

The Market for Independent Directors

Lei Chen^{a,b}

Frank Moers^{b,c}

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Abstract

We study the market for independent directors in the United States during the 1996-2006 period within a demand-supply framework. We find that, in parallel with new governance reforms and escalated public scrutiny, directors generally reduce their board seats since 2000. While adjusting their directorship portfolio during the period when the scrutiny is high, incumbent directors (both financial experts and non-financial experts) are more likely to depart the firms that are costly to monitor and advise (e.g. riskier). Despite shrinking supply from the incumbent director pool, substantial number of new directors enter the market and fill the vacancies so that the increased demand for independent directors can be satisfied. These new directors are more likely to be financial experts (audit committee member) and are more likely to be recruited by riskier firms after the passage of the Sarbanes-Oxley Act.

Keywords: independent directors, market for directors, director turnover, directorship portfolio adjustments, cost of monitoring and advising, the Sarbanes-Oxley Act

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a. Maastricht University School of Business and Economics, Department of Finance (LIFE), PO Box 616, 6200 MD Maastricht, The Netherlands.

b. The European Centre for Corporate Engagement (ECCE).

c. Maastricht University School of Business and Economics, Department of Accounting and Information Management (AIM), PO Box 616, 6200MD Maastricht, The Netherlands.

Over the last decade, firms' corporate governance mechanisms especially boards of directors have attracted much attention. To better protect shareholders' wealth, not only were governance reforms undertaken by regulators but also the public scrutiny by investors, researchers and the press has become more rigorous. Despite the best intentions, these initiatives may have brought about unforeseen consequences. Our paper aims to shed light on an important issue that has not been addressed by previous studies, that is, how the market for independent directors has responded to these changes.

Our analyses are done within a demand-supply framework. Since the demand for independent directors has unambiguously increased due to regulatory requirements, our framework focuses on the supply side of the market where at first sight the changes appear less straightforward.¹ To examine the change in supply, we introduce a simple (stylized) baseline theory of individual utility maximization to guide the discussion (see section I for the details).

Motivated by the theoretical predictions, we conduct three major empirical analyses. The first analysis examines a key attribute of the market for independent directors- the busyness of directors, defined as the number of external board seats that an independent director obtains.² We find that the busyness of directors does not change during the period of 1996-1999. However, as scrutiny from the stakeholders escalated, directors start to reduce their number of directorships since 2000 so that the workload and risk involved in the board service are within their own

¹ The framework of demand and supply for directors has been used by Linck, Netter and Yang (2009), who investigates unintended consequences of the passage of the Sarbanes-Oxley Act 2002 (SOX). Our research questions are different from theirs. They examine director compensation (the price), board structure and directors' background. In contrast, we focus on how the increased demand for independent directors was satisfied and how directors made their turnover decisions.

² We follow previous literature and use "busyness" to refer to the number of directorships (see Core, Holthausen& Larcker, 1999; Ferris, Jagannathan& Pritchard, 2003, Fich & Shivdasani, 2006). When we say "directors have become less busy", it only means that directors have held fewer board seats. It doesn't suggest that directors' workload is reduced.

capacity (time) constraint. The same pattern can be observed if two board level variables are examined: board capital and percentage of busy directors.

Given that directors on average reduce their board seats since 2000, the second analysis is devoted to directors' departure choices. Within this section, we conduct two sub-analyses: (i) a conventional director turnover analysis in which the departures are examined relative to the whole market for directors and (ii) a novel directorship portfolio analysis in which the departures are examined relative to the directorships held by each specific director. The underlying assumption for these analyses is that independent directors generally leave the firms voluntarily rather than be forced to step down. This assumption is reasonable given the threat of replacement is more attenuated for independent directors than for executives since they do not report to a higher authority that might fire them (Yermack, 2004).³ Nevertheless, we explicitly control for many factors that could lead to (unlikely) forced departure in all analyses. As suggested in the theoretical model, after 2000 (especially after 2002) when public scrutiny intensifies, busy directors (the ones that have many directorships and the ones who are outside full-time executive directors) tend to depart more often, and the firms that the directors drop are more costly to monitor and advice compared to the firms that they keep.

The third analysis starts with an examination on the changes in the compositions of the director pool. Independent directors in general reduce their number of board seats since 2000 on the one hand but firms' demand for independent directors unambiguously increases due to various mandates on board structure on the other hand. We demonstrate that the gap between decreased supply and increased demand is filled by an increased number of directors who newly enter the

³ Yermack (2004) also points out that it is almost impossible to partition director turnover into forced and voluntary subsamples as many studies do for CEO turnover since the news media rarely reports director departures and almost never illuminates the reasons for an individual director's leaving.

market (e.g. *unseasoned new directors*). Moreover, we find that among all independent directors, financial experts (as well as non-financial experts) reduce their external directorships, meaning the supply of independent directors with financial expertise decreases. However, the demand for such directors actually increases as a result of regulatory requirements. It turns out that those new directors are more likely to have financial expertise after 2002 so the gap between demand and supply of financial experts can be satisfied. We also examine the appointments of those new directors, and we find they are more likely to sit on the firms which are costly to monitor and advise after 2002. This implies that the vacancies created by the departures of incumbent directors tend to be filled by the directors who are new and are willing to take more risk to gain a foothold in the market.

Our paper contributes to the literature in several ways. First, to the best of our knowledge, this is the first paper which systematically investigates the changes in the market for independent directors against the backdrop of intensified regulation and public scrutiny over the last decade.

We not only show the trend towards reduced number of board seats per director but also document an influx of directors who are not in the market before. Second, our study deepens the understanding of director turnovers by showing how the determinants of director departures have changed through time as the environment in which they fulfill their fiduciary duty is reshaped.

Especially, we demonstrate that the cost of monitoring and advice becomes a very important factor after 2002. Last, our paper adds to the heated discussion about unintended consequences of governance regulations (e.g. Bushee and Leuz, 2005; Butler et al. 2007; Engel et al., 2007; Netter and Yang, 2009). Our findings suggest that, although it is never a purpose of the governance reforms, firms that have higher monitoring/advising cost tend to lose incumbent directors and have to recruit unseasoned new directors instead. It is not clear how this would affect firm

performances. Our research also casts some doubts on the popular wisdom that the number of board seats held by directors should be limited. For example, in the US both the National Association of Corporate Directors (NACD 1996) and the Council for Institutional Investors have adopted resolutions calling for caps on the number of directorships held by directors of publicly traded companies. In Europe, both Britain and the Netherlands have adopted similar provisions in their governance codes.⁴ Despite the best intentions of these initiatives, their rippling effects on the market for directors cannot be overestimated if there is a shortage in the supply of quality directors.

The remainder of our paper is organized as follows. In the next section, we discuss how the environment in which directors carry out their fiduciary duties has changed, present the framework of demand and supply for independent directors, and predict the impact of the changes on directors' busyness, their directorship portfolio choices and an influx of new directors. Section II described the data and key variables. The following three sections elaborate the empirical results. Specifically, section III presents the trend of holding fewer outside board seats by independent directors since the beginning of the 2000s. Section IV explains how directors make their departure choices differently in three time periods. Section V documents a substantial influx of unseasoned new directors after 2000, and investigates if they have more financial expertise and by which firms they are more likely to be hired. Robustness tests and extensions are provided in section VI. Section VII concludes.

I. The context and framework

⁴ For example, the British Combined Code prescribes that a full time executive director is allowed to take on just one non-executive directorship in a FTSE 100 company and may not serve as chairman of such a company (Combined Code, 2003, p.9). The Dutch corporate governance code requires that outside directors may simultaneously serve as supervisory (i.e. outside) directors in no more than five boards of listed companies.

A. Background

The environment in which boards of directors fulfill their duties has been considerably reshaped in the US during the last decade. The main forces driving the changes are increased attention paid to corporate governance by a variety of market participants and the reforms initiated by regulatory bodies.

Bebchuk, Cohen, and Wang (2010) show that the attention paid to governance by the media, institutional investors, and academic researchers (proxies by the number of media articles about governance, the number of resolutions about corporate governance submitted by institutional investors, and the fraction of NBER discussion papers related to corporate governance respectively), jumped sharply in the beginning of the 2000s to historically high levels and remained there. The most drastic rise in such attention occurred after 2002, which, according to the authors, might have been due to the “shock” created by the governance scandals of some of the biggest corporations and to the accompanying governance reforms. Del Guercio, Seery and Woidtke (2008) find that boards of directors received considerable pressures from so-called “just vote no” campaigns, whereby activists encourage their fellow shareholders to withhold votes toward a specific director’s election in the case of being unsatisfied with the firm’s governance practices or performances. These campaigns generated huge negative publicity so that targeted directors were induced to act voluntarily before further embarrassment occurred (Grundfest, 1993). This strategy has been increasingly used in the 2000s. For example, in the wake of the corporate scandals, Institutional Shareholder Services (ISS) recommended votes against board members at more than 2,000 companies for a variety of reasons including poor attendance, a lack of adequate independence, and use of abusive governance practices during the 2002 proxy season (McGurn, 2002).

In the meantime, new regulations pertaining to corporate governance were adopted. The reforms targeting at firms' board structures started in 1999 when the New York Stock Exchange (NYSE) and National Association of Securities Dealers (NASD) required domestic listed companies to seat at least three independent directors on audit committees, and set rules for their independence and financial expertise based on the Blue Ribbon Committee. During 2001 and 2002, the financial scandals of many large corporations including Enron, Tyco, and WorldCom came to light, which cost investors billions of dollars when the share prices of affected companies plummeted and shook public confidence in securities markets. As a response to the public outcry, the Sarbanes-Oxley Act (SOX) of 2002 was signed into law. The Act has eleven sections and aims to ensure the alignment of incentives of corporate insiders with those of investors, and to reduce the likelihood of corporate misconduct and fraud (Chhaochharia & Grinstein, 2007). SOX unequivocally imposes higher workload as well as risk on directors. For example, section 302 requires that the company's "principal officers" (typically the CEO and CFO) certify and approve the integrity of their company financial reports; section 404 requires internal controls for assuring the accuracy of financial reports and disclosures, and mandates both audits and reports on those controls; section 802 specifies criminal penalties for officers in the case of violation of SOX. In accordance with the new law, the Securities and Exchange Commission (SEC) approved the governance proposals from NYSE and NASDAQ in 2003. These proposals not only require a majority of directors on the board to be independent but also set the minimal independence levels for compensation committees and nominating committees, and require boards to hold extra sessions without management, in addition to their regular meetings (Duchin *et al.*, 2010). Moreover, SOX and the exchanges rules stipulate that each member of the audit committee must be financially literate, and one member must be "financial expert," otherwise the company must disclose that it does not have such an expert and why not.

B. Demand and supply for independent directors: an analysis of the supply side

As discussed above, governance reforms initiated by the regulatory bodies mandate certain independence levels on boards and subordinate standing committees. This implies firms' demand for independent directors increases. By using the data from Riskmetrics, we confirm that whereas the average percentage of independent directors is stable during the 1996-1999 period (around 60%), it rises prominently since 2000 and reaches 72.2% by 2006. Moreover, higher independence level is not achieved by changing board size since the average board size fluctuates moderately between 9.3 and 9.5 during that period of time. These findings suggest that firms' demand for independent directors unambiguously increases since the beginning of the 2000s.

Our study focuses on the supply side of the market, where at first sight the changes appear less straightforward. To examine the change in supply, we start off using a simple (stylized) baseline theory of individual utility maximization to guide the discussion. In particular, we assume that directors are rational utility maximizers, who trade-off the costs and benefits of directorships offered to them, all within a capacity (time) constraint. Something like:

$$\text{Max } B(D, n) - C(D, n)$$

$$\text{s.t. } nt \leq h$$

where $B(\cdot)$ are the benefits of a certain directorship portfolio D with n directorships, with $B' > 0$ and $B'' \leq 0$; $C(\cdot)$ are the costs of the portfolio, with $C' > 0$ and $C'' \geq 0$; t is the time needed per directorship; and h is the director's capacity.⁵

⁵ Allowing the time needed for a directorship to vary across directorships does not change the inferences that we draw here; it would only add unnecessary complexity.

When the costs of multiple directorships are (relatively) low, as in the low scrutiny period, an individual director is predominately interested in maximizing the benefits within her capacity constraint. Given that the extent to which individual directors are in demand is very likely to vary, firms offer directorships to some directors “sooner” than others. As a result, a director who is in high demand, for whatever reason, can accept a number of directorships that fits her capacity constraint, after which the “next” director steps in. This process implies that, in the end, the majority of the directors in the market will be working “at capacity”.⁶ For the typical director in the market, the capacity constraint after making an optimal portfolio decision thus looks like

$$h - t < n^*t \leq h$$

where n^* is the optimal number of directorships. Since the beginning of the 2000s, the intensified public scrutiny and contemporary governance regulations have led to more workload and responsibilities for directors, as well as to higher risk (see Appendix A which includes figure 1 for detailed empirical evidence on increased workload and risk). The impact of the higher workload implies that the time needed for each directorship changes by $\delta > 0$, making the total workload of a given portfolio equal to

$$n(1 + \delta)t$$

Given the significance of the change in workload documented in the literature and corroborated in Appendix A, it is reasonable to assume that δ is of a magnitude such that the capacity constraint will be violated for numerous directors, especially when $n > 1$. In that case, the director has to drop at least one directorship from her portfolio to satisfy her capacity constraint and get the total workload back to the previous level, i.e.,

⁶ Strictly speaking the argument implies that at least every director in the market but the “last” one is working at capacity.

$$h - (1 + \delta)t < m(1 + \delta)t \leq h$$

with $m < n$. The above analysis shows that, coming from a time period where the costs of having a portfolio of directorships is small, a pure workload effect already pushes (some) directors to drop firms from their portfolio.

The more rigorous scrutiny by market participants since 2000 and since SOX in particular have also exposed directors to higher risk (see Appendix A for the details). The consequence of this exposure is clearly that the costs of a given directorship portfolio are higher in a period of high scrutiny (HS) versus low scrutiny (LS), i.e.,

$$C_{HS}(D, n) > C_{LS}(D, n)$$

As a result, the risk effect can trigger an adjustment to the directorship portfolio, since the portfolio that is optimal when C_{LS} is taken into consideration is unlikely to be optimal when C_{HS} applies. If the capacity constraint is irrelevant, i.e., the workload effect is trivial, then the director will replace a firm that is more costly to monitor and advice by a firm that is less costly.

Obviously when both the workload and risk effect apply, which we assume to be the case, the directors will decrease their number of directorships and drop firms that are most costly. Therefore, we posit that, instead of accepting new board appointments to meet increased demand, directors in general will reduce the number of their directorships and are more likely to drop directorships at firms that are more costly to monitor and advice. Due to the fact that board independence has unequivocally increased, the gap between increased demand and decreased supply has to be filled. We show that it is the influx of unseasoned new directors that fills this gap.

II. Data and key concepts

The data on directors and boards are retrieved from Riskmetrics (formerly IRRC) via Wharton Research Data Services (WRDS). We define the market for independent directors as the Riskmetrics universe.⁷ Riskmetrics mainly covers S&P 1500, which implies that our market covers over 93% of the total market capitalization of all public firms in the US (Gompers, Ishii & Metrick, 2003).⁸ Our paper focuses on independent directors (who can be non-independent directors of other firms) for several reasons. First, the regulatory reforms, which affect demand and supply in the market, mainly concern independent directors. Second, our paper is an addition to two streams of literature: busy directors and director turnover, both of which exclusively examine independent directors.

As mentioned before, our paper consists of three major empirical analyses. The first analysis concerns the key attribute of the director market- the busyness of directors which is measured by the number of outside directorships each unique independent director holds within Riskmetrics universe each year. In addition to this director level measurement, we create two firm level variables. One is *board capital*, which is the total number of external directorships held by all independent directors of the focal firm; the other is the percentage of busy directors, which is the ratio of the number of busy directors to the number of independent directors of the focal firm. Based on previous literature (Core, Holthausen& Larcker, 1999; Ferris, Jagannathan& Pritchard, 2003, Fich & Shivdasani, 2006), we define a *busy director* as an independent director who holds at least one outside executive directorship or at least two outside non-executive directorships

⁷According to Riskmetrics, independent directors are those directors who have no material connection to the company other than a board seat. "Material" is defined as a standard of relationship (financial, personal or otherwise) that a reasonable person might conclude could potentially influence one's objectivity in the boardroom in a manner that would have a meaningful impact on an individual's ability to satisfy requisite fiduciary standards on behalf of shareholders.

⁸ The number of firms included each year slightly varies across time. To be more specific, except for the 1998-2001 period where around 1700 firms are covered by Riskmetrics, the rest of years always have around 1500 firms. In our robustness check, we will show that our findings are not influenced by the small variations in the sample size across time.

within the Riskmetrics universe.⁹ It is very important to note that, in line with previous literature, the busyness of directors only refers to the number of directorships *not* workload. If the director market became tighter, we should observe the values of these variables decreasing over time.

The second analysis deals with director departures and directorship portfolio adjustments. We follow director X who serves on the board of firm ABC in year t. If X is no longer a director of firm ABC in year t+1 (despite both director X and ABC are still in the sample in year t+1), this observation takes the value of 1 for the director departure dummy and 0 otherwise. If either director X or firm ABC is unobservable in year t+1, the dummy is set missing. Directorship portfolio refers to all outside directorships within the Riskmetrics universe that are held by each director at one point in time.

The third set of empirical analyses examines independent directors who newly entered the market. For the purpose of our study, we classify independent directors into three categories. For firm ABC in year t, an *incumbent director* is an independent director who was already an independent director for firm ABC in year t-1; a *seasoned new director* is an independent director who was a board member of any firm rather than ABC in year t-1 and becomes an independent director of firm ABC in year t; an *unseasoned new director* is an independent director who was not in the market in year t-1 and becomes an independent director of firm ABC in year t. Seasoned new director and unseasoned new director combined are labeled *any new director*, thus defined as an independent director who is newly added to the board of firm ABC in year t regardless her status in year t-1.

⁹ Among 107,676 independent directors, 98,509 independent directors were not external executives and 16.5% of them (16,278) are classified as busy; 9,167 independent directors were external executives and all of them are classified as busy. In total, busy directors account for 23.6% of all independent directors.

Our data from Riskmetrics cover the period of 1996-2006.¹⁰ We further divide the whole period into three sub-periods since we are particularly interested in how the market for independent directors has changed over time. The *low scrutiny period* (LS), the *high scrutiny period 1* (HS1) and the *high scrutiny period 2* (HS2) refer to the 1996-1999, the 2000-2002, and the 2003-2006 periods, respectively. The cutoff point between LS and HS1 is 1999 when NYSE and NASD initiated the first round of reforms on audit committees of public firms. The cutoff point between HS1 and HS2 is 2002 when SOX was signed into law. We use post-SOX period and HS2 interchangeably in this paper. HS1 and HS2 combined refer to the *high scrutiny period* (HS).

We are particularly interested in how the costs of monitoring and advising affect directors' portfolio choice. Following Core and Guay (1999), we measure the costs by idiosyncratic risk, which is defined as the standard deviation of the residuals from a market model regression estimated over 36 months of returns ending with the fiscal year-end (subject to a minimum of 12 monthly returns). Higher idiosyncratic risk increases the cost of monitoring and advising for directors. For our purpose, "riskier firms" and "the firms that are more costly for directors to monitor and advice" are used interchangeably in the rest of the paper.

Major control variables are constructed based on the data from Compustat Industry annual, Compustat segments, CRSP and Thomson Reuters. The construction and sources of some control variables will be explained in the relevant sections. Detailed explanations for all variables are summarized in Appendix B. For all regressions, except the directorship portfolio adjustments, the variables are winsorized at the 0.5th and the 99.5th percentiles. Finally, it's important to note that

¹⁰ There are two reasons why our analyses stop in 2006. First, currently Riskmetrics has two segmented sub-databases: Director Legacy and Director. We retrieved the data from the former one which covers 1996-2006. The latter was introduced in 2007 when Riskmetrics acquired IRRC, and covers the years afterwards. According to the manuals, the data collection methodologies of two sub-databases are different, and "the time series of variables are not necessarily comparable to the previous data years". To avoid any contamination, we prefer to use one single database. Second, our methodology is analogue to event studies. Consider 2000 and 2003 as two event years, it makes sense to have (-3, +3) rather than (-3, +7) as the windows, for example.

the number of observations varies due to different samples and different variables included in the regressions.

III. The trend towards fewer directorships per director

In this section, we show that the market for directors has become tighter since 2000. We start with the examination of three direct proxies for director busyness, and the distributions of directors holding certain amounts of board seats across time. Then we provide auxiliary evidence by focusing on one particular type of independent directors- the ones who are outside executives.

A. The busyness of independent directors

Our initial sample for the analyses of director busyness covers the period from 1996 to 2006 and contains 107,676 directorship-year, 17,355 firm-year, or 19,176 unique directors observations. As figure 2 demonstrates, there has been a trend towards less busy directors and boards since the beginning of the 2000s. In section VI, we will show that our conclusion is robust to alternative measures. Panel A presents the changes in the number of outside directorships per independent director.¹¹ It slightly fluctuates around 0.47 in the first three years before the substantial declines start in 2000. During the six-year period after 2000, it drops from 0.47 to 0.31 (by 34%). Panel B plots the evolution of board capital. Board capital stands around 5.3 during LS. The first apparent drop occurs in 2000 (e.g. a decrease of 0.51). It continues to decline, leading to an average of 4.6 and 4.1 for HS1 and HS2 respectively. Panel C presents the average percentage of busy directors. The percentage moves around 0.24 before 2000 and decreases constantly thereafter. By 2006, only 15.3% of independent directors are busy. The biggest two yearly drops can be observed in 2000, the year right after NYSE and NASD posed independence requirements on audit

¹¹ Since this variable is on director level, each director has equal weight in the calculation of this variable no matter how many boards she served on in one specific year.

committees of public firms and 2002, the year when SOX was enacted.¹² Specifically, the percentage of busy directors experiences a decrease of 2 percentage points in 2000 (by 8.4% relative to 1999) and a decrease of 2.5 percentage points in 2002 (by 11.7% relative to 2001).

*****Insert Figure 2 about here*****

To test if these changes were significant, we run mean-comparison tests for each of these three variables between two delimited periods. As reported in table I, all variables have significantly smaller values in HS compared to LS. Moreover, the values are even smaller in HS2 compared to HS1.

*****Insert Table I about here*****

We then regress two firm level variables (e.g. board capital and the percentage of busy directors) against year dummies, controlling for potential economic determinants. We choose 1999, the year separating LS and HS as the base year. Model 1 and 3 of table II indicate that, compared to 1999, there is no significant difference with respect to board capital or the presence of busy directors in any year from the 1996-1998 period. In contrast, the coefficients of all year dummies from HS are all significant, negative (except the dummy for year 2001 in model 1), confirming that there is indeed a trend towards less busy directors and boards since the beginning of the 2000s after economic determinants are controlled for. Since our measures of busyness, especially board capital are mechanically related to board size and board independence, we add these two variables into the regressions (shown in model 2 and 4) in order to rule out the possibility that we

¹² Later on, we don't observe significant increased number of new entrants in year 2000 is due to the fact that in the early stage of the 2000s, many firms turn their linked directors into independent directors. This explains how the increased demand for independent directors can be met without seeing many unseasoned new in the market without making incumbent independent directors busier.

only captured the changes in board size and board independence. As can be seen, the results are qualitatively the same.

*****Insert Table II about here*****

Another way to check if the market becomes tighter is to examine how the distributions of directors holding different number of external directorships evolved across three time periods.

*****Insert Figure3 about here*****

Figure 3 demonstrates that the median director has no external directorship, and *within* each single time period, the proportions of directors who hold certain number of external directorships unanimously decrease in the number of external directorships. More importantly, *across* three time periods, the proportions increase for those who do not sit on any external board while decrease for those who sit on two or more external boards. Furthermore, the presence of extremely busy directors weakens much faster than their less busy counterparts. For example, the proportion of directors who have at least 5 external directorships decreases from 0.9 in HS1 to 0.3 in HS2 (a drop of 67%). In contrast, it decreases for the same periods from 6.2 to 4.6 (a drop of 26%), and from 10.4 to 8.8 (a drop of only 15%) for the directors who hold 3-4 and 2 external directorships respectively.

B. Auxiliary evidence – executive directors and geographical distance

A potential consequence of a tightening market for directors is that firms might have to explore more geographically distant areas to find independent directors, once the local talent pool is exhausted. To test such conjecture, we focus on the independent directors who are external executives. This allows us to use the addresses of the headquarters of the firms where they work

as executives to proxy for their personal addresses which are unknown, so that the geographical distance can be calculated. Moreover, these directors are very interesting in nature for two reasons. First, previous studies have already shown that such directors are in extremely high demand because of their superior authority and experiences (Fich, 2005; Fahlenbrach, Low and Stulz, 2010). Second, executives are already busy by definition, once the workload and risk involved in outside board service increases, they should be more likely to reduce their directorships than professional directors.¹³ Therefore, we expect the friction between the demand and supply of such directors to be particularly high.

Based on the zip codes, we calculate the geographical distances between the headquarters of the firms where the directors are executives and the headquarters of the firms where they are independent directors, following the method by Coval and Moskowitz (1999). The distance is represented by the left vertical axis in figure 4. The right axis represents the percentage of independent directorships held by external executives. First, the figure clearly demonstrates that the distance shoots up during HS, especially after 2002. The average distance in LS is 760 kilometers. It increases moderately to 820 kilometers (by 7.9%) during HS1 and jumps up to 930 kilometers (by 22.4%) during HS2. Second, in parallel with the increase in distance, the supply of the executives who hold outside independent directorships decreases in HS. The percentage of independent directorships held by external executives fluctuates between 10.2 and 11.4 during LS. It goes down straightly during HS and bottoms out at 5.5% by 2006. These findings imply that, as a response to a tighter market, firms are forced to search for talents beyond local sources especially if they want to have executives on their boards.¹⁴ This is consistent with Knyazeva,

¹³ Since executives have much more stakes in the firms where they worked as full time employees than in the firms where they sit as outside directors, they were very unlikely to leave the former.

¹⁴ Other evidence that the supply of executives who held independent positions decreased in HS is simply that the number of such executives decreased from 764 to 481 during HS.

Knyazeva and Masulis (2009) who report that the predictive power of the depth of local talent pool on the boards' independence level has become much weaker after the passage of the SOX,¹⁵ and with Linck, Netter and Yang (2008) who document a decline in the proportion of current and retired executives among independent directors after the passage of the SOX.

****Insert Figure 4 about here****

IV. Director turnovers and directorship portfolio adjustments

Previous analyses revealed that directors reduce their board seats since the beginning of the 2000s. In this section, we answer two related questions: how do directors make their departure decisions, and do they make the decisions differently when the scrutiny becomes more rigorous? These questions are answered with a conventional director turnover approach and a novel directorship portfolio approach. As discussed in the introduction, one assumption for these analyses is that director turnovers tend to be voluntary rather than forced. This assumption is based on that the threat of replacement is more attenuated for independent directors since they do not report to a higher authority that might fire them (Yermack, 2004). Still, we explicitly control for many factors that could lead to (unlikely) forced departure, including, institutional shareholdings, shareholdings held by activist shareholders, and mandatory retirement. Moreover, we delete firms where more than five directors depart simultaneously because the director turnovers are likely to be driven by the change of corporate control (Fahlenbrach, Low and Stulz, 2010)¹⁶. In unreported robustness analysis, we find our results are also robust after changes in ownership (M&As) are controlled for.¹⁷ Although we cannot rule out the possibility that directors

¹⁵ Around 99.7% of the firm pairs for which the distances are calculated were headquartered in the US. Therefore, the increases in the distances are not due to the internationalization of board rooms.

¹⁶ Our findings stay qualitatively the same if these observations are included.

¹⁷ For our turnover analysis, we require the firm to exist in year t and year $t+1$. Therefore, by definition our sample only consists of those firms that do not experience significant changes in ownership. Moreover, we create an M&A dummy by using data from SDC- Platinum (defined as

leave the firms due to health issues in the conventional analysis, this concern is eliminated in our directorship portfolio analysis which focuses the decisions made by each director within her own portfolio.

A. Director turnover - the conventional approach

The literature on director turnover is scant. Yermack (2004) documents that poor firm performance leads to the departure of the directors and reduces their chances of obtaining additional board seats. Srinivasan (2005) finds that directors, especially audit committee members experience market penalties after their firms restate earnings. In a similar vein, Fich and Shivdasani (2007) investigate the reputational impact of financial fraud on outside directors and show that a director will lose other board seats if one of the firms for which he is a director is sued for financial fraud. Cai, Garner and Walking (2009) focus on director elections. They conclude that directors on average receive a very high level of votes, and shareholder votes have little impact on board elections outcome and are unrelated to other board memberships of a director. Fahlenbrach, Low and Stulz (2010) document that outside directors are more likely to leave the firms which *will* perform poorly or disclose adverse news. They, therefore, conclude that outside directors have incentives to resign to protect their reputation or to avoid an increase in their workload.

Based on previous research, we set up very comprehensive models to examine directors' departure decisions. The sample includes all the directors who held at least one independent directorship.¹⁸ In line with previous literature, executive turnovers are all excluded. After merging the turnover data based on Riskmetrics with the data from other sources, we have 61,859

change in ownership more than 5%). After merging it with the turnover data, we find very few firms in our turnover dataset have such dummy, and it dummy has no explanatory power in director turnover at all.

¹⁸ Our major conclusions hold if the directors that are not an independent director for the focal firms are excluded from the sample.

directorship-year observations for the regressions, among which 1,939 (3.1%) observations take the value of 1 for the departure dummy.

Table III presents the probit regression results estimating director turnovers. Model 1-3 use LS, HS1, and HS2 as the sample period respectively. Model 4 uses all three sub-periods and includes their interactions with all explanatory variables.

*****Insert Table III about here*****

As table III shows, the number of external directorships is positively related to director departure in all three time periods. More importantly, such relation is strengthened in HS2, as indicated by the positive, significant sign of the interaction term in model 4, suggesting that busy directors are more inclined to drop directorships, especially post-SOX when the workload and risk of being board members reach unprecedentedly high levels. Another proxy for the busyness of director is whether he is an outside executive. Our results suggest that being an external executive increases the probability of leaving the firm only during HS2, implying that for those executives whose compensation and reputation are more closely attached to the firm they work for full time, the cost of being external board members outweighs the benefit post-SOX. This is also in line with our earlier findings that the supply of executive who hold external independent directorships decreases and drives the geographical distances up as shown in figure 4.

As discussed in section I and evidenced in Appendix A, the cost of a given portfolio of directorships has increased over time due to the increased risk imposed on directors. Therefore, we are particularly interested in the role played by the monitoring and advising cost in directors' departure decisions. As can be seen, such cost does not predict director departures in either LS or HS1. In contrast, the cost in model 3 and its interaction term with HS2 dummy in model 4 are

significantly positive. This indicates that, after SOX, directors are more likely to leave the firms that are costly to monitor and advise.

Mandatory retirement is positively related to director departure in all three time periods. However, it seems that firms' director retirement policy becomes less important in predicting director turnovers once the supply of independent directors severely shrinks, suggested by the negative, significant sign of the interaction term between mandatory retirement and HS2 in model 4.

Furthermore, we find that neither operating performance nor stock market performance has explanatory power in any time period. Top 5 institutional shareholdings is not related to director departures in any time period, and shareholdings by activists are positively related to departures in LS but not in either HS1 or HS2, which further rules out the possibility that director turnover are mainly forced. Linked directorship identity is positively related to director departure in all three time periods.

We conduct a robustness check by adding extra explanatory variables, including committee memberships, the value of ownership and the cash compensation (including the annual retainer and meeting fees) into the regressions (tables unreported). Since most of these data are not available until 1998, the time period is split into two sub-periods: the 1999-2002 and the 2003-2006 periods.¹⁹ The results indicate that audit committee membership and compensation committee membership reduces the likelihood of director departures in both periods and nominating committee membership reduces the likelihood only in the 2003-2006 period.²⁰

¹⁹ The first sub-period starts from 1999 instead of 1998 because we need the variables from the previous year to predict director departures.

²⁰ Figure 1 panel A suggests that committee members seemed to have higher workload than non-members. However, the departure analysis shows that committee memberships were negatively related to director departures. This is not inconsistent with our conjecture that directors tried reduced their aggregated level of workload. It only means that the number of directorships rather than the committee membership that has the first-order effect on the workload. In other words, figure 1 panel A indicates the workload of sitting on any board increased since around 89% of independent directors sit on at least one of these three committees, and consequently directors reduced their number of board to keep their aggregated workload constant. While making the decision about the firms to drop, directors tended to leave the firms where they were non-committee members maybe because of more prestige.

However, the impact of committee memberships on departure is not significantly different between the two time periods. Moreover, either the value of ownership or cash pay does not have any explanatory power in either period, which is not surprising given that independent directors by definition cannot have material stake or receive substantial compensation from the appointing firms.²¹ Most importantly, in line with our previous findings, being an outside executive and the monitoring/advising cost are again positively related to director turnover only in the post-SOX period. The number of external board seats has a positive effect on director departure in both periods but the effect is significantly stronger after 2003.

B. Directorship portfolio - a novel approach

In the previous subsection, we examined how the characteristics of one directorship relative to all other directorships available in the *market* influence director turnovers. However, for those directors who sit on multiple boards, it is the characteristics of each directorship relative to other directorships within her *portfolio* that should be most decisive. These directors represent the most interesting group for our study since they are the driving force of the trend towards less busy directors. For example, the departure rates for the directors who hold at least one external directorship is 6.2% in stark contrast to only 0.3% for the directors who hold none. Therefore, we conduct the directorship portfolio analyses to investigate how directors make their departure decisions given all the directorships they already obtain. To be more specific, we focus on the directors who meet the following criteria: first, the director has at least two outside directorships in year t ; second, the director keeps at least one *and* drops at least one of her directorships in year $t+1$. These criteria lead to 6,603 directorship-year or 2,430 director-year observations (only based

²¹NYSE requires direct compensation received by independent directors is no more than \$100,000, and Nasdaq requires any compensation received by independent directors is no more than excess of \$120,000 during any period of 12 consecutive. The caps posed by the exchanges suggest the workload and risk perceived by directors are unlikely to be fully compensated by director pay, if director pay has any substitution effect for the risk at all.

on Riskmetrics). We provide distributions of the changes in number of directorships in appendix C (including figure 5), which are consistent with our previous findings that directors in general reduce their board seats.

To examine if the directorships dropped are systematically different from the ones kept, we compare a variety of characteristics between these two sets of directorships. Take the cost of monitoring and advising as an example, we calculate idiosyncratic risk for each directorship in director' portfolio. Then the average idiosyncratic risk of the directorships dropped is compared to those kept for each director-year observation. Table IV summarizes these differences across all the variables.

*****Insert Table IV about here*****

Panel A presents the differences between LS and HS. First and foremost, consistent with the prediction of our stylized model, monitoring and advising cost, which is not significantly different in LS, is significantly higher for the directorships that are dropped by directors than the ones that are kept in HS. The results also show that directors tend to leave the firms if they reach the mandatory retirement age or if they are linked to the firms regardless the periods.

Directorships given away tend to be from the firms with higher board capital. One explanation for this is that, although the directors probably want to stay with the firms that are rich in social network and human capital, these firms are already crowded with busy directors, and therefore are more likely to pose restrictions on the number of board seats their directors can hold. As a result, directors opt to leave these firms if they want to keep other board seats. Several differences are significant only in HS: the firms that directors depart have lower market-to-book ratio, lower operating performance and lower stock performance than the firms they stay with.

These findings suggest that the firms with higher growth opportunities and better performance are more attractive for directors during HS. Moreover, the departures of CEOs are often followed by the departures of the directors in the same firms in HS. This implies that, as the scrutiny escalates, outside directors become more wary of CEO turnovers that could convey negative signals of the firms. An alternative explanation is that directors prefer working with the CEOs that they already know, especially during HS, since it saves the cost of getting acquainted with the new CEO, and reduces the cost of obtaining and processing information provided by the CEO. Last, directors are more likely to depart older firms probably because these firms are more likely to restrict the number of board seats their director can hold. The comparisons between HS1 and HS2 are summarized in panel B. It can be seen that most significant differences between LS and HS shown in panel A are driven by HS2. In addition, we find that directors are more likely to keep board seats of the firms where they are committee members, especially after the passage of SOX.

We conduct multiple regressions to confirm the results of table IV. The dependent variable is still the director departure; however, unlike the conventional director turnover analysis in section IV-A, the value of every independent variable is adjusted by its mean value within each director's directorship portfolio. Therefore, all the independent variables for the analysis of portfolio adjustments represent the relative characteristics of one directorship compared to all the directorships held by one specific director at one specific point of time. After merging our portfolio adjustment data with other databases containing the control variables, 4,400 directorship-year (or 1,660 director-year observations) with a departure rate of 40.2% are included in the final sample, which covers around 92% of director departures from previous conventional turnover analysis.

Table V presents the probit regression results estimating directors' portfolio choices. Model 1-3 use LS, HS1, and HS2 as the sample period respectively. Model 4 uses the whole period and includes period dummies and their interaction terms with all explanatory variables.

*****Insert Table V about here*****

As table V shows, the only variable with significant sign across all three time periods is relative mandatory retirement. Both relative board capital and relative linked director are positively related to director departures while relative market to book ratio is negatively related to director departures in HS1 and HS2, which is consistent with the results from the univariate analysis. Several variables are only significant in HS2. For examples, relative firm size has a negative sign, suggesting that directors are less likely to give away the board seats of bigger firms in post-SOX period. This is probably because bigger firms provide more prestige and are easier to monitor due to lower information asymmetry, which makes them more attractive when the scrutiny intensifies. Relative CEO turnover has a positive sign, which indicates, during post-SOX period, directors are more likely to depart the firms if the CEOs also departs the firms. Most importantly, in line with the theoretical prediction, relative monitoring/advising cost doesn't explain director turnover before 2000 but it turns positively related to director departures in the periods when the scrutiny of regulators and the public is high (HS1 and HS2).

Model 4 uses the full sample with LS as the base period. We are particularly interested in the coefficients of the interaction terms between the determinants of departures and the period dummies since they demonstrate if the impact of the determinants on directors' portfolio decisions has changed significantly across different periods. As can be seen, relative board capital and relative leverage have a higher positive impact on director departure in HS1 than in LS.

Relative market to book ratio, relative firm size and relative R&D have a higher negative impact on director departure in HS2 than in LS. Most importantly, the interaction term between relative cost of monitoring and advising, and HS2 dummy is significant and has a positive sign, confirming the conjecture that directors are prone to leave riskier firms within their directorship portfolios post-SOX.

As a robustness check, we replace all the mean-adjusted independent variables with the within-portfolio above-median dummies for the regressions (table unreported). The results are qualitatively the same. Especially, the interaction terms between above-median monitoring/advising cost dummy and two period dummies (HS1 and HS2) are significantly positive. Furthermore, similar to the conventional director turnover analysis, we divide the time period into the 1999-2002 and the 2003-2006 periods, and add extra explanatory variables including committee memberships, the value of ownership and cash pay (table unreported). The results show that sitting on audit committee or compensation committee helps to sustain directors during the period of 1999-2002. All types of committee memberships including audit committee, compensation committee and nominating committee memberships reduces director departures post-SOX. Consistent with conventional turnover analysis, either relative ownership or cash pay does not explain directors' portfolio choices in any period. The major variable of our interest (i.e., cost of monitoring and advising) is positively related to director departures in both periods, and there is no significant difference in the predictive power of such variable between these two sub-periods.

To sum up, our results show that since the beginning of 2000, the directors that hold multiple external directorships, are outside executives, and sit on the board of firms that are costly to monitor and advise are much more likely to depart, compared to other directors. For the directors

that hold a portfolio of directorships, we find that these directors are more likely to leave riskier firms and stay with the firms which are easier to monitor and advise within their portfolio. All these findings support the conjecture that, as a response to increased public attention to corporate governance and the changes in regulation, directors manage their exposure to the workload and risk by strategically adjusting the number and the characteristics of board seats.

V. Who fills the demand-supply gap? An analysis of unseasoned new directors

In Section III, we showed that independent directors hold fewer directorships on average since the beginning of the 2000s. Given that the demand for independent directors has grown over the same period of time, we expect to find an influx of new directors who are not in the market before, so that the gap between supply and demand can be filled. This section starts with the evidence for the stronger presence of unseasoned new directors during HS, followed by an investigation of what type of firms are likely to recruit these directors. Last, we show that unseasoned new directors are more likely to be financial experts post-SOX so increased demand for such independent directors due to the regulatory changes can be satisfied.

A. The influx of unseasoned new directors

As described in section II, we decompose independent directors on a board into three categories: incumbent, seasoned new and unseasoned new. Panel A of table VI reports how the decompositions of independent directors change over time. Panel B reports whether these changes are significant through mean comparison tests. It can be seen that before 2000, unseasoned new directors hold only 5.5% of independent directorships on average. Their representation on boards enhances thereafter and they hold 5.8% of independent directorships during HS1. However, the increase of 0.3% compared to LS is not significant. After 2002, more

unseasoned new directors enter the market and seize 6.2% of the independent directorships. The increase of 0.7 percentage point (or an increase by 12.7%) compared to LS and the increase of 0.4 percentage point (or an increase by 6.9%) compared to HS1 are both significant at the 0.01 level, as shown in panel B. The two biggest annual influxes of unseasoned new directors occur in 2003 and 2004, that is, the two years immediately following the passage of SOX. As opposed to unseasoned new directors, the representation of seasoned new directors does not change significantly across different time periods.

*****Insert Table VI about here*****

Next, we test if the increase in unseasoned new directors is significant in a multivariate context. Table VII reports the regression results. Model 1 uses the percentage of unseasoned new directors as the dependent variables and is estimated by the Tobit model since majority of firms do not have unseasoned new directors on boards (75.2% in LS, 74.1% in HS1 and 68.1% in HS2). The dependent variable in model 2 is a recruit unseasoned new director dummy, and the model is estimated by a probit model. It can be seen that, after firm characteristics are controlled for, HS1 dummy has positive sign in both models although not significant. The HS2 dummy consistently displays a positive sign and is always significant at the 0.01 level, indicating that, compared to LS, firms are much more likely to recruit unseasoned new directors during the post-SOX period.

*****Insert Table VII about here*****

Two questions regarding unseasoned new directors are relevant in light of the results presented in section III and IV: (i) do unseasoned new directors become immediately busy when they enter the market and (ii) what is their turnover rate? To answer the first question, we report the number (frequencies) of unseasoned new directors who hold a certain number of external directorships in

different time periods in table VIII. The results reveal that the unseasoned new directors that hold no external directorship account for the overwhelming majority in all three periods. Further, the frequency of such directors increases over time. These findings show that unseasoned new directors do not become busy immediately after entering the market and the likelihood of being busy is even smaller in HS (especially HS2) than in LS. As for the answer to the second question, we find that only 0.6% of unseasoned new directors step down from the respective boards in the next year. Therefore, we can conclude that our findings in both section III and section IV are purely driven by the directors who have been in the market before. Excluding the very few unseasoned new directors from the sample does not change our inferences at all.

*****Insert Table VIII about here*****

B. Which firms recruit unseasoned new directors?

One important finding from section IV is that during HS2, directors who are already in the market are inclined to depart riskier firms (e.g. more costly to monitor and advice). We hypothesize that the riskier firms that are given away by those directors will have to resort to the talents who are not in the market before. To test this hypothesis, we examine how monitoring/advising cost influences the probability of recruiting unseasoned new directors in different time periods. The results are summarized in table IX. Model 1-3 uses LS, HS1 and HS2 as the sample period respectively. Model 4 uses the whole time period and all the explanatory variables are interacted with HS1 and HS2 dummies. Unlike the period dummies from table VII, which were our focus previously, the cost and its interactions with the period dummies are our major interest now. In line with our expectation, we find that the cost of monitoring and advising is not related to the recruitment of unseasoned new directors in either LS or HS1, while it

significantly increases the probability of introducing unseasoned new directors to the boards in HS2.

****Insert Table IX about here****

C. Financial expertise of unseasoned new directors

The Sarbanes-Oxley Act not only increases the demand for independent directors in general but also increases the demand for the independent directors with financial expertise particularly, since it requires that all audit committee members are financially literate and at least one of these members are financial experts.²²

We first look into the supply of financial experts from the existing talent pool. In line with previous research (e.g. Duchin et al., 2011; Knyazeva et al., 2008), an independent director is considered as a financial expert when she holds the title of chief financial officer, treasurer, public accountant or works for investment/financial service industries (including serving as an employee director on financial institutions' boards: SIC codes 6000-6999). As can be seen in panel A of figure 6, both financial experts and non-financial experts independent directors reduce their number of external directorships across the 2002-2006 period.²³ Since the supply of financial experts from the existing talent pool decreases on the one hand and the demand for such directors unambiguously increases post-SOX on the other hand, we expect that unseasoned new directors are very likely to have financial expertise so the gap between demand and supply can be filled.

****Insert Figure 6 about here****

²² It is important to note that because in our directorship portfolio analysis in the previous section all explanatory variable are mean-adjusted within each director's portfolio, it is not an issue to have no financial expertise variable in that analysis. In unreported analysis, we do include the financial expert variable in the conventional director turnover regressions for HS2 and it is not significant.

²³ Defond & Hann (2005) differentiate accounting financial experts and non-accounting financial experts. In unreported results, we find that both types of financial experts reduce their number of external directorships after 2002.

The data from Riskmetrics do not allow us to create consistent criteria for financial experts across the 1996-2006 period, which makes it difficult to directly compare the proportion of financial experts among unseasoned new directors before and after SOX.²⁴ As an alternative, we decide to examine how the propensities of sitting on audit committees for unseasoned new directors have changed across different time periods.²⁵ Since SOX and concurrent proposals of stock exchanges mandate the financial expertise for audit committee members, obtaining a seat on audit committee would be a good proxy for financial expertise. If there are more financial experts among unseasoned new directors in post-SOX period than before, the likelihood of sitting on audit committees should increase for them.

First, we plot the percentages of unseasoned and seasoned new directors who end up with audit committee for the 1998-2006 period. As panel B of figure 6 indicates, the percentage of seasoned new directors who become audit committee members is rather stable across the whole sample period. In comparison, the presence of unseasoned directors substantially enhances after 1999. By 2004, 43.1% of unseasoned directors become audit committee members, exceeding 34.5% for seasoned ones. After this spike, the percentage for unseasoned directors starts to drop but still dominates the seasoned type.²⁶

*****Insert Table X about here*****

We formally test our conjecture in a multiple regression. As can be seen in table X, Any New Director dummy is significantly negative, indicating that in LS seasoned new directors are less

²⁴ In the database, the titles of directors can be seen in the variable “pritle” only before 2002 while in the variable “empl_category” since 2002. These two variables are not directly comparable, which makes it impossible to create consistent criteria for financial expertise. This is the major reason why figure 6 Panel A starts with year 2002.

²⁵ This analysis is conducted for the 1998-2006 period since during 1996-1997, committee memberships information is not available in Riskmetrics.

²⁶ The drop of probability of sitting on audit committee for unseasoned director after 2005 might suggest the market reached a new equilibrium, that is, after an influx of new directors with financial expertise in the previous several years, the shortage in supply has been served.

likely to sit on audit committees compared to incumbent directors.²⁷ Unseasoned New Director is also significantly negative, indicating that unseasoned new type has an even lower likelihood than seasoned new type to sit on an audit committee. The interaction terms between HS1 and both Any New Director and Unseasoned New Director are not significant, and thus the probabilities do not change for all types of independent directors in HS1. In contrast, unseasoned new directors are much more likely to become audit committee members after the passage of SOX given the significantly positive interaction term between HS2 and Unseasoned New Director. The changes in such propensity are also economically significant. The fitted probability of sitting on audit committee in a typical firm for a typical unseasoned new director is 22.3% in LS and 30.2% in HS1. It reaches 38% in HS2, which is almost as high as for seasoned new directors (38.4%).²⁸ The conclusion also holds for the 2000-2006 sample where HS1 is the benchmark period since the interaction between HS2 and unseasoned new director is again significantly positive (table unreported). These results support our conjecture that due to the decreased supply of financial experts from incumbent directors and increased demand for financial experts for audit committees, unseasoned new directors are much more likely to have such expertise so that the gap between supply and demand can be filled.

VI. Robustness checks and extensions

A. Less busy independent directors – other evidence

In section III, we documented that independent directors reduce their board seats since the beginning of the 2000s. The key measures of the busyness of director/board are based on one

²⁷ Since Unseasoned New Dummy is actually the interaction term between Any New and Unseasoned New by construction, the coefficients for Any New are actually for Seasoned New directors.

²⁸ For instance, to obtain the probability for unseasoned new director to sit on an audit committee in scrutiny period 2 using the 1998-2006 sample, we specify Any New Director, Unseasoned New Director, HS2 dummy, and the interaction terms Any New Director* HS2 and Unseasoned New Director*HS2 to be one while HS1 and the interaction terms Any New Director* HS1 and Unseasoned New Director* HS1 to be zero, holding other control variables constant at their means.

variable: the number of directorships held by each independent director within the Riskmetrics universe. This variable by construction depends on the number of firms covered by Riskmetrics every year. Although Riskmetrics mainly follows S&P 1500, its coverage still fluctuates slightly across time. As a robustness check, we create one overall measure of busyness: the ratio of the total number of independent directorships available in Riskmetrics universe to the total number of unique independent directors. Given that, if anything, coverage increases over time, this ratio will, *ceteris paribus*, most likely mechanically increase over time, which works against our prediction.²⁹ As panel A of figure 7 shows, whereas the value of this variable is stable during the 1996-1999 period (around 1.30), it has decreased constantly since 2000 and becomes 1.22 by 2006. These findings are consistent with our previous results.

Insert Figure 7 about here

Another concern is that, since the number of directorships each director holds is counted within the Riskmetrics universe, the conclusion that we draw might be spurious if directors actually add board seats *outside* the universe, which is not captured by our proxy. To tackle this concern, we plot the average number of outside directorships in panel B of figure 7, based on the variable “outside_public_boards” reported by Riskmetrics.³⁰ Once again, we find that there is a trend towards less busy directors, and this trend does not start until the beginning of the 2000s.

There is a possibility that firms with different sizes faced different markets. We compute the percentage of busy directors for big, medium and small firms separately. To form the size groups,

²⁹ Adding a firm to the database, increases the number of directorships by n , while the number of unique directors increases by $m \leq n$.

³⁰ We don't use the variable “outside_public_boards” reported in Riskmetrics database in our main analysis for two reasons. First, Riskmetrics does not report this variable until 1998, which causes a loss of two years of observations for our analyses. Second, Riskmetrics obtains the number of outside board seats from proxy statements. It has been shown that the director information (like the boards each director serve) disclosed in proxy statements is not complete (Reeb & Zhao, 2010). We even find in many cases that the variable “outside_public_boards” takes different values for the same director in the same year when he/she serves multiple boards in Riskmetric universe. Despite these problems, we believe the measure “outside_public_boards” can provide insights into whether directors leave the Riskmetrics universe. The correlation between our counts of external directorship and “outside_public_boards” is 0.88.

we merge Riskmetrics and Compustat Industry Annual, and rank the firms into quartiles based on their sales each year. The first quartile firms are small, quartiles two and three medium and the fourth quartile big. As shown in panel C of figure 7, the percentage of busy directors for big and medium firms is generally stable in the late 1990s. Both big and medium firms substantially reduce the representation of busy directors since the beginning of the 2000s. In comparison, the percentage of busy directors in small firms does not decrease until 2002. These findings suggest that all firms, irrespective of size, reduce the number of busy directors gradually. The trends towards less busy boards starts a bit later for small firms than for medium and big firms, probably because small firms are not under as much scrutiny as the others until post-SOX.

B. Increased internal busyness- another consequence of tightened director market

We also check how many internal committees independent directors sit on over time. Since the market for directors has tightened, firms are expected to use the people at their disposal more efficiently. In line with such conjecture, we find that the average number of internal committee memberships held by independent directors increases from 1.32 in 1999 up to 1.53 in 2005.³¹ The difference in such variable between pre-SOX and post-SOX periods is 0.12 and it is significant at the 0.01 level. This suggests that during the HS period, independent directors manage their exposure to the workload and risk mainly by adjusting their directorships across firms instead of reducing the number of committee membership within firms. This is consistent with our earlier findings that independent directors that are committee members are less likely to depart. The interpretation of these results is: for directors, the cost of sitting on an extra board is much bigger

³¹ Committees include audit committee, nominating committee and compensation committee. The value of this variable experienced a drop in 2006. This is mainly due to the decrease in the size of committees. Especially, the nomination committee comprised of only 2.7 in 2006 compared to 3.6 people in 2005. The committees' size was generally stable for the rest of time.

than sitting on an extra committee in the firm where they are already board member.³² In other words, the number of committee memberships within a firm has a second order effect on the workload and risk of directors, since they have already reduced their exposure by sitting on fewer board seats.

C. Added directorships versus dropped directorship

The analyses in section IV reveal that the directorships dropped by incumbent directors are likely to be riskier than the ones kept. However, up until this point, we are silent about the directorships added by those directors. Two relevant questions here are: (i) how many of them at all accept new board appointments when they decide to drop some directorships and (ii) if they do, are the added directorships systematically different from the directorships that they drop? To answer the first question, we follow the 2,187 directors covered in section IV-B. We find that only 142 directors (around 6%) add new board seats (152 non-executive directorships) in year $t+1$, which indicates that directors are unlikely to add new board seats once they decide to reduce their directorship portfolio.³³ To answer the second question, we focus on the cost of monitoring and advising, as this is the major variable of interest in this study. Ideally, we expect added board seats to have lower cost than dropped board seats, especially during HS period. Therefore, we deduct the average idiosyncratic risk of the directorships added in year $t+1$ by the average idiosyncratic risk of the directorships dropped in year t for each director and test if these differences are significantly different from zero. However, we fail to document significant results, either for the whole period or for HS, most likely caused by the very small sample size

³² For example, different committee meetings are normally held on the same day and many committee meetings are held on the same day for board meetings, which minimizes the travelling cost. Besides, taking a board appointment requires much more new information regarding the industry, the strategy, the personnel etc. than taking an extra committee membership.

³³ The percentage of directors who accepted new board appointments in year $t+2$ is also low (around 6.5%).

(table unreported).³⁴ An alternative explanation for the lack of results is that this small group of independent directors, who clearly behaves differently than the majority in terms of adding directorships, is simply not representative of the Riskmetric universe on any other dimension.

VII. Conclusions

Boards of directors have received intensive scrutiny by investors, regulators, researchers and the press. However, it is not clear how directors respond. Our paper makes important contributions to the literature by systematically examining changes in the market for independent directors against the backdrop of new regulatory reforms and rising public scrutiny over boards of directors. To our knowledge, most of our findings have never been documented in previous studies.

Our paper consists of three major empirical analyses. Figure 8 depicts the linkages among these analyses and summarizes our main findings. First, we present that independent directors reduce their external board seats since the beginning of the 2000s, due to increasing workload, responsibilities, and risk involved in board services. Second, we focus on director turnovers and directorship portfolio adjustments. The most important finding from this analysis is that, when scrutiny is high, directors are more likely to depart riskier firms, which involve more cost to monitor and advice. Third, we document a substantial influx of unseasoned new directors into the market at the same time as the supply from the incumbent talent pool shrinks, so that the increasing demand for independent directors can still be satisfied. Besides, these new directors are more likely to be recruited by riskier firms and sit on audit committees.

Our paper is an addition to the debate on unintended consequences of governance reforms. Our results indicate that, when scrutiny is high, riskier firms seem to experience difficulty in retaining

³⁴ The number of observations for the whole period and HS is only 130 and 98 respectively.

old directors and therefore, have to recruit new directors who have never been in market before. Since it is unclear whether these directors have the same level of experiences, expertise, and resources as their predecessors to fulfill their monitoring and advising duties, the cost of the regulations might be particularly high for these firms. These findings also cast some doubts on a currently popular wisdom that the limit on the number of board seats held by directors should be written into best practice or even mandated by law since the impact of such reforms on the market for directors can be substantial.

One fruitful area for future research is the impact of the restructuring of the market for directors on firm performance. For example, on the one hand, as many researcher and practitioners prompted, independent directors have been less busy, which means that they would be less distracted by excessive board services and therefore lead to better firm performances. On the other hand, firms lost considerable board capital as directors cut their board seats. Since board capital represents a pool of social capital and knowledge repository, which minimizes firms' dependence on other resources (Pfeffer, 1972; Pfeffer and Salancik, 2003; Certo, 2003), loss in board capital might have a negative impact on firm performance. Therefore, it is an empirical question whether the trend towards less busy director is positively or negatively related to firm performance. Moreover, higher board independence and firms' policies that restrict directors' outside board service have considerably reduced the supply of the most popular type of independent directors: outside executives. Since these people have superior authority and experiences, it is worthwhile to investigate if their departures adversely affect firm performance. Another phenomenon of the restructuring of the market is enhanced representation of unseasoned new directors. More careful investigations on the impact of these directors on firm performance will be rewarding.

Appendix A: Empirical evidence on increased workload and risk

The most direct measure of directors' workload to sit on one board is the number of board and committee meetings. As panel A of figure 1 demonstrates, whereas the average number of board meetings is rather stable over time (around 7.3), the number of meetings has grown constantly for all committees during the 2000s. Nominating committee members and compensation committee members meet only 1.6 and 4 times respectively in 1998, in stark contrast to 3.8 and 5.4 times in 2006. Notably, the upward shifts in the meeting frequencies for audit committee members predate, and are much more drastic than the other two committees. Audit committee members have met more frequently since the very beginning of the 2000s. In 2003, the year immediately after the passage of SOX, they met 6.7 times, which is a 39% annual increase. Afterwards, the meeting frequencies continues to rise and reaches 9 by 2006 (an increase of 179% compared to 1998). Note that increased number of committee meetings after 2000 also indicates more workload on the board level given that around 89% of independent directors sit on at least one of these three committees. Another indicator of the workload and responsibilities of directors is the attendance rate of board meetings. As shown in panel B of figure 1, the percentage of independent directors who fail to attend at least 75% of board meetings is rather stable from 1996 to 1999, ranging from 3.5% to 3.4%. It decreases since 2000 and bottoms out at 0.6% in 2005, followed by a rebound in 2006. Besides, the decrease is accelerated after the enactment of SOX. During the three-year, post-SOX period (2003-2005), it drops 2 percentage points in contrast to only 0.8 during the three-year, pre-SOX period (2000-2002).

****Insert Figure 1 about here****

As discussed earlier, more rigorous scrutiny by market participants and SOX in particular have exposed directors to higher risk. Before we empirically investigate the impact of risk on directors' behaviors in section 5, we can gain some insights into directors' perception of the risk involved in board services from the surveys. According to a series of "What Directors Think" surveys by Corporate Board Magazine and PriceWaterhouseCoopers (2004, 2005), as many as 68% and 73% of directors felt the risk of being board members increased during 2003 and 2004 respectively. The report by Korn/Ferry International, one of the biggest director recruitment firms, showed that among 2,042 respondents, 48% had turned down new board positions because they believed that "the risk was too great" in 2001 (Black, Cheffins & Klausner, 2003). In some cases, directors even chose to step down. For example, in the resignation letter to her shareholder in 2007, the former chairman Jim Clark of Shutterfly stated:

"As I understand it, Sarbox dictates that I not Chair any committee due to the size of my holdings, not be on the compensation committee because of the loan I once made to the company, not be on the governance committee, and it even dictates that some other board member must carry out the perfunctory duties of the Chairman. What's left is liability and constraints on stock transactions, neither of which excite me. "

While increasing workload and exposure to risk have made some directors voluntarily restrict the number of their directorships, some firms even formally set the limits for their board members and executives. According to the surveys by Korn /Ferry (Annual Board of Directors Study, 2005, 2007), only 23% of respondents in the US said that their companies limited outside board service by their CEO in 2001. By 2007, the percentage has risen to 62%. Similarly, 48% respondents reported that their boards limited the number of outside board seats their members may hold in 2007 as opposed to only 18% in 2003.

Appendix B: Variables definitions

Variables	Definition (Source)
Busy director	The independent director who holds at least one outside executive directorship or at least two outside non-executive directorships (Riskmetrics)
Incumbent director	For a firm in year t, the independent director who was already an independent director for the same firm in year t-1(Riskmetrics)
Any new director	For a firm in year t, the independent director who was newly added to the board in year t
Seasoned new director	For a firm in year t, the independent director who was director of any other firm in year t-1 and became an independent director in year t for the firm (Riskmetrics)
Unseasoned new director	For a firm in year t, the independent director who didn't serve as a director for any firm within Riskmetrics universe in year t-1 and became an independent director in year t for the firm (Riskmetrics)
Low scrutiny period	Dummy which equal to 1 if the year is from the 1996-1999 period and 0 otherwise
High scrutiny period	Dummy which equal to 1 if the year is from the 2000-2006 period and 0 otherwise
High scrutiny period 1	Dummy which equal to 1 if the year is from the 2000-2002 period and 0 otherwise
High scrutiny period 2	Dummy which equal to 1 if the year is from the 2003-2006 period and 0 otherwise
%busy directors	The ratio of the number of busy directors to the number of independent directors in a firm-year (Riskmetrics)
Firm size	The natural logarithm of total revenue (Compustat: ln(sale))
Leverage	The sum of long term debt and debt in current liabilities scaled by total assets(Compustat: (dltt+dlc)/at)
RND	The ratio of R&D expenditure to total assets (Compustat: xrd/at, xrd is replaced by zero if it is missing)
Capital expenditure	The ratio of capital expenditures to total revenue (Compustat: capx/sale)
Intangibles	1 minus the ratio of net total property, plant and equipments to total assets (Compustat: 1-ppent/at)
#business segments	The number of business segments (Compustat segments)
Firm age	The number of years since the firm floated its stocks on the exchanges (CRSP)
Cost of monitoring and advising	The standard deviation of the residual from a market model regression estimated over 36 months of returns ending with the fiscal year-end (subject to a minimum of 12 monthly returns) (CRSP)
FCF	Operating cash flow less long term debt, less dividends for common shares and then scaled by total assets (Compustat: (oanfc-dltd-dvc)/at)
% Unseasoned new	The ration of unseasoned new directors to the number of independent directors (Riskmetrics)
% Seasoned new	The ration of seasoned new directors to the number of independent directors (Riskmetrics)
% incumbent	The ration of incumbent directors to the number of independent directors (Riskmetrics)
Recruit Unseasoned New	Dummy which equals to one of the firm recruit at least one unseasoned new director (Riskmetrics)

Board Size	The number of directors on the board (Riskmetrics)
Board Independence	The ratio of the number of independent directors to board size (Riskmetrics)
MTB	The ratio of market value of assets to book value of assets (Compustat: $(at-ceq+prcc_f*csho)/at$)
Activists Shareholding	The total percentage of outstanding common stock held by the activist shareholders. The identity of activist shareholder is based on Larker, Richardson and Tuna (2005) (Thomson Reuters 13F)
Adjusted ROA	The firm's return on assets minus the average return on assets of all the firms from the same industry. ROA is defined as operating income before depreciation scaled by total assets (Compustat: $oibdp/at$). Industry is defined by 2-digit SIC code (Compustat).
Net Stock Return	The firm's annual stock return for the fiscal year minus the CRSP value-weighted index return, both compounded continuously (CRSP).
CEO Turnover Dummy	Dummy which takes the value of 1 if there is a CEO turnover between year t and year t+1, and 0 otherwise (Execucomp).
Mandatory Retirement	Dummy which takes the value of 1 if the director's age is bigger or equal to the age specified in firm's retirement policy, and takes 0 if the director's age is smaller the retirement age or if the firm doesn't have a retirement policy. Firm retirement policy is retrieved from Riskmetrics CD-ROM and director age is retrieved from Riskmetrics.
Linked Director Dummy	Dummy which takes the value of 1 if the director is identified as "Linked" by Riskmetrics and 0 otherwise (Riskmetrics).
Outside Executive Dummy	Dummy which takes the value of 1 if the director is identified as "Employee" in any other firm by Riskmetrics and 0 otherwise (Riskmetrics).
Top 5 Institutional Shareholdings	The percentage shares held by the firm's largest 5 institutional investors. The percentage is the average of 4 quarterly values (Thomson Reuters 13F)
Board Capital	The total number of external directorships within the Riskmetrics universe that are held by the firm's all independent directors (Riskmetrics).
#External Directorships	The number of external directorships held by the director within the Riskmetrics universe.
Total cash compensation	The sum of annual retainer and the meeting fees. The meeting fees are the per meeting fee times the number of board meetings (Compustat Executive Compensation-Company Financial and Director Compensation for 2005 and prior)
Distances between the headquarters	The geographical distance between the headquarter of the firm where the director is an independent director and the headquarter of the firm where she is an executive director. The calculation method follows following the method by Coval and Moskowitz(1999). The zip codes of firm headquarters are retrieved from Compustat. The geographic coordinates for these zip codes are taken from the US Census (2000) Gazetteer. A few American zip codes are not covered by the US Census (2000) Gazetteer and we manually look them up via http://www.zipinfo.com . The geographical coordinates corresponding to the zip codes outside the US are found on http://www.geopostcodes.com .
Change in the number of external directorships	The director's number of external directorships in year t-1 minus the number of external directorships in year t (Riskmetrics).
Financial experts	An independent director is considered as an financial expert when she holds chief financial officer, treasurer, public accountant titles or works for investment/financial service industries (including serving as an employee director on financial institutions' boards: SIC codes 6000-6999). The variables used to identify directors' titles include <code>employment_ceo</code> , <code>employment_cfo</code> , <code>employment_treasurer</code> and <code>empl_category</code> from Riskmetrics. SIC codes are obtained from Compustat North America Annual.
Audit committee member	Dummy which takes value of 1 if the director is member of audit committee and 0 otherwise (Riskmetrics).

Appendix C: the distributions of the changes in the number of external directorships

Figure 5 depicts the distributions of the changes in the number of external directorships between year $t+1$ and year t . Panel A and B include all directors that hold at least one independent directorship, and use LS and HS as the sample period respectively. It can be noticed that super majority of directors do not change the number of external directorships which they have obtained in both periods. A comparison between the panels reveals two major distinctions between LS and HS. The first distinction is: the number of directorships dropped by directors is closed to that is added in LS; in comparison, the number of directorships dropped clearly surpasses that is added in HS. This is confirmed by the mean comparison test. We find that the average change in the number of external directorship in HS is -0.04 (significant at 0.01 level) compared to 0 (insignificant at 0.1 level) in LS. The second distinction is that, unlike in LS, the distribution of the change in the number of external directorships is more skewed to the left in HS, suggesting directors are much more likely to drop a big amount of directorships rather than add them as the risk and workload rise.

*****Insert Figure 5 about here*****

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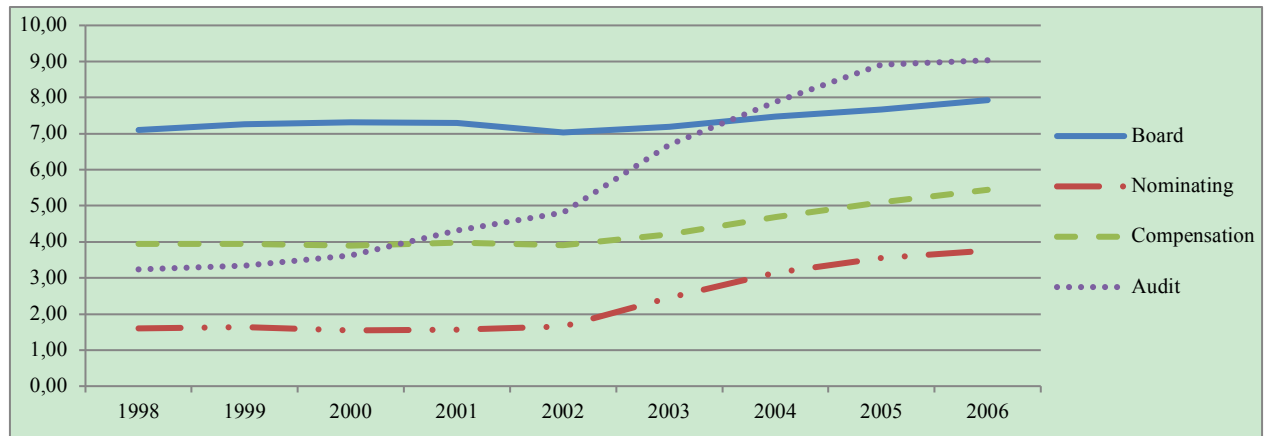
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Figure 1 Evidence of increased workload

These figures present the evidence of increased workload and risk since the beginning of the 2000s. Panel A shows the number of meetings on board and committee levels. The data source is Riskmetrics CD-ROM. Panel B shows the time trend of board meeting attendance for independence directors in Riskmetric universe. The numbers along vertical axis are the percentages of independent directors who failed to attend at least 75% board meetings. The data source is Riskmetrics online.

Panel A



Panel B

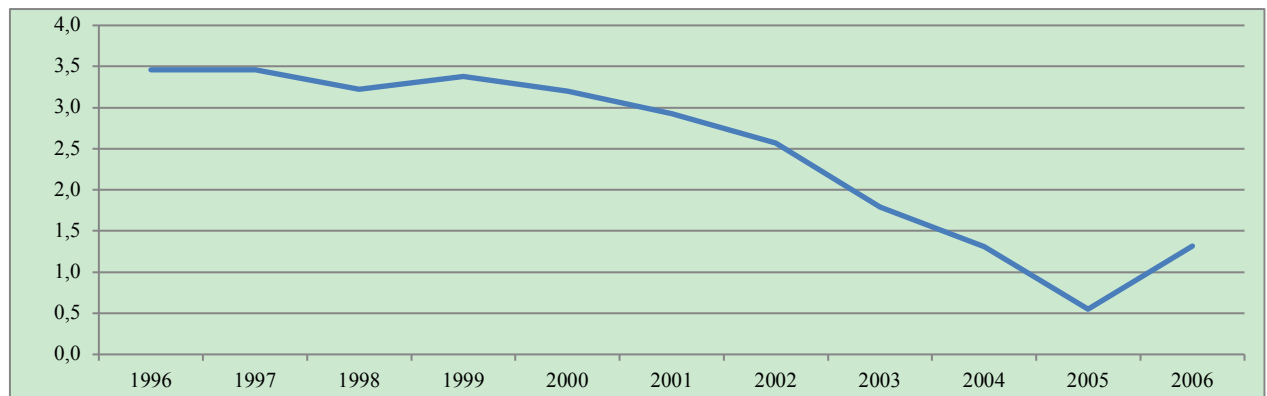
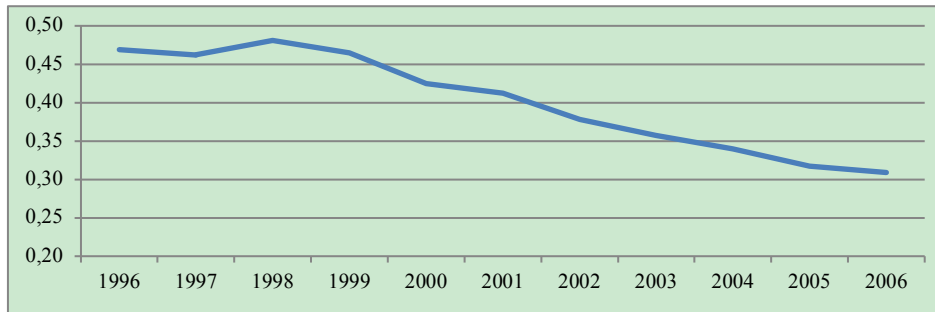


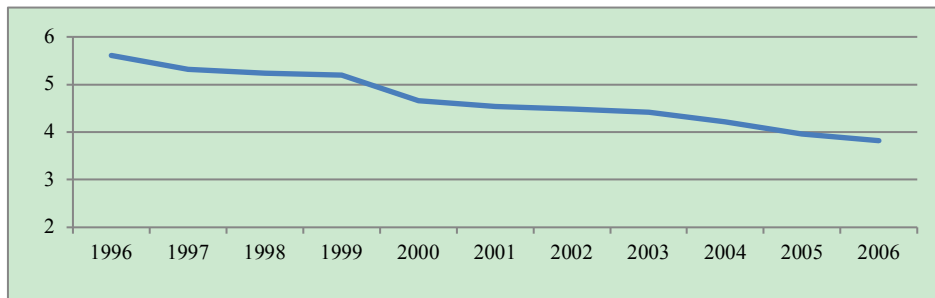
Figure 2 The trend towards less busy directors and boards

This figure shows the trend towards less busy directors and boards over the 1996-2006 period. Panel A presents the average number of outside directorships held by independent directors. We calculate the number of outside directorships for each unique independent director in one specific year and then take the average for each year (the sample includes the director who is independent director of any firm in Riskmetrics universe). Panel B presents board capital. Panel C presents the average percentage of busy directors. We calculate the percentage of busy director for each firm-year observation and then take the average by year.

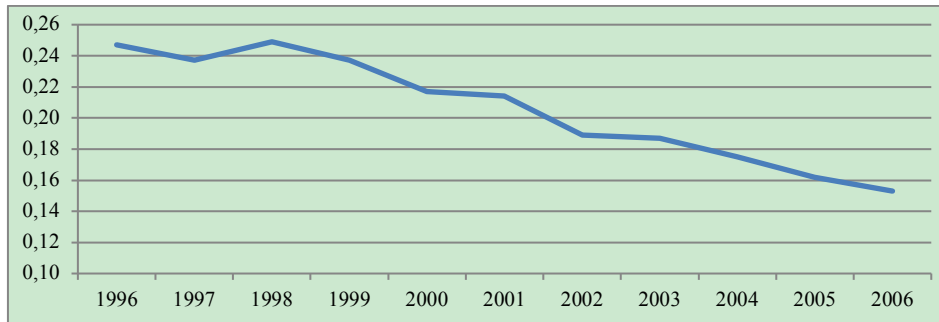
Panel A Number of outside directorships per an independent directors



Panel B Board capital



Panel C Percentage of busy directors



**Figure 3 The trend towards less busy directors
-the distributions of number of external directorships-**

This figure shows the distributions of the number of external directorships within Riskmetric universe by independent directors. LS, HS1, HS2 refer to low scrutiny period (1996-1999), high scrutiny period 1 (2000-2002) and high scrutiny period 2 (2003-2006) respectively. The numbers on the bars represent the percentages of independent directors who hold certain number of external directorships.

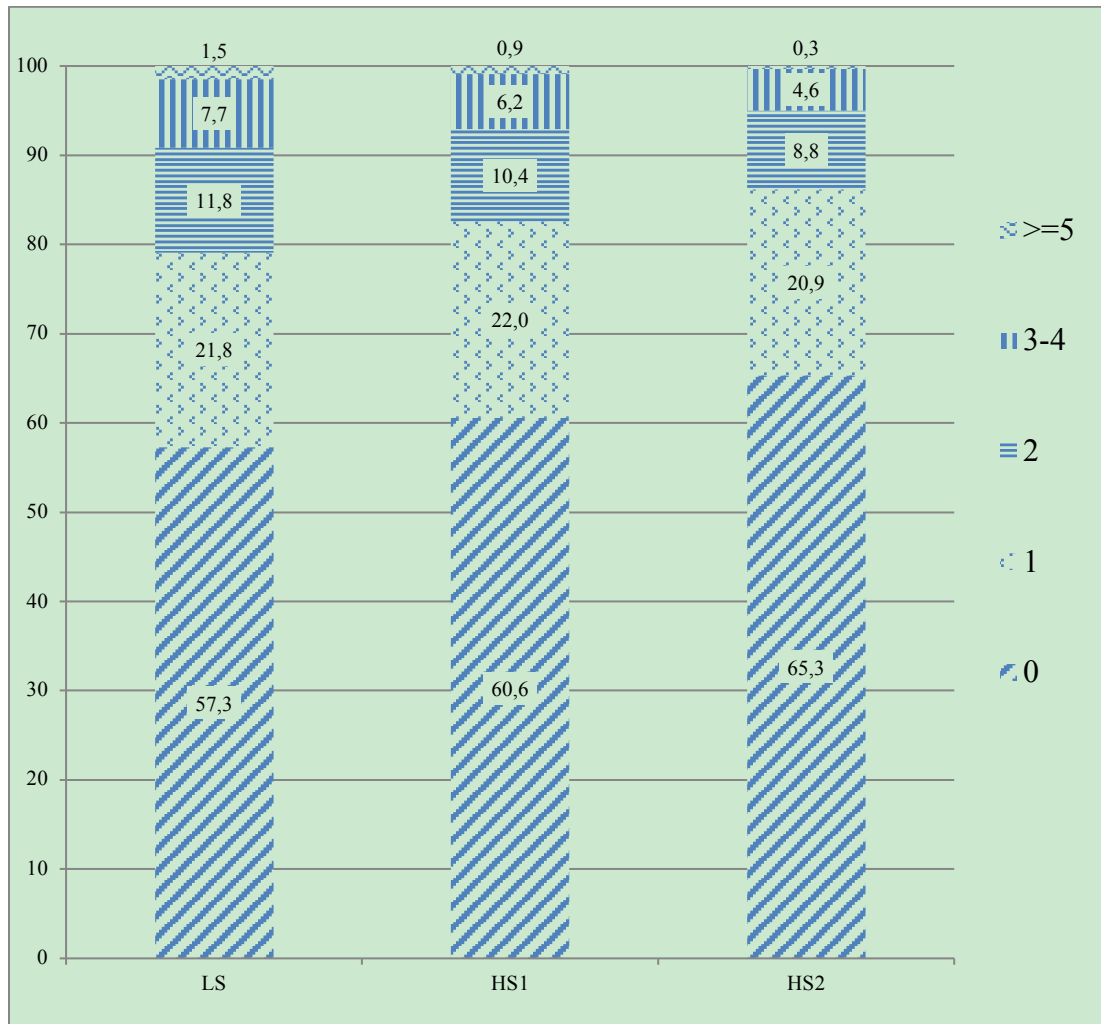


Figure 4 Auxiliary evidence for a tighter market- the geographical distances

This figure presents auxiliary evidence for decreasing supply of directors. The left vertical axis shows the geographical distance between the headquarters of the firms where the directors work as executives and the headquarters of the firms where they serve as independent directors, the right vertical axis shows the percentage of independent directorships held by external executives.

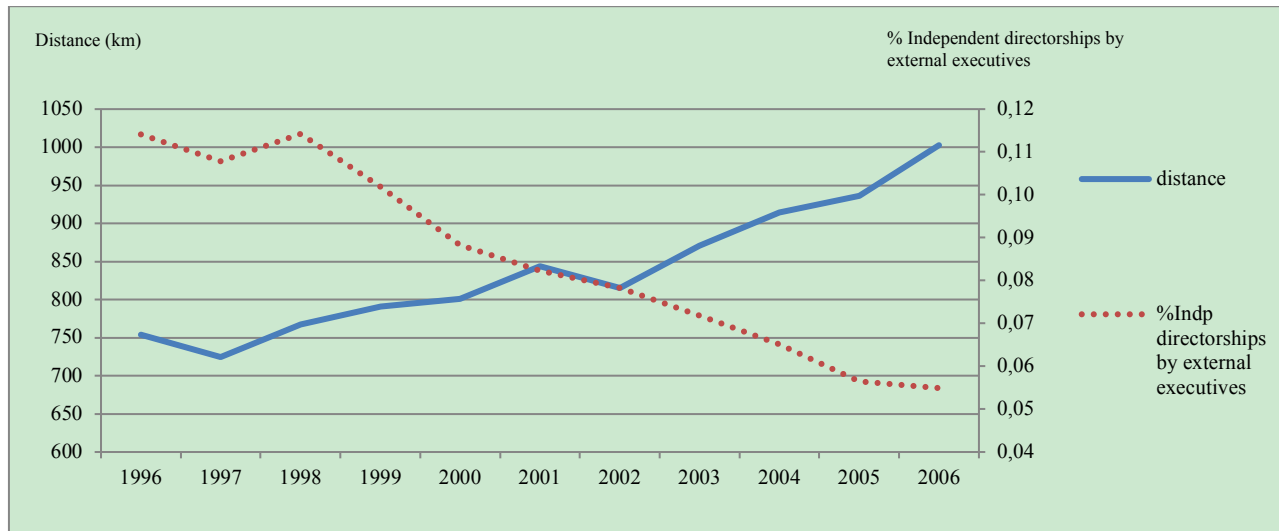
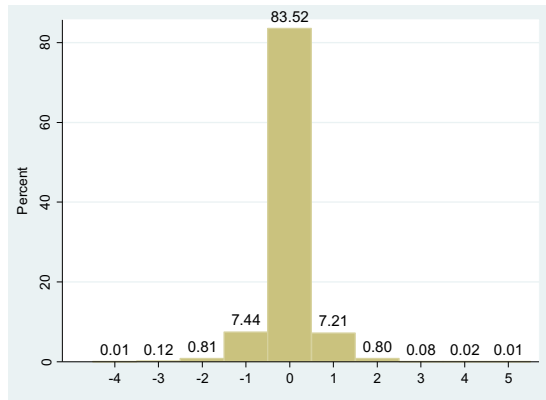


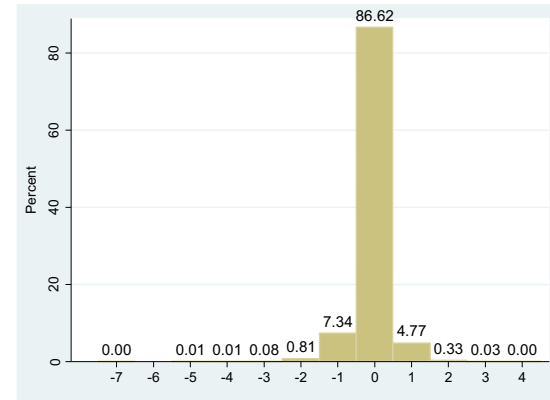
Figure 5 Changes in the number of external directorships

This figure shows the distributions of the change in the number of external directorships for the directors. The change is defined as the number of external directorships in year t minus the number of external directorships in year $t-1$ held by the same director. Panel A and Panel C use low scrutiny period while Panel B and Panel D use high scrutiny period. The changes take place in low scrutiny period if year t is not bigger than 1999 and the changes take place in high scrutiny period if year t is bigger than 1999. The sample for panel A and B includes all the directors who are independent director in any firm in Riskmetrics universe in year $t-1$. The number of directors in Panel A and Panel B is 19,124 and 47,199 respectively. The sample for panel C and D includes all the directors that were included in our directorship portfolio analysis. The number of directors in Panel C and Panel D is 734 and 1,696 respectively.

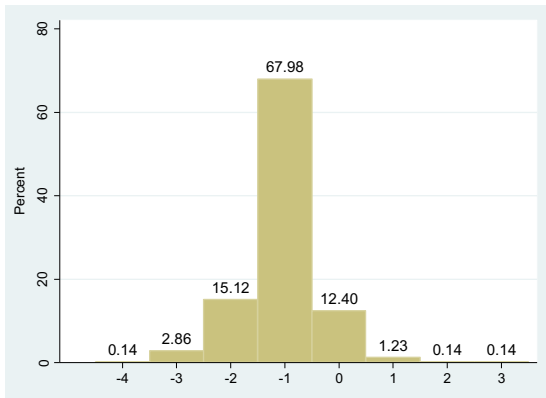
Panel A



Panel B



Panel C



Panel D

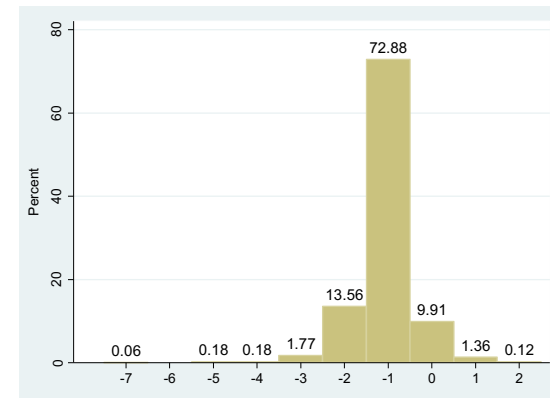
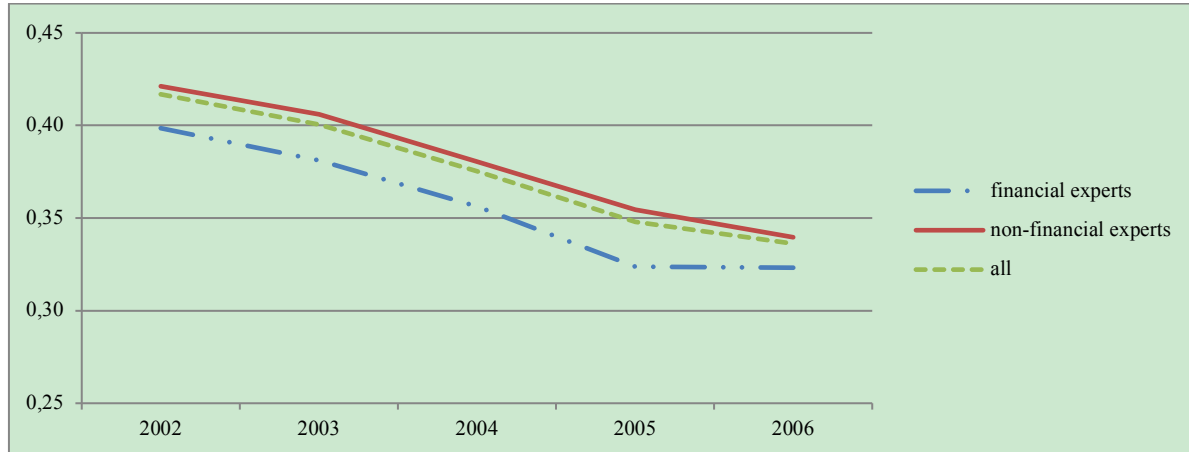


Figure 6 The busyness and financial expertise of unseasoned new directors

Panel A depicts the average number of outside directorships per unique independent director within the Riskmetrics universe for financial experts and non-financial experts separately. An independent director is considered as a financial expert when she holds chief financial officer, treasurer, public accountant titles or works for investment/financial service industries (including serving as an employee director on financial institutions' boards: SIC codes 6000-6999). The figure is generated after merging Riskmetrics and Compustat (in order to obtain SIC codes). All unseasoned new directors are excluded. Including unseasoned new directors doesn't change the results qualitatively. Panel B presents the percentages of two types of directors who sit on audit committees. Solid lines represent unseasoned new directors while dotted lines represent seasoned new directors.

Panel A



Panel B

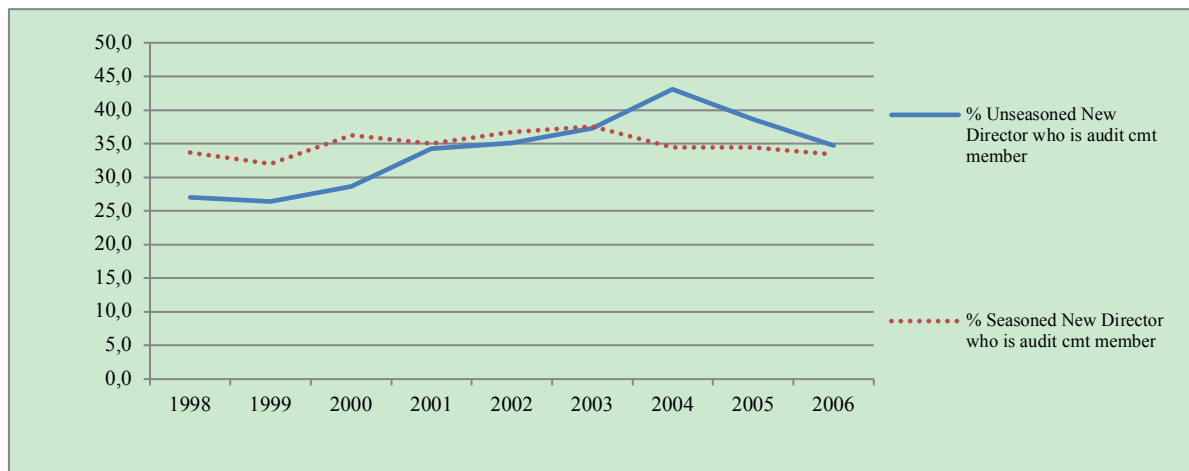
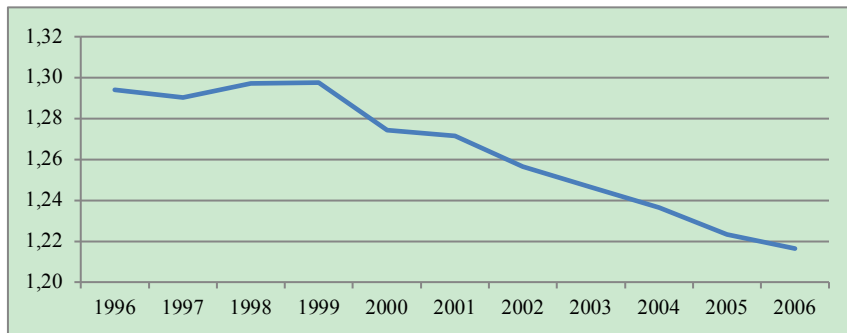


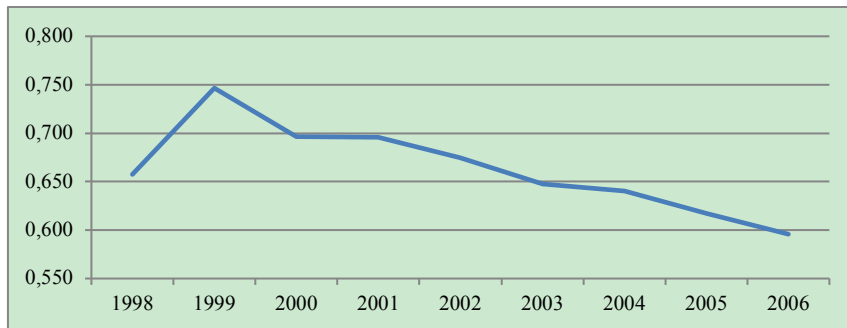
Figure 7 The trend towards less busy directors and boards- Robustness checks

This figure shows the robustness check regarding the trend towards less busy directors and boards. Panel A shows the average number of independent directorships per independent director on the database level. It is calculated by dividing the total number of independent directorships available in Riskmetrics by the total number of unique independent directors. Panel B shows the average number of outside directorships per unique independent director based on variable “outside_public_boards” reported by Riskmetrics. Panel C shows the average percentage of busy directors for three groups of firms with different sizes. We rank the firms into quartiles based on their sales each year. The first quartile firms are labeled small, quartiles two and three medium and the fourth quartile big. Big firms, medium firms and small firms are represented by solid line, dashed line and dotted line respectively.

Panel A



Panel B



Panel C

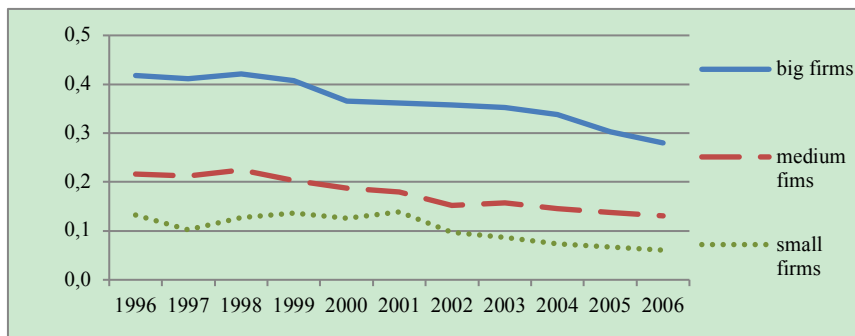


Figure 8 The market for independent directors-the summary in a graph

This figure displays the changes in the market for independent directors since 2000. It summarizes the main findings of our paper.

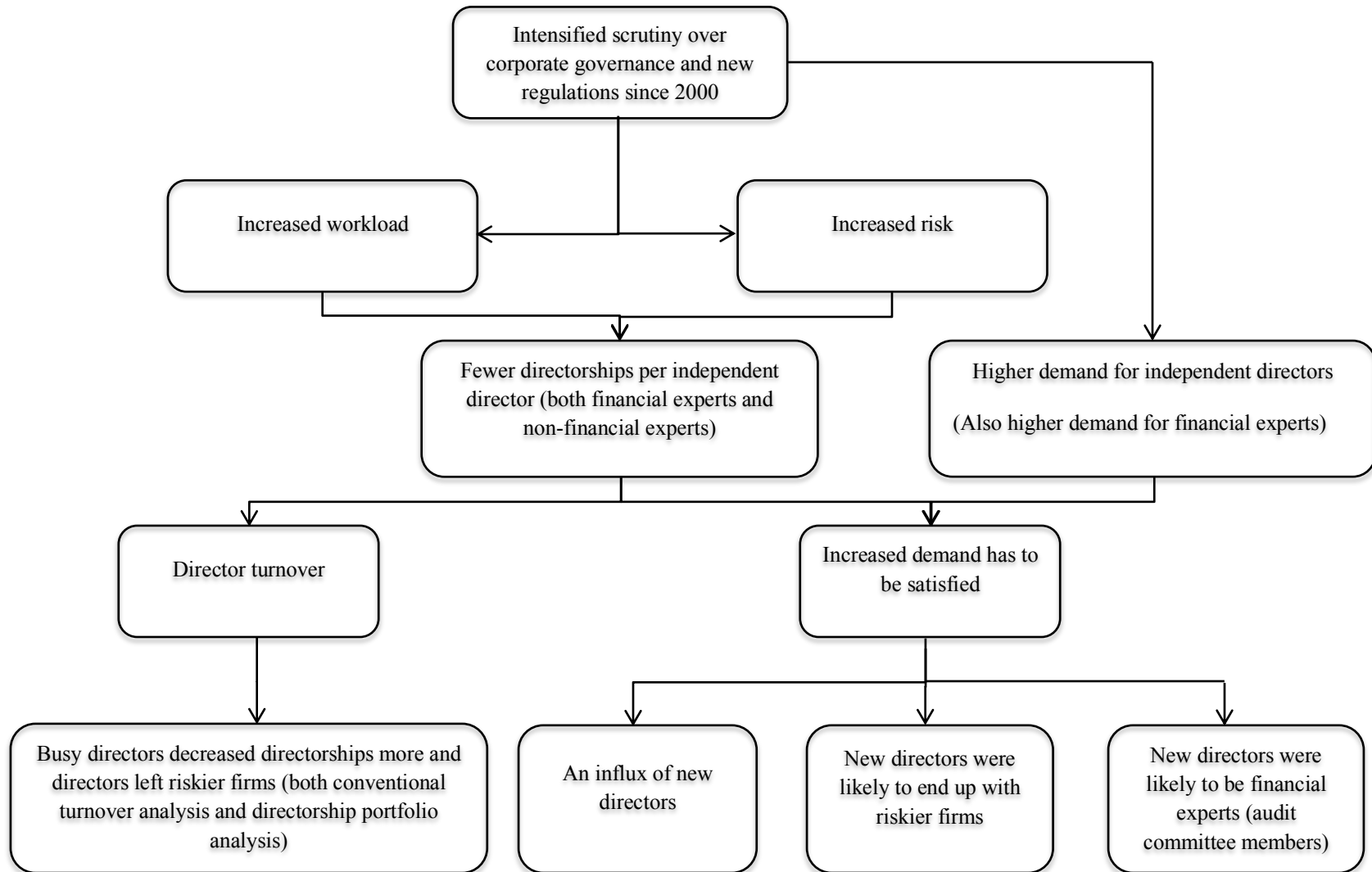


Table I Decreasing director supply - mean comparison

This table presents the differences in the mean values of two variables regarding director supply. Panel A reports the number of outside directorship per independent directors; Panel A reports the board capital; Panel C reports the percentage of busy directors. Low scrutiny period is from 1996-1999; High scrutiny period is from 2000-2006. Furthermore, High scrutiny period is split into High scrutiny period 1 which covers 2000-2002 and High scrutiny period 2 which covers 2003-2006. . *, ** and *** represent the t-statistics from the mean comparison tests are significant at 0.1, 0.05 and 0.01 level respectively.

Panel A Differences in the number of outside directorship per independent directors

HS versus LS	-0.107***
HS1 versus LS	-0.063***
HS2 versus LS	-0.139***
HS2 versus HS1	-0.076***

Panel B Differences in board capital

HS versus LS	-1.014***
HS1 versus LS	-0.768***
HS2 versus LS	-1.225***
HS2 versus HS1	-0.458***

Panel C Differences in the percentage of busy directors

HS versus LS	-0.055***
HS1 versus LS	-0.035***
HS2 versus LS	-0.073***
HS2 versus HS1	-0.038***

Table II Decreasing director supply-lower board capital and fewer busy directors

This table reports estimation results of panel-data analysis of the representation of busy directors. Year 1999 is the base year in the regression. The model is estimated by OLS model. Industry dummies are based on SIC 2-digit codes. The values in brackets are heteroskedasticity-robust standard errors.

	(1) Board capital	(2) Board capital	(3) %Busy directors	(4) %Busy directors
year1996	0.075 (0.188)	0.054 (0.166)	0.001 (0.009)	0.002 (0.009)
year1997	-0.010 (0.176)	0.010 (0.157)	-0.005 (0.009)	-0.004 (0.009)
year1998	-0.000 (0.170)	0.082 (0.152)	0.006 (0.009)	0.008 (0.009)
year2000	-0.426** (0.166)	-0.560*** (0.146)	-0.021** (0.009)	-0.023*** (0.009)
year2001	-0.202 (0.163)	-0.541*** (0.144)	-0.016* (0.009)	-0.023*** (0.009)
year2002	-0.619*** (0.165)	-1.137*** (0.149)	-0.050*** (0.008)	-0.061*** (0.008)
year2003	-0.759*** (0.164)	-1.412*** (0.148)	-0.055*** (0.008)	-0.069*** (0.008)
year2004	-1.216*** (0.160)	-1.913*** (0.146)	-0.073*** (0.008)	-0.089*** (0.008)
year2005	-1.660*** (0.159)	-2.400*** (0.145)	-0.094*** (0.008)	-0.112*** (0.008)
year2006	-2.131*** (0.161)	-2.881*** (0.146)	-0.116*** (0.008)	-0.135*** (0.008)
Firm size	1.708*** (0.036)	1.241*** (0.033)	0.066*** (0.002)	0.061*** (0.002)
Leverage	-0.175 (0.392)	-0.311 (0.359)	0.023 (0.022)	0.016 (0.022)
RND	8.149*** (0.714)	5.876*** (0.637)	0.323*** (0.045)	0.277*** (0.046)
Capital expenditure	1.958*** (0.340)	1.901*** (0.296)	0.109*** (0.021)	0.113*** (0.021)
Intangibles	-0.399 (0.286)	0.127 (0.251)	0.006 (0.014)	0.015 (0.014)
#Business segments	0.088*** (0.027)	0.020 (0.023)	0.001 (0.001)	0.000 (0.001)
Firm age	0.047*** (0.003)	0.026*** (0.002)	0.001*** (0.000)	0.001*** (0.000)
Cost of monitoring and advising	-4.718*** (0.770)	-1.326* (0.706)	-0.129*** (0.047)	-0.094** (0.047)
FCF	-0.655** (0.326)	-0.169 (0.297)	-0.013 (0.018)	-0.010 (0.018)
Board independence		9.083*** (0.189)		0.181*** (0.012)
Board size		0.528*** (0.017)		0.005*** (0.001)
Industry Dummies	Yes	Yes	Yes	Yes
Observations	12,473	12,473	12,473	12,473
R-squared	0.410	0.533	0.264	0.282
Adjusted R-squared	0.406	0.530	0.259	0.277

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table III Director turnover

This table presents the results of director turnover analyses. The dependent variable is director departure which equals 1 if the director stays with the firm in year 0 while not in year 1 and 0 otherwise. The estimation period for model 1-4 is 1997-1999, 2000-2002, 2003-2006, and 1997-2006 respectively. All coefficients and standard errors are estimated by probit models. Industry dummies are based on SIC 2-digit codes. The values in brackets are heteroskedasticity-robust standard errors.

	(1) Departure	(2) Departure	(3) Departure	(4) Departure
#External Directorships	0.175*** (0.015)	0.204*** (0.014)	0.256*** (0.013)	0.175*** (0.015)
Outside Executive Dummy	-0.056 (0.063)	-0.040 (0.061)	0.158*** (0.051)	-0.056 (0.063)
Cost of Monitoring and Advising	-0.857 (1.045)	0.502 (0.567)	1.935*** (0.416)	-0.857 (1.045)
Firm Size	0.026 (0.023)	0.026 (0.022)	0.022 (0.018)	0.026 (0.023)
Adjusted ROA	-0.587 (0.404)	-0.361 (0.324)	-0.477 (0.311)	-0.587 (0.404)
Net Stock Return	-0.131 (0.080)	0.002 (0.044)	-0.035 (0.050)	-0.131 (0.080)
Top 5 Institutional Shareholdings	0.136 (0.309)	0.163 (0.262)	-0.013 (0.220)	0.136 (0.309)
Shareholdings by Activists	2.869** (1.330)	0.680 (1.640)	2.602 (1.995)	2.869** (1.330)
Mandatory Retirement	1.563*** (0.086)	1.508*** (0.076)	1.151*** (0.060)	1.563*** (0.086)
CEO Turnover Dummy	0.140** (0.064)	0.048 (0.058)	0.107** (0.049)	0.140** (0.064)
Linked Director Dummy	0.243*** (0.074)	0.342*** (0.070)	0.402*** (0.061)	0.243*** (0.074)
Leverage	0.022 (0.180)	0.176 (0.152)	-0.209 (0.130)	0.022 (0.180)
RND	0.226 (0.830)	1.294* (0.676)	-0.981 (0.604)	0.226 (0.830)
MTB	0.013 (0.025)	-0.023 (0.021)	-0.057** (0.026)	0.013 (0.025)
Intangibles	-0.013 (0.186)	0.140 (0.175)	-0.289** (0.136)	-0.013 (0.186)
Firm Age	-0.000 (0.001)	-0.003** (0.001)	0.001 (0.001)	-0.000 (0.001)
Board Capital	0.002 (0.004)	0.014*** (0.004)	0.009** (0.003)	0.002 (0.004)
High Scrutiny Period 1(2000-2002) (HS1)				-0.391 (0.806)
#External Directorships*HS1				0.030 (0.021)
Outside Executive Dummy*HS1				0.016 (0.088)
Cost of Monitoring and Advising *HS1				1.359 (1.189)
Firm Size*HS1				0.001 (0.032)
Adjusted ROA*HS1				0.226 (0.518)
Net Stock Return*HS1				0.133 (0.091)
Top 5 Institutional Shareholdings*HS1				0.027 (0.405)
Shareholdings by Activists*HS1				-2.189 (2.112)
Mandatory Retirement*HS1				-0.055 (0.114)
CEO Turnover Dummy*HS1				-0.092 (0.086)
Linked Director Dummy*HS1				0.099 (0.102)

Leverage*HS1				0.154 (0.236)
RND*HS1				1.068 (1.070)
MTB*HS1				-0.035 (0.033)
Intangible*HS1				0.153 (0.256)
Firm Age*HS1				-0.002 (0.002)
Board Capital*HS1				0.011** (0.005)
High Scrutiny Period 2 2003-2006 (HS2)				-0.287 (0.711)
#External Directorships*HS2				0.082*** (0.020)
Outside Executive Dummy*HS2				0.214*** (0.081)
Cost of Monitoring and Advising *HS2				2.792** (1.125)
Firm Size*HS2				-0.004 (0.029)
Adjusted ROA*HS2				0.110 (0.510)
Net Stock Return*HS2				0.096 (0.094)
Top 5 Institutional Shareholdings*HS2				-0.149 (0.380)
Shareholdings by Activists*HS2				-0.268 (2.397)
Mandatory Retirement*HS2				-0.412*** (0.104)
CEO Turnover Dummy*HS2				-0.033 (0.080)
Linked Director Dummy*HS2				0.159* (0.096)
Leverage*HS2				-0.231 (0.222)
RND*HS2				-1.206 (1.027)
MTB*HS2				-0.070* (0.037)
Intangible*HS2				-0.276 (0.231)
Firm Age*HS2				0.001 (0.002)
Board Capital*HS2				0.006 (0.005)
Constant	-1.673*** (0.605)	-2.337*** (0.344)	-2.275*** (0.474)	-1.987** (0.795)
Industry Dummies	Yes	Yes	Yes	Yes
Observations	14,740	18,067	28,658	61,859
Pseudo R-squared	0.139	0.170	0.144	0.152

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table IV Comparison of directorship characteristics within directors' portfolios

This table presents the results of the t-tests regarding the differences in the characteristics of the directorship portfolios. For each director who adjusts her directorship portfolio, we deduct the mean value of each characteristic of the directorships he drops by that of the directorships he keeps. The numbers in the tables are the mean values of such differences across all the directors who adjust the directorship portfolios in the same time period. *, ** and *** represent the t-statistics are significant at 0.1, 0.05 and 0.01 level respectively.

Panel A

	1997-1999 (LS)	2000-2006 (HS)
Cost of monitoring and advising	0.002	0.004***
Next year mandatory retirement dummy	0.132***	0.120***
Firm Size	0.021	0.047
MTB	-0.018	-0.209***
Leverage	-0.004	0.009
RND	0.001	-0.001
Adjusted ROA	-0.004	-0.009**
Intangibles	0.028**	0.007
Firm Age	-0.854	1.586***
Net Stock Return	-0.011	-0.038**
Board Capital	0.955**	1.024***
Top 5 institutional shareholdings	0.007	-0.003
Shareholdings by Activists	0.000	0.000
CEO departure dummy	0.030	0.043***
Linked director dummy	0.040**	0.047***

Panel B

	2000-2002	2003-2006
Cost of monitoring and advising	0.004*	0.004**
Next year mandatory retirement dummy	0.136***	0.108***
Firm Size	0.113	-0.007
MTB	-0.184*	-0.230***
Leverage	0.013	0.006
RND	0.001	-0.003**
Adjusted ROA	-0.002	-0.014***
Intangibles	0.007	0.007
Firm Age	1.265	1.858**
Net Stock Return	-0.028	-0.046***
Board Capital	1.725***	0.435
Top 5 institutional shareholdings	-0.008	-0.004
Shareholdings by Activists	0.001	0.000
CEO departure dummy	0.025	0.057***
Linked director dummy	0.057***	0.040***
Audit cmt member dummy	-0.037	-0.047**
Compensation cmt member dummy	-0.102***	-0.049***
Nominating cmt member dummy	0.036	-0.057***
\$ Ownership	1.E+07	-3.E+06

Table V Directorship portfolio analyses

This table presents the results of directorship portfolio analyses. The dependent variable is director departure which takes 1 if the director stays with the firm in year 0 while not in year 1 and zero otherwise. The estimation period for model 1-4 is 1997-1999, 2000-2002, 2003-2006, and 1997-2006 respectively. All coefficients and standard errors are estimated by probit models. The values in brackets are heteroskedasticity-robust standard errors.

VARIABLES	(1) Departure	(2) Departure	(3) Departure	(4) Departure
Relative Cost of Monitoring and Advising	-0.313 (2.361)	4.156*** (1.441)	4.124*** (1.107)	-0.313 (2.360)
Relative Firm Size	-0.002 (0.050)	-0.029 (0.043)	-0.122*** (0.037)	-0.002 (0.050)
Relative Adjusted ROA	0.120 (0.656)	0.496 (0.427)	0.487 (0.441)	0.120 (0.656)
Relative Net Stock Return	-0.253 (0.176)	0.002 (0.090)	-0.288** (0.115)	-0.253 (0.176)
Relative Top 5 Institutional Shareholdings	-0.311 (0.628)	-0.800 (0.529)	-1.370*** (0.517)	-0.311 (0.628)
Relative Shareholdings by Activists	2.433 (3.271)	-1.645 (3.627)	-4.832 (5.091)	2.433 (3.270)
Relative Mandatory Retirement	1.538*** (0.206)	1.857*** (0.216)	1.768*** (0.180)	1.538*** (0.206)
Relative CEO Turnover Dummy	0.176 (0.152)	0.019 (0.128)	0.427*** (0.115)	0.176 (0.152)
Relative Linked Director Dummy	0.108 (0.139)	0.403*** (0.137)	0.399*** (0.133)	0.108 (0.139)
Relative Leverage	-0.445 (0.335)	0.680** (0.268)	-0.299 (0.264)	-0.445 (0.335)
Relative RND	-0.280 (1.461)	1.215 (1.347)	-4.127*** (1.299)	-0.280 (1.461)
Relative MTB	-0.011 (0.052)	-0.088** (0.035)	-0.216*** (0.051)	-0.011 (0.052)
Relative Intangibles	0.370 (0.234)	0.176 (0.227)	0.365* (0.195)	0.370 (0.233)
Relative Firm Age	-0.002 (0.003)	-0.001 (0.002)	0.004** (0.002)	-0.002 (0.003)
Relative Board Capital	0.007 (0.007)	0.031*** (0.007)	0.017** (0.008)	0.007 (0.007)
High Scrutiny Period 1(2000-2002) (HS1)				0.034 (0.053)
Relative Cost of Monitoring and Advising *HS1				4.470 (2.765)
Relative Firm Size*HS1				-0.027 (0.066)
Relative Adjusted ROA*HS1				0.376 (0.782)
Relative Net Stock Return*HS1				0.255 (0.198)
Relative Top 5 Institutional Shareholdings*HS1				-0.488 (0.821)
Relative Shareholdings by Activists*HS1				-4.079 (4.883)
Relative Mandatory Retirement*HS1				0.319 (0.298)
Relative CEO Turnover Dummy*HS1				-0.157 (0.199)
Relative Linked Director Dummy*HS1				0.296 (0.195)
Relative Leverage*HS1				1.124*** (0.429)
Relative MTB*HS1				-0.077 (0.063)
Relative RND*HS1				1.496 (1.986)
Relative Intangible*HS1				-0.194 (0.326)

Relative Firm Age*HS1				0.001 (0.004)
Relative Board Capital*HS1				0.024** (0.010)
High Scrutiny Period 2 2003-2006 (HS2)				0.008 (0.050)
Relative Cost of Monitoring and Advising *HS2				4.438* (2.607)
Relative Firm Size*HS2				-0.120* (0.062)
Relative Adjusted ROA*HS2				0.367 (0.790)
Relative Net Stock Return*HS2				-0.036 (0.210)
Relative Top 5 Institutional Shareholdings*HS2				-1.059 (0.813)
Relative Shareholdings by Activists*HS2				-7.265 (6.050)
Relative Mandatory Retirement*HS2				0.230 (0.273)
Relative CEO Turnover Dummy*HS2				0.251 (0.191)
Relative Linked Director Dummy*HS2				0.291 (0.192)
Relative Leverage*HS2				0.145 (0.426)
Relative RND*HS2				-3.846** (1.954)
Relative MTB*HS2				-0.205*** (0.073)
Relative Intangible*HS2				-0.005 (0.304)
Relative Firm Age*HS2				0.006* (0.003)
Relative Board Capital*HS2				0.010 (0.011)
Constant	-0.280*** (0.040)	-0.246*** (0.036)	-0.272*** (0.030)	-0.280*** (0.040)
Industry Dummies	No	No	No	No
Observations	1,105	1,398	1,937	4,440
Pseudo R-squared	0.059	0.093	0.088	0.083

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table VI Decomposition of independent directors

This table reports the decomposition of independent directors. Incumbent director in year t refers to the one who was already an independent director for the same firm in year $t-1$. Seasoned new director in year t refers to the one who was a director of any other firm in our sample in year $t-1$ and becomes an independent director in year t for the firm. Unseasoned new director in year t refers to the one who doesn't serve as a director for any firm in our sample in year $t-1$ and becomes an independent director in year t . Panel A reports the mean values of the proportions of three types of independent directors. Panel B reports the differences in the mean proportions of three types of independent directors between certain time periods. *, ** and *** represent the t -statistics are significant at 0.1, 0.05 and 0.01 level respectively.

Panel A Composition of Independent Directors

Year	% Unseasoned New	%Seasoned New	% Incumbent
1997	0.059	0.044	0.897
1998	0.056	0.046	0.898
1999	0.050	0.045	0.905
2000	0.052	0.041	0.906
2001	0.063	0.044	0.893
2002	0.058	0.045	0.897
2003	0.075	0.044	0.881
2004	0.064	0.052	0.884
2005	0.059	0.044	0.897
2006	0.050	0.039	0.911
Low Scrutiny Period: 1997-1999	0.055	0.045	0.900
High Scrutiny Period: 2000-2006	0.060	0.044	0.896
High Scrutiny Period 1: 2000-2002	0.058	0.043	0.899
High Scrutiny Period 2: 2003-2006	0.062	0.045	0.893

Panel B Mean comparison

	% Unseasoned New	%Seasoned New	% Incumbent
Change: High Scrutiny versus Low Scrutiny	0.005***	-0.001	-0.004**
Change: High Scrutiny 1 versus Low Scrutiny	0.003	-0.002	-0.002
Change: High Scrutiny 2 versus Low Scrutiny	0.007***	0.000	-0.007***
Change: High Scrutiny 2 versus High Scrutiny 1	0.004**	-0.001	-0.006**

Table VII Representation of unseasoned new directors

This table presents the estimation results of panel-data analysis of the representation of unseasoned new directors using the 1997-2006 sample. Model 1 uses the percentage of unseasoned new directors as the dependent variable and it is estimated by Tobit model. Model 2 uses recruit unseasoned new director dummy as the dependent variable and it is estimated by probit model. Industry dummies are based on SIC 1-digit codes³⁵. The values in brackets are heteroskedasticity-robust standard errors.

	(1) Unseasoned New%	(2) Recruit Unseasoned New
High Scrutiny Period 1 (2000-2002) (HS1)	0.002 (0.012)	0.020 (0.045)
High Scrutiny Period 2(2003-2006) (HS2)	0.060*** (0.011)	0.236*** (0.040)
Firm size	-0.004 (0.004)	-0.001 (0.014)
Leverage	0.018 (0.049)	0.064 (0.181)
RND	0.077 (0.104)	0.180 (0.383)
FCF	-0.042 (0.046)	-0.153 (0.170)
Capital expenditure	-0.081 (0.049)	-0.332* (0.174)
Intangibles	-0.059** (0.026)	-0.240** (0.095)
# Business segments	0.005* (0.003)	0.020** (0.010)
Firm age	0.001*** (0.000)	0.003*** (0.001)
Cost of Monitoring and Advising	0.282*** (0.104)	0.861** (0.396)
Adjusted ROA	0.023 (0.046)	-0.019 (0.173)
MTB	-0.005 (0.004)	-0.011 (0.015)
Net Stock Return	0.007 (0.010)	0.015 (0.037)
Top 5 Institutional Shareholdings	-0.026 (0.049)	-0.071 (0.185)
Shareholdings by Activists	0.191 (0.298)	0.663 (1.091)
Lag# Mandatory Independent Dir.	0.050*** (0.010)	0.191*** (0.043)
Lag Board size	-0.020*** (0.002)	-0.054*** (0.008)
Lag Board independence	-0.183*** (0.026)	-0.277*** (0.092)
CEO Turnover Dummy	0.029** (0.011)	0.099** (0.044)
Constant	-0.049 (0.121)	-0.653 (0.437)
Observations	8,401	8,401
Pseudo R-squared	0.043	0.018

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

³⁵ We use sic-1 digit instead of sic-2 digit in table VI and 7 because the convergence for the model estimation can't be achieved and the probability can't be calculated because the matrix has missing values while using sic-2 digit. The results are robust if no industry dummies are included.

Table VIII The busyness of unseasoned new directors

This table reports the number of external directorship held by unseasoned new independent directors in difference time periods.

# external directorships	Observations (frequencies%)		
	Low Scrutiny Period	High Scrutiny Period 1	High Scrutiny Period 2
0	1206 (91.9)	1333 (93.8)	2018(96.1)
1	93(7.1)	79(5.6)	76(3.6)
2	11(0.8)	7(0.5)	7(0.3)
3	2(0.2)	2(0.1)	0(0)

Table IX Which firms recruited unseasoned new directors

This table presents the estimation results of panel-data analysis of the representation of unseasoned new directors using the 1997-2006 sample. The dependent variable is recruit unseasoned new director dummy and all the models are estimated by probit model. Industry dummies are based on SIC 1-digit codes³⁶. The values in brackets are heteroskedasticity-robust standard errors.

	(1) Recruit Unseasoned New	(2) Recruit Unseasoned New	(3) Recruit Unseasoned New	(4) Recruit Unseasoned New
Cost of Monitoring and Advising	-0.375 (0.997)	0.198 (0.664)	1.682*** (0.595)	-0.375 (0.996)
Firm size	-0.001 (0.030)	-0.032 (0.026)	0.028 (0.021)	-0.001 (0.030)
Leverage	0.246 (0.337)	0.183 (0.325)	-0.158 (0.301)	0.246 (0.337)
RND	-1.102 (0.781)	1.599** (0.701)	0.200 (0.593)	-1.102 (0.780)
FCF	-0.178 (0.314)	0.036 (0.305)	-0.349 (0.285)	-0.178 (0.314)
Capital expenditure	-0.411 (0.344)	-0.379 (0.299)	-0.131 (0.295)	-0.411 (0.344)
Intangibles	-0.269 (0.186)	-0.190 (0.173)	-0.216 (0.148)	-0.269 (0.186)
# Business segments	0.014 (0.021)	0.014 (0.018)	0.032** (0.014)	0.014 (0.021)
Firm age	0.003 (0.002)	0.001 (0.002)	0.003** (0.001)	0.003 (0.002)
Adjusted ROA	-0.579 (0.359)	0.646** (0.324)	-0.187 (0.267)	-0.579 (0.359)
MTB	0.034 (0.027)	-0.044* (0.026)	-0.017 (0.027)	0.034 (0.027)
Net Stock Return	0.074 (0.076)	0.021 (0.058)	-0.050 (0.063)	0.074 (0.076)
Top 5 Institutional Shareholdings	0.123 (0.361)	-0.198 (0.333)	-0.114 (0.288)	0.123 (0.361)
Shareholdings by Activists	1.174 (1.649)	1.374 (1.865)	-0.561 (2.586)	1.174 (1.649)
Lag# Mandatory Retired Independent Dir.	0.155* (0.092)	0.202** (0.089)	0.215*** (0.060)	0.155* (0.092)
Board size	-0.051*** (0.015)	-0.040*** (0.014)	-0.080*** (0.012)	-0.051*** (0.015)
Board independence	-0.044 (0.178)	-0.008 (0.162)	-0.656*** (0.147)	-0.044 (0.178)
CEO Turnover Dummy	-0.022 (0.091)	0.193** (0.078)	0.109 (0.067)	-0.022 (0.091)
High Scrutiny Period 1(2000-2002) (HS1)				0.181 (0.522)
Cost of Monitoring and Advising *HS1				0.573 (1.197)
Firm size*HS1				-0.031 (0.039)
Leverage*HS1				-0.063 (0.468)
RND*HS1				2.702** (1.049)
FCF*HS1				0.214 (0.437)
Capital expenditure*HS1				0.031 (0.456)
Intangibles *HS1				0.079 (0.254)
# Business segments*HS1				-0.000 (0.028)

³⁶ We use sic-1 digit instead of sic-2 digit in table II3 because the convergence for the model estimation can't be achieved and the probability can't be calculated because the matrix has missing values while using sic-2 digit. The results are robust if no industry dummies are included.

Firm age*HS1				-0.002 (0.003)
Adjusted ROA*HS1				1.225** (0.483)
MTB*HS1				-0.078** (0.037)
Net Stock Return*HS1				-0.053 (0.096)
Top 5 Institutional Shareholdings*HS1				-0.321 (0.490)
Shareholdings by Activists*HS1				0.200 (2.489)
Lag# Mandatory Retired Independent Dir. *HS1				0.047 (0.128)
Board size*HS1				0.011 (0.020)
Board independence*HS1				0.036 (0.241)
CEO Turnover Dummy*HS1				0.214* (0.120)
High Scrutiny Period 2 (2002-2006) (HS2)				5.054*** (0.461)
Cost of Monitoring and Advising *HS2				2.057* (1.160)
Firm size*HS2				0.029 (0.036)
Leverage*HS2				-0.403 (0.452)
RND*HS2				1.302 (0.980)
FCF*HS2				-0.171 (0.424)
Capital expenditure*HS2				0.280 (0.454)
Intangibles *HS2				0.052 (0.238)
# Business segments*HS2				0.018 (0.025)
Firm age*HS2				-0.000 (0.002)
Adjusted ROA*HS2				0.392 (0.447)
MTB*HS2				-0.051 (0.038)
Net Stock Return*HS2				-0.124 (0.099)
Top 5 Institutional Shareholdings *HS2				-0.237 (0.461)
Shareholdings by Activists*HS2				-1.735 (3.067)
Lag# Mandatory Retired Independent Dir. *HS2				0.061 (0.110)
Board size*HS2				-0.030 (0.019)
Board independence*HS2				-0.612*** (0.231)
CEO Turnover Dummy*HS2				0.130 (0.113)
Constant	-0.406 (0.707)	-0.684 (0.675)	-0.059 (0.513)	-0.406 (0.707)
Industry Dummies	Yes	Yes	Yes	Yes
Observations	2,165	2,508	3,724	8,399
Pseudo R-squared	0.015	0.015	0.024	0.024

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table X Probabilities of being audit committee members

This table presents the estimation results of panel-data analysis of the probabilities of being audit committee members for independent directors using the 1998-2006 sample. The dependent variable takes 1 if the independent director sits on audit committee and 0 otherwise. All coefficients and standard errors are estimated by probit models. Industry dummies are based on SIC 2-digit codes. The values in brackets are heteroskedasticity-robust standard errors.

	Audit Cmt. Mem
Any New Director	-0.561*** (0.060)
Unseasoned New Director	-0.325*** (0.084)
HS1	0.049*** (0.018)
HS1*Any New Director	0.107 (0.077)
HS1* Unseasoned New Director	0.089 (0.105)
HS2	0.035** (0.017)
HS2*Any New Director	0.107 (0.072)
HS2* Unseasoned New Director	0.314*** (0.098)
Age	-0.003*** (0.001)
Female	-0.002 (0.017)
Board Size	-0.087*** (0.003)
Board Independence	-0.974*** (0.042)
Firm size	0.008 (0.006)
leverage	-0.102*** (0.039)
RND	-0.406** (0.162)
Intangibles	-0.032 (0.048)
# Business Segments	0.000 (0.004)
Capital expenditure	-0.065 (0.073)
Firm age	0.001*** (0.000)
Cost of Monitoring and Advising	0.168 (0.154)
Block Shareholdings	-0.020 (0.052)
Activists Shareholdings	-0.444 (0.466)
Constant	1.667*** (0.182)
Industry Dummies	YES
Observations	52,113
Pseudo R-squared	0.040

*** p<0.01, ** p<0.05, * p<0.1