Busy Directors and Compensation Effects on Firm Performance and Resilience

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Abstract Busy board members bring valuable experience, networks, and expertise to firms, yet holding multiple directorships also has potential drawbacks. These directors typically receive higher compensation, but it remains unclear whether this reflects superior skills or compensates for limited time and attention. We examine whether busy directors are more generously compensated and how their compensation relates to firm performance and resilience. Using a comprehensive dataset of over 18,000 board members from publicly traded, non-financial U.S. firms between 2008 and 2024, we find that busy directors receive higher total compensation, though not in the form of long-term incentives. While short-term and non-equity compensation is positively associated with firm performance, the interaction between compensation and busyness generally does not predict performance, except for non-equity compensation. During periods of market turbulence, busy directors contribute to financial resilience, but only when incentivized with short-term compensation. These findings challenge the reputation hypothesis, highlighting compensation as a key mechanism shaping busy directors' contributions.

Keywords: Busy boards; compensation; performance; resilience.

JEL codes: G34, G30.

1. Introduction

Busy board members, those who have a seat on multiple boards (Elyasiani and Zhang, 2015), have become relevant in the discussion of board composition. On the one hand, these members often bring significant knowledge, experience, and professional networks accumulated from their involvement on multiple boards, enhancing decision making and positively contributing to firm performance. Their presence signals expertise and credibility, which can

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be attractive to firms (Fama and Jensen, 1983). On the other hand, being part of multiple boards may stretch a member's capacity, reducing the time and attention they can dedicate to any single firm. As a result, the corporate world tends to perceive busy directors as ineffective.

The existing literature has examined the advantages and disadvantages of counting with busy board members (Fich and Shivdasani, 2006; Field et al., 2013; Withisuphakorn and Jiraporn, 2018; Ferris et al., 2018). While some studies suggest that busy directors bring valuable skills and connections that benefit the firm, others argue that their overcommitment hampers their ability to provide effective oversight. The opposing perspectives make busy board members a key topic in corporate governance debates, especially as firms aim to balance the benefits of their expertise against the risks of their diminished effectiveness.

Based on the assumption that busy directors may be beneficial due to their knowledge, experience, and connections, but their monitoring might still not be effective, some efforts have examined the role of compensation of these directors (Ferris et al., 2018; Chen and Keefe, 2018). The results are clear, showing that busy directors receive higher compensation and better incentive packages (Ferris et al., 2018; Chen and Keefe, 2018; Yoon, 2024). However, whether this is an acknowledgment for their expertise or the consequence of the apprehension over their busy agendas is still uncertain. Thus, the underlying reasons why busy board members are better compensated remain unsettled. On the one hand, their skills and expertise should be valued, with firms offering higher and more attractive compensation packages as a form of recognition. On the other hand, although busy directors bring many assets to the table, their full agendas could compromise them, causing firms to offer greater monetary incentives to place them high on the agenda of such directors.

Compensation packages are commonly used to motivate executives and align their interests with those of shareholders. However, empirical research suggests that they often fail to align with value creation (Goergen and Renneboog, 2011). Consequently, the effects of executive compensation on firm performance are *de facto* inconclusive (Adelopo et al., 2023). When board members are busy, it is even more challenging to reach an agreement on their compensation due to the perceived trade-off between their engagement with the company and what is offered to them. Under the premise that busy directors are beneficial to firms, existing literature suggests that their compensation packages are also more attractive than those of non-busy members (Brick et al., 2006; Chen and Keefe, 2018; Yoon, 2024). This is, again, possibly not only a result of their quality but also a means to mitigate potential conflicts due

to their full agenda (Ferris et al., 2018). From the reputation point of view, however, busy directors are not driven by their compensation. Instead, they are motivated by building a good reputation established through the positive organizational outcomes of the firms where they hold a seat.

Busy directors are recognized for the value of their human and social capital as internal decision makers in other organizations (Fama and Jensen, 1983). Taking this into account, it would be expected that busy board members positively contribute to firm performance, considering that good results would signal to the market that they are indeed effective decision makers contributing to their reputation (Withisuphakorn and Jiraporn, 2018). Nevertheless, opposing evidence are also present in literature. For example, (Fich and Shivdasani, 2006) argue that firms with busy boards are associated with poorer profitability and performance, possibly a result of the higher cost of debt that comes with board busyness (Chakravarty and Rutherford, 2017), among others. An explanation of such consequence of having busy directors can be found in (Reguera-Alvarado and Bravo, 2017) who show that these directors enhance firm performance up to a certain level of busyness.

Another reason why busy board members may be, at some point, ineffective is brought by (Withisuphakorn and Jiraporn, 2018). The authors show that corporate governance mechanisms such as the composition of boards work differently in turbulent times than they do regularly. Even though busy board members contribute to financial resilience (Withisuphakorn and Jiraporn, 2018; Croci et al., 2023), they are not always beneficial to firms. Busy directors have proved to play a crucial role in to the adverse consequences of crises, such as the Great Recession, positively contributing to firm value (Withisuphakorn and Jiraporn, 2018; Elyasiani and Zhang, 2015) and organizational stability (Trinh et al., 2020; Elyasiani and Zhang, 2015). Therefore, even though there is no consensus on whether busy directors are advantageous to firms in stable economic conditions, their contribution to financial resilience appears to be decisive when external shocks occur.

Thus far, extant research on corporate finance and governance has provided evidence that busy directors are awarded more and/or better compensation packages (Brick et al., 2006; Ferris et al., 2018; Chen and Keefe, 2018; Yoon, 2024), compensation and performance interact in some way (Brick et al., 2006; Bhuyan et al., 2022, among others) and that busyness may impact organizational outcomes such as performance and resilience (Cashman et al., 2012; Ferris et al., 2003; Fich and Shivdasani, 2006; Withisuphakorn and Jiraporn, 2018; Ferris et al., 2020; Trinh et al., 2020; Croci et al., 2023; Venkatesh et al., 2024, for example). One question remains: do busyness

and compensation contribute to a firm's financial outcomes individually or is the interaction between them that actually promotes better results? Thus, we aim to examine whether busy board members (those who hold seats on at least three boards) rewarded more and, if so, verify the role they play in firm performance taking their compensation into consideration. Moreover, we propose examining whether those relationships stand in times of crises, extending the growing research agenda on busy directors.

We achieve this by analyzing all publicly traded non-financial American companies from 2008 to 2024. This time span allows us to investigate the impact of busyness and compensation on firm performance and resilience—resilience that we assess in the context of two distinct crises: the Global Financial Crisis of 2008 and the economic downturn triggered by the COVID-19 pandemic in 2020. Our sample is composed of observations across companies distributed among 11 industries. Such a large sample can provide valuable insights for understanding the complex relationships here examined.

This paper adds to the recently growing body of literature regarding boards' busyness while examining the existence and nature of relationships not previously explored. The paper closest to ours is (Ferris et al., 2018) which we differ from in several ways. First, we focus on the impact of the interaction between compensation and busyness on different financial outcomes while (Ferris et al., 2018) main aim was to examine the relationship between directors' busyness and their compensation. Second, due to the different goals and thus the hypothesis and variable definitions of each of the articles, our analysis method also differs in terms of methodology and modeling approach.

We contribute not only to the literature, but also to practitioners who can benefit from our findings and appreciate them when planning their board composition. Furthermore, we add to policy makers who need to develop guidelines on the composition of boards and are now more aware of the trade-off of having (and well-paying) busy board members in firms.

2. Theoretical Background and Hypothesis Development

Corporate governance, with roots in Agency Theory (Berle and Means, 1932; Jensen and Meckling, 1976), aims to mitigate the existing conflicts between agents and principals aligning their interests and goals. Boards of directors, an internal mechanism of corporate governance, facilitate the separation of management and control over the organization's decisions (Fama and Jensen, 1983). It is due to its importance in monitoring and controlling organizations' agents that a vast body of literature is dedicated to examining

its and its members' diverse characteristics.

Board members can be classified as either busy or non-busy. According to (Ferris et al., 2018), busy directors are those who hold seats on at least three boards. Busy directors address serious agency problems, motivated by their desire to build a reputation as experts in decision control (Fama and Jensen, 1983). The disadvantage of counting on such members relies on their overcommitment. Multiple directorships reduce the time and attention devoted to any individual board (Ferris et al., 2020), decreasing the impact of their monitoring (Yoon, 2024). From this standpoint, companies led by busy boards may have a weaker governance structure (Yoon, 2024), that jeopardize organizational outcomes such as performance (Fich and Shivdasani, 2006; Withisuphakorn and Jiraporn, 2018).

On the other hand, with multiple directorships comes better quality. Busy directors are often offered additional directorships as a result of their high quality (Chen and Keefe, 2018). Their skills and network grant their reputation as high-caliber professionals capable of contributing to strategic decisions and improving organizational performance, a fact evidenced in previous studies (Field et al., 2013; Elyasiani and Zhang, 2015; Trinh et al., 2020; Mbanyele, 2020). From this point of view, directors who serve on multiple boards simultaneously gain access to a wider range of information and experience in different contexts (Amin et al., 2023). Moreover, their value as esteemed advisors is recognized by shareholders whose companies are in need for advising (Chen and Guay, 2020), such as in the case of IPO firms that demand more advising than monitoring (Field et al., 2013).

As a result, the strategic need to cope with overcommitment and the high quality and demand for busy directors is expected to reflect on their compensation (Ferris et al., 2018). The compensation of busy directors is first evidenced in (Brick et al., 2006) whose results point that highly paid directors are more likely to serve on multiple boards. Later, (Ferris et al., 2018) find that not only do busy directors are awarded greater total compensation, they also receive greater amounts of equity-bases compensation. These evidences are consistent with both points of view, *i.e,*, the overcommitment and the reputation ones. Moreover, (Chen and Keefe, 2018) show that compensation is positively influenced by multiple directorship in China while (Yoon, 2024) evidence that busy directors are paid higher values of compensation in New York's nonprofits. Thus, we hypothesize that:

H_1. *Busy board members are awarded greater total compensation than non-busy board members.*

Busy board members have relevant skills acquired from serving on multiple boards. However, their overcommitment may limit the time and attention they can dedicate to monitoring and governance activities for any single organization. To counterbalance this potential limitation, firms may structure compensation packages with a larger proportion of share-based remuneration (Ferris et al., 2018). Such packages encourage busy directors to prioritize long-term value creation and remain focused on firm performance, despite their multiple commitments (Goergen and Renneboog, 2011).

Long-term remuneration, such as stock options and restricted stock, offers high pay-performance sensitivity, motivating directors to contribute to sustainable organizational success. There is evidence of the effectiveness of such strategy once share-based payments seem to contribute to the alignment of managers' and shareholders' interests creating long-term value (Aguiar and Coppe, 2017). For busy directors, this strategy is even more crucial, as it reinforces their focus on the firm's success while mitigating their potentially ineffective monitoring (Ferris et al., 2018). Therefore, companies are more inclined to allocate a larger share of compensation in equity to busy board members, aiming to mitigate overcommitment challenges and optimize their contributions to organizational performance. Moreover, being busy directors in high demand, the right compensation package might also serve as a bait to attract qualified and well-positioned directors. Taking this information into consideration, we hypothesize as follows:

H_2. *Busy board members receive more long-term compensation, such as equity bonus, than non-busy board members.*

Compensation can be used to incentivize busy board members. It may also mitigate the negative effects of their overloaded agendas. Therefore, it is reasonable to believe that these members contribute only when they receive an appropriate compensation package. Empirical evidence can be found in (Ferris et al., 2018) who find that the compensation package busy directors receive has a positive impact on market-to-book, return on assets and profit margins.

Contrary to the predictions of reputation theory, busy directors may be primarily driven by performance-based compensation rather than by the pursuit of market prestige. Their engagement with the firm appears to be more sensitive to incentive structures than to reputational concerns. This interpretation shifts the focus from symbolic to economic motivations. Consequently, firms seeking to leverage the expertise of busy board members should design compensation packages that effectively align the effort with outcomes. Therefore,

we hypothesize that:

H_3. *Better compensating busy board members improves firm performance.*

H_4. *Better compensating busy board members improves firm resilience.*

Busy directors often bring with them strong reputations, broad management experience, and access to valuable information resources. These attributes can contribute to the mitigation of agency problems, particularly those related to information asymmetry (He et al., 2024). By connecting firms to a diverse set of information channels, such directors are well-positioned to provide effective guidance and monitoring (Amin et al., 2023). Although busy board members are frequently portrayed as less effective due to their limited time commitments (Field et al., 2013), their reputational capital and professional quality may outweigh the drawbacks typically associated with multiple board appointments.

Moreover, the benefits of having busy directors may become even more salient in times of crisis. Firm resilience—the capacity to identify and correct maladaptive behaviors while adapting to unexpected challenges (Ortiz-de Mandojana and Bansal, 2016)—is particularly critical under adverse conditions. Resilient firms are those capable of sustaining above-average financial performance even after experiencing external shocks (Teixeira and Werther, 2013). Prior research suggests that busy directors contribute positively to firm value during periods of economic stress, such as the Great Recession (Withisuphakorn and Jiraporn, 2018; Elyasiani and Zhang, 2015). Their presence has also been linked to greater organizational stability (Trinh et al., 2020; Elyasiani and Zhang, 2015), a core dimension of resilience (DesJardine et al., 2019; Sajko et al., 2021; Engelen et al., 2024; Xia et al., 2022).

Based on these considerations, we formulate the following hypotheses:

H$_5$. *Busy board members enhance firm performance.*

H$_6$. *Busy board members enhance firm resilience.*

3. Methodological Procedures

3.1 Sample and data sources

Our sample consists of board members from 2008 to 2024 in different companies in 11 industries (including healthcare, technology and industrials, among others). In particular, we collected data for all listed companies in the United States of America. We excluded firms that were not on the NYSE or NASDAQ exchanges, those whose primary sector was Financial Services, and included only those with a mean trading volume of at least USD 100,000. Furthermore, we deleted companies that had substantial missing data (more than 10%) in their yearly financial report, an adequate practice when dealing with variables of secondary importance to the analysis, which in this case is performance (Sainani, 2015). To achieve our goal, we counted on two different datasets. The first contains information on companies, their yearly balance sheets and their daily stocks' closing price. These were collected from eodhd, a reliable source of financial data. The second set of data were gathered from SEC-API.io platform and contain information on boards and the compensation of its members.

Recent research has gathered data from eodhd (Kouloumpris et al., 2024; Weitzenfeld, 2024; Perlin et al., 2025) considering it is a widely-used and high-quality platform for accessing financial information (Perlin et al., 2025). Data collection from the Securities and Exchanges Commission (SEC) is a common practice for researchers. (Field et al., 2013) for example hand-collected data on board composition and corporate governance from SEC.

3.2 Analysis

To test Hypotheses 1 and 2 regarding the compensation of the different groups (busy and non-busy) we use as a dependent variable *busy company*, a dummy variable that takes the value of 1 when the board counts with at least one busy director and 0 otherwise (He et al., 2024; Chen and Guay, 2020) at time t [1]. Naturally, our independent variable is compensation, which we break down as total, short-term, long-term, and non-equity-based incentives (Goergen and Renneboog, 2011; Bhuyan et al., 2022). Short-term compensation includes the sum of salary and bonuses, while long-term compensation includes stock and option awards. Non-equity compensation is the sum of non-equity incentives, changes in pension and deferred earning, and others.

We first perform a univariate analysis using Welch's t-test. Following

[1] As a robustness check we also performed a fixed-effects panel data analysis where the dependent variables busy company referred to the proportion of busy directors in the boardroom.

(Ferris et al., 2018), this analysis allows us to explore the relationship between compensation and busyness. Subsequently, a multivariate analysis is performed in order to confirm the univariate results by estimating an random effects probit regression (Chen and Keefe, 2018; Ferris et al., 2020). Building on this, we verify whether busy boards are awarded better compensation packages. The model has the following form:

$$X_{it} = \alpha + \beta_1 \text{compensation}_{it} + \sum_{k=1}^{K} \phi_{2k} \text{control}_{itk} \tag{1}$$

$$E(Z_{it}) = \Phi(X_{it}) \tag{2}$$

where Z_{it} is the dependent variable *busy company*, α is the intercept, and the β terms correspond to the compensation and control variables respectively. β_1 takes the value of total, short-term, long-term, or non-equity compensation. Φ denotes the cumulative distribution function of the standard normal distribution, as used in a probit model. The mean of each compensation item is computed for board/year observations, as well as the means for age and tenure. The analysis is done for board/year observations.

To test Hypotheses 3 and 5, we use return on assets (ROA) as a proxy of financial performance, following previous studies (Withisuphakorn and Jiraporn, 2018; Saleh et al., 2020; Elyasiani and Zhang, 2015) and Operating Return on Assets (OROA) (Ferris et al., 2020; Sun and Yu, 2022). Our independent variable is the proportion of busy board members for which we base on (Withisuphakorn and Jiraporn, 2018; Wang et al., 2023; He et al., 2024) calculated as the sum of the busy member dummy divided by the number of board members for each company/year observation. We perform a fixed-effects panel regression [2] to analyze the role of busyness and compensation play in performance:

$$y_{it} = \alpha_i + \beta_1 \text{busyness}_{it} + \beta_2 \text{compensation}_{it} \text{busyness}_{i,t} + \sum_{k=1}^{K} \phi_{3k} \text{control}_{itk} + \varepsilon_{it}$$

[2]The choice of the fixed effects model is supported by the results of several statistical tests. The F-test for individual effects yielded a highly significant result (p-value < 0.01), indicating the presence of individual-specific effects and rejecting the pooled OLS model. Similarly, the Breusch-Pagan Lagrange Multiplier test also strongly rejected the null hypothesis in favor of panel effects (p-value < 0.01). Finally, the Hausman test comparing fixed and random effects produced a chi-squared statistic of 115.5 (p-value < 0.01), suggesting that the random effects model is inconsistent. Together, these results justify the use of the fixed effects specification for this analysis.

(3)

where $y_{i,t}$ takes the value of ROA, the interaction of compensation and busyness is responsible for β_2 and control variables are considered for the value of β_3. Moreover, it is noteworthy to mention that the choice between pooled, fixed-effects and aleatory-effects models was based on the performance of the Chow, Breuch-Pagan and Hausmann tests. For the first regression (Equation 2), the best fit is the random-effects model, whereas for the second one (Equation 3) the best fit is the fixed-effects on the firm-level model.

For Hypotheses 4 and 6, we investigate corporate resilience during challenging periods by assessing firms' stability and flexibility in response to financial distress, as proposed by (DesJardine et al., 2019). Specifically, we evaluate severity of loss and time to recovery, with the former being computed as follows:

$$Sev(X) = \frac{minCP_{t-1,t+365} - CP_{t-1}}{CP_{t-1}} - 1 \quad (4)$$

where $minCP_{t-1,t+365}$ is the minimum stock closing price between the day before the shock and one year after, and CP_{t-1} is the closing stock price on the day before the shock. Time to recovery is measured as of the number of days it took the firm to bounce back to its pre-shock level. Our resilience-focused analysis is done in two steps. We first examine the stability and flexibility of firms counting on busy directors with a univariate analysis using Welch's t-test. Then, to further comprehend and evaluate resilience we estimate an ordinary least squares regression where $y_{i,t}$ form equation (3) is substituted for y_i for severity of loss following (DesJardine et al., 2019).

Across all models, we control for the economic sector in which firms operate (Ferris et al., 2018), as well as for firms' leverage and size (Elyasiani and Zhang, 2015; Withisuphakorn and Jiraporn, 2018), in addition to key board characteristics. For board characteristics, we use board size (Elyasiani and Zhang, 2015; Withisuphakorn and Jiraporn, 2018; Ferris et al., 2018) and the tenure and age of board members (Field et al., 2013; Ferris et al., 2020; Sun and Yu, 2022). For tenure, the data on the board member's first election required some preprocessing. First, we removed textual elements, handled multiple date formats, and extracted the year of the first election. We then validated this year, setting any values outside a realistic range (1900 to the current year) to NA. Afterwards, we calculated tenure by subtracting the year of the first election from the year of the observation. Any resulting negative values were also set to NA. For age, we similarly cleaned and standardized

the variable by converting it to a numeric format. We first normalized text entries such as "under 60" or "70 and older" into representative numeric values, extracted numbers from ranges, and removed non-numeric characters. Finally, we validated the resulting values, setting any ages below 18 to NA. All variables are defined according to Table 1. Furthermore, we winsorized continuous variables of interest, *i.e.* performance and compensation variables, at upper and lower 1% of the sample distribution (James et al., 2018).

Table 1
Variable Definitions

Variable	Family	Type	Definition	Authors
busy company	Busyness	Dependent	Dummy variable: equals 1 if the board counts with at least one busy board member and 0 otherwise.	Chen and Guay (2020), He (2024)
proportion busy	Busyness	Independent	Sum of busy board members per company and year / board size.	Withisuphakorn (2018), Wang (2023), He (2024)
total	Compensation	Independent	Total compensation.	Goergen (2011), Bhuyan (2022)
short term	Compensation	Independent	Sum of salary and bonus.	Goergen (2011), Bhuyan (2022)
long term	Compensation	Independent	Sum of stock and option awards.	Goergen (2011), Bhuyan (2022)
non-equity	Compensation	Independent	Sum of non-equity incentive, change in pension value, deferred earnings, and other compensation.	Goergen (2011), Bhuyan (2022)
ROA	Performance	Dependent	Net income / total assets.	Elyasiani (2015), Withisuphakorn (2018), Saleh (2020)
OROA	Performance	Dependent	Ebit / total assets.	Ferris (2020), Sun (2022)
stability	Resilience	Dependent	Absolute percentage loss in stock price in the 12 months following the start of the crisis.	Desjardine (2019)
flexibility	Resilience	Dependent	Time until stock price reached pre-crisis level.	Desjardine (2019)
board size	Board Characteristic	Control	Sum of board members occupying a seat on the board.	Elyasiani (2015), Withisuphakorn (2018), Ferris (2020), Sun (2022)
age	Director Characteristic	Control	Age, in years, of board member.	Field (2013), Ferris (2020), Sun (2022)
tenure	Director Characteristic	Control	Difference between reference date and date first elected.	Field (2013)
firm size	Firm Characteristic	Control	Log of total assets.	Elyasiani (2015), Withisuphakorn (2018), Saleh (2020), Sun (2022)
leverage	Firm Characteristic	Control	Total liabilities / total assets.	Elyasiani (2015), Withisuphakorn (2018), Saleh (2020), Sun (2022)
sector	Firm Characteristic	Control	Matrix of dummies of the sector in which each company operates.	Ferris (2018)

4. Analysis and Discussion of Results

4.1 Summary Statistics

Of the board members (observations over time), only 0.15% (0.24%) are busy following the definition given by (Fich and Shivdasani, 2006; Field et al., 2013; Ferris et al., 2018) that busy directors are those who occupy three or more board seats in different companies. The maximum number of boards held by one director is four. Over time (see Figure 1), the number of directorships held by a director has varied. From 2012 to 2018, busy board members became increasingly prevalent in companies. Notably, during and after the Global Financial Crisis (GFC) and the COVID-19 outbreak, their presence remained significant, with a growing demand for their expertise. This may be a result of

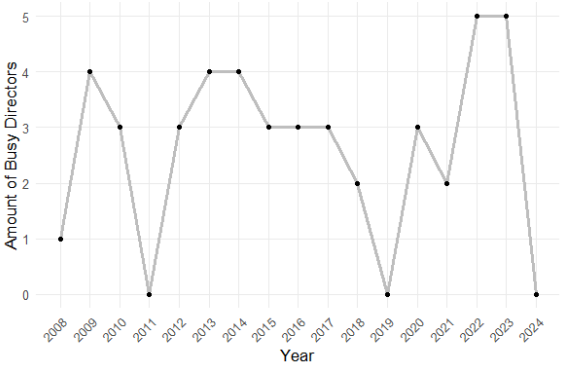

Figure 1
Busyness over Time

the need for talents that only busy directors could have (Croci et al., 2023) to deal with crises.

We also examine the proportion of multiple directorships in the different economic sectors (Figure 2). Busy board members are more common in the Energy, Utilities and Consumer Cyclical sectors. This can be due to several factors, one being the inter-industry linkages and their highly dynamic nature which induce companies to count on directors with specific and extensive experience, networks and abilities related to these industries. On the other hand, sectors such as communication services, industrials, technology and healthcare that may require more available and dedicated directors, have a lower concentration of busy board members. The real estate, financial services, consumer defensive, and basic materials are the economic sectors that over the 17 year we examine do not count with any busy director.

Table 2 displays the summary statistics of our main variables, where we can observe some trends referring to compensation. Busy board members receive higher total compensation in terms of mean values. Moreover, they also receive higher amounts of short-term, long-term, and non-equity compensation. The standard deviation values indicate that compensation packages vary substantially, with variability being usually higher for busy directors.

On average, a board consists of about ten members, and the proportion of busy board members is relatively low (1%). However, the mean proportion of busy board members in a board with at least one busy director is 41% and the median is 40% which indicates that busy boards often count with more than one busy director. As of the directors themselves, busy board members are

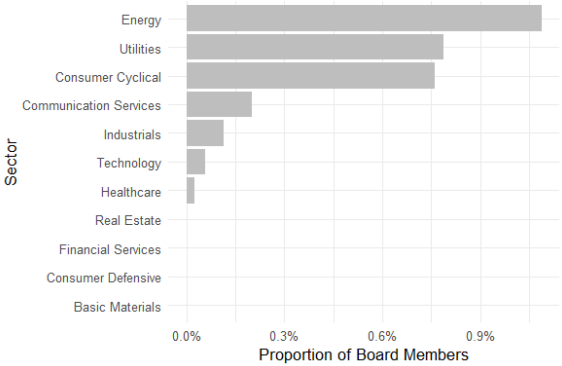

Figure 2
Busyness across Sectors

often older with an average age of 76.43 comparing to 53.46 years old of non-busy directors. Directors with multiple directorships also occupy their board seat longer than non-busy directors. Therefore, we can note that the experience, network and expertise that come with a busy director might also be the result of advanced aged and tenure. Directors holding multiple directorships have had the time to build a concrete reputation the market recognizes and needs, something they are awarded for better than their non-busy pairs.

Moreover, regarding firm characteristics, one can observe that firms counting with busy directors perform better once ROA and OROA values are higher for such firms. Busy directors seem to enhance returns on assets. Furthermore, companies where directors are busy are smaller and less indebted.

Table 2
Summary Statistics

Variable	Mean			Std. Deviation			Median			Welch's t-test	
	All	Non-Busy	Busy	All	Non-Busy	Busy	All	Non-Busy	Busy	t-statistic	p-value
person count	1.02	1.02	3.02	0.16	0.13	0.15	1.00	1.00	3.00		
busy company	0.06	0.06	1.00	0.24	0.23	0.00	0.00	0.00	1.00		
board size	10.05	10.05	9.47	4.06	4.06	3.81	10.00	10.00	9.00		
proportion busy	0.01	0.01	0.41	0.04	0.03	0.26	0.00	0.00	0.40		
age	53.50	53.46	76.43	8.45	8.39	10.98	53.00	53.00	78.00		
tenure	8.84	8.75	27.29	9.85	9.74	15.77	5.00	5.00	26.00		
short term	473992.32	473525.70	667191.44	226815.32	226421.97	299732.09	427847.00	427353.50	673077.00	-4.33	0.00
long term	1091277.54	1090565.44	1386119.80	1308914.09	1308547.09	1438687.07	649978.00	649091.50	974700.00	-1.38	0.18
non-equity	440788.49	440360.13	618150.38	547971.38	547901.31	554401.33	262500.00	262254.50	601515.00	-2.15	0.04
total	2018667.27	2017066.73	2681365.13	1701710.89	1700959.60	1895748.10	1501590.00	1500142.00	2594565.00	-2.35	0.02
ROA	-0.01	-0.01	0.08	0.17	0.17	0.13	0.03	0.03	0.12		
OROA	0.02	0.02	0.10	0.17	0.17	0.18	0.06	0.06	0.10		
firm size	21.10	21.10	20.97	1.77	1.77	1.88	21.17	21.17	20.76		
leverage	0.55	0.55	0.43	0.31	0.31	0.20	0.53	0.53	0.39		

Note: person count = number of directorships held; busy company = takes the value of 1 if a company counts with at least one busy board member; board size = amount of directors in a corporate boardroom; proportion busy = proportion of directors who are busy; age = director age; tenure = director tenure; short term = sum of salary and bonus; long term = sum of stock and option awards; non equity = sum of non-equity incentive, change in pension value, deferred earnings, and other compensation.; total = total compensation; ROA = return on assets; OROA = operating return on assets; firm size = natural logarithm of a firm's total assets; leverage = ratio of total liabilities to total assets

4.2 Busyness and Compensation

From the Welch's t-test performed (see Table 2) we confirm the results of the descriptive analysis that busy board members receive higher amounts of total, long and short-term and non-equity compensations. The difference is statistically significant for total (at 5% level), short-term (at 1% level), and non-equity compensations (at 5% level). These results are consistent with Hypotheses 1 and 2. Busy directors — often regarded as well-connected, highly skilled, and valuable to firms (Ferris et al., 2018) — tend to receive higher compensation. Nonetheless, the higher amounts of money earned by them are mostly due to the short-term component of their compensation. These results do not align with (Ferris et al., 2018) who report that busy directors earn more equity-based compensation, yet receive lower total pay. We reinforce the evidence presented by (Brick et al., 2006) and (Chen and Keefe, 2018), which suggests that directors with higher compensation tend to hold multiple board seats. While our analysis does not permit definitive conclusions regarding the compensation structure of busy directors, the results indicate that such individuals are perceived as valuable within the corporate environment. Accordingly, there is no indication that busy board members are seen as ineffective, at least not to the point of requiring enhanced long-term or non-equity compensation to align their interests with those of the firm.

We also performed a probit regression resulting from Equation 2 (Table 3). The difference between the models is in the independent variables. We account for total (Model 1), short-term (Model 2), long-term (Model 3), non-equity (Model 4) and the compensation variables altogether (Model 5). The regressions include the sector matrix (minus one to avoid perfect collinearity), but to save space we opt to not present these results. Having at least one busy director at the boardroom increases the chances to receive higher values of total and non-equity compensation, more specifically, for each unit increase in total and non-equity compensation, the odds of the board being busy increase by approximately 1.2% and 3.9% respectively, holding all things equal. This result is only statistically significant when the compensation components are taken into account separately (Model 1 and Model 4). In Model 5, the statistical significance disappears; however, the direction of these relationships hold suggesting that the connection remains but is weaker when all compensation components are considered together. Short and long-term components are not statistically significant in any model. It should be noted that according to the AIC criterion, Model 5 does not outperform the others, indicating that Models 1 to 4 provide a better trade-off between fit and complexity. Moreover, it is interesting to mention that while all components of compensation have

a positive coefficient when evaluated separately, in Model 5 the coefficient reverses for short and long-term compensation.

Furthermore, tenure and age as board characteristics matter in a couple of the models. Tenure is negatively and statistically significant in Models 2 and 4 whereas age is positively and statistically significant in Models 1 and 3. Busy directors tend to be older than non-busy ones potentially due to their accumulated experience, reputation, and established networks. Meanwhile, they have more flexibility and options to choose from, and thus, stay in a determined firm for a shorter period of time - contrary to what our descriptive analysis indicated. This result may also reflect the fact that busy directors are substantial advisors who contribute to firms in need of their skills. In such contexts, their role may be especially valuable during the early stages, but not necessarily required over extended periods, as these firms may rely heavily on their expertise initially and gradually become more independent. This is consistent with findings from (Field et al., 2013), who show that among IPO firms—characterized by minimal experience with public markets and a strong reliance on board advising—busy boards are common and contribute positively to firm value. Thus, the shorter tenure observed may not signal lower commitment, but rather the timely and targeted nature of their contribution. Moreover, board size is also key. An additional board member increases the chances of busyness in about 8%. The random-effects probit regression estimated a statistically significant standard deviation of firm-specific effects (σ), suggesting substantial heterogeneity across firms in the propensity for board busyness after accounting for observable firm characteristics [3].

Given the results from Equation 2, we cannot reject Hypothesis 1 that busy board members are awarded greater total compensation, whereas we should reject Hypothesis 2 that they are awarded more long-term compensation. Busy board members are appreciated and valued. However, they do not need incentives to outperform non-busy board members. Our results corroborate those of (Brick et al., 2006; Chen and Keefe, 2018; Yoon, 2024) and, in parts, those of (Ferris et al., 2018) once, although busy directors are paid more, they do not receive more long-term compensation. Our results also support the reputation hypothesis (Fama and Jensen, 1983). Busy board members can be beneficial to firms bringing with them extensive experience, expertise, and networks. Their contribution to each individual firm does not require monetary stimulus, they are motivated by their will to build a reputation.

[3] In our robustness checks, busy directors' total, short- and long-term compensation were positively and statistically significant (Models 1, 2 and 3), whereas in the full model (Model 5), only short-term compensation remained statistically significant.

Table 3
Compensation of Busy Boards

	Model 1	Model 2	Model 3	Model 4	Model 5
(Intercept)	-7.601***	-8.908***	-7.992***	-9.602***	-8.324***
	(2.331)	(2.324)	(2.236)	(2.062)	(2.556)
board size	0.073**	0.081**	0.072**	0.084***	0.076**
	(0.033)	(0.033)	(0.032)	(0.031)	(0.036)
average tenure	-0.020	-0.024*	-0.020	-0.028**	-0.023
	(0.014)	(0.014)	(0.014)	(0.014)	(0.015)
average age	0.029*	0.025	0.031*	0.019	0.028
	(0.017)	(0.017)	(0.017)	(0.017)	(0.025)
firm size	0.061	0.127	0.084	0.160*	0.084
	(0.101)	(0.099)	(0.097)	(0.085)	(0.101)
leverage	0.460	0.438	0.468	0.325	0.425
	(0.345)	(0.320)	(0.334)	(0.343)	(0.345)
total	0.012*				0.019
	(0.006)				(0.067)
short term		0.052			-0.003
		(0.054)			(0.089)
long term			0.011		-0.011
			(0.008)		(0.067)
non-equity				0.039**	0.011
				(0.018)	(0.070)
sigma	2.042***	2.100***	2.009***	2.624***	2.175***
	(0.252)	(0.319)	(0.243)	(0.349)	(0.353)
Log Likelihood	-366.176	-367.584	-367.128	-365.499	-365.599
AIC	758.353	761.168	760.255	756.999	763.198

$^{***}p < 0.01$; $^{**}p < 0.05$; $^{*}p < 0.1$

Note: board size = amount of directors in a corporate boardroom; average tenure = average director tenure; average age = average director age; total = average total compensation; short term = average short-term compensation; long term = average long-term compensation; non equity = average non-equity compensation; firm size = natural logarithm of a firm's total assets; leverage = ratio of total liabilities to total assets.

sigma: represents the standard deviation of the random intercepts — in this case, the statistical significance of sigma confirms that the random effects model is appropriate.

4.3 Performance

We now focus on (operating) return on assets to assess whether busy directors improve firm performance. We also examine whether such an improvement stems from reputational concerns or monetary incentives. Table 4 exhibits the results of the significance of different compensation components and the proportion of busy directors in corporate boards, as well as their interaction, on firm performance (Equation 3). Models 1 to Models 4 examine compensation components separately (total, short-term, long-term and non equity) while Models 5 considers them altogether. Models 5 explain better part of the variation in the dependent variable with higher R^2 for both ROA and OROA.

The results show that the higher the proportion of busy directors on boards,

the lower the performance of firms - particularly in the case of ROA where the proportion of busy directors is negatively associated with this dependent variable across all models. However, these relationships are not statistically significant. We reject Hypothesis 5 that busy board members enhance firm performance alone. Contrary to the reputation hypothesis (Fama and Jensen, 1983) and the agency theory, directors with multiple directorships do not appear to be effective monitors whose experience, information resources, and reputations promote greater financial performance. Our findings corroborate those found by (Fich and Shivdasani, 2006), who suggest that serving on multiple boards results in overloaded directors who become ineffective monitors to all boards.

Table 4
Performance Determinants

	ROA					OROA				
	Model 1	**Model 2**	**Model 3**	**Model 4**	**Model 5**	**Model 1**	**Model 2**	**Model 3**	**Model 4**	**Model 5**
proportion busy	-6.597	-15.763	-1.297	-1.785	-15.033	1.984	-7.475	5.178	0.170	-6.292
	(11.014)	(15.028)	(10.116)	(8.869)	(15.126)	(10.303)	(14.054)	(9.465)	(8.304)	(14.161)
board size	-0.153	-0.151	-0.168*	-0.139	-0.150	-0.213**	-0.211**	-0.224**	-0.202**	-0.212**
	(0.097)	(0.096)	(0.097)	(0.096)	(0.096)	(0.091)	(0.090)	(0.090)	(0.090)	(0.090)
average tenure	-0.119***	-0.138***	-0.121***	-0.121***	-0.147***	-0.085**	-0.102**	-0.085**	-0.086**	-0.112***
	(0.046)	(0.046)	(0.046)	(0.045)	(0.046)	(0.043)	(0.043)	(0.043)	(0.042)	(0.043)
average age	-0.009	-0.014	-0.004	-0.019	-0.019	-0.015	-0.021	-0.010	-0.023	-0.022
	(0.051)	(0.051)	(0.051)	(0.051)	(0.051)	(0.048)	(0.048)	(0.048)	(0.048)	(0.048)
firm size	3.614***	3.387***	3.873***	3.482***	3.614***	1.695***	1.518***	1.909***	1.654***	1.692***
	(0.478)	(0.462)	(0.471)	(0.452)	(0.481)	(0.447)	(0.432)	(0.441)	(0.423)	(0.450)
leverage	-3.335***	-3.415***	-3.371***	-3.499***	-3.618***	-0.548	-0.628	-0.549	-0.686	-0.758
	(1.152)	(1.150)	(1.152)	(1.150)	(1.148)	(1.078)	(1.076)	(1.078)	(1.076)	(1.074)
total	0.005				-0.287	0.016				-0.251
	(0.023)				(0.193)	(0.022)				(0.180)
total * proportion busy	0.470				-0.873	0.060				-1.344
	(0.347)				(1.070)	(0.325)				(1.002)
short		0.454***			0.753***		0.469***			0.713***
		(0.175)			(0.258)		(0.163)			(0.242)
short * proportion busy		2.834			3.427		1.514			3.570
		(1.977)			(2.638)		(1.849)			(2.469)
long			-0.042		0.226			-0.019		0.214
			(0.027)		(0.195)			(0.026)		(0.182)
long * proportion busy			0.491		0.420			-0.117		0.257
			(0.543)		(0.992)			(0.508)		(0.929)
non-equity				0.217***	0.499**				0.178***	0.418**
				(0.062)	(0.201)				(0.058)	(0.189)
non-equity * proportion busy				1.183	2.251				0.708	2.737*
				(0.885)	(1.720)				(0.828)	(1.610)
R^2	0.040	0.044	0.040	0.047	0.055	0.013	0.018	0.013	0.019	0.027
Adj. R^2	-0.242	-0.237	-0.242	-0.233	-0.227	-0.277	-0.271	-0.277	-0.270	-0.263
Num. obs.	2605	2605	2605	2605	2605	2605	2605	2605	2605	2605

$^{***}p < 0.01$; $^{**}p < 0.05$; $^{*}p < 0.1$

Note: proportion busy = proportion of busy directors in a corporate boardroom; board size = amount of directors in a corporate boardroom; average tenure = average director tenure; average age = average director age; total = average total compensation; short term = average short-term compensation; long term = average long-term compensation; non equity = average non-equity compensation; firm size = natural logarithm of a firm's total assets; leverage = ratio of total liabilities to total assets

As for compensation, the short-term and non-equity components are positively related to performance indicating that attractive compensation packages lead to better performance. Such relationship is statistically significant in all models that include these variables (Models 2, 4 and 5) for both ROA and OROA. A unit increase in short-term compensation, raises ROA and OROA by approximately 7 percentage points, while a unit increase in non-equity increases ROA and OROA in about 4.5 percentage points. Thus far, we have shown that the right compensation package serves as a managerial incentive, whereas the proportion of busy directors has no significant impact.

For our third hypothesis, however, what interests us is the interaction be-

tween the compensation components and board busyness. In the first four models, there are no significant relationships. Nevertheless, when we account for all compensation components (Models 5), some interesting patterns emerge. Although not statistically significant, for both ROA and OROA, we find negative relationships for the interaction terms of total compensation and board busyness, while the interactions between board busyness and short- and long-term compensations show positive relationships. Whilst the negative effect of the proportion of busy directors vanishes in the last two cases, it remains when considered in interaction with total compensation. Interestingly though, the proportion of busy board members in interaction with non-equity compensation is positively associated to performance - a result statistically significant for OROA.

Likewise our previous discussion on compensation, (Chen and Keefe, 2018) evidence that director busyness positively influences director compensation. By counting with more busy directors, board members tend to receive higher amounts of compensation - an outcome that could reflect on the returns and, hence, the performance of firms. This is not what we evidence here, at least not entirely. Therefore, we partially reject Hypothesis 3 that better compensating busy board members improves firm performance. Contrary to (Ferris et al., 2018), better (operating) return on assets is not the outcome of the interaction between compensation and busy directors. Even though short-term and non-equity components of compensation enhance firm performance, the proportion of busy director does not and the interaction terms are insignificant except when we consider non-equity on OROA. It is also noteworthy that average age is not statistically significant in any model. On the other hand, tenure, board size, firm size and leverage are detrimental to performance; in our findings, smaller boards, less tenured directors and bigger firms perform better as do less indebted firms.

4.4 Resilience

Listed in Table 5, the results on resilience variability through quantile analysis can help understand the distribution of firms by their stability and flexibility. From this analysis, it is possible to observe that our sample suffered more adverse consequences during the GFC (Global Financial Crisis) than they did during the COVID-19 pandemic both in terms of stability and flexibility. The difference in the stability of firms was about 20% for each quartile. For instance, while the most severe loss was of 96% during the GFC, during the COVID-19 it was of 78%. On the other hand, there were companies whose stock prices almost did not suffer from the effects of the crises with the forth

quartile close to -1. The median firm experienced a loss equal to 56% during the GFC and 31% during the pandemic.

As of the flexibility of the companies to respond to these shocks, we observe that while the median firm took a day to return to its pre-shock level, there were some that took a significantly longer time to achieve that. The evidence is more pronounced in the GFC. Recall that flexibility is defined as the time it takes for a firm's stock price to return to its level immediately before the start of an event (DesJardine et al., 2019), so it is natural to observe such small windows for the recovery of firms. Although recovery from a crisis is urgent, sustaining resilience in the aftermath and preventing relapses is also critical (Mellado-Garcia et al., 2024), something to consider when evaluating, particularly, time to recovery.

Table 5
Statistical Overview of Resilience

Quantile		0%	25%	50%	75%	100%
Stability	GFC	-1.96	-1.69	-1.56	-1.45	-1.00
	COVID-19	-1.78	-1.43	-1.31	-1.23	-1.00
Flexibility	GFC	0	1	1	6	317
	COVID-19	1	1	1	1	112

From the Welch's t-test performed, we evaluate the mean recovery time and severity of loss of firms with and without busy boards. Firms with at least one board member involved in three or more companies experienced a 54% drop in stock prices during the Global Financial Crisis (GFC) and a 36% decline during the COVID-19 pandemic. On the other hand, firms without the expertise and network of busy board members suffered more significant losses during the GFC (57%) whereas the consequences during the pandemic were milder and more promissing than those firms with busy board members (33%). Nevertheless, the variance in firm stability was not statistically significant during either crisis, with Welch's t-test p-value being higher than 10%. In terms of flexibility, firms counting on busy directors were more resilient recovering faster from adversities during both crises. Yet, the results were not statistically significant.

We performed OLS regressions to evaluate the results presented before in depth (Equation 3 with the dependent variable resulting from Equation 4). The results are displayed in Table 6. For each crisis, five regressions were estimated following the same logic as when performance was examined. The first four models consider average total, average short-term, average long-term and non equity compensations separately while the fifth model takes all compensation components into account. It is noteworthy to mention that the small number of observations for these analyses is due to their cross-sectional character and the

Table 6
Global Financial Crisis and COVID-19 Stability

	GFC					COVID-19				
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 1	Model 2	Model 3	Model 4	Model 5
(Intercept)	-1.311***	-1.670***	-1.495***	-1.510***	-1.401***	-1.776***	-1.686***	-1.850***	-1.602***	-1.769***
	(0.253)	(0.215)	(0.252)	(0.200)	(0.248)	(0.217)	(0.188)	(0.209)	(0.182)	(0.218)
proportion busy	0.361	-1.237	0.555	1.191*	-1.416	0.323*	0.180	0.324*	0.339**	-0.902
	(0.757)	(0.763)	(0.410)	(0.604)	(1.365)	(0.184)	(0.319)	(0.167)	(0.145)	(0.627)
board size	0.004	0.003	0.003	0.003	0.004	-0.004	-0.004	-0.004	-0.004	-0.004
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
average tenure	-0.003**	-0.004**	-0.003*	-0.004**	-0.004**	0.000	0.000	0.000	0.000	-0.000
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
average age	0.003	0.004*	0.003	0.003*	0.003*	-0.004**	-0.003**	-0.004**	-0.003**	-0.003*
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
firm size	-0.015	0.003	-0.005	-0.007	-0.012	0.040***	0.035***	0.043***	0.030***	0.037***
	(0.013)	(0.011)	(0.013)	(0.010)	(0.013)	(0.011)	(0.010)	(0.010)	(0.009)	(0.011)
leverage	-0.272***	-0.320***	-0.276***	-0.278***	-0.285***	-0.210***	-0.218***	-0.206***	-0.222***	-0.205***
	(0.079)	(0.078)	(0.081)	(0.076)	(0.079)	(0.059)	(0.059)	(0.059)	(0.059)	(0.059)
total	0.003**				0.006	-0.001				-0.038
	(0.001)				(0.007)	(0.001)				(0.044)
total*proportion busy	0.003				-0.005	-0.002				0.027
	(0.037)				(0.124)	(0.009)				(0.171)
short		0.000			-0.010		-0.003			0.037
		(0.006)			(0.008)		(0.006)			(0.045)
short*proportion busy		0.248**			0.303**		0.022			0.372*
		(0.102)			(0.119)		(0.060)			(0.197)
long			0.002		-0.004			-0.002		0.036
			(0.002)		(0.008)			(0.001)		(0.044)
long*proportion busy			-0.014		-0.023			-0.002		-0.123
			(0.040)		(0.122)			(0.013)		(0.242)
non-equity				0.008***	0.002				0.002	0.041
				(0.003)	(0.007)				(0.002)	(0.044)
non-equity*proportion busy				-0.148					-0.030	
				(0.101)					(0.047)	
R^2	0.229	0.240	0.204	0.260	0.317	0.317	0.313	0.327	0.318	0.362
Adj. R^2	0.133	0.145	0.104	0.168	0.193	0.243	0.239	0.255	0.245	0.263
Num. obs.	118	118	118	118	118	135	135	135	135	135

***p <0.01; **p <0.05; *p <0.1

Note: proportion busy = proportion of busy directors in a corporate boardroom; board size = amount of directors in a corporate boardroom; average tenure = average director tenure; average age = average director age; total = average total compensation; short term = average short-term compensation; long term = average long-term compensation; non equity = average non-equity compensation; firm size = natural logarithm of a firm's total assets; leverage = ratio of total liabilities to total assets

quantity of missing data. Moreover, in Models 5 the interaction term between non-equity compensation and the proportion of busy board members had to be ommitted due to the high multicollinearity it had with the other interaction terms.

The proportion of busy board members was positively and statistically significant in Models 4 for both crises and Models 1 and 3 for the COVID-19 pandemic. However, although statistically insignificant, its relationship with the severity of loss was negative in the full models (Model 5), a result that partially refutes Hypothesis 6 and is contrary to previous evidence (Withisuphakorn and Jiraporn, 2018; Croci et al., 2023). Average total board compensation was not statistically significant in all but one model — specifically, the first model for the GFC. Although total compensation was generally not statistically significant across most estimations, it showed a positive association with the severity of loss, including in the fifth model of the GFC and a negative one for the COVID-19. A positive (negative) relationship suggests that higher total compensation may enhance (jeopardize) financial resilience. The interaction term between total compensation and the proportion of busy board members was not statistically significant, but reversed the direction of total compensation.

Short- and long-term compensations are negatively (positively) related to

the stability of firms during the GFC (COVID-19) while non-equity enhances firm stability during both crises. These results, however, were not statistically significant. The interaction term between short-term compensation and the proportion of busy board members is positively and statistically significant in most cases. This implies that with higher short-term compensation, the negative impact of busy board members is reversed and resilience is improved leading us to not reject Hypothesis 4. While during normality busy board members do not boost financial performance, during crises the contrary occurs with the help of monetary incentives. This finding may be justified by the intensified efforts needed during harsh times. Directors with multiple directorships may feel more overloaded than ever when crises strike, giving preference to those companies that pay more short-term compensation. Nevertheless, it is not long-term or non equity compensation that motivate busy board members. Even though busy board members need monetary incentives during turbulent times, short-term compensation is more valuable to them. All in all, we partially reject Hypothesis 4 considering that busy board members enhance financial resilience when the right monetary incentive is offered to them.

It is also noteworthy to mention the impact of the directors' and firms' characteristics we controlled for. Directors' age is statistically significant during GFC and the COVID-19 pandemic. Nevertheless, the direction of their relationship to the stability of firms is contrary for each crisis. With age comes experience and, therefore, boards with older directors tend to experience less losses - at least during the GFC. For the COVID-19 on the other hand, older directors seemed to hamper financial resilience. On the other hand, tenure is negatively related to the stability of firms during crises with more entrenched directors easing stock prices losses - a result statistically significant for the GFC. As for firms' characteristics, more indebted firms were more exposed to the adverse effects and exhibited more severe losses. Firm size on the other hand is significant only for the COVID-19 pandemic during which bigger firms with more assets were more stable and experienced less losses than smaller firms. However, during the GFC although insignificant, the contrary was observed: bigger firms were less stable than their smaller pairs.

5. Conclusion

We investigate board busyness in firms from 2008 to 2024 to assess the compensation of busy board members and the role they play in firm performance. The results provide evidence that directors holding multiple directorships are awarded greater compensation packages than their non-busy pairs. Considering their expertise, network and vast experience, such a result was

expected and busy directors are appreciated by companies. These evidence take us to not reject Hypothesis 1 and reject Hypothesis 2 in line with (Brick et al., 2006), (Chen and Keefe, 2018) and (Yoon, 2024).

Furthermore, we found evidence that the proportion of busy directors in boards does not impact the performance of firms, rejecting Hypothesis 5, whereas the different compensation components contribute to it. Their interaction is not significant, except in one case where non-equity compensation fosters the operational performance of companies thus partially rejecting Hypothesis 3. Moreover, our results show that busy board members enhance firm resilience, however, only when the right monetary incentive is given to them. We thus partially reject Hypotheses 4 and 6.

We contribute to the growing body of literature on the trade-offs associated with directors holding multiple directorships by examining their compensation and whether they deserve to be paid more than their peers. We find that busy directors are better compensated and because of that, contribute to firm performance. Their primary motivation appears to stem from monetary incentives. Moreover, during crises busy board members also contribute to resilience - but only when their short-term compensation is worth the effort.

Nevertheless, this study is not free of limitations. First, we followed the literature (Fich and Shivdasani, 2006; Field et al., 2013; Ferris et al., 2018) and defined a director as busy if they hold three or more board seats. Under this definition, only a small portion of the sample qualifies as busy (just 0.34%). This translates into a selection bias and low variability of one of the main variables. Future research could differently define busy directors as those holding two or more board seats instead of three, or those with other functions such as the overlapping of roles or functions in one or more companies. Moreover, our analysis focuses exclusively on U.S. corporate boards between 2008 and 2024. Future research could extend this work by examining other countries, exploring different time periods, or conducting comparative analyses. Furthermore, our analysis related to resilience was based on a limited number of observations. We suggest that future research could benefit from alternative modeling approaches, which may allow for a larger sample size and more robust inference. From our findings and limitations, we open the door for a new research agenda on the real benefits busy directors can bring with them and their motivations. We also provide valuable insights to policy makers and practitioners who can, from the evidence obtained here, design strategies and policies on board structure and its diversity to improve firm performance, among other organizational outcomes.

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A. Endogeneity Analysis

Given the structure of our panel and the limited within-firm variation of key variables, the Generalized Method of Moments is infeasible. Similarly, propensity score matching is not appropriate, as there are too few firms classified as "busy" to build a reliable control group. Thus, to address potential endogeneity concerns, we estimate equations 2, and 4 with lagged independent variables (Barros et al., 2020), a method used to mitigate endogeneity bias in the field of study (see, for example, (Li, 2016; Chen et al., 2025)). Moreover, for equation 2 we follow (Ferris et al., 2018, 2020; Chen et al., 2025) and perform the Heckman two-step procedure, whereas for equation 3 we address the endogeneity concerns with first-difference estimations. The results for the Heckman two-step procedure are displayed in Table 7. From the first (selection) step it is observed that predictors of a firm having a busy board are board size, average director age and firm size. Average tenure, on the other hand, is negatively related to the odds of a firm having a busy board. The lack of statistical significance of the inverted Mills ratio indicates that our initial results from Table 3 were not subject to significant sample selection bias (or selection-induced endogeneity).

Heckman Two-Step Procedure									
Selection						Outcome			
(Intercept)	-4.627***	-4.627***	-4.627***	-4.627***	(Intercept)	-838.755	13.372	-1243.896	271.370
	(0.626)	(0.626)	(0.626)	(0.626)		(1623.668)	(109.093)	(2512.969)	(720.523)
board size	0.044***	0.044***	0.044***	0.044***	board size	5.074	-0.175	8.937	-2.600
	(0.012)	(0.012)	(0.012)	(0.012)		(13.166)	(0.873)	(20.437)	(5.849)
average tenure	-0.016***	-0.016***	-0.016***	-0.016***	average tenure	-2.023	0.146	-3.376	0.899
	(0.005)	(0.005)	(0.005)	(0.005)		(4.702)	(0.315)	(7.283)	(2.087)
average age	0.029***	0.029***	0.029***	0.029***	average age	3.880	-0.115	6.252	-1.607
	(0.006)	(0.006)	(0.006)	(0.006)		(8.770)	(0.586)	(13.591)	(3.894)
firm size	0.055**	0.055**	0.055**	0.055**	firm size	14.977	0.362	16.887	-1.188
	(0.027)	(0.027)	(0.027)	(0.027)		(17.133)	(1.123)	(26.660)	(7.618)
leverage	0.092	0.092	0.092	0.092	leverage	11.968	0.610	18.591	-5.072
	(0.123)	(0.123)	(0.123)	(0.123)		(31.639)	(1.957)	(49.788)	(14.126)
inv Mills Ratio	146.898	-4.896	245.578	-67.131	R2	0.522	0.418	0.438	0.288
	(347.496)	(23.687)	(536.081)	(154.024)	Adj. R2	0.483	0.370	0.392	0.229
sigma	135.151	4.747	225.357	61.700	Num. obs.	2571	2571	2571	2571
rho	1.087	-1.032	1.090	-1.088	Censored	2425	2425	2425	2425
Observed	146	146	146	146		146	146	146	146

***p <0.01; **p <0.05; *p <0.1

Table 7
Heckman Two-Step Procedure

Furthermore, the results with lagged independent and control variables for equation 2 are displayed in Table 8 below. As previously in our main results, higher non-equity compensation raises the odds of the board being busy. However, differently of what we found in Table 3, total compensation does not play a significant role.

The results of the first-difference equation 3 are displayed in Table 9. The results are similar to the findings in the main analysis: the proportion of busy directors and the total and long-term compensations are not statisti-

	Model 1	Model 2	Model 3	Model 4	Model 5
(Intercept)	-8.200***	-9.157***	-8.807***	-9.754***	-9.204***
	(2.419)	(2.350)	(2.435)	(2.327)	(2.605)
board size	0.072**	0.073*	0.071**	0.077***	0.076**
	(0.035)	(0.038)	(0.035)	(0.030)	(0.031)
average tenure	-0.022	-0.025*	-0.023	-0.027**	-0.026*
	(0.015)	(0.015)	(0.016)	(0.014)	(0.014)
average age	0.033*	0.034	0.035*	0.035*	0.033
	(0.018)	(0.022)	(0.018)	(0.021)	(0.022)
firm size	0.084	0.129	0.116	0.136	0.113
	(0.102)	(0.097)	(0.101)	(0.084)	(0.099)
leverage	0.464	0.457	0.467	0.441	0.436
	(0.356)	(0.348)	(0.355)	(0.327)	(0.329)
total	0.010				0.021
	(0.006)				(0.069)
short		0.040			-0.009
		(0.055)			(0.091)
long			0.006		-0.018
			(0.008)		(0.069)
nonequity				0.035**	0.012
				(0.017)	(0.071)
sigma	2.028***	2.019***	2.006***	2.244***	2.215***
	(0.272)	(0.286)	(0.283)	(0.364)	(0.371)
Log Likelihood	-358.974	-359.788	-359.763	-358.065	-357.909
AIC	743.947	745.577	745.526	742.131	747.818

***p <0.01; **p <0.05; *p <0.1

Table 8
Compensation of Busy Board with Lagged Variables

cally significant. Specifically, the interaction between long-term compensation and director busyness is also not significant, while short-term and non-equity compensations are found to enhance financial and operational performance. However, in contrast to the main findings, the first-difference estimation brings to light the importance of the interaction between compensation packages and busyness. Specifically, the interaction of short-term and non-equity compensation with busyness yields positive results for firm performance—results that are superior to those achieved by the compensation packages alone. Moreover, the interaction between total compensation and busyness is positive in Models 1 and negative in Models 5, with this relationship being statistically significant in certain instances.

Finally, for the lagged version of equation 4, the results can be found in Table 10. Due to our dataset beginning in 2008, this regression concerns the

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10
(Intercept)	−0.640**	−0.652**	−0.625**	−0.660**	−0.657**	−0.658***	−0.669***	−0.653***	−0.670***	−0.671***
	(0.264)	(0.264)	(0.265)	(0.263)	(0.263)	(0.244)	(0.243)	(0.244)	(0.243)	(0.243)
proportion busy	−14.140	−19.867	−0.949	−5.701	−16.603	−6.505	−14.423	3.189	−6.561	−11.130
	(9.921)	(12.502)	(8.718)	(8.120)	(12.749)	(9.148)	(11.524)	(8.029)	(7.495)	(11.767)
board size	−0.255**	−0.266**	−0.271**	−0.258**	−0.264**	−0.309***	−0.312***	−0.318***	−0.306***	−0.322***
	(0.106)	(0.106)	(0.106)	(0.106)	(0.106)	(0.098)	(0.098)	(0.098)	(0.097)	(0.098)
average tenure	−0.127**	−0.139**	−0.132**	−0.124**	−0.146***	−0.039	−0.048	−0.039	−0.037	−0.051
	(0.055)	(0.055)	(0.055)	(0.055)	(0.055)	(0.050)	(0.051)	(0.051)	(0.050)	(0.051)
average age	−0.019	−0.015	−0.012	−0.024	−0.021	−0.103*	−0.103*	−0.099*	−0.107**	−0.102*
	(0.059)	(0.059)	(0.059)	(0.059)	(0.059)	(0.054)	(0.054)	(0.054)	(0.054)	(0.054)
firm size	8.867***	8.816***	9.026***	8.958***	8.950***	6.170***	6.099***	6.274***	6.216***	6.269***
	(0.827)	(0.822)	(0.828)	(0.818)	(0.825)	(0.763)	(0.758)	(0.763)	(0.755)	(0.762)
leverage	−6.012***	−6.076***	−6.034***	−5.966***	−6.112***	−0.512	−0.569	−0.495	−0.480	−0.510
	(1.388)	(1.387)	(1.391)	(1.383)	(1.383)	(1.280)	(1.278)	(1.281)	(1.277)	(1.277)
total	0.015				−0.255	0.006				−0.220
	(0.023)				(0.176)	(0.021)				(0.163)
total * proportion busy	0.968***				−0.938	0.440				−1.807*
	(0.332)				(1.127)	(0.306)				(1.040)
short		0.433**			0.694***		0.311*			0.536**
		(0.187)			(0.257)		(0.172)			(0.237)
short * proportion busy		4.014**			2.954		2.648*			3.897*
		(1.638)			(2.529)		(1.510)			(2.334)
long			−0.018		0.225			−0.011		0.202
			(0.026)		(0.179)			(0.024)		(0.165)
long * proportion busy			0.689		0.754			−0.057		0.647
			(0.493)		(0.931)			(0.454)		(0.860)
nonequity				0.178***	0.432**				0.093*	0.308*
				(0.059)	(0.185)				(0.054)	(0.171)
nonequity * proportion busy				2.510***	3.277*				1.969***	4.192***
				(0.801)	(1.736)				(0.740)	(1.602)
R^2	0.077	0.079	0.073	0.083	0.089	0.040	0.043	0.039	0.045	0.050
Adj. R^2	0.073	0.075	0.070	0.080	0.082	0.036	0.039	0.035	0.041	0.044
Num. obs.	2020	2020	2020	2020	2020	2020	2020	2020	2020	2020

$^{***}p < 0.01$; $^{**}p < 0.05$; $^{*}p < 0.1$

Table 9
First-Difference for ROA and OROA

COVID-19 pandemic severity of loss, demonstrating that compensation is indeed important for resilience. While Model 5 shows a loss of statistical significance for the stand-alone proportion of busy directors and its interaction with short-term compensation, other significant patterns emerge in the compensation structure. Specifically, we find a positive relationship evidenced by the interaction term between board busyness and total compensation and a negative relationship with the interaction between board busyness and long-term compensation. Our conclusion to partially reject Hypothesis 4 remains: busy directors enhance resilience when the right monetary incentive is offered. Before a crises strikes, long-term and total compensation matter; during the crisis period, however, short-term compensation is the primary driver of directors' motivations.

In general, our conclusions remain robust to the use of alternative estimation techniques and different strategies to address endogeneity. The consistent patterns observed in lagged variable regressions, first-difference estimations, and the Heckman two-step procedure indicate that the core relationships between board busyness, compensation structures, and firm performance are not driven by selection bias or omitted variable concerns. These robustness checks therefore reinforce the validity of our main results and provide greater confidence in our theoretical interpretations.

	Model 1	Model 2	Model 3	Model 4	Model 5
(Intercept)	-1.639***	-1.567***	-1.687***	-1.544***	-1.667***
	(0.221)	(0.193)	(0.209)	(0.187)	(0.217)
proportion busy	-0.075	1.252	0.515	-0.673	1.732
	(0.923)	(1.322)	(0.916)	(0.801)	(1.650)
board size	0.000	-0.000	-0.000	0.001	0.000
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
average age	-0.002	-0.002	-0.002	-0.002	-0.002
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
average tenure	-0.001	-0.001	-0.001	-0.001	-0.001
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
firm size	0.024**	0.020**	0.027**	0.019**	0.026**
	(0.011)	(0.010)	(0.011)	(0.009)	(0.011)
leverage	-0.125**	-0.138**	-0.125**	-0.130**	-0.142**
	(0.055)	(0.054)	(0.054)	(0.055)	(0.055)
total	-0.001				0.016
	(0.001)				(0.018)
total * proportion busy	-0.005				0.177***
	(0.016)				(0.061)
short		0.003			-0.011
		(0.008)			(0.020)
short * proportion busy		-0.212			-0.456
		(0.160)			(0.456)
long			-0.001		-0.018
			(0.001)		(0.018)
long * proportion busy			-0.036		-0.332**
			(0.034)		(0.153)
nonequity				0.000	-0.017
				(0.003)	(0.018)
nonequity *proportion busy				0.011	
				(0.032)	
R2	0.269	0.278	0.280	0.267	0.347
Adj. R2	0.177	0.188	0.190	0.175	0.229
Num. obs.	118	118	118	118	118

***p <0.01; **p <0.05; *p <0.1

Table 10
Severity of Loss during COVID-19 with lagged data