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# Better directors or distracted directors? An international analysis of busy boards

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### ABSTRACT

This study examines the effect of busy directors and boards on the value of a set of non-U.S. firms from 1999 to 2012. We find that busy directors and boards are a global phenomenon, but that national culture helps to explain the cross-sectional variation in director and board busyness. Firms with busy boards exhibit lower market-to-book ratios and reduced profitability, but this effect is reversed for younger firms. We conclude that the advising ability of these networked directors is most useful for younger firms. A demographic analysis shows that multiple directorships are positively associated with firm performance and education, but negatively associated with female directors.

### 1. Introduction

The issue of multiple directorships on corporate boards has come under increasing scrutiny from both academicians and practitioners. There is conflicting evidence in the academic literature about the impact of multiple directorships on firm value and performance. Some studies contend that multiple directorships are signals of quality and as such improve firm value and performance. Others argue that multiple directorships increase directors' workload and thus impair the firm's performance and value.

Most of the existing studies, however, limit their analysis to U.S. corporate boards. Yet there are reasons to doubt whether the results for the United States apply with equal validity to other countries. Country differences in culture and legal traditions, for instance, can influence individual decisions about holding multiple board seats and the nature of corporate governance in general (Aggarwal, Erel, Stulz, & Williamson, 2009; Ferris, Jagannathan, & Pritchard, 2003; La Porta, Lopez-de-Silanes, & Shleifer, 1999; La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 1998). In this study we examine a large panel of non-U.S. firms to assess the global incidence, determinants, and effects of multiple directorships.

Examining the board appointments of non-U.S. firms, we develop four hypotheses regarding the nature of non-U.S. boards and director busyness. First, we test whether busy boards are a global phenomenon. Second, we investigate the extent to which national cultures might explain the distribution of busy boards across countries. Third, we look specifically at how corporate affiliations or desirable personal characteristics help a director gain additional board seats. Finally, we test how far busy directors affect firm value, and specifically, whether their usefulness is conditional upon firm age.

We find that busy boards are a global phenomenon. Approximately 70% of our sample firms can be categorized as having busy boards. The incidence of busy boards is higher among firms in civil law countries than those headquartered in common law nations. We find that cultural factors help to explain the frequency with which board busyness is observed globally. Specifically, we find that

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### S.P. Ferris et al.

#### Global Finance Journal xxx (xxxx) xxx-xxx

cultures that are more tolerant of power inequalities and emphasize individual accomplishment have a higher incidence of busy boards. Firms headquartered in national cultures that focus more on masculinity are associated with lower levels of busyness.

We also provide an analysis of what firm and personal factors account for individuals gaining multiple board seats. We find that the performance of firms on whose boards an individual sits directly affects the number of directorships an individual holds. Further, we determine that directors serving on the boards of larger firms tend to hold more directorships. We discover that personal characteristics also matter, with status as a CEO or possession of a law degree or an MBA helping an individual to gain additional board seats

Our results also offer new insight into the ability of busy boards to provide value to their firms. We find that firms with busy boards exhibit lower market-to-book ratios and reduced profitability. Our empirical findings indicate that a one percentage increase in the number of busy independent directors on a board reduces the firm's market-to-book ratio by 0.05, while its return on assets is about 2% lower.

When we stratify our firms by age, however, we find that the negative effect of board busyness on firm value reverses. Specifically, we determine that the benefits offered by busy directors are much more valuable to younger firms. This evidence is similar to that reported for U.S. IPO firms by Field, Lowry, and Mkrtchyan (2013). We conclude that as firms mature, the demand for advising decreases while the need for monitoring by directors increases. These results are consistent with the notion that busy directors most benefit young firms.

This study contributes to the international corporate finance literature in several important ways. Most importantly, our study provides new evidence from a heretofore unexamined set of firms to help resolve the debate about whether busy boards mean better directors or distracted directors. This is the first study that examines the effect of board busyness in a comprehensive set of non-U.S. firms. Previous researchers such as Ferris et al. (2003), Fich and Shivdasani (2006), and Field et al. (2013) limit their analysis of board busyness to U.S. firms. But because of international differences in corporate governance practices (Aggarwal et al., 2009; Coffee Jr., 2002), legal requirements regarding director responsibilities (Licht, Goldschmidt, & Schwartz, 2005), and cultural norms regarding business practices (Dalton & Kesner, 1987: Haniffa & Cooke, 2005), it is uncertain whether findings from U.S. firms hold globally. Finally, because this study uses a set of non-U.S. firms, we can examine the extent to which national culture might explain corporate governance practices as reflected in board busyness. Existing studies focus on director and firm characteristics and ignore this important environmental factor. Thus, our analysis adds to the growing research (e.g., Beugelsdijk & Frijns, 2010; Licht, Goldschmidt, & Schwartz, 2007; Stulz & Williamson, 2003) establishing the relevance of culture to corporate finance and managerial decision-making.

We organize the remainder of our study as follows. Section 2 provides a literature review and develops our hypotheses. Section 3 describes the data collection process and our method for sample construction. We present our findings regarding international patterns of board busyness in Section 4, and our analysis of national culture effects on director and board busyness in Section 5. In Section 6 we examine other factors that might influence the likelihood of busy directors. Sections 7 and 8 discuss the implications of busy boards for firm value and profitability. Section 9 describes our test for endogeneity; Section 10, a series of robustness tests. Section 11 provides a brief summary of our findings and a discussion of their importance to the literature.

### 2. Literature review and hypotheses development

### 2.1. The controversy over busy boards and firm performance

Fama and Jensen (1983) argue that multiple directorships can signal a director's reputation, quality, and skill to the external labor market of directors. Supporting this argument, studies find that multiple directorships can add value by enhancing executive experience (Carpenter & Westphal, 2001) and by permitting executives to establish a network or to monitor business relations (Loderer & Peyer, 2002; Mace, 1986). Harris and Shimizu (2004) document that busy directors are important sources of knowledge and enhance acquisition performance. Perry and Peyer (2005) find that outside directorships for executives can enhance firm value for firms with low agency problems. Elyasiani and Zhang (2015) find that the performance of bank holding companies is positively associated with the busyness of directors. Chakravarty and Rutherford (2017) find that firms with busy directors have a lower cost of debt. Other studies report evidence confirming this reputation effect of directors holding multiple appointments (Booth & Deli, 1996; Brickley, Linck, & Coles, 1999; Coles & Hoi, 2003; Gilson, 1990; Harford, 2003; Kaplan & Reishus, 1990; Masulis & Mobbs, 2011; Rapp, Schmid, & Urband, 2017). Ferris, Javakhadze, and Liu (2017) argue that that busy directors are networked directors, who can provide valuable contacts to their firms. Their social capital results in greater transparency, stricter contract enforcement, and more efficient managerial decision-making, all of which make such firms less dependent on internally generated cash for their capital expenditures.

Additional directorships, however, reduce the time and attention directors can devote to any individual board. For example, Beasley (1996) finds that busy directors increase the probability of accounting fraud. Core, Holthausen, and Larcker (1999) report that CEO compensation is higher when outside directors are busy, and the high compensation in turn impairs firm performance. Ferris et al. (2003), however, find no relation between the number of directorships held by a director and firm valuation as proxied by the market-to-book ratio. This evidence is disputed by Fich and Shivdasani (2006), who report that firms with busy boards exhibit lower market-to-book ratios, reduced profitability, and a weakened sensitivity of CEO turnover to firm performance. Cashman, Gillan, and Jun (2012) also discover an inverse association between board busyness and firm performance. In addition, Jiraporn, Davidson III, DaDalt, and Ning (2009) find that individuals with multiple board seats are more likely to be absent from board meetings, and Jiraporn, Singh, and Lee (2009) find that they serve on fewer board committees. Cooper and Uzun (2012) find that

Global Finance Journal xxx (xxxx) xxx-xxx

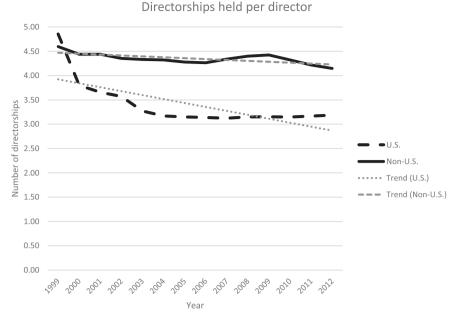


Fig. 1. Changes of directorships held per director over time.

bank risk is positively related to the multiple board appointments of bank directors. Kress (2018) argues that overcommitted directors impair the governance of large financial institutions. Wysocki, Tuna, and Richardson (2005) document that the magnitude of the director monitoring effect decreases with the number of outside board appointments held by a director. Ahn, Jiraporn, and Kim (2010) report that acquiring firms whose independent directors hold more outside board seats experience greater negative abnormal returns upon announcement. Falato, Kadyrzhanova, and Lel (2014) document that directors' busyness is detrimental to board monitoring quality and shareholder value. Other researchers including Devos, Prevost, and Puthenpurackal (2009), Liu and Paul (2015), and Pandey, Vithessonthi, and Mansi (2015) also provide confirming evidence that busy directors are negatively associated with firm performance. Benson, Davidson III, Davidson, and Wang (2015), however, find that busy directors are not uniformly detrimental. More recently, Ljungqvist and Raff (2017) have developed a theoretical model to derive conditions under which a "busy" director on the board is either beneficial or detrimental to shareholder value. Field et al. (2013) find that busy directors offer advantages for younger firms, and argue that the benefits of busy boards extend to all but the most established firms.

The corporate world, however, appears to see busy directors as ineffective directors. Several practitioner organizations have adopted resolutions limiting the number of directorships held by directors. For instance, Institutional Shareholder Services (ISS) sought to place limits on multiple directorships in 2009, and adopted a policy beginning in 2017 that lowers the limit on multiple directorships from six board seats to five. A 2012 survey by Spencer Stuart indicates that three-fourths of S&P 500 firms restrict the number of directorships their directors can hold. Five years earlier, in 2007, only 55% of the S&P 500 firms had such limitations. Fig. 1 shows that over the period 1999 to 2012, the average number of directorships held per director decreased from 5 to 3 for U.S. firms. This change is not only statistically significant (test unreported), but also economically significant, representing a 40% decrease. Although a similar reduction can be observed for non-U.S. firms, it is not as pronounced as that for U.S. firms.

The conflicting evidence summarized above about the effect of multiple directorships on firm value and performance is based on an analysis of either exclusively U.S. firms or firms within a single country. In the latter category, Di Pietra, Grambovas, Raonic, and Riccaboni (2008) find that busy directors are associated with a higher market value of Italian firms. Pombo and Gutiérrez (2011) report that busy directors are associated with improved firm performance in Colombia. Andres, Bongard, and Lehmann (2013), however, determine that German firms with busy directors, as captured by their social network, exhibit lower firm performance. Méndez, Pathan, and García (2015) discover that Australian-listed firms with busy directors pay higher remuneration to their CEOs and experience lower sensitivity of CEO pay or turnover to performance. They conclude that busy directors are detrimental to the monitoring capability of the board. Such conflicting evidence exists even for the same country. Jackling and Johl (2009) find that an Indian firm's Tobin's Q decreases with the number of directorships held by independent directors, while Sarkar and Sarkar (2009) determine that multiple directorships by independent directors in India are positively related to firm value. Both studies use social network approaches, but their findings are contradictory.<sup>1</sup> Thus, the literature regarding the global effect of busy boards does not

<sup>&</sup>lt;sup>1</sup> While we follow the current finance literature to construct our board busyness measurements, we acknowledge that network studies of board busyness have gained importance (see Scott, 2011 for an overview). The mathematical methods used by sociologists facilitate assessing interpersonal relationships and applying them to financial data. For example, Barnea and Guedj (2009) generate measures that account for a director's importance in a social network and find that in firms with more connected directors, the CEO's remuneration is higher while CEO turnover is less

#### S.P. Ferris et al.

### provide unambiguous insights or conclusions.

Yet there are important reasons to believe that both the incidence and the effects of multiple directorships demonstrate meaningful international differences. The desirability and social acceptance of sitting on multiple boards can differ across countries because of cultural norms (Hofstede, 1980, 1998; Schwartz, 1992). Ethical standards and their ability to influence managerial behaviors are likely to differ across borders. There are also legal or regulatory differences regarding the ability of individuals to serve simultaneously on multiple boards. And since the supply of individuals sufficiently skilled and experienced to serve as directors varies across countries, the very feasibility of such appointments is likely to differ internationally. Finally, the power of the board to influence corporate activities, especially with respect to entrenched or family management, differs across countries (Hu & Kumar, 2004; Morck & Yeung, 2003). All of these considerations make the desirability of directors with multiple appointments sensitive to country characteristics and institutions.

#### 2.2. Global incidence of busy boards

The need for corporate directors to provide access to resources for the firm while also offering advice and counsel is well established in the literature (e.g., Adams, Hermalin, & Weisbach, 2010; Hillman, Cannella, & Paetzold, 2000). Pfeffer (1972) is among the first organizational theorists to identify resource provisioning as a role for corporate boards. He contends that corporate directors serve as valuable links to an organization's environment, helping to gain access to various networks and their associated resources as well as providing insights from varied perspectives. Hermalin and Weisbach (2003) and Adams et al. (2010) describe the advising role of directors for the firm's managers. Experience tells: individuals who are currently sitting or have sat on other boards are better able to provide the advising and guidance required of a director.

Directors with multiple appointments can signal firm legitimacy. Pfeffer and Salancik (1978) argue that firms adopt organizational structures, including the board of directors, to signal legitimacy. Certo (2003) notes that individuals with greater experience—by implication, busy directors—are seen as prestigious directors. Because of the greater perceived legitimacy of prestigious directors, they are more capable of ensuring firm performance and survival (Barringer & Milkovich, 1998; Eisenhardt, 1988).

Busy directors also provide the firm with critical human (Carpenter & Westphal, 2001; Fredman, 2002) and social capital (D'Aveni & Kesner, 1993; Nahapiet & Ghoshal, 1998). The human capital of busy directors includes important firm or industry experience (Gimeno, Folta, Cooper, & Woo, 1997; Pennings, Lee, & Van Witteloostuijn, 1998) or information about a firm's industry, customers, or suppliers. The social capital of busy directors helps the firm update its assessment of the current external environment (Certo, 2003) and recruit managerial talent (Rosenstein, Bruno, Bygrave, & Taylor, 1993).

Because busy directors confer greater access to resources through their superior human and social capital, improved perceptions of corporate legitimacy, and effective advising and oversight, their service on corporate boards is highly desired. All firms, regardless of their nation of incorporation or site of major operations, will desire directors who bring networking opportunities, legitimacy, and advising/monitoring skills and therefore will seek out experienced directors. Thus,

Hypothesis 1. Busy boards with directors simultaneously holding multiple board appointments are a global phenomenon.

### 2.3. The effect of national culture

National cultures help to shape perceptions regarding the usefulness and desirability of a particular potential director. First, national cultures influence important dimensions of business activity (Newman & Nollen, 1996; Stulz & Williamson, 2003). Second, national culture serves as a foundation for the country's legal system and thus influences the development of what is ethically acceptable as a business practice (Licht et al., 2005, 2007). Finally, culture helps to determine what is allowable as a punishment and what is desirable as an incentive (Hofstede, 1980, 2001; Scott & Meyer, 1994). Consequently, national cultures will also shape perceptions regarding the desirability of an individual's sitting on multiple boards.

Institutional theory (DiMaggio & Powell, 1983; Meyer & Rowan, 1977; Scott, 1987) views organizations as seeking resources and legitimacy by aligning their structures to institutional norms, which are also components of national culture. Thus, corporate boards as part of a firm's core structures reflect the underlying national culture. Li and Harrison (2008) argue that corporate structures arise from the implicit models of organizational appropriateness attributable to culture (Hofstede, 1980, 2001; Smircich, 1983; Swidler, 1986). Thus,

Hypothesis 2. National culture influences the extent to which a country's corporate boards are busy.

### 2.4. Other director characteristics

Appointment to multiple boards is also influenced by both individual characteristics and those of the firm for which the individual is presently a director (Raheja, 2005; Westphal & Stern, 2007). Affiliation with a firm that is performing well, a larger firm, or a firm

<sup>(</sup>footnote continued)

sensitive to firm performance. Subrahmanyam (2008) develops a model that links the optimal number of board memberships to social costs and benefits. Omer, Shelley, and Tice (2014) find that firms with well-connected directors have higher market value.

#### S.P. Ferris et al.

with a larger board increases a director's ability to gain additional board appointments (Boone, Field, Karpoff, & Raheja, 2007; Ferris et al., 2003; Linck, Netter, & Yang, 2008). Specific individual characteristics will also be highly valued in the market for directors (Peterson & Philpot, 2007; Westphal & Zajac, 1995). Age, gender, CEO status, and education are related to prestige and therefore to an individual's ability to obtain multiple board appointments (Acharya & Pollock, 2013; D'Aveni, 1990; D'Aveni & Kesner, 1993).

Along a related line of argument, Kaczmarek, Kimino, and Pye (2012) define group fault lines as those characteristics "that split a group into relatively homogeneous subgroups based on group members' alignment along their multiple attributes and are most likely to emerge when group diversity is moderate." The authors argue that fault lines such as education, tenure, experience, etc. can end up affecting directors' ability to monitor effectively and thereby reduce board effectiveness. These fault lines combined with the widespread presence of homophilic in-group construction (Mcpherson, Smith-Lovin, & Cook, 2001; Ruef, Aldrich, & Carter, 2003) lead us to hypothesize that

**Hypothesis 3.** A director's affiliation with large and successful companies or the possession of desirable personal characteristics affects the likelihood of holding multiple board appointments.

### 2.5. Director advising and firm age

Field et al. (2013) present evidence that busy directors help create value for IPO firms. They attribute this finding to such directors' extensive experience with the marketing, legal, and accounting issues associated with going public, and they provide evidence that the positive relation between board busyness and firm performance is attenuated five or ten years following the IPO. Thus, it might be that busy directors provide their greatest value to newly listing or very young firms. We contend that the advising function of directors is critical not only for IPO firms, but for younger firms in general. These firms have less corporate knowledge in key areas such as the management of investor and analyst relations or the regulatory issues associated with merger and acquisition. The appointment of busy directors to their boards can help these firms to fill this knowledge gap.

Additionally, companies that go public seek to appoint prestigious directors to certify the firm's desirability to IPO investors and to signal their general legitimacy and strength. Indeed, indicators of board prestige (Certo, 2003; Pollock, Chen, Jackson, & Hambrick, 2010) enhance a firm's initial valuations, and directors having multiple appointments are viewed as prestigious. Consistently with signaling theory (Ross, 1977; Spence, 1973), the presence of these directors can be seen as confirmation of a firm's value, which might otherwise be unclear. Consequently,

Hypothesis 4. Busy directors provide more value to younger firms.

### 3. Data, sample, and director identification

### 3.1. Data sources and sample construction

We start with the BoardEx database to identify our sample firms. BoardEx provides information concerning the demographics, education, and employment history of corporate directors over the period 1999 through 2012. We require that each sample firm have at least three directors for each year reported in BoardEx. This yields an initial sample of 194,594 firm-year observations distributed across 54 countries. We include U.S. data for Tables 1 and 2 for comparison purposes only. For our subsequent analyses, we drop all U.S. firm-year observations to eliminate concerns that the results might be driven by the large number of U.S. firms in the sample. This results in an intermediate sample of 95,923 non-U.S. firm-year observations, or 319,619 director-year observations.

We then merge the BoardEx data with the Compustat Global database through International Securities Identification Numbers (ISIN) to obtain the necessary financial and accounting data for our sample firms. We require that all candidate firms be public, with all variables winsorized at the 1 and 99% levels. This results in a final sample of 20,612 non-U.S. firm-year observations, or 167,828 non-U.S. director-year observations.

### 3.2. Director identification

We develop a three-step process to determine whether a board is busy. Each director is classified as independent if identified in BoardEx as a nonexecutive director. Our focus on independent directors is consistent with the existing literature on multiple board memberships. It does, however, cause us to ignore potentially busy directors who are either employee representatives to the board or executives who are directors for multiple subsidiaries within the same corporate family. Then, following Fich and Shivdasani (2006) and Field et al. (2013), we classify independent directors as busy if they sit on three or more boards. Finally, we define a board as busy if 50% or more of its independent directors are classified as busy.

An important part of any global study of corporate directors is the correct identification of board assignment. This issue occurs because globally the supervision of corporate management is achieved with two different models. Listed companies in the United States, Canada, and the United Kingdom have only one supervisory board, which contains both executive and nonexecutive directors. Other countries, such as the Netherlands, Germany, Austria, Finland, Norway, and Denmark, require both a management and a supervisory board. The management board is entirely composed of executive directors, and is responsible for setting corporate strategy and overall direction. The supervisory board is entirely composed of nonexecutive directors, and its main tasks are to appoint and dismiss the members of the management board and to monitor them. There are also countries, such as Belgium, Portugal, France,

### S.P. Ferris et al.

### Table 1

Global distribution of board independence and busyness.

Legal regime	Country	Ν	Percent of in	ndependent directors	Percent of bu	sy independent directors	Busy boa	rd indicator
			Mean	Median	Mean	Median	Mean	Median
English common	Australia	6070	0.82	0.83	0.67	0.67	0.81	1.00
	Canada	8378	0.84	0.86	0.67	0.67	0.80	1.00
	Hong Kong	1881	0.62	0.67	0.68	0.75	0.75	1.00
	India	2982	0.70	0.75	0.83	1.00	0.90	1.00
	Ireland	1725	0.57	0.60	0.57	0.56	0.63	1.00
	Israel	1604	0.72	0.80	0.66	0.67	0.77	1.00
	Kenya	25	0.81	0.92	0.59	0.50	0.60	1.00
	Malaysia	489	0.77	0.75	0.75	0.83	0.83	1.00
	New Zealand	196	0.80	0.88	0.76	0.80	0.88	1.00
	Nigeria	13	0.52	0.59	0.63	0.50	0.62	1.00
	Pakistan	15	1.00	1.00	0.69	0.67	0.67	1.00
	Singapore	1272	0.73	0.75	0.77	0.83	0.88	1.00
	South Africa	1624	0.69	0.73	0.70	0.73	0.83	1.00
	Thailand	23	0.92	1.00	0.81	0.75	1.00	1.00
	United Kingdom	30,770	0.58	0.60	0.61	0.64	0.70	1.00
	United States	30,770 98,671	0.38	0.77	0.56	0.56	0.70	1.00
ormer socialist	China							
ormer socialist		2204	0.60	0.63	0.48	0.50	0.50	1.00
	Croatia	33	0.64	0.60	0.49	0.44	0.48	0.00
	Czech Republic	55	0.68	0.75	0.68	0.80	0.62	1.00
	Georgia	3	0.96	1.00	0.90	1.00	1.00	1.00
	Hungary	28	0.85	0.91	0.52	0.33	0.39	0.00
	Kazakhstan	10	0.89	1.00	0.56	0.67	0.60	1.00
	Poland	247	0.75	0.72	0.66	0.67	0.76	1.00
	Romania	4	0.82	0.87	0.30	0.29	0.00	0.00
	Russia	502	0.71	0.79	0.64	0.67	0.75	1.00
	Slovenia	10	0.66	0.64	0.48	0.33	0.40	0.00
	Vietnam	12	1.00	1.00	0.89	1.00	1.00	1.00
French civil	Argentina	140	0.72	0.75	0.69	0.72	0.77	1.00
	Belgium	1942	0.70	0.75	0.68	0.71	0.77	1.00
	Brazil	660	0.79	0.89	0.55	0.55	0.61	1.00
	Chile	114	0.85	1.00	0.73	0.75	0.77	1.00
	Colombia	9	0.96	1.00	0.56	0.42	0.44	0.00
	Egypt	57	0.66	0.67	0.70	0.67	0.86	1.00
	France	7437	0.59	0.67	0.69	0.76	0.75	1.00
	Greece	543	0.70	0.71	0.42	0.33	0.70	0.00
	Indonesia	39	0.49	0.55	0.58	0.60	0.40	1.00
	Italy	39	0.49	0.33	0.38	0.00	0.31	1.00
	Mexico	558	0.69	0.81	0.72	0.80	0.80	1.00
	Netherlands	3017	0.63	0.67	0.73	0.78	0.82	1.00
	Peru	46	0.81	1.00	0.84	1.00	0.98	1.00
	Philippines	69	0.86	0.90	0.77	0.80	0.88	1.00
	Portugal	557	0.60	0.67	0.72	0.78	0.77	1.00
	Spain	2788	0.63	0.67	0.69	0.75	0.75	1.00
	Turkey	85	0.90	1.00	0.43	0.38	0.36	0.00
	Uruguay	11	0.59	0.70	0.45	0.60	0.64	1.00
German civil	Austria	785	0.65	0.67	0.62	0.67	0.66	1.00
	Germany	4887	0.73	0.75	0.63	0.67	0.71	1.00
	Japan	594	0.53	0.54	0.47	0.50	0.51	1.00
	South Korea	82	0.69	0.64	0.21	0.11	0.18	0.00
	Switzerland	1732	0.86	0.89	0.68	0.67	0.86	1.00
Scandinavian civil	Denmark	647	0.87	0.92	0.69	0.67	0.80	1.00
	Finland	722	0.88	1.00	0.70	0.67	0.85	1.00
	Norway	1758	0.92	1.00	0.57	0.57	0.65	1.00
	Sweden	3391	0.88	0.93	0.71	0.70	0.84	1.00
	encucii	0071	5.00	0.90	0.71	0.70	0.04	1.00
anel B. Board busy	ness between legal	regimes						
-	_	N	Mean	Median	Mean	Median	Mean	Median
Civil		35,748	0.71	0.75	0.67	0.69	0.75	1.00
Common		155,738	0.68	0.75	0.59	0.60	0.66	1.00
Former socialist		3108	0.64	0.67	0.53	0.50	0.57	1.00
			Diff	p-Value	Diff	p-Value	Diff	p-Value
Common–civil			-0.02	< 0.0001	-0.08	< 0.0001	-0.09	< 0.000
Common-former so	cialist		0.05	< 0.0001	0.06	< 0.0001	0.10	< 0.000

(continued on next page)

### Table 1 (continued)

Panel A. Distribu	tion across legal 1 Country	regimes N	Percent of i	ndependent directors	Percent of bu	isy independent directors	Busy boa	ard indicator
			Mean	Median	Mean	Median	Mean	Median
Civil–former soci	alist		0.07	< 0.0001	0.14	< 0.0001	0.18	< 0.0001

Notes: The percent of independent directors is calculated as the number of independent directors divided by the total number of directors on the board of each firm. The percent of busy independent directors is calculated as the number of busy independent directors (i.e., those who are independent and sit on the boards of three or more firms) divided by the total number of independent directors. A busy board is defined as one that has 50% or more of independent directors who are busy. N refers to the number of firm-year observations available for each country.

### Table 2

Sample descriptive statistics.

Variable	Mean	Med.	Std Dev	"Busy board" Pearson correlation
Board characteristics				
Directorships per director	5.13	4.00	5.82	0.19***
Directorships per independent director	5.04	4.00	5.22	0.19***
Percentage of independent directors	0.69	0.70	0.18	0.14***
Percentage of busy independent directors	0.56	0.57	0.25	0.80***
Mean director age	57.14	57.30	4.51	0.12***
Busy board indicator	0.68	1.00	0.47	
Board size	11.64	10.00	5.88	0.14***
CEO directorship	3.49	2.00	5.12	0.06***
CEO tenure	6.64	4.80	6.19	-0.06***
Firm characteristics				
Market-to-book ratio	1.12	0.96	0.99	-0.002
ROA	0.03	0.07	0.32	-0.004
Total sales (in millions of U.S. dollars)	4271.5	533.57	14,276.19	0.07***
Firm age	11.73	11.00	6.97	0.06**
Common law	0.62	1.00	0.49	0.07***
Civil law	0.35	0.00	0.48	-0.04***
Former socialist regimes	0.03	0.00	0.18	-0.09***
č				

Variable	Mean	Med.	Std Dev	"Busy board" Pearson correlation
Board characteristics				
Directorships per director	3.84	3.00	3.11	0.28***
Directorships per independent director	3.53	3.00	3.24	0.27***
Percentage of independent directors	0.81	0.83	0.17	0.14***
Percentage of busy independent directors	0.52	0.50	0.27	0.81***
Mean director age	58.73	59.08	5.43	-0.10***
Busy board indicator	0.59	1.00	0.49	-
Board size	9.23	9.00	4.43	0.06***
CEO directorship	2.49	2.00	2.39	0.19***
CEO tenure	5.97	4.00	8.88	-0.08***
Firm characteristics				
Market-to-book ratio	1.78	1.29	1.37	0.04***
ROA	-0.05	0.06	0.51	-0.04***
Total sales (in millions of U.S. dollars)	2919.71	331.41	13,277.45	0.09***
Firm age	20.65	15.00	16.36	-0.03***

Notes: Variable definitions are provided in Appendix A. The busy board indicator variable equals one if a firm's board has 50% or more busy independent directors. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

and Spain, that allow firms to choose between the two fsystems (Demb & Neinbauer, 1993; Jungmann, 2006; Maassen & Van Den Bosch, 1999).

Although BoardEx does not distinguish between members of the management board and members of the supervisory board, a given director's status as executive or nonexecutive (independent) implicitly identifies the board to which he or she belongs. Thus, in

### S.P. Ferris et al.

those countries where two-tier boards are either required or allowed, we effectively select directors from the supervisory board given our restriction of our sample to independent directors.

### 4. International patterns in busy directors

### 4.1. Global distribution of board independence and busyness

In Table 1 we explore global patterns in director independence, director busyness, and board busyness by legal regime. The average percentage of independent directors across common law (civil law) countries is 68% (71%). The percentage of busy independent directors, however, is statistically significantly higher for firms within civil law countries (67%) than for those in common law countries (59%), perhaps because civil law countries have more family-owned firms and pyramid business structures (Facio & Lang, 2002; La Porta et al., 1999). Our results are very similar when we measure busyness with the binary indicator variable.<sup>2</sup> We conclude that this evidence is consistent with our first hypothesis, that busy boards with directors simultaneously holding multiple appointments are a global phenomenon.

### 4.2. Sample summary statistics

Panel A of Table 2 presents descriptive statistics for board and select corporate variables for non-U.S. firms. The variables examined in this and our subsequent empirical analyses are defined in Appendix A. On average, our sample directors hold a mean (median) of 5.13 (4.00) directorships, while independent directors hold 5.04 (4.00) directorships. The percentage of independent directors is defined as the number of independent directors divided by the total number of directors in each firm. It averages 69% across the sample. The percentage of busy independent directors is defined as the number of directors who are independent and simultaneously sit on the board of three or more firms, divided by the number of independent directors on the board. Using this definition, we classify 56% of the independent directors as busy. The busy board indicator variable equals one if 50% or more of a firm's independent directors are busy and zero otherwise. Our summary statistics show that 68% of the firms in the sample have busy boards. The mean board size for our sample firms is 11.64, while the average director age is 57.14 years. The average CEO holds 3.49 directorships and has been a CEO for 6.64 years.

Among firm characteristics, the median market-to-book ratio is 0.96, while the corresponding ROA measure is 7%. The median value of total sales is \$554 million, and the firms are, on average, about 12 years old. The majority of our firms, 62%, are head-quartered in a common law country.

Although the remainder of our empirical analysis focuses only on non-U.S. firms, in Panel B of Table 2 we provide comparative summary statistics for U.S. firms as a benchmark for comparison. As Fig. 1 shows, U.S. firms differ from non-U.S. firms with respect to director busyness. On average, directors in U.S. firms hold a mean (median) of 3.84 (3.00) directorships, compared to 5.13 (4.00) for non-U.S. firm directors. Independent directors on average hold 3.53 (3.00) directorships. Of the independent directors, 52% are classified as busy, and of the firms in the U.S. sample, 59% have busy boards. In general, director busyness is lower in U.S. firms than in non-U.S. firms. Board busyness, then, is important to a deeper understanding of global corporate governance practices.

### 5. National culture effects on director and board busyness

To test our second hypothesis, we use the well-established Hofstede (1980, 2001) survey-based measures, which comprise six different dimensions of national culture (see Appendix B).<sup>3</sup> These measures are used in a number of accounting and finance studies (e.g., Beugelsdijk & Frijns, 2010; Chui, Titman, & Wei, 2010; Ferris, Jayaraman, & Sabherwal, 2013; Hope, 2003).

The results contained in Table 3 generally support our second hypothesis, that culture influences directors' ability or willingness to accept multiple board seats. But the effect is not unidirectional; culture influences board busyness both positively and negatively.

Several dimensions of culture positively affect the likelihood of board busyness. The independent directors of firms headquartered in countries with a high acceptance of power inequalities (Hofstede's power distance) are significantly busier, as are their boards. Such acceptance makes it more likely an individual will seek out positions of power and influence such as multiple board appointments (Bochner & Hesketh, 1994). We observe similar results for individualism. A strong emphasis on individual accomplishment (Hofstede's individualism) increases the likelihood of accepting leadership positions such as board directorships (Li & Harrison, 2008).

Higher levels of uncertainty avoidance also increase director and board busyness, perhaps because firms prefer to hire wellexperienced individuals as directors. Firms incorporated in indulgent cultures tend to have busier boards, and individual directors in

 $<sup>^{2}</sup>$  We also perform an untabulated analysis regarding the percentage of directors in each firm who hold 1, 2, 3, or more directorships. We find that corporate directors in former socialist countries hold fewer seats than their common law or civil law peers, perhaps because they are relatively inexperienced at supervising for-profit businesses. While directors in common law countries frequently hold more than three appointments, directors with three or more appointments are most frequently found in civil law countries.

<sup>&</sup>lt;sup>3</sup> The seven cultural measures of Schwartz (1992) might be considered as an alternative to Hofstede's system. But researchers who have used factor analysis report a congruence between the Hofstede and Schwartz measures. Drogendijk and Slangen (2006), for instance, conclude that the "explanatory power of the Hofstede and Schwartz-based measures is comparable."

### S.P. Ferris et al.

#### Table 3

Board independence and busyness by national culture dimensions.

Hofstede dimension		Percent of busy independent directors	Busy board indicator
		Mean	Mean
Power distance	Low	0.64	0.74
	High	0.69	0.75
	Diff (High-Low)	0.05***	0.01***
Individualism	Low	0.55	0.61
	High	0.60	0.71
	Diff (High-Low)	0.05***	0.10***
Masculinity	Low	0.61	0.73
-	High	0.58	0.69
	Diff (High-Low)	$-0.03^{***}$	-0.04***
Uncertainty avoidance	Low	0.58	0.68
-	High	0.59	0.71
	Diff (High-Low)	0.01***	0.03***
Long-term orientation	Low	0.61	0.73
	High	0.58	0.69
	Diff (High-Low)	$-0.03^{***}$	-0.04***
Indulgence	Low	0.56	0.64
-	High	0.60	0.71
	Diff (High-Low)	0.04***	0.07***

Notes: In accord with Ferris et al. (2013), a firm is included in the high (low) group if the country of the firm's headquarters has a Hofstede (1980, 2001) score above (below) the world median score for that measure. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

those cultures tend to be busier. Such cultures exert fewer restrictions and regulations over individual behaviors, making multiple appointments more socially acceptable, as well as easier from a legal and regulatory perspective.

In contrast, Hofstede's measures of masculinity and long-term orientation are associated with lower levels of busyness. The masculinity dimension is interpreted as the need to be competitive or to be the very best, while femininity focuses on liking what one does (Hofstede, 1998; Oudenhoven, 2001). The negative coefficients for masculinity imply that individuals accept board appointments because they like what they do rather than from a desire to be competitive. Further, the social norms of masculine cultures focus on ego, money, and conflict resolved through force (Hofstede, 2001), while more feminine cultures emphasize relationships, networking, and conflict resolution through negotiation (An & Kim, 2007). Our results suggest that individuals better able to network, build relationships, and negotiate are in greater demand for service as board directors. Cultures with a long-term orientation emphasize permanent commitments and tradition. People in such cultures may perceive that multiple appointments are inconsistent with the traditional role of a director, which involves a deep personal commitment of both attention and time to an individual firm.

Besides the relationship between culture and board busyness, in untabulated results, we further examine the effect of cultural values on director busyness. Consistently with the earlier results shown in Table 3, we find that greater power distance and individualism are associated with more directorships held by independent directors. We conclude that although director busyness is a global phenomenon, cultural dimensions help to explain its cross-country variation.

### 6. Other factors influencing the likelihood of busy directors

Table 4 presents our results concerning the determinants of multiple board appointments. Panel A presents the Poisson regression estimates of the number of directorships held by independent directors, while Panel B reports a logistic regression to determine the likelihood that a director can be classified as busy. Our first set of regressors consists of firm characteristics. Since a director might serve on multiple boards, we average these characteristics across all firms in which a director holds a directorship. We find that the past performance of those firms (captured in lagged one-year measures of stock return and sales growth) has a positive relation with the total number of directorships an individual holds. Also, directors serving on the boards of larger firms are more likely to hold more directorships. We do discover, however, that as a firm matures, it is less likely to appoint busy directors. This result is consistent with our fourth hypothesis, that busy directors are more valuable to younger firms that need advice from seasoned and networked directors.

The next set of regressors consists of individual director characteristics. Female directors tend to hold fewer other appointments, and individuals who have experience as a CEO in another firm, or a law degree or MBA, hold more. After controlling for these firm and personal characteristics, we reintroduce the six Hofstede cultural dimensions into our regression analysis. As in our earlier results, we still find a distinct cultural influence on the number of directorships held by an individual, with power distance and individualism favoring multiple appointments, while masculinity continues to restrain them.

Our final set of regressors is a set of country variables to control for shareholder rights and other legal differences between countries. We first use country fixed effects to capture variation across countries in model 3, because many of a country's directors might originate from the same country. We then use the country's legal regime—common law, civil law, or former socialist—to control for country differences. Legal regimes are potentially important factors in determining the number of board seats an

### S.P. Ferris et al.

### Table 4

Determinants of the number of appointments held by directors.

	1	2	3	4	5	6	7
Intercept	1.5649	1.4954	1.8279	1.3176	1.3492	1.8000	1.7240
Firm characteristics							
Average directorship lagged stock return	0.0000		0.0002**	-0.0002	0.0001**	0.0001	0.0002***
iverage uncertoisinp tagged stock return	(0.8657)		(0.0121)	(0.4313)	(0.0490)	(0.1046)	(0.00011)
Average directorship sales growth	0.0656***		0.0511***	0.0799***	0.0649***	0.0654***	0.0607***
Average unectorship sales growin							
	(0.0085)		(< 0.0001)	(< 0.0001)	(< 0.0001)	(< 0.0001)	(< 0.000
Average directorship lagged ROA	-0.0003		-0.0006	0.0000	-0.0003	-0.0003	-0.0004
	(0.7597)		(0.5196)	(0.9751)	(0.7405)	(0.7211)	(0.6682)
Average directorship firm size (log of sales)	0.0215*		0.0028	0.0165	0.0098*	0.0024	0.0067
	(0.0607)		(0.6562)	(0.1208)	(0.0979)	(0.7095)	(0.2605)
Average directorship firm age	-0.0102***		-0.0060***	-0.0116***	-0.0079***	-0.0067***	-0.0080
	(0.0011)		(0.0014)	(0.0015)	(< 0.0001)	(< 0.0001)	(< 0.000
Average directorship board size	-0.0138		-0.0621	0.0210	-0.0553	-0.0565	-0.0564
0 1	(0.8541)		(0.1701)	(0.7573)	(0.1471)	(0.1898)	(0.1600)
Director characteristics		0.0010	0.0000	0.0010	0.0005	0.0010	0.0007
Director age		0.0019	-0.0028	-0.0012	-0.0025	-0.0019	-0.0027
		(0.3834)	(0.1992)	(0.6286)	(0.2726)	(0.4251)	(0.2236)
Director gender (female $= 1$ , male $= 0$ )		-0.1710***	-0.1308**	-0.1571***	-0.1475***	$-0.1413^{***}$	-0.1391
		(0.0004)	(0.0162)	(0.0015)	(0.0057)	(0.0080)	(0.0117)
CEO in another firm		0.3468**	0.1380	0.2988	0.1161	0.1329	0.1295
		(0.0143)	(0.3109)	(0.1297)	(0.3253)	(0.3286)	(0.3230)
Law degree		0.0561	0.1031*	0.0726	0.1035*	0.0947	0.0996*
		(0.4603)	(0.0628)	(0.3156)	(0.0796)	(0.1100)	(0.0921)
MBA		0.0885**	0.0844**	0.0857**	0.0848***	0.0855***	0.0805**
		(0.0144)	(0.0116)	(0.0228)	(0.0092)	(0.0095)	(0.0141)
PhD		0.0427	0.0507	0.0306	0.0472	0.0274	0.0409
PID							
		(0.3956)	(0.2098)	(0.4951)	(0.2404)	(0.5216)	(0.3231)
Cultural dimensions							
Power distance					0.3783***	0.3674***	0.3443**
					(< 0.0001)	(< 0.0001)	(< 0.000
Individualism					0.1888*	0.2130**	0.1045
					(0.0563)	(0.0323)	(0.1701)
Masculinity					-0.1787***	-0.1189**	-0.1646
Auseumity					(0.0002)	(0.0142)	(< 0.000
Ta containte anaiden ac						- 0.0669	
Uncertainty avoidance					-0.0685		-0.0274
					(0.2700)	(0.2904)	(0.5998)
Long-term orientation					0.0153	-0.0242	0.0758*
					(0.6656)	(0.5228)	(0.0950)
Indulgence versus restraint					-0.2567***	$-0.2152^{***}$	-0.1907
					(< 0.0001)	(0.0002)	(< 0.000
Country characteristics							
Common				0.3194***	0.6546***		0.8136**
				(0.0087)	(< 0.0001)		(< 0.000
Civil				0.3748***	(< 0.0001) 0.5869***		
JIVII							0.4498**
				(< 0.0001)	(< 0.0001)		(0.0006)
Anti-self-dealing index						-0.2441*	-0.5913
						(0.0640)	(0.0010)
Anti-director index						0.0764**	0.0017
						(0.0463)	(0.9577)
N	167,828	167,828	167,828	167,828	167,828	167,828	167,828
Country fixed effect	No	No	Yes	No	No	No	No
Year fixed effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes
JIGUDU Y IIACU CIICUL	100	1 C3	105	1 C 3	1 05	1 0 3	1 03

Panel B. Logistic regression estimates

Parameter	1	2	3	4	5	6	7
Intercept	0.2716	-0.3344	-0.2686	-1.0458	-1.0225	-0.3526	-0.3932
Firm characteristics							
Average directorship lagged stock return	0.0038***		0.0039***	0.0034***	0.0038***	0.0037***	0.0039***
	(< 0.0001)		(< 0.0001)	(< 0.0001)	(< 0.0001)	(< 0.0001)	(< 0.0001)
Average directorship sales growth	0.0891***		0.0730***	0.1034***	0.0933***	0.0970***	0.0864***
0	(0.0006)		(< 0.0001)	(< 0.0001)	(< 0.0001)	(< 0.0001)	(< 0.0001)

(continued on next page)

### S.P. Ferris et al.

### Table 4 (continued)

Panel B. Logistic regression estimates

Parameter	1	2	3	4	5	6	7
Average directorship lagged ROA	-0.0151 (0.8881)		-0.0079 (0.9220)	-0.0034 (0.8809)	-0.0058 (0.9219)	-0.0054 (0.9194)	-0.0069 (0.9258)
Average directorship firm size (log of sales)	0.0859*** (< 0.0001)		0.0673*** (< 0.0001)	0.0875*** (< 0.0001)	0.0805*** (< 0.0001)	0.0696*** (< 0.0001)	0.0783*** (< 0.0001)
Average directorship firm age	-0.0016 (0.7675)		- 0.0073* (0.0919)	-0.0121** (0.0144)	-0.0086* (0.0624)	-0.0069 (0.1463)	- 0.0092** (0.0233)
Average directorship board size	-0.2780 (0.1060)		- 0.2049** (0.0340)	-0.1466 (0.1622)	- 0.2078** (0.0220)	-0.1953* (0.0467)	-0.2037** (0.0293)
Director characteristics							
Director age		0.0148*** (< 0.0001)	0.0044 (0.2186)	0.0066* (0.0776)	0.0060 (0.1060)	0.0072* (0.0570)	0.0055 (0.1344)
Director gender (female = 1, male = 0)		-0.1696** (0.0487)	- 0.0887 (0.3742)	-0.1118 (0.2146)	-0.1285 (0.1842)	-0.1177 (0.2195)	-0.1168 (0.2435)
CEO in another firm		1.5724 (0.2109)	10.4295*** (< 0.0001)	9.5993*** (< 0.0001)	9.3725*** (< 0.0001)	9.3963*** (< 0.0001)	9.3816*** (< 0.0001)
Law degree		0.3115** (0.0324)	0.3666** (0.0217)	0.3553** (0.0321)	0.4183** (0.0120)	0.4004** (0.0163)	0.4095** (0.0170)
MBA		0.4542*** (< 0.0001)	0.4814*** (< 0.0001)	0.4866*** (< 0.0001)	0.4824*** (< 0.0001)	0.4785*** (< 0.0001)	0.4746*** (< 0.0001)
PhD		0.2796*** (0.0077)	0.3333*** (0.0011)	0.3153*** (0.0036)	0.3400*** (0.0011)	0.3019*** (0.0051)	0.3302*** (0.0021)
Cultural dimensions							
Power distance					0.4525*** (< 0.0001)	0.4308*** (0.0003)	0.4352*** (< 0.0001)
Individualism					0.2038 (0.1408)	0.2866* (0.0910)	0.1287 (0.3880)
Masculinity					-0.2082** (0.0245)	-0.1256 (0.2063)	-0.2408*** (0.0027)
Uncertainty avoidance					-0.1327 (0.1991)	-0.1494 (0.2130)	-0.1132 (0.3080)
Long-term orientation					-0.0922 (0.4098)	-0.1615 (0.1597)	0.0322 (0.7066)
Indulgence versus restraint					-0.2628*** (0.0016)	-0.1905** (0.0339)	-0.1855** (0.0408)
Country characteristics				0 2025444	1 0515++++		1 40 40+++
Common				0.7075*** (< 0.0001)	1.0715*** (< 0.0001)		1.4840*** (< 0.0001)
Civil				0.6557*** (< 0.0001)	0.9016*** (< 0.0001)		0.7614*** (0.0003)
Anti-self-dealing index						-0.1419 (0.5508)	-0.8166*** (0.0043)
Anti-director index						0.0710 (0.3518)	-0.0670 (0.3530)
Ν	167,828	167,828	167,828	167,828	167,828	167,828	167,828
Country fixed effect	No	No	Yes	No	No	No	No
Year fixed effect Industry fixed effect	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes

Notes: In Panel A, the dependent variable is the number of directorships held by independent directors. In Panel B, the dependent variable is a binary indicator variable that takes the value of one if the independent director holds three or more total directorships and zero otherwise. All regressions are contemporaneous except for those using stock return and ROA as proxies for past performance. Cultural dimension variables take a value of 1 if above the median for the sample, and 0 if below. All models include year and industry fixed effects. The standard errors are clustered at the country level. p-Values are provided in parentheses. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

individual holds, since they define the associated responsibilities, privileges, and liabilities (Aggarwal et al., 2009; La Porta et al., 1998). We find that both the common and civil legal regime indicator variables are significantly positive. This suggests that multiple directorships are relatively infrequent for firms headquartered in former socialist countries, perhaps because these economies have been slow to adopt modern governance and business practices. We also use the revised anti-director and anti-self-dealing indices of Djankov, La Porta, Lopez-de-Silanes, and Shleifer (2008) as alternative measures for country differences. The anti-director index aims to capture the power of directors over minority shareholders, while the anti-self-dealing index measures the ability of corporate insiders to expropriate minority shareholders. Both reflect the quality of a country's legal system. Since Djankov and colleagues state that the two indices are correlated, we repeat our estimation of models 6 and 7 to check the robustness of our previous results, now including the anti-self-dealing index, the anti-director index, and the legal regime indicator individually. In an untabulated analysis, we obtain qualitatively identical results.

Panel A. Firm value and percentage of busy independent directors	ependent directors					
	1	2	ę	4	IJ	9
Intercept	-0.1766	0.2229	-4.0741	- 1.6623	-0.0701	-0.0502
Percentage of busy independent directors	$-0.0456^{*}$	$-0.0453^{*}$	$-0.0508^{**}$	$-0.0508^{**}$	$-0.0499^{**}$	$-0.0521^{**}$
	(0.0671)	(0.0706)	(0.0446)	(0.0446)	(0.0472)	(0.0381)
CEO tenure	- 0.0044***	-0.0044***	- 0.0046***	$-0.0046^{***}$	-0.0045***	-0.0044***
	(< 0.0001)	(< 0.0001)	(< 0.0001)	(< 0.0001)	(< 0.0001)	(< 0.001)
CEO duairty	0.0006)	(0.0007)	(0.0005)	(0.0005)	(9000.0)	(0.0006)
Mean director age	0.0025	0.0021	0.0026	0.0026	0.0019	0.0021
2	(0.2073)	(0.2937)	(0.1953)	(0.1953)	(0.3300)	(0.2916)
Log of board size	$-0.0715^{***}$	$-0.0715^{***}$	$-0.0726^{***}$	$-0.0726^{***}$	$-0.0717^{***}$	$-0.0675^{***}$
	(0.003)	(0.0003)	(0.0003)	(0.0003)	(0.0003)	(0.008)
Percentage of independent directors	0.0805*	0.0857*	0.0954**	0.0954**	0.0903**	0.0918**
	(0.0702) 0.1446***	(0.0548) 0.1426***	(0.0342)	(0.0342)	(0.0439)	(0.0403)
KUA	0.1440°°°° ( < 0.0001)	0.1436	0.1390 ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° °	0.1390°°°° ( < 0.0001)	0.1418°°°	0.1431~~ (< 0.0001)
Firm size (log sales)	$-0.0158^{**}$	$-0.0137^{**}$	$-0.0114^{*}$	$-0.0114^{*}$	$-0.0141^{**}$	$-0.0125^{*}$
	(0.0195)	(0.0455)	(0.0985)	(0.0985)	(0.0390)	(0.0693)
Log firm age	0.2516***	0.2527***	0.2477***	0.2477***	0.2500***	0.2442***
	(< 0.0001)	(< 0.0001)	(< 0.0001)	(< 0.0001)	(< 0.0001)	(< 0.0001)
Growth opportunity	0.0002	0.0003	0.0004	0.0004	0.0003	0.0003
	(0.7454)	(0.7042)	(0.6106)	(0.6106)	(0.7176)	(0.6810)
Common law country dummy		1.2526 (0.0295)				
Civil law country dummy		-0.3974				
		(0.4900)				
Anti-director index			1.1025*** (0.0038)			
Anti-self-dealing index				3.8165***		
				(0.0038)		
Rule of law					- 0.0623 (0 2224)	
Control of corruption						-0.0916
z	20.612	20.612	19.905	19.905	20.372	(0.0010) 20.368
Year fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Firm fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Panel B. Firm value and busy board indicator						
	1	2	3	4	5	6
Intercept Busy board dummy	- 0.1976 - 0.0182* 0.0750)	0.2198 - 0.0156 (01.1380)	- 4.1505 - 0.0176* (0.0001)	-1.7095 -0.0176* (0.0001)	- 0.1335 - 0.0191* 00.0620)	- 0.0921 - 0.0193* (0.0601)
			(1000.0)	(10000)		(continued on next page)

 Table 5

 The effect of busy directors on market-to-book ratio.

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$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	4 - 0.0047***			
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	- 0.0047	5		9
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$			- 0.0045***	- 0.0045***
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	0	(< 0.0001)	(< 0.0001)
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	0.0549***		0.0555***	0.0555***
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	(0.006)		(0.0005)	(0.0005)
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	0.0028	0.0023	23	0.0024
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	(0.1509)		(0.2467) 0.0070***	(0.2198)
$\begin{array}{cccccccc} 0.0021 & 0.0877 \ast \ast & 0.0000 \\ 0.0821 \ast & (0.0590) & 0.0877 \ast \ast & (0.045) \\ 0.1440 \ast \ast & (0.0690) & 0.1430 \ast \ast & (0.0445) & (0.0411 \ast \ast & (0.0169) & (0.0169) & (0.0389) & (0.0389) & (0.0389) & (0.0389) & (0.0389) & (0.0389) & (0.0389) & (0.0339) & (0.0339) & (0.0336) & (0.0336) & (0.0336) & (0.0336) & (0.0336) & (0.0336) & (0.0336) & (0.0336) & (0.0336) & (0.0336) & (0.0336) & (0.04698) & (0.0336) & (0.04698) & (0.0336) & (0.04698) & (0.0336) & (0.04698) & (0.0336) & (0.04698) & (0.0336) & (0.04698) & (0.0336) & (0.04698) & (0.0336) & (0.04698) & (0.0336) & (0.04698) & (0.0336) & (0.04698) & (0.0336) & (0.04698) & (0.0336) & (0.04698) & (0.0336) & (0.04698) & (0.0336) & (0.04698) & (0.0336) & (0.04698) & (0.0336) & (0.04698) & (0.04698) & (0.0336) & (0.04698) & (0.0336) & (0.04698) & (0.0336) & (0.04698) & (0$	- 0.0679*** 0.0006)		- 0.0672***	-0.0633*** 0.0013)
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	0.0944**		0.0900**	$0.0925^{**}$
0.1440*** (< 0.0001) -0.0161** (< 0.0001) -0.0169) (0.0169) (0.0169) (0.0389) 0.2515*** (< 0.0001) 0.2525*** (< 0.001) 0.00339 (0.7502) (0.7502) (0.7502) (0.7502) (0.7502) (0.7502) (0.7502) (0.7502) (0.7502) (0.7102) (0.7102) (0.7102) (0.7102) (0.7102) (0.7102) (0.7102) (0.7102) (0.7468) (0.7768) (0.7468) (0.7568) (0.7568) (0.7568) (0.7568) (0.7568) (0.7568) (0.7568) (0.7568) (0.756	(0.0321)		(0.0394)	(0.0341)
(< 0.0001) -0.0161** (0.0169) (0.0169) (0.0169) (0.0339) 0.2515*** (< 0.0001) 0.03399 (0.7502) (0.7502) (0.7702) (0.7102) (	0.1394***		0.1421 ***	0.1431***
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	(< 0.0001)		(< 0.0001)	(< 0.0001)
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	-0.0132*		$-0.0166^{**}$	$-0.0152^{**}$
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	(0.0543)		(0.0147)	(0.0265)
0.00022 0.0003 0.71023 0.0003 1.2446 0.03053 -0.4161 (0.4698) (0.3053 -0.4161 (0.4698)	0.2482 ***		0.2513°°°° (10001)	0.2460
(0.7502) (0.7102) 1.2446 (0.0305) -0.4161 (0.4698) (0.4698) 20,612 Yes Yes Yes Yes 3	0.0003		02	0.0002
1.2446 (0.0305) - 0.4161 (0.4698) (0.46	(0.6440)	(0.70	(0.7662)	(0.7349)
20,612 20,612 (0.0305) -0.4161 (0.4698) (0.4698) (0.4698) Yes Yes Yes Yes Yes 30,612 20,612 Yes Yes 30,612 30,612 Yes 30,612 30,712 30,				
-0.4161 (0.4698) (0.4698) (0.4698) Yes Yes Yes Yes Yes Yes Yes				
20,612 20,612 Yes Yes Yes Yes 3 3				
20,612 20,612 Yes Yes Yes Yes 3				
20,612 20,612 Yes Yes Yes 1 2 3	3.8626			
20,612 20,612 Yes Yes Yes 1 2 3	(0.0034)			
20,612 20,612 Yes Yes Yes Yes 1 2 3		-0-	- 0.0404 (0.4233)	
20,612 20,612 Yes Yes Yes Yes 1 2 3			6004	-0.0838
Yes Yes Yes Yes 1 2 3	19.905	20.372	72	(0.0023) 20.368
Yes Yes 1 2 3	Yes	Yes	I	Yes
1 2 3	Yes	Yes		Yes
3				
	5 6	7	œ	6
Firm age $\leq 7$ Firm age $\leq 8$ Firm age $\leq 9$ Firm age $\leq 7$	Firm age ≤ 8	Firm age $\leq 9$ Firm age $\leq 7$	7 Firm age ≤ 8	Firm age ≤ 9
Intercept         5.3419         5.3262         5.3554         12.3064           Percentage of busy independent directors         -0.042         -0.0688         -0.0831         -0.0459			8.3152 - 0.0732	8.3334 -0.0945
(0.2596) (0.1545) 0.2551*** 0.2624***			(0.2324) 0.2708***	(0.1281) 0.2807***
	(< (1000.0 >)	(1000.0 >) $(1000.0 >)$	(1000.0 >)	( < 0.000 )

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	1	7	3	4	5	9	7	8	6
	Firm age ≤ 7	Firm age ≤ 8	Firm age ≤ 9	Firm age ≤ 7	Firm age ≤ 8	Firm age ≤ 9	Firm age ≤ 7	Firm age ≤ 8	Firm age ≤ 9
	$0.0094^{***}$	0.0093***	0.0093***	0.0101***	$0.0100^{***}$	$0.0100^{***}$	0.0101***	0.0100***	0.0100***
	(< 0.0001)	(< 0.0001)	(< 0.001)	(< 0.001)	(< 0.0001)	(< 0.0001)	(< 0.0001)	(< 0.0001)	(< 0.001)
CEO duality	-0.0994***	-0.0987***	-0.1009***	-0.0994***	-0.0988***	$-0.1010^{***}$	-0.0994***	-0.0988***	$-0.1010^{***}$
•	(0.0082)	(0.0087)	(0.0073)	(0.0080)	(0.0083)	(0.0070)	(0.0080)	(0.0083)	(0.0070)
Mean director age	$-0.0128^{***}$	$-0.0127^{***}$	$-0.0132^{***}$	$-0.0118^{**}$	$-0.0116^{**}$	$-0.0119^{***}$	$-0.0118^{**}$	$-0.0116^{**}$	$-0.0119^{***}$
	(0.0058)	(0.0060)	(0.0044)	(0.0110)	(0.0124)	(2600.0)	(0.0110)	(0.0124)	(20000)
Log of board size	0.0229	0.0255	0.0249	0.0087	0.0122	0.0120	0.0087	0.0122	0.0120
	(0.6249)	(0.5864)	(0.5944)	(0.8526)	(0.7948)	(0.7978)	(0.8526)	(0.7948)	(0.7978)
Percentage of independent directors	-0.3743	-0.3765	-0.3664	-0.3768	-0.3786	-0.3679	-0.3768	-0.3786	-0.3679
	(0.004)	(0.0003)	(0.0005)	(0.0004)	(0.0003)	(0.0005)	(0.0004)	(0.0003)	(0.0005)
ROA	0.1249	0.1235	0.1236	0.0985	0.0970	0.0971	0.0985	0.0970	0.0971
	(0.003)	(0.0003)	(0.0003)	(0.0039)	(0.0045)	(0.0044)	(0.0039)	(0.0045)	(0.0044)
Firm size (log sales)	$-0.1640^{***}$	$-0.1634^{***}$	-0.1644	$-0.1699^{***}$	$-0.1690^{***}$	$-0.1703^{***}$	$-0.1699^{***}$	$-0.1690^{***}$	$-0.1703^{***}$
	(< 0.0001)	(< 0.0001)	(< 0.0001)	(< 0.001)	(< 0.0001)	(< 0.0001)	(< 0.0001)	(< 0.0001)	(< 0.0001)
Growth opportunity	-0.0023	-0.0024	-0.0024	-0.0026	-0.0026	-0.0026	-0.0026	-0.0026	-0.0026
	(0.1719)	(0.1673)	(0.1683)	(0.1348)	(0.1312)	(0.1318)	(0.1348)	(0.1312)	(0.1318)
Common law country dummy	-2.0979	-2.0829	-2.0676						
	(0.1206)	(0.1232)	(0.1260)						
Civil law country dummy	0.6422	0.6446	0.6497						
	(0.6351)	(0.6337)	(0.6310)						
Anti-director index				-1.8061	-1.7962	-1.7878			
				(0.0433)	(0.0444)	(0.0454)			
Anti-self-dealing index							-6.2519	-6.2177	-6.1886
							(0.0433)	(0.0444)	(0.0454)
Ν	20,612	20,612	20,612	19,905	19,905	19,905	19,905	19,905	19,905
Year fixed effect	Yes								
Firm fixed effect	Yes								

independent directors on a board. In Panel B, board busyness is measured by a dummy variable that equals one if 50% or more of a firm's independent directors are busy. In Panel C, the "young" indicator variable takes the value of one if the firm is younger than a specific age. In models 1, 4, and 7, a firm is defined as young if it is younger than 7 years old; in models 2, 5, and 8, if it is younger than 8 years old; in models 3, 6, and 9, if it is younger than 9 years old. All models include year and firm fixed effects. p-Values are provided in parentheses. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

14

### S.P. Ferris et al.

In sum, the results shown in Table 4 are consistent with our third hypothesis. We conclude that a director's individual characteristics and those of the firm with which the director is affiliated influence the extent to which additional board seats are awarded.

### 7. Busy boards and firm value

In Table 5, we test the effect of busy directors on firm value as measured by the market-to-book ratio. In this analysis, we control for various firm and board characteristics as well as year and firm fixed effects. We use two proxies to measure board busyness. In Panel A, we capture the busyness of the board by the percentage of a board's busy independent directors. The coefficients of our primary variable of interest are significantly negative across all model specifications. In model 1, the coefficient is -0.0456, indicating that a one-percent increase in the number of busy independent directors on a board is associated with a reduction in the market-to-book ratio of 0.0456. This magnitude represents approximately 5% of our sample median market-to-book ratio of 0.96. In Panel B, we measure board busyness with an indicator variable that assumes a value of one if 50% or more of a board's independent directors each hold three or more directorships. We continue to find that the coefficient for board busyness is inversely related to firm value and generally statistically significant.

We control for legal or regulatory differences between countries by using five alternative measures: (1) legal regime indicator variables, (2) the revised anti-director index, (3) the anti-self-dealing index, (4) the rule of law index, and (5) the control of corruption index. Our results are robust across these five measures: firms with busy independent directors or with busy boards experience lower values. We conclude that, in the aggregate, busy boards decrease firm value. Our findings are consistent with claims by practitioners and organizations such as Institutional Shareholders Service that individuals with multiple board appointments are less effective as corporate directors, and with Falato et al.' (2014) conclusion that the busyness of independent directors is detrimental to the quality of a board's monitoring.

However, as we note in Section 2.5, Field et al. (2013) suggest that the reverse may be true for newly public firms. We therefore examine our non-U.S. sample to determine which relationship holds globally for young firms. To ensure robustness in our analysis, we use three different age cutoffs (seven, eight, and nine years) to classify a firm as either young or old.

In Panel C of Table 5 we show the results of nine models estimating firm value, with each using slightly different proxies for firm youth, legal regime, and the national regulatory environment. In models 1, 4, and 7, young firms are defined as seven years old or younger; in models 2, 5, and 8, as eight years old or younger; and in models 3, 6, and 9, as nine years old or younger. We find that the coefficient for the interaction of the percentage of a board's busy independent directors and young firm indicators is significantly positive across all models. In untabulated analyses, we estimate these models while interacting the busy board and firm youth indicator variables, with qualitatively identical results. We use rule of law and control of corruption as alternative country variables (in analyses untabulated here) and obtain comparable results. We also undertake tests (untabulated here) for firms younger than 7 years or older than 9 years old. We find that when a firm is 11 years old (our sample median firm age) or older, the positive effect of board busyness disappears. This suggests that during a firm's first decade, busy directors provide value, perhaps through their advising skills and general knowledge of industry best practices, but as it matures, the need for board advising decreases while that for board monitoring increases. In aggregate, then, our findings offer convincing support for our fourth hypothesis, that busy directors contribute to value creation in younger firms.

### 8. Busy boards and firm profitability

In Table 6 we examine the effect of busyness on return on assets. In Panels A and B, we control for various firm and board characteristics<sup>4</sup> and include year and firm fixed effects. In accord with our analysis of firm value, we find that busy boards and directors reduce corporate profitability. In Panel C, we test whether this adverse effect also holds for younger firms. We find that when we interact the percentage of a board's busy independent directors with an indicator variable capturing firm youth, the coefficient is significantly positive. This result suggests that although busy boards adversely affect firm profitability, that effect is mitigated in younger firms. We conclude that the advising and networking advantages of directors with multiple memberships are most useful for younger firms.<sup>5</sup>

### 9. Endogeneity analysis and discussion

There might be endogeneity between firm value and director appointments. Adams et al. (2010) discuss possible bidirectional causality in the relation between multiple directors and firm performance. That is, busy directors might be overextended and unable to monitor effectively, thus contributing to poor corporate financial performance. In the opposite direction, poorly performing firms might either recruit experienced directors (in an effort to improve), or find it difficult to attract such directors.

To address possible self-selection as well as potential endogeneity, we follow Masulis and Mobbs (2011) and estimate a Heckman

<sup>&</sup>lt;sup>4</sup> Our results suggest that older firms have a higher market-to-book ratio. As Table 2 shows, our non-U.S. firms have an average age of 11 years, while that of our U.S. firms is 20 years. It is likely that our sample firms are not at the point in their lifecycle where growth opportunities decline because of firm maturity.

<sup>&</sup>lt;sup>5</sup> In a robustness test we repeat this analysis while excluding those countries that either mandate or allow a two-tier board. We also repeat our analysis while excluding U.K. firms, to address the concern that they are overrepresented in our sample. We obtain qualitatively identical results.

$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	The effect of busy directors on ROA. Panel A. Firm profitability and the percentage of busy independent directors	of busy independent directors					
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$		1	2	3	4	5	9
$ \begin{array}{cccccc} \mbox{inte} & - 0.031 & - 0.031 & - 0.031 & - 0.031 & - 0.031 & - 0.031 & - 0.033 &$		Intercept	-0.4801	-0.6508	- 0.9489	-0.7610	-0.4924	-0.4424
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Percentage of busy independent directors	-0.0235*	$-0.0263^{**}$	$-0.0241^{*}$	$-0.0241^{*}$	- 0.0244*	-0.0260*
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	•	(0.0769)	(0.0495)	(0.0778)	(0.0778)	(0.0687)	(0.0524)
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$		CEO tenure	$0.0013^{**}$	$0.0012^{**}$	$0.0013^{**}$	$0.0013^{**}$	$0.0013^{**}$	0.0013**
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$		(0.0140)	(0.0159)	(0.0144)	(0.0144)	(0.0137)	(0.0103)
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccc} 0.0000 & 0.0000 & 0.0000 & 0.0000 & 0.0000 \\ 0.00000 & 0.00000 & 0.0000 & 0.00000 & 0.00000 \\ 0.00000 & 0.00000 & 0.00000 & 0.00000 & 0.00000 \\ 0.00000 & 0.00000 & 0.00000 & 0.00000 & 0.00000 \\ 0.00000 & 0.00000 & 0.00000 & 0.00000 & 0.00000 & 0.00000 \\ 0.00000 & 0.00000 & 0.00000 & 0.00000 & 0.00000 & 0.00000 \\ 0.00000 & 0.00000 & 0.00000 & 0.00000 & 0.00000 & 0.00000 \\ 0.00000 & 0.00000 & 0.00000 & 0.00000 & 0.00000 & 0.00000 \\ 0.00000 & 0.00000 & 0.00000 & 0.00000 & 0.00000 & 0.00000 \\ 0.00000 & 0.00000 & 0.00000 & 0.00000 & 0.00000 & 0.00000 \\ 0.00000 & 0.00000 & 0.00000 & 0.00000 & 0.00000 & 0.00000 & 0.00000 \\ 0.00000 & 0.00000 & 0.00000 & 0.00000 & 0.00000 & 0.00000 & 0.00000 \\ 0.00000 & 0.00000 & 0.00000 & 0.00000 & 0.00000 & 0.00000 & 0.00000 \\ 0.00000 & 0.00000 & 0.00000 & 0.00000 & 0.00000 & 0.00000 & 0.00000 & 0.00000 \\ 0.00000 & 0.000000 & 0.00000 & 0.000000 & 0.000000 & 0.00000000$	CEO duality	-0.0055	-0.0058	-0.0058	-0.0058	-0.0056	-0.0059
$ \begin{array}{ccccccc} \mbox{there} & 0.003^{\circ} & 0$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		(0.5269)	(0.5049)	(0.5148)	(0.5148)	(0.5186)	(0.4948)
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$		Mean director age	$0.0018^{*}$	0.0018*	0.0019*	$0.0019^{*}$	$0.0018^{*}$	$0.0019^{*}$
$ \begin{tabular}{ c c c c c c c c c c c c c c c c c c c$	$ \label{eq:constraints} \begin{tabular}{ c c c c c c c c c c c c c c c c c c c$		(0.0969)	(0.0979)	(0.0782)	(0.0782)	(0.0905)	(0.0793)
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	$ \begin{array}{ccccccc} & 0.6530, & 0.6530, & 0.6530, & 0.6530, & 0.6543, & 0.06373, & 0.06373, & 0.06373, & 0.06373, & 0.06373, & 0.06373, & 0.06373, & 0.06373, & 0.06373, & 0.06373, & 0.06373, & 0.06353, & 0.06454, & 0.00474, & 0.00464, & 0.00474, & 0.00474, & 0.00464, & 0.00474, & 0.00414, & 0.00474, & 0.00119, & 0.00474, & 0.00119, & 0.00112, & $	Log of board size	-0.0042	-0.0049	-0.0039	-0.0039	-0.0048	-0.0031
array of independent directors $-0.0569^{**} - 0.0563^{**} - 0.0563^{**} - 0.0563^{**} - 0.0563^{**} - 0.0563^{**} - 0.0563^{**} - 0.0563^{**} - 0.0563^{**} - 0.0563^{**} - 0.0563^{**} - 0.0037^{**} - 0.0563^{**} - 0.00317^{**} - 0.0563^{**} - 0.00317^{**} - 0.0563^{**} - 0.00317^{**} - 0.0563^{**} - 0.00317^{**} - 0.0563^{**} - 0.00317^{**} - 0.0563^{**} - 0.056$	ange of independent directors $-0.053^{++}$ $-0.054^{++}$ $-0.054^{++}$ $-0.054^{++}$ $-0.054^{++}$ $-0.054^{++}$ $-0.054^{++}$ $-0.054^{++}$ $-0.056^{++}$ $-0.056^{++}$ $-0.056^{++}$ $0.004^{+++}$ $0.004^{+++}$ $0.0066^{+++}$ $0.0066^{+++}$ $0.0066^{+++}$ $0.0066^{+++}$ $0.0066^{+++}$ $0.0066^{+++}$ $0.0066^{+++}$ $0.0066^{+++}$ $0.0066^{+++}$ $0.0066^{+++}$ $0.0066^{+++}$ $0.0066^{+++}$ $0.0066^{+++}$ $0.0066^{+++}$ $0.0066^{+++}$ $0.0066^{+++}$ $0.0066^{+++}$ $0.0066^{+++}$ $0.0666^{+++}$ $0.0666^{+++}$ $0.0666^{+++}$ $0.0666^{+++}$ $0.0666^{++++}$ $0.0666^{++++}$ $0.0666^{+++++}$ $0.0666^{++++++}$ $0.0666^{+++++++}$ $0.0666^{++++++++++}$ $0.0666^{++++++++++++++++++++++++++++++++++$		(0.6983)	(0.6550)	(0.7243)	(0.7243)	(0.6616)	(0.7751)
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	$ \begin{array}{ccccccc} & 0.0130, & 0.0175, & 0.0180, & 0.0275, & 0.0037, & 0.0047^{+++}, & 0.0047^{+++}, & 0.0047^{+++}, & 0.0047^{+++}, & 0.0047^{+++}, & 0.0047^{+++}, & 0.0046^{+++}, & 0.0047^{+++}, & 0.0046^{+++}, & 0.0047^{+++}, & 0.0046^{+++}, & 0.0041, & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001), & (< 0.0001, & (< 0.0001), & (< 0.0001, & (< 0.0001), & (< 0.0001, & (< 0.0001, & (< 0.0001, & (< 0.0001, & (< 0.0001, & (< 0.0001, & (< 0.0001, & (< 0.0001, & (< 0.0001, & (< 0.0001, & $	Percentage of independent directors	$-0.0569^{**}$	$-0.0570^{**}$	$-0.0543^{**}$	$-0.0543^{**}$	$-0.0558^{**}$	$-0.0548^{**}$
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		(0.0172)	(0.0180)	(0.0275)	(0.0275)	(0.0206)	(0.0231)
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	ROS	0.0046***	0.0046***	0.0047***	0.0047***	0.0046***	0.0046***
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$		(< 0.0001)	(< 0.0001)	(< 0.0001)	(< 0.0001)	(< 0.0001)	(< 0.0001)
$ \begin{array}{ccccccc} & & & & & & & & & & & & & & & &$	$ \begin{array}{ccccccc} & & & & & & & & & & & & & & & &$	Firm size (log sales)	$0.0510^{***}$	$0.0516^{***}$	$0.0514^{***}$	$0.0514^{***}$	$0.0513^{***}$	$0.0520^{***}$
$ \begin{array}{cccccc} & -0.050^{+++} & -0.025^{+++} & -0.025^{+++} & -0.025^{+++} & -0.025^{+++} & -0.025^{+++} & -0.025^{+++} & -0.025^{+++} & -0.025^{+++} & -0.025^{+++} & -0.025^{+++} & -0.025^{+++} & -0.025^{+++} & -0.025^{+++} & -0.025^{+++} & -0.025^{+++} & -0.020^{+++} & -0.025^{+++} & -0.020^{+++} & -0.056^{+++} & -0.056^{+++} & -0.056^{+++} & -0.056^{+++} & -0.056^{+++} & -0.056^{+++} & -0.056^{+++} & -0.056^{+++} & -0.056^{+++} & -0.056^{+++} & -0.056^{+++} & -0.056^{+++} & -0.056^{+++} & -0.056^{++++} & -0.056^{++++} & -0.056^{++++} & -0.056^{+++++} & -0.056^{+++++++} & -0.056^{+++++++++} & -0.052^{++++++++++++++++++++++++++++++++++++$	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$		(< 0.0001)	(< 0.0001)	(< 0.0001)	(< 0.0001)	(< 0.0001)	(< 0.0001)
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Log firm age	-0.0568***	-0.0567***	-0.0569***	-0.0569***	-0.0561***	-0.0589***
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$		(< 0.0001)	(< 0.0001)	(< 0.0001)	(< 0.001)	(< 0.0001)	(< 0.0001)
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	стомы оррогицину	(1000 0 >)	( 1000 0 > )	( 1000 )	0.0001)	(1000 0 >)	(1000 U > )
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	$ \begin{array}{ccccccc} & & & & & & & & & & & & & & & &$	Common law country dummy		0.1419				
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{ccccccc} & 0.035 & & 0.035 \\ & 0.0647) & 0.089 & & 0.059 \\ & 0.05283 & 0.059 & & 0.019 \\ & 0.06283 & & 0.0593 & & 0.019 \\ & 0.05283 & & 0.0593 & & 0.019 \\ & 0.05283 & & 0.0593 & & 0.019 \\ & 0.0643 & & & & & & & & & & & & & & & & & & &$	•		(0.5914)				
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccc} 0.059 & 0.059 & 0.059 & 0.0273 & 0.0293 & 0.019 & 0.019 & 0.019 & 0.019 & 0.019 & 0.019 & 0.019 & 0.019 & 0.019 & 0.019 & 0.019 & 0.019 & 0.019 & 0.019 & 0.019 & 0.0583 & 0.019 & 0.0583 & 0.019 & 0.0583 & 0.019 & 0.0583 & 0.019 & 0.0583 & 0.019 & 0.0583 & 0.019 & 0.019 & 0.0102 & \ & & & & & & & & & & & & & & & & & $	Civil law country dummy		0.0135				
$ \begin{array}{cccccc} 0.0533 & 0.2973 \\ 0.6233 & 0.2973 \\ 0.613 & 0.612 & 20,612 & 19,905 & 0.6433 \\ 0.66433 & 0.60433 & 0.0119 \\ 0.66433 & 0.612 & 19,905 & 20,372 & 788 \\ Yes & Yes & Yes & Yes & Yes & Yes \\ Yes & Yes &$	$\begin{array}{ccccc} & & & & & & & & & & & & & & & & &$			(0.9647)				
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	$ \begin{array}{cccccc} & & & & & & & & & & & & & & & & $	Anti-director index			9680.0 (06283)			
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c cccc} & & & & & & & & & & & & & & & & & $	Anti-self-dealing index				0.2973		
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$					(0.6283)		
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Rule of law					0.0119	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	20,612     20,612     19,905     20,372       Yes     Yes     Yes     Yes       Yes     Yes	Control of corruption					(0+00.0)	- 0.0469
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$							(0.0019)
Yes         Yes <td>Yes         Yes         Yes         Yes         Yes         Yes           ability and busy board indicator         1         2         3         4         5           1         2         3         4         5         -0.5637           0.0325)         0.0271)         0.0478)         0.0112**         -0.0112**         -0.0122**</td> <td>Ν</td> <td>20,612</td> <td>20,612</td> <td>19,905</td> <td>19,905</td> <td>20,372</td> <td>20,368</td>	Yes         Yes         Yes         Yes         Yes         Yes           ability and busy board indicator         1         2         3         4         5           1         2         3         4         5         -0.5637           0.0325)         0.0271)         0.0478)         0.0112**         -0.0112**         -0.0122**	Ν	20,612	20,612	19,905	19,905	20,372	20,368
Yes         Yes <td>Yes         Yes         Yes         Yes           tability and busy board indicator         1         2         3         4         5           1         2         3         4         5         -0.5637           -0.5469         -0.7137         -0.9726         -0.8090         -0.5637           -0.0112**         -0.0112**         -0.0112**         -0.0122**           (0.0325)         (0.0271)         (0.0478)         (0.0291)</td> <td>Year fixed effect</td> <td>Yes</td> <td>Yes</td> <td>Yes</td> <td>Yes</td> <td>Yes</td> <td>Yes</td>	Yes         Yes         Yes         Yes           tability and busy board indicator         1         2         3         4         5           1         2         3         4         5         -0.5637           -0.5469         -0.7137         -0.9726         -0.8090         -0.5637           -0.0112**         -0.0112**         -0.0112**         -0.0122**           (0.0325)         (0.0271)         (0.0478)         (0.0291)	Year fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
ability and busy board indicator 1 2 2 3 4 5 0 -0.5469 -0.7137 -0.9726 -0.8090 -0.5637 -0.0112** -0.0112** -0.0112** -0.0122** 0.02213 (0.0271) (0.0478) (0.0478) (0.0478) (0.0291)	ability and busy board indicator 1 2 3 4 5 -0.5469 -0.7137 -0.9726 -0.8090 -0.5637 -0.0112** -0.0112** -0.0112** -0.0122** (0.0325) (0.0271) (0.0478) (0.0478) (0.0291)	Firm fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
tability and busy board indicator $1$ $2$ $2$ $3$ $4$ $5$ $6$ $-0.5637$ $-0.5469$ $-0.7137$ $-0.9726$ $-0.8090$ $-0.5637$ $-0.0112^{**}$ $-0.0112^{**}$ $-0.0112^{**}$ $-0.0112^{**}$ $-0.0122^{**}$ $-0.0122^{**}$ $-0.0112^{**}$ $-0.0112^{**}$ $-0.012^{**}$ $-0.012^{**}$ $-0.0$	tability and busy board indicator $1$ $2$ $3$ $4$ $5$ $-0.5469$ $-0.7137$ $-0.9726$ $-0.8090$ $-0.5637$ $-0.0112^{**}$ $-0.0112^{**}$ $-0.0112^{**}$ $-0.012^{**}$ $-0.012^{**}$ $-0.012^{**}$ $-0.012^{**}$ $-0.022^{**}$ $(0.0291)$							
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Panel B. Firm profitability and busy board inc	licator					
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccc} -0.5469 & -0.7137 & -0.9726 & -0.8090 & -0.5637 \\ -0.0118^{**} & -0.0123^{**} & -0.0112^{**} & -0.0112^{**} & -0.0122^{**} \\ (0.0325) & (0.0271) & (0.0478) & (0.0478) & (0.0291) \end{array}$		1	2	3	4	5	9
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Internet	-0 E460	70170	9620 0-		0 6697	-0 5100
(0.0271) (0.0478) (0.0478) (0.0291)	(0.0271) (0.0478) (0.0478) (0.0291)	Busy board dummy	-0.0118**	-0.0123**	-0.0112**	$-0.0112^{**}$	$-0.0122^{**}$	$-0.0123^{**}$
	(continued on next page)		(0.0325)	(0.0271)	(0.0478)	(0.0478)	(0.0291)	(0.0268)

ARTICLE IN PRESS

1	1	2		3	4		5		9
CEO tenure (	0.0013**	0.0013**		0.0013**	0.0	0.0013**	0.0013**	*	0.0013**
	(0.0139)	(0.0157)		(0.0143)	(0)	(0.0143)	(0.0138)	(	(0.0108)
CEO duality	-0.0056	-0.0060		-0.0059	) –	-0.0059	-0.0058	8	-0.0061
	(0.5183)	(0.4938)		(0.5054)	(0.	(0.5054)	(0.5104)	<u> </u>	(0.4907)
Mean director age	0.0020*	0.0020*		0.0022**	0.0	0.0022**	0.0021*		0.0021**
	0.0594)	(0.0595)		(0.0466) 0.0042	0,0	(0.0466) 0.0043	(0.0544)	~ F	(0.0483) 0.0026
	- 0.0043 (0 6729)	- 0.0043 (0 6498)		- 0.0042) (0 7044)		- 0.0042) (0 7044)	- 0.0031 (0 6398)		- 0.0030 (0 7364)
Percentage of independent directors	-0.0529**	-0.0527**		-0.0504**		-0.0504**	-0.0518**	8**	-0.0507**
	(0.0256)	(0.0278)		(0.0393)	(0)	(0.0393)	(0.0305)	-	(0.0342)
ROS (	0.0047***	0.0046***		0.0047***	0.0	0.0047***	0.0047***	**	0.0046***
	(< 0.0001)	(< 0.0001)		(< 0.0001)	<u> </u>	(< 0.0001)	(< 0.0001)	01)	(< 0.0001)
Firm size (log sales)	0.0538***	0.0543***		$0.0543^{***}$	0.0	$0.0543^{***}$	0.0541***	**	0.0547***
1 or firm or	(< 0.0001)	(< 0.0001)	*	(< 0.0001)	<u>v</u>	< 0.0001	(< 0.0001)	01) 8***	(< 0.0001)
	-0.0466	(< 0.0001)		(< 0.0001)	í Ľ	<pre>- 0.0001)</pre>	(< 0.001)	01)	(1000.0 - 1)
Growth opportunity	0.0026***	0.0026***		0.0026***	0.0	0.0026***	0.0026***	**	0.0026***
	(< 0.0001)	(< 0.0001)		(< 0.001)	<u> </u>	(< 0.0001)	(< 0.0001)	01)	(< 0.0001)
Common law country dummy		0.1271							
Civil law country dummy		(0.6342) 0.0138							
•		(0.9642)							
Anti-director index				0.0748					
Anti-self-dealing index				(ca/a.n)	6 U	0.2590			
0					.0)	(0.6765)			
Rule of law							0.0164		
Control of corruption							76/0.0)	(	-0.0382
									(0.0118)
	20,612	20,612		19,905	19,	19,905	20,372		20,368
	Yes	Yes		Yes	Yes	S	Yes		Yes
Firm fixed effect	Yes	Yes		Yes	Yes	S	Yes		Yes
Panel C. Young firms and profitability									
	1	2	3	4	5	6	7	8	6
	Firm age $\leq 7$	Firm age ≤ 8	Firm age ≤ 9	Firm age ≤ 7	Firm age ≤ 8	Firm age ≤ 9	Firm age ≤ 7	Firm age ≤ 8	Firm age ≤ 9
Intercept Percentage of busy independent directors	-0.8491 -0.0175*	-0.8482 $-0.0178^{*}$	-0.8472 $-0.0188^{**}$	-1.0983 $-0.0169^{*}$	-1.0939 $-0.0169^{*}$	-1.0928 $-0.0176^{*}$	-0.9023 -0.0169*	-0.8990 $-0.0169^{*}$	-0.8976 $-0.0176^{*}$
Percentage of busy independent directors * Young dummy		(0.0569) $0.0111^*$	(0.0467) $0.0118^{*}$	(0.0709) 0.0136**	(0.0732) $0.0113^{*}$	(0.0658) $0.0111^*$	(0.0709) $0.0136^{**}$	(0.0732) $0.0113^{*}$	(0.0658) $0.0111^*$
	(0.0595)	(0.0967)	(0.0761)	(0.0442)	(0.0949)	(0.0988)	(0.0442)	(0.0949)	(0.0988)
CEO directorship									

Table 6 (continued)

# ARTICLE IN PRESS

			2	-	,				
	Firm age ≤ 7	Firm age ≤ 8	Firm age ≤ 9	Firm age ≤ 7	Firm age ≤ 8	Firm age ≤ 9	Firm age ≤ 7	Firm age ≤ 8	Firm age ≤ 9
	0.0006*	0.0006*	0.0006*	0.0006	0.0005	0.0005	0.0006	0.0005	0.0005
	(0.0796)	(0.0821)	(0.0822)	(0.1006)	(0.1042)	(0.1046)	(0.1006)	(0.1042)	(0.1046)
CEO tenure	-0.0072	-0.0072	-0.0073	-0.0071	-0.0071	-0.0072	-0.0071	-0.0071	-0.0072
	(0.2057)	(0.2065)	(0.1996)	(0.2148)	(0.2144)	(0.2075)	(0.2148)	(0.2144)	(0.2075)
Mean director age	0.0014*	$0.0014^{*}$	$0.0013^{*}$	$0.0014^{*}$	$0.0014^{*}$	$0.0014^{*}$	$0.0014^{*}$	$0.0014^{*}$	$0.0014^{*}$
	(0.0524)	(0.0551)	(0.0574)	(0.0487)	(0.0521)	(0.0551)	(0.0487)	(0.0521)	(0.0551)
Log of board size	$-0.0322^{***}$	$-0.0323^{***}$	$-0.0323^{***}$	$-0.0296^{***}$	-0.0297	$-0.0298^{***}$	$-0.0296^{***}$	$-0.0297^{***}$	$-0.0298^{***}$
	(< 0.0001)	(< 0.0001)	(< 0.0001)	(< 0.0001)	(< 0.0001)	(< 0.0001)	(< 0.0001)	(< 0.0001)	(< 0.0001)
Percentage of independent directors	-0.0463***	$-0.0465^{***}$	$-0.0461^{***}$	$-0.0442^{***}$	-0.0444	$-0.0440^{***}$	$-0.0442^{***}$	$-0.0444^{***}$	-0.0440
	(0.0039)	(0.0038)	(0.0041)	(0.0067)	(0.0065)	(0.0070)	(0.0067)	(0.0065)	(0.0070)
ROS	$0.0011^{***}$	$0.0011^{***}$	$0.0011^{***}$	$0.0011^{***}$	$0.0011^{***}$	$0.0011^{***}$	$0.0011^{***}$	$0.0011^{***}$	$0.0011^{***}$
	(< 0.0001)	(< 0.0001)	(< 0.0001)	(< 0.001)	(< 0.0001)	(< 0.0001)	(< 0.0001)	(< 0.0001)	(< 0.0001)
Firm size (log sales)	0.0609***	0.0609***	0.0608***	$0.0602^{***}$	$0.0602^{***}$	0.0602***	0.0602***	$0.0602^{***}$	$0.0602^{***}$
	(< 0.0001)	(< 0.0001)	(< 0.0001)	(< 0.001)	(< 0.0001)	(< 0.0001)	(< 0.0001)	(< 0.0001)	(< 0.0001)
Growth opportunity	$0.0011^{***}$	$0.0011^{***}$	$0.0011^{***}$	$0.0010^{***}$	$0.0010^{***}$	$0.0010^{***}$	$0.0010^{***}$	$0.0010^{***}$	$0.0010^{***}$
	(< 0.0001)	(< 0.0001)	(< 0.0001)	(< 0.001)	(< 0.0001)	(< 0.0001)	(< 0.0001)	(< 0.0001)	(< 0.0001)
Common law country dummy	0.1985	0.1990	0.1996						
	(0.3100)	(0.3089)	(0.3073)						
Civil law country dummy	0.0687	0.0697	0.0698						
	(0.7258)	(0.7220)	(0.7217)						
Anti-director index				0.0896	0.0891 (0.4949)	0.0893 (0.4940)			
Anti-self-dealing index							0.3102	0.3084	0.3090
							(0.4923)	(0.4949)	(0.4940)
	20,612	20,612	20,612	19,905	19,905	19,905	19,905	19,905	19,905
Year fixed effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm fixed effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table 6 (continued)

## ARTICLE IN PRESS

### S.P. Ferris et al.

#### Table 7

Heckman two-step analysis of the effect of board busyness on firm value.

Heckman stage 1		Heckman stage 2	
Intercept	-1.2303	Intercept	1.5784
Lagged stock return	0.0066	% of busy independent directors	-0.0537*
	(0.6256)		(0.0566)
Sales growth	0.0038*	CEO tenure	-0.0046***
	(0.0598)		(< 0.0001)
Lagged ROA	-0.0254	CEO duality	0.0585***
	(0.6330)		(0.0008)
Firm size (log sales)	0.0803***	Mean director age	0.0007
	(< 0.0001)		(0.7553)
Firm age	-0.0017	Log of board size	-0.0700***
	(0.5662)		(0.0051)
Log of board size	0.0687*	Percent outside directors	0.0812
	(0.0959)		(0.1017)
Common law country dummy	0.7364***	ROA	-0.1819***
	(< 0.0001)		(< 0.0001)
Civil law country dummy	0.4278***	Firm size (log sales)	-0.0358***
	(< 0.0001)		(0.0051)
		Log firm age	0.2271***
			(< 0.0001)
		Growth opportunity (depreciation/sales)	-0.0002
			(0.7813)
		Common law country dummy	1.2359**
			(0.0210)
		Civil law country dummy	-1.1978**
		5	(0.0248)
		Lambda	-0.0051
			(0.4794)
Ν	20,612	Ν	11,427
Year fixed effect	Yes	Year fixed effect	Yes
Industry fixed effect	Yes	Firm fixed effect	Yes

Notes: Appendix A lists the variables and their definitions. All variables used in the regressions are measured contemporaneously except the stock return and ROA used in the first stage. Lambda represents the inverse Mill's ratio of the first stage probit regression that estimates the likelihood of a firm having a busy board. The dependent variable in the first stage is an indicator variable that equals one if a firm has a busy board and zero otherwise. In stage 1, we use the firm characteristics specified in model 1 of Table 6. Standard errors are clustered at the firm level in Stage 1. The dependent variable in the second stage is the market-to-book ratio. All models include year and firm fixed effects. p-Values are provided in parentheses. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

(1979) two-step model. In the first stage, we use a probit model and analyze the determinants of busy boards. In this first model, the dependent variable equals one if a firm has a busy board and zero otherwise. In the second stage, the effect of board busyness on firm value as measured by the market-to-book ratio is estimated only for firms with busy boards. This second model includes the inverse Mills ratio from the first stage probit regression as an additional regressor.

Table 7 presents our estimation results. The results from the first stage show that firms which are larger, enjoy greater sales growth, or have larger boards are more likely to have a busy board. This suggests that these firms have a greater need to appoint seasoned directors. We then estimate the effect of board busyness on firm value in the second stage. We observe that these results are consistent with our original findings reported in Table 5. Specifically, we continue to find that busy directors exert a negative effect on firm value. We also show that the inverse Mills ratio is statistically insignificant, confirming that sample selection bias does not affect our results.

Further, as we show in Table 4, a director's affiliation with firms having strong financial performance increases the likelihood that he or she will have additional board seats. Similar to the arguments made by Fich and Shivdasani (2006), we suggest that our finding of an inverse relation between multiple directorships and firm performance is unlikely to suffer from reverse causality.

### 10. Robustness in model selection

We conduct several robustness tests to ensure that our results are not driven by an opportunistic selection of models. First, we modify our model specification by regressing the changes in firm performance on changes in board busyness. This method helps address the potential for reverse causality. As Panel A of Table 8 shows, the negative relation between board busyness and firm performance persists. This indicates that when board busyness increases, firm value or profitability decreases.

We then conduct another robustness test using lead-lag specifications. In this specification, we include board busyness two years before and two years after the year in which firm performance is measured. If board busyness has a negative effect on firm performance, this effect should load only on the lagged busyness terms. As Panel B of Table 8 shows, we find that board busyness in the one or two years before performance measurement has a significantly negative effect. As we expected, board busyness in the years following performance measurement affects neither market-to-book ratio nor ROA. These results indicate that a firm's poor

### Table 8 Robustness analysis.

Panel A. Changes on changes

Dependent variable: change in market-to-book ra	tio	Dependent variable: change in ROA	
Intercept	-0.4193	Intercept	0.0483
Change in % of busy outside directors	-0.0509*	Change in % of busy outside directors	-0.0530*
с ,	(0.0736)		(0.0282)
CEO tenure	0.0009	CEO tenure	-0.0001
	(0.4788)		(0.8989)
CEO duality	-0.0191	CEO duality	-0.0004
	(0.3603)		(0.9835)
Mean director age	0.0076***	Mean director age	0.0008
-	(0.0039)	-	(0.7182)
Log of board size	-0.0192	Log of board size	-0.0197
	(0.4681)		(0.4120)
Percent outside directors	0.0077	Percent outside directors	-0.0266
	(0.8940)		(0.6027)
ROA	-0.2380***	ROS	-0.0002
	(< 0.0001)		(0.7265)
Firm size (log sales)	-0.0043	Firm size (log sales)	0.0054
	(0.6320)		(0.4963)
Log firm age	0.0799***	Log firm age	-0.0219
	(0.0048)		(0.4231)
Growth opportunity (depreciation/sales)	0.0011	Growth opportunity (depreciation/sales)	0.0000
	(0.2294)		(0.9815)
Common law country dummy	-0.1268	Common law country dummy	-0.0608
	(0.8335)		(0.9141)
Civil law country dummy	1.1710*	Civil law country dummy	-0.0464
	(0.0531)		(0.9343)
Ν	20,612	Ν	20,612
Year fixed effect	Yes	Year fixed effect	Yes
Firm fixed effect	Yes	Firm fixed effect	Yes

Panel B. Lead-lag specification

Dependent variable: market-to-book ratio		Dependent variable: ROA	
Intercept	1.6987	Intercept	-0.2723
Percent of busy independent directors $_{t-2}$	-0.0542	Percent of busy independent directors $_{t-2}$	-0.0319*
	(0.2443)		(0.0654)
Percent of busy independent directors $_{t-1}$	-0.1164**	Percent of busy independent directors $_{t-1}$	0.0208
	(0.0498)		(0.34471)
Percent of busy independent directors <sub>t</sub>	-0.0914	Percent of busy independent directors <sub>t</sub>	-0.0523**
	(0.1231)		(0.0178)
Percent of busy independent directors $_{t+1}$	0.0074	Percent of busy independent directors $_{t+1}$	-0.0032
	(0.8969)		(0.8810)
Percent of busy independent directors $_{t+2}$	-0.0226	Percent of busy independent directors $_{t+2}$	0.0156
	(0.6699)		(0.4298)
CEO tenure <sub>t-1</sub>	0.1529	CEO tenure <sub>t <math>-1</math></sub>	-0.0327
	(0.1176)		(0.3714)
CEO duality <sub>t - 1</sub>	-0.0596*	CEO duality $_{t-1}$	-0.0086
	(0.0672)		(0.4801)
Mean director age <sub>t-1</sub>	-0.0065	Mean director $age_{t-1}$	0.0036**
0.1.1	(0.1488)	0.1.1	(0.0336)
log of board size $_{t-1}$	-0.1943***	log of board size $_{r-1}$	-0.0226
0	(< 0.0001)	0 11	(0.1658)
Percent outside directors $_{t-1}$	-0.0119	Percent outside directors $_{t-1}$	0.0226
	(0.8990)		(0.5152)
$ROA_{t-1}$	0.0225	$ROS_{t-1}$	0.0003
	(0.3090)		(0.1892)
Firm size (log sales) $_{t-1}$	-0.0070	Firm size (log sales) $_{t-1}$	0.0372***
	(0.6418)		(< 0.0001)
Log firm $age_{t-1}$	0.0831**	Log firm $age_{t-1}$	-0.0306**
	(0.0356)	0.011	(0.0350)
Growth opportunity (depreciation/sales) $_{t-1}$	0.0004	Growth opportunity (depreciation/sales) $_{t-1}$	0.0021*
11 ···································	(0.8641)		(0.0581)
Common law country dummy		Common law country dummy	······

(continued on next page)

#### S.P. Ferris et al.

### Table 8 (continued)

Panel B. Lead-lag specification

Dependent variable: market-to-book ratio		Dependent variable: ROA	
Intercept	1.6987	Intercept	- 0.2723
	-0.7527		- 0.0103
	(0.3941)		(0.9751)
Civil law country dummy	-0.7585	Civil law country dummy	0.0539
	(0.4967)		(0.8972)
N	12,449	Ν	12,449
Year fixed effect	Yes	Year fixed effect	Yes
Firm fixed effect	Yes	Firm fixed effect	Yes

Notes: This table presents the effect of board busyness on firm value using alternative model specifications. A list of variables and their definitions is provided in Appendix A. All variables used in the Panel A regressions are measured contemporaneously, while lagged variables used in Panel B are so indicated with a subscript. Panel A presents the results using a difference-in-difference approach. The dependent variable is the change in firm performance, while the primary variable of interest is the change in board busyness. Panel B presents the results using a lead-lag specification of board busyness. Board busyness is measured by the percentage of busy independent directors in a board. All models include year and firm fixed effects. p-Values are provided in parentheses. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

performance is the outcome of board busyness, not vice versa.

Because of our relatively long sample period and the stability of cultural and country characteristics, we follow Bertrand, Duflo, and Mullainathan (2004) and split our sample period into two subperiods: 1999–2005 and 2006–2012. As Bertrand and colleagues note, shortening the time span of the sample attenuates any concerns that the results are due to downward biased standard errors and insufficient variation in the variables of interest. Our findings are untabulated for brevity, but are qualitatively similar to those originally reported. We conclude that there are no intertemporal shifts in the relations we observe regarding board or director busyness.

### 11. Summary and discussion

There is conflicting evidence in the academic literature about the effect of multiple directorships on firm value and performance, but most of the evidence pertains to U.S. corporate boards. We find that busy boards are a global phenomenon. Nearly 70% of the firms in our sample have busy boards, and the incidence is higher in civil law countries than in common law countries.

Culture matters for explaining the cross-country variation in busy directors and boards. High power distance and individualism are associated with greater busyness, while masculinity is associated with less busyness.

Firms with busy boards exhibit lower market-to-book ratios and weaker profitability. A one-percent increase in busy independent directors in a board reduces the market-to-book ratio by 0.045 and return on assets by about 2%. For individual directors, the accumulation of directorships is positively related to firm performance, firm size, director education, and CEO status, and negatively related to firm age.

Finally, when we stratify our sample firms by age, we find that the value of busy directors is greater for younger firms. This result is similar to that reported by Field et al. (2013) for U.S. IPOs. We conclude that as firms mature, the demand for advising decreases while the need for monitoring increases.

We believe that the research presented in this study can be meaningfully extended and generate further insights into the value effects of director busyness. For instance, one could study the value implications of busy boards as a firm moves through its life cycle or as its equity ownership changes. Another line of research could focus on the market, compensation, and demographics of networked directors who sit on multiple boards.

Further, one could examine busy directors who are not independent—for instance, busy employee or union directors, or individuals who sit on the boards of various subsidiaries within a single corporate entity. These analyses could extend our understanding of the effect of busyness on corporate governance.

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### Appendix A. List of variables and their definitions

### Variable

Definition

Anti-self-dealing index

### S.P. Ferris et al.

#### Global Finance Journal xxx (xxxx) xxx-xxx

	Average of the ex-ante and ex-post private control of self-dealing. Ex-ante is the average of approval by disinterested shareholders and ex-ante disclosure; ex-post is the average of disclosure in periodic filings and the ease of proving wrongdoing. Values range between zero and one. Source: Djankov et al. (2008)
Average directorship board size	The average board size of all firms for which an individual serves as director.
Average directorship firm age	The average age of all firms for which an individual serves as director.
Average directorship firm size (log of sales)	The average size of all firms for which an individual serves as director.
Average directorship lagged ROA	The average lagged ROA of all firms for which an individual serves as director.
Average directorship lagged stock return	The average lagged return of all firms for which an individual serves as director.
Average directorship sales growth	The average sales growth of all firms for which an individual serves as director.
Busy board	An indicator variable that equals one if 50% or more of a firm's independent directors are busy.
Busy director	A director who sits on the boards of three or more firms.
CEO in another firm	An indicator variable that equals one if a director is a CEO in another firm.
CEO tenure	CEO's tenure in years as CEO.
Common/civil/former socialist	Indicator variables that equal one if a firm operates under English common law, the Napoleonic
	Code, or the legal system of a former socialist country, respectively.
Control of corruption	A measure of perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption as well as "capture" of the state by elites and private interests. A country's aggregate score is reported in units of a standard normal distribution, with values ranging from approximately $-2.5$ to 2.5. Source: the World Bank
Firm age	A firm's age in years since its listing on a public exchange.
Firm size	Log of total sales in U.S. dollars for a specific firm.
Growth opportunity	A firm's depreciation divided by its total sales.
Law degree/MBA/PhD	Indicator variables that equal one if a director holds a law/MBA/PhD degree.
Log of board size	Log of total number of directors in each firm.
Market-to-book ratio	The market value of a firm's equity plus the difference between the book value of its assets and the book value of its equity at the end of the year, divided by the book value of the firm's assets at the end of the year.
Mean director age	The average age of a firm's directors.
Percent of busy independent directors	The number of busy independent directors divided by the total number of independent directors.
Percent of independent directors	The number of independent directors divided by the total number of directors in each firm
Revised anti-director index	An aggregate index of shareholder rights. The index is formed by summing (1) vote by mail, (2) shares not deposited, (3) cumulative voting, (4) oppressed minority, (5) preemptive rights, and (6) capital to call a meeting. Source: Djankov et al. (2008)
ROS/ROA	A firm's EBIT divided by its total sales (assets).
Rule of law	Rule of law captures perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence. The aggregate country score is reported in units of a standard normal distribution, ranging from approximately $-2.5$ to 2.5. Source: the World Bank

### Appendix B. Hofstede dimensions of culture

*Power distance* focuses on the amount of equality or inequality between people in a country. A high power distance ranking indicates that inequalities of power and wealth have been allowed to grow within the society. Such a society is likely to follow a caste system that does not allow significant upward mobility. A low power distance ranking indicates that the society deemphasizes differences in power and wealth and emphasizes equality and opportunity for everyone. We expect countries exhibiting greater power distance to more frequently have busy boards.

*Individualism* measures the degree to which society reinforces individual or collective achievement and interpersonal relationships. A high individualism ranking indicates that individuality and individual rights are paramount within the society. Individuals in such a society may tend to form a larger number of looser relationships. A low individualism ranking indicates that the society is relatively collectivist, with close ties between individuals. Such a culture reinforces extended families and other collectives in which everyone takes responsibility for fellow members of the group.

Masculinity captures the extent to which society reinforces the traditional masculine work role of male achievement, control, and

#### S.P. Ferris et al.

power. A high masculinity ranking indicates that the country encourages a high degree of competition and individuals feel that they must be the best at whatever they undertake. The dimension focuses on motivation, with a masculine environment encouraging one to be the best while a less masculine culture focuses on liking what one does.

Uncertainty avoidance reflects the level of tolerance for uncertainty and ambiguity within unstructured situations. A high uncertainty avoidance ranking indicates that the country has a low tolerance for uncertainty and ambiguity. Such a society institutes laws, rules, regulations, and controls in order to reduce uncertainty. A low uncertainty avoidance ranking indicates that the society has less concern about ambiguity and uncertainty and more tolerance for a variety of opinions. Such a society is less rule-oriented, more readily accepts change, and takes greater risks.

Long-term orientation focuses on whether the society embraces long-term devotion to traditional values and forward thinking. A high long-term orientation ranking indicates that the country subscribes to the values of long-term commitments and respect for tradition. This attitude is thought to support a strong work ethic in which long-term rewards are expected as a result of today's hard work. Business, however, might take longer to develop in this society, particularly for an "outsider." A low long-term orientation ranking indicates that change can occur more rapidly, as long-term traditions and commitments do not become impediments to change.

*Indulgence*, Hofstede's most recent dimension, was added in 2010, requiring us to backfill this variable for use in longer time-series analyses. An indulgent society encourages or permits relatively free gratification of basic and natural human drives related to enjoying life and having fun. Less indulgent societies suppress the gratification of needs and regulate these wants by means of strict social norms.

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#### Global Finance Journal xxx (xxxx) xxx-xxx

#### S.P. Ferris et al.

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### S.P. Ferris et al.

### Global Finance Journal xxx (xxxx) xxx-xxx

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