

Large Shareholder Ownership Types and Board Independence

Joanna Ho

Paul Merage School of Business, University of California at Irvine, Irvine, CA 92697. U.S.A.; jlho@uci.edu

Cheng Jen Huang, Taiwan

Tunghai University, Box 979, No. 1727, Sec. 4, Xitun Dist., Taiwan Boulevard, Taichung, Taiwan 40704;
cj0623@thu.edu.tw

Christo Karuna*

Monash Business School, Monash University, Melbourne, VIC 3800, Australia; christo.karuna@monash.edu

Anne Wu

National Chengchi University, NO.64, Sec.2, ZhiNan Rd., Wenshan District, Taipei City 11605, Taiwan
(R.O.C); anwu@nccu.edu.tw

ABSTRACT

This study examines the relation between large shareholder ownership and board independence in firms. Using a dataset comprising Taiwanese firms, we find that different types of large shareholder ownership influence board independence in different ways. Specifically, we find that greater family ownership is associated with greater outside director proportion on the board (reflecting more independent boards) and a higher likelihood of CEO-Chair combination (reflecting less independent boards). The nature of the relation between institutional ownership and board independence depends on whether the institutional owners are foreign or domestic, active or passive, and whether ownership concentration has a direct or indirect (via CEO tenure) relation with board independence. Our study contributes to the literature by providing evidence on the multidimensional nature of the relation between large shareholder ownership types and board independence.

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1. Introduction

Prior studies have documented a positive relation between large shareholder ownership and monitoring of managers (e.g., Shleifer & Vishny, 1986, 1997). According to this literature, the larger the shareholder stakes in a firm, the more shareholders have to gain (lose) from effective (ineffective) management, and so the greater the incentives the shareholders have to monitor management. However, these studies fail to consider the varying effects of different types of large shareholder ownership on monitoring in firms. To the extent that different types of large shareholder ownership affect agency costs in different ways, monitoring effectiveness would also vary with these types of ownership, resulting in varying strength of monitoring mechanisms across firms.

In this study, we examine how two important types of large shareholder ownership, family and institutional (domestic versus foreign and active versus passive), affect two commonly used measures of monitoring of the manager by boards, namely, the proportion of outside directors on the board and whether the CEO is also chair of the board (Engel et al., 2002; Weisbach, 1988), both of which we refer to as board independence. To generate our predictions, we draw from studies asserting that monitoring is less effective if monitors do not possess relevant information that they can use in monitoring activities (e.g., Lipton & Lorsch, 1992). Thus, monitoring effectiveness decreases when there is greater information asymmetry between shareholder and manager (Demsetz & Lehn, 1985). We assume that shareholders with larger stakes in the firm are able to exert greater influence in decision-making (Shleifer & Vishny, 1997), and therefore, the strength of monitoring mechanisms is determined by these shareholders' demands. When information asymmetry between shareholder and manager is high (high agency costs), large shareholders demand stronger monitoring mechanisms to offset their reduced monitoring effectiveness. However, when information

asymmetry is low (low agency costs), large shareholders use their influence to implement weaker, less costly monitoring mechanisms.

We extend these arguments to examining the relations between board independence and the two types of large shareholder ownership based on the premise that different types of large shareholder ownership are associated with different levels of information asymmetry between shareholder and manager, resulting in different strengths of monitoring mechanisms. Family owners typically have *long-term associations* with the firm and are focused on *firm survival and reputation* because they want to pass the business on to the next generation (James, 1999; Anderson & Reeb, 2003a). They are also likely to ensure that the manager has a long-term horizon to ensure goal congruence. For example, they typically place family members in CEO and board positions (Ali et al., 2007). Thus, family owners are closely involved in, and familiar with, firm operations.¹ This suggests that greater family ownership is associated with less information asymmetry between shareholder and manager, and thus weaker internal monitoring mechanisms via less independent boards.

We draw from myopic institutions theory (Drucker, 1986; Graves, 1988; Hill et al., 1988; Loescher, 1984; Scherer, 1984) in generating our prediction on the relation between institutional ownership and board independence. According to this theory, institutional owners tend to be *shortsighted* because institutional fund managers must compete for accounts and are evaluated and remunerated based on annual or even quarterly performance. Accordingly, it is assumed that their investments will be based on the same *short-term horizons* (Woolridge, 1988). A short-term horizon results in institutional owners typically not being familiar with daily firm operations. As a result, they are less effective in monitoring the manager due to the high information asymmetry between shareholder and manager and are

¹ In separate tests, we find that greater family ownership is associated with a greater likelihood that a family member is a CEO. This finding supports our assertion that family ownership is associated with closer involvement in the firm's operations.

also likely to ensure that the manager has a short-term horizon to ensure goal congruence. The high information asymmetry leads institutional owners to demand stronger internal monitoring mechanisms via more independent boards to protect their stakes.

To test our predictions, we use a dataset comprising Taiwanese public companies. An advantage of the Taiwanese setting is that there is a sizeable proportion of family and institutional ownership, domestic versus foreign, and active versus passive, in companies, giving us considerable power to test our hypotheses. Additionally, in Taiwan family control plays an important role and there is weak investor protection. In contrast, in the U.S. ownership is much more diverse and investor protection is strong. The Taiwanese setting thus allows us to more robustly test our hypotheses which are predicated on the notion that large shareholders are dominant players in influencing board selection. Finally, our setting possesses a weak market for corporate control, unlike the U.S., which diminishes the influences of such external market disciplinary (governance) forces on our tests on internal governance.

We find that family ownership has a positive relation with outside director proportion on boards and also with the likelihood that the CEO is chair. The finding on greater family ownership associated with more outside directors on the board is opposite to our hypothesis. While greater outside director board representation can reflect a greater monitoring role (Fama, 1980; Weisbach, 1988), broad board experience can also provide better strategic advice to managers (Baysinger & Butler, 1985). Similarly, a CEO who is chair of the board is likely to have more discretion and be more forthcoming with necessary information that the board can use to provide advice without being hindered by the obstacles posed by a separate chair (Adams et al., 2005; Brickley et al., 1997; Ghosh et al., 2015). Our findings on family ownership do not support agency theory insights; rather, they are arguably consistent with stewardship theory, which advocates a notion that the manager is inherently motivated to act

in the best interests of the shareholder and thus need not be disciplined and monitored closely (Corbetta & Salvato, 2004; Daily et al., 2003; Davis et al., 1997; Davis et al., 2010). Our finding of a combination of greater outside director board representation and CEO being chair of the board (hereafter CEO duality) provides the necessary advisory environment for family ownership. Thus, greater family ownership is arguably associated with a more *advisory* environment.

In contrast, institutional ownership is insignificantly related to board independence. When we partition institutional ownership further into foreign institutional versus domestic institutional ownership, and also active versus passive institutional ownership, we find a positive relation between foreign institutional ownership and board independence but a negative relation between domestic institutional ownership and board independence. If we assume that foreign institutions have less knowledge of local operations compared to domestic institutions (Choe et al., 2005; Dvorak, 2005), then our finding provides support for our reasoning that greater information asymmetry is associated with stronger internal monitoring mechanisms via more independent boards. Furthermore, we find active institutional ownership is insignificantly related to outside director proportion on the board but negatively related with the likelihood of CEO duality, indicating a weak positive relation between active institutional ownership and board independence. Interestingly, passive institutional ownership is also insignificantly related to outside director board representation but positively related to CEO duality (less independent boards). Collectively, our findings provide evidence that different types of large ownership affect board independence in different ways.

Furthermore, based on our theoretical reasoning via shareholder horizon and information asymmetry, we examine whether CEO tenure acts as an important mechanism via which large shareholder ownership and board independence are related. Our reasoning for the mediating

effect of CEO tenure is as follows: the longer (shorter) the shareholder horizon, the longer (shorter) the period the shareholders would retain the CEO to protect their stakes in the firm and hence the less (greater) the information asymmetry and the less (more) independent the boards.² Consistent with our conjecture, we find that greater family (institutional) ownership is associated with longer (shorter) CEO tenure, reflecting longer (shorter) family (institutional) owner horizon.

Using path analysis, we find differences in signs and statistical significance between the direct and indirect effects for some relations. Family ownership has a positive direct relation but a negative, *albeit* weak, indirect relation (via CEO tenure) with outside director proportion on the board. With CEO duality, family ownership has an insignificant direct relation, and a positive indirect relation via CEO tenure. Intriguingly, our results for institutional ownership reveal a contrasting set of findings to family ownership. Institutional ownership has an insignificant direct relation with both outside director board proportion and CEO duality, but a positive and weak indirect relation with outside director proportion and a negative indirect relation with CEO duality via CEO tenure, indicating more independent boards.

This study contributes to the accounting literature in four ways. First, we show that different types of large shareholder ownership provide an explanation for observed variation in the strength of management control systems across firms. This finding sheds light on the inconclusive evidence in the management accounting literature as to whether different monitoring (governance) mechanisms act as substitutes or complements. Our study shows that they can act as both substitutes and complements in different contexts, specifically, the type of large shareholder ownership. Second, our study shows that the relation between large shareholder ownership and board independence is multidimensional. Prior research has

² It is conceivable that large shareholders would encourage the CEO to engage in the necessary short- or -term actions consistent with the CEO's tenure and the shareholders' horizons. In their study, Dikolli et al. (2009) show that large shareholders provide short- or long-term incentives to CEOs, depending on their horizons.

typically treated this relation as unidimensional. There is a precedent in the literature for a multidimensional relation between institutional ownership and CEO pay. For example, Brickley et al. (1988) and Kim & Seo (2011) show that different types of institutional ownership affect CEO pay in different ways. Third, our study contributes to the debate in the literature on whether firms make a tradeoff between the advisory and monitoring roles of boards (Adams & Ferreira, 2007; Faleye et al., 2011) by suggesting that the dominance of one role over the other could depend on the type of large shareholder ownership. One implication of our findings is that stewardship theory best describes the relation between family ownership and board independence whereas agency theory holds for the relation between institutional ownership and board independence. This suggests that stewardship and agency theories, which have opposing assumptions and predictions, could both be empirically supported depending on the context, for example, type of large shareholder (Chrisman et al., 2007; Le Breton-Miller & Miller, 2009). However, investigating this further is beyond the scope of our study and we leave this for future research to resolve.

Finally, our study also contributes to the limited but growing number of studies on governance practices in emerging markets. Prior research on the relation between large shareholder ownership and governance has focused on the U.S. A discussion paper by Gillan & Starks (2003) asserts that the legal environment influences the role of institutional shareholders. Thus, the nature of the relation between large shareholder ownership and governance is not clear beyond the U.S. Our study shows that, even in the absence of a sophisticated capital market like the one in the U.S., board independence plays a powerful role in firms in emerging markets. Thus, it is conceivable that governance mechanisms also serve to protect organizational stakeholders other than the stakeholder (e.g., employees and suppliers) in these regions.

Two studies are closely related to our study. Yeh & Woidtke (2005) examine the relation between family ownership, board selection, and firm value. Supporting our reasoning, their evidence suggests that family owners are heavily involved in board selection. However, they do not examine the relation between family ownership and both CEO-Chair combination and outside director proportion on the board nor the causal nature of the relation between family ownership and board independence via CEO tenure. A recent study by Aggarwal et al. (2011) examines the relation between institutional (foreign vs. domestic) ownership and governance strength across 20 common versus civil-law countries. They provide confirmatory evidence that legal protection influences the relation between institutional ownership and governance. However, our study is different to theirs in two ways. First, unlike their study, we consider family ownership in addition to institutional ownership and treat the relation between large shareholder ownership and governance as multidimensional. Second, using path analysis our study complements Aggarwal et al. (2011) in providing detailed evidence on a possible mechanism by which large shareholder ownership and governance are related in a civil-law country.

The rest of the paper is organized as follows. Section 2 presents our hypothesis development. Sections 3 and 4 describe the sample and measures, as well as the research method, respectively. We discuss our main results in Section 5. In Section 6, we outline our study's limitations and conclude in Section 7 with suggestions for future research.

2. Hypothesis development

Prior theoretical research is inconclusive on whether different monitoring mechanisms act as substitutes or complements to influence managerial behavior (e.g., Hart, 1995; Shleifer & Vishny, 1997). For example, Rediker & Seth (1995) find that different control mechanisms act as substitutes to each other, whereas Hoskisson et al. (2009) argue that they act as

complements. According to this literature, large shareholder ownership is one monitoring mechanism that could influence managerial behavior. The larger the stakes in a firm, the greater the extent of monitoring intensity (Shleifer & Vishny, 1986, 1997). Dispersed shareholders have little or no incentive to monitor management. This is because monitoring is costly and a public good, and each shareholder will free-ride in the hope that other shareholders will do the monitoring and s/he would benefit from improved firm performance (Hart, 1995). Shareholders with large stakes are inherently motivated to ensure the success of their stakes and have the power to demand necessary information to monitor management more intensely (Demsetz & Lehn, 1985; Hart, 1995; Shleifer & Vishny, 1997). Thus, large shareholder ownership could mitigate managerial expropriation via intense monitoring and, consequently, such firms tend to have weaker monitoring mechanisms in place.

The above line of reasoning inadvertently assumes that large shareholders are effective in monitoring. However, monitoring effectiveness is considerably reduced by information asymmetry (Nayyar, 1990). The notion that monitoring effectiveness depends on the cost of acquiring information is part of a recent but growing body of literature emphasizing information asymmetry (Duchin et al., 2010). For example, several recent studies show that when boards have greater firm-specific knowledge (e.g., when they are insiders to the firm), information asymmetry between boards and managers is reduced (e.g., Duchin et al., 2010; Linck et al., 2008). Consequently, monitoring effectiveness is enhanced, leading to weak monitoring mechanisms. On the other hand, when large shareholders do not possess sufficient (credible) information to monitor managers, monitoring effectiveness is considerably reduced. Thus, it is conceivable that these shareholders would demand stronger monitoring mechanisms.

The preceding discussion suggests that the relation between large shareholder ownership and monitoring mechanisms depends on the extent of information asymmetry

(agency costs) between the owner and the manager. Below, we discuss how family and institutional ownerships affect board independence (a commonly used monitoring mechanism in firms) based on the extent of information asymmetry. Our theoretical reasoning leads to our hypotheses for this study.

2.1 Family ownership and board independence

One type of large shareholder is the family owner. When family ownership is greater, there is a higher likelihood that family members hold important positions on both the management team and board of directors³ (Anderson & Reeb, 2003b; Chen et al., 2010; Ho & Kang, 2013). Such ownership may be beneficial for the firm as these family members monitor managers to protect their interests or the “family name” because they typically have undiversified and concentrated equity stakes in the firm and will, therefore, enjoy the benefit of good managerial decisions and bear the brunt of bad decisions (Demsetz & Lehn, 1985). Thus, greater family ownership is associated with greater monitoring intensity.

Family owners typically have long investment horizons in the firm, which enables them to acquire detailed knowledge of the firm’s operations (James, 1999; Chen et al., 2010; Anderson & Reeb, 2003a). Furthermore, family members are likely to be closely involved in firm operations as the family’s wealth is closely tied to firm welfare (Anderson & Reeb, 2003a). Thus, they typically possess superior firm knowledge to effectively monitor managerial activities as information asymmetry between the family owners and the manager is reduced (Anderson & Reeb, 2003a; Cheng, 2014). The association between greater family control and effective monitoring is empirically supported—family firms have better earnings quality (Wang, 2006), are more likely to warn about bad news (Ali et al., 2007) than non-

³ For example, Anderson and Reeb (2003b) report that within family firms of the S&P 500, family members occupy nearly 20 percent of all board seats and hold the CEO post 46 percent of the time. Using a more recent and comprehensive dataset of the S&P 1500, Ho and Kang (2013) find that 33.7 percent of CEOs are family members and 19.3 percent of the family members serve on firms’ boards. As mentioned earlier, we find a positive association between family ownership and the CEO also being a family member in our sample.

family firms, and lead firm deviation in IT investment toward increasing firm value (Ho et al., 2017). Thus, this suggests that greater family ownership is associated with less independent boards.

The preceding discussion suggests that agency costs are lower when family ownership is greater due to reduced information asymmetry between the owner and manager and thus monitoring effectiveness is enhanced. Consequently, family owners are likely to use their influence to have less independent boards. This leads to our first hypothesis (stated in alternate form):

HYPOTHESIS 1. *Greater family ownership is associated with less independent boards, ceteris paribus.*

2.2 Institutional ownership and board independence

Like family ownership, greater institutional ownership is also associated with stronger incentives to monitor managers as the institutions have larger stakes in firms and thus benefit more from good and lose more from bad managerial decisions (Hoskisson et al., 2009, 2002). In their study, Ackert & Athanassakos (2003) show that institutional owners care about agency costs and take appropriate measures to respond to such costs. The more intense monitoring interest associated with institutional ownership is also discussed in other studies (e.g., Hartzell & Starks, 2003). Thus, via proxy fights, vote-no campaigns, or other methods, these investors attempt to discipline managers to undertake actions that are beneficial to the firm as a whole.⁴

According to myopic institutions theory (Drucker, 1986; Graves, 1988; Hill et al., 1988; Loescher, 1984; Scherer, 1984), institutional owners tend to be myopic. Because institutional fund managers must compete for accounts and are evaluated and remunerated based on annual or even quarterly performance, they have short-term horizons (Woolridge,

⁴ Greater institutional ownership has also witnessed ousting of CEOs and directors.

1988). Institutional owners are typically not closely involved in and therefore less knowledgeable about firm operations due to their shorter horizons. As such, information asymmetry between institutional owners and managers is likely to be greater, and monitoring of managers by institutional owners tend to be less effective in curbing potential agency problems. Their short-term horizon may lead institutional owners to demand more independent boards to protect their stakes.

The preceding discussion leads to our second hypothesis (stated in alternate form):

HYPOTHESIS 2. *Greater institutional ownership is associated with more independent boards, ceteris paribus.*

We employ a range of tests on a comprehensive set of variables to provide robust evidence on tests of our hypotheses. We discuss our sample and measures next.

3. Sample selection and measures used

3.1 Sample

Our data comes from two sources. First, we obtain ownership data from the Corporate Database compiled by the Taiwan Economic Journal (TEJ). Second, we collect financial performance information from TEJ's Financial Report Database, which contains data extracted from Taiwanese firms' annual financial reports. Since these databases cover companies listed on the Taiwan Stock Exchange, our sample contains only public companies.⁵ After merging the two data sources, our final sample comprises 6,687 firm-year observations covering the period from 2006⁶ to 2011.

⁵ In this study, all sample firms are domestic Taiwanese companies. Regarding the definition of domestic companies, the Taiwanese Securities Law requires that more than half of the company's capital come from Taiwanese nationals or Taiwanese-owned companies. By contrast, a company is labeled as foreign if more than 50 percent of its capital is from foreign investors (either foreign nationals or foreign institutional investors). Based on the Taiwanese government's regulations, no foreign companies are publicly listed and traded in Taiwan.

⁶ In 2005, Taiwanese regulators changed the disclosure requirement for executive compensation. Under the new rule, companies are required to disclose overall executive compensation without separately disclosing the CEO's

3.2 Definitions of key variables

3.2.1 Dependent variable

Board independence. We use two commonly used variables in the literature as our board independence proxies. First, we measure it as the proportion of outside directors to total directors (*OUTDIR*) on the board. Prior research argues that outside directors can monitor more independently and thus reduce agency problems as inside directors are likely to have close relationships with managers (e.g., Baysinger & Butler, 1985; Weisbach, 1988). Second, following previous studies, we measure board independence by whether the CEO and chair of the board positions are separate (e.g., Jensen, 1993; Goyal & Park, 2002). When these roles are separate, monitoring of managers is likely to be more intense. We use *CEOCHR*, an indicator variable, that equals one if the CEO is also chair of the board and zero otherwise.

3.2.2 Independent variables

Ownership concentration: We use the sum of equity holdings by family owners (*FAMOWN*) and institutional investors (*INSTIT*) to measure their respective ownership concentration.

CEO tenure (CEOTENU): We use the CEO's time in office to measure CEO tenure.

Control variables

Following prior studies, we control for variables that may affect a firm's board independence (e.g., Gillan & Starks, 2003; Randøy & Jensen, 2004; Iwasaki, 2008). Specifically, following Engel et al. (2002), we use two proxies for firm performance: return on total assets (*ROA*) and stock returns (*RTN*). *ROA* is the ratio of net income to the year-end book value of total assets, which is a measure of accounting earnings and represents a firm's past profitability generated from the investment by shareholders. In contrast, *RTN* is a

and other executives' compensation. Given that we include CEO incentive compensation as a control variable in our regressions, our sample period starts in 2006.

measure of stock performance, which represents annualized daily stock returns and is reflective about expectations about future cash flows. We proxy firm risk by estimating the standard deviation of monthly stock returns for the fiscal year (*BETA*). We control for leverage (*LEV*), which is defined as the ratio of total liabilities to total assets. In addition, firm age (*FIRMAGE*) is measured as the number of years since the firm was founded. Both R&D intensity (*RD*) and market-to-book ratio (*MTB*) are proxies for growth opportunities. *RD* is calculated by dividing research and development expenditure by total sales. We measure *MTB* by dividing the market value by the book value of shareholders' equity. Advertising intensity (*ADV*) is proxied by advertising expenditure divided by total sales. Director stock holdings (*DIRHOLD*) are proxied by directors' stock holdings as a proportion of outstanding shares in a firm. Finally, we control for incentive compensation mix (*COMMIX*), which is proxied for by the proportion of the sum of bonus and other annual compensation to total compensation. The next section discusses the research design we employ in this study.

4. Research design

To test our hypotheses, we use path analysis to examine whether large shareholder ownership affects board independence via CEO tenure. This would more properly capture our characterisation of the relation between large shareholder ownership and board independence via shareholder horizon, which we proxy for using CEO tenure. We conduct path analysis using the PROCESS Macro in SPSS allowing for 10,000 iterations in bootstrapping tests with 95% confidence intervals to examine the relations between different types of large shareholder ownership and board independence (Preacher & Hayes, 2004; Hayes, 2009; Hayes, 2013). We run the following regression to test our hypotheses:⁷

⁷ Following prior studies (e.g., Osborne and Overbay, 2004), we delete studentized residuals with absolute values greater than or equal to three to exclude outliers before we run the regressions.

$$\begin{aligned}
BDINDEP = & \beta_0 + \beta_1FAM + \beta_2INSTIT + \beta_3ROA + \beta_4RTN + \beta_5BETA + \beta_6LEV + \beta_7FIRMAGE \\
& + \beta_8RD + \beta_9MTB + \beta_{10}ADV + \beta_{11}DIRHOLD + \beta_{12}COMMIX + \beta_{13}YEAR2 + \beta_{14}YEAR3 \\
& + \beta_{15}YEAR4 + \beta_{16}YEAR5 + \varepsilon
\end{aligned} \tag{1}$$

The dependent variable *BDINDEP* denotes board strength and captures either of our two board independence measures: *OUTDIR* and *CEOCHR*.⁸ To test Hypothesis 1, we examine the coefficient β_1 on *FAM* which measures the relation between family ownership and the proportion of outside directors on the board or the likelihood of CEO duality. To test Hypothesis 2, we examine the coefficient β_2 on *INSTIT*, which measures the relation between institutional ownership and our two board independence measures. Consistent with our hypotheses, we predict β_1 to be negative and β_2 to be positive. We next discuss the descriptive statistics for our sample and results for tests of our hypotheses.

5. RESULTS

5.1 Descriptive statistics

Table 1 summarizes the industry distribution for our full sample. As shown in Table 1, Electronics is the largest industry sector as it accounts for more than half our sample (56.63%). Table 2 presents descriptive statistics for key variables for our sample. As seen in Table 2, 29.2 percent of CEOs hold the position of chair of the board, which is higher than 16 percent of the Chinese listed companies in year 2000 as reported by Firth, Fung, and Rui (2007). However, the percentage of outside directors (15.7 %) is lower than in Hong Kong (40.6%) as reported by Cheng & Firth (2005) and Continental Europe (23.4%) as reported by Croci et al. (2012).

⁸ When *CEOCHR*, an indicator variable, is the dependent variable, we use a logistic regression to test the hypotheses.

Table 2 also summarizes statistics on ownership concentration. Family ownership accounts for 29.66 percent of the firms' equity, indicating strong family control in Taiwanese companies. In addition, consistent with Cheng & Firth (2005), we find that institutional investors hold an average of 15.33 percent of the firms' equity. The average firm age of our sample is about 25 years. Finally, the average shareholdings of directors are 20 percent and the proportion of short-term incentive compensation to total compensation is 22.5 percent.

[Insert Tables 1 and 2 about here.]

5.2 Correlation

Table 3 presents the Pearson correlation matrix of the dependent variables and independent variables. The correlations among the independent variables are generally considerably less than 0.7. It is worth noting that the highest absolute correlation coefficient (0.615) is between family share ownership and directors' share ownership. The results are consistent with prior research that family members more likely serve on the board as directors (Ali et al. 2007). Therefore, if family owners' shareholdings are higher, the shareholdings of directors are higher, too. We compute collinearity diagnostics, specifically, the variance inflation factor (VIF) to check for multicollinearity. All of the VIF values are under 10, suggesting that serious multicollinearity problems are unlikely in our study (Belsley et al., 1980).

[Insert Table 3 about here.]

5.3 Path analysis

In this section, we discuss our path analysis results under the two categories of large shareholder ownership we examine.

5.3.1 Family ownership:

Our path analysis results for tests of our hypotheses on family ownership are presented in Tables 4 to 6. Column 1 of Tables 4 and 5 show positive relations between family ownership

and the proportion of outside directors on the board (0.0106, at 1% level) and CEO duality (0.0181, at 5% level), respectively. Thus, family ownership affects board independence via higher proportion of outside directors and greater likelihood of the CEO-Chair role.

As seen in column 2 of Tables 4 and 5, greater family ownership is associated with longer CEO tenure (0.3484 and 0.4109, respectively; both at 1% level), reflecting the longer CEO horizon associated with greater family ownership as we argue above. In addition, our results show that CEO tenure has a negative relation with the proportion of outsider directors on the board (-0.0012; at 1% level; column 3 of Table 4) but a positive relation with CEO duality (0.0145; at 1% level; column 3 of Table 5). This finding indicates longer CEO tenure leads to less independent boards, which supports our assertion that the longer the CEO tenure, the lower the information asymmetry between the CEO and the shareholders, leading to weaker monitoring of the CEO. The above path analysis results are also displayed in Figures 1 and 2.

Table 6 shows that family ownership has a statistically significant and positive direct effect on outside director proportion on the board (0.011; at 1% level) and a statistically significant but negative and small indirect effect via CEO tenure (-0.0004; at 1% level).⁹ The result indicates that the relation between family ownership and proportion of outside directors is dominated by the direct effect than the indirect effect via CEO tenure. In addition, Table 6 reports that the mediating effect of CEO tenure only accounts for 3.9% of the total effect of family ownership on outside director composition on the board. The ratio of indirect effect to direct effect is 3.7%.

As for the relation between family ownership and CEO duality, Table 6 shows that family ownership has an insignificant direct effect on CEO duality but a significant and

⁹ The magnitude of the indirect effect is the result of the cross-product(s) of the coefficients that comprise the respective paths which make up the indirect effect. So, if the indirect effect is negative, it is caused by one path having a negative sign.

positive indirect effect via CEO tenure (0.006; at 1% level). This indirect effect accounts for 32.8% of the total effect of family ownership on CEO duality, indicating the important mediating role that CEO tenure plays on the relation between family ownership and CEO duality.

Taken together, the path analysis results (as presented in Figures 1 and 2) show that family ownership has an important positive direct relation with outside director proportion on the board (indicating greater board independence) and an important indirect positive relation via CEO tenure on CEO duality (indicating less board independence). Rather than assert that the relation between family ownership and board independence is inconclusive, these findings suggest that the relation between family ownership and board independence is non-trivial, and arguably, multidimensional. For example, it is conceivable that family owners, with close involvement with firm operations, prefer weaker monitoring of the CEO via a combined CEO-Chair role (likely with a family member occupying this position) and a greater proportion of outside directors on the board for advisory purposes. Prior research has shown that, due to possessing a range of experiences and broad industry knowledge, outside directors are better advisors to the CEO than inside directors (e.g., Baysinger & Butler, 1985). A combination of outside directors on the board and CEO duality provides the necessary advisory environment in family firms.

These findings are also consistent with stewardship theory. According to this theory, managers are viewed as stewards who act in the best interests of the firm (Davis et al., 1997). Since family owners are closely involved with the firm, they are likely less concerned with monitoring the manager as they are with providing the manager with the necessary advisory environment. As documented in prior research (e.g., Anderson & Reeb, 2003b), firms with significant family ownership also likely appoint family members as CEOs, thus further reducing the information asymmetry between the family owners and CEO. A family CEO is

more likely to have interests closely aligned with those of family owners compared to a hired-hand CEO (Anderson & Reeb, 2003a). Davis et al. (1997) argue that a family member at the helm of the firm acts as a steward and, therefore, identifies closely with the firm and its performance. Since the interests of family owners and CEOs are closely aligned, family owners are likely to demand that board members provide strategic advice rather than monitor the CEOs, in accordance with stewardship theory (Corbetta & Salvatto, 2004; Davis et al., 2010). Our findings on family ownership collectively support this assertion on the family ownership-board independence relation based on stewardship theory. Thus we conclude that our findings do not provide robust evidence supporting our first hypothesis based on agency theory; rather, it provides evidence supporting insights from stewardship theory.

5.3.2 Institutional ownership:

In contrast to family ownership, *INSTIT* is insignificantly related to *OUTDIR* and CEO duality according to the results presented in column 1 of Tables 4 and 5. These results indicate an insignificant relation between institutional ownership and board independence. Thus, we do not find evidence supporting hypothesis 2. In addition, column 2 of Tables 4 and 5 show that greater institutional ownership is associated with shorter CEO tenure (-0.6434 and -0.6556, respectively; at 1% level), reflecting the shorter horizon associated with institutional ownership that we posit. In contrast to the insignificant results reported in Tables 4 and 5, Table 6 shows that institutional ownership has a positive, albeit small, indirect relation with outside director proportion on the board via CEO tenure (0.0008; at 1% level) and a negative indirect relation with CEO duality (-0.010; at 1% level) via CEO tenure. These results (summarized in Figures 1 and 2) suggest that institutional ownership and board independence are not directly related but indirectly (positively) related via CEO tenure. Table 6 also reports that the mediating effect of CEO tenure accounts for 25.2% and 134.7% of the total effect of

institutional ownership on outside director composition on the board and CEO duality, respectively.

Taken together, the path analysis results show that institutional ownership, via the mediating role of CEO tenure, has a positive relation with outside director proportion on the board and a negative relation with CEO duality. Furthermore, it appears that institutional ownership is associated with a monitoring rather than an advisory environment.

[Insert Tables 4, 5, 6 and Figures 1, 2 about here.]

6. Additional tests

6.1 Partitioning institutional ownership into foreign institutional ownership and domestic institutional ownership

In this section, we conduct additional tests to examine whether finer partitions of institutional ownership (i.e., foreign institutional ownership (*FORINST*) vs. domestic institutional ownership (*DOMINST*))¹⁰ affect board independence in different ways. Although prior research is inconclusive on whether foreign investors or domestic investors have an informational advantage for share trading purposes (Dvorak, 2005), we posit that the information asymmetry between foreign institutional investors and managers is greater than that between their domestic counterparts and managers due to less local knowledge of business operations. Thus, if our theoretical reasoning based on ownership concentration affecting board independence via information asymmetry is justified, we would find a stronger positive relation between *FORINST* and board independence compared to the relation between *DOMINST* and board independence.

Columns 1 of Table 7 and 8 show that, while *FORINST* has a positive relation with *OUTDIR* (0.0067; at 1% level) and a negative relation with *CEOCHR* (-0.0293; at 1% level),

¹⁰ The proportions of *FORINST* and *DOMINST* in our sample are 7.29% and 8.03%, respectively.

DOMINST is negatively related to *OUTDIR* (-0.0042; at 10% level) and insignificantly relation to *CEOCHR*. Thus, *FORINST* has a positive relation with board independence whereas *DOMINST* has a weak negative relation with board independence. Overall, we find evidence consistent with Aggarwal et al. (2010) and supporting our conjecture that foreign institutional ownership is associated with stronger monitoring by boards compared to domestic institutional ownership. In addition to providing additional support for the notion that ownership concentration is related to board independence via information asymmetry, these findings also show that it is important to partition institutional ownership into different types, as the nature of the relation between large shareholder ownership and board independence differs across these types of large shareholder ownership.

We next use similar paths as above via CEO tenure to examine whether finer partitions of institutional ownership into foreign institutional and domestic institutional ownership yield additional insights on the relation between large shareholder ownership and board independence. Similar to the results for institutional ownership, column 2 of Table 7 and Figure 3 show that both foreign and domestic institutional ownership are associated with shorter CEO tenure (*FORINST*: -0.4238, at 1% level; *DOMINST*: -0.2608, at 1% level). Figure 4 shows similar relations. In addition, our results show that longer CEO tenure is associated with lower proportion of outside directors on the board (-0.0012, at 1% level; column 3 of Table 7) and a higher likelihood of CEO duality (0.0143; at 1% level; column 3 of Table 8). These findings are consistent with our findings in Figures 1 and 2, suggesting longer CEO tenure is associated with less independent boards.

As shown in Table 9, foreign institutional ownership has a positive direct relation (0.006, at 1% level) and a small positive indirect relation (0.001; at 1% level) with outside director board representation, while domestic institutional ownership has a negative direct relation (-0.005, at 1% level) but a small positive indirect relation (0.0003; at 1% level) with proportion

of outside directors on the board. CEO tenure accounts for 7.4% of the total effect of the relation between foreign institutional ownership and outside director proportion on the board; the indirect effect via CEO tenure for domestic institutional ownership on outside director board representation is 6.8% of the direct effect. Thus, the direct effect of foreign and domestic institutional ownership on outside director representation on the board are dominant compared to the indirect effect via CEO tenure. The statistically significant relations between outside director board proportion and both foreign institutional and domestic institutional ownership are in contrast to the insignificant direct relation between institutional ownership and outside director proportion on the board documented in Figure 1 and Table 6. This insignificant relation between institutional ownership and outside director board representation may be attributable to the opposing effects of foreign institutional ownership (positive relation) versus domestic institutional ownership (negative relation) on outside director representation.

With the likelihood of CEO duality, Table 9 shows that foreign institutional ownership has a negative direct relation (-0.022, at 1% level) and a negative indirect relation (-0.007; at 1% level), while domestic institutional ownership has a positive direct relation (0.013, at 5% level) but a negative indirect relation (-0.004; at 1% level). The mediating effect of CEO tenure accounts for 23.5% of the total effect of the relation between foreign institutional ownership and CEO duality. It is also interesting to note that foreign institutional and domestic institutional ownership have opposite relations with board independence to each other. A possible explanation for these contrasting findings is the home bias domestic institutions possess compared to foreign institutions pertaining to knowledge about local conditions, which leads to less information asymmetry between the CEO and domestic institutional investors.

[Insert Tables 7, 8, 9 and Figures 3, 4 about here.]

6.2 Partitioning institutional ownership into active institutional ownership and passive institutional ownership

Another way to partition institutional owners is into those who are active in monitoring and those who are passive. Doing this treats monitoring effort as exogenous and separate to information asymmetry. We examine whether active versus passive institutional ownership influence board independence in different ways. Following prior studies (e.g., Brickley & Zimmerman, 2010; Aggarwal et al., 2011), we measure active institutional ownership as involvement by governments, overseas organizations, and other legal entities that are less likely to be influenced by the company but nonetheless display monitoring activity. Passive institutional ownership includes financial institutions, legal entities or companies, and trust companies that may have financial relationships with the company.¹¹

Column 1 of Tables 10 and 11 show that *ACTINST* has an insignificant relation with *OUTDIR* and a negative relation with *CEOCHR* (-0.0191; at 1% level), while *PASSINST* is insignificantly related to *OUTDIR* and positively related to *CEOCHR* (0.0156; at 5% level). Column 2 of Table 10 and Figure 5 show that both active and passive institutional ownerships are associated with shorter CEO tenure (*ACTINST*: -0.5607, at 1% level; *PASSINST*: -0.1947, at 1% level). These relations are also illustrated in Figure 6. In addition, we observe consistent results that longer CEO tenure is associated with lower proportion of outside directors on the board (-0.0012, at 1% level; column 3 of Table 10) and a higher likelihood of CEO duality (0.0145; at 1% level; column 3 of Table 11).

As shown in Table 12, active and passive institutional ownership both have insignificant direct relations and a significant and positive indirect relation (*ACTINST*: 0.001; at 1% level; *PASSINST*: 0.0002; at 10% level) with outside director board representation. Interestingly, the mediating effect of CEO tenure accounts for 147.9% of the total effect of the relation between

¹¹ The proportions of *ACTINST* and *PASSINST* in our sample are 8.34% and 6.99%, respectively.

active institutional ownership and outside director proportion on the board. Therefore, active institutional ownership is associated with higher outside director proportion on the board via CEO tenure than passive institutional ownership.

With the likelihood of CEO duality, Table 12 shows that active institutional ownership has a negative direct relation with *CEOCHR* (-0.010, at 1% level), while passive institutional ownership has a positive direct relation with *CEOCHR* (0.018, at 1% level). The results also show that active and passive institutional ownerships both have negative indirect relationships with *CEOCHR* (*ACTINST*: -0.009; at 1% level; *PASSINST*: -0.002; at 10% level). The mediating effect of CEO tenure accounts for 46.1% of the total effect of the relation between active institutional ownership and CEO duality. The results indicate that the indirect effect of active institutional ownership on CEO duality via CEO tenure is dominant compared to the direct effect.

Overall, consistent with our expectation of active role in monitoring activity, the relation between active institutional ownership and board independence is positive. However, although passive institutional ownership is positively associated with the outside director proportion on the board via CEO tenure, it appears to be more directly associated with CEO duality. A possible explanation for these findings is that even though institutional ownership is associated with high information asymmetry, active and passive institutional shareholders have different preferences regarding monitoring effort. Thus, monitoring intensity is exogenous and not necessarily reduced due to higher information asymmetry.

[Insert Tables 10, 11, 12 and Figures 5, 6 about here.]

The analysis in this section provides additional evidence to our results in Table 4 in that they highlight the multidimensional nature of the relation between large shareholder ownership and board independence. Our analysis also reveals a mechanism by which our

large shareholder ownership variables and board independence are related, specifically, via CEO tenure. Interestingly, the findings indicate that while there is more of a direct relation between outside director proportion on the board and both family ownership and institutional ownership, CEO tenure acts as an important mediating variable in the relation between CEO duality and both family ownership and institutional ownership. Thus, researchers should examine the relation between large shareholder ownership and board independence with caution.

6.3 Endogeneity

Prior studies have alluded to the possibility that the relation between large shareholder ownership and governance is endogenous (e.g., Aggarwal et al., 2011). An argument is that different types of large shareholders could be attracted or discouraged from investing in the firm based on its quality of governance. We contend that our study does not suffer from endogeneity concerns for several reasons. First, it is unlikely that the paths we document via CEO tenure arise due to reverse causality in the relation between large shareholder ownership and board independence. For example, it is more likely that shareholder ownership influences CEO tenure and not the reverse.¹² Second, reverse causality is also unlikely for the direct relations between large shareholder ownership and board independence. For example, it is not conceivable that the negative relation we document between family ownership and CEO duality arises due to the CEO's role as chair of the board attracting family investment. Finally, other studies systematically rule out endogeneity concerns (e.g., Aggarwal et al., 2011; Kim & Seo, 2011), yielding greater comfort that our study does not suffer from endogeneity problems.

¹² As an example, it is not conceivable that the negative relation between institutional ownership and CEO tenure we document arises due to longer CEO tenure resulting in less institutional investment.

7. Conclusion

This paper provides comprehensive evidence on how different types of large shareholder ownership affect internal monitoring mechanisms via board independence. Specifically, we examine how family and institutional (domestic versus foreign; active versus passive) ownerships affect board independence. We provide evidence that the relation between large shareholder ownership and board independence is multidimensional.

We find that family ownership has a positive relation with outside director proportion on boards and also with the likelihood that the CEO is chair. While the finding on greater family ownership associated with CEO duality is consistent with our prediction, the finding on greater family ownership associated with more outside directors on the board is opposite to our hypothesis. One explanation is the result is not consistent with agency theory but with stewardship theory, which advocates a notion that the manager is inherently motivated to act in the best interests of the shareholder and thus need not be disciplined and monitored closely (Corbetta & Salvato, 2004; Daily et al., 2003; Davis et al., 1997; Davis et al., 2010). That is, family owners view the manager as a steward of the company whose welfare is closely tied to the firm's (Gomez-Mejia et al., 2003; Davis et al., 1997). In this situation, the family owners would see less of a need for the manager to be closely monitored, especially given the family owners' familiarity with the business, and more of a need for the manager to be assisted in the manager's stewardship role via strategic advice from the directors (Corbetta & Salvato, 2004; Daily et al., 2003; Davis et al., 1997; Davis et al., 2010). It is conceivable that a reduced monitoring-intensive environment under greater family ownership is associated with an increased advisory environment.

While we did not find a significant relation between institutional ownership and board independence, our additional analysis by partitioning institutional ownership further into foreign institutional versus domestic institutional ownership, and also active versus passive

institutional ownership shows that both foreign institutional ownership and active institutional ownership has a positive relation with board independence. However, domestic institutional ownership and passive institutional ownership has a negative relation with board independence. These findings are consistent with agency theory and myopic institutions theory and support our conjectures that the information asymmetry between foreign institutional investors and managers is greater than that between their domestic counterparts and managers and that active institutional investors are more active in monitoring.

In our study we assume that large shareholders work in the best interests of the firm. A limitation to our study is that we do not consider the agency costs imposed by large shareholders. For example, large shareholders can use their voting power and control rights to select board members who would support their decisions that are related to expropriating wealth from minority shareholders (negative entrenchment effect). Another limitation is that our study focuses on only two, albeit commonly used, board independence variables that capture board monitoring; however, we view our work as an initial attempt to analyze the effect of large shareholder ownership on board independence. One line of future inquiry is to investigate the relation between ownership structure and other aspects of managerial controls (e.g., audit committee, reporting transparency). Another limitation is that we provide evidence in only one setting, Taiwan, an emerging market with weak legal protection for shareholders. As we indicated above, insights from studies like Gillan & Starks (2003) and Aggarwal et al. (2011) reveal that the nature of the large shareholder ownership-governance relation could differ across different legal environments.

In addition, our study also shows that different governance mechanisms can act as both substitutes and complements in different contexts, specifically, the type of large shareholder ownership. To delve deeper, future research could investigate whether firms make a tradeoff between their vital board functions and under what contexts stewardship and

agency theories, which have opposing assumptions and predictions, can better describe the relationship between different types of large shareholder ownership and board independence.

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TABLE 1: Industry distribution by two-digit SIC code for Taiwan Stock Exchange

Industry	No. of Firm-Years	Percent
Electronics	3,787	56.63
Chemicals	435	6.51
Electric & Machinery	347	5.19
Others	338	5.05
Construction	329	4.92
Textiles	299	4.47
Biotechnology	220	3.29
Steel, Iron	156	2.33
Transportation	130	1.94
Food	124	1.85
Department Stores	103	1.54
Cable Appliance	85	1.27
Tourism	66	0.99
Rubber	65	0.97
Utility	65	0.97
Cement	42	0.63
Paper, Pulp	42	0.63
Automobile	30	0.45
Glass, Ceramics	24	0.36
Total	6,687	100

TABLE 2: Descriptive statistics

	Mean	Standard Deviation	Min.	Max.
<i>OUTDIR</i>	0.157	0.169	0.000	0.667
<i>CEOCHR</i>	0.292	0.455	0.000	1.000
<i>FAMOWN</i>	29.663	17.400	0.750	97.740
<i>INSTIT</i>	15.328	17.074	0.000	100.000
<i>CEOTENU</i>	10.773	6.694	0.000	53.330
<i>ROA</i>	3.456	10.332	-204.946	59.330
<i>RTN</i>	25.241	94.962	-94.279	1025.322
<i>BETA</i>	0.887	0.339	-1.496	4.069
<i>LEV</i>	41.287	17.620	1.271	98.266
<i>FIRMAGE</i>	25.482	12.293	0.000	65.000
<i>RD</i>	3.372	8.673	0.000	316.880
<i>MTB</i>	1.579	1.250	0.072	16.662
<i>ADV</i>	0.570	2.040	0.000	47.116
<i>DIRHOLD</i>	20.204	13.016	0.500	87.830
<i>COMMIX</i>	22.520	21.186	0.000	100.000

Note: *OUTDIR*: The proportion of outside directors on the board; *CEOCHR*: Indicator variable equal to one if the CEO is the chair of the board, and zero otherwise; *FAMOWN*: Equity holdings by family owners (%); *INSTIT*: Equity holdings by institutional investors (%); *CEOTENU*: CEO's time in office; *ROA*: The ratio of net income to the year-end book value of total assets (%); *RTN*: Annualized daily stock returns (%); *BETA*: The standard deviation of monthly stock returns for the fiscal year; *LEV*: The ratio of total liability to total assets; *FIRMAGE*: The difference between 2011, the final year in the sample period, and the firm's year of incorporation; *RD*: The ratio of research and development expenditure to total sales; *MTB*: The ratio of market value to the book value of shareholders' equity; *ADV*: The ratio of advertising expenditure to total sales; *DIRHOLD*: The directors' stock holdings as a proportion of outstanding shares in firm (%); *COMMIX*: The proportion of short-term incentive compensation to total compensation.

TABLE 3: Pearson correlation matrix of main test variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. <i>INDPDIR</i>	1.000														
2. <i>CEOCHR</i>	0.005 (0.656)	1.000													
3. <i>FAMOWN</i>	-0.029** (0.020)	-0.049*** (0.000)	1.000												
4. <i>INSTIT</i>	0.003 (0.793)	-0.047*** (0.000)	-0.182*** (0.000)	1.000											
5. <i>CEOTENU</i>	-0.195*** (0.000)	0.183*** (0.000)	0.082*** (0.000)	-0.101*** (0.000)	1.000										
6. <i>ROA</i>	0.072*** (0.000)	-0.062*** (0.000)	0.054*** (0.000)	0.139*** (0.000)	0.053*** (0.000)	1.000									
7. <i>RTN</i>	-0.016 (0.203)	-0.010 (0.435)	0.013 (0.297)	-0.038*** (0.002)	-0.010 (0.428)	0.139*** (0.000)	1.000								
8. <i>BETA</i>	0.073*** (0.000)	-0.011 (0.373)	-0.225*** (0.000)	0.056** (0.000)	-0.109*** (0.000)	0.080*** (0.000)	-0.014 (0.240)	1.000							
9. <i>LEV</i>	-0.107*** (0.000)	-0.033*** (0.007)	0.035** (0.004)	0.004 (0.771)	-0.043*** (0.000)	-0.233*** (0.000)	-0.013 (0.279)	-0.029** (0.020)	1.000						
10. <i>FIRMAGE</i>	-0.448*** (0.000)	-0.016 (0.185)	0.133*** (0.000)	-0.015 (0.232)	0.365*** (0.000)	-0.030** (0.013)	-0.020 (0.100)	-0.075*** (0.000)	0.131*** (0.000)	1.000					
11. <i>RD</i>	0.152*** (0.000)	0.033*** (0.007)	-0.118*** (0.000)	-0.020 (0.103)	-0.094*** (0.000)	-0.114*** (0.000)	-0.003 (0.813)	0.057*** (0.000)	-0.259*** (0.000)	-0.230*** (0.000)	1.000				
12. <i>MTB</i>	0.187*** (0.000)	-0.021* (0.088)	-0.000 (0.993)	0.148*** (0.000)	-0.139*** (0.000)	0.272*** (0.000)	0.384*** (0.000)	0.065*** (0.000)	-0.102*** (0.000)	-0.238*** (0.000)	0.150*** (0.000)	1.000			
13. <i>ADV</i>	0.004 (0.733)	0.015 (0.221)	0.081*** (0.000)	-0.004 (0.723)	0.015 (0.227)	-0.010 (0.395)	0.006 (0.614)	-0.039*** (0.002)	-0.006 (0.641)	0.020* (0.094)	0.010 (0.394)	0.060*** (0.000)	1.000		
14. <i>DIRHOLD</i>	0.012 (0.310)	-0.090*** (0.000)	0.615*** (0.000)	0.028** (0.022)	-0.052*** (0.000)	0.056*** (0.000)	0.008 (0.495)	-0.191*** (0.000)	-0.034*** (0.005)	-0.070*** (0.000)	-0.046*** (0.000)	0.053*** (0.000)	0.032*** (0.008)	1.000	
15. <i>COMMIX</i>	-0.052*** (0.000)	-0.041*** (0.001)	0.008 (0.500)	0.164*** (0.000)	0.088*** (0.000)	0.290*** (0.000)	0.009 (0.457)	0.068*** (0.000)	-0.037*** (0.002)	0.111*** (0.000)	-0.092*** (0.000)	0.060*** (0.000)	-0.009 (0.474)	0.026** (0.037)	1.000

Notes:

1. ***, ** and * denote significance at the 1%, 5% and 10% levels.
2. Please refer to Table 2 for the definitions of variables.

TABLE 4: The mediating effect of CEO tenure on the relationship between ownership structure and the proportion of outsider directors on the board

	<i>OUTDIR</i>		<i>CEOTENU</i>		<i>OUTDIR</i>	
	(1)		(2)		(3)	
	coeff	t	coeff	t	coeff	t
<i>CONSTANT</i>	0.3035***	30.8524	6.6009***	17.6334	0.3113***	30.9590
<i>CEOTENU</i>					-0.0012***	-3.6646
<i>FAMOWN</i>	0.0106***	4.1090	0.3484***	3.5644	0.0110***	4.2687
<i>INSTIT</i>	0.0030	1.4685	-0.6434***	-8.2453	0.0023	1.0943
<i>ROA</i>	0.0909***	4.3559	3.6720***	4.6229	0.0952***	4.5600
<i>RTN</i>	-0.0001***	-3.3503	-0.0017	-1.6345	-0.0001***	-3.4261
<i>CEOCHR</i>	-0.0050	-1.2134	2.4610***	15.7246	-0.0021	-0.4998
<i>BETA</i>	0.0018***	5.2669	-0.0338***	-2.5699	0.0018***	5.1539
<i>LEV</i>	-0.0003**	-2.5118	-0.0265***	-6.0639	-0.0003***	-2.7785
<i>FIRMAGE</i>	-0.0058***	-34.2764	0.1880***	29.3295	-0.0056***	-31.0507
<i>ADV</i>	0.0007	0.7652	-0.0215	-0.5936	0.0007	0.7393
<i>DIRHOLD</i>	-0.0009***	-4.3874	-0.0261***	-3.5079	-0.0009***	-4.5447
<i>COMMIX</i>	-0.0192**	-2.0123	1.5586***	4.2877	-0.0174*	-1.8193
<i>YEAR EFFECTS</i>	<i>INCLUDED</i>					
Observation	6687		6687		6687	
R-squared	0.16		0.16		0.21	

Note:

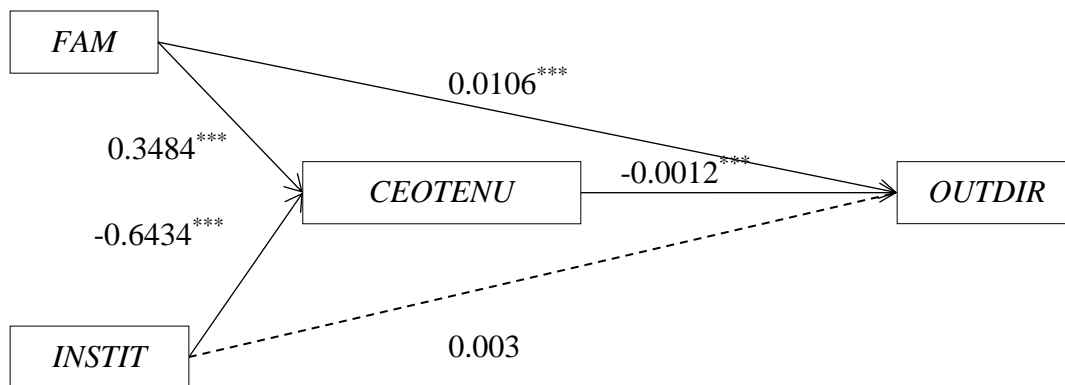
1. *t* statistics in parentheses.
2. ***, ** and * denote significance at the 1%, 5% and 10% levels, respectively.
3. Please refer to Table 2 for the definitions and computations of variables.

TABLE 5: The mediating effect of CEO tenure on the relationship between ownership structure and CEO duality

	<i>CEOCHR</i>		<i>CEOTENU</i>		<i>CEOCHR</i>	
	(1)		(2)		(3)	
	coeff	t	coeff	t	coeff	t
<i>CONSTANT</i>	0.5028***	16.3819	8.3517***	20.9257	0.3817***	12.2655
<i>CEOTENU</i>					0.0145***	15.6831
<i>FAMOWN</i>	0.0181**	2.3706	0.4109***	4.1290	0.0122	1.6188
<i>INSTIT</i>	-0.0001	-1.3056	-0.6556***	-8.2584	0.0025	0.4066
<i>ROA</i>	-0.0368	-0.5917	3.7368***	4.6183	-0.0910	-1.4870
<i>RTN</i>	-0.0071	-1.1561	-0.0021**	-1.9994	-0.0001	-0.9451
<i>OUTDIR</i>	-0.0442	-1.2134	-1.8144***	-3.8283	-0.0179	-0.4998
<i>BETA</i>	-0.0161***	-15.8917	-0.0702***	-5.3295	-0.0151***	-15.1253
<i>LEV</i>	-0.0013***	-3.7310	-0.0301***	-6.7789	-0.0008**	-2.4886
<i>FIRMAGE</i>	-0.0010*	-1.8269	0.1757***	24.8546	-0.0035***	-6.3456
<i>ADV</i>	0.0054*	1.9068	-0.0070	-0.1903	0.0055**	1.9780
<i>DIRHOLD</i>	-0.0042***	-7.2102	-0.0378***	-5.0105	-0.0036***	-6.3673
<i>COMMIX</i>	-0.0659**	-2.3177	1.3642***	3.6896	-0.0857***	-3.0652
<i>YEAR EFFECTS</i>	<i>INCLUDED</i>					
Observation	6687		6687		6687	
R-squared	0.04		0.16		0.08	

Note:

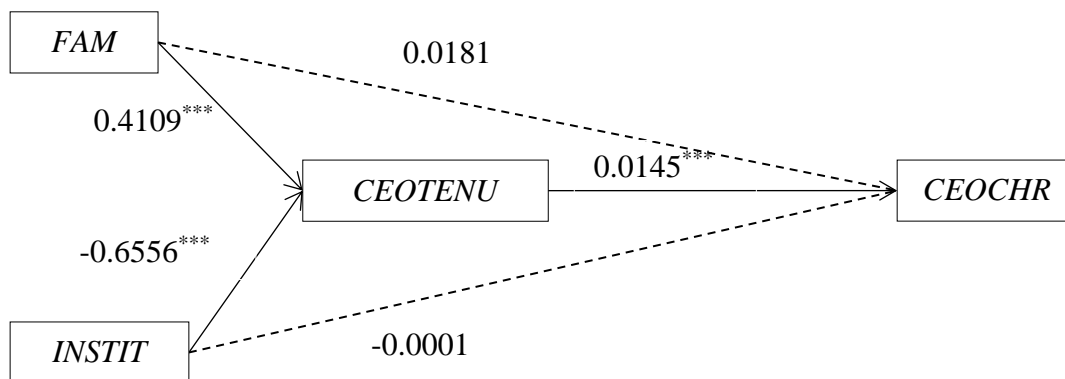
1. *t* statistics in parentheses.
2. ***, ** and * denote significance at the 1%, 5% and 10% levels, respectively.
3. Please refer to Table 2 for the definitions and computations of variables.



Notes:

1. ***, ** and * denote significance at the 1%, 5% and 10% levels
2. Please refer to Table 2 for the definitions and computations of variables.

Figure 1 Analysis of paths for large shareholder ownership, CEO tenure, and outsider director proportion: family ownership and institutional investor ownership



Notes:

1. ***, ** and * denote significance at the 1%, 5% and 10% levels
2. Please refer to Table 2 for the definitions and computations of variables.

Figure 2 Analysis of paths for large shareholder ownership, CEO tenure, and CEO duality: family ownership and institutional investor ownership

TABLE 6: Total, direct, and indirect effects on the relation between large shareholder ownership and board independence: family ownership and institutional investor ownership

IV	DV	Direct effect		Indirect effect		Total effect		Ratio of indirect to total effect	Ratio of indirect to direct effect
		Coeff.	Sig.	Coeff.	Sig.	Coeff.	Sig.		
<i>FAM</i>	→ <i>OUTDIR</i>	0.011	***	-0.0004	***	0.011	***	3.9%	3.7%
<i>FAM</i>	→ <i>CEOCHR</i>	0.012	-	0.006	***	0.018	**	32.8%	48.9%
<i>INSTIT</i>	→ <i>OUTDIR</i>	0.002	-	0.0008	***	0.003	-	25.2%	33.6%
<i>INSTIT</i>	→ <i>CEOCHR</i>	0.002	-	-0.010	***	-0.007	-	134.7%	388.0%

Notes:

1. We use confidence intervals from bootstrapped sampling distributions (based on 10,000 bootstrap samples) to test the significance of indirect effects (Hayes 2013).
2. ***, ** and * denote significance at the 1%, 5% and 10% two-tail levels.
3. Please refer to Table 2 for the definitions and computations of variables.

TABLE 7: The mediating effect of CEO tenure on the relationship between ownership structure and the proportion of outsider directors on the board: foreign vs. domestic institutional ownership

	<i>OUTDIR</i>		<i>CEOTENU</i>		<i>OUTDIR</i>	
	(1)		(2)		(3)	
	coeff	t	coeff	t	coeff	t
<i>CONSTANT</i>	0.3024***	30.7557	6.6555***	17.7601	0.3102***	30.8622
<i>CEOTENU</i>					-0.0012***	-3.6743
<i>FAMOWN</i>	0.0092***	3.5411	0.3733***	3.7586	0.0097***	3.7096
<i>FORINST</i>	0.0067***	3.1203	-0.4238***	-5.1618	0.0062***	2.8853
<i>DOMINST</i>	-0.0042*	-1.9481	-0.2608***	-3.1784	-0.0045**	-2.0913
<i>ROA</i>	0.0912***	4.3782	3.5002***	4.4095	0.0953***	4.5741
<i>RTN</i>	-0.0001***	-3.3567	-0.0016	-1.5623	-0.0001***	-3.4295
<i>CEOCHR</i>	-0.0044	-1.0583	2.4326***	15.5026	-0.0015	-0.3555
<i>BETA</i>	0.0018***	5.3306	-0.0355***	-2.6974	0.0018***	5.2114
<i>LEV</i>	-0.0003***	-2.5615	-0.0267***	-6.0920	-0.0003***	-2.8301
<i>FIRMAGE</i>	-0.0058***	-34.3964	0.1878***	29.2346	-0.0056***	-31.1758
<i>ADV</i>	0.0007	0.7728	-0.0244	-0.6712	0.0007	0.7433
<i>DIRHOLD</i>	-0.0008***	-4.0607	-0.0272***	-3.6312	-0.0008***	-4.2237
<i>COMMIX</i>	-0.0208**	-2.1779	1.5323***	4.2026	-0.0190**	-1.9882
<i>YEAR EFFECTS</i>	<i>INCLUDED</i>					
Observation	6687		6687		6687	
R-squared	0.21		0.19		0.21	

Notes:

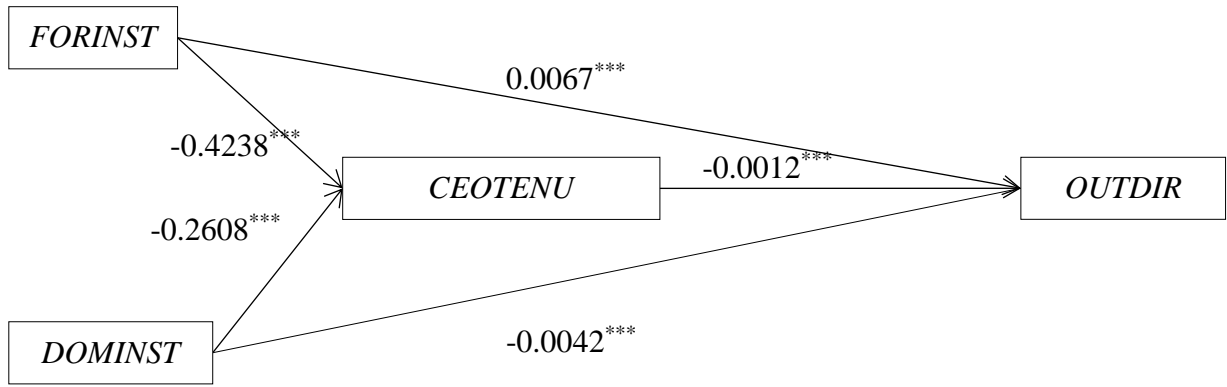
1. We use confidence intervals from bootstrapped sampling distributions (based on 10,000 bootstrap samples) to test the significance of indirect effects (Hayes 2013).
2. ***, ** and * denote significance at the 1%, 5% and 10% two-tail levels.
3. Please refer to Table 2 for the definitions and computations of variables.

TABLE 8: The mediating effect of CEO tenure on the relationship between ownership structure and CEO duality: foreign vs. domestic institutional ownership

	<i>CEOCHR</i>		<i>CEOTENU</i>		<i>CEOCHR</i>	
	(1)		(2)		(3)	
	coeff	t	coeff	t	coeff	t
<i>CONSTANT</i>	0.4967***	16.2075	8.3782***	20.9792	0.3771***	12.1270
<i>CEOTENU</i>					0.0143***	15.4682
<i>FAMOWN</i>	0.0183**	2.3630	0.4336***	4.2910	0.0121	1.5898
<i>FORINST</i>	-0.0293***	-4.5819	-0.4835***	-5.7958	-0.0224***	-3.5563
<i>DOMINST</i>	0.0092	1.4392	-0.2457***	-2.9439	0.0127**	2.0210
<i>ROA</i>	-0.0218	-0.3521	3.6035***	4.4584	-0.0733	-1.2010
<i>RTN</i>	-0.0001	-1.4000	-0.0020*	-1.9444	-0.0001	-1.0563
<i>OUTDIR</i>	-0.0385	-1.0583	-1.8068***	-3.8076	-0.0127	-0.3555
<i>BETA</i>	-0.0159***	-15.7529	-0.0710***	-5.3885	-0.0149***	-14.9786
<i>LEV</i>	-0.0012***	-3.5389	-0.0301***	-6.7662	-0.0008**	-2.3120
<i>FIRMAGE</i>	-0.0009	-1.5981	0.1758***	24.8043	-0.0034***	-6.0517
<i>ADV</i>	0.0055*	1.9333	-0.0098	-0.2663	0.0056**	2.0180
<i>DIRHOLD</i>	-0.0041***	-7.1174	-0.0386***	-5.0851	-0.0036***	-6.2681
<i>COMMIX</i>	-0.0534*	-1.8764	1.3671***	3.6875	-0.0729***	-2.6055
<i>YEAR EFFECTS</i>	<i>INCLUDED</i>					
Observation	6687		6687		6687	
R-squared	0.05		0.16		0.08	

Notes:

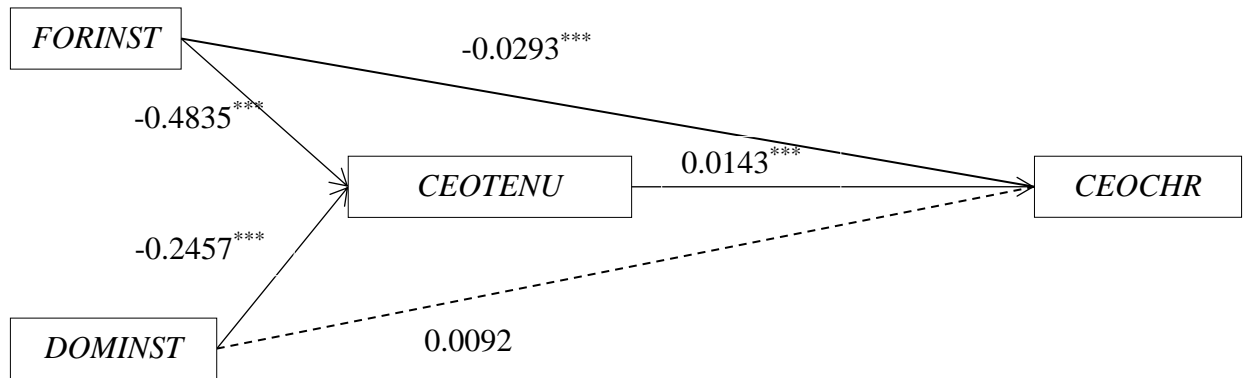
1. We use confidence intervals from bootstrapped sampling distributions (based on 10,000 bootstrap samples) to test the significance of indirect effects (Hayes 2013).
2. ***, ** and * denote significance at the 1%, 5% and 10% two-tail levels.
3. Please refer to Table 2 for the definitions and computations of variables.



Notes:

1. *** , ** and * denote significance at the 1%, 5% and 10% levels
2. Please refer to Table 2 for the definitions and computations of variables.

Figure 3 Analysis of paths for large shareholder ownership, CEO tenure, and outsider director proportion: foreign and domestic institutional investor ownership



Notes:

1. *** , ** and * denote significance at the 1%, 5% and 10% levels
2. Please refer to Table 2 for the definitions and computations of variables.

Figure 4 Analysis of paths for large shareholder ownership, CEO tenure, and CEO duality: foreign and domestic institutional investor ownership

TABLE 9: Total, direct, and indirect effects on the relation between large shareholder ownership and board independence: foreign and domestic institutional investor ownership

IV	DV	Direct effect		Indirect effect		Total effect		Ratio of indirect to total effect	Ratio of indirect to direct effect
		Coeff.	Sig.	Coeff.	Sig.	Coeff.	Sig.		
<i>FORINST</i>	→ <i>OUTDIR</i>	0.006	***	0.001	***	0.007	***	7.4%	8.0%
<i>FORINST</i>	→ <i>CEOCHR</i>	-0.022	***	-0.007	***	-0.029	***	23.5%	30.8%
<i>DOMINST</i>	→ <i>OUTDIR</i>	-0.005	***	0.0003	***	-0.004	-	7.3%	6.8%
<i>DOMINST</i>	→ <i>CEOCHR</i>	0.013	**	-0.004	***	0.009	-	38.1%	27.6%

Notes:

1. We use confidence intervals from bootstrapped sampling distributions (based on 10,000 bootstrap samples) to test the significance of indirect effects (Hayes 2013).
2. ***, ** and * denote significance at the 1%, 5% and 10% two-tail levels.
3. Please refer to Table 2 for the definitions and computations of variables.

TABLE 10: The mediating effect of CEO tenure on the relationship between ownership structure and the proportion of outsider directors on the board: active and passive institutional ownership

	<i>OUTDIR</i>		<i>CEOTENU</i>		<i>OUTDIR</i>	
	(1)		(2)		(3)	
	coeff	t	coeff	t	coeff	t
<i>CONSTANT</i>	0.3026***	30.7715	6.6433***	17.7586	0.3107***	30.9015
<i>CEOTENU</i>					-0.0012***	-3.7785
<i>FAMOWN</i>	0.0103***	3.9292	0.3968***	3.9860	0.0108***	4.1127
<i>ACTINST</i>	-0.0005	-0.2213	-0.5607***	-7.0787	-0.0011	-0.5470
<i>PASSINST</i>	0.0019	0.8672	-0.1947**	-2.3979	0.0016	0.7568
<i>ROA</i>	0.0946***	4.5266	3.7074***	4.6655	0.0991***	4.7392
<i>RTN</i>	-0.0001***	-3.4074	-0.0017*	-1.7016	-0.0001***	-3.4888
<i>CEOCHR</i>	-0.0052	-1.2675	2.4571***	15.6861	-0.0022	-0.5332
<i>BETA</i>	0.0018***	5.2741	-0.0364***	-2.7552	0.0018***	5.1489
<i>LEV</i>	-0.0003**	-2.4487	-0.0266***	-6.0829	-0.0003***	-2.7250
<i>FIRMAGE</i>	-0.0058***	-34.0668	0.1886***	29.3238	-0.0055***	-30.8170
<i>ADV</i>	0.0008	0.7897	-0.0227	-0.6248	0.0007	0.7616
<i>DIRHOLD</i>	-0.0008***	-4.2726	-0.0285***	-3.8145	-0.0009***	-4.4485
<i>COMMIX</i>	-0.0177*	-1.8449	1.6047***	4.4038	-0.0157	-1.6406
<i>YEAR EFFECTS</i>	<i>INCLUDED</i>					
Observation	6687		6687		6687	
R-squared	0.21		0.16		0.21	

Notes:

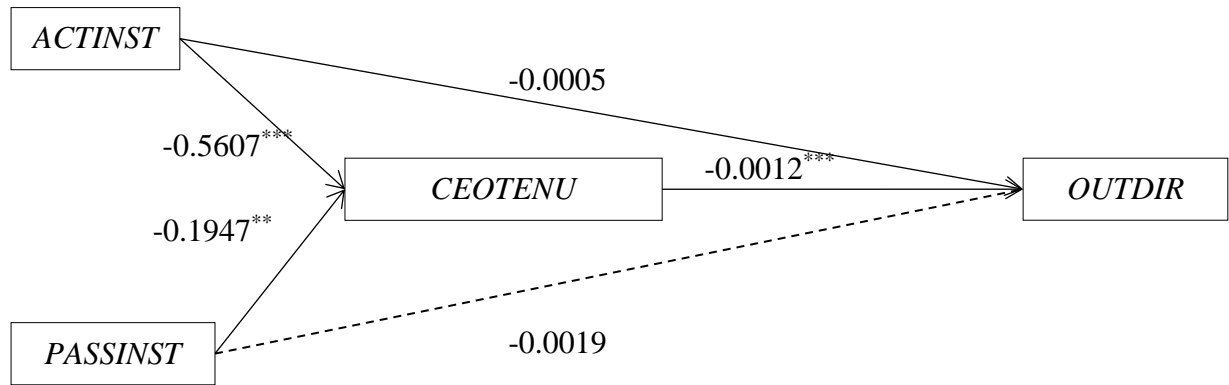
1. We use confidence intervals from bootstrapped sampling distributions (based on 10,000 bootstrap samples) to test the significance of indirect effects (Hayes 2013).
2. ***, ** and * denote significance at the 1%, 5% and 10% two-tail levels.
3. Please refer to Table 2 for the definitions and computations of variables.

TABLE 11: The mediating effect of CEO tenure on the relationship between ownership structure and CEO duality: active and passive institutional ownership

	<i>CEOCHR</i>		<i>CEOTENU</i>		<i>CEOCHR</i>	
	(1)		(2)		(3)	
	coeff	t	coeff	t	coeff	t
<i>CONSTANT</i>	0.5071***	16.5578	8.4167***	21.1216	0.3854***	12.4037
<i>CEOTENU</i>					0.0145***	15.6411
<i>FAMOWN</i>	0.0242***	3.1058	0.4741***	4.6801	0.0173**	2.2618
<i>ACTINST</i>	-0.0191***	-3.0824	-0.6082***	-7.5546	-0.0103*	-1.6840
<i>PASSINST</i>	0.0156**	2.4520	-0.1533*	-1.8578	0.0178***	2.8515
<i>ROA</i>	-0.0288	-0.4632	3.8031***	4.6984	-0.0838	-1.3693
<i>RTN</i>	-0.0001	-1.3256	-0.0022**	-2.0759	-0.0001	-0.9517
<i>OUTDIR</i>	-0.0462	-1.2675	-1.8714***	-3.9502	-0.0191	-0.5332
<i>BETA</i>	-0.0164***	-16.1596	-0.0733***	-5.5520	-0.0153***	-15.3533
<i>LEV</i>	-0.0013***	-3.7375	-0.0302***	-6.7987	-0.0008**	-2.4943
<i>FIRMAGE</i>	-0.0009	-1.6298	0.1763***	24.8777	-0.0034***	-6.1457
<i>ADV</i>	0.0054*	1.8911	-0.0082	-0.2227	0.0055**	1.9680
<i>DIRHOLD</i>	-0.0045***	-7.6445	-0.0409***	-5.3947	-0.0039***	-6.7349
<i>COMMIX</i>	-0.0608**	-2.1358	1.4247***	3.8445	-0.0814**	-2.9076
<i>YEAR EFFECTS</i>	<i>INCLUDED</i>					
Observation	6687		6687		6687	
R-squared	0.05		0.16		0.08	

Notes:

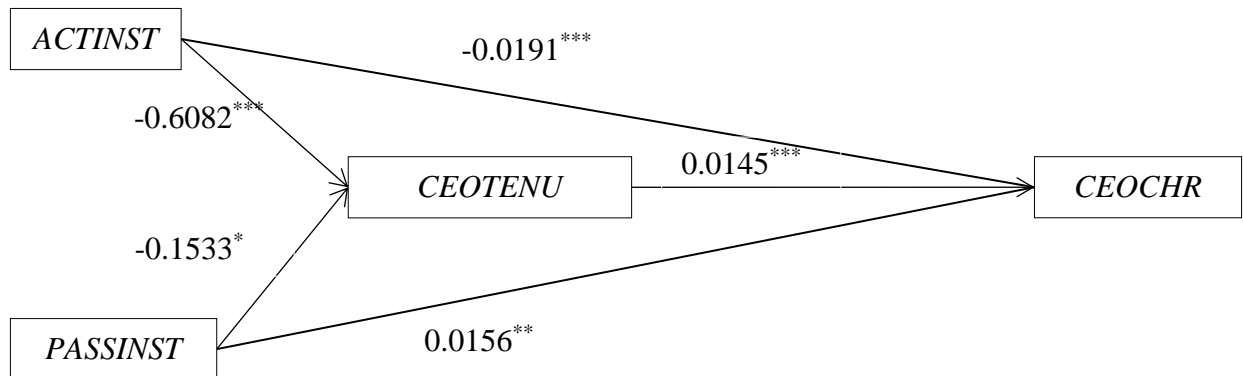
1. We use confidence intervals from bootstrapped sampling distributions (based on 10,000 bootstrap samples) to test the significance of indirect effects (Hayes 2013).
2. ***, ** and * denote significance at the 1%, 5% and 10% two-tail levels.
3. Please refer to Table 2 for the definitions and computations of variables.



Notes:

1. ***, ** and * denote significance at the 1%, 5% and 10% levels
2. Please refer to Table 2 for the definitions and computations of variables.

Figure 5 Analysis of paths for large shareholder ownership, CEO tenure, and outsider director proportion: active and passive institutional investor ownership



Notes:

1. ***, ** and * denote significance at the 1%, 5% and 10% levels
2. Please refer to Table 2 for the definitions and computations of variables.

Figure 6 Analysis of paths for large shareholder ownership, CEO tenure, and CEO duality: active and passive institutional investor ownership

TABLE 12: Total, direct, and indirect effects on the relation between large shareholder ownership and board independence: active and passive institutional investor ownership

IV	DV	Direct effect		Indirect effect		Total effect		Ratio of indirect to total effect	Ratio of indirect to direct effect
		Coeff.	Sig.	Coeff.	Sig.	Coeff.	Sig.		
<i>ACTINST</i>	→ <i>OUTDIR</i>	-0.001	-	0.001	***	0.0005	-	147.9%	59.7%
<i>ACTINST</i>	→ <i>CEOCHR</i>	-0.010	***	-0.009	***	-0.019	***	46.1%	85.6%
<i>PASSINST</i>	→ <i>OUTDIR</i>	0.002	-	0.0002	*	0.002	-	12.8%	14.7%
<i>PASSINST</i>	→ <i>CEOCHR</i>	0.018	***	-0.002	*	0.016	***	14.3%	12.5%

Notes:

1. We use confidence intervals from bootstrapped sampling distributions (based on 10,000 bootstrap samples) to test the significance of indirect effects (Hayes 2013).
2. ***, ** and * denote significance at the 1%, 5% and 10% two-tail levels.
3. Please refer to Table 2 for the definitions and computations of variables.