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IMPACT OF CASH HOLDINGS ON FIRM VALUE: ROLE OF ELECTION INDUCED POLITICAL UNCERTAINTY

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ABSTRACT

This paper uses presidential elections as the proxy for political uncertainties to investigate the impact of election induced political uncertainties on the relationship between cash holdings and firm value for a sample of non-financial firms from the U.S. The findings suggest that the impact of cash holdings on firm value goes down significantly during the years of presidential elections. This finding, however, is confined only to elections in which both presidential candidates are new and for firms headquartered in the states that have always voted for the Democrat candidates in the presidential elections. Furthermore, our findings suggest that the impact of political uncertainties on the relationship between cash holdings and firm value does not hold for gubernatorial elections. Our results are robust after including number of firm-specific and country-specific control variables and after taking into account potential endogeneity concerns.

Keywords: Cash holdings, Presidential elections, Political uncertainty, Information asymmetry

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INTRODUCTION

This paper is an attempt to document the effect of political environment on managerial decisions at the corporate levels. More specifically, we provide firm-level evidence on how political uncertainty surrounding presidential elections affect the cash holdings on firm value (value of cash holdings) in the U.S. The presidential elections are exogenous events that are associated with increased uncertainty in the financial markets (Durnev, 2013; Baloria & Mamo, 2017; Farooq & Ahmed, 2019). In this paper, we argue that presidential elections affect the value of cash holdings by exacerbating the information asymmetries surrounding the firm. The divergence in the expected economic policies of competing political parties leads to the deterioration in information environment during the periods of elections (Farooq & Ahmed, 2019). Due to this uncertainty, managers tend to adjust their cash policies (Myers & Majluf, 1984; Jensen, 1986; Huang et al., 2014; Chung et al., 2015). The underlying reason behind adjusting the cash policies is that political uncertainty increases the cost of external financing (Gilchrist et al., 2014; Pástor & Veronesi, 2013; Brogaard & Detzel, 2015). Therefore, firms are inclined to increase their cash holdings to buffer against any shocks that might emerge due to political uncertainty. Moreover, when faced with uncertainty, firms may delay investments (Bernanke, 1983; Dixit & Pindyck, 1994; Gulen & Ion, 2016). This delay in investments may also lead to an increase in cash holdings. The delay in investments may be either due to increased value of option to wait or due to adverse selection problems that arise because of increased uncertainty (Bloom et al., 2007; Bloom, 2009). Myers and Majluf (1984) argue that adverse selection leads managers to hoard cash by bypassing the issuance of undervalued securities to raise external capital. Large cash holdings serve as a precautionary motive to avoid passing up positive Net Present Value (NPV) projects. This strand of literature would expect positive impact of uncertainty on the value of cash holdings. Im et al. (2017), for example, document significantly higher values of cash holdings for firms facing higher levels of uncertainty. In contrast to the arguments, there is significant amount of literature that predicts the opposite. Drobetz et al. (2010) argues that uncertainty can lower the value of cash holdings by exacerbating the agency conflicts due to more severe information asymmetries. Higher information asymmetries provide means and incentives to managers to misuse cash (Jensen, 1986). Xingquan and Zhaonan (2008) and Xu et al. (2016) also document negative impact of information asymmetries on the value of cash holdings. The arguments underlying this strand of literature are based on the assumption that it is relatively hard for stock market participants to monitor managers when uncertainty is high. Therefore, it is not desirable to leave large amount of cash at the expense of managers in uncertain environments.

In this paper, we extend the mentioned strand of literature by focusing on an important type of uncertainty—election induced political uncertainty—in the United States. Using the data covering six presidential elections (1996 to 2017), we document that the impact of cash holding of firm value goes down significantly during the years of presidential elections. We argue that the disadvantages of holding high amount of cash become more pronounced during these years. In other words, the agency costs associated with holding high cash lessen the precautionary benefits associated with holding high cash during the election years. Our results are also robust after including number of firm-specific and country-specific control variables. The findings also hold after controlling for potential endogeneity concerns.

Our findings also suggest that the effect of election induced uncertainties on the values of cash holdings are less pronounced in the states that have always voted for the Democrat presidential nominee than in the states that always vote for the Republican presidential nominee. These findings imply that firms headquartered in the Democrat leaning states are more sensitive to agency problems that arise due to presidential elections than firms headquartered in the Republican leaning states. Furthermore, our findings indicate that all of the adverse impact of election induced uncertainties on the value of cash holdings comes from those elections in which both of the candidates are new. This result is consistent with the conclusion made by Gelman and King (1990), who argue that when an incumbent president is not seeking a re-election, the likelihood of party turnover tends to be higher leading to higher political uncertainty. We also show that governor's election at the state-level (gubernatorial elections) have relatively lesser impact on the value of cash holdings. Our findings suggest that the extent of cash holdings affect firm values more negatively during the years of presidential elections than during the years of gubernatorial elections. These findings are consistent with Waisman et al. (2015), who argue that, because of nationwide influence of presidential elections, the uncertainty accompanied with these elections dominate the uncertainty accompanied with gubernatorial elections.

Our work is, to some extent, similar to the recent literature on political uncertainty and its impact on cash holdings (Phan et al., 2019; Demir & Ersan, 2017; Xu et al., 2016). However, unlike this strand of literature, we use presidential election as a special case of political uncertainty. We believe that our measure of political uncertainty is superior because it does not suffer from endogeneity concerns. Baloria and Mamo (2017) and Durnev (2013) note that the advantage of focusing on the presidential elections in the United States is that they are exogenous political events. They argue that the presidential elections in the United States are exogenous because they are conducted on pre-determined

time. Furthermore, unlike most of prior studies on the relationship between policy uncertainty and cash holdings, we focus on the value of cash holdings, rather than the cash holdings themselves. By focusing on the impact of cash holdings on firm value, we hope to increase our understanding on what should firms do when they anticipate the political uncertainty to increase. Our findings do not support the arguments that firms should increase their cash holdings during uncertain times. Our results indicate that stock market participants do not value the increase in cash holdings as much in uncertain times as they do it in normal periods. Therefore, the optimal decision of firms must not be to reduce current investments and increase the cash holdings in preparation for undertaking postponed investments in future.

HYPOTHESIS DEVELOPMENT AND LITERATURE REVIEW

During the recent years, corporate cash holdings have received increased attention in literature (Phan et al., 2019; Demir & Ersan, 2017; Chung et al., 2015; Huang et al., 2014). This particular interest has arisen due to the fact that firms have started to hold large amounts of cash in their balance sheets. Dittmar and Mahrt-Smith (2007), for example, document that cash and cash equivalents constitute more than 13% of total assets for large publicly traded firms in the U.S. In another study, Hoberg et al. (2014) report that publicly traded firms in the U.S. hold cash balances in excess of USD1.3 trillion. In this section, we build our arguments regarding the implications of this behaviour for firm value during the years of presidential elections.

Presidential Elections and Information Asymmetry

Prior literature argues that presidential elections significantly contribute to information uncertainties in financial markets (Farooq & Ahmed, 2019; Obradovic & Tomic, 2017; Julio & Yook, 2012). Most of these information uncertainties arise because political parties competing in elections, generally, have differing preferences for economic policies. For example, the right-winged political parties advocate protecting the interests of dominant classes, while the left-winged political parties champion the rights of lower classes of society (Dettrey & Palmer, 2015; Bartels, 2008). Farooq and Ahmed (2019) argue that differences in the economic policies of potential winners can induce significant uncertainty about the post-election economic environment.

We argue that, anticipating the uncertainty regarding electoral outcome, firms can change their behaviour significantly during the election years (Jens, 2017; Baloria & Mamo, 2017; Li et al., 2016; Durnev, 2013). For instance, firms can decrease their investment expenditures, delay their projects, pay lower taxes

and reduce hiring in response to the electoral uncertainties. It has been argued that modification in the behaviour of firms occurs because uncertainties regarding post-election economic environment oblige firms to change their interactions with capital providers, competitors, customers, suppliers and regulators (Farooq & Ahmed, 2019). One implication of the changes in firm behaviour during the election years is that investors will find it hard to decode the possible outcomes of managerial decisions. Therefore, the confidence about fundamentals of the firm (such as expected cash flows, their growth rates, and discount rates) may decline, thereby creating information asymmetries. Furthermore, the information asymmetries between managers and investors are expected to exacerbate during these years because managers know more than investors about how change in political regime would affect their firms.

Another reason behind increased information uncertainties during the election years stem from the fact that stock prices are less informative during these years. There is a large strand of literature that has studied the linkage between political uncertainty and the volatility of equity markets. Bialkowski et al. (2008), Pástor and Veronesi (2013) and Smales (2014), for instance, conclude that there is a positive relationship between political uncertainty and stock market volatility. Durnev (2013) argues that inability of investors to forecast economic policies of incoming governments is likely to make stock prices noisier during the election years. Mei and Guo (2004) also come to similar conclusion by showing that eight out of the nine financial crises happened during the election periods. They argue that uncertainties associated with uncertain political outcome contributed to making stock prices more volatile during these periods.

Information Asymmetry and the Value of Cash Holdings

This paper argues that information asymmetries that accompany presidential elections have significant implications for the relationship between cash holdings and firm value. Our arguments are based on the assumption that corporate decisions are not always undertaken with an aim to maximise the value of firms. The separation of ownership and control do not always allow managers to act in a way that satisfies the shareholders' interests. The presence of self-interests tempts managers to pursue their own agenda at the expense of shareholders.[1] This temptation can be particularly strong when uncertainty is high (Drobetz et al., 2010). We argue that one of the resources required by managers to fulfill their self-interests is the presence of large cash holdings within firms.[2] Availability of large cash holdings allow managers to avoid capital markets while making investment decisions. As a result, they can freely and self-centredly decide on investments without shareholders' approval (Huang et al., 2014). Jensen (1986) concludes that

holding large amount of cash is consistent with management's interest rather than shareholders' interest. He claims that, if the firm has large cash, managers are more likely to squander it on their own pet projects.

An outcome of squandering cash is that it leads to the destruction of shareholders' wealth and firm value. Harford (1999) and Dittmar et al. (2003) show that cash-abundant firms waste cash on projects that have value-destroying consequences. Lee and Powell (2011) also document value-destroying consequences of high cash holdings. The arguments underlying the negative impact of cash holdings are based on the agency conflicts embedded in modern corporations. Any mechanisms that exacerbate the agency conflicts are likely to reduce the impact of cash on firm value (Dittmar & Mahrt-Smith, 2007; Faulkender & Wang, 2006; Xu et al., 2016). It has been shown that investors value cash at a considerable discount when they expect that managers are likely to expropriate corporate resources. Faulkender and Wang (2006) show that marginal value of cash holdings decreases with increase in the possibility that managers will misuse them. Dittmar and Mahrt-Smith (2007) also document the same by reporting that the value of cash holding goes down when the likelihood of its misuse increase.

In this paper, we argue that manager's ability to misuse cash is a function of the extent of information asymmetries surrounding the firm (Kalcheva & Lins, 2007; Dittmar et al., 2003). The higher the information asymmetries are, the greater is the risk that managers will misuse cash. These information asymmetries can arise not only at the firm-level, but also at the country-level. Highlighting the importance of firm-level information environment, Chen et al. (2015) document that the value of cash holdings is higher for firms with greater analyst coverage. Similar findings are reported by Drobetz et al. (2010) when they show that dispersion in analyst forecasts reduces the value of cash holdings. Higher analyst coverage and lower dispersion in their forecasts are characteristics of lower information asymmetries. In another related study, Xingquan and Zhaonan (2008) document lower value of cash holdings for firms with higher government ownership in China. They attribute this relationship to higher information asymmetries present in firms with higher government ownership. Huang et al. (2014) also come to similar conclusions by showing that the presence of information asymmetries reduces the value of cash holdings. They argue that information asymmetries allow managers to misuse cash, thereby reducing the value of cash holdings. Lundstrum (2003) also complement the findings by arguing that agency costs of cash holdings outweigh the benefits associated with them in firms where information asymmetries are high. Consequently, cash holdings have negative impact on firm values in these firms.

The importance of country-level information environment on the value of cash holdings can be observed in studies that relates investor protection with the value of cash holdings. Pinkowitz et al. (2006), for instance, show that the value of cash in countries with weaker shareholder protection is less than the value of cash in countries with stronger shareholder protection. Kalcheva and Lins (2007) also report value-destroying consequences of cash holdings in countries with weak investor protection. This strand of literature argues that weak protection of shareholder rights leads to an increase in managerial entrenchment. In these countries, managers are more likely to hold cash for self-interest. Therefore, the incremental value of these cash holdings decreases due to high degree of asymmetric information.

Hypothesis

Our arguments suggest that the value of cash holdings is negatively affected by the presence of information asymmetries. Assuming that election years are characterised by high information asymmetries, we hypothesise that the value of cash holdings will be lower in the election years relative to the non-election years.

H1: The impact of cash holdings on firm value (value of cash holding) is lower in election years relative to non-election years.

DATA AND METHODOLOGY

Sample

This paper uses the data for non-financial firms from the U.S. to document the effect of political uncertainty on the value of cash holdings. All non-financial firms for which the relevant data is available were included in the analysis.[3] For the purpose of this paper, we use the data from 1996 to 2017. This time period covers six presidential elections that were held in 1996, 2000, 2004, 2008, 2012 and 2016.

Methodology

This paper argues that political uncertainty (as defined by the years in which presidential elections are held) has a significant impact on the relationship between cash holdings and firm value. In order to test this argument, we estimate various

versions of the following pooled OLS regression.[4] The data used in this paper is obtained from the Worldscope.

$$\begin{aligned} Q = {} & \alpha + \beta_1(\text{PRESIDENT}) + \beta_2(\text{CASH}) + \\ & \beta_3(\text{PRESIDENT} * \text{CASH}) + \beta_4(\text{SIZE}) + \beta_5(\text{LEVERAGE}) + \\ & \beta_6(\text{EPS}) + \beta_7(\text{GROWTH}) + \beta_8(\text{ANALYST}) + \\ & \beta_9(\text{OWNERSHIP}) + \beta_{10}(\text{CAPEX}) + \beta_{11}(\text{DIVIDEND}) + \\ & \beta_{12}(\text{GDP}) + \beta_{13}(\text{GDPGROWTH}) + \beta_{14}(\text{TRADE}) + \\ & \beta_{15}(\text{CREDIT}) + \beta_{16}(\text{SAVINGS}) + \sum_{S=1}^{N-1}\delta_S(\text{SDUM}) + \\ & \sum_{I=1}^{N-1}\theta_I(\text{IDUM}) + \varepsilon \end{aligned} \tag{1}$$

In the mentioned regression, the dependent variable measures the performance of firms. For the purpose of this paper, we use the Tobin's Q as a measure of firm performance. Consistent with prior literature, the Tobin's Q is computed as the market value of equity plus book value of assets minus the book value of equity, scaled by book value of assets (Foucault & Frésard, 2012). The main independent variable of interest in the above regression equation is PRESIDENT*CASH. The coefficient of this variable will indicate whether the cash is valuable or not during the years of presidential elections. The positive coefficient will indicate that cash is valuable and vice versa. This variable is computed by interacting PRESIDENT with CASH. This paper defines PRESIDENT as a dummy variable that takes the value of 1 for years in which presidential elections were held and 0 otherwise. We consider presidential elections as the proxy for political uncertainty (Farooq & Ahmed, 2019; Goodell & Vähämaa, 2013; Li & Born, 2006). For the purpose of this paper, we define CASH as the ratio of cash and cash equivalents to total assets.

In addition to the variables, this paper uses several control variables. For instance, log of firm's total assets (SIZE), total debt to total asset ratio (LEVERAGE), number of analysts covering a firm (ANALYST), percentage of shares held by insiders (OWNERSHIP), and percentage of earnings paid out as dividends (DIVIDEND) to control for the effect of agency problems and information asymmetries.[5] We have argued that the impact of cash on firm value/performance (value of cash holding) is a function of information asymmetries.[6] Therefore, controlling for factors that are related to information asymmetries can make the relationship between cash holding and firm value/performance free of confounding effects. Moreover, earnings per share (EPS), growth in

total assets over the last one year (GROWTH) and capital expenditures to total assets (CAPEX) are also added as control variables. In addition to firm-specific characteristics, the above regression equation also controls for the various year-specific characteristics. These variables are natural logarithm of gross domestic product (GDP), one year change in the GDP (GDPGROWTH), sum of exports and imports of goods and services measured as a share of gross domestic product (TRADE), domestic credit to private sector ratio (CREDIT), and gross national income less total consumption, plus net transfers (SAVINGS). We expect these year-specific characteristics to affect the value of cash holding. Furthermore, the regression equation also incorporates the set of state dummies (SDUM) and the set of industry dummies (IDUM) to control for the effect of state-specific and industry-specific factors.[7]

EMPIRICAL RESULTS

Descriptive Statistics

Table 1 documents the descriptive statistics for the firm-specific variables used in analysis. We show that, relative to election years, firms perform better during the non-election years. We report that the average value of Q is 2.14 in election years and 2.28 in non-election years. Furthermore, we show that the median and average values of EPS and GROWTH are lower during election years compared to non-election years. These observations are consistent with Durnev (2013) who shows that election periods lead to inefficient capital allocation, thereby reducing firm performance. The table also shows that, relative to election years, firms pay lower percentage of their earnings as dividends during the non-election years. We report that the average value of DIVIDEND is 10.99% in election years and 10.56% in non-election years. This observation is consistent with findings of Farooq and Ahmed (2019), where they show that firms respond to political uncertainty by increasing their dividend payout ratios during the years of presidential elections.

Table 2 documents the correlation matrix along with the VIF values for variables used in analysis. Our results show no severe multicollinearity between the control variables. Therefore, we can include all of the variables in regression analysis.

.Table 1
Descriptive statistics

	Election years					Non-election years					
Variables	25th percentile	Mean	Median	75th percentile	Observations	25th percentile	Mean	Median	75th percentile	Observations	Difference in means
Q	1.14	2.14	1.59	2.45	9001	1.20	2.28	1.67	2.60	24183	0.14*** (6.12)
CASH	0.03	0.21	0.11	0.30	9001	0.03	0.22	0.12	0.31	24183	0.01 (1.61)
SIZE	11.15	12.81	12.86	14.43	9001	11.08	12.78	12.82	14.42	24183	–0.03 (–0.94)
LEVERAGE	1.28	19.33	16.16	32.18	9001	0.88	18.74	15.44	30.58	24183	–0.59*** (–2.65)
EPS	–0.13	0.16	0.51	1.56	9001	–0.09	0.32	0.54	1.57	24183	0.16* (1.82)
GROWTH	–2.66	14.96	6	18.67	9001	–2.33	16.15	6.60	19.63	24183	1.19** (2.05)
ANALYST	0	6.87	4	10	9001	0	6.88	4	10	24183	0.01 (0.07)
OWNERSHIP	3.56	23.36	16.72	36.71	9001	4.08	24.11	17.50	38.14	24183	0.75*** (2.65)
CAPEX	1.69	6.09	3.60	7.20	9001	1.59	5.86	3.42	6.97	24183	–0.23** (–2.41)
DIVIDEND	0	10.99	0	16.25	9001	0	10.56	0	15.01	24183	–0.43* (–1.75)

Note: All variables are as defined in Data and Methodology section.

Table 2
Correlation matrix

No.	Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	VIF
1	PRESIDENT	1.00															1.10
2	CASH	–0.01	1.00														1.45
3	SIZE	0.01	–0.32	1.00													2.67
4	LEVERAGE	0.01	–0.38	0.22	1.00												1.23
5	EPS	–0.01	–0.17	0.23	0.01	1.00											1.08
6	GROWTH	–0.01	0.15	0.01	–0.02	0.01	1.00										1.11
7	ANALYST	0.01	–0.10	0.70	0.08	0.15	0.01	1.00									2.15
8	OWNERSHIP	–0.01	–0.01	–0.39	0.01	–0.05	0.01	–0.37	1.00								1.30
9	CAPEX	0.01	–0.15	0.06	0.05	0.04	0.21	0.09	0.03	1.00							1.13
10	DIVIDEND	0.01	–0.18	0.35	0.04	0.14	–0.06	0.21	–0.14	–0.02	1.00						1.17
11	GDP	0.01	0.10	0.11	0.02	0.03	–0.03	0.14	–0.20	–0.12	0.03	1.00					4.20
12	GDPGROWTH	0.01	–0.05	–0.01	0.01	0.03	0.10	–0.02	0.02	0.09	0.01	–0.42	1.00				2.52
13	TRADE	0.09	0.08	0.08	–0.01	0.02	0.01	0.12	–0.17	–0.05	0.02	0.76	–0.25	1.00			2.59
14	CREDIT	–0.17	0.08	0.04	–0.01	0.01	–0.01	0.06	–0.05	–0.08	–0.01	0.66	–0.37	0.46	1.00		2.23
15	SAVINGS	–0.04	-0.04	0.01	0.04	0.03	0.08	–0.01	–0.04	0.09	0.02	–0.25	0.71	–0.19	–0.39	1.00	2.43

Note: All variables are as defined in Data and Methodology section.

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PRESIDENTIAL ELECTIONS AND THE VALUE OF CASH HOLDINGS

Table 3 documents the impact of presidential elections on the value of cash holdings. The main variable of interest in this table is PRESIDENT*CASH. Our findings show significantly negative coefficient of PRESIDENT*CASH for all estimations. It suggests that the effect of cash holdings on the value of firm become less pronounced during the years of presidential elections. The standalone effect of cash holdings on firm value is positive. But this affect become less pronounced during the years of presidential elections. This result is consistent with our expectation that manager's ability to misuse cash increases during the periods characterised by high uncertainty, such as the years in which the presidential elections are held. It should, therefore, lower the value enhancing effect of cash during these years. These findings are consistent with prior literature that associates information asymmetries with the likelihood that managers will misuse the cash (Kalcheva & Lins, 2007; Dittmar et al., 2003).

Table 3
Presidential elections and the value of cash holdings

Variables	Model 1	Model 2	Model 3	Model 4
PRESIDENT	–0.0464**	–0.0506**	0.0115	0.0283
	(–1.98)	(–2.25)	(0.47)	(1.21)
CASH	2.3771***	1.8165***	2.4194***	1.8546***
	(32.55)	(24.29)	(33.12)	(24.77)
PRESIDENT*CASH	–0.3942***	–0.3446***	–0.4149***	–0.3838***
	(–3.24)	(–2.99)	(–3.43)	(–3.35)
SIZE		–0.2481***		–0.2488***
		(–28.20)		(–28.10)
LEVERAGE		–0.0055***		–0.0058***
		(–9.58)		(–9.88)
EPS		0.0043**		0.0038**
		(2.44)		(2.18)
GROWTH		0.0052***		0.0049***
		(17.10)		(16.31)
ANALYST		0.0743***		0.0756***
		(39.83)		(40.60)
OWNERSHIP		–0.0020***		–0.0023***
		(–3.95)		(–4.40)
CAPEX		0.0212***		0.0198***
		(14.12)		(13.21)
DIVIDEND		0.0057***		0.0056***
		(13.58)		(13.45)

(*Continued on next page*)

Table 3 (*Continued*)

Variables	Model 1	Model 2	Model 3	Model 4
GDP			–0.0304 (–0.41)	0.0993 (1.36)
GDPGROWTH			0.0846*** (9.37)	0.0669*** (7.80)
TRADE			–0.0204*** (–4.17)	–0.0412*** (–8.79)
CREDIT			0.0067*** (6.91)	0.0077*** (8.28)
SAVINGS			0.0421*** (5.61)	0.0343*** (4.78)
Industry dummies	Yes	Yes	Yes	Yes
State dummies	Yes	Yes	Yes	Yes
No. of observations	33,184	33,184	33,184	33,184
F-value	70.48	95.82	64.99	91.82
R^2	0.1479	0.2317	0.1591	0.2405
Adjusted R^2	0.1460	0.2300	0.1570	0.2390

Notes: All variables are as defined in Data and Methodology section. The coefficients with 1% significance are followed by ***, coefficient with 5% by **, and coefficients with 10% by *.

Presidential Elections and The Value of Cash Holdings in Different Sub-Samples

In order to highlight the effect of political uncertainty on the value of cash holdings, we divide our sample into two sub-samples. The first sub-sample consists of small firms and the second sub-sample consists of large firms.[8] We re-estimate Equation 1 for both sub-samples. The findings are reported in Table 4. Our findings show that the effect of cash holdings on firm value remains qualitatively the same in both sub-samples. We report significantly negative coefficient of PRESIDENT*CASH for both sub-samples. Furthermore, we also test whether the value of cash holdings is more pronounced in some states versus the others. For the purpose of this analysis, we divide states into two sub-samples. The first sub-sample consists of states that have always voted for the Democrat presidential candidate in the six elections covered in our sample.[9] The second sub-sample consists of states that have always voted for the Republican presidential candidate in the six elections covered in our sample.[10] We re-estimate Equation 1 for both sub-samples. The findings in Table 4 indicate that the effect of cash holdings on firm value is confined only to the firms that are headquartered in states that have always voted for the Democrat presidential candidate. We report significantly negative coefficient of PRESIDENT*CASH for this sub-sample. We argue that

firms headquartered in states that have predominantly Democrat tilt are more likely to notice and take into consideration any characteristic that helps managers in their self-serving endeavours. Our arguments are based on the assumption that residents of these states are more likely to be on the left side of political spectrum. They are more likely to place greater emphasis on issues related to the interests of disadvantaged groups (Giuli & Kostovetsky, 2014). One of the disadvantaged groups is the minority shareholders. These are more likely to be affected by self-serving behaviour of managers. Therefore, they react negatively to a situation that may help managers in their self-serving endeavours. In contrast, the firms that are headquartered in states that have always voted for the Republican presidential candidate show no impact of political uncertainty induced through presidential elections on the value of cash holdings. We report insignificant coefficient of PRESIDENT*CASH for this sub-sample.

Table 4
Presidential elections and the value of cash holdings in different sub-samples

Variables	Sub-samples based on size of firms		Sub-samples based on political orientation of states	
	Small firms	Large firms	Traditionally Democrat states	Traditionally Republican states
PRESIDENT	0.0067 (0.13)	0.0189 (0.84)	0.0356 (1.07)	0.0013 (0.03)
CASH	1.5155*** (14.14)	2.1724*** (22.74)	1.9504*** (20.78)	1.3795*** (8.61)
PRESIDENT*CASH	–0.3860** (–2.49)	–0.3477** (–2.11)	–0.4222*** (–3.11)	–0.1587 (–0.54)
SIZE	–0.5724*** (–24.98)	–0.1939*** (–21.55)	–0.2657*** (–22.20)	–0.2185*** (–13.60)
LEVERAGE	–0.0037*** (–3.07)	–0.0077*** (–13.50)	–0.0063*** (–7.66)	–0.0079*** (–8.70)
EPS	–0.0010 (–0.43)	0.0129*** (7.65)	0.0050** (2.16)	0.0041 (1.56)
GROWTH	0.0055*** (12.73)	0.0035*** (9.99)	0.0047*** (12.49)	0.0045*** (7.38)
ANALYST	0.2654*** (28.02)	0.0584*** (33.00)	0.0883*** (33.77)	0.0528*** (18.09)
OWNERSHIP	–0.0019** (–2.05)	–0.0001 (–0.33)	–0.0026*** (–3.61)	0.0002 (0.22)
CAPEX	0.0258*** (8.94)	0.0150*** (11.52)	0.0297*** (11.85)	0.0145*** (6.73)

(*Continued on next page*)

Table 4 (*Continued*)

Variables	Sub-samples based on size of firms		Sub-samples based on political orientation of states	
	Small firms	Large firms	Traditionally Democrat states	Traditionally Republican states
DIVIDEND	0.0070*** (6.11)	0.0045*** (12.32)	0.0042*** (6.88)	0.0088*** (11.57)
GDP	–0.0977 (–0.65)	0.1842*** (2.64)	0.0125 (0.13)	0.3349** (2.52)
GDPGROWTH	0.1352*** (7.89)	0.0220*** (3.02)	0.0782*** (6.49)	0.05165*** (3.60)
TRADE	–0.0326*** (–3.32)	–0.0470*** (–11.04)	–0.0462*** (–7.08)	–0.0267*** (–3.18)
CREDIT	0.0113*** (6.11)	0.0042*** (5.09)	0.0082*** (6.36)	0.0060*** (3.77)
SAVINGS	–0.0283* (–1.92)	0.0801*** (12.92)	0.0395*** (3.90)	0.0169 (1.37)
Industry dummies	Yes	Yes	Yes	Yes
State dummies	Yes	Yes	Yes	Yes
No. of observations	13,346	19,838	19,257	8,534
F-value	143.39	72.18	107.96	31.11
R^2	0.2405	0.3206	0.2598	0.1851

Note: All variables are as defined in Data and Methodology section. The coefficients with 1% significance are followed by ***, coefficient with 5% by **, and coefficients with 10% by *.

Presidential Elections and the Value of Cash Holdings: Alternate Estimation Procedures

There may be concerns that the cash holdings are endogenously determined. The cash holdings might be correlated with an error term in the regression model or there may exist factors that affect firm value and cash holdings simultaneously. In order to correct for endogeneity, we re-estimate Equation 1 by using the instrumental variable approach. For the purpose of this paper, we identify two instruments. First instrument is the average cash holdings for the industry (excluding the firm itself) and the second instrument is the interaction between PRESIDENT and the average cash holdings for the industry.[11] Table 5 documents the results of our analysis. As was documented before, we report significantly negative coefficient of PRESIDENT*CASH. Furthermore, we use the propensity score matching to estimate Equation 1. In the Table 1, we observe that firms differ in multiple ways across the election and the non-election years. The propensity score matching allows for the matching of treatment and control units with similar values on the

propensity score and the discarding of all unmatched units (Rubin, 2001). It can allow us to reduce the probability that our results are due to factors other than political uncertainty induced through presidential elections. The results in Table 5 confirm our previous findings of the negative coefficient of PRESIDENT*CASH. Lastly, there may be concerns regarding dependencies of unobserved independent variables on a dependent variable. In order to control it, we use the panel data regression with fixed effects. Consistent with the results obtained in the previous tables, we show significantly negative coefficient of PRESIDENT*CASH.

Table 5
Presidential elections and the value of cash holdings: Alternate estimation procedures

Variables	Propensity score matching	Instrument variable regression	Panel regression with fixed effects
PRESIDENT	0.0321 (1.18)	0.0722* (1.91)	0.0206 (1.30)
CASH	1.8437*** (16.50)	4.1996*** (16.97)	1.0221*** (6.82)
PRESIDENT*CASH	–0.2457* (–1.78)	–0.6176*** (–3.17)	–0.4133*** (–4.97)
SIZE	–0.2422*** (–21.22)	–0.2003*** (–18.82)	–0.4786*** (–15.36)
LEVERAGE	–0.0042*** (–6.00)	0.0025** (2.42)	–0.0074*** (–6.92)
EPS	0.0054*** (3.92)	0.0091*** (4.62)	0.0037 (1.55)
GROWTH	0.0049*** (12.75)	0.0038*** (10.98)	0.0039*** (12.53)
ANALYST	0.0725*** (30.38)	0.0685*** (34.33)	0.0436*** (9.13)
OWNERSHIP	–0.0017*** (–2.60)	–0.0016*** (–2.87)	–0.0025** (–2.50)
CAPEX	0.0154*** (10.89)	0.0269*** (15.40)	0.0204*** (9.08)
DIVIDEND	0.0049*** (10.12)	0.0058*** (13.06)	–0.0001 (-0.04)
GDP	0.1471 (1.17)	0.0922 (1.13)	0.5383*** (5.51)
GDPGROWTH	0.1088*** (7.74)	0.0703*** (7.86)	0.0796*** (11.42)
TRADE	–0.0307*** (–5.08)	–0.0459*** (–9.18)	–0.0473*** (–10.67)

(*Continued on next page*)

Table 5 (*Continued*)

Variables	Propensity score matching	Instrument variable regression	Panel regression with fixed effects
CREDIT	0.0047*** (2.35)	0.0065*** (6.75)	0.0090*** (9.45)
SAVINGS	–0.0021 (–0.15)	0.0385*** (5.17)	0.0347*** (5.24)
Industry dummies	Yes	Yes	-
State dummies	Yes	Yes	-
No. of observations	18002	31902	33184
F-value / Wald Chi^2	57.95	6512.46	86.07
R^2	0.2458	0.1972	0.1182

Note: All variables are as defined in Data and Methodology section. The coefficients with 1% significance are followed by ***, coefficient with 5% by **, and coefficients with 10% by *.

ADDITIONAL TESTS

Presidential Elections and the Value of Cash Holdings: Effect of Transition Elections

One can argue that most of the political uncertainties associated with presidential elections are confined to those elections in which both candidates are new. That is, the presidential elections in which the incumbent president is seeking the re-election have lower political uncertainties than presidential elections in which both candidates are new. In order to test this conjecture, we estimate two versions of the following pooled OLS regression. In the first model, we do not include PRESIDENT and PRESIDENT*CASH, while in the second model, all variables are included. In the following regression, TRANSITION is a dummy variable that takes the value of 1 when both candidates are new and 0 otherwise. In our sample, presidential elections held in 2000, 2008 and 2016 were transition presidential elections. Our modified regression equation takes the following form:

$$\begin{aligned} Q = {} & \alpha + \beta_1(\text{PRESIDENT}) + \beta_2(\text{CASH}) + \beta_3(\text{PRESIDENT} * \text{CASH}) + \\ & \beta_4(\text{TRANSITION}) + \beta_5(\text{TRANSITION} * \text{CASH}) + \beta_6(\text{SIZE}) + \\ & \beta_7(\text{LEVERAGE}) + \beta_8(\text{EPS}) + \beta_9(\text{GROWTH}) + \beta_{10}(\text{ANALYST}) + \\ & \beta_{11}(\text{OWNERSHIP}) + \beta_{12}(\text{CAPEX}) + \beta_{13}(\text{DIVIDEND}) + \beta_{14}(\text{GDP}) + \\ & \beta_{15}(\text{GDPGROWTH}) + \beta_{16}(\text{TRADE}) + \beta_{17}(\text{CREDIT}) + \\ & \beta_{18}(\text{SAVINGS}) + \sum_{S=1}^{N-1}\delta_S(\text{SDUM}) + \sum_{I=1}^{N-1}\theta_I(\text{IDUM}) + \varepsilon \end{aligned} \tag{2}$$

Table 6 documents the results of our analysis. The main variables of interest in this table are PRESIDENT*CASH and TRANSITION*CASH. Our findings show that the coefficient of TRANSITION*CASH is always significant and negative, while the coefficient of PRESIDENT*CASH is insignificant. It indicates that cash holdings affect firm values more during the transition presidential elections. These results are consistent with prior literature that argues in favour of higher political uncertainty when the incumbent president is not seeking a re-election (Gelman & King, 1990). Additionally, in their analysis, Dai and Ngo (2021) show that the impact of political uncertainty (proxied by presidential election years) is more pronounced when the incumbent president is not seeking re-election.

Table 6
Presidential elections and the value of cash holdings: Effect of transition elections

Variables	Model 1	Model 2
PRESIDENT		0.0113 (0.36)
CASH	1.8448*** (26.05)	1.8541*** (24.76)
PRESIDENT*CASH		–0.0682 (–0.44)
TRANSITION	0.0381 (1.31)	0.0284 (0.72)
TRANSITION*CASH	–0.6040*** (–4.28)	–0.5449*** (–2.83)
SIZE	–0.2484*** (–28.07)	–0.2484*** (–28.07)
LEVERAGE	–0.0057*** (–9.82)	–0.0057*** (–9.83)
EPS	0.0038** (2.17)	0.0038** (2.17)
GROWTH	0.0049*** (16.26)	0.0049*** (16.26)
ANALYST	0.0756*** (40.60)	0.0756*** (40.59)
OWNERSHIP	–0.0022*** (–4.30)	–0.0022*** (–4.30)
CAPEX	0.0200*** (13.28)	0.0200*** (13.28)
DIVIDEND	0.0056*** (13.38)	0.0056*** (13.38)

(*Continued on next page*)

Table 6 (*Continued*)

Variables	Model 1	Model 2
GDP	0.1196 (1.63)	0.1196 (1.63)
GDPGROWTH	0.0616*** (7.18)	0.0618*** (7.02)
TRADE	–0.0430*** (–9.20)	–0.0429*** (–9.08)
CREDIT	0.0077*** (8.55)	0.0077*** (8.29)
SAVINGS	0.0369*** (5.21)	0.0368*** (5.10)
Industry dummies	Yes	Yes
State dummies	Yes	Yes
No. of observations	33,184	33,184
F-value	92.36	90.07
Adjusted R^2	0.2410	0.2410

Note: All variables are as defined in Data and Methodology section. The coefficients with 1% significance are followed by ***, coefficient with 5% by **, and coefficients with 10% by *.

Presidential Elections and the Value of Cash Holdings: Effect of Elections During the Crisis Years

The presidential elections held in 2000 and 2008 also coincided with the financial crises. In this section, we test whether the effect of political uncertainty on the value of cash holdings in higher during the crisis years. In order to test this conjecture, we two versions of the following pooled OLS regression. In the first model, we do not include PRESIDENT and PRESIDENT*CASH, while in the second model, all variables are included. In the following regression, CRISIS is a dummy variable that takes the value of 1 for years 2000 and 2008 and 0 otherwise. Our modified regression equation takes the following form:

$$\begin{aligned} Q = {} & \alpha + \beta_1(\text{PRESIDENT}) + \beta_2(\text{CASH}) + \\ & \beta_3(\text{PRESIDENT} * \text{CASH}) + \beta_4(\text{CRISIS}) + \\ & \beta_5(\text{CRISIS} * \text{CASH}) + \beta_6(\text{SIZE}) + \beta_7(\text{LEVERAGE}) + \\ & \beta_8(\text{EPS}) + \beta_9(\text{GROWTH}) + \beta_{10}(\text{ANALYST}) + \\ & \beta_{11}(\text{OWNERSHIP}) + \beta_{12}(\text{CAPEX}) + \beta_{13}(\text{DIVIDEND}) + \\ & \beta_{14}(\text{GDP}) + \beta_{15}(\text{GDPGROWTH}) + \beta_{16}(\text{TRADE}) + \beta_{17}(\text{CREDIT}) + \\ & \beta_{18}(\text{SAVINGS}) + \sum_{S=1}^{N-1}\delta_S(\text{SDUM}) + \sum_{I=1}^{N-1}\theta(\text{IDUM}) + \varepsilon \end{aligned} \tag{3}$$

Table 7 documents the results of our analysis. The main variables of interest in this table are PRESIDENT*CASH and CRISIS*CASH. Our findings show that the coefficient of PRESIDENT *CASH is significant and negative, while the coefficient of CRISIS*CASH is insignificant in Model (2) – the most comprehensive model. It indicates that the elections held during the crisis years have no effect on the relationship between political uncertainty and the value of cash holdings.

Table 7
Presidential elections and the value of cash holdings: Effect of elections during the crisis years

Variables	Model 1	Model 2
PRESIDENT		0.0593**
		(–2.25)
CASH	1.7955***	1.8545***
	(26.17)	(24.78)
PRESIDENT*CASH		–0.2861**
		(–2.25)
CRISIS	–0.0509	–0.0959**
	(–1.27)	(–2.10)
CRISIS *CASH	–0.5875***	–0.3605
	(–2.92)	(–1.62)
SIZE	–0.2483***	–0.2482***
	(–28.04)	(–28.03)
LEVERAGE	–0.0057***	–0.0057***
	(–9.82)	(–9.82)
EPS	0.0036**	0.0036**
	(2.06)	(2.08)
GROWTH	0.0049***	0.0049***
	(16.34)	(16.31)
ANALYST	0.0754***	0.0754***
	(40.47)	(40.46)
OWNERSHIP	–0.0022***	–0.0022***
	(–4.22)	(–4.23)
CAPEX	0.0199***	0.0199***
	(13.22)	(13.24)
DIVIDEND	0.0056***	0.0056***
	(13.46)	(13.44)
GDP	–0.0499	–0.0403
	(–0.65)	(–0.51)
GDPGROWTH	0.0579***	0.0580***
	(6.68)	(6.57)

(*Continued on next page*)

Table 7 (*Continued*)

Variables	Model 1	Model 2
TRADE	–0.0323*** (–6.36)	–0.0330*** (–6.47)
CREDIT	0.0083*** (9.26)	0.0083*** (8.80)
SAVINGS	0.0363*** (5.11)	0.0365*** (5.09)
Industry dummies	Yes	Yes
State dummies	Yes	Yes
No. of observations	33,184	33,184
F-value	93.13	90.73
Adjusted R^2	0.2408	0.2410

Note: All variables are as defined in Data and Methodology section. The coefficients with 1% significance are followed by ***, coefficient with 5% by **, and coefficients with 10% by*.

Presidential Elections, Economic Policy Uncertainty and the Value of Cash Holdings

Our arguments are based on assumption that presidential elections expose firms to policy uncertainties. In this section, we explore whether the relationship between policy uncertainties and the value of cash holdings hold for other variables measuring the policy uncertainties. In order to test this conjecture, we estimate various versions of the following pooled OLS regression. In the following regression, ECONOMIC is an index of economic policy uncertainty. This index is constructed by Baker et al. (2016). Our modified regression equation takes the following form:

$$\begin{aligned} Q = {} & \alpha + \beta_1(\text{PRESIDENT}) + \beta_2(\text{CASH}) + \\ & \beta_3(\text{PRESIDENT} * \text{CASH}) + \beta_4(\text{ECONOMIC}) + \\ & \beta_5(\text{ECONOMIC} * \text{CASH}) + \beta_6(\text{SIZE}) + \beta_7(\text{LEVERAGE}) + \\ & \beta_8(\text{EPS}) + \beta_9(\text{GROWTH}) + \beta_{10}(\text{ANALYST}) + \beta_{11}(\text{OWNERSHIP}) + \\ & \beta_{12}(\text{CAPEX}) + \beta_{13}(\text{DIVIDEND}) + \beta_{14}(\text{GDP}) + \\ & \beta_{15}(\text{GDPGROWTH}) + \beta_{16}(\text{TRADE}) + \beta_{17}(\text{CREDIT}) + \\ & \beta_{18}(\text{SAVINGS}) + \sum_{S=1}^{N-1}\delta_S(\text{SDUM}) + \sum_{I=1}^{N-1}\theta_I(\text{IDUM}) + \varepsilon \end{aligned} \tag{4}$$

Table 8 documents the results of our analysis. The main variables of interest in this table are PRESIDENT*CASH and ECONOMIC*CASH. Our findings show that the coefficients of PRESIDENT*CASH and ECONOMIC*CASH are negative and significant for all models. It indicates that our findings hold for other measures of policy uncertainties. This result is consistent with our arguments that highlight the negative impact of information asymmetries on the value of cash holdings.

Table 8
Presidential elections, economic policy uncertainty and the value of cash holdings

Variables	Model 1	Model 2	Model 3	Model 4
PRESIDENT	–0.0412*	–0.0457**	–0.0041	0.0198
	(–1.76)	(–2.04)	(–0.17)	(0.84)
CASH	3.0793***	2.4460***	3.1428***	2.4796***
	(16.39)	(13.40)	(16.68)	(13.50)
PRESIDENT*CASH	–0.3410***	–0.3008***	–0.3736***	–0.3535***
	(–2.81)	(–2.61)	(–3.08)	(–3.07)
ECONOMIC	–0.0035***	–0.0029***	0.0008	0.0012**
	(–9.68)	(–8.44)	(1.57)	(2.47)
ECONOMIC*CASH	–0.0077***	–0.0069***	–0.0079***	–0.0068***
	(–4.12)	(–3.89)	(–4.25)	(–3.83)
SIZE		–0.2488***		–0.2488***
		(–28.30)		(–28.10)
LEVERAGE		–0.0057***		–0.0058***
		(–9.88)		(–9.89)
EPS		0.0038**		0.0037**
		(2.16)		(2.14)
GROWTH		0.0049***		0.0049***
		(16.24)		(16.10)
ANALYST		0.0748***		0.0756***
		(40.29)		(40.62)
OWNERSHIP		–0.0020***		–0.0023***
		(–3.96)		(–4.43)
CAPEX		0.0204***		0.0199***
		(13.63)		(13.26)
DIVIDEND		0.0056***		0.0056***
		(13.51)		(13.50)
GDP			–0.0387	0.0878
			(–0.52)	(1.20)
GDPGROWTH			0.0812***	0.0667***
			(8.74)	(7.56)

(*Continued on next page*)

Table 8 (*Continued*)

Variables	Model 1	Model 2	Model 3	Model 4
TRADE			–0.0166***	–0.0395***
			(–3.25)	(–8.03)
CREDIT			0.0053***	0.0072***
			(4.67)	(6.60)
SAVINGS			0.0328***	0.0308***
			(3.83)	(3.77)
Industry dummies	Yes	Yes	Yes	Yes
State dummies	Yes	Yes	Yes	Yes
No. of observations	33184	33184	33184	33184
F-value	69.75	94.53	65.23	90.23
R^2	0.1555	0.2373	0.1601	0.2412
Adjusted R^2	0.1540	0.2360	0.1580	0.2390

Notes: All variables are as defined in Data and Methodology section. The coefficients with 1% significance are followed by ***, coefficient with 5% by **, and coefficients with 10% by *.

Presidential Elections, Gubernatorial Elections and the Value of Cash Holdings

In this section, we test whether the political uncertainties created by elections at the state-level (gubernatorial elections) also affect the value of cash holdings in the same way as the political uncertainties created by elections at the country-level (presidential elections). We argue that, similar to the presidential elections, the gubernatorial elections are also important for firms because the state governments can impose taxes not only on corporate income, but also on personal income of investors. Therefore, it is possible that the value of cash holdings is also significantly affected by the political uncertainties created by the gubernatorial elections. In order to test this conjecture, we estimate two versions of the following pooled OLS regression. In the first model, we do not include PRESIDENT and PRESIDENT*CASH, while in the second model, all variables are included. In the following regression, GOVERNOR is a dummy variable that takes the value of 1 for a particular state for years in which gubernatorial elections were held in that state and 0 otherwise.[12] All other variables are defined as in the earlier section.

$$
\begin{aligned}
Q = {} & \alpha + \beta_1(\text{PRESIDENT}) + \beta_2(\text{CASH}) + \\
& \beta_3(\text{PRESIDENT} * \text{CASH}) + \beta_4(\text{GOVERNOR}) + \\
& \beta_5(\text{GOVERNOR} * \text{CASH}) + \beta_6(\text{SIZE}) + \\
& \beta_7(\text{LEVERAGE}) + \beta_8(\text{EPS}) + \beta_9(\text{GROWTH}) + \beta_{10}(\text{ANALYST}) + \\
& \beta_{11}(\text{OWNERSHIP}) + \beta_{12}(\text{CAPEX}) + \beta_{13}(\text{DIVIDEND}) + \beta_{14}(\text{GDP}) + \\
& \beta_{15}(\text{GDPGROWTH}) + \beta_{16}(\text{TRADE}) + \beta_{17}(\text{CREDIT}) + \\
& \beta_{18}(\text{SAVINGS}) + \sum_{s=1}^{N-1}\delta_s(\text{SDUM}) + \sum_{i=1}^{N-1}\theta_i(\text{IDUM}) + \varepsilon
\end{aligned}
\tag{5}
$$

Table 9 documents the results of our analysis. The main variables of interest in this table are PRESIDENT*CASH and GOVERNOR*CASH. Our findings show that the coefficient of PRESIDENT*CASH is more negative and more significant than the coefficient of GOVERNOR*CASH for all models. These findings indicate that cash holdings affect firm values more negatively during the years of presidential elections than during the years of gubernatorial elections. In other words, greater uncertainty is associated with the presidential elections than with the gubernatorial elections. Our findings are consistent with Waisman et al. (2015), who argue that because of nationwide influence of presidential elections, the uncertainty accompanied with these elections dominate the uncertainty accompanied with gubernatorial elections. They note that gubernatorial elections have a limited geographic influence, while presidential elections have wider national influence (due to potential changes in monetary, fiscal and foreign policies).

Table 9
Presidential elections, gubernatorial elections, and the value of cash holdings

Variables	Model 1	Model 2
PRESIDENT		0.0260
		(1.08)
CASH	1.7908***	1.9359***
	(24.25)	(22.76)
PRESIDENT*CASH		–0.4420***
		(–3.72)
GOVERNOR	–0.0158	–0.0081
	(–0.65)	(–0.32)
GOVERNOR*CASH	–0.1452	–0.2547**
	(–1.20)	(–2.04)

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Table 9 (*Continued*)

Variables	Model 1	Model 2
SIZE	–0.2491*** (–28.04)	–0.2488*** (–27.99)
LEVERAGE	–0.0057*** (–9.83)	–0.0057*** (–9.84)
EPS	0.0039** (2.23)	0.0038** (2.21)
GROWTH	0.0050*** (16.42)	0.0050*** (16.35)
ANALYST	0.0756*** (40.60)	0.0755*** (40.53)
OWNERSHIP	–0.0023*** (–4.38)	–0.0023*** (–4.35)
CAPEX	0.0197*** (13.11)	0.0198*** (13.19)
DIVIDEND	0.0056*** (13.46)	0.0056*** (13.45)
GDP	0.0665 (0.91)	0.0925 (1.27)
GDPGROWTH	0.0658*** (7.69)	0.0687*** (7.98)
TRADE	–0.0412**** (–8.78)	–0.0403*** (–8.56)
CREDIT	0.0084*** (9.36)	0.0077*** (8.26)
SAVINGS	0.0370*** (5.18)	0.0340*** (4.72)
Industry dummies	Yes	Yes
State dummies	Yes	Yes
No. of observations	33098	33098
F-value	92.42	90.33
Adjusted R^2	0.2403	0.2411

Notes: All variables are as defined in Data and Methodology section. The coefficients with 1% significance are followed by ***, coefficient with 5% by **, and coefficients with 10% by *.

CONCLUSIONS

This paper hypothesises that presidential elections are a source of political uncertainty. During the years in which presidential elections are held, stock market participants react negatively to any decision that increases the agency problems. One such decision is holding higher amount of cash. Consistent with these arguments, our findings indicate that the effect of cash holdings on firm value become less pronounced during the years of presidential elections. The findings are robust to the comprehensive inclusion of relevant controls and to a number of sensitivity tests. Our results are also robust after controlling for potential endogeneity concerns. We also show that the impact of political uncertainties (that arise due to presidential elections) on the value of cash holdings are less pronounced in the following cases:

1. For firms headquartered in the states that have always voted for the Democrat candidates in the presidential elections.
2. During the presidential elections in which both candidates are new.
3. During the presidential elections that are characterised by high economic policy uncertainties.

Furthermore, we show that gubernatorial elections do not affect the value of cash holdings as much as presidential elections.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

DISCLOSURE STATEMENT

There is no potential competing interest.

NOTES

1. Investing in negative NPV projects is one such example where managers follow their opportunistic agenda at the expense of shareholders' interests (Jensen, 1986).
2. There is also a competing strand of literature that documents positive impact of cash holdings on firm value. Mikkelson and Partch (2003) argue that accumulation of large cash within the firm reduces the external financing costs, thereby positively

affecting firms. Denis and Sibilkov (2010) argue that cash holdings positively affect firm values because it allows firms to carry out value-adding investments.

3. There are 2,929 distinct firms in our sample.
4. To control heteroskedasticity, robust regression was used for all estimations. The robust regression produces White corrected robust variance estimates.
5. Worldscope defines insiders as officers, directors and their immediate families, shares held in trust, shares held by other companies (except shares held in a fiduciary capacity by banks or other financial institutions), shares owned by the company's pensions or benefit plans, and shares held by individuals who own more than 5% of the shares outstanding.
6. Prior literature associates these factors with agency problems and information asymmetries. For example, Fang et al. (2009) consider firm's size to affect its information environment and Farooq et al. (2017) associate financial leverage with agency problems. Similarly, Li and Zhao (2008) and Deshmukh (2005) relate analyst coverage with information asymmetries, Farooq and Zerouali (2016) consider ownership concentration to affect agency conflicts, and La Porta et al. (2000) associate dividend policy with information environment of a firm.
7. We use the address of a firm's head office to find the state in which the firm is located. This data is available in Worldscope. The industry dummies are based on Industry Classification Benchmark (ICB) of FTSE. According to this classification, we divide sample into the following groups: (1) Basic Material, (2) Oil and Gas, (3) Industrials, (4) Consumer Goods, (5) Healthcare, (6) Consumer Services, (7) Utilities, (8) Technology, (9) Telecommunications.
8. The sub-sample of small firms consists of firms with below median size of the entire sample and the sub-sample of large forms constitutes of firms with above median size of the entire sample.
9. The states (which have always voted for the Democrat presidential candidate) consists of the following states: California, Connecticut, Delaware, Hawaii, Illinois, Maine, Maryland, Massachusetts, Michigan, Minnesota, Nevada, New Jersey, New Mexico, Oregon, Pennsylvania, Rhode Island, Vermont, Washington, Washington D.C., Wisconsin.
10. The states (which have always voted for the Republican presidential candidate) consists of the following states: Alabama, Alaska, Arizona, Arkansas, Georgia, Idaho, Indiana, Kansas, Kentucky, Louisiana, Mississippi, Missouri, Montana, Nebraska, North Dakota, Oklahoma, South Carolina, South Dakota, Tennessee, Texas, Utah, West Virginia and Wyoming.
11. For the purpose of this analysis, we define industry by two-digit SIC classification. SIC classification is not available for all firms. Therefore, some observations will drop from analysis.
12. See Appendix A for information about the years for gubernatorial elections. Washington D.C. is not included in this analysis.

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APPENDIX

Appendix A
Information about gubernatorial elections

States	Years of gubernatorial elections	Notes on gubernatorial elections
New Hampshire and Vermont	1996, 1998, 2000, 2002, 2004, 2006, 2008, 2010, 2012, 2014 and 2016	The elections are held in every even numbered year.
Alabama, Alaska, Arizona, Arkansas, California, Colorado, Connecticut, Florida, Georgia, Hawaii, Idaho, Illinois, Iowa, Kansas, Maine, Maryland, Massachusetts, Michigan, Minnesota, Nebraska, Nevada, New Mexico, New York, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Wisconsin and Wyoming	1998, 2002, 2006, 2010 and 2014	The elections are held in even numbered years which are not divisible by four.
Delaware, Indiana, Missouri, Montana, North Carolina, North Dakota, Utah, Washington and West Virginia	1996, 2000, 2004, 2008, 2012 and 2016	The elections are held in years divisible by four.
Kentucky, Louisiana and Mississippi	1999, 2003, 2007, 2011 and 2015	The elections are held in the year before a year divisible by four.
New Jersey and Virginia	1997, 2001, 2005, 2009 and 2013	The elections are held in the year following a year divisible by four.