.90)	(-2.93)	(-2.92)
ASSETS	–	-0.019**	-0.018**	-0.020**	-0.018**	-0.027***	-0.018**
		(-2.23)	(-2.20)	(-2.33)	(-2.09)	(-3.19)	(-2.09)
LEVERAGE	+	1.081***	1.082***	1.085***	1.082***	1.079***	1.080***
		(19.75)	(19.77)	(19.84)	(19.77)	(19.71)	(19.73)
SALES_GROWTH	+	0.209***	0.207***	0.208***	0.209***	0.208***	0.208***
		(11.12)	(11.04)	(11.11)	(11.15)	(11.08)	(11.10)
NET_INCOME	+	1.377***	1.383***	1.376***	1.374***	1.379***	1.377***
		(10.32)	(10.36)	(10.32)	(10.30)	(10.32)	(10.31)
CASH	+	1.758***	1.759***	1.758***	1.762***	1.751***	1.763***
		(22.88)	(22.90)	(22.89)	(22.93)	(22.76)	(22.92)
Intercept	?	1.244***	1.340***	1.220***	1.248***	1.416***	1.161***
		(5.37)	(5.68)	(5.24)	(5.37)	(6.05)	(5.00)
Country Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes
N		164,089	164,089	164,089	164,089	164,089	164,089
Adjusted R2		0.154	0.154	0.154	0.154	0.154	0.154

Table Notes: This table reports parameter estimates and two-tailed t-statistics in parentheses from the following regression on 164,089 observations from 1998-2012:

$$FIRM\_VALUE_{i,t+1} = \alpha_0 + \alpha_1 COMPETITION_{i,t} + \sum \beta_n Controls_{n,i,t} + \varepsilon_{i,t+1}$$

Firm value is estimated using Tobin's Q (*TOBINS_Q*) and market-to-book value of equity (*MTB*). The dependent variable in Panel A (Panel B) is *TOBINS_Q* (*MTB*). Competition is estimated in variable *COMP_CONCENTRATE*, C*OMP_DOMINANCE*, *COMP_TOP4*, *COMP_EXISTING*, *COMP_POTENTIAL and COMP_IND_ONLY*. Control variables include *CAPEX*, *ADR*, *DIVIDENDS*, *ASSETS*, *LEVERAGE*, *SALES_GROWTH*, *NET_INCOME*, and *CASH*. All regressions include country, industry (4-digit SIC), and fiscal year fixed effects. Estimated robust standard errors are clustered by firm. Two-tailed significance at the 10%, 5%, or 1% levels is denoted *, **, and ***, respectively. All variables are defined in Appendix A.

Table 6

Panel A: Tests of the Influence of Competition and Liquidation Risk on Firm Value Measured as Tobin's Q

Variable	Prediction	Model											
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
COMP_CONCENTRATE	?	-0.074***	-0.119***										
		(-3.96)	(-5.40)										
COMP_CONCENTRATE * LIQ_RISK	**?**		**0.143*** **										
			(7.01)										
COMP_DOMINANCE	?			-0.080***	-0.093***								
				(-4.25)	(-3.83)								
COMP_DOMINANCE *LIQ_RISK	**?**				**0.042**								
					(1.55)								
COMP_TOP4	?					-0.186***	-0.241***						
						(-6.22)	(-7.08)						
COMP_TOP4* LIQ_RISK	**?**						**0.174*** **						
							(5.66)						
COMP_EXISTING	?							-0.012***	-0.019***				
								(-4.34)	(-6.14)				
COMP_EXISTING * LIQ_RISK	**?**								**0.021*** **				
									(9.33)				
COMP_POTENTIAL	?									-0.006***	-0.003		
										(-2.97)	(-1.22)		
COMP_POTENTIAL * LIQ_RISK	**?**										**-0.011*** **		
											(-4.89)		
COMP_IND_ONLY	?											0.016	-0.001
												(0.94)	(-0.06)
COMP_IND_ONLY * LIQ_RISK	**?**												**0.052** **
													(2.14)
LIQ_RISK	**–**	**-0.296*** **	**-0.376*** **	**-0.297*** **	**-0.326*** **	**-0.297*** **	**-0.326*** **	**-0.297*** **	**-0.413*** **	**-0.296*** **	**-0.238*** **	**-0.297*** **	**-0.334*** **
		(-34.64)	**(-25.84)**	**(-34.68)**	**(-15.85)**	**(-34.71)**	**(-31.58)**	**(-34.71)**	**(-26.17)**	**(-34.62)**	**(-16.87)**	**(-34.68)**	**(-17.09)**
CAPEX	+	0.718***	0.716***	0.715***	0.716***	0.724***	0.721***	0.724***	0.720***	0.702***	0.697***	0.714***	0.713***
		(10.47)	(10.44)	(10.44)	(10.45)	(10.56)	(10.52)	(10.57)	(10.50)	(10.22)	(10.15)	(10.41)	(10.40)
ADR	+	0.245***	0.247***	0.245***	0.245***	0.245***	0.245***	0.246***	0.248***	0.242***	0.243***	0.246***	0.246***
		(4.96)	(5.00)	(4.95)	(4.95)	(4.95)	(4.98)	(4.97)	(5.03)	(4.90)	(4.91)	(4.98)	(4.98)
DIVIDENDS	?	-0.084***	-0.085***	-0.084***	-0.084***	-0.084***	-0.084***	-0.084***	-0.085***	-0.084***	-0.085***	-0.084***	-0.084***
		(-9.96)	(-10.05)	(-9.94)	(-9.93)	(-9.94)	(-10.00)	(-9.96)	(-10.10)	(-9.99)	(-10.09)	(-10.00)	(-10.00)
ASSETS	–	-0.005	-0.005	-0.005	-0.005	-0.006*	-0.006*	-0.005	-0.004	-0.008**	-0.008**	-0.005	-0.005
		(-1.57)	(-1.51)	(-1.55)	(-1.54)	(-1.70)	(-1.65)	(-1.39)	(-1.29)	(-2.18)	(-2.20)	(-1.40)	(-1.37)
LEVERAGE	+	0.163***	0.156***	0.163***	0.163***	0.165***	0.161***	0.164***	0.152***	0.161***	0.157***	0.162***	0.163***
		(7.75)	(7.40)	(7.79)	(7.78)	(7.89)	(7.65)	(7.81)	(7.24)	(7.69)	(7.46)	(7.74)	(7.74)
SALES_GROWTH	+	0.100***	0.101***	0.099***	0.100***	0.100***	0.101***	0.101***	0.102***	0.100***	0.100***	0.100***	0.100***
		(11.86)	(11.95)	(11.76)	(11.77)	(11.84)	(11.91)	(11.89)	(12.05)	(11.83)	(11.84)	(11.83)	(11.83)
NET_INCOME	+	0.707***	0.700***	0.710***	0.710***	0.706***	0.702***	0.704***	0.691***	0.708***	0.697***	0.706***	0.706***
		(11.20)	(11.09)	(11.24)	(11.23)	(11.19)	(11.12)	(11.16)	(10.95)	(11.20)	(11.02)	(11.18)	(11.17)

Table 6 (continued)

Panel A (continued): Tests of the Influence of Competition and Liquidation Risk on Firm Value Measured as Tobin's Q

Variable	Prediction	Model											
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
CASH	+	0.996***	0.997***	0.996***	0.996***	0.996***	0.996***	0.998***	0.999***	0.995***	0.991***	0.998***	0.998***
		(25.41)	(25.44)	(25.43)	(25.43)	(25.42)	(25.44)	(25.46)	(25.48)	(25.34)	(25.23)	(25.45)	(25.46)
Intercept	?	1.302***	1.338***	1.357***	1.365***	1.291***	1.303***	1.308***	1.355***	1.347***	1.333***	1.275***	1.287***
		(12.17)	(12.51)	(12.43)	(12.45)	(11.95)	(12.06)	(12.15)	(12.56)	(12.47)	(12.28)	(11.86)	(11.93)
Country Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N		164,089	164,089	164,089	164,089	164,089	164,089	164,089	164,089	164,089	164,089	164,089	164,089
Adjusted R2		0.216	0.216	0.216	0.216	0.216	0.217	0.216	0.217	0.216	0.216	0.216	0.216

Table 6 (continued)

Panel B: Tests of the Influence of Competition and Liquidation Risk on Firm Value Measured as Market-to-Book Ratio

Variable	Prediction	Model											
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
COMP_CONCENTRATE	?	-0.138***	-0.230***										
		(-3.27)	(-4.78)										
COMP_CONCENTRATE * LIQ_RISK	**?**		**0.294*** **										
			(5.82)										
COMP_DOMINANCE	?			-0.147***	-0.160***								
				(-3.39)	(-3.00)								
COMP_DOMINANCE * LIQ_RISK	**?**				**0.040**								
					(0.61)								
COMP_TOP4	?					-0.357***	-0.481***						
						(-5.43)	(-6.66)						
COMP_TOP4 * LIQ_RISK	**?**						**0.390*** **						
							(5.28)						
COMP_EXISTING	?							-0.022***	-0.033***				
								(-3.65)	(-5.21)				
COMP_EXISTING * LIQ_RISK	**?**								**0.037*** **				
									(6.78)				
COMP_POTENTIAL	?									-0.017***	-0.020***		
										(-3.65)	(-3.84)		
COMP_POTENTIAL * LIQ_RISK	**?**										**0.009***		
											(1.69)		
COMP_IND_ONLY	?											0.064	0.030
												(1.58)	(0.63)
COMP_IND_ONLY * LIQ_RISK	**?**												**0.102**
													(1.64)
LIQ_RISK	**–**	**-0.779*** **	**-0.943*** **	**-0.779*** **	**-0.807*** **	**-0.780*** **	**-0.844*** **	**-0.780*** **	**-0.983*** **	**-0.777*** **	**-0.826*** **	**-0.779*** **	**-0.852*** **
		(-34.16)	**(-25.17)**	**(-34.18)**	**(-15.90)**	**(-34.21)**	**(-31.45)**	**(-34.21)**	**(-24.70)**	**(-34.11)**	**(-22.69)**	**(-34.19)**	**(-16.62)**
CAPEX	+	0.909***	0.905***	0.904***	0.905***	0.920***	0.914***	0.920***	0.913***	0.869***	0.873***	0.901***	0.900***
		(5.51)	(5.49)	(5.48)	(5.49)	(5.58)	(5.54)	(5.57)	(5.53)	(5.25)	(5.28)	(5.46)	(5.45)
ADR	+	0.593***	0.595***	0.592***	0.592***	0.591***	0.593***	0.594***	0.597***	0.583***	0.582***	0.595***	0.595***
		(5.26)	(5.29)	(5.25)	(5.25)	(5.25)	(5.27)	(5.27)	(5.31)	(5.18)	(5.18)	(5.28)	(5.28)
DIVIDENDS	+/–	-0.146***	-0.148***	-0.146***	-0.146***	-0.146***	-0.147***	-0.146***	-0.148***	-0.146***	-0.146***	-0.147***	-0.147***
		(-7.44)	(-7.52)	(-7.43)	(-7.43)	(-7.43)	(-7.48)	(-7.44)	(-7.55)	(-7.46)	(-7.41)	(-7.47)	(-7.47)
ASSETS	–	-0.008	-0.007	-0.007	-0.007	-0.009	-0.008	-0.006	-0.006	-0.014*	-0.014*	-0.007	-0.006
		(-0.94)	(-0.89)	(-0.91)	(-0.91)	(-1.05)	(-1.00)	(-0.79)	(-0.72)	(-1.74)	(-1.74)	(-0.80)	(-0.78)
LEVERAGE	+	1.708***	1.694***	1.710***	1.710***	1.714***	1.703***	1.710***	1.691***	1.705***	1.709***	1.708***	1.708***
		(27.52)	(27.29)	(27.54)	(27.54)	(27.62)	(27.46)	(27.55)	(27.23)	(27.46)	(27.44)	(27.50)	(27.51)
SALES_GROWTH	+	0.177***	0.178***	0.175***	0.175***	0.176***	0.178***	0.177***	0.179***	0.176***	0.176***	0.176***	0.176***
		(9.56)	(9.65)	(9.48)	(9.48)	(9.55)	(9.62)	(9.59)	(9.71)	(9.53)	(9.53)	(9.54)	(9.54)
NET_INCOME	+	0.483***	0.469***	0.488***	0.488***	0.481***	0.472***	0.478***	0.454***	0.486***	0.495***	0.482***	0.481***
		(3.62)	(3.52)	(3.66)	(3.66)	(3.61)	(3.54)	(3.59)	(3.41)	(3.64)	(3.71)	(3.62)	(3.61)

Table 6 (continued)

Panel B (continued): Tests of the Influence of Competition and Liquidation Risk on Firm Value Measured as Market-to-Book Ratio

Variable	Prediction	Model											
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
CASH	+	1.592***	1.595***	1.593***	1.593***	1.592***	1.594***	1.596***	1.597***	1.587***	1.590***	1.597***	1.597***
		(20.98)	(21.01)	(20.99)	(20.99)	(20.98)	(21.00)	(21.02)	(21.04)	(20.89)	(20.90)	(21.02)	(21.03)
Intercept	?	1.508***	1.581***	1.609***	1.616***	1.487***	1.513***	1.517***	1.600***	1.647***	1.660***	1.438***	1.463***
		(6.65)	(6.98)	(6.94)	(6.94)	(6.51)	(6.62)	(6.66)	(7.02)	(7.17)	(7.23)	(6.31)	(6.40)
Country Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N		164,089	164,089	164,089	164,089	164,089	164,089	164,089	164,089	164,089	164,089	164,089	164,089
Adjusted R2		0.170	0.171	0.170	0.170	0.170	0.171	0.170	0.171	0.170	0.170	0.170	0.170

Table Notes: This table reports parameter estimates and t-statistics in parentheses from the following regression on 164,089 observations from 1998-2012:

$$FIRM\_VALUE_{i,t+1} = \alpha_0 + \alpha_1 COMPETITION_{i,t} + \alpha_2 LIQ\_RISK_{i,t} + \alpha_3 COMPETITION * LIQ\_RISK_{i,t} + \sum \beta_n Controls_{n,i,t} + \varepsilon_{i,t+1}$$

Firm value is estimated using Tobin's Q (*TOBINS_Q*) and market-to-book value of equity (*MTB*). The dependent variable in Panel A (Panel B) is *TOBINS_Q* (*MTB*). Competition is estimated in variables *COMP_CONCENTRATE*, *COMP_DOMINANCE*, *COMP_TOP4*, *COMP_EXISTING*, *COMP_POTENTIAL* and *COMP_IND_ONLY*. *LIQ_RISK* is a proxy for liquidation risk and is defined as one (zero otherwise) if Z-Score is less than 1.81. Control variables include *CAPEX*, *ADR*, *DIVIDENDS*, *ASSETS*, *LEVERAGE*, *SALES_GROWTH*, *NET_INCOME*, and *CASH*. All regressions include country, industry (4-digit SIC), and fiscal year fixed effects. Estimated robust standard errors are clustered by firm with the number of clusters reported. Two-tailed significance at the 10%, 5%, or 1% levels is denoted *, **, and ***, respectively. All variables are defined in Appendix A.

Table 7

Panel A: Tests of the Influence of Competition and Investor Protection Mechanisms, measured as Anti Director Rights, on Firm Value, Measured as Tobin's Q,

Variable	Prediction	Model											
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
COMP_CONCENTRATE	?	-0.086***	0.054										
		(-4.55)	(1.15)										
COMP_CONCENTRATE *ANTI_DIR	**?**		**-0.042*** **										
			(-3.07)										
COMP_DOMINANCE	?			-0.087***	0.009								
				(-4.46)	(0.17)								
COMP_DOMINANCE * ANTI_DIR	**?**				**-0.029** **								
					(-1.96)								
COMP_TOP4	?					-0.202***	-0.123						
						(-6.54)	(-1.29)						
COMP_TOP4 * ANTI_DIR	**?**						**-0.022**						
							(-0.84)						
COMP_EXISTING	?							-0.013***	-0.000				
								(-4.84)	(-0.01)				
COMP_EXISTING * ANTI_DIR	**?**								**-0.004***				
									(-1.90)				
COMP_POTENTIAL	?									-0.006***	0.001		
										(-2.60)	(0.24)		
COMP_POTENTIAL * ANTI_DIR	**?**										**-0.002**		
											(-1.38)		
COMP_IND_ONLY	?											0.003	0.160***
												(0.21)	(3.27)
COMP_IND_ONLY * ANTI_DIR	**?**												**-0.045*** **
													(-3.39)
ANTI_DIR	**+**	**0.091**	**0.101**	**0.067**	**0.092**	**0.079**	**0.080**	**0.083**	**0.092**	**0.075**	**0.088**	**0.074**	**0.105**
		(0.41)	**(0.46)**	**(0.30)**	**(0.41)**	**(0.35)**	**(0.36)**	**(0.37)**	**(0.42)**	**(0.34)**	**(0.40)**	**(0.33)**	**(0.48)**
CORRUPTION	?	-0.005***	-0.005***	-0.005***	-0.005***	-0.005***	-0.005***	-0.005***	-0.005***	-0.005***	-0.005***	-0.005***	-0.005***
		(-5.54)	(-5.59)	(-5.49)	(-5.49)	(-5.62)	(-5.64)	(-5.65)	(-5.69)	(-5.37)	(-5.35)	(-5.53)	(-5.57)
CAPEX	+	1.016***	1.019***	1.013***	1.014***	1.019***	1.020***	1.023***	1.025***	1.001***	0.999***	1.013***	1.015***
		(14.05)	(14.08)	(14.01)	(14.03)	(14.10)	(14.10)	(14.14)	(14.16)	(13.83)	(13.80)	(14.00)	(14.03)
ADR	+	0.228***	0.227***	0.228***	0.228***	0.227***	0.227***	0.228***	0.228***	0.225***	0.224***	0.229***	0.230***
		(4.73)	(4.71)	(4.73)	(4.73)	(4.73)	(4.72)	(4.75)	(4.74)	(4.67)	(4.65)	(4.76)	(4.76)
DIVIDENDS	?	-0.073***	-0.072***	-0.073***	-0.073***	-0.073***	-0.073***	-0.073***	-0.073***	-0.073***	-0.073***	-0.073***	-0.072***
		(-8.86)	(-8.81)	(-8.83)	(-8.83)	(-8.85)	(-8.83)	(-8.85)	(-8.83)	(-8.89)	(-8.83)	(-8.88)	(-8.80)
ASSETS	–	0.006*	0.006*	0.006**	0.006**	0.006*	0.006*	0.007**	0.007**	0.004	0.005	0.007**	0.007**
		(1.94)	(1.94)	(1.97)	(1.96)	(1.82)	(1.83)	(2.16)	(2.15)	(1.33)	(1.37)	(2.13)	(2.10)
LEVERAGE	+	-0.023	-0.022	-0.023	-0.022	-0.021	-0.020	-0.022	-0.022	-0.024	-0.024	-0.023	-0.022
		(-1.17)	(-1.10)	(-1.15)	(-1.15)	(-1.07)	(-1.05)	(-1.14)	(-1.11)	(-1.21)	(-1.23)	(-1.19)	(-1.14)
SALES_GROWTH	+	0.127***	0.127***	0.126***	0.126***	0.127***	0.127***	0.127***	0.127***	0.126***	0.126***	0.126***	0.127***
		(13.32)	(13.35)	(13.21)	(13.22)	(13.31)	(13.32)	(13.36)	(13.38)	(13.28)	(13.29)	(13.28)	(13.30)

Table 7 (continued)

Panel A(continued): Tests of the Influence of Competition and Investor Protection Mechanisms, measured as Anti Director Rights, on Firm Value, Measured as Tobin's Q,

Variable	Prediction	Model											
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
NET_INCOME	+	1.009***	1.009***	1.013***	1.013***	1.009***	1.009***	1.007***	1.007***	1.010***	1.010***	1.009***	1.009***
		(15.95)	(15.94)	(15.99)	(15.99)	(15.95)	(15.95)	(15.92)	(15.91)	(15.93)	(15.93)	(15.92)	(15.92)
CASH	+	1.117***	1.117***	1.118***	1.118***	1.118***	1.118***	1.120***	1.119***	1.116***	1.116***	1.120***	1.120***
		(27.08)	(27.07)	(27.11)	(27.10)	(27.11)	(27.10)	(27.14)	(27.13)	(27.01)	(26.98)	(27.12)	(27.12)
Intercept	?	0.965	0.937	1.105	1.023	0.987	0.984	1.002	0.971	1.051	1.009	1.000	0.891
		(1.18)	(1.15)	(1.34)	(1.24)	(1.20)	(1.20)	(1.23)	(1.19)	(1.28)	(1.23)	(1.22)	(1.09)
Country Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N		139,319	139,319	139,319	139,319	139,319	139,319	139,319	139,319	139,319	139,319	139,319	139,319
Adjusted R2		0.188	0.189	0.188	0.189	0.189	0.189	0.189	0.189	0.188	0.188	0.188	0.188

Table 7 (continued)

Panel B: Tests of the Influence of Competition and Investor Protection Mechanisms, measured as Anti Director Rights, on Firm Value, Measured as Market-to-Book Ratio

Variable	Prediction	Model											
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
COMP_CONCENTRATE	?	-0.149***	0.218*										
		(-3.37)	(1.85)										
COMP_CONCENTRATE *ANTI_DIR	**?**		**-0.111*** **										
			(-3.19)										
COMP_DOMINANCE	?			-0.162***	0.058								
				(-3.60)	(0.49)								
COMP_DOMINANCE * ANTI_DIR	**?**				**-0.066***								
					(-1.89)								
COMP_TOP4	?					-0.409***	0.126						
						(-5.93)	(0.58)						
COMP_TOP4 * ANTI_DIR	**?**						**-0.147** **						
							(-2.51)						
COMP_EXISTING	?							-0.024***	0.020				
								(-3.87)	(1.13)				
COMP_EXISTING * ANTI_DIR	**?**								**-0.012** **				
									(-2.56)				
COMP_POTENTIAL	?									-0.017***	0.006		
										(-3.41)	(0.43)		
COMP_POTENTIAL * ANTI_DIR	**?**										**-0.007***		
											(-1.79)		
COMP_IND_ONLY	?											0.035	0.322***
												(0.91)	(2.69)
COMP_IND_ONLY * ANTI_DIR	**?**												**-0.083** **
													(-2.53)
ANTI_DIR	**+**	**0.050**	**0.077**	**0.009**	**0.065**	**0.030**	**0.037**	**0.036**	**0.067**	**0.025**	**0.066**	**0.021**	**0.079**
		(0.11)	**(0.17)**	**(0.02)**	**(0.14)**	**(0.06)**	**(0.08)**	**(0.08)**	**(0.15)**	**(0.05)**	**(0.14)**	**(0.05)**	**(0.17)**
CORRUPTION	?	-0.005***	-0.006***	-0.005***	-0.005***	-0.006***	-0.006***	-0.006***	-0.006***	-0.005**	-0.005**	-0.005***	-0.005***
		(-2.70)	(-2.75)	(-2.66)	(-2.66)	(-2.78)	(-2.85)	(-2.79)	(-2.85)	(-2.49)	(-2.46)	(-2.68)	(-2.71)
CAPEX	+	1.834***	1.840***	1.828***	1.832***	1.841***	1.847***	1.846***	1.852***	1.793***	1.786***	1.827***	1.832***
		(10.19)	(10.23)	(10.16)	(10.19)	(10.23)	(10.27)	(10.25)	(10.29)	(9.95)	(9.91)	(10.15)	(10.17)
ADR	+	0.569***	0.566***	0.569***	0.568***	0.567***	0.566***	0.570***	0.568***	0.559***	0.557***	0.572***	0.572***
		(5.09)	(5.06)	(5.09)	(5.09)	(5.08)	(5.07)	(5.10)	(5.09)	(5.01)	(4.99)	(5.11)	(5.12)
DIVIDENDS	?	-0.138***	-0.137***	-0.137***	-0.137***	-0.137***	-0.136***	-0.138***	-0.137***	-0.138***	-0.136***	-0.138***	-0.137***
		(-7.00)	(-6.94)	(-6.97)	(-6.97)	(-6.99)	(-6.93)	(-6.99)	(-6.96)	(-7.02)	(-6.92)	(-7.01)	(-6.94)
ASSETS	–	0.019**	0.019**	0.019**	0.019**	0.018**	0.018**	0.021**	0.020**	0.013	0.013*	0.020**	0.020**
		(2.42)	(2.42)	(2.43)	(2.42)	(2.29)	(2.30)	(2.57)	(2.56)	(1.62)	(1.66)	(2.55)	(2.52)
LEVERAGE	+	0.987***	0.990***	0.987***	0.987***	0.991***	0.993***	0.988***	0.990***	0.985***	0.983***	0.986***	0.988***
		(18.12)	(18.17)	(18.13)	(18.13)	(18.21)	(18.25)	(18.14)	(18.18)	(18.07)	(18.06)	(18.09)	(18.14)
SALES_GROWTH	+	0.223***	0.223***	0.221***	0.221***	0.223***	0.223***	0.223***	0.224***	0.222***	0.222***	0.222***	0.223***
		(10.94)	(10.98)	(10.85)	(10.86)	(10.93)	(10.98)	(10.97)	(11.00)	(10.90)	(10.92)	(10.91)	(10.93)

Table 7 (continued)

Panel B (continued): Tests of the Influence of Competition and Investor Protection Mechanisms, measured as Anti Director Rights, on Firm Value, Measured as Market-to-Book Ratio

Variable	Prediction	Model											
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
NET_INCOME	+	1.532***	1.531***	1.539***	1.539***	1.531***	1.532***	1.528***	1.527***	1.534***	1.534***	1.532***	1.532***
		(11.11)	(11.11)	(11.16)	(11.16)	(11.12)	(11.12)	(11.09)	(11.09)	(11.12)	(11.12)	(11.11)	(11.11)
CASH	+	2.028***	2.027***	2.030***	2.029***	2.028***	2.028***	2.032***	2.032***	2.022***	2.020***	2.033***	2.033***
		(25.34)	(25.31)	(25.36)	(25.34)	(25.36)	(25.34)	(25.39)	(25.38)	(25.22)	(25.19)	(25.38)	(25.39)
Intercept	?	0.965	0.892	1.221	1.031	0.999	0.977	1.028	0.926	1.174	1.036	1.008	0.808
		(0.55)	(0.51)	(0.70)	(0.59)	(0.57)	(0.56)	(0.59)	(0.53)	(0.67)	(0.59)	(0.58)	(0.46)
Country Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N		139,319	139,319	139,319	139,319	139,319	139,319	139,319	139,319	139,319	139,319	139,319	139,319
Adjusted R2		0.146	0.146	0.146	0.146	0.146	0.146	0.146	0.146	0.146	0.146	0.145	0.146

Table Notes: This table reports parameter estimates and t-statistics in parentheses from the following regression on 139,319 observations from 1998-2012:

$$FIRM\_VALUE_{i,t+1} = \alpha_0 + \alpha_1 COMPETITION_{i,t} + \alpha_2 ANTI\_DIR_{i,t} + \alpha_3 COMPETITION * ANTI\_DIR_{i,t} + \sum \beta_n Controls_{n,i,t} + \varepsilon_{i,t+1}$$

Firm value is estimated using Tobin's Q (*TOBINS_Q*) and market-to-book value of equity (*MTB*). The dependent variable in Panel A (Panel B) is *TOBINS_Q* (*MTB*). Competition is estimated in variables *COMP_CONCENTRATE*, *COMP_DOMINANCE*, *COMP_TOP4*, *COMP_EXISTING*, *COMP_POTENTIAL* and *COMP_IND_ONLY*. Country-level anti-director rights is estimated in variable ANTI_DIR. Control variables include *CORRUPTION*, *CAPEX*, *ADR*, *DIVIDENDS*, *ASSETS*, *LEVERAGE*, *SALES_GROWTH*, *NET_INCOME*, and *CASH*. All regressions include industry (4-digit SIC code), country, and fiscal-year fixed effects. Estimated robust standard errors are clustered by firm. Two-tailed significance at the 10%, 5%, or 1% levels is denoted *, **, and ***, respectively. All variables are defined in Appendix A.

Table 8

Panel A: Tests of the Influence of Competition and Investor Protection Mechanisms, measured as Investor Protections Rights, on Firm Value, Measured as Tobin's Q

Variable	Prediction	Model											
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
COMP_CONCENTRATE	?	-0.086***	0.016										
		(-4.55)	(0.38)										
COMP_CONCENTRATE *INV_PROTECT	**?**		**-0.196****										
			(-2.52)										
COMP_DOMINANCE	?			-0.087***	-0.010								
				(-4.46)	(-0.23)								
COMP_DOMINANCE * INV_PROTECT	**?**				**-0.151***								
					(-1.75)								
COMP_TOP4	?					-0.202***	-0.082						
						(-6.54)	(-0.98)						
COMP_TOP4 * INV_PROTECT	**?**						**-0.231**						
							(-1.45)						
COMP_EXISTING	?							-0.013***	-0.003				
								(-4.84)	(-0.47)				
COMP_EXISTING * INV_PROTECT	**?**								**-0.019***				
									(-1.65)				
COMP_POTENTIAL	?									-0.006***	0.001		
										(-2.60)	(0.21)		
COMP_POTENTIAL * INV_PROTECT	**?**										**-0.013**		
											(-1.55)		
COMP_IND_ONLY	?											0.003	0.089**
												(0.21)	(2.14)
COMP_IND_ONLY * INV_PROTECT	**?**												**-0.171****
													(-2.12)
INV_PROTECT	**+**	**1.492**	**1.486**	**1.112**	**1.246**	**1.295**	**1.288**	**1.360**	**1.389**	**1.243**	**1.279**	**1.219**	**1.365**
		(0.41)	**(0.41)**	**(0.30)**	**(0.34)**	**(0.35)**	**(0.35)**	**(0.37)**	**(0.38)**	**(0.34)**	**(0.35)**	**(0.33)**	**(0.37)**
CORRUPTION	?	-0.005***	-0.005***	-0.005***	-0.005***	-0.005***	-0.005***	-0.005***	-0.005***	-0.005***	-0.005***	-0.005***	-0.005***
		(-5.54)	(-5.55)	(-5.49)	(-5.49)	(-5.62)	(-5.63)	(-5.65)	(-5.66)	(-5.37)	(-5.29)	(-5.53)	(-5.64)
CAPEX	+	1.016***	1.019***	1.013***	1.014***	1.019***	1.021***	1.023***	1.025***	1.001***	0.998***	1.013***	1.015***
		(14.05)	(14.08)	(14.01)	(14.03)	(14.10)	(14.13)	(14.14)	(14.18)	(13.83)	(13.80)	(14.00)	(14.02)
ADR	+	0.228***	0.227***	0.228***	0.228***	0.227***	0.226***	0.228***	0.228***	0.225***	0.225***	0.229***	0.230***
		(4.73)	(4.71)	(4.73)	(4.73)	(4.73)	(4.72)	(4.75)	(4.74)	(4.67)	(4.66)	(4.76)	(4.77)
DIVIDENDS	?	-0.073***	-0.073***	-0.073***	-0.073***	-0.073***	-0.073***	-0.073***	-0.073***	-0.073***	-0.073***	-0.073***	-0.073***
		(-8.86)	(-8.82)	(-8.83)	(-8.83)	(-8.85)	(-8.83)	(-8.85)	(-8.84)	(-8.89)	(-8.82)	(-8.88)	(-8.83)
ASSETS	−	0.006*	0.006*	0.006**	0.006**	0.006*	0.006*	0.007**	0.007**	0.004	0.005	0.007**	0.007**
		(1.94)	(1.96)	(1.97)	(1.97)	(1.82)	(1.83)	(2.16)	(2.16)	(1.33)	(1.37)	(2.13)	(2.11)
LEVERAGE	+	-0.023	-0.022	-0.023	-0.022	-0.021	-0.020	-0.022	-0.022	-0.024	-0.024	-0.023	-0.023
		(-1.17)	(-1.11)	(-1.15)	(-1.14)	(-1.07)	(-1.03)	(-1.14)	(-1.11)	(-1.21)	(-1.23)	(-1.19)	(-1.15)
SALES_GROWTH	+	0.127***	0.127***	0.126***	0.126***	0.127***	0.127***	0.127***	0.127***	0.126***	0.126***	0.126***	0.126***
		(13.32)	(13.35)	(13.21)	(13.22)	(13.31)	(13.33)	(13.36)	(13.38)	(13.28)	(13.29)	(13.28)	(13.29)

Table 8 (continued)

Panel A (continued): Tests of the Influence of Competition and Investor Protection Mechanisms, measured as Investor Protections Rights, on Firm Value, Measured as Tobin's Q

Variable	Prediction	Model											
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
NET_INCOME	+	1.009***	1.010***	1.013***	1.014***	1.009***	1.009***	1.007***	1.007***	1.010***	1.011***	1.009***	1.009***
		(15.95)	(15.95)	(15.99)	(16.01)	(15.95)	(15.95)	(15.92)	(15.91)	(15.93)	(15.94)	(15.92)	(15.93)
CASH	+	1.117***	1.117***	1.118***	1.118***	1.118***	1.117***	1.120***	1.120***	1.116***	1.114***	1.120***	1.120***
		(27.08)	(27.07)	(27.11)	(27.11)	(27.11)	(27.09)	(27.14)	(27.14)	(27.01)	(26.95)	(27.12)	(27.13)
Intercept	?	0.613	0.618	0.842	0.774	0.681	0.685	0.680	0.666	0.758	0.735	0.712	0.640
		(0.37)	(0.37)	(0.50)	(0.46)	(0.41)	(0.41)	(0.41)	(0.40)	(0.45)	(0.44)	(0.42)	(0.38)
Country Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N		139,319	139,319	139,319	139,319	139,319	139,319	139,319	139,319	139,319	139,319	139,319	139,319
Adjusted R2		0.188	0.189	0.188	0.189	0.189	0.189	0.189	0.189	0.188	0.188	0.188	0.188

Table 8 (continued)

Panel B: Tests of the Influence of Competition and Investor Protection Mechanisms, measured as Investor Protections Rights, on Firm Value, Measured as Market-to-Book Ratio

Variable	Prediction	Model											
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
COMP_CONCENTRATE	?	-0.149***	0.166										
		(-3.37)	(1.54)										
COMP_CONCENTRATE *INV_PROTECT	**?**		**-0.610*** **										
			(-3.07)										
COMP_DOMINANCE	?			-0.162***	0.001								
				(-3.60)	(0.01)								
COMP_DOMINANCE * INV_PROTECT	**?**				**-0.320**								
					(-1.57)								
COMP_TOP4	?					-0.409***	0.119						
						(-5.93)	(0.60)						
COMP_TOP4 * INV_PROTECT	**?**						**-1.021*** **						
							(-2.76)						
COMP_EXISTING	?							-0.024***	0.015				
								(-3.87)	(0.94)				
COMP_EXISTING * INV_PROTECT	**?**								**-0.071** **				
									(-2.53)				
COMP_POTENTIAL	?									-0.017***	0.003		
										(-3.41)	(0.28)		
COMP_POTENTIAL * INV_PROTECT	**?**										**-0.040***		
											(-1.90)		
COMP_IND_ONLY	?											0.035	0.203**
												(0.91)	(2.04)
COMP_IND_ONLY * INV_PROTECT	**?**												**-0.335***
													(-1.75)
INV_PROTECT	**+**	**0.819**	**0.801**	**0.142**	**0.427**	**0.497**	**0.467**	**0.595**	**0.709**	**0.413**	**0.522**	**0.354**	**0.640**
		(0.11)	**(0.10)**	**(0.02)**	**(0.06)**	**(0.06)**	**(0.06)**	**(0.08)**	**(0.09)**	**(0.05)**	**(0.07)**	**(0.05)**	**(0.08)**
CORRUPTION	?	-0.005***	-0.006***	-0.005***	-0.005***	-0.006***	-0.006***	-0.006***	-0.006***	-0.005**	-0.005**	-0.005***	-0.006***
		(-2.70)	(-2.72)	(-2.66)	(-2.66)	(-2.78)	(-2.80)	(-2.79)	(-2.81)	(-2.49)	(-2.40)	(-2.68)	(-2.77)
CAPEX	+	1.834***	1.842***	1.828***	1.832***	1.841***	1.851***	1.846***	1.856***	1.793***	1.785***	1.827***	1.831***
		(10.19)	(10.24)	(10.16)	(10.18)	(10.23)	(10.30)	(10.25)	(10.32)	(9.95)	(9.90)	(10.15)	(10.17)
ADR	+	0.569***	0.566***	0.569***	0.569***	0.567***	0.564***	0.570***	0.567***	0.559***	0.557***	0.572***	0.573***
		(5.09)	(5.07)	(5.09)	(5.09)	(5.08)	(5.06)	(5.10)	(5.08)	(5.01)	(4.99)	(5.11)	(5.12)
DIVIDENDS	?	-0.138***	-0.137***	-0.137***	-0.137***	-0.137***	-0.136***	-0.138***	-0.137***	-0.138***	-0.136***	-0.138***	-0.137***
		(-7.00)	(-6.94)	(-6.97)	(-6.97)	(-6.99)	(-6.93)	(-6.99)	(-6.97)	(-7.02)	(-6.92)	(-7.01)	(-6.97)
ASSETS	−	0.019**	0.019**	0.019**	0.019**	0.018**	0.019**	0.021**	0.021**	0.013	0.013*	0.020**	0.020**
		(2.42)	(2.43)	(2.43)	(2.42)	(2.29)	(2.31)	(2.57)	(2.56)	(1.62)	(1.66)	(2.55)	(2.53)
LEVERAGE	+	0.987***	0.990***	0.987***	0.988***	0.991***	0.995***	0.988***	0.990***	0.985***	0.984***	0.986***	0.987***
		(18.12)	(18.17)	(18.13)	(18.14)	(18.21)	(18.27)	(18.14)	(18.17)	(18.07)	(18.06)	(18.09)	(18.13)
SALES_GROWTH	+	0.223***	0.223***	0.221***	0.221***	0.223***	0.223***	0.223***	0.224***	0.222***	0.222***	0.222***	0.222***
		(10.94)	(10.98)	(10.85)	(10.85)	(10.93)	(10.98)	(10.97)	(11.01)	(10.90)	(10.91)	(10.91)	(10.92)

Table 8 (continued)

Panel B (continued): Tests of the Influence of Competition and Investor Protection Mechanisms, measured as Investor Protections Rights, on Firm Value, Measured as Market-to-Book Ratio

Variable	Prediction	Model											
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
NET_INCOME	+	1.532***	1.533***	1.539***	1.541***	1.531***	1.531***	1.528***	1.526***	1.534***	1.537***	1.532***	1.532***
		(11.11)	(11.12)	(11.16)	(11.17)	(11.12)	(11.12)	(11.09)	(11.08)	(11.12)	(11.13)	(11.11)	(11.11)
CASH	+	2.028***	2.027***	2.030***	2.029***	2.028***	2.026***	2.032***	2.032***	2.022***	2.016***	2.033***	2.034***
		(25.34)	(25.32)	(25.36)	(25.36)	(25.36)	(25.33)	(25.39)	(25.39)	(25.22)	(25.15)	(25.38)	(25.39)
Intercept	?	0.771	0.789	1.187	1.041	0.882	0.897	0.888	0.832	1.077	1.007	0.924	0.782
		(0.22)	(0.22)	(0.33)	(0.29)	(0.25)	(0.25)	(0.25)	(0.24)	(0.30)	(0.28)	(0.26)	(0.22)
Country Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N		139,319	139,319	139,319	139,319	139,319	139,319	139,319	139,319	139,319	139,319	139,319	139,319
Adjusted R2		0.146	0.146	0.146	0.146	0.146	0.146	0.146	0.146	0.146	0.146	0.145	0.145

Table Notes: This table reports parameter estimates and t-statistics in parentheses from the following regression on 139,319 observations from 1998-2012:

$$FIRM\_VALUE_{i,t+1} = \alpha_0 + \alpha_1 COMPETITION_{i,t} + \alpha_2 INV\_PROTECT_{i,t} + \alpha_3 COMPETITION * INV\_PROTECT_{i,t} + \sum \beta_n Controls_{n,i,t} + \varepsilon_{i,t+1}$$

Firm value is estimated using Tobin's Q (*TOBINS_Q*) and market-to-book value of equity (*MTB*). The dependent variable in Panel A (Panel B) is *TOBINS_Q* (*MTB*). Competition is estimated in variables *COMP_CONCENTRATE*, *COMP_DOMINANCE*, *COMP_TOP4*, *COMP_EXISTING*, *COMP_POTENTIAL* and *COMP_IND_ONLY*. Country-level investor protection is estimated in variable INV_PROTECT. Control variables include *CORRUPTION*, *CAPEX*, *ADR*, *DIVIDENDS*, *ASSETS*, *LEVERAGE*, *SALES_GROWTH*, *NET_INCOME*, and *CASH*. All regressions include industry (4-digit SIC code), country, and fiscal-year fixed effects. Estimated robust standard errors are clustered by firm. Two-tailed significance at the 10%, 5%, or 1% levels is denoted *, **, and ***, respectively. All variables are defined in Appendix A.

Table 9

Panel A: Tests of the Influence of Transparency on Firm Value Measured as Tobin's Q

Variable	Prediction	Model					
		(1)	(2)	(3)	(4)	(5)	(6)
ACCT_CHOICE	+	0.105***					
		(7.99)					
ANALYST_ERROR	–		-0.553***				
			(-7.82)				
BIG_N	+			0.031***			
				(2.91)			
ANALYSTS	+				0.110***		
					(20.24)		
UNEXPECTED_SMOOTHING	+					0.009***	
						(6.87)	
TRANSPARENCY	+						0.712***
							(21.27)
BIAS	+		0.741***				
			(9.05)				
SURPRISE	?		-0.062**				
			(-2.07)				
EXPECTED_SMOOTHING	+					0.012***	
						(7.15)	
CAPEX	+	0.830***	0.890***	0.809***	0.657***	0.803***	0.714***
		(11.88)	(7.32)	(11.59)	(9.50)	(10.50)	(10.27)
ADR	+	0.254***	0.156***	0.255***	0.246***	0.256***	0.253***
		(5.04)	(3.12)	(5.05)	(4.80)	(4.86)	(5.01)
DIVIDENDS	?	-0.055***	-0.049***	-0.051***	-0.056***	-0.041***	-0.064***
		(-6.41)	(-3.22)	(-5.95)	(-6.63)	(-4.39)	(-7.48)
ASSETS	–	-0.013***	-0.011*	-0.011***	-0.056***	-0.006	-0.038***
		(-3.80)	(-1.81)	(-3.07)	(-13.66)	(-1.49)	(-10.24)
LEVERAGE	+	-0.076***	-0.009	-0.076***	-0.040**	-0.085***	-0.039**
		(-3.85)	(-0.27)	(-3.83)	(-2.06)	(-3.94)	(-2.01)
SALES_GROWTH	+	0.112***	0.151***	0.113***	0.118***	0.118***	0.114***
		(13.08)	(8.34)	(13.19)	(13.81)	(11.39)	(13.24)
NET_INCOME	+	1.035***	2.957***	1.043***	1.000***	1.158***	0.917***
		(16.82)	(17.51)	(16.92)	(16.52)	(15.92)	(15.18)
CASH	+	1.060***	1.258***	1.059***	1.016***	1.043***	1.022***
		(26.98)	(18.00)	(26.93)	(26.22)	(24.64)	(26.15)
Intercept	?	1.180***	1.049***	1.171***	1.396***	0.986***	1.004***
		(10.70)	(8.03)	(10.67)	(12.81)	(8.87)	(9.01)
Country Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes
N		164,089	56,044	164,089	164,089	139,712	164,089
Adjusted R2		0.205	0.268	0.204	0.212	0.211	0.210

Table 9 (continued)

Panel B: Tests of the Influence of Competition and Transparency on Firm Value Measured as Tobin's Q

Variable	Prediction	Model											
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
COMP_CONCENTRATE	?	-0.074***	0.066										
		(-3.91)	(1.46)										
COMP_CONCENTRATE * TRANSPARENCY	**?**		**-0.281*** **										
			(-3.11)										
COMP_DOMINANCE	?			-0.080***	-0.123**								
				(-4.19)	(-2.21)								
COMP_DOMINANCE * TRANSPARENCY	**?**				**0.086**								
					(0.75)								
COMP_TOP4	?					-0.179***	0.144*						
						(-5.92)	(1.84)						
COMP_TOP4* TRANSPARENCY	**?**						**-0.707*** **						
							(-4.20)						
COMP_EXISTING	?							-0.011***	0.008				
								(-3.92)	(1.44)				
COMP_EXISTING * TRANSPARENCY	**?**								**-0.040*** **				
									(-3.61)				
COMP_POTENTIAL	?									-0.007***	0.004		
										(-3.12)	(0.85)		
COMP_POTENTIAL * TRANSPARENCY	**?**										**-0.022** **		
											(-2.20)		
COMP_IND_ONLY	?											0.024	0.044
												(1.38)	(0.76)
COMP_IND_ONLY * TRANSPARENCY	**?**												**-0.041**
													(-0.35)
TRANSPARENCY	–	**0.711*** **	**0.850*** **	**0.712*** **	**0.652*** **	**0.711*** **	**0.800*** **	**0.710*** **	**0.897*** **	**0.710*** **	**0.842*** **	**0.712*** **	**0.742*** **
		(21.24)	**(15.69)**	**(21.28)**	**(7.31)**	**(21.25)**	**(20.68)**	**(21.23)**	**(14.73)**	**(21.20)**	**(12.78)**	**(21.27)**	**(8.10)**
CAPEX	+	0.717***	0.726***	0.715***	0.714***	0.723***	0.737***	0.723***	0.736***	0.700***	0.698***	0.713***	0.713***
		(10.32)	(10.45)	(10.29)	(10.28)	(10.41)	(10.59)	(10.41)	(10.58)	(10.07)	(10.03)	(10.26)	(10.26)
ADR	+	0.252***	0.250***	0.252***	0.252***	0.252***	0.250***	0.253***	0.252***	0.249***	0.243***	0.253***	0.253***
		(5.00)	(4.96)	(4.99)	(4.99)	(4.99)	(4.96)	(5.01)	(4.99)	(4.93)	(4.83)	(5.01)	(5.01)
DIVIDENDS	?	-0.064***	-0.064***	-0.063***	-0.063***	-0.063***	-0.064***	-0.064***	-0.064***	-0.064***	-0.064***	-0.064***	-0.064***
		(-7.44)	(-7.51)	(-7.42)	(-7.42)	(-7.42)	(-7.53)	(-7.43)	(-7.52)	(-7.47)	(-7.44)	(-7.47)	(-7.47)
ASSETS	–	-0.039***	-0.038***	-0.039***	-0.038***	-0.039***	-0.039***	-0.038***	-0.037***	-0.041***	-0.042***	-0.038***	-0.038***
		(-10.38)	(-10.35)	(-10.38)	(-10.35)	(-10.49)	(-10.46)	(-10.22)	(-10.04)	(-10.91)	(-11.21)	(-10.24)	(-10.24)
LEVERAGE	+	-0.039**	-0.042**	-0.039**	-0.038*	-0.037*	-0.042**	-0.039**	-0.044**	-0.040**	-0.038*	-0.040**	-0.040**
		(-1.99)	(-2.15)	(-1.97)	(-1.95)	(-1.88)	(-2.15)	(-1.96)	(-2.22)	(-2.04)	(-1.95)	(-2.01)	(-2.01)
SALES_GROWTH	+	0.114***	0.114***	0.113***	0.113***	0.114***	0.114***	0.114***	0.115***	0.113***	0.113***	0.114***	0.114***
		(13.27)	(13.31)	(13.18)	(13.17)	(13.25)	(13.35)	(13.30)	(13.37)	(13.24)	(13.24)	(13.24)	(13.24)
NET_INCOME	+	0.918***	0.919***	0.921***	0.922***	0.918***	0.920***	0.916***	0.918***	0.919***	0.921***	0.917***	0.917***
		(15.21)	(15.22)	(15.24)	(15.26)	(15.20)	(15.23)	(15.18)	(15.20)	(15.20)	(15.27)	(15.18)	(15.18)

Table 9 (continued)

Panel B (continued): Tests of the Influence of Competition and Transparency on Firm Value Measured as Tobin's Q

Variable	Prediction	Model											
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
CASH	+	1.019***	1.021***	1.020***	1.019***	1.019***	1.021***	1.021***	1.023***	1.018***	1.018***	1.022***	1.022***
		(26.10)	(26.15)	(26.12)	(26.11)	(26.11)	(26.18)	(26.15)	(26.20)	(26.02)	(26.03)	(26.14)	(26.14)
Intercept	?	1.024***	0.947***	1.078***	1.106***	1.012***	0.962***	1.027***	0.926***	1.074***	1.013***	0.992***	0.977***
		(9.20)	(8.26)	(9.52)	(9.40)	(9.03)	(8.52)	(9.18)	(7.97)	(9.56)	(8.83)	(8.88)	(8.28)
Country Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N		164,089	164,089	164,089	164,089	164,089	164,089	164,089	164,089	164,089	164,089	164,089	164,089
Adjusted R2		0.210	0.211	0.210	0.210	0.211	0.211	0.210	0.211	0.210	0.210	0.210	0.210

Table Notes: This table reports parameter estimates and t-statistics in parentheses from the following regression on observations from 1998-2012:

$$FIRM\_VALUE_{i,t+1} = \alpha_0 + \alpha_1 COMPETITION_{i,t} + \alpha_2 TRANSPARENCY_{i,t} + \alpha_3 COMPETITION * TRANSPARENCY_{i,t} + \beta_n Controls_{n,i,t} + \varepsilon_{i,t+1}$$

In Panel A, Models 1, 3, 4, and 6, have 164,089 observations, model 2 has 56,044 observations, and model 5 has 139,712 observations. In Panel B, all models have 164,089 observations. Firm value is estimated using Tobin's Q (*TOBINS_Q*). The dependent variable in Panel A and B is *TOBINS_Q*. Competition is estimated in variables *COMP_CONCENTRATE*, *COMP_DOMINANCE*, *COMP_TOP4*, *COMP_EXISTING*, *COMP_POTENTIAL* and *COMP_IND_ONLY*. Transparency is estimated using *ACCT_CHOICE*, *ANALYST_ERROR*, *BIG_N*, *ANALYSTS*, *UNEXPECTED_SMOOTHING*, and *TRANSPARENCY*. Control variables include *CAPEX*, *ADR*, *DIVIDENDS*, *ASSETS*, *LEVERAGE*, *SALES_GROWTH*, *NET_INCOME*, and *CASH*. All regressions include country, industry (4-digit SIC code), and fiscal year fixed effects. Estimated robust standard errors are clustered by firm. Two-tailed significance at the 10%, 5%, or 1% levels is denoted *, **, and ***, respectively. All variables are defined in Appendix A.

Table 10

Panel A: Tests of the Influence of Transparency on Firm Value Measured as Market-to-Book Ratio

Variable	Prediction	Model					
		(1)	(2)	(3)	(4)	(5)	(6)
ACCT_CHOICE	+	0.202***					
		(6.49)					
ANALYST_ERROR	–		-1.160***				
			(-5.56)				
BIG_N	+			0.078***			
				(3.30)			
ANALYSTS	+				0.208***		
					(16.48)		
UNEXPECTED_SMOOTHING	+					0.017***	
						(5.36)	
TRANSPARENCY	+						1.406***
							(18.30)
BIAS	+		1.427***				
			(6.16)				
SURPRISE	?		0.039				
			(0.48)				
EXPECTED_SMOOTHING	+					0.023***	
						(5.52)	
CAPEX	+	1.194***	1.651***	1.152***	0.868***	1.077***	0.965***
		(7.06)	(5.04)	(6.82)	(5.17)	(6.02)	(5.74)
ADR	+	0.616***	0.368***	0.617***	0.602***	0.635***	0.615***
		(5.32)	(3.04)	(5.33)	(5.11)	(5.18)	(5.28)
DIVIDENDS	?	-0.067***	-0.082**	-0.059***	-0.070***	-0.037*	-0.085***
		(-3.36)	(-2.11)	(-2.95)	(-3.49)	(-1.67)	(-4.27)
ASSETS	–	-0.026***	-0.005	-0.022***	-0.106***	-0.013	-0.075***
		(-3.10)	(-0.34)	(-2.62)	(-11.02)	(-1.45)	(-8.54)
LEVERAGE	+	1.081***	1.496***	1.081***	1.148***	1.105***	1.153***
		(19.76)	(14.74)	(19.74)	(20.95)	(18.63)	(21.02)
SALES_GROWTH	+	0.208***	0.266***	0.211***	0.219***	0.213***	0.211***
		(11.09)	(6.54)	(11.23)	(11.73)	(9.34)	(11.24)
NET_INCOME	+	1.354***	5.064***	1.366***	1.288***	1.558***	1.120***
		(10.16)	(13.73)	(10.25)	(9.79)	(9.91)	(8.53)
CASH	+	1.760***	2.370***	1.757***	1.676***	1.776***	1.684***
		(22.90)	(16.47)	(22.84)	(22.05)	(21.42)	(22.00)
Intercept	?	1.203***	0.801***	1.179***	1.610***	0.757***	0.854***
		(5.15)	(3.00)	(5.09)	(7.01)	(3.35)	(3.61)
Country Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes
N		164,089	56,044	164,089	164,089	139,712	164,089
Adjusted R2		0.155	0.201	0.154	0.160	0.161	0.159

Table 10 (continued)

Panel B: Tests of the Influence of Competition and Transparency on Firm Value Measured as Market-to-Book Ratio

Variable	Prediction	Model											
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
COMP_CONCENTRATE	?	-0.141***	0.306***										
		(-3.26)	(2.82)										
COMP_CONCENTRATE * TRANSPARENCY	**?**		**-0.894*** **										
			(-4.12)										
COMP_DOMINANCE	?			-0.146***	-0.282**								
				(-3.31)	(-2.13)								
COMP_DOMINANCE * TRANSPARENCY	**?**				**0.270**								
					(1.00)								
COMP_TOP4	?					-0.341***	0.574***						
						(-5.09)	(3.39)						
COMP_TOP4* TRANSPARENCY	**?**						**-2.002*** **						
							(-5.63)						
COMP_EXISTING	?							-0.019***	0.034***				
								(-3.21)	(2.69)				
COMP_EXISTING * TRANSPARENCY	**?**								**-0.112*** **				
									(-4.54)				
COMP_POTENTIAL	?									-0.019***	0.024**		
										(-3.93)	(1.99)		
COMP_POTENTIAL * TRANSPARENCY	**?**										**-0.086*** **		
											(-3.61)		
COMP_IND_ONLY	?											0.085**	0.090
												(2.07)	(0.67)
COMP_IND_ONLY * TRANSPARENCY	**?**												**-0.010**
													(-0.04)
TRANSPARENCY	**–**	**1.403*** **	**1.845*** **	**1.406*** **	**1.218*** **	**1.404*** **	**1.657*** **	**1.403*** **	**1.928*** **	**1.399*** **	**1.909*** **	**1.406*** **	**1.413*** **
		(18.28)	**(13.87)**	**(18.30)**	**(5.96)**	**(18.28)**	**(18.33)**	**(18.27)**	**(13.52)**	**(18.23)**	**(12.07)**	**(18.29)**	**(6.55)**
CAPEX	+	0.971***	1.001***	0.966***	0.965***	0.982***	1.022***	0.981***	1.017***	0.928***	0.919***	0.963***	0.963***
		(5.77)	(5.95)	(5.75)	(5.74)	(5.84)	(6.08)	(5.83)	(6.05)	(5.50)	(5.45)	(5.72)	(5.72)
ADR	+	0.613***	0.606***	0.612***	0.613***	0.612***	0.607***	0.614***	0.611***	0.602***	0.581***	0.616***	0.616***
		(5.27)	(5.22)	(5.26)	(5.27)	(5.26)	(5.23)	(5.28)	(5.27)	(5.19)	(5.01)	(5.29)	(5.29)
DIVIDENDS	?	-0.084***	-0.086***	-0.084***	-0.084***	-0.084***	-0.087***	-0.084***	-0.086***	-0.085***	-0.084***	-0.085***	-0.085***
		(-4.23)	(-4.32)	(-4.22)	(-4.21)	(-4.21)	(-4.35)	(-4.23)	(-4.33)	(-4.25)	(-4.21)	(-4.25)	(-4.25)
ASSETS	–	-0.076***	-0.076***	-0.076***	-0.075***	-0.077***	-0.076***	-0.075***	-0.073***	-0.083***	-0.088***	-0.075***	-0.075***
		(-8.66)	(-8.62)	(-8.66)	(-8.60)	(-8.75)	(-8.72)	(-8.52)	(-8.31)	(-9.48)	(-9.93)	(-8.54)	(-8.54)
LEVERAGE	+	1.154***	1.144***	1.155***	1.156***	1.158***	1.143***	1.155***	1.140***	1.152***	1.158***	1.153***	1.153***
		(21.04)	(20.89)	(21.05)	(21.05)	(21.12)	(20.87)	(21.06)	(20.82)	(20.99)	(21.09)	(21.02)	(21.01)
SALES_GROWTH	+	0.211***	0.212***	0.210***	0.209***	0.211***	0.213***	0.211***	0.213***	0.210***	0.211***	0.211***	0.211***
		(11.27)	(11.33)	(11.19)	(11.17)	(11.25)	(11.38)	(11.29)	(11.39)	(11.23)	(11.24)	(11.25)	(11.25)
NET_INCOME	+	1.122***	1.125***	1.128***	1.131***	1.121***	1.127***	1.119***	1.124***	1.124***	1.135***	1.122***	1.122***
		(8.55)	(8.57)	(8.59)	(8.60)	(8.55)	(8.59)	(8.53)	(8.56)	(8.56)	(8.65)	(8.54)	(8.54)

Table 10 (continued)

Panel B (continued): Tests of the Influence of Competition and Transparency on Firm Value Measured as Market-to-Book Ratio

Variable	Prediction	Model											
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
CASH	+	1.680***	1.686***	1.680***	1.679***	1.680***	1.686***	1.683***	1.689***	1.674***	1.675***	1.684***	1.684***
		(21.96)	(22.03)	(21.97)	(21.97)	(21.96)	(22.05)	(22.01)	(22.07)	(21.85)	(21.87)	(22.00)	(22.00)
Intercept	?	0.892***	0.648***	0.990***	1.079***	0.870***	0.728***	0.896***	0.611**	1.049***	0.816***	0.811***	0.807***
		(3.77)	(2.62)	(4.11)	(4.27)	(3.66)	(3.03)	(3.78)	(2.45)	(4.39)	(3.31)	(3.42)	(3.16)
Country Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N		164,089	164,089	164,089	164,089	164,089	164,089	164,089	164,089	164,089	164,089	164,089	164,089
Adjusted R2		0.159	0.159	0.159	0.159	0.159	0.160	0.159	0.159	0.159	0.159	0.159	0.159

Table Notes: This table reports parameter estimates and t-statistics in parentheses from the following regression on observations from 1998-2012:

$$FIRM\_VALUE_{i,t+1} = \alpha_0 + \alpha_1 COMPETITION_{i,t} + \alpha_2 TRANSPARENCY_{i,t} + \alpha_3 COMPETITION * TRANSPARENCY_{i,t} + \beta_n Controls_{n,i,t} + \varepsilon_{i,t+1}$$

In Panel A, Models 1, 3, 4, and 6, have 164,089 observations, model 2 has 56,044 observations, and model 5 has 139,712 observations. In Panel B, all models have 164,089 observations. Firm value is estimated using market-to-book value of equity (*MTB*). The dependent variable in Panel A and B is *MTB*. Competition is estimated in variables *COMP_CONCENTRATE*, *COMP_DOMINANCE*, *COMP_TOP4*, *COMP_EXISTING*, *COMP_POTENTIAL* and *COMP_IND_ONLY*. Transparency is estimated using *ACCT_CHOICE*, *ANALYST_ERROR*, *BIG_N*, *ANALYSTS*, *UNEXPECTED_SMOOTHING*, and *TRANSPARENCY*. Control variables include *CAPEX*, *ADR*, *DIVIDENDS*, *ASSETS*, *LEVERAGE*, *SALES_GROWTH*, *NET_INCOME*, and *CASH*. All regressions include country, industry (4-digit SIC code), and fiscal year fixed effects. Estimated robust standard errors are clustered by firm. Two-tailed significance at the 10%, 5%, or 1% levels is denoted *, **, and ***, respectively. All variables are defined in Appendix A.

APPENDIX A

VARIABLE DEFINITIONS

Table A1

Variable Definitions

Abbreviation	Source	Description*
Panel A: Dependent Variables		
MTB	Compustat Global	Market value of equity (PRCCD*CSHR) scaled book value of equity (CEQ).
TOBINS_Q	Compustat Global	Total assets (AT) less book value of equity (CEQ) plus market value of equity (PRCCD*CSHR) scaled by total assets (AT).
Panel B: Competition Variables		
COMP_CONCENTRATE	Compustat Global	One minus the Herfindahl-Hirschman Index (HHI). HHI is defined as the sum of the squared sales ratios within an industry.
COMP_DOMINANCE	Compustat Global	One minus the difference between the maximum sales ratio and the median sales ratio for each industry.
COMP_TOP4	Compustat Global	One minus the four-firm concentration ratio, defined as the sum of market sales of the four largest (by sales) firms in an industry divided by industry aggregate sales.
COMP_EXISTING	Compustat Global	The decile ranked second principal component from an analysis of seven competition variables. It measures competition from existing rivals. See appendix B.
COMP_POTENTIAL	Compustat Global	The decile ranked first principal component from an analysis of seven competition variables. It measures competition from potential rivals. See appendix B.
COMP_IND_ONLY	Compustat Global	One minus the Herfindahl-Hirschman Index (HHI) calculated within each industry across all countries in the sample.
Panel C: Liquidation Risk Variables		
LIQ_RISK	Compustat Global	Indicator variable equal to one if the Z-Score is less than 1.81.
ZSCORE	Compustat Global	$1.2*\left(\frac{\text{Current Assets-Current Liabilities}}{\text{Total Assets}}\right)+1.4*\frac{\text{Retained Earnings}}{\text{Total Assets}}$ $+3.3*\frac{\text{EBIT}}{\text{Total Assets}}+0.6*\frac{\text{Market Value of Equity}}{\text{Total Liabilities}}+0.999*\frac{\text{Sales}}{\text{Total Assets}}$
Panel D: Transparency Variables		
ACCT_CHOICE	Compustat Global	Indicator variable equal to one if firm is an adopter of IFRS or adopter of GAAP (ACCTSTD) and above median average percentile of all other transparency variables.
ANALYST_ERROR	I/B/E/S	Analysts' estimation error, defined as the absolute value of actual EPS minus estimated EPS scaled by contemporaneous stock price.
BIG_N	Compustat Global	Indicator variable equal to one if firm hires Big N auditor (AU).
ANALYSTS	I/B/E/S	Natural log of one plus the number of analysts issuing EPS forecasts for firm.
UNEXPECTED_SMOOTHING	Compustat Global	The decile ranked residual value of the equation B1. See appendix C.
TRANSPARENCY	Combination	Average percentile rank of *ACCT_CHOICE*, *ANALYST_ERROR*, *BIG_N*, *ANALYSTS*, and *UNEXPECTED_SMOOTHING*. If any of the five firm-level transparency measures are unavailable, *TRANSPARENCY* is the average percentile rank of the remaining transparency measures.

Table A1 (continued)

Variable Definitions

Abbreviation	Source	Description*
Panel E: Country-Level Institutional Environment Variables		
ANTI_DIR	La Porta et al. (1998)	Formed by adding one for each of the following conditions: (1) shareholders are allowed to mail their proxy vote; (2) deposit of shares is not required prior to general shareholders' meetings; (3) cumulative voting or proportional representation of minorities on the board of directors is allowed; (4) there exists an oppressed minority mechanism; (5) the minimum percentage of share capital that allows a shareholder to request an extraordinary shareholders' meeting is less than or equal to 10 percent; or (6) shareholders' preemptive rights can only be waived by a shareholders' meeting.
INV_PROTECT	La Porta et al. (2006)	Principal component of the indices of anti-director rights, disclosure requirements, and liability standards.
Panel F: Variables used in Principal Component Analysis in Appendix B		
ind_ppe	Compustat Global	The weighted average of property, plant, and equipment (PPENT) of all firms in an industry in a country. A firm's sales ratio is used as the weight. Sales ratio is defined as a firm's sales divided by aggregate sales of all firms in the same country and industry (2-digit SIC).
ind_xrd	Compustat Global	The weighted average of research and development (XRD) of all firms in an industry in a country. If research and development are missing, it is replaced with a zero. A firm's sales ratio is used as the weight; see above.
ind_capex	Compustat Global	The weighted average of capital expenditures (CAPX of all firms in an industry in a country. A firm's sales ratio is used as the weight; see above.
ind_mkts	Compustat Global	Natural log of aggregate sales in an industry within a country.
ind_con4	Compustat Global	Four-firm concentration ratio, defined as the sum of market sales of the four largest (by sales) firms in the industry divided by industry aggregate sales.
ind_hhi	Compustat Global	Herfindahl-Hirschman Index (HHI) for each industry, country, and fiscal-year combination. HHI is defined as the sum of the squared sales ratios.
ind_num	Compustat Global	Total number of firms in an industry within a country.
Panel G: Control Variables		
ADR	Compustat Global	Indicator variable equal to one if firm has an American Depository Receipt (ADRR).
ASSETS	Compustat Global	Natural log of total assets (AT).
BIAS	I/B/E/S	Signed analysts' estimation error, defined as the value of actual EPS minus estimated EPS scaled by stock price.
CAPEX	Compustat Global	Capital expenditures (CAPX) scaled by total assets (AT).
CASH	Compustat Global	Cash and cash equivalents (CHSTI) scaled by total assets (AT).
CORRUPTION_INDEX	World Justice Project Rule of Law	Extent to which corruption is absent within a country. Based upon over 100,000 surveys of households and experts. Corruption index is derived from the extent of government officials using public office for private gain in the executive, judicial, and legislative branches of government as well as within the police and military.
DIVIDENDS	Compustat Global	Indicator variable equal to one if firm pays dividend (DV).
EXPECTED_SMOOTHING	Compustat Global	The decile ranked fitted value of the equation B1. See appendix C.
LEVERAGE	Compustat Global	Financial debt (DLTT + DLC) divided by book value of capital (DLTT + DLC + CEQ + MIBT).
NET_INCOME	Compustat Global	Earnings before extraordinary items (IB) scaled by total assets (AT).
SALES_GROWTH	Compustat Global	Sales (SALE) minus prior year sales divided by prior year sales.
SURPRISE	I/B/E/S	Actual EPS less prior-year actual EPS scaled by stock price.

*Compustat Global mnemonics are in parentheses where applicable.

APPENDIX B

EXISTING AND POTENTIAL COMPETITION ESTIMATION

Following Li (Li 2010), I construct variables to separately measure competition arising from existing firms in an industry (*COMP_EXISTING*) and potential entrants to the industry (*COMP_POTENTIAL*) by conducting principal component analysis on commonly used proxies for industry competition. Two measures of competition from Karuna (2007) are utilized: (1) industry average property, plant, and equipment, and (2) product market size. Weighted-average industry aggregate property, plant, and equipment (*ind_ppe*) is measured as the weighted average PPE within an industry and country each fiscal year using sales ratio as the weight. This can be thought of as a minimum cost to enter the industry. Product market size (*ind_mkts*) is measured as the natural logarithm of aggregate industry sales within each country. Other competition measures are estimated using the industry sales concentration within each country. I utilize the Herfindahl-Hirschman index (*ind_hhi*), which is calculated as the sum of the squared industry market shares of each firm, and the four-firm concentration (*ind_con4*) ratio, which is calculated as the ratio of the aggregate sales of the top four firms to the total sales within each industry and country. Finally, I use the weighted average industry aggregate capital expenditure (*ind_capex*), weighted average industry aggregate research and development expense (*ind_xrd*), and the total number of firms operating within an industry (*ind_num*).

These seven measures are used to characterize different aspects of competition, although they are all associated. Following Li (2010), these seven proxies are classified into the following two groups: proxies for competition from potential entrants to the industry and proxies for competition from existing rivals within the industry. The following measures can be thought of as competition from potential entrants: *ind_ppe*, *ind_xrd*, and *ind_capex*. These measures capture

either initial setup costs (*ind_ppe*), costs necessary to bring a product to market (*ind_xrd*), or costs associated with necessary investment in expansion to remain competitive with rivals (*ind-capex*). The following measures can be thought of as competition from existing rivals within an industry: *ind_mkts*, *ind_con4*, *ind_hhi*, and *ind_num*. These measures capture competition from firms already existing within an industry.

Table B1
Eigenvalues of the Correlation Matrix

Principal Component	Eigenvalue	Difference in Eigenvalue	Variance Explained (%)	Cumulative Variance Explained (%)
PC1	2.807	0.667	0.401	0.401
PC2	2.140	1.396	0.306	0.707
PC3	0.744	0.155	0.106	0.813
PC4	0.589	0.153	0.084	0.897
PC5	0.436	0.241	0.062	0.959
PC6	0.195	0.105	0.028	0.987
PC7	0.090		0.013	100

Table Notes: This table reports the Eigenvalue, differences in Eigenvalues, variance explained, and cumulative variance explained of the components from principal component analysis on *ind_ppe*, *ind_xrd*, *ind_capex*, *ind_mkts*, *ind_con4*, *ind_hhi*, and *ind_num*. All variables are defined in Appendix A.

The data used to calculate the competition measures are obtained from Compustat Global for fiscal years 1998 to 2012.[35] Each variable is measured using the maximum number of observations available, because a firm may experience competitive pressure from a rival firm despite the fact that the rival firm may be removed from the final analyses due to a subsequent data limitation. Thus, I use all observations that have a non-missing value for sales (Compustat: SALE) and a non-missing value for net property, plant, and equipment (Compustat: PPENT). Missing values for research and development (Compustat: XRD) are set to zero. Table B1

[35] This date range is used to match the range of data in the main analysis.

reports the results of principal component analysis (PCA) on these seven measures of competition. Components with an Eigenvalue greater than one are retained, leaving two components which explain approximately 72% of the total variance in the seven competition measures.

Table B2 reports the standardized scoring coefficients, suggesting that PC1 is loaded by competition measures that are proxies for competition arising from potential entrants to an industry (i.e., *ind_ppe*, *ind_xrd*, and *ind_capex*), while PC2 is loaded by competition measures that are proxies for competition from existing firms within an industry (i.e., *ind_mkts*, *ind_con4*, *ind_hhi*, and *ind_num*). *COMP_POTENTIAL* is calculated as the negative of PC1 and COMP_EXISTING as the negative of PC2, with the interpretation that industries with lower barriers to entry are positively related to *COMP_POTENTIAL* and industries with higher levels of existing competition are positively related to *COMP_EXISTING.*

Table B2
Standardized Scoring Coefficients

Raw Variable	PC1	PC2
ind_ppe	0.018	0.603
ind_xrd	0.005	0.431
ind_capex	0.020	0.628
ind_mkts	(0.420)	0.162
ind_con4	0.573	0.095
ind_hhi	0.539	0.083
ind_num	(0.453)	0.123

Table Notes: This table reports the standardized scoring coefficients of the components from principal component analysis on *ind_ppe*, *ind_xrd*, *ind_capex*, *ind_mkts*, *ind_con4*, *ind_hhi*, and *ind_num*. All variables are defined in Appendix A.

Table B3 reports descriptive statistics for the competition variables used in the principal component analysis, as well as the two measures of competition retained from the analysis. Specifically, table B3 reports the number of observations, mean, standard deviation, and

distribution statistics for all seven variables used in the principal component analysis, as well as for the two factors which are retained. The sample shows variance for all the variables used in the analysis.

Table B3

Summary Statistics for Competition Input Variables

Raw Variable	N	Mean	SD	P25	Med	P75
ind_ppe	164,089	1,466.277	5,151.448	51.558	205.474	887.533
ind_xrd	164,089	78.696	410.776	0.000	0.225	10.777
ind_capex	164,089	269.129	1,064.612	8.209	31.439	135.924
ind_mkts	164,089	10.525	3.501	7.748	10.351	13.517
ind_con4	164,089	0.830	0.209	0.696	0.932	1.000
ind_hhi	164,089	0.438	0.317	0.170	0.351	0.654
ind_num	164,089	19.302	31.691	3.000	8.000	21.000
COMP_POTENTIAL	164,089	0.000	1.522	0.087	0.357	0.500
COMP_EXISTING	164,089	0.000	1.622	(1.284)	(0.224)	1.100

Table Notes: This table reports the number, mean, standard deviation, and distribution statistics of ind*_ppe*, *ind_xrd*, *ind_capex*, *ind_mkts*, *ind_con4*, *ind_hhi*, *ind_num*, *COMP_POTENTIAL*, and *COMP_EXISTING*. *COMP_POTENTIAL* and *COMP_EXISTING* are the negative of the first and second principal components from a principal component analysis on *ind_ppe*, *ind_xrd*, *ind_capex*, *ind_mkts*, *ind_con4*, *ind_hhi*, and *ind_num*. All variables are defined in Appendix A.

Table B4

Correlations Matrix for Competition Input Variables

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
ind_ppe	(1)	—							
ind_xrd	(2)	0.36	1.00						
ind_capex	(3)	0.90	0.48	1.00					
ind_mkts	(4)	0.23	0.21	0.23	1.00				
ind_con4	(5)	0.04	0.01	0.04	(0.50)	1.00			
ind_hhi	(6)	0.01	**0.00**	0.02	(0.51)	0.76	1.00		
ind_num	(7)	0.22	0.11	0.23	0.41	(0.64)	(0.46)	1.00	
COMP_POTENTIAL	(8)	(0.91)	(0.65)	(0.95)	(0.33)	(0.03)	(0.02)	(0.28)	1.00
COMP_EXISTING	(9)	0.08	0.07	0.08	0.71	(0.91)	(0.86)	0.76	(0.12)

Table Notes: This table reports the correlation statistics of *ind_ppe*, *ind_xrd*, *ind_capex*, *ind_mkts*, *ind_con4*, *ind_hhi*, *ind_num*, *COMP_POTENTIAL*, and *COMP_EXISTING*. *COMP_POTENTIAL* and *COMP_EXISTING* are the negative of the first and second principal components from a principal component analysis on *ind_ppe*, *ind_xrd*, *ind_capex*, *ind_mkts*, *ind_con4*, *ind_hhi*, and *ind_num*. All variables are defined in Appendix A.

Table B4 shows the Pearson correlations between each of the nine variables. As can be seen in the table, correlations are higher within each group of competition measures, while less so across the groups of competition measures. The final two rows of the correlation table show

the correlations between the two retained factors and the individual competition measures. *A priori*, I expected negative correlations between the proxies for potential competition and the proxies for existing competition. For example, I expected a negative correlation between *ind_ppe* and *ind_mkts*. Other correlations are in the expected direction. Importantly, the correlations between *COMP_POTENTIAL* and the three potential competition proxies are in the correct direction. Further, the correlations between *COMP_EXISTING* and the four existing competition proxies are also in the correct direction. These correlations provide reassurance that these principal components are capturing the desired underlying constructs.

APPENDIX C

EARNINGS SMOOTHNESS ESTIMATION

Earnings smoothness is modeled as a function of the fundamentals affecting a firm's operating environment. The expected and unexpected smoothness of earnings is calculated by estimating the following model, similar to that of Lang et al. (2012):

$$EARNINGS\_SMOOTHNESS_{i,t} = \beta_0 + \beta_1 ASSETS_{i,t} + \beta_2 LEVERAGE_{i,t} + \beta_3 BTM_{i,t} + \beta_4 \sigma SALES_{i,t} + \beta_5 \%LOSS_{i,t} + \beta_6 OP\_CYCLE_{i,t} + \beta_7 SALES\_GROWTH_{i,t} + \beta_8 OP\_LEVERAGE_{i,t} + \beta_9 \sigma CASH\_FLOW_{i,t} + \sum \text{Industry} + \sum \text{Year} + \varepsilon_{i,t} \quad \text{(C1)}$$

The left-hand variable (*EARNINGS_SMOOTHNESS*) is calculated as the three-year standard deviation of net income divided by the three-year standard deviation of cash flows from operations. The right-hand variables are: *ASSETS*, the natural log of total assets measured in millions of USD, to control for the size of the firm; *LEVERAGE*, total debt divided by total debt plus total equity, to control for the capital structure of the firm; *BTM*, the book-to-market ratio, calculated as total equity divided by total market value, to control for the market valuation of the firm; *σSALES*, the three-year standard deviation of sales, to control for changes in sales which may influence earnings smoothness; *%LOSS*, the ratio of the number of years with a negative income (before extraordinary items) over the previous three years divided by three, to control for the influence of loss years on earnings smoothness; *OP_CYCLE*, the natural log of the number of days of accounts receivable plus the number of days in inventory, to control for the operating environment of the firm; *SALES_GROWTH*, the average sales growth over the previous three years, to control for the increase in sales; *OP_LEVERAGE*, net property, plant, and equipment, scaled by total assets, to control for capital intensity of the firm; and *CASH_FLOW*, average cash

flow from operations for the previous three years, to control for cash flow effects on earnings smoothness. Indicator variables for industry and year are included to control for fixed effects. The fitted value from equation B1 is the expected earnings smoothness, while the residual is unexpected smoothness. The decile rank of expected and unexpected smoothness is utilized to create the variables *EXPECTED_SMOOTHNESS* and *UNEXPECTED_SMOOTHNESS*, where a lower (higher) rank signifies more (less) earnings smoothness.

APPENDIX D

PRIMARY RESULTS WITH INDUSTRY CLASSIFIED AT 2-DIGIT SIC

Table D1

Panel A: Tests of the Influence of Competition on Firm Value Measured as Tobin's Q and Industry Measured at the 2-digit SIC

Variable	Prediction	Model					
		(1)	(2)	(3)	(4)	(5)	(6)
COMP_CONCENTRATE	?	**-0.020**					
		(-0.73)					
COMP_DOMINANCE	?		**-0.091*** **				
			(-3.55)				
COMP_TOP4	?			**-0.072** **			
				(-2.46)			
COMP_EXISTING	?				**-0.004**		
					(-1.20)		
COMP_POTENTIAL	?					**-0.005** **	
						(-2.34)	
COMP_IND_ONLY	?						**0.080*** **
							(5.42)
CAPEX	+	0.810***	0.810***	0.811***	0.813***	0.800***	0.807***
		(11.48)	(11.49)	(11.50)	(11.53)	(11.32)	(11.44)
ADR	+	0.264***	0.264***	0.264***	0.264***	0.262***	0.263***
		(5.20)	(5.20)	(5.20)	(5.20)	(5.16)	(5.19)
DIVIDENDS	?	-0.060***	-0.059***	-0.060***	-0.060***	-0.060***	-0.060***
		(-6.94)	(-6.89)	(-6.92)	(-6.93)	(-6.90)	(-6.92)
ASSETS	–	-0.012***	-0.012***	-0.012***	-0.012***	-0.012***	-0.012***
		(-3.39)	(-3.44)	(-3.46)	(-3.40)	(-3.61)	(-3.40)
LEVERAGE	+	-0.109***	-0.109***	-0.109***	-0.109***	-0.109***	-0.109***
		(-5.49)	(-5.46)	(-5.45)	(-5.48)	(-5.47)	(-5.48)
SALES_GROWTH	+	0.122***	0.122***	0.122***	0.122***	0.122***	0.122***
		(14.14)	(14.11)	(14.14)	(14.14)	(14.13)	(14.15)
NET_INCOME	+	1.010***	1.012***	1.011***	1.010***	1.012***	1.013***
		(15.97)	(16.00)	(16.01)	(15.99)	(16.00)	(16.02)
CASH	+	1.161***	1.160***	1.159***	1.162***	1.159***	1.161***
		(28.86)	(28.82)	(28.79)	(28.87)	(28.74)	(28.85)
Intercept	?	1.188***	1.251***	1.176***	1.183***	1.230***	1.144***
		(10.83)	(11.26)	(10.71)	(10.79)	(11.12)	(10.42)
Country Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes
N		164,089	164,089	164,089	164,089	164,089	164,089
Adjusted R2		0.185	0.185	0.185	0.185	0.185	0.185

Table D1 (continued)

Panel B: Tests of the Influence of Competition on Firm Value Measured as Market-to-Book Ratio and Industry Measured at the 2-digit SIC

Variable	Prediction	Model					
		(1)	(2)	(3)	(4)	(5)	(6)
COMP_CONCENTRATE	**?**	**-0.103**					
		(-1.56)					
COMP_DOMINANCE	**?**		**-0.166*** **				
			(-2.80)				
COMP_TOP4	**?**			**-0.160** **			
				(-2.40)			
COMP_EXISTING	**?**				**-0.009**		
					(-1.14)		
COMP_POTENTIAL	**?**					**-0.013*** **	
						(-2.67)	
COMP_IND_ONLY	**?**						**0.210*** **
							(6.01)
CAPEX	+	1.074***	1.075***	1.077***	1.081***	1.049***	1.067***
		(6.28)	(6.28)	(6.29)	(6.31)	(6.11)	(6.23)
ADR	+	0.629***	0.628***	0.630***	0.629***	0.624***	0.628***
		(5.44)	(5.43)	(5.44)	(5.43)	(5.40)	(5.42)
DIVIDENDS	?	-0.073***	-0.072***	-0.073***	-0.073***	-0.072***	-0.073***
		(-3.63)	(-3.60)	(-3.62)	(-3.63)	(-3.60)	(-3.61)
ASSETS	–	-0.018**	-0.018**	-0.018**	-0.018**	-0.020**	-0.018**
		(-2.22)	(-2.23)	(-2.26)	(-2.21)	(-2.44)	(-2.22)
LEVERAGE	+	1.015***	1.016***	1.017***	1.015***	1.016***	1.015***
		(18.46)	(18.48)	(18.49)	(18.47)	(18.46)	(18.46)
SALES_GROWTH	+	0.226***	0.225***	0.225***	0.226***	0.225***	0.226***
		(11.91)	(11.88)	(11.90)	(11.91)	(11.89)	(11.92)
NET_INCOME	+	1.334***	1.337***	1.336***	1.334***	1.337***	1.341***
		(9.78)	(9.80)	(9.80)	(9.79)	(9.80)	(9.84)
CASH	+	1.941***	1.940***	1.938***	1.943***	1.935***	1.941***
		(24.96)	(24.95)	(24.90)	(24.99)	(24.84)	(24.97)
Intercept	?	1.196***	1.296***	1.156***	1.172***	1.292***	1.068***
		(5.13)	(5.48)	(4.97)	(5.05)	(5.49)	(4.60)
Country Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes
N		164,089	164,089	164,089	164,089	164,089	164,089
Adjusted R2		0.140	0.140	0.140	0.140	0.140	0.140

Table Notes: This table reports parameter estimates and two-tailed t-statistics in parentheses from the following regression on 164,089 observations from 1998-2012:

$$FIRM\_VALUE_{i,t+1} = \alpha_0 + \alpha_1 COMPETITION_{i,t} + \sum \beta_n Controls_{n,i,t} + \varepsilon_{i,t+1}$$

Firm value is estimated using Tobin's Q (*TOBINS_Q*) and market-to-book value of equity (*MTB*). The dependent variable in Panel A (Panel B) is *TOBINS_Q* (*MTB*). Competition is estimated in variable *COMP_CONCENTRATE*, C*OMP_DOMINANCE*, *COMP_TOP4*, *COMP_EXISTING*, *COMP_POTENTIAL and COMP_IND_ONLY*. Control variables include *CAPEX*, *ADR*, *DIVIDENDS*, *ASSETS*, *LEVERAGE*, *SALES_GROWTH*, *NET_INCOME*, and *CASH*. All regressions include country, industry, and fiscal year fixed effects. Industry fixed effects are estimated at the two-digit SIC. Estimated robust standard errors are clustered by firm. Two-tailed significance at the 10%, 5%, or 1% levels is denoted *, **, and ***, respectively. All variables are defined in Appendix A.

Table D2

Panel A: Tests of the Influence of Competition and Liquidation Risk on Firm Value Measured as Tobin's Q and Industry Measured at the 2-digit SIC

Variable	Prediction	Model											
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
COMP_CONCENTRATE	?	-0.016	-0.082**										
		(-0.58)	(-2.57)										
COMP_CONCENTRATE * LIQ_RISK	**?**		**0.203*** **										
			(7.11)										
COMP_DOMINANCE	?			-0.087***	-0.127***								
				(-3.46)	(-3.88)								
COMP_DOMINANCE * LIQ_RISK	**?**				**0.126*** **								
					(3.61)								
COMP_TOP4	?					-0.064**	-0.100***						
						(-2.22)	(-3.09)						
COMP_TOP4 * LIQ_RISK	**?**						**0.123*** **						
							(4.26)						
COMP_EXISTING	?							-0.004	-0.009**				
								(-1.06)	(-2.55)				
COMP_EXISTING * LIQ_RISK	**?**								**0.020*** **				
									(8.27)				
COMP_POTENTIAL	?									-0.005**	0.001		
										(-2.17)	(0.37)		
COMP_POTENTIAL * LIQ_RISK	**?**										**-0.019*** **		
											(-8.77)		
COMP_IND_ONLY	?											0.070***	0.100***
												(4.74)	(5.43)
COMP_IND_ONLY * LIQ_RISK	**?**												**-0.092*** **
													(-3.93)
LIQ_RISK	**–**	**-0.303*** **	**-0.458*** **	**-0.303*** **	**-0.393*** **	**-0.303*** **	**-0.346*** **	**-0.303*** **	**-0.411*** **	**-0.303*** **	**-0.198*** **	**-0.303*** **	**-0.229*** **
		(-35.67)	**(-19.08)**	**(-35.64)**	**(-14.68)**	**(-35.65)**	**(-24.69)**	**(-35.67)**	**(-24.69)**	**(-35.68)**	**(-14.20)**	**(-35.62)**	**(-10.93)**
CAPEX	+	0.707***	0.705***	0.707***	0.708***	0.708***	0.707***	0.710***	0.704***	0.698***	0.687***	0.705***	0.709***
		(10.22)	(10.19)	(10.22)	(10.24)	(10.24)	(10.22)	(10.26)	(10.18)	(10.07)	(9.92)	(10.18)	(10.24)
ADR	+	0.254***	0.256***	0.254***	0.255***	0.255***	0.256***	0.255***	0.257***	0.253***	0.254***	0.254***	0.254***
		(5.11)	(5.14)	(5.12)	(5.13)	(5.12)	(5.14)	(5.12)	(5.17)	(5.08)	(5.10)	(5.11)	(5.10)
DIVIDENDS	+/–	-0.095***	-0.095***	-0.095***	-0.094***	-0.095***	-0.095***	-0.095***	-0.095***	-0.095***	-0.096***	-0.095***	-0.095***
		(-11.10)	(-11.11)	(-11.06)	(-11.05)	(-11.09)	(-11.12)	(-11.10)	(-11.13)	(-11.07)	(-11.19)	(-11.08)	(-11.09)
ASSETS	–	-0.007**	-0.007*	-0.007**	-0.007**	-0.007**	-0.007**	-0.007**	-0.006*	-0.007**	-0.008**	-0.007**	-0.007**
		(-2.03)	(-1.96)	(-2.08)	(-2.03)	(-2.09)	(-2.02)	(-2.04)	(-1.91)	(-2.23)	(-2.26)	(-2.04)	(-2.07)
LEVERAGE	+	0.135***	0.128***	0.136***	0.132***	0.136***	0.130***	0.135***	0.123***	0.135***	0.128***	0.135***	0.134***
		(6.41)	(6.05)	(6.44)	(6.24)	(6.43)	(6.17)	(6.42)	(5.82)	(6.41)	(6.06)	(6.40)	(6.37)
SALES_GROWTH	+	0.110***	0.111***	0.110***	0.110***	0.110***	0.111***	0.110***	0.111***	0.110***	0.110***	0.110***	0.110***
		(12.88)	(12.98)	(12.86)	(12.91)	(12.88)	(12.97)	(12.88)	(13.07)	(12.87)	(12.91)	(12.89)	(12.89)
NET_INCOME	+	0.658***	0.651***	0.660***	0.655***	0.659***	0.654***	0.658***	0.647***	0.660***	0.649***	0.661***	0.659***
		(10.18)	(10.07)	(10.21)	(10.12)	(10.21)	(10.11)	(10.19)	(10.01)	(10.20)	(10.05)	(10.22)	(10.20)
CASH	+	1.097***	1.097***	1.096***	1.095***	1.095***	1.096***	1.097***	1.098***	1.095***	1.091***	1.097***	1.096***
		(27.37)	(27.38)	(27.34)	(27.32)	(27.31)	(27.32)	(27.38)	(27.41)	(27.26)	(27.17)	(27.37)	(27.35)

Table D2 (continued)

Panel A (continued): Tests of the Influence of Competition and Liquidation Risk on Firm Value Measured as Tobin's Q and Industry Measured at the 2-digit SIC

Variable	Prediction	Model											
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Intercept	+/–	1.292***	1.358***	1.353***	1.379***	1.281***	1.298***	1.287***	1.329***	1.330***	1.304***	1.253***	1.231***
		(12.19)	(12.70)	(12.57)	(12.76)	(12.07)	(12.25)	(12.15)	(12.54)	(12.43)	(12.12)	(11.81)	(11.52)
Country Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N		164,089	164,089	164,089	164,089	164,089	164,089	164,089	164,089	164,089	164,089	164,089	164,089
Adjusted R2		0.198	0.198	0.198	0.198	0.198	0.198	0.198	0.199	0.198	0.199	0.198	0.198

Table D2 (continued)

Panel B: Tests of the Influence of Competition and Liquidation Risk on Firm Value Measured as Market-to-Book Ratio and Industry Measured at the 2-digit SIC

Variable	Prediction	Model											
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
COMP_CONCENTRATE	?	-0.091	-0.252***										
		(-1.42)	(-3.41)										
COMP_CONCENTRATE *LIQ_RISK	**?**		**0.495*** **										
			(6.87)										
COMP_DOMINANCE	?			-0.156***	-0.255***								
				(-2.69)	(-3.55)								
COMP_DOMINANCE *LIQ_RISK	**?**				**0.311*** **								
					(3.75)								
COMP_TOP4	?					-0.138**	-0.243***						
						(-2.13)	(-3.43)						
COMP_TOP4* LIQ_RISK	**?**						**0.359*** **						
							(5.15)						
COMP_EXISTING	?							-0.007	-0.019**				
								(-0.98)	(-2.44)				
COMP_EXISTING * LIQ_RISK	**?**								**0.042*** **				
									(7.22)				
COMP_POTENTIAL	?									-0.012**	-0.007		
										(-2.49)	(-1.28)		
COMP_POTENTIAL * LIQ_RISK	**?**										**-0.018*** **		
											(-3.38)		
COMP_IND_ONLY	?											0.182***	0.179***
												(5.28)	(4.25)
COMP_IND_ONLY * LIQ_RISK	**?**												**0.009**
													(0.15)
LIQ_RISK	**–**	**-0.793*** **	**-1.172*** **	**-0.793*** **	**-1.014*** **	**-0.793*** **	**-0.919*** **	**-0.794*** **	**-1.017*** **	**-0.793*** **	**-0.696*** **	**-0.793*** **	**-0.800*** **
		(-34.57)	**(-19.08)**	**(-34.56)**	**(-15.97)**	**(-34.54)**	**(-26.20)**	**(-34.56)**	**(-24.78)**	**(-34.57)**	**(-19.64)**	**(-34.53)**	**(-14.63)**
CAPEX	+	0.804***	0.800***	0.805***	0.807***	0.807***	0.805***	0.810***	0.798***	0.781***	0.771***	0.798***	0.798***
		(4.82)	(4.79)	(4.82)	(4.84)	(4.84)	(4.82)	(4.85)	(4.78)	(4.67)	(4.61)	(4.78)	(4.78)
ADR	+	0.605***	0.608***	0.604***	0.605***	0.605***	0.608***	0.605***	0.610***	0.600***	0.601***	0.604***	0.604***
		(5.37)	(5.40)	(5.37)	(5.38)	(5.37)	(5.40)	(5.37)	(5.42)	(5.33)	(5.34)	(5.36)	(5.36)
DIVIDENDS	+/–	-0.165***	-0.165***	-0.164***	-0.164***	-0.165***	-0.165***	-0.165***	-0.165***	-0.164***	-0.165***	-0.164***	-0.164***
		(-8.33)	(-8.33)	(-8.31)	(-8.30)	(-8.32)	(-8.36)	(-8.33)	(-8.36)	(-8.30)	(-8.35)	(-8.31)	(-8.31)
ASSETS	–	-0.006	-0.005	-0.006	-0.005	-0.006	-0.005	-0.006	-0.005	-0.007	-0.007	-0.006	-0.006
		(-0.71)	(-0.63)	(-0.72)	(-0.67)	(-0.75)	(-0.66)	(-0.70)	(-0.58)	(-0.92)	(-0.92)	(-0.71)	(-0.71)
LEVERAGE	+	1.655***	1.637***	1.655***	1.646***	1.655***	1.640***	1.655***	1.629***	1.655***	1.648***	1.654***	1.654***
		(26.36)	(26.13)	(26.38)	(26.25)	(26.39)	(26.22)	(26.38)	(26.06)	(26.37)	(26.21)	(26.35)	(26.34)
SALES_GROWTH	+	0.193***	0.195***	0.192***	0.193***	0.193***	0.195***	0.193***	0.196***	0.192***	0.193***	0.193***	0.193***
		(10.35)	(10.46)	(10.32)	(10.38)	(10.34)	(10.46)	(10.35)	(10.52)	(10.33)	(10.34)	(10.36)	(10.36)
NET_INCOME	+	0.414***	0.397***	0.417***	0.404***	0.416***	0.400***	0.413***	0.390***	0.417***	0.408***	0.421***	0.421***
		(3.05)	(2.93)	(3.07)	(2.97)	(3.06)	(2.94)	(3.05)	(2.87)	(3.07)	(3.01)	(3.10)	(3.10)
CASH	+	1.773***	1.774***	1.772***	1.770***	1.770***	1.772***	1.775***	1.777***	1.767***	1.764***	1.774***	1.774***
		(23.14)	(23.15)	(23.12)	(23.10)	(23.08)	(23.10)	(23.16)	(23.19)	(23.02)	(22.97)	(23.14)	(23.14)

Table D2 (continued)

Panel B (continued): Tests of the Influence of Competition and Liquidation Risk on Firm Value Measured as Market-to-Book Ratio and Industry Measured at the 2-digit SIC

Variable	Prediction	Model											
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Intercept	+/–	1.466***	1.629***	1.561***	1.627***	1.430***	1.480***	1.444***	1.531***	1.553***	1.529***	1.354***	1.356***
		(6.50)	(7.18)	(6.79)	(7.07)	(6.35)	(6.59)	(6.42)	(6.82)	(6.81)	(6.68)	(6.01)	(6.00)
Country Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N		164,089	164,089	164,089	164,089	164,089	164,089	164,089	164,089	164,089	164,089	164,089	164,089
Adjusted R2		0.157	0.157	0.157	0.157	0.157	0.157	0.157	0.157	0.157	0.157	0.157	0.157

Table Notes: This table reports parameter estimates and t-statistics in parentheses from the following regression on 164,089 observations from 1998-2012:

$$FIRM\_VALUE_{i,t+1} = \alpha_0 + \alpha_1 COMPETITION_{i,t} + \alpha_2 LIQ\_RISK_{i,t} + \alpha_3 COMPETITION * LIQ\_RISK_{i,t} + \sum \beta_n Controls_{n,i,t} + \varepsilon_{i,t+1}$$

Firm value is estimated using Tobin's Q (*TOBINS_Q*) and market-to-book value of equity (*MTB*). The dependent variable in Panel A (Panel B) is *TOBINS_Q* (*MTB*). Competition is estimated in variables *COMP_CONCENTRATE*, *COMP_DOMINANCE*, *COMP_TOP4*, *COMP_EXISTING*, *COMP_POTENTIAL* and *COMP_IND_ONLY*. *LIQ_RISK* is a proxy for liquidation risk and is defined as one (zero otherwise) if Z-Score is less than 1.81. Control variables include *CAPEX*, *ADR*, *DIVIDENDS*, *ASSETS*, *LEVERAGE*, *SALES_GROWTH*, *NET_INCOME*, and *CASH*. All regressions include country, industry, and fiscal year fixed effects. Industry fixed effects are estimated at the two-digit SIC. Estimated robust standard errors are clustered by firm with the number of clusters reported. Two-tailed significance at the 10%, 5%, or 1% levels is denoted *, **, and ***, respectively. All variables are defined in Appendix A.

Table D3

Panel A: Tests of the Influence of Competition and Investor Protection Mechanisms, measured as Anti Director Rights, on Firm Value, Measured as Tobin's Q, and Industry, Measured at the 2-digit SIC

Variable	Prediction	Model											
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
COMP_CONCENTRATE	?	-0.030	0.011										
		(-1.06)	(0.19)										
COMP_CONCENTRATE *ANTI_DIR	**?**		**-0.013**										
			(-0.74)										
COMP_DOMINANCE	?			-0.109***	-0.112*								
				(-4.18)	(-1.86)								
COMP_DOMINANCE * ANTI_DIR	**?**				**0.001**								
					(0.04)								
COMP_TOP4	?					-0.107***	-0.115						
						(-3.57)	(-1.55)						
COMP_TOP4 * ANTI_DIR	**?**						**0.002**						
							(0.12)						
COMP_EXISTING	?							-0.010***	-0.014*				
								(-2.95)	(-1.74)				
COMP_EXISTING * ANTI_DIR	**?**								**0.001**				
									(0.50)				
COMP_POTENTIAL	?									-0.003	-0.002		
										(-1.10)	(-0.35)		
COMP_POTENTIAL * ANTI_DIR	**?**										**-0.000**		
											(-0.14)		
COMP_IND_ONLY	?											0.060***	0.261***
												(4.23)	(6.00)
COMP_IND_ONLY * ANTI_DIR	**?**												**-0.057*** **
													(-4.90)
ANTI_DIR	**+**	**0.149**	**0.155**	**0.131**	**0.130**	**0.146**	**0.146**	**0.148**	**0.146**	**0.144**	**0.146**	**0.142**	**0.185**
		(0.57)	**(0.59)**	**(0.50)**	**(0.50)**	**(0.56)**	**(0.56)**	**(0.57)**	**(0.56)**	**(0.55)**	**(0.55)**	**(0.54)**	**(0.70)**
CORRUPTION	?	-0.005***	-0.005***	-0.005***	-0.005***	-0.005***	-0.005***	-0.005***	-0.005***	-0.005***	-0.005***	-0.005***	-0.005***
		(-5.95)	(-5.95)	(-5.92)	(-5.91)	(-6.00)	(-5.99)	(-6.06)	(-6.03)	(-5.90)	(-5.90)	(-5.93)	(-5.95)
CAPEX	+	1.008***	1.007***	1.007***	1.007***	1.008***	1.009***	1.014***	1.015***	1.003***	1.003***	1.005***	1.008***
		(13.86)	(13.86)	(13.85)	(13.86)	(13.87)	(13.88)	(13.93)	(13.95)	(13.78)	(13.78)	(13.82)	(13.85)
ADR	+	0.240***	0.240***	0.239***	0.239***	0.241***	0.241***	0.241***	0.242***	0.239***	0.239***	0.239***	0.239***
		(4.95)	(4.95)	(4.94)	(4.94)	(4.97)	(4.97)	(4.98)	(4.98)	(4.92)	(4.92)	(4.94)	(4.92)
DIVIDENDS	+/–	-0.083***	-0.083***	-0.083***	-0.083***	-0.083***	-0.083***	-0.083***	-0.083***	-0.083***	-0.083***	-0.083***	-0.081***
		(-9.92)	(-9.91)	(-9.86)	(-9.87)	(-9.90)	(-9.91)	(-9.88)	(-9.89)	(-9.91)	(-9.92)	(-9.92)	(-9.66)
ASSETS	–	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
		(1.64)	(1.63)	(1.59)	(1.59)	(1.54)	(1.54)	(1.61)	(1.61)	(1.53)	(1.53)	(1.63)	(1.57)
LEVERAGE	+	-0.056***	-0.056***	-0.056***	-0.056***	-0.055***	-0.055***	-0.055***	-0.056***	-0.056***	-0.056***	-0.056***	-0.055***
		(-2.85)	(-2.83)	(-2.82)	(-2.82)	(-2.80)	(-2.81)	(-2.81)	(-2.82)	(-2.85)	(-2.85)	(-2.85)	(-2.77)
SALES_GROWTH	+	0.139***	0.139***	0.139***	0.139***	0.139***	0.139***	0.139***	0.139***	0.139***	0.139***	0.139***	0.140***
		(14.46)	(14.47)	(14.44)	(14.44)	(14.47)	(14.47)	(14.48)	(14.48)	(14.46)	(14.46)	(14.46)	(14.52)
NET_INCOME	+	0.956***	0.956***	0.957***	0.957***	0.957***	0.957***	0.956***	0.956***	0.956***	0.956***	0.958***	0.957***
		(14.61)	(14.61)	(14.63)	(14.63)	(14.64)	(14.64)	(14.63)	(14.63)	(14.61)	(14.61)	(14.64)	(14.63)

Table D3 (continued)

Panel A (continued): Tests of the Influence of Competition and Investor Protection Mechanisms, measured as Anti Director Rights, on Firm Value, Measured as Tobin's Q, and Industry, Measured at the 2-digit SIC

Variable	Prediction	Model											
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
CASH	+	1.229***	1.229***	1.227***	1.227***	1.225***	1.225***	1.228***	1.229***	1.228***	1.228***	1.229***	1.229***
		(29.12)	(29.11)	(29.07)	(29.06)	(28.98)	(28.97)	(29.11)	(29.09)	(29.04)	(29.03)	(29.12)	(29.14)
Intercept	?	0.684	0.666	0.823	0.825	0.676	0.676	0.683	0.689	0.715	0.710	0.672	0.522
		(0.69)	(0.67)	(0.84)	(0.83)	(0.68)	(0.68)	(0.69)	(0.70)	(0.72)	(0.71)	(0.68)	(0.52)
Country Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N		139,319	139,319	139,319	139,319	139,319	139,319	139,319	139,319	139,319	139,319	139,319	139,319
Adjusted R2		0.167	0.167	0.168	0.168	0.168	0.168	0.168	0.168	0.167	0.167	0.168	0.168

Table D3 (continued)

Panel B: Tests of the Influence of Competition and Investor Protection Mechanisms, measured as Anti Director Rights, on Firm Value, Measured as Market-to-Book Ratio and Industry, Measured at the 2-digit SIC

Variable	Prediction	Model											
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
COMP_CONCENTRATE	?	-0.115*	0.020										
		(-1.70)	(0.13)										
COMP_CONCENTRATE *ANTI_DIR	**?**		**-0.044**										
			(-0.93)										
COMP_DOMINANCE	?			-0.217***	-0.186								
				(-3.51)	(-1.23)								
COMP_DOMINANCE * ANTI_DIR	**?**				**-0.010**								
					(-0.21)								
COMP_TOP4	?					-0.226***	-0.198						
						(-3.28)	(-1.14)						
COMP_TOP4 * ANTI_DIR	**?**						**-0.008**						
							(-0.15)						
COMP_EXISTING	?							-0.020***	-0.022				
								(-2.59)	(-1.16)				
COMP_EXISTING * ANTI_DIR	**?**								**0.000**				
									(0.09)				
COMP_POTENTIAL	?									-0.006	-0.011		
										(-1.26)	(-0.93)		
COMP_POTENTIAL * ANTI_DIR	**?**										**0.001**		
											(0.41)		
COMP_IND_ONLY	?											0.155***	0.607***
												(4.46)	(5.57)
COMP_IND_ONLY * ANTI_DIR	**?**												**-0.129*** **
													(-4.26)
ANTI_DIR	**+**	**0.100**	**0.120**	**0.048**	**0.054**	**0.078**	**0.079**	**0.082**	**0.082**	**0.077**	**0.067**	**0.069**	**0.166**
		(0.19)	**(0.23)**	**(0.09)**	**(0.10)**	**(0.15)**	**(0.15)**	**(0.16)**	**(0.16)**	**(0.15)**	**(0.13)**	**(0.13)**	**(0.31)**
CORRUPTION	?	-0.006***	-0.006***	-0.006***	-0.006***	-0.006***	-0.006***	-0.006***	-0.006***	-0.006***	-0.006***	-0.006***	-0.006***
		(-2.96)	(-2.96)	(-2.93)	(-2.93)	(-3.01)	(-3.01)	(-3.06)	(-3.06)	(-2.90)	(-2.90)	(-2.93)	(-2.96)
CAPEX	+	1.731***	1.729***	1.731***	1.731***	1.733***	1.733***	1.744***	1.744***	1.719***	1.719***	1.725***	1.731***
		(9.56)	(9.55)	(9.55)	(9.56)	(9.57)	(9.57)	(9.62)	(9.63)	(9.48)	(9.48)	(9.51)	(9.54)
ADR	+	0.582***	0.582***	0.580***	0.580***	0.584***	0.584***	0.584***	0.584***	0.578***	0.579***	0.580***	0.579***
		(5.18)	(5.17)	(5.17)	(5.17)	(5.19)	(5.19)	(5.20)	(5.20)	(5.15)	(5.15)	(5.16)	(5.15)
DIVIDENDS	?	-0.153***	-0.153***	-0.152***	-0.152***	-0.153***	-0.153***	-0.153***	-0.153***	-0.153***	-0.153***	-0.153***	-0.149***
		(-7.71)	(-7.70)	(-7.66)	(-7.66)	(-7.69)	(-7.69)	(-7.67)	(-7.67)	(-7.70)	(-7.71)	(-7.70)	(-7.47)
ASSETS	–	0.020***	0.020***	0.020***	0.020***	0.020**	0.020**	0.020***	0.020***	0.019**	0.020**	0.020***	0.020**
		(2.60)	(2.59)	(2.58)	(2.58)	(2.53)	(2.52)	(2.59)	(2.59)	(2.50)	(2.51)	(2.60)	(2.55)
LEVERAGE	+	0.920***	0.921***	0.920***	0.921***	0.921***	0.921***	0.921***	0.921***	0.919***	0.919***	0.919***	0.923***
		(16.77)	(16.78)	(16.80)	(16.79)	(16.81)	(16.79)	(16.80)	(16.78)	(16.76)	(16.77)	(16.77)	(16.83)
SALES_GROWTH	+	0.244***	0.244***	0.243***	0.243***	0.244***	0.244***	0.244***	0.244***	0.243***	0.243***	0.244***	0.245***
		(11.83)	(11.84)	(11.80)	(11.80)	(11.83)	(11.83)	(11.84)	(11.84)	(11.82)	(11.82)	(11.83)	(11.89)

Table D3 (continued)

Panel B (continued): Tests of the Influence of Competition and Investor Protection Mechanisms, measured as Anti Director Rights, on Firm Value, Measured as Market-to-Book Ratio and Industry, Measured at the 2-digit SIC

Variable	Prediction	Model											
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
NET_INCOME	+	1.481***	1.481***	1.484***	1.484***	1.484***	1.484***	1.482***	1.482***	1.482***	1.482***	1.486***	1.485***
		(10.45)	(10.45)	(10.46)	(10.46)	(10.47)	(10.47)	(10.46)	(10.46)	(10.45)	(10.45)	(10.48)	(10.48)
CASH	+	2.220***	2.219***	2.216***	2.216***	2.212***	2.211***	2.220***	2.220***	2.218***	2.218***	2.220***	2.222***
		(27.31)	(27.30)	(27.28)	(27.27)	(27.17)	(27.14)	(27.31)	(27.29)	(27.22)	(27.23)	(27.31)	(27.34)
Intercept	?	0.668	0.609	0.986	0.964	0.688	0.688	0.706	0.709	0.776	0.807	0.667	0.328
		(0.33)	(0.30)	(0.50)	(0.48)	(0.35)	(0.35)	(0.35)	(0.36)	(0.39)	(0.40)	(0.33)	(0.16)
Country Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N		139,319	139,319	139,319	139,319	139,319	139,319	139,319	139,319	139,319	139,319	139,319	139,319
Adjusted R2		0.129	0.129	0.130	0.130	0.129	0.129	0.129	0.129	0.129	0.129	0.129	0.130

Table Notes: This table reports parameter estimates and t-statistics in parentheses from the following regression on 139,319 observations from 1998-2012:

$$FIRM\_VALUE_{i,t+1} = \alpha_0 + \alpha_1 COMPETITION_{i,t} + \alpha_2 ANTI\_DIR_{i,t} + \alpha_3 COMPETITION * ANTI\_DIR_{i,t} + \sum \beta_n Controls_{n,i,t} + \varepsilon_{i,t+1}$$

Firm value is estimated using Tobin's Q (*TOBINS_Q*) and market-to-book value of equity (*MTB*). The dependent variable in Panel A (Panel B) is *TOBINS_Q* (*MTB*). Competition is estimated in variables *COMP_CONCENTRATE*, *COMP_DOMINANCE*, *COMP_TOP4*, *COMP_EXISTING*, *COMP_POTENTIAL* and *COMP_IND_ONLY*. Country-level anti-director rights is estimated in variable ANTI_DIR. Control variables include *CORRUPTION*, *CAPEX*, *ADR*, *DIVIDENDS*, *ASSETS*, *LEVERAGE*, *SALES_GROWTH*, *NET_INCOME*, and *CASH*. All regressions include industry (3-digit SIC code), country, and fiscal-year fixed effects. Estimated robust standard errors are clustered by firm. Two-tailed significance at the 10%, 5%, or 1% levels is denoted *, **, and ***, respectively. All variables are defined in Appendix A.

Table D4

Panel A: Tests of the Influence of Competition and Investor Protection Mechanisms, measured as Investor Protections Rights, on Firm Value, Measured as Tobin's Q, and Industry, Measured at the 2-digit SIC

Variable	Prediction	Model											
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
COMP_CONCENTRATE	?	-0.030	0.022										
		(-1.06)	(0.39)										
COMP_CONCENTRATE *INV_PROTECT	**?**		**-0.105**										
			(-1.02)										
COMP_DOMINANCE	?			-0.109***	-0.069								
				(-4.18)	(-1.24)								
COMP_DOMINANCE * INV_PROTECT	**?**				**-0.081**								
					(-0.75)								
COMP_TOP4	?					-0.107***	-0.111*						
						(-3.57)	(-1.70)						
COMP_TOP4 * INV_PROTECT	**?**						**0.008**						
							(0.06)						
COMP_EXISTING	?							-0.010***	-0.015**				
								(-2.95)	(-2.02)				
COMP_EXISTING * INV_PROTECT	**?**								**0.009**				
									(0.65)				
COMP_POTENTIAL	?									-0.003	0.001		
										(-1.10)	(0.28)		
COMP_POTENTIAL * INV_PROTECT	**?**										**-0.007**		
											(-0.87)		
COMP_IND_ONLY	?											0.060***	0.139***
												(4.23)	(3.72)
COMP_IND_ONLY * INV_PROTECT	**?**												**-0.156****
													(-2.21)
INV_PROTECT	**+**	**2.459**	**2.456**	**2.156**	**2.205**	**2.405**	**2.407**	**2.443**	**2.451**	**2.380**	**2.391**	**2.333**	**2.532**
		(0.57)	**(0.57)**	**(0.50)**	**(0.51)**	**(0.56)**	**(0.56)**	**(0.57)**	**(0.57)**	**(0.55)**	**(0.55)**	**(0.54)**	**(0.58)**
CORRUPTION	?	-0.005***	-0.005***	-0.005***	-0.005***	-0.005***	-0.005***	-0.005***	-0.005***	-0.005***	-0.005***	-0.005***	-0.005***
		(-5.95)	(-5.94)	(-5.92)	(-5.92)	(-6.00)	(-6.01)	(-6.06)	(-6.07)	(-5.90)	(-5.86)	(-5.93)	(-6.11)
CAPEX	+	1.008***	1.007***	1.007***	1.007***	1.008***	1.009***	1.014***	1.015***	1.003***	1.002***	1.005***	1.006***
		(13.86)	(13.86)	(13.85)	(13.85)	(13.87)	(13.88)	(13.93)	(13.95)	(13.78)	(13.77)	(13.82)	(13.83)
ADR	+	0.240***	0.240***	0.239***	0.239***	0.241***	0.241***	0.241***	0.242***	0.239***	0.239***	0.239***	0.239***
		(4.95)	(4.94)	(4.94)	(4.94)	(4.97)	(4.97)	(4.98)	(4.98)	(4.92)	(4.91)	(4.94)	(4.93)
DIVIDENDS	?	-0.083***	-0.083***	-0.083***	-0.083***	-0.083***	-0.083***	-0.083***	-0.083***	-0.083***	-0.083***	-0.083***	-0.082***
		(-9.92)	(-9.91)	(-9.86)	(-9.87)	(-9.90)	(-9.90)	(-9.88)	(-9.89)	(-9.91)	(-9.89)	(-9.92)	(-9.81)
ASSETS	–	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
		(1.64)	(1.62)	(1.59)	(1.58)	(1.54)	(1.54)	(1.61)	(1.62)	(1.53)	(1.53)	(1.63)	(1.60)
LEVERAGE	+	-0.056***	-0.056***	-0.056***	-0.055***	-0.055***	-0.055***	-0.055***	-0.056***	-0.056***	-0.056***	-0.056***	-0.055***
		(-2.85)	(-2.82)	(-2.82)	(-2.81)	(-2.80)	(-2.80)	(-2.81)	(-2.83)	(-2.85)	(-2.85)	(-2.85)	(-2.80)
SALES_GROWTH	+	0.139***	0.139***	0.139***	0.139***	0.139***	0.139***	0.139***	0.139***	0.139***	0.139***	0.139***	0.139***
		(14.46)	(14.47)	(14.44)	(14.44)	(14.47)	(14.47)	(14.48)	(14.47)	(14.46)	(14.46)	(14.46)	(14.49)
NET_INCOME	+	0.956***	0.956***	0.957***	0.957***	0.957***	0.957***	0.956***	0.956***	0.956***	0.957***	0.958***	0.958***
		(14.61)	(14.61)	(14.63)	(14.63)	(14.64)	(14.64)	(14.63)	(14.63)	(14.61)	(14.61)	(14.64)	(14.63)

Table D4 (continued)

Panel A (continued): Tests of the Influence of Competition and Investor Protection Mechanisms, measured as Investor Protections Rights, on Firm Value, Measured as Tobin's Q, and Industry, Measured at the 2-digit SIC

Variable	Prediction	Model											
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
CASH	+	1.229***	1.229***	1.227***	1.226***	1.225***	1.225***	1.228***	1.229***	1.228***	1.227***	1.229***	1.229***
		(29.12)	(29.12)	(29.07)	(29.05)	(28.98)	(28.97)	(29.11)	(29.11)	(29.04)	(28.99)	(29.12)	(29.13)
Intercept	?	0.103	0.104	0.314	0.289	0.107	0.107	0.106	0.104	0.153	0.145	0.121	0.027
		(0.05)	(0.05)	(0.16)	(0.14)	(0.05)	(0.05)	(0.05)	(0.05)	(0.08)	(0.07)	(0.06)	(0.01)
Country Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N		139,319	139,319	139,319	139,319	139,319	139,319	139,319	139,319	139,319	139,319	139,319	139,319
Adjusted R2		0.167	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.167	0.167	0.168	0.168

Table D4 (continued)

Panel B: Tests of the Influence of Competition and Investor Protection Mechanisms, measured as Investor Protections Rights, on Firm Value, Measured as Market-to-Book Ratio and Industry, Measured at the 2-digit SIC

Variable	Prediction	Model											
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
COMP_CONCENTRATE	?	-0.115*	0.079										
		(-1.70)	(0.54)										
COMP_CONCENTRATE *INV_PROTECT	**?**		**-0.396**										
			(-1.47)										
COMP_DOMINANCE	?			-0.217***	-0.084								
				(-3.51)	(-0.61)								
COMP_DOMINANCE * INV_PROTECT	**?**				**-0.267**								
					(-1.03)								
COMP_TOP4	?					-0.226***	-0.176						
						(-3.28)	(-1.13)						
COMP_TOP4 * INV_PROTECT	**?**						**-0.093**						
							(-0.32)						
COMP_EXISTING	?							-0.020***	-0.020				
								(-2.59)	(-1.12)				
COMP_EXISTING * INV_PROTECT	**?**								**-0.001**				
									(-0.03)				
COMP_POTENTIAL	?									-0.006	-0.007		
										(-1.26)	(-0.64)		
COMP_POTENTIAL * INV_PROTECT	**?**										**0.001**		
											(0.04)		
COMP_IND_ONLY	?											0.155***	0.338***
												(4.46)	(3.47)
COMP_IND_ONLY * INV_PROTECT	**?**												**-0.364***
													(-1.95)
INV_PROTECT	**+**	**1.640**	**1.627**	**0.787**	**0.948**	**1.293**	**1.267**	**1.358**	**1.358**	**1.265**	**1.263**	**1.145**	**1.607**
		(0.19)	**(0.19)**	**(0.09)**	**(0.11)**	**(0.15)**	**(0.15)**	**(0.16)**	**(0.16)**	**(0.15)**	**(0.15)**	**(0.13)**	**(0.18)**
CORRUPTION	?	-0.006***	-0.006***	-0.006***	-0.006***	-0.006***	-0.006***	-0.006***	-0.006***	-0.006***	-0.006***	-0.006***	-0.006***
		(-2.96)	(-2.95)	(-2.93)	(-2.93)	(-3.01)	(-3.00)	(-3.06)	(-3.07)	(-2.90)	(-2.90)	(-2.93)	(-3.13)
CAPEX	+	1.731***	1.729***	1.731***	1.729***	1.733***	1.733***	1.744***	1.744***	1.719***	1.719***	1.725***	1.728***
		(9.56)	(9.55)	(9.55)	(9.55)	(9.57)	(9.57)	(9.62)	(9.63)	(9.48)	(9.48)	(9.51)	(9.53)
ADR	+	0.582***	0.581***	0.580***	0.580***	0.584***	0.583***	0.584***	0.584***	0.578***	0.578***	0.580***	0.580***
		(5.18)	(5.16)	(5.17)	(5.17)	(5.19)	(5.19)	(5.20)	(5.19)	(5.15)	(5.15)	(5.16)	(5.16)
DIVIDENDS	?	-0.153***	-0.153***	-0.152***	-0.152***	-0.153***	-0.153***	-0.153***	-0.153***	-0.153***	-0.153***	-0.153***	-0.151***
		(-7.71)	(-7.69)	(-7.66)	(-7.66)	(-7.69)	(-7.68)	(-7.67)	(-7.67)	(-7.70)	(-7.70)	(-7.70)	(-7.60)
ASSETS	–	0.020***	0.020***	0.020***	0.020**	0.020**	0.020**	0.020***	0.020***	0.019**	0.019**	0.020***	0.020**
		(2.60)	(2.58)	(2.58)	(2.56)	(2.53)	(2.52)	(2.59)	(2.58)	(2.50)	(2.50)	(2.60)	(2.57)
LEVERAGE	+	0.920***	0.922***	0.920***	0.921***	0.921***	0.922***	0.921***	0.921***	0.919***	0.919***	0.919***	0.921***
		(16.77)	(16.79)	(16.80)	(16.80)	(16.81)	(16.76)	(16.80)	(16.75)	(16.76)	(16.77)	(16.77)	(16.80)
SALES_GROWTH	+	0.244***	0.244***	0.243***	0.243***	0.244***	0.244***	0.244***	0.244***	0.243***	0.243***	0.244***	0.244***
		(11.83)	(11.85)	(11.80)	(11.81)	(11.83)	(11.83)	(11.84)	(11.84)	(11.82)	(11.82)	(11.83)	(11.86)

Table D4 (continued)

Panel B (continued): Tests of the Influence of Competition and Investor Protection Mechanisms, measured as Investor Protections Rights, on Firm Value, Measured as Market-to-Book Ratio and Industry, Measured at the 2-digit SIC

Variable	Prediction	Model											
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
NET_INCOME	+	1.481***	1.482***	1.484***	1.484***	1.484***	1.484***	1.482***	1.482***	1.482***	1.482***	1.486***	1.485***
		(10.45)	(10.45)	(10.46)	(10.47)	(10.47)	(10.47)	(10.46)	(10.46)	(10.45)	(10.44)	(10.48)	(10.48)
CASH	+	2.220***	2.219***	2.216***	2.215***	2.212***	2.211***	2.220***	2.220***	2.218***	2.218***	2.220***	2.221***
		(27.31)	(27.31)	(27.28)	(27.27)	(27.17)	(27.15)	(27.31)	(27.30)	(27.22)	(27.22)	(27.31)	(27.32)
Intercept	?	0.281	0.285	0.800	0.716	0.383	0.393	0.385	0.385	0.477	0.478	0.397	0.177
		(0.07)	(0.07)	(0.20)	(0.18)	(0.10)	(0.10)	(0.10)	(0.10)	(0.12)	(0.12)	(0.10)	(0.04)
Country Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N		139,319	139,319	139,319	139,319	139,319	139,319	139,319	139,319	139,319	139,319	139,319	139,319
Adjusted R2		0.129	0.129	0.130	0.130	0.129	0.129	0.129	0.129	0.129	0.129	0.129	0.129

Table Notes: This table reports parameter estimates and t-statistics in parentheses from the following regression on 139,319 observations from 1998-2012:

$$FIRM\_VALUE_{i,t+1} = \alpha_0 + \alpha_1 COMPETITION_{i,t} + \alpha_2 INV\_PROTECT_{i,t} + \alpha_3 COMPETITION * INV\_PROTECT_{i,t} + \sum \beta_n Controls_{n,i,t} + \varepsilon_{i,t+1}$$

Firm value is estimated using Tobin's Q (*TOBINS_Q*) and market-to-book value of equity (*MTB*). The dependent variable in Panel A (Panel B) is *TOBINS_Q* (*MTB*). Competition is estimated in variables *COMP_CONCENTRATE*, *COMP_DOMINANCE*, *COMP_TOP4*, *COMP_EXISTING*, *COMP_POTENTIAL* and *COMP_IND_ONLY*. Country-level investor protection is estimated in variable INV_PROTECT. Control variables include *CORRUPTION*, *CAPEX*, *ADR*, *DIVIDENDS*, *ASSETS*, *LEVERAGE*, *SALES_GROWTH*, *NET_INCOME*, and *CASH*. All regressions include industry (2-digit SIC code), country, and fiscal-year fixed effects. Estimated robust standard errors are clustered by firm. Two-tailed significance at the 10%, 5%, or 1% levels is denoted *, **, and ***, respectively. All variables are defined in Appendix A.

Table D5

Panel A: Tests of the Influence of Transparency on Firm Value Measured as Tobin's Q and Industry Measured at the 2-digit SIC

Variable	Prediction	Model					
		(1)	(2)	(3)	(4)	(5)	(6)
ACCT_CHOICE	+	0.119***					
		(8.85)					
ANALYST_ERROR	–		-0.631***				
			(-8.59)				
BIG_N	+			0.043***			
				(3.89)			
ANALYSTS	+				0.121***		
					(21.80)		
UNEXPECTED_SMOOTHING	+					0.009***	
						(6.81)	
TRANSPARENCY	+						0.777***
							(22.77)
BIAS	+		0.795***				
			(9.31)				
SURPRISE	?		-0.054*				
			(-1.79)				
EXPECTED_SMOOTHING	+					0.013***	
						(7.40)	
CAPEX	+	0.830***	0.776***	0.806***	0.642***	0.792***	0.699***
		(11.76)	(6.22)	(11.43)	(9.19)	(10.14)	(9.97)
ADR	+	0.261***	0.178***	0.262***	0.252***	0.261***	0.260***
		(5.15)	(3.56)	(5.16)	(4.89)	(4.90)	(5.12)
DIVIDENDS	?	-0.065***	-0.062***	-0.060***	-0.065***	-0.049***	-0.075***
		(-7.45)	(-4.06)	(-6.95)	(-7.58)	(-5.13)	(-8.58)
ASSETS	–	-0.016***	-0.019***	-0.014***	-0.062***	-0.008**	-0.042***
		(-4.78)	(-3.35)	(-4.10)	(-15.49)	(-2.28)	(-11.80)
LEVERAGE	+	-0.109***	-0.043	-0.109***	-0.067***	-0.117***	-0.067***
		(-5.49)	(-1.32)	(-5.46)	(-3.41)	(-5.40)	(-3.41)
SALES_GROWTH	+	0.122***	0.164***	0.124***	0.128***	0.129***	0.123***
		(14.13)	(8.96)	(14.28)	(14.84)	(12.30)	(14.28)
NET_INCOME	+	0.998***	2.928***	1.005***	0.961***	1.133***	0.868***
		(15.80)	(16.82)	(15.90)	(15.52)	(15.17)	(14.04)
CASH	+	1.159***	1.402***	1.158***	1.102***	1.141***	1.115***
		(28.82)	(19.52)	(28.77)	(27.91)	(26.21)	(27.94)
Intercept	?	1.182***	1.140***	1.170***	1.423***	0.991***	0.991***
		(10.72)	(8.39)	(10.66)	(13.13)	(9.00)	(8.92)
Country Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes
N		164,089	56,044	164,089	164,089	139,712	164,089
Adjusted R2		0.186	0.242	0.185	0.196	0.191	0.193

Table D5 (continued)

Panel B: Tests of the Influence of Competition and Transparency on Firm Value Measured as Tobin's Q and Industry Measured at the 2-digit SIC

Variable	Prediction	Model											
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
COMP_CONCENTRATE	?	-0.023	0.021										
		(-0.86)	(0.34)										
COMP_CONCENTRATE * TRANSPARENCY	**?**		**-0.086**										
			(-0.72)										
COMP_DOMINANCE	?			-0.093***	0.007								
				(-3.65)	(0.09)								
COMP_DOMINANCE * TRANSPARENCY	**?**				**-0.194**								
					(-1.24)								
COMP_TOP4	?					-0.072**	-0.068						
						(-2.49)	(-1.02)						
COMP_TOP4* TRANSPARENCY	**?**						**-0.009**						
							(-0.07)						
COMP_EXISTING	?							-0.004	-0.003				
								(-1.25)	(-0.53)				
COMP_EXISTING * TRANSPARENCY	**?**								**-0.002**				
									(-0.16)				
COMP_POTENTIAL	?									-0.005**	-0.010*		
										(-2.28)	(-1.84)		
COMP_POTENTIAL * TRANSPARENCY	**?**										**0.009**		
											(0.89)		
COMP_IND_ONLY	?											0.079***	-0.059
												(5.33)	(-1.15)
COMP_IND_ONLY * TRANSPARENCY	**?**												**0.290*** **
													(2.74)
TRANSPARENCY	**–**	**0.777*** **	**0.839*** **	**0.777*** **	**0.910*** **	**0.777*** **	**0.779*** **	**0.777*** **	**0.786*** **	**0.776*** **	**0.721*** **	**0.776*** **	**0.537*** **
		(22.77)	**(9.28)**	**(22.78)**	**(8.11)**	**(22.77)**	**(15.61)**	**(22.77)**	**(12.64)**	**(22.76)**	**(10.52)**	**(22.76)**	**(5.87)**
CAPEX	+	0.699***	0.701***	0.699***	0.703***	0.700***	0.701***	0.702***	0.703***	0.689***	0.690***	0.696***	0.697***
		(9.97)	(9.99)	(9.97)	(10.02)	(9.98)	(9.96)	(10.01)	(9.98)	(9.82)	(9.82)	(9.92)	(9.94)
ADR	+	0.260***	0.260***	0.260***	0.259***	0.261***	0.261***	0.261***	0.261***	0.259***	0.260***	0.260***	0.262***
		(5.13)	(5.12)	(5.13)	(5.12)	(5.13)	(5.13)	(5.13)	(5.13)	(5.09)	(5.12)	(5.12)	(5.15)
DIVIDENDS	?	-0.075***	-0.075***	-0.074***	-0.074***	-0.074***	-0.074***	-0.074***	-0.074***	-0.074***	-0.074***	-0.074***	-0.075***
		(-8.58)	(-8.60)	(-8.54)	(-8.58)	(-8.57)	(-8.58)	(-8.57)	(-8.59)	(-8.54)	(-8.55)	(-8.56)	(-8.62)
ASSETS	–	-0.042***	-0.042***	-0.043***	-0.043***	-0.043***	-0.043***	-0.043***	-0.042***	-0.043***	-0.043***	-0.043***	-0.042***
		(-11.81)	(-11.79)	(-11.88)	(-11.90)	(-11.87)	(-11.86)	(-11.82)	(-11.78)	(-11.99)	(-11.86)	(-11.82)	(-11.79)
LEVERAGE	+	-0.067***	-0.068***	-0.066***	-0.068***	-0.066***	-0.066***	-0.067***	-0.067***	-0.067***	-0.067***	-0.067***	-0.067***
		(-3.40)	(-3.43)	(-3.37)	(-3.42)	(-3.36)	(-3.36)	(-3.39)	(-3.39)	(-3.39)	(-3.42)	(-3.40)	(-3.42)
SALES_GROWTH	+	0.123***	0.123***	0.123***	0.123***	0.123***	0.123***	0.123***	0.123***	0.123***	0.123***	0.123***	0.123***
		(14.28)	(14.29)	(14.25)	(14.29)	(14.28)	(14.28)	(14.28)	(14.29)	(14.27)	(14.26)	(14.29)	(14.29)
NET_INCOME	+	0.868***	0.869***	0.870***	0.870***	0.869***	0.869***	0.868***	0.869***	0.870***	0.870***	0.871***	0.870***
		(14.04)	(14.06)	(14.07)	(14.06)	(14.07)	(14.08)	(14.05)	(14.06)	(14.07)	(14.07)	(14.08)	(14.07)
CASH	+	1.114***	1.115***	1.113***	1.114***	1.112***	1.113***	1.115***	1.115***	1.112***	1.111***	1.114***	1.114***
		(27.92)	(27.93)	(27.89)	(27.92)	(27.86)	(27.88)	(27.94)	(27.96)	(27.81)	(27.79)	(27.92)	(27.92)

Table D5 (continued)

Panel B (continued): Tests of the Influence of Competition and Transparency on Firm Value Measured as Tobin's Q and Industry Measured at the 2-digit SIC

Variable	Prediction	Model											
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Intercept	?	0.996***	0.962***	1.059***	0.991***	0.983***	0.981***	0.990***	0.985***	1.035***	1.062***	0.951***	1.066***
		(8.96)	(7.97)	(9.42)	(8.00)	(8.84)	(8.63)	(8.91)	(8.52)	(9.23)	(9.22)	(8.55)	(9.13)
Country Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N		164,089	164,089	164,089	164,089	164,089	164,089	164,089	164,089	164,089	164,089	164,089	164,089
Adjusted R2		0.193	0.193	0.193	0.193	0.193	0.193	0.193	0.193	0.193	0.193	0.193	0.193

Table Notes: This table reports parameter estimates and t-statistics in parentheses from the following regression on observations from 1998-2012:

$$FIRM\_VALUE_{i,t+1} = \alpha_0 + \alpha_1 COMPETITION_{i,t} + \alpha_2 TRANSPARENCY_{i,t} + \alpha_3 COMPETITION * TRANSPARENCY_{i,t} + \beta_n Controls_{n,i,t} + \varepsilon_{i,t+1}$$

In Panel A, Models 1, 3, 4, and 6, have 164,089 observations, model 2 has 56,044 observations, and model 5 has 139,712 observations. In Panel B, all models have 164,089 observations. Firm value is estimated using Tobin's Q (*TOBINS_Q*). The dependent variable in Panel A and B is *TOBINS_Q*. Competition is estimated in variables *COMP_CONCENTRATE*, *COMP_DOMINANCE*, *COMP_TOP4*, *COMP_EXISTING*, *COMP_POTENTIAL* and *COMP_IND_ONLY*. Transparency is estimated using *ACCT_CHOICE*, *ANALYST_ERROR*, *BIG_N*, *ANALYSTS*, *UNEXPECTED_SMOOTHING*, and *TRANSPARENCY*. Control variables include *CAPEX*, *ADR*, *DIVIDENDS*, *ASSETS*, *LEVERAGE*, *SALES_GROWTH*, *NET_INCOME*, and *CASH*. All regressions include country, industry (2-digit SIC code), and fiscal year fixed effects. Estimated robust standard errors are clustered by firm. Two-tailed significance at the 10%, 5%, or 1% levels is denoted *, **, and ***, respectively. All variables are defined in Appendix A.

Table D6

Panel A: Tests of the Influence of Transparency on Firm Value Measured as Market-to-Book Ratio and Industry Measured at the 2-digit SIC

Variable	Prediction	Model					
		(1)	(2)	(3)	(4)	(5)	(6)
ACCT_CHOICE	+	0.224***					
		(7.10)					
ANALYST_ERROR	–		-1.350***				
			(-6.39)				
BIG_N	+			0.101***			
				(4.20)			
ANALYSTS	+				0.228***		
					(17.82)		
UNEXPECTED_SMOOTHING	+					0.017***	
						(5.22)	
TRANSPARENCY	+						1.524***
							(19.50)
BIAS	+		1.569***				
			(6.67)				
SURPRISE	?		0.043				
			(0.51)				
EXPECTED_SMOOTHING	+					0.023***	
						(5.59)	
CAPEX	+	1.111***	1.305***	1.064***	0.757***	0.972***	0.857***
		(6.49)	(3.95)	(6.22)	(4.46)	(5.30)	(5.04)
ADR	+	0.623***	0.403***	0.624***	0.607***	0.638***	0.621***
		(5.38)	(3.31)	(5.39)	(5.16)	(5.19)	(5.34)
DIVIDENDS	?	-0.083***	-0.094**	-0.074***	-0.083***	-0.049**	-0.102***
		(-4.10)	(-2.41)	(-3.65)	(-4.16)	(-2.19)	(-5.07)
ASSETS	–	-0.027***	-0.015	-0.024***	-0.113***	-0.014	-0.079***
		(-3.31)	(-1.12)	(-2.90)	(-12.02)	(-1.55)	(-9.22)
LEVERAGE	+	1.015***	1.418***	1.016***	1.095***	1.042***	1.098***
		(18.48)	(13.81)	(18.47)	(19.90)	(17.48)	(19.91)
SALES_GROWTH	+	0.225***	0.295***	0.229***	0.235***	0.232***	0.228***
		(11.89)	(7.15)	(12.07)	(12.51)	(10.05)	(12.04)
NET_INCOME	+	1.310***	5.089***	1.321***	1.241***	1.528***	1.054***
		(9.62)	(13.42)	(9.71)	(9.25)	(9.49)	(7.89)
CASH	+	1.938***	2.637***	1.934***	1.830***	1.953***	1.851***
		(24.94)	(17.96)	(24.87)	(23.89)	(23.23)	(23.96)
Intercept	?	1.170***	0.890***	1.140***	1.624***	0.753***	0.794***
		(5.00)	(3.19)	(4.91)	(7.09)	(3.36)	(3.36)
Country Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes
N		164,089	56,044	164,089	164,089	139,712	164,089
Adjusted R2		0.141	0.177	0.140	0.147	0.145	0.146

Table D6 (continued)

Panel B: Tests of the Influence of Competition and Transparency on Firm Value Measured as Market-to-Book Ratio and Industry Measured at the 2-digit SIC

Variable	Prediction	Model											
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
COMP_CONCENTRATE	?	-0.109*	0.140										
		(-1.67)	(0.95)										
COMP_CONCENTRATE * TRANSPARENCY	**?**		**-0.483***										
			(-1.69)										
COMP_DOMINANCE	?			-0.170***	0.215								
				(-2.88)	(1.24)								
COMP_DOMINANCE * TRANSPARENCY	**?**				**-0.751****								
					(-2.11)								
COMP_TOP4	?					-0.160**	0.163						
						(-2.42)	(1.06)						
COMP_TOP4* TRANSPARENCY	**?**						**-0.666****						
							(-2.10)						
COMP_EXISTING	?							-0.009	0.017				
								(-1.18)	(1.20)				
COMP_EXISTING * TRANSPARENCY	**?**								**-0.052***				
									(-1.93)				
COMP_POTENTIAL	?									-0.013***	-0.014		
										(-2.62)	(-1.18)		
COMP_POTENTIAL * TRANSPARENCY	**?**										**0.003**		
											(0.11)		
COMP_IND_ONLY	?											0.207***	0.030
												(5.93)	(0.24)
COMP_IND_ONLY * TRANSPARENCY	**?**												**0.373**
													(1.43)
TRANSPARENCY	**−**	**1.525*** **	**1.873*** **	**1.524*** **	**2.039*** **	**1.524*** **	**1.723*** **	**1.524*** **	**1.765*** **	**1.523*** **	**1.507*** **	**1.523*** **	**1.214*** **
		(19.51)	**(8.52)**	**(19.51)**	**(8.05)**	**(19.50)**	**(14.32)**	**(19.50)**	**(11.95)**	**(19.49)**	**(9.76)**	**(19.49)**	**(5.32)**
CAPEX	+	0.856***	0.868***	0.857***	0.871***	0.859***	0.881***	0.863***	0.884***	0.832***	0.832***	0.849***	0.851***
		(5.03)	(5.10)	(5.03)	(5.12)	(5.05)	(5.16)	(5.07)	(5.17)	(4.88)	(4.88)	(4.99)	(5.00)
ADR	+	0.623***	0.621***	0.621***	0.618***	0.623***	0.621***	0.623***	0.622***	0.617***	0.618***	0.621***	0.623***
		(5.36)	(5.34)	(5.35)	(5.34)	(5.36)	(5.35)	(5.35)	(5.35)	(5.32)	(5.32)	(5.34)	(5.37)
DIVIDENDS	?	-0.102***	-0.102***	-0.101***	-0.102***	-0.101***	-0.103***	-0.102***	-0.103***	-0.101***	-0.101***	-0.101***	-0.102***
		(-5.06)	(-5.10)	(-5.03)	(-5.09)	(-5.05)	(-5.15)	(-5.05)	(-5.12)	(-5.03)	(-5.03)	(-5.04)	(-5.07)
ASSETS	−	-0.079***	-0.079***	-0.079***	-0.079***	-0.079***	-0.079***	-0.079***	-0.078***	-0.081***	-0.080***	-0.079***	-0.079***
		(-9.25)	(-9.22)	(-9.27)	(-9.30)	(-9.28)	(-9.25)	(-9.24)	(-9.15)	(-9.43)	(-9.37)	(-9.24)	(-9.22)
LEVERAGE	+	1.098***	1.095***	1.099***	1.095***	1.100***	1.092***	1.099***	1.091***	1.099***	1.099***	1.098***	1.098***
		(19.92)	(19.87)	(19.95)	(19.87)	(19.95)	(19.87)	(19.93)	(19.86)	(19.92)	(19.93)	(19.92)	(19.90)
SALES_GROWTH	+	0.228***	0.228***	0.227***	0.228***	0.227***	0.229***	0.228***	0.229***	0.227***	0.227***	0.228***	0.228***
		(12.04)	(12.07)	(12.01)	(12.06)	(12.04)	(12.10)	(12.04)	(12.09)	(12.02)	(12.02)	(12.05)	(12.05)

Table D6 (continued)

Panel B (continued): Tests of the Influence of Competition and Transparency on Firm Value Measured as Market-to-Book Ratio and Industry Measured at the 2-digit SIC

Variable	Prediction	Model											
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
NET_INCOME	+	1.055***	1.058***	1.058***	1.057***	1.058***	1.060***	1.055***	1.059***	1.059***	1.059***	1.063***	1.062***
		(7.89)	(7.92)	(7.91)	(7.90)	(7.91)	(7.93)	(7.90)	(7.92)	(7.92)	(7.92)	(7.95)	(7.94)
CASH	+	1.849***	1.851***	1.847***	1.851***	1.846***	1.849***	1.851***	1.853***	1.843***	1.843***	1.849***	1.849***
		(23.93)	(23.94)	(23.92)	(23.97)	(23.87)	(23.91)	(23.96)	(23.99)	(23.81)	(23.81)	(23.94)	(23.94)
Intercept	?	0.818***	0.629**	0.920***	0.657**	0.777***	0.665***	0.793***	0.661***	0.910***	0.917***	0.691***	0.838***
		(3.45)	(2.38)	(3.82)	(2.47)	(3.28)	(2.72)	(3.35)	(2.65)	(3.79)	(3.72)	(2.92)	(3.28)
Country Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N		164,089	164,089	164,089	164,089	164,089	164,089	164,089	164,089	164,089	164,089	164,089	164,089
Adjusted R2		0.146	0.146	0.146	0.146	0.146	0.146	0.146	0.146	0.146	0.146	0.146	0.146

Table Notes: This table reports parameter estimates and t-statistics in parentheses from the following regression on observations from 1998-2012:

$$FIRM\_VALUE_{i,t+1} = \alpha_0 + \alpha_1 COMPETITION_{i,t} + \alpha_2 TRANSPARENCY_{i,t} + \alpha_3 COMPETITION * TRANSPARENCY_{i,t} + \beta_n Controls_{n,i,t} + \varepsilon_{i,t+1}$$

In Panel A, Models 1, 3, 4, and 6, have 164,089 observations, model 2 has 56,044 observations, and model 5 has 139,712 observations. In Panel B, all models have 164,089 observations. Firm value is estimated using market-to-book value of equity (*MTB*). The dependent variable in Panel A and B is *MTB*. Competition is estimated in variables *COMP_CONCENTRATE*, *COMP_DOMINANCE*, *COMP_TOP4*, *COMP_EXISTING*, *COMP_POTENTIAL* and *COMP_IND_ONLY*. Transparency is estimated using *ACCT_CHOICE*, *ANALYST_ERROR*, *BIG_N*, *ANALYSTS*, *UNEXPECTED_SMOOTHING*, and *TRANSPARENCY*. Control variables include *CAPEX*, *ADR*, *DIVIDENDS*, *ASSETS*, *LEVERAGE*, *SALES_GROWTH*, *NET_INCOME*, and *CASH*. All regressions include country, industry (2-digit SIC code), and fiscal year fixed effects. Estimated robust standard errors are clustered by firm. Two-tailed significance at the 10%, 5%, or 1% levels is denoted *, **, and ***, respectively. All variables are defined in Appendix A.

APPENDIX E

PRIMARY RESULTS WITH INDUSTRY CLASSIFIED AT 3-DIGIT SIC

Table E1

Panel A: Tests of the Influence of Competition on Firm Value Measured as Tobin's Q and Industry Measured at the 3-digit SIC

Variable	Prediction	Model					
		(1)	(2)	(3)	(4)	(5)	(6)
COMP_CONCENTRATE	**?**	**-0.067*** (-3.25)**					
COMP_DOMINANCE	**?**		**-0.081*** (-4.07)**				
COMP_TOP4	**?**			**-0.132*** (-4.51)**			
COMP_EXISTING	**?**				**-0.011*** (-3.74)**		
COMP_POTENTIAL	**?**					**-0.006*** (-2.83)**	
COMP_IND_ONLY	**?**						**0.079*** (4.63)**
CAPEX	+	0.840***	0.840***	0.843***	0.845***	0.827***	0.836***
		(12.00)	(12.02)	(12.06)	(12.08)	(11.81)	(11.95)
ADR	+	0.255***	0.253***	0.253***	0.255***	0.251***	0.256***
		(5.07)	(5.03)	(5.05)	(5.08)	(5.00)	(5.09)
DIVIDENDS	?	-0.056***	-0.055***	-0.056***	-0.056***	-0.056***	-0.056***
		(-6.55)	(-6.49)	(-6.54)	(-6.53)	(-6.54)	(-6.54)
ASSETS	–	-0.010***	-0.010***	-0.010***	-0.010***	-0.012***	-0.010***
		(-2.93)	(-2.89)	(-2.95)	(-2.83)	(-3.41)	(-2.82)
LEVERAGE	+	-0.082***	-0.082***	-0.081***	-0.081***	-0.082***	-0.082***
		(-4.16)	(-4.16)	(-4.11)	(-4.14)	(-4.18)	(-4.18)
SALES_GROWTH	+	0.117***	0.116***	0.116***	0.117***	0.116***	0.116***
		(13.57)	(13.48)	(13.56)	(13.58)	(13.53)	(13.55)
NET_INCOME	+	1.018***	1.022***	1.020***	1.018***	1.021***	1.020***
		(16.40)	(16.45)	(16.43)	(16.40)	(16.43)	(16.41)
CASH	+	1.092***	1.092***	1.091***	1.093***	1.090***	1.094***
		(27.76)	(27.75)	(27.73)	(27.78)	(27.67)	(27.79)
Intercept	?	1.217***	1.272***	1.199***	1.217***	1.264***	1.157***
		(10.69)	(11.06)	(10.54)	(10.68)	(11.01)	(10.16)
Country Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes
N		164,089	164,089	164,089	164,089	164,089	164,089
Adjusted R2		0.199	0.199	0.199	0.199	0.199	0.199

Table E1 (continued)

Panel B: Tests of the Influence of Competition on Firm Value Measured as Market-to-Book Ratio and Industry Measured at the 3-digit SIC

Variable	Prediction	Model					
		(1)	(2)	(3)	(4)	(5)	(6)
COMP_CONCENTRATE	**?**	**-0.151*** (-3.16)**					
COMP_DOMINANCE	**?**		**-0.139*** (-3.03)**				
COMP_TOP4	**?**			**-0.250*** (-3.90)**			
COMP_EXISTING	**?**				**-0.021*** (-3.27)**		
COMP_POTENTIAL	**?**					**-0.016*** (-3.38)**	
COMP_IND_ONLY	**?**						**0.171*** (4.34)**
CAPEX	+	1.201***	1.201***	1.206***	1.209***	1.167***	1.192***
		(7.08)	(7.09)	(7.11)	(7.13)	(6.87)	(7.03)
ADR	+	0.604***	0.601***	0.602***	0.605***	0.594***	0.607***
		(5.22)	(5.19)	(5.20)	(5.23)	(5.14)	(5.23)
DIVIDENDS	?	-0.068***	-0.067***	-0.068***	-0.068***	-0.068***	-0.068***
		(-3.41)	(-3.37)	(-3.40)	(-3.40)	(-3.40)	(-3.40)
ASSETS	–	-0.017**	-0.017**	-0.017**	-0.016*	-0.022***	-0.016*
		(-2.03)	(-1.97)	(-2.03)	(-1.92)	(-2.62)	(-1.92)
LEVERAGE	+	1.066***	1.066***	1.067***	1.067***	1.065***	1.065***
		(19.57)	(19.56)	(19.60)	(19.59)	(19.54)	(19.54)
SALES_GROWTH	+	0.216***	0.214***	0.215***	0.216***	0.215***	0.215***
		(11.48)	(11.41)	(11.46)	(11.49)	(11.43)	(11.46)
NET_INCOME	+	1.336***	1.343***	1.339***	1.336***	1.342***	1.340***
		(9.99)	(10.04)	(10.01)	(9.99)	(10.03)	(10.02)
CASH	+	1.804***	1.805***	1.803***	1.806***	1.799***	1.809***
		(23.47)	(23.47)	(23.44)	(23.50)	(23.36)	(23.51)
Intercept	?	1.248***	1.331***	1.206***	1.240***	1.376***	1.117***
		(5.30)	(5.58)	(5.13)	(5.27)	(5.77)	(4.74)
Country Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes
N		164,089	164,089	164,089	164,089	164,089	164,089
Adjusted R2		0.150	0.150	0.150	0.150	0.150	0.150

Table Notes: This table reports parameter estimates and two-tailed t-statistics in parentheses from the following regression on 164,089 observations from 1998-2012:

$$FIRM\_VALUE_{i,t+1} = \alpha_0 + \alpha_1 COMPETITION_{i,t} + \sum \beta_n Controls_{n,i,t} + \varepsilon_{i,t+1}$$

Firm value is estimated using Tobin's Q (*TOBINS_Q*) and market-to-book value of equity (*MTB*). The dependent variable in Panel A (Panel B) is *TOBINS_Q* (*MTB*). Competition is estimated in variable *COMP_CONCENTRATE*, C*OMP_DOMINANCE*, *COMP_TOP4*, *COMP_EXISTING*, *COMP_POTENTIAL and COMP_IND_ONLY*. Control variables include *CAPEX*, *ADR*, *DIVIDENDS*, *ASSETS*, *LEVERAGE*, *SALES_GROWTH*, *NET_INCOME*, and *CASH*. All regressions include country, industry, and fiscal year fixed effects. Industry fixed effects are estimated at the three-digit SIC. Estimated robust standard errors are clustered by firm. Two-tailed significance at the 10%, 5%, or 1% levels is denoted *, **, and ***, respectively. All variables are defined in Appendix A.

Table E2

Panel A: Tests of the Influence of Competition and Liquidation Risk on Firm Value Measured as Tobin's Q and Industry Measured at the 3-digit SIC

Variable	Prediction	Model											
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
COMP_CONCENTRATE	?	-0.062***	-0.100***										
		(-3.08)	(-4.20)										
COMP_CONCENTRATE *LIQ_RISK	**?**		**0.118*** **										
			(5.50)										
COMP_DOMINANCE	?			-0.079***	-0.094***								
				(-4.02)	(-3.67)								
COMP_DOMINANCE * LIQ_RISK	**?**				**0.047***								
					(1.69)								
COMP_TOP4	?					-0.133***	-0.169***						
						(-4.65)	(-5.18)						
COMP_TOP4* LIQ_RISK	**?**						**0.115*** **						
							(3.92)						
COMP_EXISTING	?							-0.011***	-0.017***				
								(-3.89)	(-5.46)				
COMP_EXISTING * LIQ_RISK	**?**								**0.019*** **				
									(8.29)				
COMP_POTENTIAL	?									-0.005**	-0.001		
										(-2.37)	(-0.43)		
COMP_POTENTIAL * LIQ_RISK	**?**										**-0.013*** **		
											(-6.13)		
COMP_IND_ONLY	?											0.071***	0.076***
												(4.16)	(3.60)
COMP_IND_ONLY * LIQ_RISK	**?**												**-0.016**
													(-0.65)
LIQ_RISK	**–**	**-0.298*** **	**-0.371*** **	**-0.298*** **	**-0.331*** **	**-0.299*** **	**-0.322*** **	**-0.299*** **	**-0.401*** **	**-0.298*** **	**-0.225*** **	**-0.298*** **	**-0.286*** **
		(-34.83)	**(-23.05)**	**(-34.84)**	**(-15.77)**	**(-34.89)**	**(-29.68)**	**(-34.89)**	**(-25.43)**	**(-34.85)**	**(-15.72)**	**(-34.85)**	**(-13.75)**
CAPEX	+	0.740***	0.738***	0.740***	0.741***	0.743***	0.741***	0.745***	0.739***	0.729***	0.721***	0.736***	0.737***
		(10.77)	(10.74)	(10.79)	(10.80)	(10.83)	(10.80)	(10.85)	(10.77)	(10.61)	(10.50)	(10.72)	(10.72)
ADR	+	0.246***	0.247***	0.244***	0.244***	0.245***	0.246***	0.246***	0.249***	0.243***	0.244***	0.247***	0.247***
		(5.00)	(5.03)	(4.96)	(4.97)	(4.98)	(4.99)	(5.01)	(5.06)	(4.94)	(4.95)	(5.01)	(5.01)
DIVIDENDS	+/–	-0.090***	-0.090***	-0.090***	-0.089***	-0.090***	-0.090***	-0.090***	-0.090***	-0.090***	-0.091***	-0.090***	-0.090***
		(-10.65)	(-10.68)	(-10.59)	(-10.57)	(-10.64)	(-10.66)	(-10.63)	(-10.68)	(-10.64)	(-10.74)	(-10.64)	(-10.64)
ASSETS	–	-0.006*	-0.006*	-0.006*	-0.006*	-0.006*	-0.006*	-0.006*	-0.005	-0.008**	-0.008**	-0.006	-0.006*
		(-1.75)	(-1.70)	(-1.71)	(-1.70)	(-1.79)	(-1.73)	(-1.65)	(-1.54)	(-2.15)	(-2.17)	(-1.64)	(-1.65)
LEVERAGE	+	0.158***	0.153***	0.158***	0.158***	0.159***	0.156***	0.159***	0.149***	0.158***	0.153***	0.158***	0.158***
		(7.58)	(7.31)	(7.59)	(7.55)	(7.64)	(7.45)	(7.63)	(7.14)	(7.55)	(7.32)	(7.56)	(7.55)
SALES_GROWTH	+	0.104***	0.105***	0.104***	0.104***	0.104***	0.105***	0.104***	0.106***	0.104***	0.104***	0.104***	0.104***
		(12.31)	(12.40)	(12.23)	(12.24)	(12.30)	(12.38)	(12.32)	(12.49)	(12.28)	(12.28)	(12.29)	(12.29)
NET_INCOME	+	0.675***	0.672***	0.679***	0.678***	0.676***	0.675***	0.674***	0.668***	0.677***	0.668***	0.677***	0.676***
		(10.60)	(10.55)	(10.65)	(10.64)	(10.62)	(10.61)	(10.59)	(10.50)	(10.63)	(10.48)	(10.61)	(10.61)
CASH	+	1.030***	1.031***	1.029***	1.029***	1.028***	1.029***	1.030***	1.032***	1.029***	1.025***	1.032***	1.032***
		(26.27)	(26.29)	(26.26)	(26.25)	(26.23)	(26.26)	(26.28)	(26.32)	(26.20)	(26.10)	(26.30)	(26.29)

Table E2 (continued)

Panel A (continued): Tests of the Influence of Competition and Liquidation Risk on Firm Value Measured as Tobin's Q and Industry Measured at the 3-digit SIC

Variable	Prediction	Model											
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Intercept	+/–	1.316***	1.348***	1.370***	1.378***	1.299***	1.307***	1.317***	1.358***	1.352***	1.333***	1.262***	1.258***
		(11.92)	(12.19)	(12.24)	(12.27)	(11.75)	(11.83)	(11.91)	(12.26)	(12.12)	(11.88)	(11.39)	(11.29)
Country Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N		164,089	164,089	164,089	164,089	164,089	164,089	164,089	164,089	164,089	164,089	164,089	164,089
Adjusted R2		0.211	0.211	0.211	0.211	0.211	0.212	0.211	0.212	0.211	0.211	0.211	0.211

Table E2 (continued)

Panel B: Tests of the Influence of Competition and Liquidation Risk on Firm Value Measured as Market-to-Book Ratio and Industry Measured at the 3-digit SIC

Variable	Prediction	Model											
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
COMP_CONCENTRATE	?	-0.139***	-0.229***										
		(-2.98)	(-4.31)										
COMP_CONCENTRATE * LIQ_RISK	**?**		**0.284*** **										
			(5.24)										
COMP_DOMINANCE	?			-0.133***	-0.164***								
				(-2.96)	(-2.92)								
COMP_DOMINANCE * LIQ_RISK	**?**				**0.096**								
					(1.37)								
COMP_TOP4	?					-0.254***	-0.374***						
						(-4.07)	(-5.45)						
COMP_TOP4* LIQ_RISK	**?**						**0.379*** **						
							(5.39)						
COMP_EXISTING	?							-0.021***	-0.034***				
								(-3.44)	(-5.03)				
COMP_EXISTING * LIQ_RISK	**?**								**0.039*** **				
									(7.02)				
COMP_POTENTIAL	?									-0.014***	-0.014***		
										(-2.85)	(-2.61)		
COMP_POTENTIAL * LIQ_RISK	**?**										**0.000**		
											(0.09)		
COMP_IND_ONLY	?											0.148***	0.124***
												(3.81)	(2.71)
COMP_IND_ONLY * LIQ_RISK	**?**												**0.071**
													(1.13)
LIQ_RISK	**–**	**-0.785*** **	**-0.960*** **	**-0.785*** **	**-0.851*** **	**-0.786*** **	**-0.864*** **	**-0.786*** **	**-0.997*** **	**-0.784*** **	**-0.787*** **	**-0.785*** **	**-0.838*** **
		(-34.31)	**(-22.98)**	**(-34.33)**	**(-16.11)**	**(-34.36)**	**(-30.73)**	**(-34.36)**	**(-24.94)**	**(-34.31)**	**(-21.61)**	**(-34.33)**	**(-15.75)**
CAPEX	+	0.937***	0.933***	0.937***	0.939***	0.943***	0.937***	0.946***	0.935***	0.909***	0.910***	0.930***	0.928***
		(5.67)	(5.64)	(5.67)	(5.68)	(5.70)	(5.67)	(5.72)	(5.66)	(5.49)	(5.49)	(5.62)	(5.61)
ADR	+	0.582***	0.585***	0.579***	0.579***	0.579***	0.582***	0.583***	0.588***	0.573***	0.573***	0.584***	0.584***
		(5.17)	(5.20)	(5.14)	(5.14)	(5.15)	(5.17)	(5.17)	(5.22)	(5.10)	(5.10)	(5.18)	(5.18)
DIVIDENDS	+/–	-0.158***	-0.158***	-0.157***	-0.157***	-0.158***	-0.158***	-0.158***	-0.158***	-0.158***	-0.158***	-0.158***	-0.158***
		(-8.02)	(-8.06)	(-7.98)	(-7.97)	(-8.02)	(-8.04)	(-8.01)	(-8.05)	(-8.01)	(-8.00)	(-8.01)	(-8.01)
ASSETS	–	-0.006	-0.005	-0.005	-0.005	-0.006	-0.005	-0.005	-0.004	-0.010	-0.010	-0.005	-0.005
		(-0.71)	(-0.66)	(-0.66)	(-0.65)	(-0.72)	(-0.65)	(-0.61)	(-0.52)	(-1.20)	(-1.20)	(-0.61)	(-0.60)
LEVERAGE	+	1.697***	1.685***	1.698***	1.696***	1.700***	1.688***	1.699***	1.679***	1.696***	1.696***	1.696***	1.697***
		(27.41)	(27.21)	(27.41)	(27.38)	(27.45)	(27.30)	(27.45)	(27.16)	(27.38)	(27.33)	(27.39)	(27.39)
SALES_GROWTH	+	0.183***	0.185***	0.182***	0.182***	0.183***	0.185***	0.183***	0.186***	0.183***	0.183***	0.183***	0.183***
		(9.92)	(10.01)	(9.85)	(9.86)	(9.90)	(10.02)	(9.93)	(10.08)	(9.87)	(9.87)	(9.90)	(9.90)
NET_INCOME	+	0.432***	0.425***	0.438***	0.437***	0.434***	0.431***	0.431***	0.418***	0.438***	0.438***	0.436***	0.436***
		(3.24)	(3.18)	(3.28)	(3.27)	(3.25)	(3.23)	(3.23)	(3.13)	(3.28)	(3.28)	(3.26)	(3.27)
CASH	+	1.641***	1.644***	1.642***	1.641***	1.639***	1.642***	1.642***	1.646***	1.637***	1.637***	1.645***	1.646***
		(21.63)	(21.66)	(21.63)	(21.63)	(21.60)	(21.64)	(21.65)	(21.69)	(21.55)	(21.53)	(21.68)	(21.68)

Table E2 (continued)

Panel B (continued): Tests of the Influence of Competition and Liquidation Risk on Firm Value Measured as Market-to-Book Ratio and Industry Measured at the 3-digit SIC

Variable	Prediction	Model											
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Intercept	?	1.507***	1.585***	1.589***	1.605***	1.469***	1.496***	1.504***	1.588***	1.608***	1.608***	1.391***	1.408***
		(6.59)	(6.93)	(6.84)	(6.88)	(6.42)	(6.55)	(6.57)	(6.95)	(6.93)	(6.93)	(6.06)	(6.12)
Country Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N		164,089	164,089	164,089	164,089	164,089	164,089	164,089	164,089	164,089	164,089	164,089	164,089
Adjusted R2		0.167	0.167	0.167	0.167	0.167	0.167	0.167	0.167	0.167	0.167	0.167	0.167

Table Notes: This table reports parameter estimates and t-statistics in parentheses from the following regression on 164,089 observations from 1998-2012:

$$FIRM\_VALUE_{i,t+1} = \alpha_0 + \alpha_1 COMPETITION_{i,t} + \alpha_2 LIQ\_RISK_{i,t} + \alpha_3 COMPETITION * LIQ\_RISK_{i,t} + \sum \beta_n Controls_{n,i,t} + \varepsilon_{i,t+1}$$

Firm value is estimated using Tobin's Q (*TOBINS_Q*) and market-to-book value of equity (*MTB*). The dependent variable in Panel A (Panel B) is *TOBINS_Q* (*MTB*). Competition is estimated in variables *COMP_CONCENTRATE*, *COMP_DOMINANCE*, *COMP_TOP4*, *COMP_EXISTING*, *COMP_POTENTIAL* and *COMP_IND_ONLY*. *LIQ_RISK* is a proxy for liquidation risk and is defined as one (zero otherwise) if Z-Score is less than 1.81. Control variables include *CAPEX*, *ADR*, *DIVIDENDS*, *ASSETS*, *LEVERAGE*, *SALES_GROWTH*, *NET_INCOME*, and *CASH*. All regressions include country, industry, and fiscal year fixed effects. Industry fixed effects are estimated at the three-digit SIC. Estimated robust standard errors are clustered by firm with the number of clusters reported. Two-tailed significance at the 10%, 5%, or 1% levels is denoted *, **, and ***, respectively. All variables are defined in Appendix A.

Table E3

Panel A: Tests of the Influence of Competition and Investor Protection Mechanisms, measured as Anti Director Rights, on Firm Value, Measured as Tobin's Q, and Industry, Measured at the 3-digit SIC

Variable	Prediction	Model											
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
COMP_CONCENTRATE	?	-0.073***	0.084*										
		(-3.58)	(1.70)										
COMP_CONCENTRATE *ANTI_DIR	**?**		**-0.048*** **										
			(-3.27)										
COMP_DOMINANCE	?			-0.093***	0.008								
				(-4.64)	(0.16)								
COMP_DOMINANCE * ANTI_DIR	**?**				**-0.031** **								
					(-2.03)								
COMP_TOP4	?					-0.160***	-0.036						
						(-5.44)	(-0.41)						
COMP_TOP4 * ANTI_DIR	**?**						**-0.035**						
							(-1.44)						
COMP_EXISTING	?							-0.014***	-0.002				
								(-4.95)	(-0.22)				
COMP_EXISTING * ANTI_DIR	**?**								**-0.004***				
									(-1.79)				
COMP_POTENTIAL	?									-0.004*	0.007		
										(-1.71)	(1.31)		
COMP_POTENTIAL * ANTI_DIR	**?**										**-0.003** **		
											(-2.17)		
COMP_IND_ONLY	?											0.042***	0.231***
												(2.58)	(4.81)
COMP_IND_ONLY * ANTI_DIR	**?**												**-0.054*** **
													(-4.14)
ANTI_DIR	**+**	**0.072**	**0.087**	**0.048**	**0.074**	**0.059**	**0.061**	**0.068**	**0.076**	**0.056**	**0.076**	**0.052**	**0.090**
		(0.31)	**(0.37)**	**(0.20)**	**(0.31)**	**(0.25)**	**(0.26)**	**(0.29)**	**(0.33)**	**(0.24)**	**(0.33)**	**(0.22)**	**(0.39)**
CORRUPTION	?	-0.005***	-0.005***	-0.005***	-0.005***	-0.005***	-0.005***	-0.005***	-0.005***	-0.005***	-0.005***	-0.005***	-0.005***
		(-5.75)	(-5.79)	(-5.68)	(-5.70)	(-5.83)	(-5.87)	(-5.89)	(-5.93)	(-5.60)	(-5.59)	(-5.65)	(-5.70)
CAPEX	+	1.033***	1.035***	1.034***	1.035***	1.035***	1.036***	1.039***	1.040***	1.024***	1.020***	1.029***	1.032***
		(14.23)	(14.26)	(14.26)	(14.27)	(14.26)	(14.28)	(14.31)	(14.34)	(14.11)	(14.05)	(14.18)	(14.22)
ADR	+	0.230***	0.230***	0.228***	0.228***	0.229***	0.228***	0.231***	0.230***	0.228***	0.227***	0.231***	0.231***
		(4.82)	(4.81)	(4.78)	(4.78)	(4.80)	(4.79)	(4.84)	(4.83)	(4.77)	(4.75)	(4.83)	(4.83)
DIVIDENDS	+/–	-0.079***	-0.079***	-0.079***	-0.079***	-0.079***	-0.079***	-0.079***	-0.079***	-0.079***	-0.079***	-0.079***	-0.078***
		(-9.57)	(-9.49)	(-9.49)	(-9.49)	(-9.56)	(-9.51)	(-9.54)	(-9.49)	(-9.57)	(-9.51)	(-9.57)	(-9.42)
ASSETS	–	0.006*	0.006*	0.006*	0.006*	0.006*	0.006*	0.007**	0.007**	0.005	0.005	0.007**	0.006*
		(1.89)	(1.87)	(1.91)	(1.90)	(1.83)	(1.84)	(2.01)	(2.01)	(1.54)	(1.57)	(2.00)	(1.95)
LEVERAGE	+	-0.032	-0.030	-0.032	-0.032	-0.031	-0.030	-0.031	-0.030	-0.032	-0.033*	-0.032	-0.031
		(-1.63)	(-1.54)	(-1.63)	(-1.62)	(-1.57)	(-1.53)	(-1.60)	(-1.55)	(-1.64)	(-1.67)	(-1.64)	(-1.59)
SALES_GROWTH	+	0.132***	0.132***	0.131***	0.131***	0.132***	0.132***	0.132***	0.132***	0.131***	0.132***	0.132***	0.132***
		(13.83)	(13.86)	(13.73)	(13.75)	(13.83)	(13.84)	(13.86)	(13.87)	(13.78)	(13.79)	(13.79)	(13.83)
NET_INCOME	+	0.977***	0.976***	0.981***	0.981***	0.979***	0.979***	0.976***	0.976***	0.979***	0.979***	0.978***	0.978***
		(15.24)	(15.24)	(15.30)	(15.30)	(15.29)	(15.28)	(15.24)	(15.24)	(15.26)	(15.26)	(15.25)	(15.25)

Table E3 (continued)

Panel A (continued): Tests of the Influence of Competition and Investor Protection Mechanisms, measured as Anti Director Rights, on Firm Value, Measured as Tobin's Q, and Industry, Measured at the 3-digit SIC

Variable	Prediction	Model											
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
CASH	+	1.156***	1.156***	1.155***	1.155***	1.153***	1.153***	1.156***	1.156***	1.156***	1.156***	1.158***	1.159***
		(28.01)	(28.02)	(28.00)	(28.00)	(27.96)	(27.96)	(28.03)	(28.03)	(27.97)	(27.96)	(28.05)	(28.06)
Intercept	?	1.019	0.978	1.170	1.085	1.047	1.041	1.042	1.014	1.098	1.029	1.049	0.916
		(1.18)	(1.13)	(1.34)	(1.24)	(1.20)	(1.20)	(1.20)	(1.17)	(1.26)	(1.18)	(1.20)	(1.05)
Country Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N		139,319	139,319	139,319	139,319	139,319	139,319	139,319	139,319	139,319	139,319	139,319	139,319
Adjusted R2		0.182	0.182	0.182	0.182	0.182	0.182	0.182	0.182	0.182	0.182	0.182	0.182

Table E3 (continued)

Panel B: Tests of the Influence of Competition and Investor Protection Mechanisms, measured as Anti Director Rights, on Firm Value, Measured as Market-to-Book Ratio, and Industry, Measured at the 3-digit SIC

Variable	Prediction	Model											
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
COMP_CONCENTRATE	?	-0.153***	0.296**										
		(-3.14)	(2.43)										
COMP_CONCENTRATE *ANTI_DIR	**?**		**-0.138*** (-3.78)**										
COMP_DOMINANCE	?			-0.157***	0.145								
				(-3.33)	(1.18)								
COMP_DOMINANCE * ANTI_DIR	**?**				**-0.092** (-2.39)**								
COMP_TOP4	?					-0.303***	0.312						
						(-4.65)	(1.58)						
COMP_TOP4 * ANTI_DIR	**?**						**-0.173*** (-3.17)**						
COMP_EXISTING	?							-0.026***	0.022				
								(-4.04)	(1.32)				
COMP_EXISTING * ANTI_DIR	**?**								**-0.014*** (-2.95)**				
COMP_POTENTIAL	?									-0.011**	0.021		
										(-2.08)	(1.59)		
COMP_POTENTIAL * ANTI_DIR	**?**										**-0.009** (-2.54)**		
COMP_IND_ONLY	?											0.094**	0.466***
												(2.49)	(4.04)
COMP_IND_ONLY * ANTI_DIR	**?**												**-0.106*** (-3.36)**
ANTI_DIR	**+**	**-0.011**	**0.030**	**-0.061**	**0.016**	**-0.040**	**-0.031**	**-0.024**	**0.008**	**-0.045**	**0.015**	**-0.054**	**0.022**
		(-0.02)	**(0.06)**	**(-0.12)**	**(0.03)**	**(-0.08)**	**(-0.06)**	**(-0.05)**	**(0.02)**	**(-0.09)**	**(0.03)**	**(-0.11)**	**(0.04)**
CORRUPTION	?	-0.006***	-0.006***	-0.006***	-0.006***	-0.006***	-0.006***	-0.006***	-0.006***	-0.005***	-0.005***	-0.006***	-0.006***
		(-2.81)	(-2.86)	(-2.75)	(-2.77)	(-2.88)	(-2.98)	(-2.93)	(-3.00)	(-2.66)	(-2.64)	(-2.71)	(-2.76)
CAPEX	+	1.854***	1.861***	1.855***	1.858***	1.857***	1.864***	1.865***	1.872***	1.831***	1.821***	1.847***	1.852***
		(10.26)	(10.30)	(10.27)	(10.29)	(10.28)	(10.32)	(10.32)	(10.36)	(10.12)	(10.06)	(10.21)	(10.24)
ADR	+	0.559***	0.558***	0.555***	0.555***	0.556***	0.554***	0.560***	0.559***	0.552***	0.549***	0.560***	0.560***
		(5.01)	(4.99)	(4.98)	(4.97)	(4.99)	(4.98)	(5.02)	(5.01)	(4.96)	(4.94)	(5.02)	(5.02)
DIVIDENDS	?	-0.148***	-0.146***	-0.147***	-0.147***	-0.148***	-0.145***	-0.147***	-0.146***	-0.148***	-0.146***	-0.148***	-0.145***
		(-7.49)	(-7.38)	(-7.42)	(-7.42)	(-7.48)	(-7.37)	(-7.47)	(-7.38)	(-7.48)	(-7.40)	(-7.49)	(-7.37)
ASSETS	–	0.021***	0.021***	0.022***	0.022***	0.021***	0.021***	0.022***	0.022***	0.018**	0.019**	0.022***	0.022***
		(2.66)	(2.64)	(2.70)	(2.69)	(2.62)	(2.64)	(2.76)	(2.76)	(2.27)	(2.31)	(2.75)	(2.71)
LEVERAGE	+	0.969***	0.974***	0.969***	0.969***	0.971***	0.975***	0.970***	0.974***	0.968***	0.967***	0.968***	0.970***
		(17.81)	(17.91)	(17.81)	(17.82)	(17.86)	(17.94)	(17.85)	(17.92)	(17.80)	(17.77)	(17.79)	(17.84)
SALES_GROWTH	+	0.231***	0.232***	0.229***	0.230***	0.231***	0.231***	0.231***	0.232***	0.230***	0.230***	0.230***	0.231***
		(11.30)	(11.34)	(11.22)	(11.23)	(11.29)	(11.33)	(11.32)	(11.35)	(11.25)	(11.26)	(11.26)	(11.30)

Table E3 (continued)

Panel B (continued): Tests of the Influence of Competition and Investor Protection Mechanisms, measured as Anti Director Rights, on Firm Value, Measured as Market-to-Book Ratio, and Industry, Measured at the 3-digit SIC

Variable	Prediction	Model											
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
NET_INCOME	+	1.498***	1.497***	1.506***	1.505***	1.502***	1.503***	1.497***	1.496***	1.503***	1.503***	1.501***	1.502***
		(10.83)	(10.83)	(10.88)	(10.88)	(10.86)	(10.87)	(10.83)	(10.82)	(10.86)	(10.87)	(10.85)	(10.85)
CASH	+	2.074***	2.074***	2.074***	2.074***	2.069***	2.069***	2.075***	2.075***	2.072***	2.071***	2.079***	2.080***
		(25.85)	(25.85)	(25.84)	(25.83)	(25.79)	(25.78)	(25.86)	(25.86)	(25.79)	(25.78)	(25.90)	(25.92)
Intercept	?	1.162	1.044	1.440	1.185	1.227	1.194	1.218	1.109	1.345	1.146	1.222	0.959
		(0.63)	(0.57)	(0.78)	(0.64)	(0.66)	(0.65)	(0.66)	(0.60)	(0.73)	(0.62)	(0.66)	(0.52)
Country Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N		139,319	139,319	139,319	139,319	139,319	139,319	139,319	139,319	139,319	139,319	139,319	139,319
Adjusted R2		0.141	0.141	0.141	0.141	0.141	0.141	0.141	0.141	0.141	0.141	0.141	0.141

Table Notes: This table reports parameter estimates and t-statistics in parentheses from the following regression on 139,319 observations from 1998-2012:

$$FIRM\_VALUE_{i,t+1} = \alpha_0 + \alpha_1 COMPETITION_{i,t} + \alpha_2 ANTI\_DIR_{i,t} + \alpha_3 COMPETITION * ANTI\_DIR_{i,t} + \sum \beta_n Controls_{n,i,t} + \varepsilon_{i,t+1}$$

Firm value is estimated using Tobin's Q (*TOBINS_Q*) and market-to-book value of equity (*MTB*). The dependent variable in Panel A (Panel B) is *TOBINS_Q* (*MTB*). Competition is estimated in variables *COMP_CONCENTRATE*, *COMP_DOMINANCE*, *COMP_TOP4*, *COMP_EXISTING*, *COMP_POTENTIAL* and *COMP_IND_ONLY*. Country-level anti-director rights is estimated in variable ANTI_DIR. Control variables include *CORRUPTION*, *CAPEX*, *ADR*, *DIVIDENDS*, *ASSETS*, *LEVERAGE*, *SALES_GROWTH*, *NET_INCOME*, and *CASH*. All regressions include industry (3-digit SIC code), country, and fiscal-year fixed effects. Estimated robust standard errors are clustered by firm. Two-tailed significance at the 10%, 5%, or 1% levels is denoted *, **, and ***, respectively. All variables are defined in Appendix A.

Table E4

Panel A: Tests of the Influence of Competition and Investor Protection Mechanisms, measured as Investor Protections Rights, on Firm Value, Measured as Tobin's Q, and Industry, Measured at the 3-digit SIC

Variable	Prediction	Model											
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
COMP_CONCENTRATE	?	-0.073***	0.027										
		(-3.58)	(0.61)										
COMP_CONCENTRATE *INV_PROTECT	**?**		**-0.195****										
			(-2.33)										
COMP_DOMINANCE	?			-0.093***	0.009								
				(-4.64)	(0.21)								
COMP_DOMINANCE * INV_PROTECT	**?**				**-0.202****								
					(-2.29)								
COMP_TOP4	?					-0.160***	-0.051						
						(-5.44)	(-0.66)						
COMP_TOP4 * INV_PROTECT	**?**						**-0.208**						
							(-1.45)						
COMP_EXISTING	?							-0.014***	-0.008				
								(-4.95)	(-1.27)				
COMP_EXISTING * INV_PROTECT	**?**								**-0.011**				
									(-0.92)				
COMP_POTENTIAL	?									-0.004*	0.007		
										(-1.71)	(1.49)		
COMP_POTENTIAL * INV_PROTECT	**?**										**-0.021****		
											(-2.47)		
COMP_IND_ONLY	?											0.042***	0.138***
												(2.58)	(3.34)
COMP_IND_ONLY * INV_PROTECT	**?**												**-0.189****
													(-2.36)
INV_PROTECT	**+**	**1.194**	**1.179**	**0.791**	**0.959**	**0.978**	**0.961**	**1.123**	**1.129**	**0.916**	**0.976**	**0.860**	**1.030**
		(0.31)	**(0.31)**	**(0.20)**	**(0.25)**	**(0.25)**	**(0.25)**	**(0.29)**	**(0.30)**	**(0.24)**	**(0.25)**	**(0.22)**	**(0.27)**
CORRUPTION	?	-0.005***	-0.005***	-0.005***	-0.005***	-0.005***	-0.005***	-0.005***	-0.005***	-0.005***	-0.005***	-0.005***	-0.005***
		(-5.75)	(-5.75)	(-5.68)	(-5.70)	(-5.83)	(-5.83)	(-5.89)	(-5.90)	(-5.60)	(-5.50)	(-5.65)	(-5.77)
CAPEX	+	1.033***	1.035***	1.034***	1.035***	1.035***	1.037***	1.039***	1.040***	1.024***	1.020***	1.029***	1.032***
		(14.23)	(14.26)	(14.26)	(14.27)	(14.26)	(14.29)	(14.31)	(14.33)	(14.11)	(14.05)	(14.18)	(14.21)
ADR	+	0.230***	0.229***	0.228***	0.228***	0.229***	0.228***	0.231***	0.230***	0.228***	0.227***	0.231***	0.231***
		(4.82)	(4.80)	(4.78)	(4.78)	(4.80)	(4.79)	(4.84)	(4.83)	(4.77)	(4.75)	(4.83)	(4.84)
DIVIDENDS	?	-0.079***	-0.079***	-0.079***	-0.079***	-0.079***	-0.079***	-0.079***	-0.079***	-0.079***	-0.079***	-0.079***	-0.079***
		(-9.57)	(-9.51)	(-9.49)	(-9.49)	(-9.56)	(-9.52)	(-9.54)	(-9.52)	(-9.57)	(-9.50)	(-9.57)	(-9.50)
ASSETS	–	0.006*	0.006*	0.006*	0.006*	0.006*	0.006*	0.007**	0.007**	0.005	0.005	0.007**	0.006**
		(1.89)	(1.88)	(1.91)	(1.89)	(1.83)	(1.84)	(2.01)	(2.01)	(1.54)	(1.58)	(2.00)	(1.97)
LEVERAGE	+	-0.032	-0.030	-0.032	-0.031	-0.031	-0.030	-0.031	-0.031	-0.032	-0.033*	-0.032	-0.031
		(-1.63)	(-1.56)	(-1.63)	(-1.61)	(-1.57)	(-1.52)	(-1.60)	(-1.57)	(-1.64)	(-1.67)	(-1.64)	(-1.60)
SALES_GROWTH	+	0.132***	0.132***	0.131***	0.131***	0.132***	0.132***	0.132***	0.132***	0.131***	0.131***	0.132***	0.132***
		(13.83)	(13.85)	(13.73)	(13.75)	(13.83)	(13.84)	(13.86)	(13.87)	(13.78)	(13.78)	(13.79)	(13.81)
NET_INCOME	+	0.977***	0.977***	0.981***	0.982***	0.979***	0.979***	0.976***	0.976***	0.979***	0.981***	0.978***	0.978***
		(15.24)	(15.25)	(15.30)	(15.32)	(15.29)	(15.29)	(15.24)	(15.24)	(15.26)	(15.28)	(15.25)	(15.25)

Table E4 (continued)

Panel A (continued): Tests of the Influence of Competition and Investor Protection Mechanisms, measured as Investor Protections Rights, on Firm Value, Measured as Tobin's Q, and Industry, Measured at the 3-digit SIC

Variable	Prediction	Model											
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
CASH	+	1.156***	1.156***	1.155***	1.155***	1.153***	1.152***	1.156***	1.156***	1.156***	1.154***	1.158***	1.159***
		(28.01)	(28.01)	(28.00)	(28.00)	(27.96)	(27.94)	(28.03)	(28.02)	(27.97)	(27.92)	(28.05)	(28.06)
Intercept	?	0.737	0.745	0.983	0.897	0.816	0.823	0.777	0.773	0.882	0.845	0.845	0.762
		(0.42)	(0.42)	(0.55)	(0.50)	(0.46)	(0.46)	(0.44)	(0.44)	(0.50)	(0.48)	(0.48)	(0.43)
Country Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N		139,319	139,319	139,319	139,319	139,319	139,319	139,319	139,319	139,319	139,319	139,319	139,319
Adjusted R2		0.182	0.182	0.182	0.182	0.182	0.182	0.182	0.182	0.182	0.182	0.182	0.182

Table E4 (continued)

Panel B: Tests of the Influence of Competition and Investor Protection Mechanisms, measured as Investor Protections Rights, on Firm Value, Measured as Market-to-Book Ratio, and Industry, Measured at the 3-digit SIC

Variable	Prediction	Model											
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
COMP_CONCENTRATE	?	-0.153***	0.189*										
		(-3.14)	(1.68)										
COMP_CONCENTRATE *INV_PROTECT	**?**		**-0.667*** (-3.18)**										
COMP_DOMINANCE	?			-0.157***	0.156								
				(-3.33)	(1.41)								
COMP_DOMINANCE * INV_PROTECT	**?**				**-0.619*** (-2.74)**								
COMP_TOP4	?					-0.303***	0.236						
						(-4.65)	(1.34)						
COMP_TOP4 * INV_PROTECT	**?**						**-1.031*** (-3.15)**						
COMP_EXISTING	?							-0.026***	0.009				
								(-4.04)	(0.57)				
COMP_EXISTING * INV_PROTECT	**?**								**-0.064** (-2.36)**				
COMP_POTENTIAL	?									-0.011**	0.015		
										(-2.08)	(1.33)		
COMP_POTENTIAL * INV_PROTECT	**?**										**-0.051** (-2.44)**		
COMP_IND_ONLY	?											0.094**	0.290***
												(2.49)	(2.91)
COMP_IND_ONLY * INV_PROTECT	**?**												**-0.387** (-2.02)**
INV_PROTECT	**+**	**-0.187**	**-0.239**	**-1.004**	**-0.489**	**-0.664**	**-0.748**	**-0.397**	**-0.357**	**-0.740**	**-0.594**	**-0.888**	**-0.540**
		(-0.02)	**(-0.03)**	**(-0.12)**	**(-0.06)**	**(-0.08)**	**(-0.09)**	**(-0.05)**	**(-0.04)**	**(-0.09)**	**(-0.07)**	**(-0.11)**	**(-0.07)**
CORRUPTION	?	-0.006***	-0.006***	-0.006***	-0.006***	-0.006***	-0.006***	-0.006***	-0.006***	-0.005***	-0.005**	-0.006***	-0.006***
		(-2.81)	(-2.82)	(-2.75)	(-2.77)	(-2.88)	(-2.87)	(-2.93)	(-2.95)	(-2.66)	(-2.56)	(-2.71)	(-2.83)
CAPEX	+	1.854***	1.862***	1.855***	1.859***	1.857***	1.869***	1.865***	1.873***	1.831***	1.821***	1.847***	1.851***
		(10.26)	(10.30)	(10.27)	(10.30)	(10.28)	(10.35)	(10.32)	(10.37)	(10.12)	(10.06)	(10.21)	(10.24)
ADR	+	0.559***	0.555***	0.555***	0.555***	0.556***	0.553***	0.560***	0.557***	0.552***	0.550***	0.560***	0.561***
		(5.01)	(4.98)	(4.98)	(4.98)	(4.99)	(4.97)	(5.02)	(4.99)	(4.96)	(4.94)	(5.02)	(5.03)
DIVIDENDS	?	-0.148***	-0.147***	-0.147***	-0.147***	-0.148***	-0.146***	-0.147***	-0.146***	-0.148***	-0.147***	-0.148***	-0.147***
		(-7.49)	(-7.41)	(-7.42)	(-7.43)	(-7.48)	(-7.40)	(-7.47)	(-7.41)	(-7.48)	(-7.41)	(-7.49)	(-7.43)
ASSETS	–	0.021***	0.021***	0.022***	0.022***	0.021***	0.021***	0.022***	0.022***	0.018**	0.019**	0.022***	0.022***
		(2.66)	(2.65)	(2.70)	(2.68)	(2.62)	(2.64)	(2.76)	(2.76)	(2.27)	(2.31)	(2.75)	(2.72)
LEVERAGE	+	0.969***	0.973***	0.969***	0.970***	0.971***	0.976***	0.970***	0.973***	0.968***	0.967***	0.968***	0.970***
		(17.81)	(17.88)	(17.81)	(17.84)	(17.86)	(17.95)	(17.85)	(17.89)	(17.80)	(17.77)	(17.79)	(17.83)
SALES_GROWTH	+	0.231***	0.232***	0.229***	0.230***	0.231***	0.232***	0.231***	0.232***	0.230***	0.230***	0.230***	0.231***
		(11.30)	(11.33)	(11.22)	(11.23)	(11.29)	(11.33)	(11.32)	(11.35)	(11.25)	(11.24)	(11.26)	(11.29)

Table E4 (continued)

Panel B (continued): Tests of the Influence of Competition and Investor Protection Mechanisms, measured as Investor Protections Rights, on Firm Value, Measured as Market-to-Book Ratio, and Industry, Measured at the 3-digit SIC

Variable	Prediction	Model											
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
NET_INCOME	+	1.498***	1.499***	1.506***	1.508***	1.502***	1.503***	1.497***	1.495***	1.503***	1.508***	1.501***	1.501***
		(10.83)	(10.84)	(10.88)	(10.90)	(10.86)	(10.87)	(10.83)	(10.82)	(10.86)	(10.89)	(10.85)	(10.85)
CASH	+	2.074***	2.073***	2.074***	2.073***	2.069***	2.066***	2.075***	2.074***	2.072***	2.067***	2.079***	2.080***
		(25.85)	(25.84)	(25.84)	(25.84)	(25.79)	(25.74)	(25.86)	(25.84)	(25.79)	(25.74)	(25.90)	(25.92)
Intercept	?	1.206	1.235	1.677	1.413	1.384	1.417	1.312	1.286	1.520	1.431	1.432	1.260
		(0.32)	(0.33)	(0.45)	(0.38)	(0.37)	(0.38)	(0.35)	(0.34)	(0.41)	(0.38)	(0.38)	(0.34)
Country Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N		139,319	139,319	139,319	139,319	139,319	139,319	139,319	139,319	139,319	139,319	139,319	139,319
Adjusted R2		0.141	0.141	0.141	0.141	0.141	0.141	0.141	0.141	0.141	0.141	0.141	0.141

Table Notes: This table reports parameter estimates and t-statistics in parentheses from the following regression on 139,319 observations from 1998-2012:

$$FIRM\_VALUE_{i,t+1} = \alpha_0 + \alpha_1 COMPETITION_{i,t} + \alpha_2 INV\_PROTECT_{i,t} + \alpha_3 COMPETITION * INV\_PROTECT_{i,t} + \sum \beta_n Controls_{n,i,t} + \varepsilon_{i,t+1}$$

Firm value is estimated using Tobin's Q (*TOBINS_Q*) and market-to-book value of equity (*MTB*). The dependent variable in Panel A (Panel B) is *TOBINS_Q* (*MTB*). Competition is estimated in variables *COMP_CONCENTRATE*, *COMP_DOMINANCE*, *COMP_TOP4*, *COMP_EXISTING*, *COMP_POTENTIAL* and *COMP_IND_ONLY*. Country-level investor protection is estimated in variable INV_PROTECT. Control variables include *CORRUPTION*, *CAPEX*, *ADR*, *DIVIDENDS*, *ASSETS*, *LEVERAGE*, *SALES_GROWTH*, *NET_INCOME*, and *CASH*. All regressions include industry (3-digit SIC code), country, and fiscal-year fixed effects. Estimated robust standard errors are clustered by firm. Two-tailed significance at the 10%, 5%, or 1% levels is denoted *, **, and ***, respectively. All variables are defined in Appendix A.

Table E5

Panel A: Tests of the Influence of Transparency on Firm Value Measured as Tobin's Q and Industry Measured at the 3-digit SIC

Variable	Prediction	Model					
		(1)	(2)	(3)	(4)	(5)	(6)
ACCT_CHOICE	+	0.110***					
		(8.30)					
ANALYST_ERROR	–		-0.565***				
			(-7.89)				
BIG_N	+			0.036***			
				(3.32)			
ANALYSTS	+				0.113***		
					(20.64)		
UNEXPECTED_SMOOTHING	+					0.009***	
						(6.54)	
TRANSPARENCY	+						0.727***
							(21.58)
BIAS	+		0.741***				
			(8.93)				
SURPRISE	?		-0.057*				
			(-1.92)				
EXPECTED_SMOOTHING	+					0.012***	
						(7.08)	
CAPEX	+	0.856***	0.906***	0.834***	0.680***	0.832***	0.736***
		(12.22)	(7.43)	(11.92)	(9.83)	(10.82)	(10.58)
ADR	+	0.252***	0.166***	0.253***	0.245***	0.256***	0.252***
		(5.03)	(3.33)	(5.03)	(4.80)	(4.85)	(5.00)
DIVIDENDS	?	-0.061***	-0.059***	-0.056***	-0.062***	-0.047***	-0.070***
		(-7.04)	(-3.85)	(-6.58)	(-7.24)	(-4.95)	(-8.13)
ASSETS	–	-0.014***	-0.013**	-0.012***	-0.058***	-0.006*	-0.039***
		(-4.08)	(-2.31)	(-3.39)	(-14.04)	(-1.71)	(-10.58)
LEVERAGE	+	-0.082***	-0.013	-0.082***	-0.045**	-0.091***	-0.044**
		(-4.17)	(-0.39)	(-4.15)	(-2.31)	(-4.25)	(-2.27)
SALES_GROWTH	+	0.116***	0.157***	0.118***	0.122***	0.123***	0.118***
		(13.54)	(8.68)	(13.66)	(14.25)	(11.86)	(13.69)
NET_INCOME	+	1.007***	2.911***	1.014***	0.972***	1.127***	0.886***
		(16.23)	(17.18)	(16.32)	(15.94)	(15.38)	(14.55)
CASH	+	1.092***	1.307***	1.092***	1.045***	1.078***	1.053***
		(27.76)	(18.73)	(27.72)	(26.97)	(25.37)	(26.93)
Intercept	?	1.197***	1.133***	1.187***	1.418***	1.006***	1.015***
		(10.51)	(8.33)	(10.46)	(12.67)	(8.82)	(8.88)
Country Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes
N		164,089	56,044	164,089	164,089	139,712	164,089
Adjusted R2		0.200	0.261	0.199	0.208	0.206	0.205

Table E5 (continued)

Panel B: Tests of the Influence of Competition and Transparency on Firm Value Measured as Tobin's Q and Industry Measured at the 3-digit SIC

Variable	Prediction	Model											
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
COMP_CONCENTRATE	?	-0.067***	0.015										
		(-3.27)	(0.32)										
COMP_CONCENTRATE * TRANSPARENCY	**?**		**-0.162***										
			(-1.72)										
COMP_DOMINANCE	?			-0.075***	0.095								
				(-3.23)	(1.43)								
COMP_DOMINANCE * TRANSPARENCY	**?**				**-0.315****								
					(-2.47)								
COMP_TOP4	?					-0.082***	-0.096						
						(-4.15)	(-1.62)						
COMP_TOP4* TRANSPARENCY	**?**						**0.028**						
							(0.23)						
COMP_EXISTING	?							-0.132***	0.032				
								(-4.56)	(0.45)				
COMP_EXISTING * TRANSPARENCY	**?**								**-0.356****				
									(-2.31)				
COMP_POTENTIAL	?									-0.011***	-0.001		
										(-3.76)	(-0.22)		
COMP_POTENTIAL * TRANSPARENCY	**?**										**-0.020***		
											(-1.77)		
COMP_IND_ONLY	?											-0.006***	-0.000
												(-2.63)	(-0.05)
COMP_IND_ONLY * TRANSPARENCY	**?**												**-0.011**
													(-1.05)
TRANSPARENCY	**–**	**0.727*** **	**0.817*** **	**0.739*** **	**1.011*** **	**0.727*** **	**0.708*** **	**0.727*** **	**0.787*** **	**0.727*** **	**0.819*** **	**0.725*** **	**0.792*** **
		(21.59)	**(13.71)**	**(20.45)**	**(8.83)**	**(21.59)**	**(7.57)**	**(21.59)**	**(19.52)**	**(21.58)**	**(13.74)**	**(21.55)**	**(11.42)**
CAPEX	+	0.739***	0.743***	0.703***	0.707***	0.739***	0.739***	0.742***	0.750***	0.743***	0.749***	0.726***	0.726***
		(10.61)	(10.67)	(9.67)	(9.73)	(10.63)	(10.63)	(10.67)	(10.76)	(10.69)	(10.75)	(10.44)	(10.42)
ADR	+	0.252***	0.251***	0.277***	0.273***	0.250***	0.250***	0.251***	0.250***	0.252***	0.252***	0.248***	0.246***
		(5.01)	(4.99)	(4.96)	(4.89)	(4.97)	(4.98)	(4.99)	(4.97)	(5.02)	(5.01)	(4.94)	(4.89)
DIVIDENDS	?	-0.070***	-0.070***	-0.072***	-0.072***	-0.069***	-0.069***	-0.070***	-0.070***	-0.070***	-0.070***	-0.070***	-0.070***
		(-8.11)	(-8.16)	(-8.02)	(-8.04)	(-8.04)	(-8.04)	(-8.10)	(-8.17)	(-8.09)	(-8.14)	(-8.10)	(-8.08)
ASSETS	–	-0.040***	-0.040***	-0.045***	-0.045***	-0.040***	-0.040***	-0.040***	-0.040***	-0.039***	-0.039***	-0.041***	-0.042***
		(-10.69)	(-10.66)	(-11.42)	(-11.42)	(-10.67)	(-10.66)	(-10.71)	(-10.68)	(-10.60)	(-10.51)	(-10.97)	(-11.06)
LEVERAGE	+	-0.044**	-0.046**	-0.039*	-0.040**	-0.044**	-0.044**	-0.043**	-0.046**	-0.043**	-0.046**	-0.044**	-0.044**
		(-2.26)	(-2.34)	(-1.94)	(-2.01)	(-2.25)	(-2.24)	(-2.20)	(-2.36)	(-2.23)	(-2.36)	(-2.27)	(-2.23)
SALES_GROWTH	+	0.118***	0.118***	0.123***	0.123***	0.117***	0.117***	0.118***	0.118***	0.118***	0.118***	0.117***	0.117***
		(13.72)	(13.74)	(13.66)	(13.68)	(13.63)	(13.63)	(13.71)	(13.77)	(13.73)	(13.77)	(13.68)	(13.68)
NET_INCOME	+	0.887***	0.888***	0.845***	0.848***	0.891***	0.891***	0.888***	0.890***	0.886***	0.888***	0.889***	0.889***
		(14.57)	(14.59)	(13.51)	(13.55)	(14.62)	(14.64)	(14.60)	(14.64)	(14.57)	(14.60)	(14.60)	(14.61)
CASH	+	1.051***	1.052***	1.052***	1.053***	1.050***	1.050***	1.049***	1.051***	1.052***	1.053***	1.050***	1.050***
		(26.89)	(26.92)	(25.95)	(25.97)	(26.88)	(26.88)	(26.86)	(26.91)	(26.91)	(26.95)	(26.81)	(26.82)

Table E5 (continued)

Panel B (continued): Tests of the Influence of Competition and Transparency on Firm Value Measured as Tobin's Q and Industry Measured at the 3-digit SIC

Variable	Prediction	Model											
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Intercept	?	1.034***	0.986***	1.216***	1.065***	1.089***	1.098***	1.016***	0.982***	1.033***	0.984***	1.075***	1.045***
		(9.03)	(8.34)	(7.38)	(6.13)	(9.40)	(9.05)	(8.87)	(8.51)	(9.02)	(8.32)	(9.30)	(8.82)
Country Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N		164,089	164,089	148,263	148,263	164,089	164,089	164,089	164,089	164,089	164,089	164,089	164,089
Adjusted R2		0.206	0.206	0.213	0.213	0.206	0.206	0.206	0.206	0.206	0.206	0.206	0.206

Table Notes: This table reports parameter estimates and t-statistics in parentheses from the following regression on observations from 1998-2012:

$$FIRM\_VALUE_{i,t+1} = \alpha_0 + \alpha_1 COMPETITION_{i,t} + \alpha_2 TRANSPARENCY_{i,t} + \alpha_3 COMPETITION * TRANSPARENCY_{i,t} + \beta_n Controls_{n,i,t} + \varepsilon_{i,t+1}$$

In Panel A, Models 1, 3, 4, and 6, have 164,089 observations, model 2 has 56,044 observations, and model 5 has 139,712 observations. In Panel B, all models have 164,089 observations. Firm value is estimated using Tobin's Q (*TOBINS_Q*). The dependent variable in Panel A and B is *TOBINS_Q*. Competition is estimated in variables *COMP_CONCENTRATE*, *COMP_DOMINANCE*, *COMP_TOP4*, *COMP_EXISTING*, *COMP_POTENTIAL* and *COMP_IND_ONLY*. Transparency is estimated using *ACCT_CHOICE*, *ANALYST_ERROR*, *BIG_N*, *ANALYSTS*, *UNEXPECTED_SMOOTHING*, and *TRANSPARENCY*. Control variables include *CAPEX*, *ADR*, *DIVIDENDS*, *ASSETS*, *LEVERAGE*, *SALES_GROWTH*, *NET_INCOME*, and *CASH*. All regressions include country, industry (3-digit SIC code), and fiscal year fixed effects. Estimated robust standard errors are clustered by firm. Two-tailed significance at the 10%, 5%, or 1% levels is denoted *, **, and ***, respectively. All variables are defined in Appendix A.

Table E6

Panel A: Tests of the Influence of Transparency on Firm Value Measured as Market-to-Book Ratio and Industry Measured at the 3-digit SIC

Variable	Prediction	Model					
		(1)	(2)	(3)	(4)	(5)	(6)
ACCT_CHOICE	+	0.209***					
		(6.68)					
ANALYST_ERROR	–		-1.187***				
			(-5.67)				
BIG_N	+			0.087***			
				(3.64)			
ANALYSTS	+				0.213***		
					(16.82)		
UNEXPECTED_SMOOTHING	+					0.016***	
						(5.17)	
TRANSPARENCY	+						1.433***
							(18.57)
BIAS	+		1.431***				
			(6.16)				
SURPRISE	?		0.044				
			(0.54)				
EXPECTED_SMOOTHING	+					0.022***	
						(5.34)	
CAPEX	+	1.230***	1.638***	1.187***	0.899***	1.113***	0.996***
		(7.25)	(4.99)	(7.01)	(5.34)	(6.17)	(5.91)
ADR	+	0.600***	0.377***	0.600***	0.586***	0.620***	0.599***
		(5.17)	(3.08)	(5.18)	(4.98)	(5.03)	(5.14)
DIVIDENDS	?	-0.077***	-0.098**	-0.069***	-0.079***	-0.048**	-0.095***
		(-3.86)	(-2.50)	(-3.44)	(-3.97)	(-2.14)	(-4.78)
ASSETS	–	-0.025***	-0.006	-0.021**	-0.106***	-0.011	-0.074***
		(-2.93)	(-0.43)	(-2.50)	(-10.96)	(-1.24)	(-8.42)
LEVERAGE	+	1.065***	1.478***	1.066***	1.135***	1.090***	1.140***
		(19.57)	(14.60)	(19.57)	(20.82)	(18.47)	(20.88)
SALES_GROWTH	+	0.215***	0.280***	0.218***	0.226***	0.223***	0.218***
		(11.45)	(6.90)	(11.60)	(12.06)	(9.73)	(11.59)
NET_INCOME	+	1.314***	5.004***	1.326***	1.249***	1.506***	1.075***
		(9.84)	(13.60)	(9.92)	(9.47)	(9.56)	(8.18)
CASH	+	1.806***	2.460***	1.803***	1.717***	1.828***	1.729***
		(23.49)	(16.93)	(23.42)	(22.60)	(22.02)	(22.58)
Intercept	?	1.202***	0.938***	1.176***	1.619***	0.775***	0.844***
		(5.09)	(3.46)	(5.01)	(7.01)	(3.40)	(3.55)
Country Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes
N		164,089	56,044	164,089	164,089	139,712	164,089
Adjusted R2		0.151	0.195	0.150	0.157	0.156	0.155

Table E6 (continued)

Panel B: Tests of the Influence of Competition and Transparency on Firm Value Measured as Market-to-Book Ratio and Industry Measured at the 3-digit SIC

Variable	Prediction	Model											
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
COMP_CONCENTRATE	?	-0.151***	0.177										
		(-3.18)	(1.55)										
COMP_CONCENTRATE * TRANSPARENCY	**?**		**-0.648*** **										
			(-2.89)										
COMP_DOMINANCE	?			-0.141***	-0.123								
				(-3.08)	(-0.85)								
COMP_DOMINANCE * TRANSPARENCY	**?**				**-0.035**								
					(-0.12)								
COMP_TOP4	?					-0.251***	0.501***						
						(-3.93)	(3.16)						
COMP_TOP4* TRANSPARENCY	**?**						**-1.624*** **						
							(-4.98)						
COMP_EXISTING	?							-0.021***	0.022*				
								(-3.28)	(1.73)				
COMP_EXISTING * TRANSPARENCY	**?**								**-0.089*** **				
									(-3.66)				
COMP_POTENTIAL	?									-0.015***	0.013		
										(-3.20)	(1.09)		
COMP_POTENTIAL * TRANSPARENCY	**?**										**-0.058** **		
											(-2.38)		
COMP_IND_ONLY	?											0.169***	-0.019
												(4.30)	(-0.14)
COMP_IND_ONLY * TRANSPARENCY	**?**												**0.391**
													(1.44)
TRANSPARENCY	**−**	**1.433*** **	**1.796*** **	**1.433*** **	**1.457*** **	**1.433*** **	**1.706*** **	**1.433*** **	**1.853*** **	**1.429*** **	**1.775*** **	**1.432*** **	**1.135*** **
		(18.57)	**(12.25)**	**(18.57)**	**(6.71)**	**(18.57)**	**(17.93)**	**(18.57)**	**(13.26)**	**(18.54)**	**(10.97)**	**(18.56)**	**(5.20)**
CAPEX	+	1.001***	1.019***	1.001***	1.001***	1.007***	1.042***	1.010***	1.036***	0.970***	0.966***	0.993***	0.995***
		(5.94)	(6.04)	(5.94)	(5.95)	(5.97)	(6.18)	(5.99)	(6.14)	(5.74)	(5.72)	(5.88)	(5.90)
ADR	+	0.599***	0.597***	0.596***	0.595***	0.597***	0.594***	0.600***	0.599***	0.589***	0.577***	0.602***	0.604***
		(5.15)	(5.13)	(5.12)	(5.12)	(5.13)	(5.11)	(5.15)	(5.15)	(5.07)	(4.97)	(5.16)	(5.19)
DIVIDENDS	?	-0.095***	-0.097***	-0.094***	-0.094***	-0.095***	-0.097***	-0.095***	-0.097***	-0.095***	-0.094***	-0.095***	-0.095***
		(-4.76)	(-4.84)	(-4.72)	(-4.72)	(-4.75)	(-4.88)	(-4.75)	(-4.84)	(-4.75)	(-4.72)	(-4.75)	(-4.76)
ASSETS	−	-0.075***	-0.075***	-0.075***	-0.075***	-0.075***	-0.075***	-0.074***	-0.073***	-0.080***	-0.082***	-0.074***	-0.074***
		(-8.54)	(-8.50)	(-8.50)	(-8.51)	(-8.54)	(-8.49)	(-8.44)	(-8.30)	(-9.02)	(-9.25)	(-8.43)	(-8.43)
LEVERAGE	+	1.141***	1.134***	1.141***	1.140***	1.142***	1.128***	1.142***	1.130***	1.140***	1.144***	1.140***	1.140***
		(20.90)	(20.78)	(20.90)	(20.86)	(20.93)	(20.71)	(20.92)	(20.74)	(20.87)	(20.92)	(20.87)	(20.87)
SALES_GROWTH	+	0.218***	0.219***	0.217***	0.217***	0.218***	0.220***	0.218***	0.220***	0.217***	0.217***	0.218***	0.218***
		(11.62)	(11.67)	(11.55)	(11.54)	(11.60)	(11.74)	(11.63)	(11.72)	(11.57)	(11.58)	(11.60)	(11.60)

Table E6 (continued)

Panel B (continued): Tests of the Influence of Competition and Transparency on Firm Value Measured as Market-to-Book Ratio and Industry Measured at the 3-digit SIC

Variable	Prediction	Model											
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
NET_INCOME	+	1.076***	1.081***	1.083***	1.082***	1.079***	1.088***	1.076***	1.082***	1.082***	1.085***	1.080***	1.078***
		(8.19)	(8.22)	(8.23)	(8.23)	(8.21)	(8.27)	(8.19)	(8.23)	(8.23)	(8.25)	(8.21)	(8.20)
CASH	+	1.723***	1.727***	1.724***	1.724***	1.722***	1.728***	1.725***	1.730***	1.719***	1.719***	1.728***	1.728***
		(22.52)	(22.56)	(22.53)	(22.54)	(22.50)	(22.57)	(22.55)	(22.60)	(22.43)	(22.44)	(22.57)	(22.57)
Intercept	?	0.886***	0.692***	0.971***	0.959***	0.844***	0.692***	0.879***	0.653***	1.005***	0.847***	0.756***	0.903***
		(3.71)	(2.76)	(4.01)	(3.74)	(3.54)	(2.86)	(3.68)	(2.61)	(4.16)	(3.39)	(3.16)	(3.51)
Country Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N		164,089	164,089	164,089	164,089	164,089	164,089	164,089	164,089	164,089	164,089	164,089	164,089
Adjusted R2		0.155	0.156	0.155	0.155	0.156	0.156	0.155	0.156	0.155	0.156	0.155	0.155

Table Notes: This table reports parameter estimates and t-statistics in parentheses from the following regression on observations from 1998-2012:

$$FIRM\_VALUE_{i,t+1} = \alpha_0 + \alpha_1 COMPETITION_{i,t} + \alpha_2 TRANSPARENCY_{i,t} + \alpha_3 COMPETITION * TRANSPARENCY_{i,t} + \beta_n Controls_{n,i,t} + \varepsilon_{i,t+1}$$

In Panel A, Models 1, 3, 4, and 6, have 164,089 observations, model 2 has 56,044 observations, and model 5 has 139,712 observations. In Panel B, all models have 164,089 observations. Firm value is estimated using market-to-book value of equity (*MTB*). The dependent variable in Panel A and B is *MTB*. Competition is estimated in variables *COMP_CONCENTRATE*, *COMP_DOMINANCE*, *COMP_TOP4*, *COMP_EXISTING*, *COMP_POTENTIAL* and *COMP_IND_ONLY*. Transparency is estimated using *ACCT_CHOICE*, *ANALYST_ERROR*, *BIG_N*, *ANALYSTS*, *UNEXPECTED_SMOOTHING*, and *TRANSPARENCY*. Control variables include *CAPEX*, *ADR*, *DIVIDENDS*, *ASSETS*, *LEVERAGE*, *SALES_GROWTH*, *NET_INCOME*, and *CASH*. All regressions include country, industry (3-digit SIC code), and fiscal year fixed effects. Estimated robust standard errors are clustered by firm. Two-tailed significance at the 10%, 5%, or 1% levels is denoted *, **, and ***, respectively. All variables are defined in Appendix A.