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Multiple Agency Perspective, Family Control and Private Information Abuse in an Emerging Market

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Abstract

Using a comprehensive sample of listed companies in Hong Kong this paper investigates how family control affects private information abuses and firm performance in emerging markets. We combine research on stock market microstructure with more recent studies of multiple agency perspectives and argue that family ownership and control over the Board increases the risk of private information abuse. This, in turn, has a negative impact on stock-market performance. Family control is associated with an incentive to distort information disclosure to minority shareholders and obtain private benefits of control. However, the multiple agency roles of controlling families may have different governance properties in terms of investors' perceptions of private information abuse. These findings contribute to our understanding of the conflicting evidence on the governance role of family control within a multiple agency perspective.

Introduction

Although the financial community and regulators in emerging markets make substantial efforts to improve investors' confidence by setting new accounting and disclosure rules that reflect international standards of good practice, recent scandals and corporate failures, such as Satyam in India, Citic Pacific in China and SK Networks in South Korea, highlight the failure of firm-level corporate governance mechanisms to improve corporate transparency and mitigate widespread private information abuses within less developed stock markets. In the finance literature, private information is defined as the difference between the information sets available to the firm's insiders, informed investors and un-informed investors who assesses whether the company share price is undervalued or overvalued in the stock market (Easley and O'Hara 2004). There are different types of private information abuses such as informal flows of information between well-connected investors and managers of firms in their portfolios, managerial dealings on insider information or information manipulation, etc. When investors suspect that the firm's management is prone to abuse private information, they will price-protect themselves by increasing the firm's cost of capital, which negatively affects the firm valuation and shareholder wealth. Despite the intensive academic and public debate on the possible negative effects of private information exchanges on corporate transparency (Beny 2007) and ultimately, performance, very little is known about the internal corporate governance factors that may affect the extent of private information abuse. Our paper aims to address these conceptual and empirical gaps.

A growing body of research in economics and management is focused on the effects of corporate governance on firm performance in emerging markets (see Filatotchev, Jackson, Gospel and Allcock, 2007, for a review). Agency research, for example, has established an association between concentrated ownership in emerging markets with private benefit of

control (Claessens, Djankov and Lang, 2000; Morck, 1996; Young, Peng, Ahlstrom, Bruton and Jiang, 2008). These private benefits of control are usually assumed to be part of the opaque information environment, which leads to abuses of private access to information by insiders (Peng and Jiang, 2010). However, how the exploitation of private information creates a possible channel to obtain these benefits, as well as the governance role of controlling shareholders in general, and family owners in particular, in terms of insider information abuses in an emerging market environment, remain relatively unexplored. More specifically, little is known about the effects of family ownership and control of corporate boards on the risk of private information abuse. In addition, there is a dearth of research on performance outcomes of reduced corporate transparency, or rather corporate opacity. By addressing these theoretical and empirical gaps, our analysis may help to inform both investment and regulatory processes in emerging markets.

Corporate governance research on disclosure focuses on the relation between corporate governance mechanisms and disclosure decisions or disclosure quality (Claessens and Fan 2002; Chahine and Filatotchev, 2008). This research emphasizes that information is prepared by management, endorsed by the audit committee, approved by the board, audited by external auditors and circulated among investors via various channels. Therefore, various governance factors, such as board composition and distribution of ownership and control, should have a non-trivial effect on the extent and content of information disclosure by senior management and their incentives and ability to abuse private access to information. It is natural to suggest that the firm's governance characteristics should influence investors' expectations with regard to the private information environment of individual firms and, ultimately, their behaviour in placing orders. These orders subsequently lead to trades and affect the price discovery process in the stock market and, ultimately, firm value. However, previous governance research does not consider the risks of private information abuse associated with informed and uninformed

trading. Therefore, there is a need combine corporate governance and market microstructure research and integrate these two separate lines of enquiry to develop a better understanding of how different agency effects influence the risk of firm-level private information abuse and firm performance.

By combining multiple agency perspective with market microstructure research, this paper investigates complex inter-relationships between family ownership and private information abuse risk in an emerging market. It extends previous studies in a number of ways. First, it aims to explore the governance effects of family control on firm performance by considering private information disclosure as an important transmission mechanism from family control to organisational outcomes. We argue that risks of private information abuse are associated not only with general firm characteristics, such as size, complexity, etc., but also with governance parameters, including ownership structure and board composition. Second, this examination allows us to expand and contextualise nascent understanding of the multiple agency perspective (e.g., Arthurs, Hoskisson, Busentiz and Johnson, 2008; Bruton, Filatotchev, Chahine and Wright, 2010) which moves away from a simplistic principal-agent dichotomy and considers the multiple governance roles of the same participants in the firm's governance mechanism. Previous studies of the effects of corporate governance on disclosure are focused on potential conflicts between managers and dispersed, minority shareholders. In this setting, managerial self-serving may distort information disclosure when top managers try to extract personal rents from organisational opacity (Jensen and Meckling 1976; Lambert 2001). However, firms in many emerging markets are characterised by high levels on non-managerial share ownership. The presence of large block-holders, who often represent a founding family, create a multiple agency setting that include agency conflicts between largest family shareholders and managers; between managers and minority shareholders; and between family shareholders and minority shareholders (Claessens and Fan 2002; Filatotchev,

Lien and Piesse, 2005). As large block-holders, family shareholders can monitor managerial disclosure decisions and improve transparency for themselves as well as for the minority shareholders (Shleifer and Vishny 1997). They may also have incentives to extract private benefits of control at the expense of minority shareholders using private information within less transparent corporate structures (Morck, 1996). This paper explores how family owners choose the optimal transparency level that maximises their own interests bearing in mind a trade-off between benefits of increased transparency and costs of releasing private information in terms of losing some private benefits of control (Verrecchia 2001). Third, in the context of multiple agency conflicts, we link private information abuse risk to firm performance. This puts this paper among the first studies that try to explain various channels used by dominant shareholders to extract private benefits of control. We contribute to this research by focusing on insider information as a valuable commodity in an emerging market environment.

Finally, we test our theoretical assumptions using the population sample of firms listed in Hong-Kong. Although this paper focuses on a single market, the Hong Kong stock exchange is a model for many emerging economies. At the same time, it allows us to analyse corporate governance effects on information disclosure and performance in situations where top managers are frequently family members; where controlling families are also represented on the board; and where they are often the major providers of capital, if not directly, then through relational holdings in other firms (Bruton, Ahlstrom and Wan, 2003, Filatotchev, Strange, Piesse and Lien, 2007). At the same time, family-controlled firms that are listed on the stock exchange also have minority shareholders to whom managers are accountable, and governance effects of family control on information disclosure and performance is therefore an important research issue. Finally, an improvement in reporting and disclosure standards and high levels of transparency in the market trading environment in Hong Kong presents an

opportunity for a rigorous empirical study using a combination of firm-level and market trading data.

THEORETICAL FRAMEWORK & HYPOTHESES

The effect of family control on private information abuse risk

Within economics and corporate finance, a substantial body of research has focused on the governance roles of dominant family owners, especially in the environment of emerging and less developed economies (Claessens et al., 2000). Few empirical studies consider organisational performance of publicly owned, family controlled firms directly, although Claessens et al. (2000) confirms that a large proportion of listed companies are still under family control in a number of countries in East Asia. Clearly, this is the common model of corporate governance in the region (Bruton et al., 2003; Peng and Zhou, 2005). At the same time, corporate control in East Asia is largely dependent on a pyramid ownership structure with equity cross-holding amongst associated firms making the separation of ownership and control very unlikely. With a high overlap between controlling family and management, discipline towards management is weak and the opportunity for shareholder expropriation commonplace (Filatotchev et al., 2005).

The model of the family-owned business has been the subject of numerous studies (see Filatotchev et al., 2007, for a review). Agency-based research suggests that family owners may have superior monitoring abilities compared to diffused shareholders, especially when this is combined with family control over management and the boards of firms (Anderson and Reeb, 2004). Because owners in the current generation have the tendency and obligation to preserve wealth for the next, family firms often possess longer time horizons compared to non-family firms (Bruton et al., 2003). Anderson, Mansi and Reeb (2003) suggest that these

characteristics can alleviate agency conflicts between the firms' debt and equity claimants and reduce the agency costs of debt. Heugens, Essen and Oosterhout (2009) present a meta-analysis of the relationship between concentrated ownership and firm financial performance in Asia that finds a positive association between both variables. Thus, family firms represent a special class of large shareholders that may have a unique incentive structure, a strong voice in the firm, and provide powerful motivation for managers.

A number of researchers express concerns about the governance problems associated with family control and the increased likelihood of the abuse of power (Jiang and Peng, 2010). Research from North America (e.g. Morck, Shleifer and Vishny 1988, Smith and Amoako-Adu, 1999) and South-East Asia (e.g., Filatotchev et al., 2005; 2007) provides evidence of the negative effect of a controlling family on corporate performance. This suggests that family interests may dominate over the interests of non-family shareholders, since the concentration of personal and family wealth in family-controlled firms normally creates a preference for wealth distribution towards dominant owners over other dimensions of firm performance, such as maximisation of dividend payments to outside shareholders (Carney and Gedajlovic, 2003). Finally, family control tends to shield a firm from the disciplinary pressure of the market for corporate control since concentrated share ownership reduces the probability of a hostile take-over (Gomez-Mejia, Larraza-Kintana and Makri, 2003). Young et al. (2008) review and synthesize recent research on principal-principal conflicts in many emerging economies with an emphasis on their institutional antecedents and organizational consequences. This emphasises the significance of principal-principal conflicts as an important but often overlooked problem in corporate governance. More specifically, Peng and Jiang (2010) theorize that whether the impact of family ownership and control on firm value is good, bad or irrelevant depends on the level of shareholder protection embodied in the legal and regulatory institutions and these vary across countries. They suggest that in

countries with less developed institutions more control through a family CEO or pyramid structure may afford controlling families more opportunities to expropriate funds from minority shareholders. However, very few studies focus on the effects of family control on the risk of private information abuse.

Agency arguments suggest that in emerging markets, family shareholders should have a strong incentive to distort public disclosure and mislead minority shareholders in order to gain private benefits of control (Anderson, Duru and Reeb, 2009; Chin, Kleinman, Lee and Lin, 2006; Faccio, Lang and Young, 2001; Lang, Lins and Miller, 2004). For example, to facilitate their tunnelling activities and transfer private benefits of control, family owners in Hong Kong often fail to meet the minimum requirements set by the Hong Kong stock exchange with regard to transaction disclosure (Ho 2003). Fan and Wong (2002) find that the quality of public disclosure deteriorates when family owners control more voting rights than cash-flow rights in the company.

These arguments suggest that high family ownership increases the firm's information opacity and stimulates the collection of private information by informed, sophisticated investors (Diamond 1985; Verrecchia 2001) leading to higher private information abuse risk faced by uninformed investors. Therefore, it is proposed that:

H1: Family ownership is positively associated with the risk of private information abuse in an emerging market

Besides ownership, corporate governance research and organization studies increasingly recognise that boards of directors have a central role in reducing agency problems, and the board structure and characteristics may influence strategic decisions, including information disclosure (Zahra and Pearce 1989). Effective monitoring and service

roles are usually a function of structural factors such as the proportion of independent directors on the board (Zahra and Pearce, 1989). A number of studies try to link board characteristics directly to firm performance. For example, in his study of boards of the largest firms in China, Peng (2004) documents a positive relationship between the presence of independent directors and firm performance. However, there is a paucity of studies that explore inter-relationships between board characteristics and private information disclosure.

Specific characteristics of corporate boards in large firms in emerging markets bring new and interesting dimensions to this research on the governance role of boards. Existing studies on corporate governance in family-controlled firms in South and East Asia suggest that family members often dominate the boards of directors by nominating family members on to the board (Filatotchev et al., 2005; Bruton et al., 2003). In this environment, agency analysis of performance outcomes of board independence from the CEO and other executives that dominated research in the US and other developed economies becomes less relevant. Instead, the focus shifts towards studying organizational outcomes of directors' independence from controlling families (Filatotchev et al., 2005).

Filatotchev et al. (2005) argues that family control over the board may lead to greater executive entrenchment and potential agency conflicts with outside investors, in particular with public market shareholders that may suffer from a high level of information asymmetry. For example, Xie, Davidson and DaDalt (2003) test the role of independent boards of directors in preventing the manipulation of earnings statements. Results suggest that an independent board and audit members, especially those with appropriate areas of expertise, effectively lower the discretionary current accruals showing in corporate financial reports. In an opaque environment, control over the firm's board as an additional control-enhancing mechanism can provide family shareholders with enhanced power to pursue their private objectives. Family shareholders with more power are more likely to make their firms more

opaque, leading to an increase in private information abuse risk in the stock market. According to agency arguments, a lack of independent directors can compromise the board monitoring function (Anderson and Reeb 2004; Boeker and Goodstein 1993; Li 1994; Weisbach 1988; Zajac and Westphal 1996). Thus, family that are dominant on the board can entrench themselves and are not liable to being disciplined by other independent directors. This makes it easier for the largest family shareholders to create opportunistic opacity and exploit this to obtain private benefits of control. Based on the analysis above, it is proposed that:

H2: Family dominance on the board is positively associated with the risk of private information abuse in an emerging market.

Our previous arguments were focused on agency conflicts between controlling families and minority investors within the context of private information abuse risk. However, the multiple agency perspective suggests that both controlling families and minority investors may be exposed to a different set of agency costs that may be associated with managerial opportunism. Ultimately, it is managers that decide how much and what kind of information the firm discloses publicly, and they may pursue their own interests when making this decision. Without controlling the top level of the decision-making hierarchy, family shareholders have to bear costs of managerial opportunism just as minority investors. Therefore, the risk of private information abuse also depends on whether the family takes control of the top leadership within the firm, such as the CEO and/or board's Chairman.

Within the multiple agency perspective, it is not clear which agency conflict will dominate the family's preferences with regard to information disclosure. Within the principal-principal agency conflict, the board leadership may enhance the power of the

controlling family, leading to a stronger incentive to extract private benefits of control. Being related to a controlling family, the CEO and Chairman are less likely to be removed by minority shareholders (Villalonga and Amit, 2006). By appointing senior executives, the family may have incentives to extract higher benefits of control by increasing the firm's opacity vis-à-vis minority shareholders.

However, when leadership positions are occupied by family members, the disclosure preferences of family owners and minority shareholders may become more aligned when confronted by the threat of managerial opportunism. Compared to externally appointed managers with low levels of equity in the firm, family shareholders have a higher preference for corporate transparency since any price discount due to adverse selection problems would cause a significant loss in the family's wealth. Family leadership, therefore, provides an opportunity to directly monitor managerial decisions with regard to private information disclosure by, for example, restraining managerial dealings in insider information. In addition, social pressures within the family may prevent family-affiliated managers from dealing in private information. Family leadership can also improve the ability of the board to process information and lower uncertainties when managers make public disclosure decisions. This further improves the quality of public disclosure and lowers both the benefits of private information collection by outside speculators and overall private information abuse risk faced by uninformed investors (Zhang 2001). Family leadership can improve the ability of the board to process information not only because family shareholders are informed about the firm's operations, R&D and other strategic issues (Baysinger and Hoskisson 1990; Gomes-Mejia et al. 2003), but also because they internalise information flows between management and the board, which can reduce any risk of misunderstanding and poor strategic decision-making.

Based on the analysis above, there are compelling reasons to believe that enhanced monitoring associated with the family's control over board leadership should lead to a

reduction of principal-agent conflict associated with information disclosure, and its benefits may be higher that potential costs of the family's entrenchment. Hence, we suggest the following:

H3: Family board leadership is negatively associated with the risk of private information abuse in an emerging market.

Private Information Abuse Risk and Stock Market Performance

Our previous arguments suggest that family control over firm ownership and the board reduces transparency to the public market investors, and leads to increasing levels of private information abuse risk. If family entrenchment dominates private information abuse risk, investors would recognise this and price-protect themselves against family opportunism. Therefore, private information abuse risk should have a negative impact on firm value. In an increasingly opaque information environment, largest family shareholders become even more entrenched (Anderson et al. 2009). Investors recognise the risk of being expropriated by family shareholders in a firm with high levels of informed trading. First, in an environment of poor information disclosure that exists in many emerging markets, uninformed investors may assume that all incremental private information is negative, given the adverse selection hypothesis (Akerlof 1970). As a result, to acquire stock in companies with higher information abuse risk, they would require a higher rate of return or a higher discount on the share price (Easley and O'Hara, 2004). The multiple agency framework outlines various agency conflicts associated with information asymmetries between controlling families, minority shareholders and managers. Therefore, these conflicts of interest should lead to a negative relationship

between the overall private information abuse risk and the performance of the firm in the stock market. Hence:

H4: The risk of private information abuse is negatively associated with the firm's stock market performance.

METHODS

Sample

We focused on companies listed on the Hong Kong Stock Exchange (HKSE) since it provides an excellent laboratory to explore the agency effects of family owners on private information abuse risk in an emerging market. Hong Kong is characterised by a high level of ownership concentration in listed companies, and the communication of information is facilitated mainly through private channels, meaning that both strategic and operational information can be easily hidden by insiders. Information exchanges between firms and investors are dominated by networks, or Chinese *guanxi*, with information asymmetry problems being more likely resolved through private communication channels, leaving individual minority shareholders largely uninformed. In addition, Stoll and Whaley (1990) and O'Hara (2001) indicate that the HKSE can mitigate market noise and emphasise the importance of firm-level corporate governance factors in explaining private information abuse risk because of the size, quality and structure of this particular market. Amongst East Asia countries, the HKSE that has been established since 1891 is generally considered to have the highest quality in the region. It is classified by the International Finance Corporation as a developed stock market, with the sixth largest total capitalisation in the world and the second largest total capitalisation in East Asia after Japan (Comerton-Forde and Rydge 2006). As an order-driven, non-specialist market, the HKSE mitigates private information abuse risk associated with market-makers' monopoly

power[1] and provides an opportunity to observe order imbalance and identification. Finally, concentrated ownership in Hong Kong-listed firms represents a more general phenomenon associated with ownership structures in emerging economies, and our research results may be generalised to other parts of the world. Although HKSE has insider trading laws, prosecution is infrequent and enforcement is ineffective, again reflecting similar situations in other emerging economies (Bhattacharya and Daouk 2002).

To test our hypotheses, data on all 812 companies listed on the HKSE (Main Board) in 2006 were collected. Following common practice, financial institutions (e.g., firms with two-digit SIC codes from 60 to 67) were omitted. We removed 164 companies with missing data for the control variables. We also removed 54 companies with corner solutions for the variable of private information abuse risk and extreme values for control variables. The final sample consists of 447 companies. In terms of industrial distribution, this includes 51 firms (11.41% of the total) from building and construction, 40 firms (8.95%) from the electronic and electrical equipment industry, 27 firms (6.04%) from wholesale trade in durable goods, 20 firms (4.47%) from the chemicals industry, 20 firms (4.47%) from business services and 16 firms (3.58%) from the communications sector. The rest of the sample is widely distributed across other industries.

Measurement

Because of its very nature, risk of private information abuse is essentially unobservable. Prior finance studies use a number of proxies to evaluate this, such as spread, analyst coverage,

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[1]Designated Market Makers are also known as Specialists, who act as the official market maker for a given security. In return for a) providing a required amount of liquidity to the security's market, b) taking the other side of trades when there are short-term buy-and-sell-side imbalances in customer orders, and c) attempting to prevent excess volatility, the specialists are granted various informational and trade execution advantages. In the United States, the New York Stock Exchange (NYSE) and American Stock Exchange (AMEX) have a single exchange member as the specialist. Other U.S. exchanges, most prominently the NASDAQ Stock Exchange, employ several competing official market makers in a security. On the London Stock Exchange (LSE) there are official market makers for many securities (but not for shares in the largest and most heavily traded companies, which instead use an automated system called TradElect). Most other stock exchanges including HKEX operate on a matched bargain or order driven basis. In such a system there are no designated or official market makers.

abnormal accruals, earnings informativeness and opacity index (Anderson et al. 2009; Lang et al. 2004; Lang and Lundholm 1996; Warfield, Wild and Wild, 1995; Callan, Lee and Yahn 1997). In this paper, private information abuse risk is measured by the possibility of informed trading in a company share that contains private information (PIN). PIN is estimated using the model developed by Easley, Kiefer, and O'Hara, (1997b). While it is not possible to identify exactly who are informed traders of private information, the presence of private information in the market can be inferred from large imbalances between the number of buy and sell orders. On an ordinary trading day without private information releases, trade orders from buyers and sellers are roughly matched and balanced. However, when private information is obtained by some market participants, there will be a large imbalance in the order flow, with buyer- or seller-initiated trades playing a predominate role. These imbalances form the basis for the market microstructure model of information asymmetry. Although Venter and Jongh (2006) suggest an extension of the PIN model which improves the ability to fit the observed trading data patterns, calculations and estimations become much more complicated. Although the PIN model may bias downwards the possibility of detecting the risk of private information abuse (Boehmer, Gramming and Theissen 2006), it will not invalidate the results in this paper.

We follow Easley, Kiefer and O'Hara (1997a), Easley et al. (1997b), and Easley, Kiefer, O'Hara and Paperman (1996) who suggest an empirical model that provides specific estimates of the risks of information-based trading. They show that the maximum likelihood estimator can solve the structural model's parameters simultaneously using daily numbers of buy and sell orders to calculate the PIN measure as a proxy for private information abuse risk. This model requires daily numbers of buy and sell orders for a minimum of 40 trading days (Easley, O'Hara and Paperman, 1998) to generate reliable private information abuse risk estimation without incurring any sample selection concerns. Therefore, high frequency trade transaction data and bid-ask data for Hong Kong-listed companies from April 1 2006 to Jun

30 2006 were obtained directly from the HKSE to explore the presence of informed trading in the stock market. This period was relatively tranquil and did not have any dramatic shocks that may have affected the pricing of stocks.

In our research, each trade is specified as buyer- or seller-initiated using the standard Lee–Ready algorithm (Lee and Ready 1991). The algorithm classifies any trade that takes place above (below) the midpoint of the current quoted spread as a buy (sell) because trades originating from buyers (sellers) are most likely to be executed at or near the ask (bid). For trades taking place at the midpoint, a tick test based on the most recent transaction price is used to classify the trade. Large trades are often broken down and matched against multiple investors. Following Hasbrouck (1988), all trades occurring within 5 seconds of each other are classified as a single trade. Thus, using real-time trades and bid-ask data in a single firm's stock and using the maximum likelihood estimator, we are able to find the Balanced Trade level for buyers and sellers on all ordinary trading days (BT), Abnormal Trade level when private information is obtained by some market participants (AT), and the Possibility that some market participants can get access to private information (P). Therefore we can construct a proxy for the release of private information using BT, AT and P and calculate PIN based on the formula: PIN= [P*AT]/[P*AT+BT].

Compared with alternative proxies of private information, the PIN provides a more direct and comprehensive measure of private information abuse risk that is stable in the long-term. For example, PIN is better than spread-based proxies of information asymmetry because spread is more likely to capture the short term factors associated with responses of a dealer's inventory to the order imbalance rather than long term information asymmetry factors (Callahan et al., 1997; Madhavan, Richardson and Roomans, 1997). In addition, the PIN method avoids econometric problems and interpretation difficulties that are associated with spread-based measures of information asymmetry (Callahan et al. 1997; Neal and Wheatley

1998; O'Hara 1995)[2.] PIN is also better than other proxies for private information used in earlier accounting and finance literatures, such as analyst coverage (Lang et al. 2004; Lang and Lundholm 1996), abnormal accruals and earnings informativeness (Warfield et al. 1995), and Opacity Index (Anderson et al. 2009). This is, because it captures more private information abuse risk by using information on decisions of all stock market participants rather than individual analysts' forecasts, and it clearly focuses on private information abuse risk as the ultimately outcome of a firm's public disclosure decision. Finally, PIN is more effective than other measures because it represents a reliable and stable firm information structure that captures long term private information abuse risk in the stock market (Easley, Hvidkjaer and O'Hara, 2002). In the empirical work of Easley et al (2002), the estimated PIN is very stable across sample years from 1983-1998, both individually and in the cross-section. This is considered to be strong evidence that PIN captures the long-term underlying information structure rather than the temporary momentum in information structure shock.

In terms of performance outcomes, Tobin's Q is used as the measure of firm value. Tobin's Q is calculated as the market value of common equity plus book value of debt divided by the book value of total assets, in this case at the end of 2006. The Tobin's Q ratio is the most common firm performance measurement in empirical corporate governance research (Anderson et al. 2009; Bruno and Claessens 2007; Morck et al. 1988). Compared with accounting ratios that reflect historic performance of the firm, such as return on capital employed and return on assets, Tobin's Q is a forward-looking evaluation that may be particularly sensitive to information opacity associated with managerial opportunism (Coff, 1999). Bearing in mind that private information abuse risk primarily affects investor

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2. For example, market makers protect themselves from information asymmetry by simultaneously manipulating both the quoted bid and ask prices along with the quoted depths associated with those prices. Unless research design allows for the simultaneous choice of depths, the spread-based analyses are incomplete and difficult to interpret. For more detailed discussion, see Lee, Mucklow and Ready (1994).

perception of firm value and is more forward-looking by its nature, Tobin's Q provides a much more appropriate measure in the context of our research.

We used a number of variables that are associated with family control. First, data on ownership are central to this study, and were obtained from a variety of sources, including the directors' biography in companies' annual reports, WorldScope, the OSIRIS ownership tree, and information on major shareholder provided by the Bank of China (Hong Kong)-Qianlong database. Given the high concentration of family owned firms in Hong Kong, the measure of ownership is defined as the equity holding of the largest individual shareholder and close family. Following Claessens et al. (2000) and Filatotchev et al. (2005) the membership of the controlling family is identified by linking corporate insiders including CEO, board members, board chairman, honorary chairman and vice chairman that share a common family and second name with the largest owner. Having identified the family of the largest shareholder, we investigate the shareholding of every individual member and sum these to define the total ownership of each family. In addition to the share ownership stakes directly owned by the controlling family we also included stakes owned by outside firms that were controlled by the same family. The latter allowed us to account for an ownership pyramid effect that may increase families' voting power beyond the limits of their immediate share ownership (see Zingales, 1995, for a discussion of this issue).

To measure family control over the board, two variables were used. First, to capture the critical bargaining power of the largest family, a Family Board Dominance dummy (FBDD) is equal to 1 if the number of family members on the board is more than the number of independent directors in board, and 0 otherwise. According to HKSE listing rules, the independent directors are those without any connection to the largest family shareholders and without any business connection to the company. Second, a Family Leadership dummy (FACD) is equal to 1 if both CEO and Chairman of the board are classified as the members of

the largest controlling family using the common family and second name criteria and zero otherwise.

To avoid spurious correlation, we used a number of control variables. These include: a founding family dummy, total board size, ownership of directors who are not from the largest family, market capitalisation of common equity, share liquidity measured by the average monthly trading volume, the daily return risk (standard deviation in share prices), sales revenue, sales growth, leverage, return on equity capital (ROE), firm age (the number of years listed on Hong Kong Stock Exchange) and financial analysts' coverage (the number of the first year forward EPS estimates available from I/B/E/S). Industry effects are controlled by dummies associated with 2 digit SIC codes.

RESULTS

Table 1 reports the descriptive statistics for the variables used and Table 2 provides the correlation matrix. As Table 1 indicates, in terms of private information abuse risk, the mean possibility of private-information based trading is 0.30, which means that on average 30 percent of the trades in HKSE convey private information. Easley et al. (2002) find that on average 19 percent of the trades on the New York Stock Exchange (NYSE) convey private information with 33.1 percent of the private information event days conveying negative private information. Compared with the findings from the NYSE, there is not only a higher overall private information abuse risk on HKSE, but also a higher probability that private information event days are associated with negative private information (50.8 percent). The relative intensity of trading by informed investors can be measured by the ratio of the arrival rate of informed trades over the arrival rate of uninformed orders. On the NYSE, the relative intensity of informed trading is 1.34 (Easley et al., 2002). On the HKSE, our calculations show that the relative intensity of informed trading is 1.90. These differences between the

HKSE and the NYSE are consistent with the characteristics of Hong Kong as a market with weaker investor protection, a less litigious environment and less rigorous disclosure policies (Bushman, Piotroski and Smith, 2005; Claessens and Fan 2002). It also has a more relative intensity of informed trading and more private information abuse risk than the US. Therefore, there is a higher level of private information abuse risk faced by minority shareholders in the Hong Kong market.

<Table 1 here>

In terms of ownership structure, 361 or 80.76 percent of the sample firms are controlled by the family. On average, the largest family controls 39.49 percent of the outstanding shareholdings. This is higher than findings reported by Claessens et al. (2000) for a sample of 330 firms listed in Hong Kong, for which there are two explanations. First, since 1997 more family-controlled companies from Mainland China were listed in Hong Kong. Second, our approach based on directors' biographies, supplemented by multiple sources of ownership information, improves the identification of family membership. When we examined the distribution of family ownership concentration it appears that family shareholdings between 0–20 percent, 20–35 percent and over 35 percent are found in 5.82 percent, 11.86 percent and 63.08 percent of firms in the sample, respectively. Therefore, compared with other Asian countries, the percentage of companies controlled by largest family shareholders in Hong Kong is extremely high.

In terms of general board characteristics, in 233 companies or 52.13 percent of the sample, the largest family shareholders take the leadership role in both management and board by controlling both CEO and Board Chairman, which is similar to the findings of Claessens et al. (2000), who found a similar figure of 53.4 percent. In our sample, 42 companies or 9.40 percent of the total have boards totally dominated by the largest family (e.g., family directors have a majority of seats on the Board, and both a CEO and a Chairman are family members).

Table 2 shows that largest family's ownership and family board dominance are positively correlated with private information abuse risk, while private information abuse risk is negatively correlated with firm performance. Such correlations suggest that largest family shareholders' control is more likely to stimulate increased private information abuse risk and this can lead to a decrease in firm performance, as predicted. Table 2 also shows some high correlations between independent variables which may cause the multicollinearity problems. However, these variables are used separately in different regression models, thus multicollinearity does not present concerns.

<Table 2 here>

Table 3 reports results of hierarchical regressions. Model A includes controls only, and in Models B to C we introduce governance-related explanatory variables in a stepwise fashion. As Model B shows, there is a significant positive relationship between the largest family shareholder's ownership and overall private information abuse risk level, suggesting that when owning more equity family shareholders create greater information opacity, supporting hypothesis 1.

Although there is no significant relationship between family board dominance and overall private information abuse risk in Model C, this relationships becomes positive and significant in Model D, when both family board dominance and family leadership are included in the model. Here, family leadership is significantly and negatively related to overall private information abuse risk. These findings suggest that the family board dominance and family leadership are different dimensions of family board characteristics. Without discriminating between these differences, the results of family board control on private information abuse risk may be ambiguous. Overall, hypothesis 2 is supported. Model D also suggests that the largest family's board leadership mitigates disclosure distortion associated with managers hired from outside the family, supporting hypothesis 3. The adjusted R-squared improves by

10.57 percent in Model D compared to Model A, suggesting that corporate governance variables explain a substantial proportion of private information abuse risk.

In terms of control variables, Table 3 indicates that the largest family shareholders' founder status is negatively associated with overall private information abuse risk. It seems that factors associated with their prestige and historical links with the firm may better align their interests with other minority shareholders and mitigate the extent of opportunistic opacity, ultimately leading to lower private information abuse risk. This finding is consistent with previous research suggesting that the founding family is associated with lower abnormal accruals, greater earnings informativeness, and less persistence of transitory loss components in earnings (Wang 2006) as well as with higher valuation than similar firms without founding family control (Kang 1998; McConaughy, Walker, Henderson and Mishra, 1998). The result also shows that private information abuse risk is higher in small firms and in firms with lower stock market liquidity. These results are consistent with Aslan, Easley, Hvidkjaer and O'Hara (2007), who indicate that smaller firms have less transparency and that those with limited trading activity tend to be less attractive to uninformed investors. Firms with higher daily return volatility have lower private information abuse risk, suggesting that higher potential returns may lead to an increase in speculative activity by uninformed investors.

<Table 3 here>

Table 4 reports the effects of private information abuse risk on firm performance (Tobin's Q). To explore possible direct effects of corporate governance on performance, Model E provides regression results using all governance variables from Table 3, plus controls. This model clearly indicates that there is no significant direct relationship between family control and firm performance. However, there is a significant negative relationship between private information abuse risk and firm performance in Model F, suggesting that although largest family shareholders' opportunistic or strategic considerations do not affect performance

directly, they can provide an indirect effect using private information abuse risk as a transmission mechanism. Therefore, the overall governance effects of largest family shareholders within the context of private information abuse risk are related to the firm's information opacity and the extraction of private benefits of control. These effects are recognized by the stock market participants leading to a reduction in Tobin's Q. Therefore, hypothesis 4 is supported.

<Table 4 here>

However, informed trading transactions incorporate both market-wide and firm-level private information into the share price (Chordia, Roll and Subrahmanyam, 2002; Bardong, Bartram and Yadav, 2008). Market-wide private information generates co-movements of share prices (Roll 1988), and this risk factor leads to discounted prices equally across firms. The firm-level component of private information abuse risk reflects intentionally distorted disclosure by managers and/or a lack of scrutiny by investors and market intermediaries (Anderson et al. 2009). The controlling shareholders may be exploiting diminished transparency or opacity by extracting personal benefits at the expense of investors' ignorance.

Bearing in mind the above arguments, we expect investors to put a bigger discount on this part of private information abuse risk than total private information abuse risk. In Model G we used two stage least square (2SLS) regression with the fitted values of PIN obtained from Model D in Table 3 (see Pagan, 1984, for a discussion of this methodology). Market-wide private information, which is common across all listed firms, is captured in the error term and thus removed from the explained component of private information abuse risk. Results in Model G show that the fitted private information abuse risk has a significant and stronger negative effect on firm performance compared to the overall private information abuse risk that also contains market wide private information abuse risk. This stronger negative relation between the explained private information abuse risk and firm performance suggests that

investors place greater valuation discounts on the firm-level governance-related proportion of private information abuse risk than the total private information abuse risk that includes market-wide risks.

Finally, in Model H we included all governance variables, explained PIN and controls. These regression results are a significant contrast to the results in Model E. Model H suggests that, after controlling for explained private information abuse risk, family control over ownership and the board has a positive impact on performance. The firm-level explained private information abuse risk is still significantly and negatively associated with firm valuation, as predicted by our framework.

These findings indicate potential differences in the wealth-generation and wealth-distribution governance roles of the controlling family, in line with the multiple-agency perspective on family control that we have developed in the theoretical part of the paper. If the firm was absolutely transparent to outside shareholders, they would put a premium on family control since the enhanced monitoring capacity of the family and their longer-term commitment to growth may mitigate principal-agent conflict and lead to an improvement in the firm's rent generation capabilities. However, family control also leads to an increase in the firm's opacity and aggravates principal-principal conflict between the family and minority shareholders. This conflict creates negative wealth distribution effects associated with opportunism by the family, as indicated by a significant negative sign for the explained PIN regression coefficient. Therefore, from the multiple-agency perspective, family ownership and board control create a governance trade-off when the effects of superior monitoring capacity of family shareholders are off-set by their impact on firm transparency.

Our results show that family board leadership is negatively associated with firm performance after controlling for firm-level private information abuse risk. Previous empirical evidence on the governance roles of family leadership is mixed, and some research shows that

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firms with family leaders trade at a premium relative to other firms (Adams, Almeida and Ferreira, 2009; Fahlenbrach, 2008) while others show a negative relationship between these two factors (Smith and Amoako-Adu 1999). Again, our findings suggest there may be governance trade-offs associated with family control over firm leadership. By appointing family members as Chairman and CEO, the controlling family may reduce information abuse risk associated with opportunism of externally hired managers. A subsequent reduction in the expected PIN signals to investors that their wealth is better protected leading to an increase in Tobin's Q. However, by promoting family members to top board positions, the controlling shareholders reduce the professionalization of the firm that is associated with externally appointed managers. Some researchers suggests that using family human resources results in lower wealth-creating capability by limiting organisational learning, entrepreneurship and innovation (Schulze et al. 2001; Singell and Thornton 1997). This focus on internal sources of managerial talent may reduce the rent generation capability of the firm, and this is reflected in a fall in Tobin's Q. Thus, when making decisions about the professionalization of the firm, the largest family shareholders face a dilemma between more competent, externally hired professional managers who may increase the risk of information distortion, and potentially less talented managers from inside the family who present a lower information abuse risk. Facing such a trade-off, large family shareholders in Hong Kong seem to prefer to appoint their own leaders. Our data suggest that in 52.13% of the sample, the largest family shareholders prefer a strong board leadership role.

Finally, we also included in Model H interactions of the expected PIN with all governance variables. Our results (not reported here) show, family ownership and leadership (board dominance) negatively (positively) moderate the impact of the expected private information abuse risk variable E[PIN]. This suggests that wealth-protecting effects of family

control may be higher when private information abuse risks are relatively low, in line with our general arguments.

In terms of controls, Table 4 indicates that larger and older firms have a lower Tobin's Q compared to their smaller and younger peers. Tobin's Q is also positively affected by firm growth, and negatively affected by past ROE. This initially appears to be counter-intuitive although it is established in the literature that reversion to the mean is the most powerful effect in investment finance. That is, in most circumstances, investors buy low-profitability companies and sell high-profitability ones and thus there is tendency for the market to converge (Fama and French, 2000; Knapp, Gart and Chaudhry, 2006). Overall, as Table 4 shows, by including factors associated with the two governance roles of controlling families there is a substantial increase in the adjusted R-squared in Model H compared to Model E.

DISCUSSION

Corporate transparency is an important but controversial issue in corporate governance and strategy research (Verrecchia 2001). Higher transparency protects shareholder value and reduces the cost of capital for the firm, but too much transparency may lead to the leakage of strategic information that harms long term competitive advantage. How diverse objectives of different stakeholders and corporate governance factors affect efficiency trade-offs associated with information disclosure represents a relatively unexplored area within the economics and management literature, and this paper attempts to answer this important question.

Although previous research on corporate governance in emerging markets has identified the importance of private benefits of control, which are often associated with the powerful position of concentrated shareholders, our understanding of specific mechanisms of rent extraction by controlling shareholders is limited. In particular, their influence on private information abuse risk and firm opacity to the external investment community is unclear.

This paper examines how control of the largest family influences overall private information abuse risk, and how this affects performance. It contributes to previous research by providing empirical evidence that links family control and firm performance through the perspective of private information abuse risk. We show that family ownership and family board dominance increase private information abuse risk in the stock market. By increasing firm opacity controlling families may create opportunities to abuse their dominant position at the expense of minority shareholders, following Anderson et al. (2009).

This study also extends the nascent theoretical emphasis on multiple agency theory (Arthurs et al., 2008; Bruton et al., 2009). We consider the heterogeneity of investors by examining the impact of both principal-agent and principal-principal conflicts on information risk. We show that corporate governance factors associated with family control may play a dual role. Controlling families may mitigate private information abuse risk associated with managerial opportunism. At the same time, they may be tempted to increase information opacity in order to extract the private benefits of control at the expense of minority shareholders. Therefore, information disclosure is associated with important governance trade-offs when controlling shareholders attempt to offset their personal costs of disclosure with the benefits of a potential reduction in the cost of capital of the firm. Our analysis helps to disentangle conflicting objectives of family shareholders and their effects on performance. It shows that families may play dual governance roles by supporting long-term wealth generation on one hand, and engaging in an opportunistic wealth distribution in an environment of corporate opacity on the other. This analysis supports theoretical arguments by Coff (1999) and helps to explain conflicting evidence on family control in the agency and strategy literatures (Anderson et al. 2003; Claessens, Djankov, Fan and Lang, 2002; Holderness and Dennis 1988; McConaughy et al. 1998).

Similarly, controlling families also create a governance trade-off when choosing to be actively involved in managing the firm. By appointing an outside CEO and Chairman, the controlling family may face an increased risk of managerial opportunism associated with information distortion. However, when these external leaders are replaced by family members, the firm becomes less professional, and our analysis shows that in emerging markets this lack of professionalism causes a reduction in performance. Our data indicate that largest family shareholders in Hong Kong prefer their own leadership to improve transparency despite the fact that it reduces investors' evaluation of the firm. Overall, our findings are in line with research by Ball, Robin and Wu (2003) who suggest that, in addition to internationally accepted good practice principals and standards of disclosure, policy makers and regulators in emerging markets should also consider the effects of firm-level governance factors on disclosure incentives.

Future Research

Our findings indicate a rich set of future research possibilities. For example, we suggest that agency problems may vary across different national settings and imply that researchers should integrate the agency framework with institutional analysis to generate robust predictions (Bruton et al., 2010). Future research should expand on this concept and seek to explicitly examine the nature of agency conflicts and their implications in different institutional settings. Our analysis is focused on a single stock market, and future research should verify where our findings can be replicated in other emerging economies such as India, Malaysia, Thailand and Indonesia. Countries in the early stages of industrialisation are defined by the immaturity of their securities markets, with family block holders and business networks playing a prominent role in the corporate landscape (Filatotchev et al., 2007). Although previous research acknowledges the importance of ownership structure on performance in these countries (e.g.,

Claessens et al., 2000; Filatotchev et al., 2005), little is known about the inter-relationships between corporate governance and information disclosure.

In addition, we have focused on corporate governance factors associated with family control. However, many listed companies in emerging markets also have non-family investors, including domestic financial institutions, foreign investors and the state. Therefore, a more refined analysis of possible effects of different groups of outside investors would be useful for a better understanding of factors affecting information disclosure in emerging markets. For example, is state ownership associated with an increased level of corporate opacity? Do foreign investors "export" good corporate governance in terms of better disclosure and reporting? Future research should address these important questions.

Conclusions

During the current prolonged recession, corporate scandals and the collapse of financial services firms have resulted in a return to an interest in the kind of values prevalent in family-owned companies. Family-controlled firms that survived their own internal succession dramas are often portrayed as businesses that take a longer-term view rather than an inclination to live and die by stock market evaluation of their performance. Our analysis indicates that in reality the corporate governance effects of family control are more complicated than was previously thought. In terms of corporate disclosure, the dominant position of family owners in emerging markets leads to a number of efficiency trade-offs, and future research should aim to disentangle complex conflicts within multiple agency framework associated with family control.

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Table 1   Descriptive Statistics

	Mean	Standard Deviation	Min	Max
Private Information Abuse Risk, Corporate Opacity Structure and Their Components				
PIN	0.30	0.13	0.08	0.84
Family Ownership Variables				
Largest Family's Ownership	39.49	24.81	0	89.64
Family Founder Status Dummy*	31.77	--	0	1
Family Board Control Variables				
Family Board Dominance Dummy*	9.40	--	0	1
Family Leadership Dummy*	52.13	--	0	1
Board Size	8.90	2.79	5	21
Non-Family Directors' Ownership	1.25	2.61	0	25.5
Firm Performance				
Tobin's Q	1.57	2.70	0.20	25.84
Control Variables				
Ln MV	21.00	1.96	17.11	27.93
Ln Sale	20.52	1.93	14.19	26.39
Ln Liquidity	13.79	1.98	7.86	20.12
Daily Return Volatility	12.85	9.56	1.75	74.77
Leverage	19.67	18.33	0	110.66
ROE	0.07	1.62	-21.34	17.58
Growth	0.60	3.35	-1.00	53.58
Ln Analyst Coverage	3.19	6.04	0	34
Ln Firm Age	12.55	8.12	1	35

Notes: for dummy variables, the percentage of the sample is reported in the mean column. N=447.

Table 2. Correlations

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1.Tobin's Q	1.00																
2.PIN	-0.11 [<0.01]	1.00															
3.Largest Family's Ownership	-0.01 [0.81]	0.22 [<0.01]	1.00														
4.Family Founder Status Dummy	0.01 [0.85]	0.05 [0.31]	0.30 [<0.01]	1.00													
5.Family Leadership Dummy	-0.04 [0.32]	0.02 [0.61]	0.32 [<0.01]	0.26 [<0.01]	1.00												
6.Family Board Dominance Dummy	-0.07 [0.10]	0.17 [<0.01]	0.17 [<0.01]	0.11 [0.02]	0.25 [<0.01]	1.00											
7.Ln Board Size	-0.10 [0.02]	-0.22 [<0.01]	-0.20 [<0.01]	-0.16 [<0.01]	-0.24 [<0.01]	0.09 [0.05]	1.00										
8.Non-Family Directors' Ownership	-0.03 [0.47]	-0.01 [0.88]	-0.17 [<0.01]	-0.02 [0.68]	-0.16 [<0.01]	-0.09 [0.05]	0.12 [0.01]	1.00									
9.Ln Market Capitalization	0.10 [0.02]	-0.47 [<0.01]	-0.14 [<0.01]	-0.14 [<0.01]	-0.09 [0.07]	-0.09 [0.06]	0.50 [<0.01]	-0.004 [0.92]	1.00								
10. Ln Sale	-0.28 [<0.01]	-0.29 [<0.01]	-0.15 [<0.01]	0.01 [0.80]	-0.04 [0.39]	-0.02 [0.58]	0.47 [<0.01]	0.03 [0.46]	0.64 [<0.01]	1.00							
11.Ln Share Liquidity	0.20 [<0.01]	-0.43 [<0.01]	-0.26 [<0.01]	-0.13 [<0.01]	-0.22 [<0.01]	-0.21 [<0.01]	0.11 [0.01]	0.004 [0.92]	0.30 [<0.01]	0.12 [<0.01]	1.00						
12. Daily Return Risk	0.19 [<0.01]	0.02 [0.65]	-0.02 [0.52]	-0.07 [0.10]	-0.04 [0.36]	-0.12 [<0.01]	-0.33 [<0.01]	-0.02 [0.68]	-0.41 [<0.01]	-0.41 [<0.01]	0.11 [0.01]	1.00					
13. Growth	0.31 [<0.01]	-0.06 [0.19]	0.07 [0.10]	0.004 [0.93]	0.01 [0.81]	-0.05 [0.26]	-0.03 [0.47]	-0.01 [0.71]	0.05 [0.27]	-0.23 [<0.01]	0.06 [0.15]	0.06 [0.16]	1.00				
14. Ln Firm Age	-0.08 [0.06]	-0.05 [0.28]	-0.03 [0.44]	-0.20 [<0.01]	-0.04 [0.38]	0.12 [<0.01]	0.20 [<0.01]	-0.04 [0.30]	0.16 [<0.01]	0.04 [0.35]	-0.05 [0.21]	-0.06 [0.15]	0.03 [0.40]	1.00			
15. Ln Analyst Coverage	0.09 [0.04]	-0.42 [<0.01]	-0.20 [<0.01]	-0.08 [0.08]	-0.04 [0.32]	-0.11 [0.01]	0.43 [<0.01]	0.03 [0.47]	0.80 [<0.01]	0.56 [<0.01]	0.34 [<0.01]	-0.28 [<0.01]	0.07 [0.13]	-0.03 [0.52]	1.00		
16. Leverage	0.001 [0.97]	-0.13 [<0.01]	0.02 [0.58]	-0.04 [0.38]	-0.09 [0.06]	-0.08 [0.06]	0.03 [0.45]	-0.005 [0.90]	0.006 [0.88]	0.04 [0.39]	0.14 [<0.01]	0.03 [0.47]	0.07 [0.12]	0.01 [0.68]	0.03 [0.45]	1.00	
17. ROE	-0.12 [0.01]	-0.12 [<0.01]	0.01 [0.74]	0.0006 [0.99]	-0.02 [0.65]	0.02 [0.54]	0.12 [0.01]	0.03 [0.44]	0.18 [<0.01]	0.19 [<0.01]	0.06 [0.14]	-0.06 [0.15]	0.005 [0.90]	0.03 [0.49]	0.13 [<0.01]	0.01 [0.82]	1.00

N=447.

Table 3. Factors Affecting Private Information Abuse Risk

	Model A PIN	Model B PIN	Model C PIN	Model D PIN
Largest Family's Founder Status Dummy	-0.06 [-1.37]	-0.09** [-2.07]	-0.09** [-2.21]	-0.08* [-1.85]
Ln Board Size	-0.04 [-0.78]	-0.02 [0.27]	-0.03 [-0.74]	-0.07 [-1.50]
Non Family Directors' Ownership	-0.01 [-0.14]	0.01 [0.27]	0.02 [0.41]	0.004 [0.12]
Ln Firm Market Capitalization	-0.39*** [-5.26]	-0.41*** [-5.53]	-0.40*** [-5.37]	-0.40*** [-5.40]
Ln Share Liquidity	-0.30*** [-7.21]	-0.28*** [-6.60]	-0.27*** [-6.40]	-0.29*** [-6.86]
Daily Return Volatility	-0.11*** [-2.52]	-0.11*** [-2.52]	-0.11** [-2.41]	-0.11*** [-2.50]
Growth	0.02 [0.60]	0.01 [0.37]	0.02 [0.44]	0.02 [0.44]
Ln Firm Age	-0.04 [-0.90]	-0.03 [-0.88]	-0.04 [-1.00]	-0.04 [-0.98]
Ln Analysts Coverage	-0.10 [-1.40]	-0.08 [-1.13]	-0.08 [-1.12]	-0.05 [-0.74]
ROE	0.01 [0.14]	0.001 [0.08]	-0.001 [-0.02]	-0.004 [-0.12]
Industry dummies	Yes	Yes	Yes	Yes
Largest Family's Ownership		0.12*** [2.80]	0.11*** [2.70]	0.13*** [3.26]
Family Board Dominance Dummy			0.06 [1.50]	0.09** [2.20]
Family Leadership Dummy				-0.14*** [-3.31]
Adj R-squared	0.380	0.399	0.40	0.42
ΔR-squared (in total), %	---	1.90	2.00	4.00
ΔR-squared (step by step), %	--	1.90	0.001	2.00

Note: All coefficients are standardized; *p≤0.10; **p≤0.05; ***p≤0.01; t-statistics in parentheses. N=447.

Table 4.   The Effects of Private Information Abuse Risk on the Firm's Performance

	Model E Tobin's Q	Model F Tobin's Q	Model G Tobin's Q	Model H Tobin's Q
PIN	---	-0.23*** [-6.01]	---	---
E[PIN]	---	---	-0.49*** [-13.04]	-0.63*** [-14.82]
Largest Family Ownership	-0.001 [-0.04]	---	---	0.20*** [5.62]
Family Board Dominance Dummy	-0.08 [-1.99]	---	---	0.11** [3.12]
Family Leadership Dummy	-0.05 [-1.25]	---	---	-0.18*** [-5.24]
Largest Family's Founder Status Dummy	0.01 [0.13]	---	---	-0.01 [-0.29]
Ln Board Size	0.08 [1.86]	---	---	-0.05** [-1.25]
Non Family Directors' Ownership	-0.02 [-0.52]	---	---	0.02 [0.68]
Ln Sale	-0.14*** [-3.07]	-0.17*** [-4.42]	-0.35*** [-9.10]	-0.37*** [-9.48]
Leverage	0.01 [0.26]	0.01 [0.29]	0.03 [0.86]	0.01 [0.22]
ROE	-0.08** [-2.30]	-0.09** [-2.53]	-0.10*** [-3.27]	-0.12*** [-4.05]
Growth	0.15*** [4.09]	0.14*** [3.91]	0.08*** [2.66]	0.07** [2.20]
Ln Firm Age	-0.10*** [-2.60]	-0.10*** [-2.82]	-0.12*** [-3.72]	-0.13*** [-4.09]
Industry dummies	Yes	Yes	Yes	Yes
Adj R-squared	0.131	0.188	0.373	0.431
ΔR-squared (in total), %	---	5.70	24.20	30.00
ΔR-squared (step by step), %	---	5.70	18.50	5.80

Note: All coefficients are standardized; *p≤0.10; **p≤0.05; ***p≤0.01; t-statistics in parentheses. N=447.