Institutional investor preferences for corporate governance mechanisms

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Abstract

This paper examines the influence and characteristics of "governance-sensitive" institutional investors (i.e., institutions that explicitly consider firms' governance mechanisms in their investment decisions). While we find that governance-sensitive institutions tend to prefer firms with existing preferred governance mechanisms, there is evidence that ownership by governance-sensitive institutions is associated with future improvements in shareholder rights. We also find that large, low-turnover institutions with preferences for growth and small-cap firms are more likely to be governance-sensitive. Overall, our results suggest that common proxies for governance sensitivity by investors (e.g., total institutional ownership, legal type, blockholding) do not cleanly measure governance preferences.

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1. Introduction

Institutional investors are commonly assumed to be a key component of corporate governance—monitoring and disciplining managers through explicit actions or "voting with their feet." Prior research finds that a small number of institutional investors take an active role in the governance of their portfolio firms by waging public and private campaigns, sponsoring shareholder proposals, and voting against management attempts to entrench (Gillan and Starks, 2003). But such actions are costly, have uncertain outcomes, and may require collective action. For institutional investors that are sensitive to corporate governance, an alternative approach is to simply invest in firms with existing, preferred governance mechanisms. However, in general, little is known about the extent to which firms' corporate governance mechanisms are an explicit determinant of institutional investors' decisions to invest in the first place.

This paper examines institutional investors' revealed preferences for firm-level corporate governance mechanisms. In contrast to prior research that examines the association between corporate governance and institutional ownership on a firm-level (e.g., Borokhovich et al., 2006; Chen, Harford, and Li, 2007; Li, Ortiz-Molina, and Zhao, 2007), we investigate this association on an institution-level by examining the extent to which institutional investors tilt their portfolios toward firms with preferred governance mechanisms. Specifically, we investigate three questions: (1) is corporate governance an explicit determinant of institutions' investment and trading decisions? (2) to what extent do institutions actively implement preferred governance mechanisms in their portfolio firms as opposed to simply investing in firms with preferred mechanisms? and (3) which types of institutions display preferences for

corporate governance mechanisms? We test for governance sensitivity using a broad range of governance mechanisms within the categories of board of director characteristics and shareholder rights.

We first investigate the association between total institutional ownership and the firm's corporate governance mechanisms. Despite a number of potential incentives that institutional investors have to tilt their portfolios toward firms with "better" governance mechanisms, we find little evidence of an association between total institutional investor ownership and corporate governance. There is weak evidence that firms with "good" board characteristics have higher levels of total institutional ownership, but we find no association between shareholder rights and total institutional ownership.[1] Given the lack of an overall relation, we attempt to identify institutions that do exhibit strong revealed preferences for governance mechanisms in order to document the proportion, influence, and characteristics of institutional investors that are sensitive to governance in their investment decisions and monitoring activities.

Using data from 1995 to 1997, we find that approximately 10% of institutions are sensitive to each set of governance mechanisms; i.e., governance characteristics significantly affect their portfolio weighting decisions. Using a holdout sample from 1998 to 2004, we confirm the validity of our revealed preference classification. Institutions classified as governance-sensitive continue to exhibit significant preferences for governance mechanisms.

[1] One difficulty in any governance study is determining whether a governance mechanism is "good" or "bad." For example, there is disagreement in the literature about whether large boards provide good governance (e.g., (Dalton et al. 1999)) or poor governance (e.g., (Yermack 1996)). However, Table 1 shows that our measure of board characteristics has improved over time. Given the pressures for governance improvements after Sarbanes-Oxley and Enron, this improvement suggests that our measure captures what the market *perceives* to be better governance mechanisms. In addition, our tests do not rely on the assumption that certain governance mechanisms are superior. Instead, we rely only on the assumption that governance mechanisms are observed by institutional investors who then choose whether to include these mechanisms in their investment decisions and monitoring activities.

Institutions classified as governance-insensitive do not exhibit significant preferences for board characteristics in the later period, but do exhibit significant preferences for "weak" shareholder rights, explaining the insignificant association for total institutional ownership. Thus, revealed preferences identify a group of institutional investors with persistent preferences for governance mechanisms.

Next, we address the question of whether these institutions simply invest in firms with preferred governance mechanisms or actively implement preferred mechanisms in their portfolio firms. We find strong evidence that changes in ownership by governance-sensitive institutions are associated with prior levels of, and contemporaneous changes in, governance mechanisms, implying that governance-sensitive institutions prefer to invest in firms with existing preferred governance mechanisms. Nevertheless, we find evidence that firms with a high level of institutions sensitive to shareholder rights exhibit significant future improvements in shareholder rights, implying some activism on the part of this set of institutions.

Finally, we investigate the characteristics of institutions that are governance-sensitive. Consistent with their fiduciary responsibilities, bank trusts and pensions and endowments tend to have the highest percentage of governance-sensitive institutions. But, neither type has more than 25% of its institutions classified as governance-sensitive, indicating that the legal type classifications do not fully proxy for general governance sensitivity.

Therefore, we examine the association between governance sensitivity and a set of factors that describe the characteristics of institutions' portfolios. We find that large institutions and institutions holding a large number of stocks in their portfolios are more likely to be sensitive to corporate governance mechanisms, suggesting that institutions view governance

mechanisms as means to decrease monitoring costs. In addition, we find that institutions with preferences for growth firms tilt their portfolios toward firms with "better" board characteristics, implying that institutions view board governance as more essential for firms with a high level of growth opportunities. In contrast, institutions with long investment horizons and small-cap investment styles are more likely to tilt their portfolios toward firms with "better" shareholder rights, suggesting that shareholder governance allows these institutions to protect their large, stable investments. Interestingly, blockholder ownership by institutional investors is not significantly related to governance sensitivity, suggesting that block ownership serves as a substitute for governance mechanisms, rather than a complement. Overall, our results suggest that common proxies for governance sensitivity by investors (e.g., legal type, blockholding) do not fully capture important aspects of the motivation for governance sensitivity and, as a result, may misclassify institutions with respect to their governance sensitivity.

Our study contributes to the literatures on institutional investors and corporate governance in the following ways. First, we investigate the preferences of institutional investors for corporate governance mechanisms, rather than their role in initiating or reacting to major governance actions. By examining investment behavior, we are able to use a large sample of firms and institutions to investigate the market forces that influence firm-level governance mechanisms. Second, we document the governance sensitivity of a broad set of institutional investors taking into consideration their heterogeneity. Not all institutional investors have the same investment objectives or philosophy, and some are constrained by fiduciary duties or influenced by political concerns. Understanding the heterogeneous preferences of institutional

investors will become increasingly important if the SEC allows shareholders to nominate director candidates (Hemphill, 2007). Finally, we specify and validate a parsimonious method to classify the corporate governance sensitivity of institutional investors. In doing so, we provide evidence of the types of institutions likely to be active in corporate governance reforms and develop a more refined method to classify institutions in the study of investor activism.

The paper is organized as follows. Section 2 provides the motivation and research questions in this study. Section 3 describes the sample, the data, and the research methodology. Section 4 presents our analyses on the relation between total institutional ownership and corporate governance. Section 5 presents our methodology for classifying institutional investors based on their observed prior governance sensitivity. Section 6 provides evidence on the characteristics of governance-sensitive institutions and section 7 concludes.

2. Preferences for corporate governance

Grossman and Hart (1980) argue that the free rider problem makes it cost ineffective for small shareholders to act as monitors of management. But, larger investors, such as institutional investors, can address agency problems in the firm because they have (1) an incentive to monitor firm management due to the size of their holdings, and (2) have the ability to effect change because of their voting blocks (Shleifer and Vishny, 1997).

Prior research has examined the role of institutional investors in the governance and decision-making of their portfolio firms. For example, research has examined the influence of institutional investors on public campaigns such as shareholder proposals and voting (Brickley, Lease, and Smith, 1988; Smith, 1996; Wahal, 1996; Gillan and Starks, 2000), on private

negotiations with management (Strickland, Wiles, and Zenner, 1996; Carleton, Nelson, and Weisbach, 1998), on anti-takeover charter amendments (Borokhovich, et al., 2006), on shareholder voting rights (Li, Ortiz-Molina, and Zhao, 2007), on major corporate decisions such as forced CEO turnover (Parrino, Sias, and Starks, 2003), on executive compensation (Hartzell and Starks, 2003; Almazan, Hartzell, and Starks, 2005), and on mergers (Chen, Harford, and Li, 2007). These studies provide mixed evidence as to whether institutional investors act as effective monitors of management and/or whether their governance actions are profitable. Possible explanations for the mixed results are that, in general, these studies focus either on specific corporate events or on specific classes of institutions such as public pension funds. In addition, these studies may not fully account for the fact that institutions can "vote with their feet" if they disagree with a firm's governance and decision-making (Bhide, 1993; Admati and Pfleiderer, 2007; Edmans, 2007).

We investigate the preferences of a large group of institutional investors for two distinct forms of corporate governance mechanisms.[2] First, we examine the composition of the board of directors, which serves as an internal mechanism for monitoring managers (Hermalin and Weisbach, 2003). Second, we examine the degree of shareholder rights (or anti-takeover provisions) embedded in the corporate charter. A higher degree of shareholder rights, implied by fewer anti-takeover provisions, disciplines managers by exposing them to the external market for corporate control (Gompers, Ishii, and Metrick, 2003). While both mechanisms monitor or discipline managers to act in the interest of shareholders, the internal mechanisms of

[2] In a similar vein, (Agrawal and Knoeber 1996)) find little evidence of an association between total institutional ownership and other possible control mechanisms (e.g., insider ownership, blockholders, outside directors, CEO human capital, and leverage). Of this list, outside directors is the only factor also considered in this study.

the board are more involved with monitoring the operational, disclosure, and compensation activities of managers on an ongoing basis, whereas external mechanisms ensure that the current management team is effectively deploying the firm's assets to maximize value.

Institutional investors have a number of incentives that would lead them to prefer firms with "better" corporate governance mechanisms.[3] First, institutional investors often hold large portfolios for which external monitoring costs are high. Bushee and Noe (2000) find that institutions with a large number of portfolio stocks prefer higher quality disclosure as a way to offset monitoring costs. Thus, institutional investors could prefer firms with strong internal monitoring mechanisms that serve as a substitute for the institutions' own costly monitoring activities. Second, there could be an association (perceived or actual) between corporate governance mechanisms and superior firm performance that is not captured by other firm fundamentals. For example, Gompers, Ishii, and Metrick (2003), Brown and Caylor (2006), and Larcker, Richardson, and Tuna (2007) find that better governed firms exhibit higher firm value, better operating performance, and potentially less wasteful corporate investment. Third, the presence of stringent fiduciary responsibilities can lead some institutions to prefer firms with better governance mechanisms because such mechanisms can reduce the possibility of negative outcomes due to managerial fraud or negligence (Del Guercio, 1996). Fourth, institutions holding large positions in firms or following an index strategy will find it costly to rapidly liquidate their positions during a governance failure, which could lead to a preference for

[3] Note that the international literature finds that foreign institutional investors prefer to invest in firms with "better" governance practices (e.g., (Leuz, Lins, and Warnock 2006); (Ferreira and Matos 2006)). This literature assumes that firm-level corporate governance mechanisms substitute for weak country-level legal protections of minority shareholders. In contrast, our study examines the preferences of US institutional investors for domestic securities. The US legal system provides one of the highest levels of protection for minority shareholders. Therefore, the motivations for governance-sensitivity in our setting are more likely associated with investor characteristics.

governance mechanisms that reduce the chance of governance failures. Fifth, institutions following investment styles that favor small or riskier firms could seek better governance mechanisms as a way of reducing the risk of their undiversified sector bet. Finally, political motivations could create incentives for some institutional investors to focus on governance mechanisms (Smith, 1996; Woidtke, 2002).

Combined, these incentives could lead institutional investors, as a whole, to exhibit preferences for corporate governance mechanisms in their investment decisions. Thus, we first test whether institutional investors, on average, exhibit governance sensitivity in their investment decisions. Then, to identify which of these incentives are associated with the most governance sensitivity, we classify institutional investors based on their revealed preferences for governance mechanisms and examine the characteristics of the governance-sensitive institutions along these dimensions.

3. Data and sample

3.1 Sample

Our sample consists of 15,892 firm-year observations between 1995 and 2004. The sample period is constrained by the availability of data on board of director characteristics, which we obtain from the Directors database of the Investor Responsibility Research Center (IRRC). This database contains director information for approximately 1,800 companies (S&P500, S&PMidCap, S&PSmallCap) from proxy statements dated 1996 to 2005. We match proxy statements to their fiscal year (i.e., 2001 proxy data for a December fiscal year end firm

applies to the 2000 fiscal year). As a result, the majority of this data applies to fiscal years 1995 to 2004.

As in Gompers, Ishii, and Metrick (2003), we obtain the data on shareholder rights from the IRRC Governance database. These data are available for the years 1990, 1993, 1995, 1998, 2000, 2002, and 2004, representing the year in which proxy statements were surveyed to gather the data. To form a complete panel of data for our tests, we use the 1995 survey for 1995–1996 fiscal years, the 1998 survey for 1997–1998 fiscal years, the 2000 survey for 1999–2000 fiscal years, the 2002 survey for 2001–2002 fiscal years, and the 2004 survey for 2003–2004. Note that this data structure prevents us from examining annual changes in the relation between governance factors and institutional investors.

We obtain institutional holdings from the Thomson Financial Spectrum database. This data compiles SEC Form 13-F filings of institutional holdings. Under rule 13(f), all institutional investors managing more than $100 million in equity are required to file all equity holdings greater than 10,000 shares or $200,000 in market value with the SEC on a quarterly basis. For each firm-year observations we calculate institutional ownership for each quarter and then use the mean of the four quarters in empirical tests. We obtain data for our control variables from the Compustat and CRSP databases.

3.2 Proxies of corporate governance

Our proxies for corporate governance mechanisms are divided into two groups. The first group consists of board characteristics: board size, percent of independent directors, whether the CEO is the Chairperson, presence of board interlocks, and board meeting attendance. The second group consists of the shareholder rights identified by Gompers, Ishii, and Metrick

(2003). To be consistent with that paper, all variables are defined so that smaller values capture better governance.

3.2.1 Board characteristics

Larger boards are considered ineffective because communication, coordination and decision-making problems are greater (Yermack, 1996). Our proxy for board size is the log of the number of directors (LNDIR). The combination of the CEO and Chairperson positions is considered ineffective governance because it reduces the possibility that the board will objectively monitor management. We code an indicator variable (CEO) as 1 if the positions are combined and 0 otherwise. Independent directors are considered more effective monitors of firm management because their careers are not dependent on the goodwill of management (Rosenstein and Wyatt, 1990; Byrd and Hickman, 1992). To proxy for ineffective governance, we calculate the percentage of directors that are not independent (PNID). Interlocked directors (directors who serve on each other's boards) are considered indicative of "poor" governance because such directors have reciprocating relationships that create incentives to vote in ways that benefit their counterparts and, hence, themselves (Hallock, 1997). We code an indicator variable (DLOCK) as 1 if there are any interlocks on the board of directors and 0 otherwise. Finally, attendance at board meetings is considered an indication of a director's effort in monitoring management. We therefore include an indicator variable for bad attendance (DBAD) coded as 1 if any director misses 75% or more of board meetings and 0 otherwise.[4]

[4] There are two other board characteristics that we considered but do not use due to data limitations: the mean number of other boards that directors serve on and the amount of ownership by officers and directors in the company. Both variables are missing prior to 1997 and service on other boards is reported for fewer than half of the observations after 1997. A second problem with ownership is that large values will be mechanically related to the

We combine these five variables into an index of board of director characteristics to serve as a parsimonious measure of the quality of the board. Bivariate correlations and factor analyses strongly suggest that these five characteristics are independently determined. Thus, we create a formative index rather than a reflective index. The index (DINDX) is computed as the sum of the three indicator variables, CEO, DLOCK, and DBAD, and indicators for whether the firm has a high level of LNDIR and PNID. To form these indicators, we split the distribution of LNDIR and PNID into high and low groups using k-means cluster analysis. This approach allows for uneven clusters and is better suited to find breakpoints in the distribution than a median split, which often divides the distribution in the center of its mass, leaving observations in each group that are very similar.[5] Thus, DINDX will range from zero to five, with zero (five) representing boards with the best (worst) combination of governance mechanisms.

Panel A of Table 1 presents descriptive statistics on DINDX and its component variables. Over 11% of firm-years have a DINDX score of zero, representing the best governance mechanisms, and over 35% of the observations have a score of one. Thus, over 45% of the sample has boards characterized by "good" governance mechanisms. Only 3.4% of the firm-years have "poor" governance on at least four of the five dimensions. Except for LNDIR at the highest level of DINDX, the mean values of each of the five components of the index increase monotonically in the DINDX score, suggesting that the index is a good proxy for governance quality along all five dimensions.

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percentage of institutional ownership and small values are often missing because director ownership does not have to be reported if it is less than 1%. We do use ownership as a control variable, as discussed later.

[5] This analysis starts with a low and high observation and classifies each subsequent observation into the high or low group based on the lower Euclidian distance between the observation and the two cluster means. Cluster means are recomputed after each new observation is classified and the procedure iterates until all observations are clustered. We were unable to split LNDIR for 2004 and therefore used the cut point for 2003.

Panel B shows the time-series change in DINDX. The percentage of firms with the best board characteristics increased dramatically over time, from 6% in 1995 to 19% in 2004. Most of this movement stems from firms with a DINDX score of 3. Thus, firms with relatively "poor" governance mechanisms have shown dramatic changes in governance mechanisms since 2001.

3.2.2 Shareholder rights

We proxy for shareholder rights using the governance index (GINDX) constructed by Gompers, Ishii, and Metrick (2003), which is the sum of 24 individual corporate charter components and state laws relating primarily to takeover protections, voting rules, and liability limitations. Gompers, Ishii, and Metrick (2003) divides GINDX into five major sub-components. DELAY is the sum of four provisions designed to slow down hostile bidders. VOTING is the sum of six provisions related to shareholder rights in elections or charter amendment votes. PROTECT is the sum of six provisions that protect officers and directors from firm-related liability and provide termination-related compensation. OTHER is the sum of six firm-level provisions relating to greenmail, directors' duties, fair price, pension parachutes, poison pills, and silver parachutes. These generally represent mechanisms to make takeovers more costly to potential bidders. STATE captures whether the firm is incorporated in states with specific anti-takeover laws and, if so, whether the firm chooses to opt out of the law.

Panel A of Table 1 presents descriptive statistics on GINDX and its component variables. For parsimony in presentation, we divide GINDX into six groups in the table (in the analyses, we use the continuous measure). The distribution of GINDX is more symmetric than that of DINDX, with most firms clustered in the middle and fewer firms at the tails. The mean component scores tend to increase monotonically in the level of GINDX, indicating that this is

also a formative index with small intra-item correlations. Panel B shows that, unlike DINDX, there has been no secular trend toward better GINDX scores. In fact, firms with low GINDX scores have moved toward the middle range in the latter part of our sample.

3.3 Correlations

Panel C presents correlations among DINDX, GINDX, and all of their components. Note that the correlation between DINDX and GINDX is only 0.119, suggesting that these two forms of governance mechanisms operate independently. Among the components of DINDX, the highest bivariate correlation is between the number of directors (LNDIR) and bad attendance (DBAD), but is only 0.154. Among the components of GINDX, there are moderately high bivariate correlations (~0.35) among DELAY, OTHER, and PROTECT, but no other correlation greater than 0.13. DINDX exhibits only small correlations (less than 0.15) with the components of GINDX, whereas GINDX is moderately correlated with the number of directors (positive) and the percent of non-independent directors (negative). Thus, big boards with many independent directors exhibit a slight tendency toward lower shareholder rights, especially in the PROTECT and OTHER category.

3.4 Descriptive statistics

Table 2 presents descriptive statistics for the variables used in our analyses. The mean institutional ownership in the sample firms is 60.5%. Two-year changes in institutional ownership (4.9%) over the 1998–2004 period have been positive, on average, consistent with the long-term trend in increasing institutional ownership. The mean and median values for DINDX and GINDX differ from those reported in Table 1 because we divide each index by the maximum value. This transformation causes the variable to range between zero and one, which

aids in the interpretation of the coefficients. Mean changes in the two governance indices (CDINDX and CGINDX) are small and the median changes are zero. These small, relatively infrequent changes in governance indices reduce the power of our changes analyses.

4. Total institutional ownership and corporate governance

We first examine the relation between total institutional investor ownership and governance mechanisms by regressing the percentage of total institutional ownership in a firm on a governance measure—DINDX or GINDX—and a set of control variables that capture previously documented determinants of institutional ownership (Bushee, 2001; Gompers and Metrick, 2001). Prior research finds that, on average, institutions prefer large, liquid stocks that can be justified as prudent investments. We control for size with the log of the market value of equity (LMV). We also proxy for the prudence of the investment by including the S&P 500 stock rating (RATE) and an indicator variable for whether a firm is listed in the S&P 500 Index (SP500). We use turnover (TURN), calculated as the average monthly trading volume over the year divided by shares outstanding, to control for liquidity preferences of institutions.

To control for institutions' preferences for good recent performance, we include annual market adjusted returns (MRET). We also include the following fundamental growth and income ratios upon which institutional investors base their trading decisions: the earnings-to-price ratio (EP), the book-to-price ratio (BP), the dividend-to-price ratio (DP), sales growth (SGR), and the return on equity (ROE). To proxy for risk, we include beta (BETA), calculated from a market model using daily returns, idiosyncratic risk (IRISK), calculated as the standard deviation of the market model residuals, and leverage (LEV), calculated as the debt-to-asset

ratio. As an additional control variable, we include the percentage of officer and director ownership (ODOWN). Ideally, we would include director ownership as an indicator of the effectiveness of corporate governance. But because of the mechanical (negative) relation between institutional holdings and ownership, we include it as a control variable instead.

We estimate the following regression for the period 1998 to 2004 using Rogers (1993) robust standard errors:

$$IH\_TOTAL_{it} = \alpha + \beta_1 GOV_{it} + \beta_2 LMV_{it} + \beta_3 RATE_{it} + \beta_4 SP500_{it} + \beta_5 TURN_{it} + \beta_6 MRET_{it} + \beta_7 EP_{it} + \beta_8 BP_{it} + \beta_9 DP_{it} + \beta_{10} SGR_{it} + \beta_{11} ROE_{it} + \beta_{12} BETA_{it} + \beta_{13} IRISK_{it} + \beta_{14} LEV_{it} + \beta_{15} ODOWN_{it} + \sum_{k=0}^{4} \beta_{16+k} DYEAR_{it} + \varepsilon_{jt}$$

where IH_TOTAL = percent of institutional ownership by all institutions; GOV = GINDX or DINDX; DYEAR = year indicator

Recall that lower DINDX and GINDX scores represent better governance, so a negative β_1 coefficient would indicate preferences for "good" governance.

Table 3 presents the results for these regressions. We find that the total level of institutional ownership is significantly, negatively related to DINDX but not significantly related to GINDX.[6] In terms of statistical significance the standard error for the coefficient on DINDX is 0.017 and the two-tailed p-value is 0.062, both of which are relatively large considering the magnitude of the estimated coefficient is -0.031 and the sample size is 8,992. In terms of economic magnitude, a one standard deviation decrease in DINDX is associated with a 0.6% increase in total institutional ownership. Thus, on average, firms with "good" governance

[6] We also estimate annual regressions. The coefficient on DINDX is negative every year and significant at the 0.10 level only in 1999 and 2000. The coefficient on GINDX is negative five out of the seven years and not significant in any of the years.

in terms of board characteristics have higher levels of total institutional ownership, but the effect is not large in either statistical or economic magnitude.[7]

The lack of governance sensitivity by institutional investors as a group motivates our subsequent examination of the proportion and characteristics of institutions that do appear to be sensitive to governance mechanisms in their investment decisions.

5. Classifying institutional investors based on revealed preferences for governance

5.1 Classification

In this section, we attempt to identify individual institutional investors that are governance-sensitive. We classify institutional investors as "governance-sensitive" if they significantly tilt their portfolio weights toward firms with better corporate governance, as measured by board characteristics (DINDX) and shareholder rights (GINDX). Governance sensitivity is likely to be a second-order effect in choosing of portfolio weights based on the strong evidence that factors such as size, performance, risk, and liquidity are first-order determinants of institutional investment (Bushee, 2001; Gompers and Metrick, 2001). Because these determinants could be correlated with governance characteristics, we control for them to determine whether governance mechanisms have an incremental impact on an institution's investment decisions. We estimate the following tobit regression annually for each institutional investor and base our classification on the sign and significance of the coefficient on the governance proxy:

[7] We also tested whether changes in total institutional ownership are associated with changes in governance indices. Results for these tests were consistent for those of the levels tests—we find only limited evidence of contemporaneous changes in total institutional ownership and changes in governance indices.

$$PWGT_{ijt} = \alpha_{jt} + \gamma_{jt} GOV_{ijt} + \beta_{1jt} LMV_{ijt} + \beta_{2jt} RATE_{ijt} + \beta_{3jt} SP500_{ijt} + \beta_{4jt} LTIME_{ijt} + \beta_{5jt} TURN_{ijt} + \beta_{6jt} MRET_{ijt} + \beta_{7jt} EP_{ijt} + \beta_{8jt} BP_{ijt} + \beta_{9jt} DP_{ijt} + \beta_{10jt} SGR_{ijt} + \beta_{11jt} ROE_{ijt} + \beta_{12jt} BETA_{ijt} + \beta_{13jt} IRISK_{ijt} + \beta_{14jt} LEV_{ijt} + \varepsilon_{jt}$$

where PWGT = institution *j*'s portfolio weight in firm *i* at time *t* and GOV = DINDX or GINDX.[8]

We estimate each institution-specific regression on the entire panel of firms for which we have data for governance and control variables. The portfolio weight (PWGT) is the percentage of the institution's total equity portfolio that is invested in a firm. If an institution has no investment in a sample firm, the portfolio weight equals zero. Because few institutions engage in short-selling, these zero weights represent a truncated distribution and a tobit model is the appropriate specification. In cases where an institution owns only a small number of the sample firms, the tobit model will not converge and we are unable to classify the institution.

We estimate the model for each year 1995–1997 and label an institutional investor as "governance-sensitive" if the γ_{jt} coefficient is *negative* and significant at the 0.10 level (one-tailed) in *at least* two of the three years. We label these institutions as GSID (GSIG) if they are sensitive to DINDX (GINDX). If the γ_{jt} coefficient is insignificant and/or positive in each year during 1995–1997, we classify the institution as "governance-insensitive" (GIND and GING for insensitivity to DINDX and GINDX, respectively). For institutions with only one year of data during 1995–1997 or with multiple years of data but only one negative and significant γ_{jt} coefficient, we do not attempt to classify the institution because of the uncertainty over its governance preferences. We perform the classification on the 1995–1997 period to allow for a

[8] We do not include ODOWN in this regression because it is missing in 1995 and 1996. When we estimate this regression after 1996 both including and excluding ODOWN, we find very similar proportions of firms with significant coefficients on the governance variables.

holdout sample to test out-of-sample validity. In addition, this period arguably provides a more powerful setting to assess governance preferences because there were no major scandals or changes in regulation that could have induced a stronger focus on governance.

Panel A of Table 4 presents the number of institutions classified into these three groups. No more than 11% of institutional investors during the 1995–1997 period explicitly tilt their portfolio weights based on "good" governance mechanisms: 11% are sensitive to board of director characteristics (DINDX) and 9% are sensitive to shareholder rights (GINDX).[9] Thus, only a small percentage of institutions consistently incorporate firms' governance characteristics in their portfolio weights. Moreover, only 23 institutions are classified as governance-sensitive to both shareholder rights and board characteristics, suggesting that, even if institutions choose to tilt their portfolio toward governance characteristics, they generally focus on only one aspect of governance.

Because only 11% of institutions significantly tilt their portfolio weights toward DINDX, the results from the total institutional ownership regressions presented in Table 3 suggest that either these institutions tend to take significant ownership stakes or that enough institutions slightly tilt toward governance characteristics (i.e., have a negative, but insignificant γ_{jt} coefficient in the classification regression) to produce an overall effect on percentage ownership. Alternatively, this result could be driven by institutions that are classified as insensitive to governance during 1995–1997 becoming more sensitive to governance in the holdout sample.

[9] We find similar results when we compare the percentage of total market capitalization of all institutions in each category: 11% are sensitive to board of director characteristics (DINDX) and 9% are sensitive to shareholder rights (GINDX).

To investigate this latter possibility we run the three-year rolling classification over the full sample period. Panel B presents the results for the rolling classification. The number of institutions classified as sensitive to DINDX is fairly constant in the sample period. The relatively constant percentages of institutions sensitive to DINDX may be driven by the secular improvement in DINDX, which may have reduced the incentives for institutions to tilt their portfolios toward "better" board characteristics. In contrast, there is a secular increase in the number of institutions sensitive to GINDX over the sample period: from 9% in 1997 up to 20% in 2002 and 2003. As the distribution of GINDX was relatively constant over the sample period, the increased focus on governance after Enron and Sarbanes-Oxley possibly provided an incentive for more institutions to tilt their portfolios toward firms with "better" shareholder rights. [10]

Panel C presents firm-level institutional ownership classified by governance-sensitivity. Despite the fact that institutions sensitive to shareholder rights under our classification method comprise no more than 10% of institutions, their average holdings in the sample firms (IH_GSIG) are 19%, which is not far below the 24% average holdings of insensitive institutions (IH_GING). This is not surprising because shareholder rights are likely to be an important factor for institutions holding large stakes. In contrast, ownership levels for institutions that are sensitive to board characteristics (IH_GSID) are, on average, similar to the percentage of institutions classified as GSID.

[10] We also estimate all of our analyses using this alternative classification method and found similar results.

5.2 Levels analyses

Panel A of Table 5 presents results for institutions classified by their prior sensitivity to board characteristics and shareholder rights. We use a specification that is similar to the one used in section 4.1, but replace the dependent variable with the percentage ownership by institutions in the relevant governance classification (IH_GSID, IH_GIND, IH_GSIG, and IH_GING) and control for the total level of institutional ownership.

$$IH\_GOVSEN_{it} = \alpha + \beta_1 GOV_{it} + \beta_2 IH\_OTHER_{it} + \beta_3 LMV_{it} + \beta_4 RATE_{it} + \beta_5 SP500_{it} + \beta_6 TURN_{it} + \beta_7 MRET_{it} + \beta_8 EP_{it} + \beta_9 BP_{it} + \beta_{10} DP_{it} + \beta_{11} SGR_{it} + \beta_{12} ROE_{it} + \beta_{13} BETA_{it} + \beta_{14} IRISK_{it} + \beta_{15} LEV_{it} + \beta_{16} ODOWN_{it} + \sum_{k=0}^{4} \beta_{17+k} DYEAR_{it} + \varepsilon_{jt}$$

where IH_GOVSEN = percent of institutional ownership held by the relevant class of institutions (GSID, GIND, GSIG, and GING); IH_OTHER = percent of institutional ownership by all institutions less the level of the ownership of the relevant governance-sensitive sub-group; GOV = GINDX or DINDX; DYEAR = year indicator.

Ownership by institutions classified as sensitive to board characteristics (IH_GSID) is negatively significantly associated with DINDX, whereas ownership by institutions insensitive to board characteristics (IH_GIND) is not significantly related to DINDX. Holding total institutional ownership constant, a one standard deviation decrease in DINDX is associated with a 0.4% increase in IH_GSID. This is two-thirds of the effect for the association between total institutional ownership and DINDX shown in Panel A Table 3. When we classify based on sensitivity to shareholder rights, ownership by governance-sensitive (insensitive) institutions is significantly negatively (positively) related to GINDX. Holding total institutional ownership

constant, a one standard deviation decrease in GINDX is associated with a 0.3% increase in IH_GSIG.

These results confirm that our classification methodology has descriptive validity out-of-sample and with firm-level percentage ownership, rather than the institution-level portfolio weights, as the measure of institutional investment. In addition, the results show that the association between total institutional ownership and DINDX in Panel A Table 3 is primarily driven by the governance-sensitive institutions and that conflicting preferences of institutions classified as GSIG and GING drive the insignificant coefficient on GINDX in Panel A of Table 3.

5.3 Changes analyses

In this section, we expand on the model of the prior section to test whether levels of and changes in governance-sensitive ownership are associated with contemporaneous changes in and levels of governance mechanisms. We include both levels and changes to test whether the results presented in the prior section are driven by governance-sensitive institutions investing in firms with preferred governance mechanisms or by governance-sensitive institutions actively implementing preferred governance mechanisms. For example, a finding that the level of institutional ownership is associated with future changes in governance would be suggestive of institutional activism, while contemporaneous changes are suggestive of institutions "voting with their feet." Such a model introduces the possibility of an association in both directions; i.e., changes in institutional ownership both drive and respond to changes in governance. Thus, we model both changes in governance and in institutional ownership and estimate both models using OLS and 2SLS.

We estimate the regressions over the period 1999 to 2004 using Rogers (1993) robust standard errors. Changes in institutional ownership, governance indices, and the control variables are all measured as two-year changes. Levels of institutional ownership, governance indices, and the control variables are measured at the beginning of the change period. We add the change in shares outstanding (CSHRS) to the model to control for any new equity issues or repurchase programs that could affect the change in institutional ownership. We also include an indicator for the number of mergers and acquisitions (MNA) and an indicator for CEO turnover (CEOTURN) to proxy for any major changes in the company management or its capital structure that could lead to changes in governance. We estimate the following regressions, first using OLS and then jointly using 2SLS:

$$\begin{aligned} CGOV_{it} = \alpha &+ \beta_1 CIH\_GOVSEN_{it} + \beta_2 IH\_GOVSEN_{it} + \beta_3 GOV_{it} + \beta_4 CIH\_OTHER_{it} \\ &+ \beta_5 IH\_OTHER_{it} + \beta_6 CLMV_{it} + \beta_7 CBP_{it} + \beta_8 MRET_{it} + \beta_9 CIRISK_{it} + \beta_{10} CSHRS_{it} \\ &+ \beta_{11} MDAGE_{it} + \beta_{12} MNA_{it} + \beta_{13} CEOTURN_{it} + \sum_{k=0}^{4} \beta_{14+k} DYEAR_{it} + \varepsilon_{it} \end{aligned}$$

$$\begin{aligned} CIH\_GOVSEN_{it} = \alpha &+ \beta_1 CGOV_{it} + \beta_2 GOV_{it} + \beta_3 IH\_GOVSEN_{it} + \beta_4 CIH\_OTHER_{it} \\ &+ \beta_5 IH\_OTHER_{it} + \beta_6 CLMV_{it} + \beta_7 CBP_{it} + \beta_8 MRET_{it} + \beta_9 CIRISK_{it} \\ &+ \beta_{10} CSHRS_{it} + \beta_{11} CLEV_{it} + \beta_{12} CEP_{it} + \beta_{13} CDP_{it} + \beta_{14} CSGR_{it} + \beta_{15} CTVOL_{it} \\ &+ \beta_{16} CSP500_{it} + \beta_{17} CRATE_{it} + \beta_{18} CROE_{it} + \beta_{19} CBTA_{it} + \beta_{20} CODOWN_{it} \\ &+ \sum_{k=0}^{4} \beta_{21+k} DYEAR_{it} + \varepsilon_{it} \end{aligned}$$

where GOV = DINDX or GINDX; IH_GOVSEN = percent of institutional ownership by governance-sensitive institutions (GSID and GSIG); IH_OTHER = percent of institutional ownership by all institutions less the level of the ownership of the relevant governance-sensitive sub-group and; DYEAR = year indicator. Variables with a prefix of "C" are two-year changes, and all other variables are prior levels. We include prior levels of governance and institutional

ownership variables to control for situations in which changes are constrained (e.g., firms with the best governance score cannot improve their governance) and to capture any changes in response to existing levels (e.g., institutions buying firms with existing good governance, but no concurrent changes in governance).

Panel B of Table 5 provides results for governance-sensitive institutions using OLS. In the first and fifth column, the results show that both the level and change of ownership by governance-sensitive institutions are significantly negatively associated with changes in governance mechanisms for both board characteristics and shareholder rights. Thus, changes in ownership by governance-sensitive institutions have a significant incremental effect on governance improvements beyond the prior ownership levels. Changes in ownership by other institutions exhibit no significant association with improvements in governance, consistent with the results for the level of ownership. In the second and sixth column, the results shows that changes in governance mechanisms are significantly associated with changes in ownership by governance-sensitive institutions for both board characteristics and shareholder rights. In addition, the change in GSID (GSIG) ownership is associated with the prior level of DINDX (GINDX), implying that governance-sensitive institutions accumulate holdings in firms with preferred governance mechanisms.

In the remaining columns of Panel B, we jointly estimate the two models using 2SLS. Only one of the relations between changes in governance-sensitive ownership and changes in governance mechanisms is significant in this estimation: CIH_GSID is associated with contemporaneous changes in DINDX. A potential explanation for the lack of results for CIH_GSIG is that there may not be sufficient variation in CGINDX— the standard deviation of

CGINDX is approximately one-third of the standard deviation for CDINDX. But the general lack of significance is likely due to the problem of finding good instruments.

Thus, we find significant evidence of a contemporaneous association between changes in ownership by governance-sensitive institutions and changes in other governance mechanisms, but we lack the statistical power to determine causality. In addition, we find that governance-sensitive institutions accumulate holdings in firms with "better" governance. Finally, we find evidence consistent with governance-sensitive institutions actively improving shareholder rights in their portfolio firms.

6. Characteristics of governance-sensitive institutions

In this section we investigate the characteristics of governance-sensitive institutions. We first examine whether governance sensitivity is associated with an institution's legal type. Then, we compare the portfolio characteristics of governance-sensitive and insensitive institutions. The analyses are exploratory in that they investigate which characteristics are associated with governance sensitivity as opposed to what determines governance sensitivity. The analyses do, however, provide insight into the incentives that can lead an institution to be governance-sensitive.

6.1 Legal type

We first classify institutional investors based on legal type using the Spectrum database. The database identifies bank trusts (BNK), insurance companies (INS), investment companies, independent investment advisors, and other. Because investment companies and independent investment advisers are both governed by the Investment Company Act of 1940 and have

similar low levels of fiduciary responsibility, we combine them to form a group called investment advisers (IA). In addition, we identify the pensions and endowments (PNE) as the corporate or private pensions, public pensions, and university and foundation endowments within the "other" group.[11] Note that these holdings only represent internally-managed investments; any externally-managed investments will be recorded as holdings by investment advisers, which often serve as external managers for pension and endowments in addition to managing mutual funds.

Although all fund managers are legally considered fiduciaries, the strictness of the prudent person standard differs depending on the legal form of the institution. Because of state trust laws and the Employee Retirement Income Security Act (ERISA), bank trusts and pensions face a higher standard of prudence, including the requirement that each investment be analyzed individually, than standards faced by investment advisers and insurance companies (Del Guercio, 1996). Failure to adhere to the standard of prudence can lead to investor lawsuits. Therefore, those institutional investors subject to more stringent fiduciary standards likely have greater preferences for "good" corporate governance mechanisms as a defense against investor lawsuits. We therefore predict that bank trusts and pensions and endowments are more likely to be sensitive to governance than insurance companies and investment advisors.[12]

Table 6 presents a cross-tabulation of our governance sensitivity classification with the classification by legal type. There is significant heterogeneity across types in terms of

[11] Among the "other" category there are also law firms, individuals acting as institutions, and other miscellaneous institutions that are difficult to classify. We do not include these in any of our analyses.

[12] An alternative view of bank trusts is that they are sensitive to pressure from portfolio firms because of other business relations such as banking and lending services ((Brickley, Lease, and Smith 1988)). This view implies that banks may be less likely to actively implement governance changes in portfolio firms.

governance sensitivity. Although Chi-square tests show that the distribution of legal types among governance-sensitive institutions significantly differs from the distribution for all institutions, no one type is dominated by governance-sensitive institutions. As expected, a high percentage of governance-sensitive institutions within a legal type are found among bank trusts (BNK) and pensions and endowments (PNE), consistent with their fiduciary incentives to demonstrate prudence in selecting portfolio firms. Pensions and endowments exhibit an especially high percentage of institutions sensitive to shareholder rights, which have been a traditional target of public pensions like CalPERS, while bank trusts show a high percentage of institutions sensitive to board characteristics.

Investment advisers (IA), which are largely exempt from fiduciary responsibility, show lower rates of governance sensitivity. Insurance companies (INS), which can face some fiduciary responsibility, show slightly higher governance sensitivity. For every type except pensions and endowments, a lower percentage of institutions are sensitive to shareholder rights than to board characteristics.

Despite the fact that pensions and endowments and bank trusts tend to have the highest percentage of governance-sensitive institutions, neither of these types has more than 25% of its institutions classified as governance-sensitive, indicating that the legal type classifications do not proxy for general governance sensitivity. Therefore, we next investigate portfolio characteristics of governance-sensitive and insensitive institutions.[13]

[13] In additional analyses, we regress the levels of bank and pensions and endowment ownership on governance indices and control variables (similar to Table 5). In these tests, we find that the levels of bank and pension ownership are *positively* associated with the governance indices, providing further evidence that legal type is not a good proxy for governance sensitivity because it suggests preferences for "worse" governance.

6.2 Portfolio characteristics

To measure the characteristics of the institution's portfolio, we use factor analysis to create seven composite measures: institution size, portfolio turnover, size of investment positions, market capitalization of the portfolio firms, prudence of investments, value vs. growth preferences, and riskiness of portfolio firms. Bushee (2001) and Abarbanell, Bushee, and Raedy (2003) use these factors to combine a large number of variables that have been used in prior literature into a parsimonious set of factors that describe institutional investor portfolios. Table 7 provides definitions of all of the variables that comprise each factor.

The first three factors capture the institutional investors' decisions with respect to how they manage their portfolio (Bushee, 2001). We measure the institution's size with a factor, ISIZE, which is a combination of the number of stocks in the portfolio and the market capitalization of the portfolio. Institutions that hold a large number of stocks in their portfolio may view investing in firms with "better" corporate governance mechanisms as a means to reduce monitoring costs. In contrast, large institutions could enjoy economies of scale in monitoring activities and better access to management that would reduce reliance on internal governance mechanisms. We use the portfolio turnover factor, PTURN, to measure the investment horizon of the institution. Institutions with short-investment horizons are less exposed to potential governance failures and are likely to be less sensitive to governance mechanisms, whereas buy-and-hold institutions, especially those following an index strategy, have a longer-term exposure to governance failures. We create a blockholder factor, BLOCK, to measure the extent to which an institution holds large positions in portfolio firms. Holding

large positions in portfolio firms makes it more costly to liquidate the positions rapidly and increases the potential cost of governance failures, which could lead to governance sensitivity.

The remaining four factors measure investment styles (i.e., preferences for certain firm characteristics) that are apparent in the institution's portfolio holdings (Abarbanell, Bushee, and Raedy, 2003). The factor FSIZE measures the typical market capitalization of firms in the institution's portfolio. Firm size preferences could be associated with governance sensitivity for two reasons. First, smaller firms have a higher incidence of fraud than larger firms (Bushee and Leuz, 2005). Second, larger firms have richer public information environments and greater external monitoring by analysts and the media. Thus, institutions following small cap styles have incentives to tilt toward firms with better governance mechanisms. We use the factor PRUDENCE to measure the extent to which the institution invests in firms with characteristics that would support the *ex ante* prudence of the investment. As mentioned earlier, firms with the most stringent fiduciary responsibilities have incentives to invest in "better" governed firms to reduce the probability of holding a firm that experiences a governance failure. We measure preferences for "growth" or "value" firms with the VALUE factor. It is unclear whether growth or value firms would be more likely to experience governance failures; thus, we do not have a prediction for how this factor would affect governance sensitivity. Finally, the factor RISK captures the risk of portfolio firms. Institutions that invest in riskier firms may prefer better governance because high levels of risk may make it more costly for the institution to monitor the firm's activities.

Panel A of Table 7 compares the means of portfolio characteristics for governance-sensitive and insensitive institutions. We measure portfolio characteristics as of fiscal year-end

1997. In general, governance-sensitive institutions are significantly larger both in terms of market capitalization and the number of individual stocks that they hold in their portfolio. In addition, they tend to have longer investment horizons than governance-insensitive institutions. Institutions that are sensitive to board characteristics are less likely to hold block positions in portfolio firms and more likely to follow a growth investment strategy. Governance-sensitive institutions of both types tend to invest in larger firms and to invest in firms that meet prudence standards.

Panel B presents estimates of logistic regressions in which the dependent variables are coded as 1 if an institution is classified as GSID (GSIG) and 0 if classified as GIND (GING). The independent variables are the seven factors that measure portfolio characteristics and indicator variables for whether an institution is either BNK or PNE.[14]

$$GOVSEN_i = \alpha + \beta_1 ISIZE_i + \beta_2 PTURN_i + \beta_3 BLOCK_i + \beta_4 FSIZE_i + \beta_5 PRUDENCE_i + \beta_6 VALUE_i + \beta_7 RISK_i + \beta_8 BNK_i + \beta_9 PNE_i + \varepsilon_i$$

where GOVSEN = 1 (0) if the institution is classified as GSID (GIND) or GSIG (GING).

The p-values for both regressions are less than 0.01 indicating that the independent variables provide explanatory power. The multivariate results are similar to the univariate results presented in Panel A. The coefficients on ISIZE are positive and significant for both GSID and GSIG, indicating that larger institutions are more likely to be sensitive to both governance mechanisms. For GSID, the coefficient on VALUE is negative and significant, indicating that institutions that follow a growth investment strategy are more likely to be sensitive to board characteristics. Institutions that invest in growth stocks may prefer "better"

[14] Results are qualitatively similar in terms of sign and significance if we combine institutions that are not classified with the GIND and GING institutions.

governance because they believe that firms with higher growth opportunities require higher quality internal oversight. For GSIG, the coefficients on PTURN and FSIZE are negative and significant, implying that institutions that hold their positions for longer periods and that invest in smaller firms are more likely to be sensitive to shareholder rights. Consistent with the univariate test, the coefficient on PRUDENCE is positive and significant implying that institutions that follow an investment strategy concordant with fiduciary duties are more likely to be sensitive to shareholder rights. In agreement with the results presented in Table 6, pensions and endowments are more likely to be sensitive to shareholder rights. Finally, note that blockholder ownership by institutional investors is not significantly related to governance sensitivity for either governance mechanism, suggesting that block ownership serves as a substitute for governance mechanisms, rather than a complement.

Although prior research commonly uses legal type to proxy for governance sensitivity, we find that governance sensitivity is more associated with the characteristics of an institution's portfolio than its legal type. In general, larger institutions are more likely to tilt their portfolio toward firms with "better" governance suggesting that governance mechanisms decrease monitoring costs. Other than large institutions, only institutions with preferences for growth firms tilt their portfolios with better board characteristics, implying that board governance is viewed by institutions as more essential for firms with a high level of growth opportunities. In contrast, institutions with long investment horizons and small-cap investment styles are more likely to tilt their portfolios toward firms with more shareholder rights, suggesting that governance allows these institutions to protect their investments.

7. Conclusion

This paper examines institutional investors' preferences for firm-level corporate governance mechanisms within the categories of board of director characteristics and shareholder rights. Specifically, we investigate three questions: (1) is corporate governance a determinant of institutions' investment and trading decisions? (2) to what extent do institutions actively implement preferred governance mechanisms in their portfolio firms as opposed to simply investing in firms with preferred mechanisms? and (3) which types of institutions display preferences for corporate governance mechanisms?

Using data from 1995 to 1997, we find that approximately 10% of institutions are sensitive to each set of governance mechanisms: governance characteristics significantly affect their portfolio weighting decisions. We find strong evidence that changes in ownership by governance-sensitive institutions are associated with prior levels of, and contemporaneous changes in, governance mechanisms. Despite the evidence that governance-sensitive institutions prefer to invest in firms with existing preferred governance mechanisms, firms with a high level of institutional ownership sensitive to shareholder rights exhibit significant future improvements in shareholder rights, implying some activism by these institutions.

Finally, we investigate the characteristics of institutions that are governance-sensitive. Consistent with their fiduciary responsibilities, bank trusts and pensions and endowments tend to have the highest percentage of governance-sensitive institutions. But, neither type has more than 25% of its institutions classified as governance-sensitive, indicating that the legal type classifications do not fully proxy for general governance sensitivity. Therefore, we examine the association between governance sensitivity and a set of factors that describe the characteristics

of institutions' portfolios. We find that large institutions and institutions holding a large number of stocks in their portfolios are more likely to be sensitive to corporate governance mechanisms, suggesting that institutions view governance mechanisms as means to decrease monitoring costs. In addition, we find that institutions with preferences for growth firms tilt their portfolios toward firms with "better" board characteristics, implying that institutions view board governance as more essential for firms with a high level of growth opportunities. In contrast, institutions with long investment horizons and small-cap investment styles are more likely to tilt their portfolios toward firms with better shareholder rights, suggesting that governance allows these institutions to protect their investments. Interestingly, blockholder ownership by institutional investors is not significantly related to governance sensitivity, suggesting that block ownership serves as a substitute for governance mechanisms, rather than a complement.

Our findings have implications for investors and researchers. For investors, understanding institutional investors' preferences for governance mechanisms will become increasingly important if the SEC allows shareholders to nominate director candidates (Hemphill, 2007). For researchers, our results suggest that common proxies for governance sensitivity by investors (e.g., legal type, blockholding) do not fully capture important aspects of the motivation for governance sensitivity and, as a result, may misclassify institutions with respect to their governance sensitivity.

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Table 1

Descriptive statistics for corporate governance mechanisms

Panel A: Mean values of governance variables for each level of governance index

	DINDX Scores					
Variable	0	1	2	3	4	5
CEO	0.00	0.60	0.83	0.87	0.93	1.00
LNDIR	2.00	2.09	2.29	2.43	2.50	2.46
PNID	0.29	0.33	0.38	0.45	0.55	0.63
DLOCK	0.00	0.01	0.06	0.27	0.62	1.00
DBAD	0.00	0.04	0.15	0.52	0.75	1.00
Total	1827	5706	5618	2200	489	52

	GINDX Scores					
Variable	2–4	5–7	8–10	11–13	14–16	17–19
DELAY	0.70	1.39	2.39	3.03	3.45	4.00
VOTING	1.57	1.88	2.12	2.46	3.07	3.92
PROTECT	0.63	1.44	2.12	2.97	3.80	3.69
OTHER	0.12	0.36	0.91	1.60	2.24	1.85
STATE	0.77	1.27	1.70	2.09	2.58	5.69
Total	286	1985	3344	2166	425	13

Panel B: Time-series movements in governance index scores

DINDX	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	GINDX	1995–1996	1997–1998	1999–2000	2001–2002	2003–2004
0	84	132	137	175	166	203	186	207	253	284	2–4	49	88	54	50	45
	6%	*8%*	*8%*	*10%*	*10%*	*11%*	*13%*	*14%*	*17%*	*19%*		*4%*	*5%*	*3%*	*3%*	*3%*
1	376	473	572	565	600	671	550	597	628	674	5–7	307	481	429	384	384
	28%	*30%*	*32%*	*31%*	*34%*	*37%*	*38%*	*41%*	*42%*	*46%*		*22%*	*28%*	*26%*	*23%*	*22%*
2	522	595	647	680	618	607	501	514	490	444	8–10	517	622	671	726	808
	39%	*38%*	*37%*	*38%*	*35%*	*34%*	*35%*	*35%*	*33%*	*30%*		*38%*	*36%*	*40%*	*43%*	*46%*
3	266	295	324	297	291	258	180	137	102	50	11–13	420	440	438	423	445
	20%	*19%*	*18%*	*16%*	*17%*	*14%*	*12%*	*9%*	*7%*	*3%*		*30%*	*26%*	*26%*	*25%*	*25%*
4	78	79	78	81	60	50	31	17	9	6	14–16	86	83	85	90	81
	6%	*5%*	*4%*	*4%*	*3%*	*3%*	*2%*	*1%*	*1%*	*0%*		*6%*	*5%*	*5%*	*5%*	*5%*
5	6	8	9	10	8	4	1	1	3	2	17–19	1	2	2	4	4
	0%	*1%*	*1%*	*1%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*		*0%*	*0%*	*0%*	*0%*	*0%*
Total	1332	1582	1767	1808	1743	1793	1449	1473	1485	1460	Total	1380	1716	1679	1677	1767

Table 1 (continued)

Descriptive statistics for corporate governance mechanisms

Panel C: Pearson (upper diagonal) and Spearman (lower) correlations among governance indices and governance variables

	DINDX	CEO	LNDIR	PNID	DLOCK	DBAD	GINDX	DELAY	VOTING	PROTECT	OTHER	STATE
DINDX	1.000	0.477	0.577	0.394	0.422	0.483	0.119	0.040	0.012	0.129	0.071	0.057
CEO	0.483	1.000	0.057	-0.089	0.014	0.008	0.125	0.081	-0.030	0.123	0.096	0.022
LNDIR	0.595	0.057	1.000	-0.101	0.110	0.154	0.241	0.103	0.010	0.239	0.189	0.095
PNID	0.381	-0.089	-0.101	1.000	0.122	0.016	-0.188	-0.117	0.050	-0.169	-0.191	-0.045
DLOCK	0.373	0.014	0.110	0.122	1.000	0.059	0.035	0.003	-0.006	0.031	0.029	0.030
DBAD	0.454	0.008	0.154	0.016	0.059	1.000	0.015	-0.008	0.004	0.029	0.005	0.024
GINDX	0.129	0.126	0.248	-0.192	0.033	0.019	1.000	0.614	0.404	0.609	0.642	0.342
DELAY	0.048	0.083	0.107	-0.117	0.005	-0.008	0.618	1.000	0.278	0.083	0.333	-0.122
VOTING	-0.001	-0.031	0.004	0.042	-0.011	-0.002	0.381	0.283	1.000	-0.042	0.119	-0.023
PROTECT	0.143	0.132	0.248	-0.170	0.033	0.029	0.598	0.081	-0.053	1.000	0.325	0.084
OTHER	0.068	0.096	0.183	-0.202	0.030	0.007	0.651	0.345	0.128	0.338	1.000	0.061
STATE	0.083	0.029	0.115	-0.049	0.035	0.037	0.311	-0.121	-0.019	0.083	0.048	1.000

This table presents descriptive statistics for the governance indices and their components. DINDX is an index of board of director characteristics and is calculated as the sum of the three indicator variables for whether the CEO is also the chairperson (CEO), whether there is one or more director interlocks (DLOCK), and whether one or more directors miss 75% or more of board meetings (DBAD), and indicators for whether the firm has a large board size (LNDIR) and a large number of non-independent directors (PNID). GINDX is an index of shareholder rights and is calculated as the sum of 24 individual corporate charter components. The 24 individual charter components are aggregated into five sub-groups: DELAY is the sum of four provisions designed to slow down hostile bidders; *VOTING* is the sum of six provisions related to shareholder rights in elections or charter amendment votes; PROTECT is the sum of six provisions that protect officers and directors from firm-related liability and provide termination-related compensation; OTHER is the sum of six provisions related to greenmail, directors' duties, fair price, pension parachutes, poison pill, and silver parachutes; and STATE captures whether the firm is incorporated in states with specific anti-takeover laws, and if so, whether the firm chooses to opt out of the laws. Panel A presents mean values of the components for each level of the respective index. Panel B presents time series movements in the levels of the governance indices for the period 1995–2004. Panel C presents correlations among the governance indices and all of their components. Correlations greater than 0.024 in absolute value are significantly different from zero at the 0.01 level.

Table 2

Descriptive statistics for variables used in analyses

Variable	Mean	Std. Dev.	Q1	Median	Q3
IH_TOTAL	0.605	0.198	0.472	0.628	0.757
CIH_TOTAL	0.049	0.104	-0.003	0.039	0.089
DINDX	0.353	0.203	0.200	0.400	0.400
CDINDX	-0.028	0.177	-0.200	0.000	0.000
GINDX	0.486	0.139	0.368	0.474	0.579
CGINDX	0.015	0.049	0.000	0.000	0.053
ODOWN	0.100	0.142	0.015	0.041	0.120
CODOWN	-0.010	0.062	-0.013	-0.001	0.005
LMV	7.443	1.465	6.384	7.251	8.364
CLMV	0.119	0.603	-0.210	0.122	0.461
LEV	0.249	0.188	0.081	0.244	0.374
CLEV	0.011	0.101	-0.038	0.000	0.052
EP	0.049	0.071	0.032	0.059	0.082
CEP	-0.009	0.086	-0.026	-0.002	0.021
BP	0.542	0.350	0.289	0.485	0.721
CBP	0.042	0.275	-0.089	0.014	0.149
DP	0.012	0.017	0.000	0.004	0.019
CDP	-0.001	0.010	-0.002	0.000	0.001
SGR	0.240	0.383	0.053	0.143	0.294
CSGR	-0.064	0.383	-0.179	-0.029	0.090
MRET	0.194	0.561	-0.125	0.095	0.386
CMRET	-0.015	0.753	-0.425	-0.040	0.412
IRISK	-3.682	0.444	-3.997	-3.697	-3.373
CIRISK	0.016	0.383	-0.267	0.015	0.290
BETA	1.041	0.546	0.665	0.941	1.307
CBETA	0.048	0.450	-0.228	0.041	0.334
TURN	0.158	0.144	0.066	0.106	0.193
CTURN	0.012	0.076	-0.010	0.010	0.035
SP500	0.281	0.450	0.000	0.000	1.000
CSP500	0.031	0.211	0.000	0.000	0.000
RATE	4.369	2.490	1.000	5.000	6.000
CRATE	0.230	1.274	0.000	0.000	0.000
ROE	0.170	0.276	0.100	0.163	0.239
CROE	-0.030	0.247	-0.094	-0.012	0.045
LTIME	2.660	1.077	2.092	2.779	3.437
CSHRS	0.631	1.344	0.009	0.152	0.963
MDAGE	4.067	0.076	4.027	4.078	4.116
MNA	0.623	0.839	0.000	0.000	1.000
CEOTURN	0.181	0.392	0.000	0.000	0.000

Table 2 (continued)

Descriptive statistics for variables used in analyses

This table presents descriptive statistics for all variables used in the empirical analyses. Variables with the prefix "C" represent two year changes. IH_TOTAL is the percentage of shares outstanding held by all institutional investors. DINDX is an index of board of director characteristics and is calculated as the sum of the three indicator variables for whether the CEO is also the chairperson (CEO), whether there is one or more director interlocks (DLOCK), and whether one or more directors miss 75% or more of board meetings (DBAD), and indicators for whether the firm has a large board size (LNDIR) and a large number of non-independent directors (PNID). GINDX is an index of shareholder rights and is calculated as the sum of 24 individual corporate charter components. Both GINDX and DINDX are divided by their maximum values so they range between zero and one. ODOWN is the percentage of shares outstanding held by officers and directors. LMV is the natural log of the market value of equity (CS#24 x CS#25). LEV is the ratio of debt (CS#34 + CS#9) to total assets (CS#6). EP is the ratio of income before extraordinary items (CS#18) to the market value of equity (CS#24 x CS#25). BP is the ratio of the book value of equity (CS#60) to the market value of equity (CS#24 x CS#25). DP is the ratio of dividends (CS#21) to the market value of equity (CS#24 x CS#25). SGR is the percentage change in sales (CS#12). MRET is the market adjusted buy-and-hold stock return measured over a year's time. IRISK is the log of the standard deviations of the market-model residuals of daily stock returns measured over a year's time. BETA is the market model beta calculated from daily stock returns measured over a year's time. TURN is the average monthly trading volume relative to total shares outstanding measured over a year's time. SP500 is an indicator variable set to one if the firm is in the S&P 500 index, and zero otherwise. RATE is the S&P stock rating (9 = A+,…,1 = not rated). ROE is the ratio of income before extraordinary items (CS#18) to the book value of equity (CS#60). CSHRS is the change in the shares outstanding. MDAGE is the mean director age. MNA is indicator for the number of mergers and acquisitions activities that occurred (AFTNT#1 populated with 'AA', 'AB', 'AR', and 'AS') during the period. CEOTURN is an indicator variable set to one if there is a turnover in the CEO position during the two year window, and zero otherwise.

Table 3

Level of total institutional ownership and level of corporate governance

	IH_TOTAL	
INTERCEPT	0.433***	0.436***
DINDX	-0.031*	
GINDX		-0.001
LMV	-0.002	-0.003
RATE	-0.009***	-0.010***
SP500	0.030***	0.030***
TURN	0.219***	0.222***
MRET	-0.011**	-0.011***
EP	0.227***	0.222***
BP	-0.013	-0.016
DP	-3.811***	-3.838***
SGR	-0.019**	-0.019**
ROE	0.042***	0.041***
BETA	-0.004	-0.004
IRISK	-0.057***	-0.057***
LEV	0.085***	0.082***
ODOWN	-0.438***	-0.443***
Adj. R^2	0.328	0.327
N	8992	8992

***, **, * Significantly different from zero at the 1%, 5%, and 10% level, respectively (two-tailed test)

This table presents results of OLS regressions of total institutional ownership on the governance indices for the period 1998–2004. Regressions are estimated using Rogers (1993) robust standard errors to control for firm-specific dependence**.** Included in regressions, but not tabulated, are year dummies. IH_TOTAL is the percentage of shares outstanding held by all institutional investors. DINDX is an index of board of director characteristics and is calculated as the sum of the three indicator variables CEO, DLOCK, and DBAD, and indicators for whether the firm has a high level of LNDIR and PNID. GINDX is an index of shareholder rights and is calculated as the sum of 24 individual corporate charter components and state laws relating primarily to takeover protections, voting rules, and liability limitations. Definitions of control variables are provided in Table 2.

Table 4

Revealed preferences for corporate governance

Panel A: Number of institutions classified as governance-sensitive based on 1995–1997 coefficients

	Frequency	Percent		Frequency	Percent
Sensitive to DINDX (GSID)	149	*11%*	Sensitive to GINDX (GSIG)	122	*9%*
Insensitive to DINDX (GIND)	809	*62%*	Insensitive to GINDX (GING)	853	*65%*
Not classified (NC)	354	*27%*	Not classified (NC)	334	*26%*
Total	1312	*100%*	Total	1309	*100%*

Panel B: Times series of the percentage of institutions classified as governance-sensitive

	1997	1998	1999	2000	2001	2002	2003	2004
Sensitive to DINDX (GSID)	11%	13%	14%	14%	11%	12%	9%	10%
Insensitive to DINDX (GIND)	62%	59%	55%	55%	58%	58%	61%	60%
Not classified (NC)	27%	27%	31%	31%	31%	30%	30%	30%
Sensitive to GINDX (GSIG)	9%	10%	10%	11%	13%	20%	20%	16%
Insensitive to GINDX (GING)	65%	66%	65%	62%	58%	53%	56%	60%
Not classified (NC)	26%	25%	25%	26%	28%	27%	24%	24%

Panel C: Percentage ownership of firm by governance-sensitive and insensitive institutions

	Mean	Std. Dev.	Q1	Median	Q3
Ownership sensitive to DINDX (IH_GSID)	0.112	0.065	0.064	0.103	0.149
Change in ownership sensitive to DINDX (CIH_GSID)	0.009	0.049	-0.017	0.007	0.035
Ownership insensitive to DINDX (IH_GIND)	0.273	0.117	0.190	0.271	0.348
Ownership sensitive to GINDX (IH_GSIG)	0.188	0.084	0.130	0.182	0.239
Change in ownership sensitive to DINDX (CIH_GSID)	0.017	0.058	-0.017	0.015	0.049
Ownership insensitive to GINDX (IH_GING)	0.244	0.110	0.166	0.240	0.319

Table 4

Revealed preferences for corporate governance

This table presents results of classifications of institutional investor sensitivity to governance mechanisms. Sensitivity is measured by regressing portfolio weights on governance indices and control variables. Regressions are estimated using the tobit model to account for the truncation of portfolio weights at zero.

$$PWGT_{ijt} = \alpha_{jt} + \gamma_{jt} GOV_{ijt} + \beta_{1jt} LMV_{ijt} + \beta_{2jt} RATE_{ijt} + \beta_{3jt} SP500_{ijt} + \beta_{4jt} LTIME_{ijt} + \beta_{5jt} TURN_{ijt} + \beta_{6jt} MRET_{ijt} + \beta_{7jt} EP_{ijt} + \beta_{8jt} BP_{ijt}$$
$$+ \beta_{9jt} DP_{ijt} + \beta_{10jt} SGR_{ijt} + \beta_{11jt} ROE_{ijt} + \beta_{12jt} BETA_{ijt} + \beta_{13jt} IRISK_{ijt} + \beta_{14jt} LEV_{ijt} + \varepsilon_{jt}$$

Institutions are classified as governance-sensitive based on the sign and significance of the coefficient on GOV over the three year window for the period 1995–1997. GOV is either DINDX, the index of board of director characteristics, or GINDX, the index of shareholder rights. If the coefficient on GOV is negative and significant (at the 0.10 level one tailed) for two years during the window, with a minimum of two years data required, then an institution is classified as either GSID or GSIG based on the governance index (DINDX or GINDX) used in the regression. If the coefficient on GOV is negative and significant (at the 0.10 level one tailed) for only one year during the window, then an institution is classified as NC and not included in further analyses. All other institutions with a minimum of two years of data are classified as GIND or GING based on the governance index (DINDX or GINDX) used in the regression. Panel A presents the number of institutions classified as governance-sensitive. Panel B presents rolling classifications of institutions based on their governance sensitivity. Panel C presents the descriptive statistics of the percent of shares outstanding held by governance-sensitive and insensitive institutions. Ownership percentages are calculated over the period 1998–2004. IH_GSID is the percentage of shares outstanding held by institutions that are sensitive to board characteristics. IH_GIND is the percentage of shares outstanding held by institutions that are insensitive to board characteristics. IH_GSIG is the percentage of shares outstanding held by institutions that are sensitive to shareholder rights. IH_GING is the percentage of shares outstanding held by institutions that are insensitive to shareholder rights. Variables with the prefix “C” represent two year changes.

Table 5

Governance-sensitive institutions and corporate governance

Panel A: Levels of governance-sensitive institutional ownership and governance indices

	IH_GSID	IH_GIND	IH_GSIG	IH_GING
INTERCEPT	0.101***	0.169***	0.070***	0.292***
DINDX	-0.018***	0.001		
GINDX			-0.025**	0.054***
IH_OTHER	0.063***	-0.012	0.066***	-0.220***
LMV	0.001	-0.005*	0.005***	-0.006**
RATE	-0.001**	-0.004***	-0.003***	-0.005***
SP500	-0.004	0.007	0.028***	0.008
TURN	0.047***	0.081***	0.038***	0.132***
MRET	-0.007***	-0.004	-0.005***	-0.006*
EP	0.023	0.110***	0.037**	0.187***
BP	-0.015***	0.008	0.024***	-0.025***
DP	-0.507***	-2.480***	-0.764***	-2.765***
SGR	0.000	-0.009*	-0.011***	-0.004
ROE	0.000	0.029***	0.012**	0.021**
BETA	-0.002	-0.004	0.004	-0.011*
LEV	-0.002	-0.048***	-0.014***	-0.041***
IRISK	-0.001	0.063***	0.030***	0.041***
ODOWN	-0.102***	-0.198***	-0.122***	-0.276***
Adj. R^2	0.152	0.141	0.195	0.170
N	8992	8992	8992	8992

***, **, * Significantly different from zero at the 1%, 5%, and 10% level, respectively (two-tailed test)

Table 5 (continued)

Governance-sensitive institutions and corporate governance

Panel B: Levels and changes in governance-sensitive institutional ownership and levels and changes in corporate governance indices

	OLS		2SLS			OLS		2SLS	
	CDINDX	CIH_GSID	CDINDX	CIH_GSID		CGINDX	CIH_GSIG	CGINDX	CIH_GSIG
INTERCEPT	-0.120	0.034***	-0.139	0.041***	INTERCEPT	0.092***	0.062***	0.064*	0.056***
CIH_GSID	-0.093**		0.030		CIH_GSIG	-0.024**		0.135	
IH_GSID	-0.054	-0.291***	-0.018	-0.294***	IH_GSIG	-0.050***	-0.279***	-0.005	-0.274***
CDINDX		-0.007**		-0.099**	CGINDX		-0.036**		0.084
DINDX	-0.315***	-0.019***	-0.313***	-0.048***	GINDX	-0.080***	-0.009**	-0.079***	0.001
CIH_OTHER	-0.001	-0.073***	0.008	-0.073***	CIH_OTHER	0.012*	-0.154***	0.036**	-0.156***
IH_OTHER	-0.005	0.027***	-0.008	0.025***	IH_OTHER	-0.003	0.041***	-0.010	0.042***
CLMV	0.008*	0.013***	0.007	0.014***	CLMV	-0.002	0.010***	-0.004**	0.010***
CBP	0.003	-0.001	0.003	-0.001	CBP	-0.002	-0.009***	-0.001	-0.009***
CMRET	0.002	-0.003***	0.002	-0.003***	CMRET	0.002***	-0.002*	0.002***	-0.002*
CIRISK	-0.009	-0.009***	-0.009	-0.010***	CIRISK	0.002	-0.012***	0.003	-0.012***
CSHRS	-0.001	-0.001	-0.001	-0.001	CSHRS	0.001	-0.002***	0.001*	-0.002***
MDAGE	0.048*		0.052*		MDAGE	-0.009		-0.005	
MNA	-0.003		-0.003		MNA	0.003***		0.003***	
CEOTURN	-0.024***		-0.024***		CEOTURN	-0.002		-0.002	
CLEV		-0.003		-0.006	CLEV		0.002		0.000
CEP		0.028***		0.027***	CEP		0.010		0.010
CDP		-0.009		0.011	CDP		-0.194***		-0.196***
CSGR		-0.003**		-0.002	CSGR		0.000		0.000
CTURN		0.056***		0.061***	CTURN		0.061***		0.060***
CSP500		-0.004		-0.004*	CSP500		-0.002		-0.003
CRATE		0.000		0.000	CRATE		0.000		0.000
CROE		-0.004*		-0.003	CROE		-0.006*		-0.005
CBETA		-0.002*		-0.003**	CBETA		0.000		0.000
CODOWN		-0.016*		0.003	CODOWN		-0.026**		-0.025**
Adj. R^2	0.150	0.216	0.149	0.198	Adj. R^2	0.113	0.233	0.109	0.231
N	7608	7608	7608	7608	N	6415	6415	6415	6415

***, **, * Significantly different from zero at the 1%, 5%, and 10% level, respectively (two-tailed test)

Table 5 (continued)

Governance-sensitive institutions and corporate governance

This table presents results of regressions of governance-sensitive institutional ownership and governance indices. Panel A presents OLS regressions of governance-sensitive institutional ownership on governance indices and control variables for the period 1998–2004. Panel B presents OLS and 2SLS regressions of changes in governance indices and changes in governance-sensitive institutional ownership for the period 1999–2004. Regressions are estimated using Rogers (1993) robust standard errors to control for firm-specific dependence**.** Included in regressions, but not tabulated, are year dummies. Variables without prefixes are levels at the beginning of the change period. Variables with the prefix of "C" are concurrent two year changes. IH_GSID (IH_GIND) is the percentage of shares outstanding held by all institutions that are sensitive (insensitive) to DINDX. IH_GSIG (IH_GING) is the percentage of shares outstanding held by all institutions that are sensitive (insensitive) to GINDX. DINDX is an index of board of director characteristics and is calculated as the sum of the three indicator variables CEO, DLOCK, and DBAD, and indicators for whether the firm has a high level of LNDIR and PNID. GINDX is an index of shareholder rights and is calculated as the sum of 24 individual corporate charter components and state laws relating primarily to takeover protections, voting rules, and liability limitations. Definitions of control variables are provided in Table 2.

Table 6

Legal type and governance sensitivity

	GSID	GIND	NC	Total	GSIG	GING	NC	Total
BNK	31	94	51	176	19	120	37	176
	21.5%	*12.2%*	*14.0%*	*13.9%*	*16.1%*	*14.9%*	*12.1%*	*13.9%*
INS	10	42	16	68	9	46	13	68
	6.9%	*5.6%*	*4.3%*	*5.4%*	*7.6%*	*5.9%*	*4.2%*	*5.4%*
IA	95	615	261	971	76	624	269	969
	66.0%	*77.8%*	*77.6%*	*76.4%*	*64.4%*	*74.5%*	*81.2%*	*76.4%*
PNE	8	34	14	56	14	36	6	56
	5.6%	*4.4%*	*4.1%*	*4.4%*	*11.9%*	*4.7%*	*2.5%*	*4.4%*
Total	144	785	342	1271	118	826	325	1269
Prob(χ^2)	0.024	0.660	0.835		0.000	0.753	0.037	

This table classifies governance-sensitive institutions by their legal type: bank trusts (BNK), insurance companies (INS), investment advisers (IA), and corporate pension funds, private pension funds, public pension funds, and university and foundation endowments (PNE). Chi-square tests examine whether the distribution of legal types among governance-sensitive institutions is significantly different from the distribution of legal types among all institutions.

Table 7

Portfolio characteristics and governance sensitivity

Panel A: Portfolio characteristics of institutions classified by their governance sensitivity

	GSID	GIND	Difference	GSIG	GING	Difference
ISIZE	0.500	0.066	0.434***	0.774	0.052	0.722***
NSTK	5.444	4.816	0.628***	5.767	4.838	0.929***
TE	13.946	13.409	0.537***	14.554	13.384	1.170***
PTURN	-0.165	0.063	-0.228***	-0.242	0.056	-0.298***
PT1	0.434	0.462	-0.028	0.414	0.456	-0.042*
PT2	0.263	0.287	-0.024	0.239	0.279	-0.040*
STABPN	0.674	0.638	0.036	0.708	0.625	0.083***
STABPH	0.580	0.472	0.108***	0.605	0.472	0.133***
BLOCK	-0.130	0.028	-0.158*	0.036	-0.017	0.053
LBPH	0.054	0.072	-0.018	0.077	0.067	0.010
LBPN	0.022	0.028	-0.006	0.034	0.024	0.010
WAPH	0.010	0.014	-0.004*	0.016	0.013	0.003
FSIZE	0.660	0.189	0.471***	0.445	0.261	0.184*
WAMC	9.328	8.816	0.512***	9.136	8.894	0.242**
WASP	0.692	0.583	0.109***	0.642	0.600	0.042*
WATIME	8.684	8.553	0.131***	8.623	8.577	0.046
WAEPRC	4.240	4.091	0.149*	4.322	4.098	0.224***
PRUDENCE	0.385	0.089	0.296***	0.319	0.118	0.201**
WADUP	0.285	0.255	0.030***	0.288	0.252	0.036***
WAPED	0.947	0.932	0.015**	0.948	0.934	0.014*
WARATE	6.752	6.339	0.413***	6.649	6.392	0.257***
WADE	0.278	0.327	-0.049***	0.299	0.315	-0.016
VALUE	-0.960	-0.899	-0.061	-0.905	-0.913	0.008
WAEP	0.043	0.042	0.001	0.044	0.042	0.002
WADP	0.019	0.020	-0.001	0.020	0.020	0.000
WABP	0.299	0.333	-0.034***	0.317	0.329	-0.012
RISK	0.149	0.372	-0.223**	0.259	0.322	-0.063
WAEGR	0.240	0.270	-0.030**	0.249	0.265	-0.016
WASGR	0.181	0.200	-0.019*	0.184	0.196	-0.012
WABTA	1.016	1.024	-0.008	1.019	1.017	0.002
WASTD	0.075	0.082	-0.007***	0.078	0.080	-0.002

***, **, * Significantly different from zero at the 1%, 5%, and 10% level, respectively (two-tailed test)

Table 7 (continued)

Portfolio characteristics and governance sensitivity

Panel B: Multivariate comparisons of portfolio characteristics based on governance sensitivity

	GSID	GSIG
INTERCEPT	-2.814***	-2.050***
ISIZE	0.526***	0.862***
PTURN	-0.157	-0.458***
BLOCK	-0.272	-0.126
FSIZE	0.021	-0.354*
PRUDENCE	0.066	0.446*
VALUE	-1.077***	0.301
RISK	-0.359	0.095
BNK	0.077	-0.392
PNE	0.084	0.727*
Pseudo R^2	0.101	0.154
Prob(χ^2)	0.001	0.001
N	836	864

***, **, * Significantly different from zero at the 1%, 5%, and 10% level, respectively (two-tailed test)

This table examines the portfolio characteristics of governance-sensitive institutions. Panel A presents mean comparisons of institutions' portfolio characteristics based on their governance sensitivity. We create seven factors to measure institutional portfolio characteristics: ISIZE, PTURN, BLOCK, FSIZE, PRUDENCE, VALUE, and RISK. Panel A presents means for each of the factors and the individual measures that comprise each factor. ISIZE measures the institution's size and is composed of the logarithm of the number of stocks in the portfolio (NSTK) and the market capitalization of the portfolio (TE). PTURN measures the duration that an institution holds an investment. The following items comprise PTURN: portfolio turnover in terms of market capitalization (PT1); portfolio turnover in terms of sales transactions (PT2); percent of number of firms held in portfolio for at least two years (STAB1); percent of total holdings held for at least two years (STAB2). BLOCK measures the extent to which an institution is a blockholder. It consists of the percent of total holdings with at least a 5% stake (LBPH), the percent of portfolio firms in which it has at least a 5% stake (LBPN), and the average percent ownership in portfolio firms (WAPH). FSIZE measures the typical size of firms in the institution's portfolio. It consists of the following measures: the weighted-average market capitalization of portfolio firms (WAMC); the weighted-average of whether firms are members of the S&P 500 Index (WASP); the logarithm of the weighted-average number of months that portfolio firms have been publicly listed (WATIME); the weighted-average price per share of portfolio firms (WAEPRC). PRUDENCE measure the extent to which the institution invests in prudent stocks as dictated by fiduciary responsibilities: the percent of firms in the portfolio with five consecutive years of earnings growth (WADUP); the weighted-average of a positive earnings indicator variable (WAPED); the weighted-average S&P stock rating (WARATE); the weighted-average debt to equity ratio of portfolio firms (WADE). VALUE measures the extent to which the institution follows a value investing strategy: the weighted-average earnings to price ratio (WAEP); the weighted-average dividend to price ratio (WADP); the weighted-average book to price ratio (WABP). RISK measures the riskiness of portfolio firms: the weighted-average earnings growth (WAEGR); the weighted-average sales growth (WASGR); the weighted-average beta (WABTA); the weighted-average standard deviation of stock returns (WASTD). Panel B presents multivariate comparisons of portfolio characteristics estimated using logistic regression. The dependent variables are indicators for whether the institution is classified as GSID or GSIG.