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Busy Board: Evidence from CEOs and Director's Compensation

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Abstract

This paper examines the busy board and compensation for CEO and independent directors. The independent variable is the busy board. The sample cover 12.332 observations during the period from 1996 to 2015. The analysis is used unbalanced panel data. In this paper, the methods that used to prove the hypothesis are using regression and econometric methodology. The results show that firms with busy boards likely to increase the CEO and independent director's compensation. The results also support the hypothesis when eliminating the endogeneity problem. Further, the results are also significant positive when changing the measurement of CEO and independent director's compensation for robustness results. This research suggests that the busy board is weaker the corporate governance.

Keywords	: Busy Board; CEO; Corporate Governance; Excess Compensation;
	Independent Director
JEL Classification	: G15, G30

1. INTRODUCTION

The job of a director in the firm becomes heavy because they need to spend a lot of time. The CNBN mentions that each director spends an average 62.5 hours a week, increase from 44 hours per week according the Bureau of Labor Statistics (Berger, 2018). However, the increases in spending time have not represented the effectiveness of monitoring and advising. In the previous research, a busy board is a director who holds three or more positions in the main firm and outside the firm. Also, the previous studies mention that a busy board is weaker corporate governance. For example, Hong et al. (2016) mention that firms with more friendly board likely to pay higher compensation and direct incentives affective increase CSR (corporate social responsibility) performance.

This study tested the effect of the busy board on CEO and independent director compensation. The independent variable is a categorical scale. If the firm has a director who holds three or more positions in the firm or outside firm than equals to one and zero if a director who holds less than three positions (Chen and Guay, 2019). To avoid the differences of a firm size and CEO power that could affect the compensation, the measurement of compensation uses the residual from total compensation regression (Hill et al., 2016).

The data is collected 12,332 sample from United States firms between 1996 until 2015. The results show that the busy board is significant and positive on CEO and independent director's compensation. Further, the firms with the higher busy board likely weaker the corporate governance roles and likely to pay the CEO and independent director's higher salaries to maintain their loyalty to the firms and avoid them move to other firms. For the robustness results, in this paper also control firm, corporate governance, and independent director characteristics. For example, one standard deviation increases in busy board increase 54.69% of CEO's compensation and 61.14% of independent director's compensation.

One of the main concerns is the endogeneity problem. One method that allows to address this problem is the Propensity Score Matching (PSM) method. PSM is the method that allows to address the sample selection bias (Lin et al., 2018). Further, the dependent variable that measures by residual value from total compensation regression with the excess compensation. The excess compensation for CEO is the salary, bonus, or both. The excess compensation for independent directors is cash, stock, option, and equity.

The contributions of this research included: first, this is the first research that examines the effect of a busy board on CEO and independent director's compensation. The measurement not only uses the nominal of the compensation that the CEO and independent directors received but also use the excess compensation and residual value from total compensation regression. Hill et al. (2016) mention that uses the nominal of the compensation is associated with the CEO power and firm size and the excess compensation is not economically justified. In this paper also control several variables include firm characteristics, corporate governance characteristics, and independent director characteristics. When all control variables run into the regression, the busy board still have a strong and significant effect on CEO and independent director's compensation. These results also support Hong et al. (2016) that weak corporate governance allows increases compensation. Second, this study also contributes to the corporate governance literature. The busy board representative the weak corporate governance monitoring and advising. Third, this study also extends the compensation literature. The busy board is a director that has a lot of network connection that firm trusted to serve as an independent director.

2. HYPOTHESES DEVELOPMENT

Busy board

In the previous research found that the benefits and threats from the busy board. Garner et al. (2017) mention that busy board reflect a weaker corporate governance in the firms. Hauser (2018) mention that reduce the independent director's activities in other firms increase the primary firm's profit. This is because the independent directors are more focus to monitoring and advising the firms. Further, the CEO who hold a position in other firms also increases the profit for the primary firms if the CEO reduce their activities in other firms. Chen and Guay (2019) find the satisfaction of stakeholders is lower if the independent directors hold a position in other firms because their time is limited. However, the stakeholders agree that independent directors who hold several positions in other firms likely to decrease the firm performance and firm's value (Hauser, 2018; Masulis and Zhang, 2019; Stein and Zhao, 2019).

On the other hand, previous studies also mention the benefits of a busy board. Elyasiani and Zhang (2015) mention that the benefits of busy boards are (1) primary firms with located in the central of the business district are likely to hire busy independent director form other firms, (2) the busy board provides monitoring and advising that can increases the quality of the loans that can reduce the default risk, (3) the busy board also has the ability to face in the crisis period, and (4) busy board is not proven to increase the probability of troubled director. Chakravarty and Rutherford (2017) mention that busy board has a ability to obtain more and higher quality advice, thus gaining higher trust which can reduce the costs. Ferris et al. (2020) mention that busy board is decrease the firm's profit, but not for new firms because their need more advise.

Corporate governance

Hong et al. (2016) find that lower stockholders likely to pay higher compensation for CEO to increases their performance in the society and the society activities can be profitable for the firms and reduce the costs. Halioui et al. (2016) mention that the structure of the corporate governance and the compensation for CEO has an effect on reducing the tax aggressiveness. Friendly board and busy board are also categorized as weaker corporate governance. Based on the previous studies, the hypothesis are as follows:

H₁: Busy board increases CEO compensation.

H₂: Busy board increases independent director's compensation.

3. METHOD, DATA, AND ANALYSIS

Sample and data

This study uses secondary data from the public firm listed on the New York Stock Exchange (NYSE), NASDAQ, and the American Stock Exchange (AMEX). The firm characteristics data come from the Compustat database. CEO and director data come from the RiskMetrics database. Further, the stock price data comes to the Center for Research in Security Prices (CRSP). The total sample in this study was 12,332 observations during the period from 1996 to 2015 (excluding financial firm with the SIC code 6000-6999). For balanced panel data is required all firm available from 1996 until 2015 and the number of samples will be drastically reduced. In this study using unbalanced panel data is to avoid the number of missing data. The benefit of uses panel data is that results are generalizable.

Busy board measurement

The Busy board is a director that hold three or more position in the outside of the firms. This measurement is following by Chen and Guay (2019) and busy board is a dummy variable. To measure the busy board, the variable set one if the director who holds three or more positions and set zero if the director who holds less than three position. The reason why using the busy board is following Chen and Guay (2019) than busy boards are difficult to allocate their time to monitoring and advising the firms.

Compensation measurement

The dependent variables in this research are compensation for CEO and independent directors. First, the excess compensation for CEO is measure by estimate the residual value from total compensation regression that includes firm size, ROA, leverage, board size, board independency, board age board tenure, female director, and year and industry fixed effects. Second, the excess compensation for the independent director is measure by the estimate of the residual value from total compensation regression that includes firm size, ROA, leverage, board size, board independency, board age board tenure, female director, and year and industry fixed effects.

Control variables

Based on the previous studies, the control variables include firm, corporate governance, and independent director characteristics that influences the busy board on compensation for CEO and independent directors. All of variables are uses in firm *i* with year *t*-1. The firm characteristics include: (1) return on assets (*ROA*) is the total income divided by total assets. (2) one-year stock return (*Return*) is the return in one year. (3) leverage (*Lev*) is the total debts divided by total assets. (4) dividend (*Div*) is the total dividend divided by total assets. (5) firm size (*FS*) is the one plus logarithm of total assets. The corporate governance characteristics include: (1) board size (*BZ*) is the one plus logarithm of total number of board size. (2) board independent director characteristics include: (1) female director (*FD*) is equal to one if the have a female director and zero is otherwise. (2) director age (*DA*) is the one plus logarithm of average age of independent directors. (3) director tenure (*DT*) is the one plus logarithm of average tenure of independent directors.

4. **RESULTS**

Statistic descriptive

Table 1 shows the statistic descriptive of the busy board, compensation for CEO, compensation for independent directors, and control variables. All of the variables are winsorized at 1% and 99% to address the outliers. The average of the busy board (*BB*) is 0.0017 with 0.4980 of standard deviation. The average of excess compensation for the CEO (*ECC*) is 0.0017. the average of excess compensation for independent directors (*ECID*) is 0.0006. Both of the average compensation for CEO and independent directors are higher than industry average compensation. The average *ROA* is 5.25% and *Return* is 12.38%. the average dividend (*Div*) is 34.47%. the average board size (*BS*) is 8 directors with 74.46% are independent directors.

Variable	N	Mean	Min	Max	Std Dev
ECC	11,759	0.0017	-6.0556	4.2517	0.9647
ECID	11,377	0.0006	-6.5200	4.5758	0.7391
BB	12,332	0.0017	0.0000	1.0000	0.4980
ROA	12,290	0.0525	-0.3209	0.2577	0.0804
Return	12,215	0.1238	-0.7694	1.7450	0.4183
Lev	12,253	0.2191	0.0000	0.7116	0.1709
Div	12,259	0.3447	0.0000	5.7975	1.0072
FS	12,290	6.9035	0.0000	11.6270	1.4896
BS	12,328	2.1705	0.0000	3.2958	0.2836
BI	12,328	0.7446	0,2500	1.0000	0.1541
FD	12,328	0.6861	0.0000	1.0000	0.4641
DA	12,328	4.0040	0.0000	4.4037	0.3521
DT	12,328	2.0442	0.0000	3.4340	0.6436

All of the variable is winsorized at 1% and 99%.

Table 2 shows the difference t-test. Mostly the variables are significant at 1% level. The result shows that the busy board is positive and significantly on compensation for CEO and independent directors.

Variable	High BB	Low BB	mean diff	t-stat
ECID	0.2180	-0.1833	0.4013***	(22.98)
ECC	0.0941	-0.0789	0.1730***	(12.52)
ROA	0.0503	0.0543	-0.0040***	(-2.74)
Return	0.1132	0.1327	-0.0195***	(-2.56)
Lev	0.2458	0.1968	0.0490***	(15.98)
Div	0.5227	0.1966	0.3261***	(18.08)
FS	7.0127	6.8124	0.2003***	(7.44)
BS	2.2387	2.1052	0.1435***	(28.91)
BI	0.7757	0.7187	0.0570***	(20.80)
FD	0.7863	0.6024	0.1839***	(22.34)
DA	4.0004	4.0069	-0.0065	(-1.02)
DT	2.1414	1.9630	0.1784***	(15.48)

Table 2. High and low busy board characteristics

This table show the difference between high and low busy board. Superscripts *, **, and *** means significance at the 10%, 5%, and 1% levels.

Busy board and compensation for CEO and independent directors

To analyze the effect of a busy board on compensation for CEO and independent directors, a model developed as follows:

 $ECC_{i,t} = \alpha_0 + \alpha_1 BB_{i,t-1} + \boldsymbol{\theta}' \boldsymbol{Z}_{i,t-1} + \gamma_i + \mu_t + \varepsilon_{i,t},$

 $ECID_{i,t} = \alpha_0 + \alpha_1 BB_{i,t-1} + \boldsymbol{\theta}' \boldsymbol{Z}_{i,t-1} + \gamma_i + \mu_t + \varepsilon_{i,t},$

(2)

Notes:

- $ECC_{i,t}$ = the excess compensation estimated by the residual value for total compensation for CEO regression.
- $ECID_{i,t}$ = the excess compensation estimated by the residual value for total compensation for independent director regression.
- $BB_{i,t-1}$ = a dummy variable than equal to one if the director who holds three or more positions and zero if the director who holds less than three positions.
- $Z_{i,t-1}$ = the control variables from corporate governance characteristics and firm characteristics.
- γ_i = the industry fixed effect.
- μ_t = the year fixed effect.
- $\varepsilon_{i,t}$ = the error of the regression.

Table 3 and Table 4 show that the coefficient of the busy board is significant on compensation for CEO and independent directors. The coefficient of 0.0937 and 0.2051 means that the busy board is positive and significant on compensation for CEO and independent directors. Further, the firms with a high busy board increase a 54.69% ($e^{(0.0937)}x$ 0.4980) compensation for the CEO per one standard deviation. Also, the firms with a busy board increase a 61.14% ($e^{(0.2051)}x$ 0.4980) compensation for independent directors per one standard deviation. Therefore, the increases in the busy board on compensation for CEO and independent directors are economically important. Firms are likely to pay higher compensation to the CEO and independent directors to keep them stay in the firms. These results also support to Acharya and Volpin (2010).

	(1)	(2)	(3)	(4)
Constant	0.2480	-0.1197	-0.6300	-0.6926*
	(0.65)	(-0.49)	(-1.42)	(-1.92)
BB	0.1856***	0.1348***	0.1145***	0.0937***
	(7.41)	(5.52)	(4.75)	(3.95)
ROA		0.5584***		0.6184***
		(3.63)		(4.14)
Return		0.1590***		0.1652***
		(7.03)		(7.32)
Lev		0.0837		0.0184
		(0.95)		(0.22)
Div		0.1062***		0.0925***
		(7.15)		(6.09)
FS		0.0893***		0.0879***
		(9.44)		(9.13)
BS			0.1974***	0.0518
			(3.44)	(0.85)
BI			0.5811***	0.5683***
			(4.15)	(4.18)
FD			0.0501	0.0318
			(1.38)	(0.91)
DA			0.0335	0.0424
			(0.64)	(0.69)
DT			-0.1501***	-0.1755***
			(-4.31)	(-5.19)
Control for:				
Year FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Obs.	11,377	11,227	11,377	11,227
Adj. R ²	0.0274	0.0689	0.0517	0.0886

Table 3. Busy board and compensation for CEO

Where the dependent variable is compensation for CEO (*ECC*). *BB* is a dummy variable than equal to one if the director hold three or more position and zero if the director hold less than three positions. γ_i , μ_t , and $\varepsilon_{i,t}$ are firm and year fixed effect and the error of the regression. Superscripts *, **, and *** means significance at the 10%, 5%, and 1% levels.

	(1)	(2)	(3)	(4)
Constant	0.4150	-1.4171***	-1.8440***	-2.7322***
	(1.17)	(-4.16)	(-4.96)	(-6.87)
BB	0.4188***	0.2800***	0.2629***	0.2051***
	(12.77)	(9.74)	(8.49)	(7.36)
ROA		1.7277***		1.7542***
		(10.54)		(10.70)
Return		0.3906***		0.3954***
		(16.64)		(16.73)
Lev		0.3903***		0.2665**
		(3.64)		(2.53)
Div		0.3015***		0.2565***
		(12.37)		(10.80)
FS		0.2025***		0.1826***
		(15.89)		(14.12)
BS			0.7516***	0.3998***
			(11.00)	(6.26)
BI			0.6452***	0.5530***
			(4.78)	(4.55)
FD			0.1136***	0.0689**
			(2.96)	(2.04)
DA			0.0807	0.0851
			(1.51)	(1.42)
DT			-0.0468	-0.0931**
			(-1.08)	(-2.39)
Control for:				
Year FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Obs.	11,759	11,601	11,759	11,601
Adj. R ²	0.0565	0.2166	0.1144	0.2364

Table 4. Busy board and compensation for independent directors

Where the dependent variable is compensation for CEO (*ECID*). *BB* is a dummy variable than equal to one if the director hold three or more position and zero if the director hold less than three positions. γ_i , μ_t , and $\varepsilon_{i,t}$ are firm and year fixed effect and the error of the regression. Superscripts *, **, and *** means significance at the 10%, 5%, and 1% levels.

Endogeneity problem

In this part, the busy board sorted into high (treatment) and low (control) with a busy board. Matching uses 4 different methods: (1) Nearest neighbor (n=1), (2) Nearest neighbor (n=2), (3) Gaussian Kernel, and (4) Kernal Epanechnikov. Panel A and B of Table 5 show the differences between treatment and control firms.

Table 5. Propensity score matching (PSM)

Panel A Matching estimation: differences of Compensation_ID between treatment and control firms				
Matching Methods	Treatment	Control	Difference	t-Statistics
Near neighbour (n=1)	0.0915	0.0300	0.0615***	(2.83)
Near neighbour (n=2)	0.0915	0.0310	0.0605***	(3.06)
Kernel Gaussian	0.0915	0.0099	0.0816***	(4.98)
Kernel Epanechnikov	0.0915	0.0215	0.0700***	(4.04)
Panel B Matching estimation: differences of Compensation_CEO between treatment and control				
firms				

Matching Methods	Treatment	Control	Difference	t-Statistics
Near neighbour (n=1)	0.2129	0.0802	0.1327***	(4.67)
Near neighbour (n=2)	0.2129	0.0463	0.1666***	(6.54)
Kernel Gaussian	0.2129	0.0189	0.1940***	(9.15)
Kernel Epanechnikov	0.2129	0.0402	0.1727***	(7.75)

Superscripts *, **, and *** means significance at the 10%, 5%, and 1% levels.

Robustness tests

To shows that the busy board is significant and positive on CEO and independent director's compensation, the excess compensation for CEO and independent directors divided into: (1) salary excess compensation for CEO, (2) bonus excess compensation for CEO, (3) salary and bonus excess compensation for CEO, (4) cash excess compensation for independent directors, (5) stock excess compensation for independent directors, (6) option excess compensation for independent directors, and (7) equity excess compensation for independent directors. In Table 6, the results still support the hypothesis. The higher busy board increase the excess compensation for CEO and independent directors.

Table 6. Robustness tests

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	CEO	CEO	CEO Salary +	ID Cash	ID Stocks	ÎD	ID
	Salary	Bonus	Bonus	1D Cush	ID SLOCKS	Options	Equity
Constant	-1.1354***	-1.0414***	-1.2263***	- 0.8148***	- 3.4972***	0.4702	-0.5583
	(-3.76)	(-3.13)	(-4.04)	(-4.01)	(-5.29)	(0.79)	(-1.35)
BB	0.0794***	0.1207***	0.0922***	0.0709***	0.2221***	-0.0084	0.1106***
	(5.63)	(4.25)	(5.80)	(3.11)	(4.40)	(-0.13)	(4.42)
ROA	0.3505***	0.8422***	0.4138***	0.0894	0.4888	1.5388***	1.0779***
	(3.70)	(4.64)	(4.19)	(0.66)	(1.61)	(3.95)	(6.32)
Return	0.0932***	0.2995***	0.1492***	-0.0073	0.0501	0.1921***	0.2226***
	(6.48)	(10.18)	(9.64)	(-0.38)	(1.31)	(3.79)	(8.86)
Lev	0.0951*	-0.2079*	0.0738	0.0522	0.7150***	-0.7212***	-0.1864*
	(1.69)	(-1.90)	(1.15)	(0.60)	(3.92)	(-2.92)	(-1.79)
Div	0.1231***	0.1369***	0.1404***	0.1027***	0.1787***	-0.0569	0.1091***
	(11.53)	(6.37)	(11.62)	(6.28)	(6.14)	(-1.31)	(5.50)
FS	0.0888***	0.1054***	0.0982***	0.0712***	0.1126***	0.0227	0.0877***
	(13.90)	(8.84)	(13.75)	(7.53)	(5.49)	(0.78)	(7.36)
BS	0.1996***	0.1536**	0.2195***	0.2308***	0.4804***	-0.3007**	-0.0865
	(5.65)	(2.31)	(5.37)	(4.56)	(4.19)	(-2.05)	(-1.12)
BI	0.2341***	0.1921	0.1355*	0.1130	1.6834***	0.2819	0.3628***
	(3.21)	(1.35)	(1.69)	(0.95)	(8.08)	(0.99)	(2.67)
FD	0.0474***	0.0610	0.0638***	0.1218***	0.2187***	-0.0383	-0.0353
	(2.61)	(1.57)	(3.07)	(3.71)	(3.28)	(-0.45)	(-0.97)
DA	0.0246	-0.0202	-0.0074	0.0594*	0.1161	0.0281	0.0208
	(0.93)	(-0.55)	(-0.29)	(1.78)	(0.86)	(0.28)	(0.37)
DT	-0.0583***	-0.0613	-0.0395*	0.0038	- 0.3235***	0.0361	- 0.1171***
	(-2.93)	(-1.55)	(-1.71)	(0.12)	(-4.99)	(0.43)	(-3.13)
Control for:	× ,	× ,			. ,		. ,
Year FÉ	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	11,597	10,792	11,597	11,714	11,701	11,713	10,608
Adj. R ²	0.1824	0.0620	0.1754	0.0891	0.1165	0.0214	0.0690

Where the dependent variables are the excess salary for CEO (*CEO Salary*), the excess bonus for CEO (*CEO Bonus*), the excess salary and bonus for CEO (*CEO Salary* + *Bonus*), the excess cash for independent directors (*ID Cash*), the excess stocks for independent directors (*ID Stocks*), the excess options for independent directors (*ID Excess*), and the excess equity for independent directors (*ID Equity*). *BB* is a dummy variable than equal to one if the director hold three or more position and zero if the director hold less than three positions. γ_i , μ_t , and $\varepsilon_{i,t}$ are firm and year fixed effect and the error of the regression. Superscripts *, **, and *** means significance at the 10%, 5%, and 1% levels.

5. DISCUSSION

In the Table 3 and 4, the results show that the busy board increases the CEO and independent director's compensation. This means that the firm's with higher busy board is weaker the corporate governance roles. The independent directors spend a limited time in the firms and less monitoring and advising. Further, to keep their position, both CEO and independent directors likely to create a friendly board, where the independent director may serve more than three position in other firms and both can increase their compensation. This results also support the previous studies from Hong et al. (2016) and Garner et al. (2017). The results address the endogeneity problem. One of the problems is the selection bias. For the robustness tests, the excess compensation for CEO (ECC) and independent directors (ECID) are replace with are the excess salary for CEO (CEO Salary), the excess bonus for CEO (CEO Bonus), the excess salary and bonus for CEO (CEO Salary + Bonus), the excess cash for independent directors (ID Cash), the excess stocks for independent directors (ID Stocks), the excess options for independent directors (ID Options), and the excess equity for independent directors (ID Equity). Further, the results are support the hypothesis that higher busy board increase the excess compensation for CEO and independent directors. Finally, the busy board is poorer corporate governance.

6. CONCLUSION

The previous studies discuss the influences of corporate governance. The proxy for busy board and define the excess compensation for CEO and independent directors following the previous studies. The results show that a higher busy board increases excess compensation for CEO and independent directors. The busy board has limited time in monitoring the firm's activity. In the other side, the firm pay higher compensation to prevent CEO and independent directors move to other firms and prevent the entry of new firm in similar industries. In addition, use the Propensity Score Matching (PSM) method to eliminate the sample selection bias and the results still support the hypothesis. Overall, this paper provides evidence that a busy board has a positive effect on excess compensation for CEO and independent directors.

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Variable	Definition	Data source
Independent var	iable	
BB	A dummy variable than equal to one if the director who holds three or more positions and zero if the director who holds less than three positions.	Risk-Metrics
Dependent varia	bles	
ECC	The excess compensation estimated by the residual value for total compensation for CEO regression.	Risk-Metrics
ECID	The excess compensation estimated by the residual value for total compensation for independent director regression.	Risk-Metrics
CEO Salary	The excess salary estimated by the residual value for total salary for CEO regression.	Risk-Metrics
CEO Bonus	The excess bonus estimated by the residual value for total bonus for CEO regression.	Risk-Metrics
CEO Salary + Bonus	The excess salary and bonus estimated by the residual value for total salary and bonus for CEO regression.	Risk-Metrics
ID Cash	The excess cash estimated by the residual value for total cash for independent director regression.	Risk-Metrics
ID Stocks	The excess stocks estimated by the residual value for total stocks for independent director regression.	Risk-Metrics
ID Options	The excess options estimated by the residual value for total options for independent director regression.	Risk-Metrics
ID Equity	The excess equity estimated by the residual value for total equity for independent director regression.	Risk-Metrics
Firm characterist	ics	
ROA	The total income divided by total assets.	Compustat
Return	The return in one-year.	Compustat & CRSP
Lev	The total debts divided by total assets.	Compustat
Div	The total dividend divided by total assets.	Compustat
FS	The one plus logarithm of total assets.	Compustat
Corporate govern	nance characteristics	
BZ	The one plus logarithm of total board size.	Risk-Metrics
BI	The total independent directors divided by number of board size	Risk-Metrics
Independent dire	ector characteristics	
FD	A dummy variable than equal to one if the firm have a female director and zero if otherwise.	Risk-Metrics

Appendix A: Variable definition

DA	The one plus logarithm of average age of independent directors.	Risk-Metrics
DT	The one plus logarithm of average tenure of independent directors.	Risk-Metrics