1. Introduction

Corporate managers have incentives to improve investors' perceptions of company value. They are then likely to obfuscate negative information. However, the ability of managers to hide bad news is limited. When the accumulated bad news reaches a tipping point, it will be suddenly released to the market all at once, resulting in an abrupt decline in stock price. Jin and Myers (2006) and Hutton et al. (2009) show that agency problems, combined with financial opacity lead to a firm-specific stock price crash. Recently, Al Mamun et al. (2020) provide evidence that CEO power is positively associated with stock price crash risk (SPCR, hereafter) on the U.S. Indeed, in widely held companies, the CEO has a discretionary power to make strategic decisions and may act opportunistically. However, the power of managers depends on the ownership structure, and no study has so far focused on more concentrated ownership companies in which a controlling shareholder may exercise his power. Our research aims to fill this gap by focusing on the power of decision-maker (i.e. the CEO in dispersed structure and controlling shareholder in concentrated structure). Our objective is to investigate the effect of powerful decision-makers on the stock price crash risk and whether corporate governance devices influence this relationship.

The general idea of this paper is that powerful decision-makers use their power to serve their interests by hoarding bad news, which in turn increases SPCR. In widely held ownership structure, the separation between decision and ownership leads managers to behave opportunistically. Managers have then high incentives to hide bad news to reach a performance threshold specified in offsetting contracts, and to improve managerial career prospects (Kothari et al., 2009). Powerful CEOs are then likely to use their power to divert corporate resources for their interests and to hide bad news, which can result in a stock price crash.

In a more concentrated ownership structure, the conflict of interests arises between controlling shareholders and minority ones (Shleifer and Vishny, 1986). Joe et al. (2018) suggest that in a concentered ownership structure, the CEO is either part of the controlling group or appointed by this group. In addition, the controlling shareholders have direct access to company resources and exert their control over executives. The controlling shareholder has also the ability to expropriate minority interests and seek to hide his expropriation activities through opaque reporting (Leuz et al., 2009; Hong et al., 2017). In this sense, Bona-Sánchez et al. (2011) suggest that ownership concentration is associated with less conservative accounting policy. The expropriation by controlling shareholders of minority interests leads to an increase in their power and will result in a SPCR. We then expect that manager and controlling shareholders in respectively widely held and concentrated ownership structures increase the SPCR.

We further analyze the effect of two governance devices likely to curb the opportunistic behavior of powerful decision-makers. These devices can discipline decision-makers, protect shareholders, and constrain bad news hoarding (Kim et al., 2011a; Andreou et al., 2016; Kim et al., 2019). We focus on analyst's coverage and the board of directors as moderators on the relationship between powerful decision-makers and the SPCR. First, financial analysts act as informational intermediaries and are likely to mitigate information asymmetry and enhance the firm's informational environment. Analyst coverage is deemed to improve the quality of released information (Hong et al., 2000; Dyck et al., 2010; Yu, 2008). Second, board independence is considered as an effective corporate governance device likely to decrease conflicts of interests and agency problems. Independent directors can indeed quickly detect hidden bad news (Beekes et al., 2004; Dimitropoulos and Asterioua, 2010) and they are able to resolve conflict of interests between managers and shareholders and between the controlling shareholders and minority ones (Kole and Lehn, 1997).

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How do powerful decision-makers affect firm's stock price crash risk?

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Abstract

This paper investigates the effect of decision-makers' power on the stock price crash risk (SPCR). Using a sample of French listed companies, the results show that SPCR increases with the power of decision-makers in widely held and more concentrated ownership structures. This result suggests that for expropriation purposes, powerful managers and controlling shareholders conceal bad news for extended periods. Up to a threshold, bad news is released to investors all at once, leading to a drop in the stock prices. We also find that analysts' coverage mitigates the effect of powerful managers on SPCR in widely held firms. However, the relationship between the power of controlling shareholders and SPCR is less prevalent in companies with independent boards. These findings highlight the importance of efficient governance devices to curb opportunistic decision-makers and protect the interests of external shareholders. However, the effectiveness of these mechanisms depends on the identity of the decision-maker and the nature of agency problems.

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This paper contributes to the literature in several ways. First, this study extends previous research by Al Mamun et al. (2020) on the US context dominated by widely held ownership structures. We rather focus on the power of decision-makers in both widely held and concentrated ownership structures on SPCR. Second, our study might be of interest to standard setters and regulators in terms of financial reporting and governance. Our results show that SPCR increases with the power of decision-makers and that the effectiveness of governance mechanisms depends on the shareholder structure. Regulators may thus draw on our results to increase corporate transparency and the effectiveness of corporate governance to constrain powerful decision-makers and protect shareholders' interests.

The remainder of this paper is organized as follows: Section 2 describes the sample and presents the variables and their measures. Section 3 presents and discusses our findings. The last section concludes the paper.

2. Data and research design

2.1. Data

This study was initially based on all listed French companies belonging to the CAC-All Shares index. This sample has undergone several restrictions. These restrictions bring our final sample to 252 firms over a 10-year period from 2007 to 2016 that is, 2,520 observations. Data on governance mechanisms (board of directors' characteristics and executive compensation) and data on the shareholding structure were hand-collected from annual reports of listed French companies. The accounting and financial information were extracted from the Thomson One database. Finally, data on financial analysts' coverage were extracted from the DataStream database.

2.2. Variables' measurement

2.2.1. Crash measures

We first estimate the firm-specific weekly returns for each firm and year because we are interested in firm-specific return crash. Specifically, the firm-specific weekly return, denoted *W*, is defined as the natural logarithm of one plus the residual from the following expanded market model:

$$r_{ij} = \alpha_i + \beta_{1i}\, r_{m(j-2)} + \beta_{2i}\, r_{m(j-1)} + \beta_{3i}\, r_{mj} + \beta_{4i}\, r_{m(j+1)} + \beta_{5i}\, r_{m(j+2)} + \beta_{6i}\, r_{s(j-2)} + \beta_{7i}\, r_{s(j-1)} + \beta_{8i}\, r_{sj} + \beta_{9i}\, r_{s(j+1)} + \beta_{10i}\, r_{s(j+2)} + \varepsilon_{ij} \qquad (1)$$

Where, r_{ij} is the return on stock *i* in week *j*, r_{mj} is the return on the market index in week *j*, r_{sj} is the return on the industry index in week *j*.

The first measure, *CRASH,* is an indicator variable that equals to one if a firm experiences one or more crash weeks during the fiscal year, and 0 otherwise. We define crash weeks in a given fiscal year for a firm as those weeks during which the firm experiences firm-specific weekly returns that lower than 3.2 standard deviations below the mean firm-specific weekly returns over the entire fiscal year, with 3.2 chosen to generate a frequency of 0.1 percent in the normal distribution (Kim et al., 2016).

The second measure is the asymmetric volatility of negative versus positive returns[1] (*DUVOL)*. The variable *DUVOL* is the natural logarithm of the ratio of the standard deviation of the down weeks to the standard deviation of the up weeks.

$$DUVOL_{it} = \log\{(n_u-1)\textstyle\sum_{down} w^2_{ij} / (n_d-1)\sum_{up} w^2_{ij}\} \qquad (2)$$

[1] For each firm *i* over a fiscal year *t*, we separate all the weeks with firm-specific weekly returns below the annual mean ("down" weeks) from those with firm-specific returns above the annual mean ("up" weeks) and calculate the standard deviation for each of these subsamples separately.

2.2.2. Decision-makers' power measure

The power of decision-makers is measured first by excessive compensation (*EXCESSCOMP*) estimated using the model of Brick et al. (2006). The latter document that excessive compensation is the difference between total compensation and predicted compensation based on firm and governance characteristics. Second, we use excess control (*EXCESSCON*) defined as the difference between the ultimate control and cash-flow rights of the first largest shareholder[2], scaled by ultimate control rights.

2.2.3. Control variables

To capture the potential persistence of the firm-specific stock price crash, we control for the past firm-specific stock price crash (*CRASH* or *DUVOL*). We also include the past volatility of firm-specific weekly returns (*SIGMA)* and the past average of firm-specific weekly returns (*RET)*. Finally, we include (one-period lagged values of): *SIZE* is firm size, *ROA* is income before extraordinary items divided by lagged total assets, *MTB* is the market to book ratio, *OPACITY is* the absolute value of discretionary accruals, where discretionary accruals are estimated by the modified Jones (1991) model.

2.3. Model specification

We use panel data regression equations to test our prediction based on Generalized Least Squares (GLS) and Probit estimations depending on the nature of the SPCR variable. We use the following models:

$$Crash_{it} = \beta_0 + \beta_1\, POWER_{it-1} + \beta_2\, Crash_{it-1} + \beta_3\, SIGMA_{it-1} + \beta_4\, RET_{it-1} + \beta_5\, SIZE_{it-1} + \beta_6\, ROA_{it-1} + \beta_7\, MTB_{it-1} + \beta_8\, OPACITY_{it-1} + \sum Year\ fixed\ effect + \sum Firm\ fixed\ effect + \acute{\varepsilon}_{it} \quad (3)$$

$$Crash_{it} = \beta_0 + \beta_1\, POWER_{it-1} + \beta_2\, ANALYST\ or\ BOARD_{it-1} + \beta_3\, POWER_{it-1} * ANALYST\ or\ BOARD_{it1} + \beta_4\, Crash_{it-1} + \beta_5\, SIGMA_{it-1} + \beta_6\, RET_{it-1} + \beta_7\, SIZE_{it-1} + \beta_8\, ROA_{it-1} + \beta_9\, MTB_{it-1} + \beta_{10}\, OPACITY_{it-1} + \sum Year\ fixed\ effect + \sum Firm\ fixed\ effect + \acute{\varepsilon}_{it} \quad (4)$$

With: i = 1,…, 252 and t = 2007,…, 2016. β_0: the model constant. ε_{it}: the error term.
Crash is either the CRASH or DUVOL measure.

3. Empirical results

3.1. Descriptive statistics

Table 1 presents the characteristics of our 10-year sampled firms. The proportion of the *CRASH* variable represents the percentage of firms that experienced at least one stock price crash during the year. Over the entire period of the study, 16.58% of French companies have gone through at least one stock price crash each year. The average of variable *DUVOL* is equal to -0.038.

As for our decision-makers' power proxies, the average of excessive compensation reaches a value 13.320 where the excessive control ratio is on average 16.1%. With respect to moderating variables, we observe that the average proportion of independent directors is 40.63%. Lastly, on average 8 financial analysts cover the stocks of French companies.

3.2. Main regression analysis

3.2.1. Power of decision-makers and SPCR

To test the relationship between powerful managers and SPCR, we estimate equation (3) for each crash risk measure. Columns 1 and 3 of Table 2 show a positive and significant effect of CEO power on both measures of SPCR in widely held companies. This result suggests that the conflicts

[2] Following Chen and Jaggi (2001), we consider a company with concentrated ownership when one or more shareholders hold more than 10% of voting rights.

of interests between shareholders and managers in widely held firms may lead the CEO to privilege his own interests at the expense of external shareholders. Indeed, a powerful CEO has the ability and the incentives to hide bad news and poor performance for opportunistic purposes leading to price falls. This result supports the agency perspective and is consistent with Al Mamun et al. (2020), who show that highly powered managers behave opportunistically by withholding bad news leading to an increase in the SPCR.

Columns 2 and 4 of Table 2 show the effect of the controlling shareholders' power, measured by the excess control on the SPCR in more concentrated ownership structures. The excess control gap is positively and significantly associated at the 1% level with the SPCR. This result supports the expropriation hypothesis of minority interests. The lock made by the controlling shareholders on the company facilitates bad news hoarding, which ultimately leads to a stock price crash (Boubaker et al., 2014). Our results are different from those found by Gao et al. (2017) in the Chinese context. Indeed, the authors were testing the alignment hypothesis between majority and minority shareholders using the voting rights held by large shareholders. In our study, we focus instead on the conflict of interests between controlling and minority shareholders using the excess control as a proxy for the expropriation behavior of the controlling shareholder.

All in all, our findings show that the power of the decision-maker is important in determining the SPCR. Our findings support the agency explanations of SPCR that the conflict of interests between external shareholders and decision-makers leads to a high crash risk both in widely held firms and in more concentrated ownership structures.

As for control variables, the results show that the most volatile stocks are more likely to experience a stock price crash. This finding is in line with Chen et al. (2001). The SPCR is negatively associated with the stock market performance. The results show that size positively affects the SPCR, suggesting that large companies are more likely to attract investors' attention when disclosing hidden bad news. Firm performance negatively affects the stock price crash. Finally, we show that SPCR increases with the opacity of the company.

3.2.2. The moderating effect of governance mechanisms

Table 3 presents the results for the model in equation (4) that tests moderating effect of analyst's coverage on the decision-makers power and SPCR relationship. Table 3 shows that the interaction term between excess compensation and analyst coverage is negative and significant for both SPCR measures at the 10% level. This result suggests that in presence of high analyst coverage, the relationship between managerial power and SPCR turns negative. Analysts coverage is then important for controlling powerful managers by preventing them hiding bad news. Second, Table 3 reports the results regarding the moderating effect of analysts' coverage on the relationship between the power of the controlling shareholders and SPCR, our results show that the interaction term (*EXCESSCON*ANALYST*) is not significant. These findings suggest that analyst's coverage mitigates the agency conflicts between managers and shareholders and is an effective governance mechanism in widely held companies. However, controlling shareholders are under less pressure from financial analysts.

We now examine the moderating effect of board independence. First, we examine this moderating effect on the relationship between managerial power and SPCR. The interaction terms coefficients (*EXCESSCOMP*BOARD*) are not significant. These results mean that independent directors are under the control and pressure of powerful managers in widely held companies. CEOs can indeed easily appoint directors with whom he has social relations while passing them off as independent regarding legal provisions. In this case, legal independence is only facade independence (Vanappelghem et al., 2017). Second, Table 4 shows that under independent boards, the effect of

powerful controlling shareholders on the SPCR is less pronounced. It seems that independent board members play a crucial monitoring role in overseeing controlling shareholders' decisions in French companies. Board independence is more effective in mitigating conflicts between controlling shareholders and minority shareholders.

3.3. Robustness checks

Alternative measure of crash risk: we perform robustness checks using an alternative SPCR measure. We use the negative skewness of firm-specific weekly returns (*NCSKEW*). Specifically, we calculate *NCSKEW* for a given firm *i* in a fiscal year *t* by taking the negative of the third moment of firm-specific weekly returns for each sample year and dividing it by the standard deviation of firm-specific weekly returns raised to the third power.

$$NCSKEW_{it} = - [n (n-1)^{3/2} \sum w^3_{ij}] / [(n-1) (n-2) (\sum w^2_{ij})^{3/2}] \qquad (5)$$

Table 5 shows that the results of decision-makers' power on SPCR remain qualitatively the same using this alternative measure of crash.

GMM regression: We use the Generalized Method of Moments (GMM) to address the endogeneity concerns. This method controls individual and temporal specific effects. Two tests are associated with the dynamic panel GMM estimator: the Sargan test and the Arellano and Bond test, which examines the validity of late dependent variable as an instrument variable. Table 5 shows that the results remain unchanged.

4. Discussion and conclusion

The purpose of this paper is to investigate the effect of powerful decision-makers on the SPCR for a sample of 252 French companies listed over a period from 2007 to 2016. First, we show that the CEO power has a positive effect on the SPCR in widely held companies. Moreover, in a more concentrated ownership structure, the result shows that excess control by the largest shareholder is positively associated with SPCR. These findings suggest that powerful decision-makers in widely held and more concentrated ownership structures are likely to hoard bad news for expropriation purposes, which leads to stock price falls.

The results also show that analyst coverage mitigates the effect of powerful decision-makers on the SPCR only in widely held firms. The effect of powerful decision-makers is also found to be less prevalent for firms with independent boards under large shareholder concentration. Our results support that the effectiveness of governance mechanisms depends on ownership structure's type.

This study has practical implications. Policymakers may draw on our results to increase the effectiveness of corporate governance of French-listed companies to protect shareholders' interests and constrain powerful decision-makers, especially in a setting where investors' rights are poorly protected.

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Table 1. Descriptive statistics

This table reports the descriptive statistics for SPCR, Power of decision-makers measures, and control variables. The sample covers 252 French firms observations from 2007 to 2016. All variables are defined in the Appendix.

Variables		Mean	SD	Min	Max
DUVOL		-0.038	0.440	-2.147	2.225
EXCESSCOMP		13.320	1.280	0	18.336
EXCESSCON		0.161	0.215	-0.416	0.960
ANALYST		8.396	9.026	0	40
BOARD		40.631	22.983	0	100
SIGMA		0.0441	0.026	-0.044	0.451
RET		-0.0001	0.007	-0.049	0.036
SIZE		13.609	2.721	3.519	21.455
ROA		0.035	8.589	-0.863	1.798
MTB		2.384	4.212	-6.820	26.361
OPACITY		0.052	0.151	0	0.857
Variables		**Proportion**	**SD**	**Conf-interval**	
CRASH	0	0.834	0.007	0.819	0.848
	1	0.166		0.152	0.181

Table 2. Powerful decision-makers and SPCR

This table reports the panel data regression results of the impact of decision-makers power on crash risk. The sample covers 252 French firms observations from 2007 to 2016. All variables are defined in the Appendix. The Z-statistics reported in parentheses. ***, **, * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

	$CRASH_t$		$DUVOL_t$	
$EXCESSCOMP_{t-1}$	0.474***		0.156***	
	(7.14)		(11.15)	
$EXCESSCON_{t-1}$		0.450*		0.632***
		(1.80)		(4.73)
$CRASH_{t-1}$	-0.099	-0.244		
	(-0.86)	(-1.32)		
$DUVOL_{t-1}$			-0.076***	0.077
			(-2.93)	(1.61)
$SIGMA_{t-1}$	3.545*	2.641*	0.664*	-0.512***
	(1.72)	(1.78)	(1.89)	(-0.50)
RET_{t-1}	-44.422***	-60.271***	-22.711***	-19.805***
	(-6.70)	(-7.03)	(-16.21)	(-7.15)
$SIZE_{t-1}$	-0.098***	0.054*	-0.017	-0.044***
	(-4.17)	(1.86)	(-0.66)	(-0.64)
ROA_{t-1}	0.264	-0.025*	0.326**	0.294
	(0.76)	(-1.75)	(2.55)	(1.29)
MTB_{t-1}	0.010	0.016**	-0.001	-0.002
	(0.81)	(2.15)	(-0.14)	(-0.52)
$OPACITY_{t-1}$	0.557***	0.305**	0.401*	0.523*
	(3.62)	(2.08)	(1.67)	(1.80)
Constant	-6.240***	-3.514***	-1.923**	0.580
	(-8.07)	(-2.38)	(-4.95)	(0.58)
Year fixed effects	Yes	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes
N	790	1730	790	1730
Adj R^2	0.1232	0.1363	0.1755	0.1500

Table 3. The moderating effect of analyst's coverage

This table reports the panel data regression of the moderating effect of analyst's coverage on the relationship between decision-makers power and crash risk. The sample covers 252 French firms observations from 2007 to 2016. All variables are defined in the Appendix. ***, **, * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

	$CRASH_t$		$DUVOL_t$	
$EXCESSCOMP_{t-1}$	0.462***		0.167***	
	(6.54)		(9.60)	
$EXCESSCOMP_{t-1}$*$ANALYST_{t-1}$	-0.087*		-0.063*	
	(-1.92)		(-1.96)	
$EXCESSCON_{t-1}$		0.471*		0.954***
		(1.77)		(3.87)
$EXCESSCON_{t-1}$*$ANALYST_{t-1}$		0.024		0.016
		(0.34)		(1.58)
$ANALYST_{t-1}$	-0.157***	-0.105	0.023	-0.160***
	(-3.45)	(-0.77)	(0.81)	(-0.88)
$CRASH_{t-1}$	-0.101	-0.236		
	(-0.85)	(-1.27)		
$DUVOL_{t-1}$			-0.073***	-0.075
			(-2.85)	(-1.57)
$SIGMA_{t-1}$	3.429*	2.783*	0.694*	0.613
	(1.71)	(1.85)	(1.85)	(1.60)
RET_{t-1}	-44.160***	-60.782***	-22.749***	-19.484***
	(-6.71)	(-7.17)	(-16.19)	(-7.03)
$SIZE_{t-1}$	-0.062**	0.015	-0.017	-0.057
	(-2.20)	(0.18)	(-0.65)	(-0.81)
ROA_{t-1}	0.309	-0.016	-0.328**	0.290
	(0.84)	(-1.18)	(-2.56)	(1.27)
MTB_{t-1}	0.010	0.017**	0.001	0.002
	(0.50)	(2.07)	(0.10)	(0.49)
$OPACITY_{t-1}$	1.053**	9.499**	0.402	0.174*
	(2.18)	(2.14)	(1.28)	(-1.69)
Constant	-6.468***	-3.103***	-2.046***	0.693*
	(-7.20)	(-1.85)	(-5.01)	(2.13)
Year fixed effects	Yes	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes
N	790	1730	790	1730
Adj R^2	0.1418	0.1383	0.1838	0.1703

Table 4. The moderating effect of board independence

This table reports the panel data regression of the moderating effect of board independence on the relationship between decision-makers power and crash risk. The sample covers 252 French firms observations from 2007 to 2016. All variables are defined in the Appendix. ***, **, * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

	$CRASH_t$		$DUVOL_t$	
$EXCESSCOMP_{t-1}$	0.517***		0.133***	
	(5.31)		(6.47)	
$EXCESSCOMP_{T-1}$ *$BOARD_{t-1}$	-0.084		0.068	
	(-0.58)		(1.35)	
$EXCESSCON_{t-1}$		2.003***		1.245***
		(2.66)		(6.47)
$EXCESSCON_{T-1}$*$BOARD_{T-1}$		-3.687**		-1.682***
		(-2.54)		(-4.56)
$BOARD_{t-1}$	-0.924	-0.211**	-1.084*	-0.203*
	(-1.38)	(-2.48)	(-1.78)	(-1.72)
$CRASH_{t-1}$	-0.111	-0.225		
	(-0.93)	(-1.32)		
$DUVOL_{t-1}$			-0.075***	0.064
			(-2.93)	(1.38)
$SIGMA_{t-1}$	3.662*	2.732	0.805*	0.732
	(1.71)	(0.81)	(1.80)	(0.73)
RET_{t-1}	-44.497***	-58.606***	-22.472***	-19.146***
	(-6.72)	(-6.91)	(-16.10)	(-7.15)
$SIZE_{t-1}$	-0.104***	0.075	-0.007	-0.009
	(-4.35)	(1.29)	(-0.22)	(0.14)
ROA_{t-1}	0.283	-0.113*	0.373	0.286
	(0.81)	(-0.13)	(1.19)	(1.30)
MTB_{t-1}	0.011	0.015*	-0.021	0.014
	(0.97)	(1.89)	(-0.14)	(0.51)
$OPACITY_{t-1}$	0.496	3.566**	0.373	0.962*
	(1.55)	(2.29)	(1.19)	(1.73)
Constant	-6.609***	-4.006**	-1.663***	0.192
	(-5.34)	(-2.59)	(-3.80)	(0.20)
Year fixed effects	Yes	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes
N	790	1730	790	1730
Adj R^2	0.1392	0.1455	0.1718	0.2646

Table 6. Robustness checks

This table reports the panel data regression results of the impact of decision-makers power on crash risk. The sample covers 252 French firms observations from 2007 to 2016. All variables are defined in the Appendix. The Z-statistics reported in parentheses. ***, **, * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

	Alternative measure of SPCR		**GMM regression**	
	$NCSKEW_t$		**$DUVOL_t$**	
$EXCESSCOMP_{t-1}$	0.182***		0.126***	
	(3.57)		(3.76)	
$EXCESSCON_{t-1}$		0.425***		0.781***
		(4.13)		(4.13)
$CRASH_{t-1}$	0.064*	0.078*		
	(1.81)	(1.90)		
$DUVOL_{t-1}$			0.160***	0.154***
			(5.24)	(5.05)
$SIGMA_{t-1}$	0.671***	0.778***	2.761***	1.422**
	(3.22)	(3.11)	(2.91)	(2.31)
RET_{t-1}	-2.211	-3.312*	-22.010	-21.731***
	(-1.33)	(-1.79)	(-1.20)	(-11.20)
$SIZE_{t-1}$	0.061	0.069	0.048	-0.071
	(1.54)	(1.02)	(-1.15)	(-1.11)
ROA_{t-1}	0.071	0.065	0.192	0.134
	(0.54)	(0.32)	(0.53)	(0.76)
MTB_{t-1}	0.036***	0.028***	-0.018	-0.021
	(4.15)	(3.18)	(-0.84)	(-1.11)
$OPACITY_{t-1}$	0.345***	0.423***	0.387	0.260
	(2.76)	(3.02)	(1.46)	(0.37)
Constant	-1.235	-2.163	0.612	0.561
	(-1.12)	(-1.22)	(1.46)	(0.89)
Year fixed effects	Yes	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes
N	790	1730	790	1730
Adj R^2	0.0632	0.0712	-	-
Sargan test	-	-	31.136 (0.70)	30.446 (0.73)
AR1	-	-	-8.914 (0.00)	-9.364 (0.00)
AR2	-	-	0.884 (0.38)	0.785 (0.43)