Strategic Cash Portfolio Management in the Face of Policy

Uncertainty: Evidence from U.S. Firms^{*}

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Abstract

Firms undertake precautionary savings to hedge against unexpected cash flow shocks. However, this stockpiling behavior captures only part of their strategic response to increased risk levels. In this paper, we document that during periods of heightened policy uncertainty, managers actively rebalance their cash portfolios toward safer, more liquid investments. This cash portfolio derisking strategy dominates in economic significance traditional cash hoarding behavior, revealing a previously overlooked dimension of corporate precautionary savings. By uncovering this nuanced strategic behavior, our findings offer novel insights into corporate financial decision-making under uncertainty, expanding our understanding of how firms strategically navigate risk.

JEL classification: G30, G31, G32

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1. Introduction

A 2019 JP Morgan survey of 346 CIOs, treasurers, and other senior cash decision-makers, managing a combined cash balance of approximately \$1 trillion, identified rising political risk as the most significant cash portfolio investment challenge for the upcoming years, overshadowing other important concerns such as, for example, a yield curve inversion, increasing and more complex cash needs for business growth, and negative yields and returns.¹ Recent studies provide evidence that firms engage in stockpiling behaviors in response to both expected (Jens and Page, 2024) and past (Phan et al., 2019; Duong et al., 2020) spikes in policy uncertainty. Yet, these findings do not provide a comprehensive understanding of firms' strategic cash management response to a contemporaneous and unforeseen heightened risk. Indeed, in such a setting, focusing on the size of firms' cash portfolios while ignoring the allocation might lead to incomplete or misleading conclusions (Duchin et al., 2017; Cardella et al., 2021; Darmouni and Mota, 2024). Do managers actively adjust their cash portfolios to cope with contemporaneous and unforeseen time-varying risk levels? In this paper, we tackle this question while venturing beyond the traditional stockpiling behavior prescribed by the precautionary savings theory.

Recent trends further underscore the importance of a holistic framework. In the first quarter of 2024, U.S. companies' cash holdings rose by 12.6%, driven partly by a strategic shift toward longer-term investments, particularly in corporate and U.S. government bonds, rather than by outright cash hoarding.² This consideration adds an important risk dimension to corporate cash management practices under uncertainty that extant literature has not yet investigated.

¹ See "2019 J.P. Morgan Global Liquidity Investment PeerView", Exhibit 15, page 27. (<u>https://am.jpmorgan.com/content/dam/jpm-am-aem/global/en/liq/insights/liquidity-insights/peerview-</u>survey-results-2019.pdf).

² See "US Corporate Stockpiles Grow, Soaring to Record \$4.11 Trillion", Bloomberg (June 13th, 2024: <u>https://www.bloomberg.com/news/articles/2024-06-13/cash-holdings-by-us-corporates-surge-to-4-11-</u>trillion-in-the-first-quarter?embedded-checkout=true).

From a theoretical perspective, the relationship between policy uncertainty and corporate cash portfolio allocation decisions is inherently complex and ex-ante ambiguous. Policy uncertainty influences firms' financial strategies through multiple, sometimes opposing, channels that affect their preferences for liquidity, risk exposure, and return optimization. On the one hand, the precautionary savings theory posits that heightened uncertainty increases the marginal value of liquidity for firms (Opler et al., 1999; Bates et al., 2009), leading them to hold more cash-like instruments rather than riskier and less liquid marketable securities.³ In normal times, marketable securities – especially those with short maturities and deep secondary markets – are relatively liquid and typically offer higher expected returns than cash (Cardella et al., 2021; Darmouni and Mota, 2024).⁴ However, in periods of elevated uncertainty, the liquidity of marketable securities can deteriorate rapidly (Haddad et al., 2020; Kargar et al., 2020), making them less reliable for meeting urgent cash needs. For instance, greater policy uncertainty has been found to increase the risk and reduce the liquidity and pricing of investable securities (Pastor and Veronesi, 2013; Brogaard and Detzel, 2015; Kaviani et al., 2020), consistent with the idea that the relative illiquidity of securities becomes more problematic under stress.

Moreover, during uncertain times, external financing often becomes more costly or altogether inaccessible due to heightened information asymmetry and reluctance among capital providers

³ Our primary data source allows us to distinguish between 'cash-like' financial instruments such as, for example, time deposits, money market funds, and checkable deposits, and 'marketable securities', which includes, for example, corporate, U.S. government, and municipal debt securities. We refer to the sum of cash-like financial instruments and marketable securities as 'cash portfolio', or simply 'cash'. In additional tests, we use hand-collected data from the footnotes of firms' 10-K reports on firms' financial asset holdings by asset class such as corporate debt, U.S. government debt, equity, and other assets.

⁴ In our main tests, cash-like assets consist of financial assets that have a maturity of 90 days or less when issued or at the time they were purchased by the firm. Short-term marketable securities consist of financial assets that are intended to be sold within one year or the normal operating cycle, if longer. Long-term marketable securities, considered in our additional tests, are intended to be sold beyond a one-year timeframe.

(Waisman et al., 2015; Gungoraydinoglu et al., 2017; Xu, 2020). In this environment, maintaining cash and near-cash assets allows firms to respond to adverse shocks more flexibly, without having to endure uncertain market conditions or financing constraints. Hence, the precautionary savings theory predicts that in times of high policy uncertainty, firms will tilt their cash holdings toward cash-like instruments, which provide immediate liquidity and insulation from market volatility. This reallocation strategy would align with the broader precautionary behavior observed during periods of heightened risk (Campello et al., 2010; Acharya and Steffen, 2020).

On the other hand, policy uncertainty increases the real option value of delaying investments (Bernanke, 1983; McDonald and Siegel, 1986; Dixit and Pindyck, 1994), resulting in reduced capital expenditures and M&A (Gulen and Ion, 2016; Nguyen and Phan, 2017; Bonaime e al., 2018). This delay generates temporary excess cash reserves, which firms may allocate to marketable securities to optimize returns in the interim. This channel is viable only to the extent that marketable securities maintain liquidity and safety in uncertain times to allow firms to "reach for yield" without severely constraining their ability to act quickly once profitable real investments emerge. This strategy would reflect a "maturity matching" approach (Geelen et al., 2024), where managers align the duration of financial investments with the expected timing of real investments. We argue that such "maturity matching" behavior may result in a positive relationship between policy uncertainty and firms' cash allocation to marketable securities. Under this channel, the real options perspective and the excess-cash management perspective (i.e., seeking marginally higher returns on near-cash instruments) complement each other.

The ultimate impact of policy uncertainty on corporate cash portfolio allocation decisions depends on firms' ability and willingness to navigate these tradeoffs. Given these conflicting theoretical predictions and the nuanced tradeoffs between risk, liquidity, and yield, the relationship

between policy uncertainty and cash portfolio allocation decisions is ultimately an empirical question. By examining this relationship, we aim to shed light on the dynamic strategies firms employ to manage risk and optimize liquidity during periods of heightened policy uncertainty.

Using the quasi-exogenous Economic Policy Uncertainty (EPU) index developed by Baker et al. (2016), we document a robust negative relationship between policy uncertainty and firms' cash allocation to marketable securities – a result consistent with the precautionary savings hypothesis. Specifically, our estimates indicate that a doubling of *Policy Uncertainty* from its mean value is associated with a 13.4% decline in allocation to marketable securities relative to the sample mean. Our models account for determinants of cash and marketable securities holdings, macroeconomic conditions, firm fixed effects, and time trends. To further verify our results, we use alternative proxies for policy uncertainty from Baker et al. (2022) and estimate 2-SLS models with an exogenous instrument for policy uncertainty to address an omitted variable bias. These additional tests confirm our findings, supporting our main hypothesis that corporate cash portfolio management is primarily driven by precautionary savings considerations.

To better understand the economic and strategic dynamics behind this statistical relationship, we further document that higher levels of *Policy Uncertainty* are associated with a decline in marketable security holdings and an increase in cash-like instruments. Importantly, these two strategic adjustments almost perfectly counterbalance.⁷ These results highlight a more subtle and previously undocumented strategic adjustment in firms' cash portfolios in response to policy risk:

⁷ As expected, given these results, the relationship between the total portfolio size and policy uncertainty is statistically insignificant. This result suggests that, when it comes to the overall portfolio size, the two mechanisms discussed above (i.e., increased external financing costs and reduced investment) balance each other out. For example, Chen et al. (2023) show that firms shift from equity to cash financing for M&A deals announced around gubernatorial elections. In the context of other results in the literature, this may mean that although the use of funds declines (i.e., there is lower investment in the face of high policy uncertainty) so does the source of funds (i.e., there is lower external financing).

managers actively rebalance their portfolios from marketable securities to cash-like instruments to hedge against adverse consequences of policy risk.⁸ Such an adjustment appears to dominate the previously established cash hoarding behavior in economic significance, thus unveiling a new important aspect of dynamic corporate precautionary savings management.

We conduct several cross-sectional tests discussed below to gain further insight into the economic mechanisms underlying our results. These tests also offer additional evidence supporting the causality of our main findings. If an omitted variable from our main regression model influenced our main results, that variable must also account for the cross-sectional outcomes.

The precautionary motive to derisk a cash portfolio should be greater among firms with poorer access to external capital markets (Keynes, 1936; Han and Qiu, 2007).⁹ We proxy for the ease of access to external capital markets using two proxies for financial constraints: dividend payer status and the SA index (Hadlock and Pierce, 2010). Next, we recognize that the negative relationship between *Policy uncertainty* and allocation to marketable securities should be pronounced among firms with relatively greater immediate external funding needs. We consider industry-level measures of variation in the need for external capital, which are plausibly more exogenous to an individual firm than measures of financial constraints based on firm-level variables (Rajan and Zingales, 1998; Duchin et al., 2010). Our results show that the negative relationship between

⁸ This evidence suggests that if firms do liquidate marketable securities in the face high policy uncertainty, they do so at face rather than discounted values given that the total portfolio size does not change. Note that all financial assets are reported at market or fair value in the financial statements. Additionally, firms may also simply wait for certain marketable securities to mature and recover full face values within a fiscal year, which is our key time period variable, to be able to better cope with the effects of policy uncertainty going forward.

⁹ When it comes to the level of cash, numerous papers document theoretical and empirical evidence consistent with this idea (see, e.g., Opler et al., 1999; Almeida et al., 2004; Bates et al., 2009; and others). When it comes to the composition, Duchin et al. (2017) and Cardella et al. (2021) show that risky financial assets and, more generally, marketable securities are concentrated among financially unconstrained firms.

policy uncertainty and marketable securities is concentrated among financially constrained and external capital-dependent firms, consistent with our conjectures.

We also examine the roles of product market competition and asset intangibility. We posit that the negative relationship between policy uncertainty and allocation to marketable securities is more pronounced among firms facing high product market competition given that they have a greater precautionary motive (Haushalter et al., 2007; Hoberg et al., 2014). Similarly, so do the high-tech and highly intangible firms due to financing frictions that these types of firms face (Myers and Majluf, 1984; Opler and Titman, 1994; Begenau and Palazzo, 2021; Falato et al., 2022). Consistent with our conjectures, our main results are concentrated among firms facing high product market competition and having low asset tangibility. Overall, the results from the crosssectional tests highlight the strategic role of cash allocation decisions when firms face risks stemming from elevated policy uncertainty.

We next proceed to the analysis of 'superstar' firms, whose economic relevance is currently at the center of a sparkling political and academic debate (see, e.g., Autor et al., 2020; De Loecker et al., 2020) and for which more granular cash allocation data are available. We note that our main results rely on Compustat data because it allows us to directly compare the economic importance of our results with those in the traditional corporate cash literature by using similar measures and samples, which is one of our key contributions. Additionally, the wide availability of Compustat data allows us to run a multitude of cross-sectional tests. The detailed information for a limited sample allows us to document a significant negative relationship between *Policy Uncertainty* and cash allocations to risky financial assets, specifically corporate debt investments. This result suggests that even the largest and more financially unconstrained firms in the economy rebalance their financial portfolios away from risky and less liquid securities in the face of high policy

uncertainty, providing further support for managers' orientation towards precautionary savingsbased cash portfolio management practices.

The final concern is that the negative relationship between policy uncertainty and marketable securities arises because of decreases in the market value of these securities when uncertainty spikes. Indeed, these securities are reported at market or fair value in the financial statements. This concern is particularly valid for longer duration and riskier securities such as corporate bonds, which are often part of such balance sheet accounts as "long-term investments" or "other assets", rather than "short-term investments". First, we note that all our models include controls for contemporaneous interest rates as well as credit risk and liquidity premiums. Second, to address this concern further, we examine the relationship between policy uncertainty and the likelihood of investing in corporate bonds. Our key dependent variable in this test is an indicator for whether a firm invests in corporate bonds in a particular year. We note that this variable is not affected by the changes in the value of other securities in the portfolio. Our estimates show a significant negative relationship between the likelihood of investing in corporate bonds and policy uncertainty.

Our paper makes several contributions. First, our paper advances the literature studying firms' cash portfolio management strategies by highlighting the role of policy uncertainty as a critical determinant.¹⁰ Specifically, we expand on these studies by documenting that firms react to policy risk by strategically adjusting the cash portfolio allocation. These findings somewhat mirror those of Agarwal et al. (2022) who show that households reduce their participation in the stock market

¹⁰ An increasing number of papers study the determinants of firms' cash allocation decisions, including Duchin et al. (2017); Cardella et al. (2021); Ysmailov (2021); Huang and Sacchetto (2023); Chen and Duchin (2024); Darmouni and Mota (2024); Le and Ramsey (2024); and Hwang (2024).

and reallocate funds to safer assets during periods of increased political uncertainty. Related to our study, Darmouni and Mota (2024) show that following the COVID-19 shock, the largest firms in the U.S., particularly those in industries most negatively affected by the COVID-19 shock, increased the size of their cash portfolios through the accumulation of cash-like financial assets.¹¹ The COVID-19 shock had a multifaceted impact on corporations, and it is unclear how much of the relationships documented in Darmouni and Mota (2024) can be attributed to policy uncertainty. We focus on the strategic corporate cash allocation decision and show that, in various broad samples, firms reduce their allocation to marketable securities – mainly, to corporate bonds – when faced with spikes in comprehensive and yet precise measures of policy uncertainty. We employ cross-sectional tests and instrumental variable approaches to confirm our findings and address omitted variable concerns.

Second, our paper contributes to a growing body of literature on the role of politics, especially political uncertainty, in shaping firms' strategic decisions.¹² To the best of our knowledge, we are the first to document a relationship between companies' cash allocation or cash investment decisions and policy uncertainty. Related to our paper, Jens and Page (2024) study the impact of temporary and predictable increases in uncertainty stemming from gubernatorial elections on the level of corporate cash holdings.¹³ Duong et al. (2020) and Phan et al. (2019) study the relationship

¹¹ The industries most negatively affected by the COVID-19 shock are those that rely heavily on in-person social interactions, such as clothing stores, motion picture studios, hotels, restaurants, and others (Chodorow-Reich et al., 2022).

¹² The papers examining the impact of EPU on firms' policies are referenced throughout this section. More broadly, political uncertainty as proxied by gubernatorial and national elections is associated with lower investment (Julio and Yook, 2012; Jens, 2017); higher R&D (Atanassov et al., 2024); lower IPO volume (Çolak et al., 2017); and the volume and outcome of cross-border acquisitions (Cao et al., 2019).

¹³ Although we focus on the impact of contemporaneous and unexpected policy uncertainty on the strategic cash allocation decisions, in the Internet Appendix, we examine the relationship between policy uncertainty stemming from gubernatorial elections and cash portfolio management. We show that due to the necessity for quarterly data for such type of analysis, we are severely limited in drawing meaningful conclusions as Compustat does not widely report data on the quarterly marketable security holdings prior to 2007.

between the level of firms' cash holdings and lagged measures of policy uncertainty. We differ from these studies by focusing on the impact of contemporaneous and unexpected policy uncertainty on the strategic cash allocation decisions, rather than on the cash holding levels. Our additional levels results suggest that a contemporaneous, unexpected shock to policy uncertainty does not immediately affect the level of firms' cash portfolios but does affect the allocation. Our approach enables us to connect our novel findings to the seminal theoretical framework of the broader precautionary savings theory, thereby providing evidence of a more nuanced corporate strategic behavior in cash management in the face of uncertainty.

The paper is structured as follows. Section 2 discusses our data collection and construction. Section 3 shows the main empirical specification and presents all results. Section 4 concludes.

2. Data

2.1 Corporate Cash Portfolio Allocations

Assessing how policy uncertainty affects firms' cash portfolio allocation decisions requires the availability of accurate proxies for the structure of corporate cash holdings. We identify two alternative data sources based on the extant literature (Duchin et al., 2017; Cardella et al., 2021; Ysmailov, 2021; Darmouni and Mota, 2024). First, we measure firms' *Marketable securities* using the short-term investments balance sheet account (Compustat item *ivst*). Similarly, we proxy for *Cash-like* holdings using the cash and cash equivalents balance sheet account (Compustat item *ch*) and for the overall size of firms' cash portfolios using the sum of cash-like instruments and marketable securities (Compustat item *che*).¹⁴ Using Compustat data, Cardella et al. (2021)

¹⁴ According to the U.S. GAAP, *cash and cash equivalents* include "short-term, highly liquid investments that are readily convertible to known amounts of cash and that are so near their maturity that they present insignificant risk of changes in value because of changes in interest rates". Cash and cash equivalents consist of financial assets that have a maturity of 90 days or less when issued or at the time they were purchased by the firm. *Marketable securities* consist of financial assets that have a remaining maturity of

document that cash-like instruments are highly liquid and safe but offer lower yields, while marketable securities are less liquid and carry higher risk, but offer higher yields. The former typically includes such financial instruments as time deposits, money market funds, and checkable deposits, whereas the latter typically includes corporate, U.S. government, and municipal debt securities. Relying on the Compustat dataset allows us to collect information for a large sample of companies over a long period.

Duchin et al. (2017) and Darmouni and Mota (2024) show that cash portfolio measures in Compustat may suffer from measurement error and that they lack granularity. Hence, there is a need for a second, more accurate proxy. To this end, we follow Darmouni and Mota (2024) and use their hand-collected data from the footnotes of companies' annual reports, which extensively report firms' financial asset holdings by broad asset class.¹⁵ Specifically, these are cash-like instruments, U.S. government debt, corporate bonds, equity, and other securities. This dataset covers 200 publicly traded firms in the U.S. comprising a union of the 100 largest firms by total book assets as observed in 2017, 2009, and 2000, augmented by another sample of 44 firms with the largest total book assets in 2017. In addition to reporting financial assets within the Compustat item CHE, it also includes financial assets typically found in such balance sheet accounts as 'long-term investments' or 'other assets.' As such, these measures are broader in scope than Compustat-based measures of cash and marketable securities.

2.2 Policy Uncertainty

more than 90 days at the time of purchase and are intended to be sold within one year or the normal operating cycle, if longer.

¹⁵ We thank Olivier Darmouni and Lira Mota for making their data publicly available at <u>https://www.corporategiants.net/</u>.

Our main measure of *Policy uncertainty* is the quasi-exogenous EPU index developed by Baker et al. (2016).¹⁶ The index is a weighted average of the following components: (i) the frequency of articles in leading U.S. newspapers that contain terms related to economic policy uncertainty; (ii) uncertainty about the tax code; and (iii) forecaster disagreement on CPI and government spending. The first component measures policy uncertainty through an automated search of ten large newspapers, counting articles containing terms like "uncertainty" or "uncertain," "economic" or "economy," and terms related to various government entities or policies. The second component estimates tax-related uncertainty using data from the Congressional Budget Office, focusing on the revenue effects of tax provisions that expire over the next ten years. The third component captures the dispersion in forecasts of the Consumer Price Index (CPI) among professional forecasters and the disagreement among forecasters about future government spending on goods and services. Consistent with the aim of the index, it spikes around periods of high uncertainty such as the Gulf Wars I and II, the events of 9/11, tight presidential elections, etc.

2.3 Data and Sample Selection

Our main sample consists of public U.S. industrial firms from 1990 to 2022 included in Compustat with positive values for total assets, revenues, and cash.¹⁷ We exclude utilities (SIC codes 4900-4999), financial firms (SIC codes 6000-6999), and quasi-public firms (SIC codes greater than or equal to 9900). We also drop firm-years for which we are unable to construct variables for our main multivariate tests. This results in a sample of 107,518 firm-year observations. Summary

¹⁶ We use alternative measures of policy uncertainty in robustness tests.

¹⁷ We begin our sample period in 1990 because in the late 1980s there was a large increase in cash-like assets relative to marketable securities due to the adoption of Statement of Financial Accounting Standards guideline number 95 (Gao et al., 2021). This guideline provided firms with more leeway in classifying cash as cash-like and led to a substantial increase in the fraction of short-term assets classified as cash-like.

statistics are presented in Table 1.¹⁸ Consistent with Dunchin et al. (2017) and Cardella et al. (2021), we observe that the distribution of firms' investments in marketable securities is skewed, ultimately accounting for 14.1% of companies' cash portfolios, on average.¹⁹ As a proportion of total book assets, cash-like instruments are 15.1%, marketable securities are 5.3%, and cash-like instruments and marketable securities combined are 20.80%.

[Table 1 About Here]

3. Policy Uncertainty and Strategic Management of Firms' Cash Portfolios

3.1 Empirical Specification

To test firms' strategic response to heightened levels of policy uncertainty, we build on the extant literature and estimate the following regression model (Bates et al., 2009; Duchin et al., 2017):

$$y_{i,t} = \alpha_i + \beta Policy \ uncertainty_t + \gamma X_{i,t-1} + \delta M_t + f(t) + \varepsilon_{i,t} \tag{1}$$

where *i* indexes firms and *t* indexes fiscal years. The key dependent variable in our analysis is the ratio of marketable securities to the total cash portfolio, which is the sum of cash-like financial assets and marketable securities (in Compustat items' terms, $IVST_t/CHE_t$). In additional tests, we consider alternative measures of firms' allocation to marketable securities based on hand-collected data from the footnotes of firms' 10-K reports, following Duchin et al. (2017), Darmouni and Mota (2024), and others. These measures capture the weight assigned to marketable securities in firms' cash portfolios and have been extensively used in recent studies. For example, Cardella et al. (2021) examine the impacts of various shocks on the contemporaneous $IVST_t/CHE_t$ ratio. Similarly, Chen and Duchin examine the impact of the 2014 oil price crisis on the

¹⁸ All firm-level continuous variables are winsorized at the 1% level. The variable definitions are provided in Appendix A, Table A1.

¹⁹ Later in robustness tests, we address a concern that such a skewed distribution introduces a bias into our estimates.

contemporaneous *Risky financial assets (Total financial assets t* ratio using hand-collected data from the footnotes of firms' 10-K reports. For robustness, in Appendix B, Table B1, we consider alternative scaling variables, and obtain results consistent with those reported in the main tests.

*Policy uncertainty*_t is measured as the arithmetic average of the Baker et al. (2016) EPU index over the 12 months of fiscal year t for each firm $i.^{20,21}$ As is well recognized in the policy risk literature, this measure lacks cross-sectional variation, thus preventing the inclusion of year fixed effects in the estimated regressions. Our model includes a linear time trend of first order f(t) in all estimated models alongside firm fixed effects, α_t , which control for unobserved, time-invariant characteristics of firms. Firm-level controls $X_{i,t-1}$ conform to the established norms in the literature (Dunchin et al., 2017; Darmouni and Mota, 2024) and lagged one period to address the issue of including potentially endogenous controls. Our models also include several macroeconomic controls denoted by M_t , including the real GDP growth rate, 3-month T-Bill rate, and the credit risk and liquidity premium (defined as the difference between rates on AAA-rated corporate debt and the 10-year Treasury yield). Standard errors are heteroskedasticity robust and clustered by firm.²²

3.2 Main Results

Table 2 reports our estimates for Model (1) using the ratio of marketable securities to the total cash portfolio as a dependent variable. In Column 1, our model omits both firm-level and macro-level

²⁰ For presentation purposes, we scale *Policy Uncertainty*_t by 100. In additional tests, we do the same for the alternative news-based measures of policy uncertainty.

²¹ In some related studies, empirical models regress a year-ahead firm-level variable, such as cash holdings, on this year's policy uncertainty (see, e.g., Phan et al., 2019; Duong et al., 2020). In robustness tests, we consider such an alternative specification.

²² Clustering standard errors by year may be problematic, given a relatively low number of year clusters (there are 32 'year' clusters in tests using the whole Compustat sample). Nevertheless, for robustness, in Appendix B, Table B2, we show that our main results are robust to clustering standard errors by year.

controls, in Column 2, we include only macro controls, in Column 3 – only firm controls, and in Column 4, we include both firm and macro controls. Our estimates show a statistically significant (at the 1% level), negative relationship between policy uncertainty and cash portfolio allocation to marketable securities across all models.²³ Specifically, the estimates in a fully specified model in Column 4, for example, imply that a doubling of *Policy uncertainty* from its mean level is associated with a 13.35% decline in allocation to marketable securities relative to the sample mean of 0.141 – a result consistent with the precautionary savings hypothesis.²⁴ A spike in policy uncertainty leads managers to favor holding cash-like assets over riskier and less liquid marketable securities to increase their cash portfolio flexibility and swiftly respond to unexpected adverse cash flow shocks (Campello et al., 2010).²⁵

[Table 2 about here]

3.3 Alternative Policy Uncertainty Measures and Endogeneity Concerns

3.3.1 Alternative Policy Uncertainty Measures

In this section, we assess whether our baseline findings are robust to the use of alternative measures

of policy uncertainty. Specifically, we utilize policy uncertainty measures from Baker et al. (2022).

The authors use digital archives from nearly 3500 local newspapers, excluding those with a strong

²³ As mentioned earlier, the distribution of corporate investments in marketable securities is skewed, with about 40% of firms in the sample never engaging in this practice. To address concerns about inactive companies, we replicate our findings with firms reporting non-zero marketable securities for at least one fiscal year during our sample period (Appendix B, Table B3). The results remain statistically and economically unchanged, confirming the robustness of our key findings.

²⁴ This is estimated as follows: [(-0.017)*(1.107)]/0.141 = -13.35%, where (-0.017) is the coefficient on *Policy uncertainty* in column 4 of Table 2, 1.107 is the mean level of *Policy uncertainty* from Table 1, and 0.141 is the mean of *Marketable Securities/Total cash portfolio* from Table 1.

²⁵ In Appendix B, Table B4, we estimate an alternative model where we regress the year-ahead allocation to marketable securities (i.e., measured at time t+1) on this year's policy uncertainty (i.e., measured at time t). The negative relationship between policy uncertainty and allocation to marketable securities holds in this specification. Among other things, this test helps alleviate a concern that the negative relationship between policy uncertainty and allocation by a contemporaneous drop in the market or fair value of marketable securities.

national reach like *The New York Times* and *The Wall Street Journal*, and develop specific terms for policy sets to distinguish between national/international and state/local policy uncertainties. *EPU-S* index is constructed from articles discussing state and local policy uncertainty; *EPU-N* – from articles discussing national and international policy uncertainty; and *EPU-C* – from articles discussing both state/local and national/international policy uncertainty. *EPU-S* tends to increase around the time of state gubernatorial elections, state-specific incidents, and the COVID-19 pandemic. *EPU-N* typically rises in response to U.S. presidential elections, and major global and national crises and events.

Our estimates using the alternative measures of policy uncertainty – reported in Columns 1-3 of Table 3 – confirm our baseline results. Consistent with the predominance of precautionary savings-based cash portfolio management practices, we document that all three alternative measures of policy uncertainty are significantly negatively associated with allocation to marketable securities.²⁶

[Table 3 about here]

3.3.2 Omitted Variable Concerns

One concern with our findings is that omitted time-varying factors may simultaneously affect both policy uncertainty and firms' cash portfolio management. Gulen and Ion (2016) document that economic policy uncertainty is countercyclical, potentially causing a spurious negative

²⁶ To further establish the robustness of our finding, we replicate our results using a wide array of alternative proxies for policy uncertainty. First, we examine each component of the EPU index separately. Appendix B, Table B5, reports our estimates confirming an overall robust negative relationship between policy uncertainty and cash allocation to marketable securities. Second, Appendix B, Table B6, reports estimates based on category-specific indices of policy uncertainty constructed by applying additional criteria to newspapers articles that already contain terms about the economy, policy, and uncertainty (Baker et al., 2016). The indices cover various policy categories, including monetary, tax, government spending, healthcare, national security, entitlement programs, regulation, trade, and sovereign debt and currency crises. Our results confirm a robust negative relationship between firms' allocation to marketable securities and all but one category of policy uncertainty.

relationship between the two variables. While we control for various macroeconomic indicators, omitted variable bias might still influence our estimates. To mitigate this risk, we conducted an instrumental variable (IV) test to confirm the robustness of our findings. Building on Gulen and Ion (2016) and Bonaime et al. (2018), we use political polarization as an instrument for policy uncertainty, specifically adopting the partisan conflict index developed by Azzimonti (2018).

The partisan conflict index, constructed similarly to Baker et al.'s (2016) EPU index, is the ratio of newspaper articles reporting political disagreement about government policy to the total number of articles published. The relevance of this instrument for policy uncertainty is well documented. Intense partisan conflict is associated with political gridlocks, making government policy less predictable (Azzimonti, 2018). While the exclusion restriction cannot be directly tested, it is unlikely that firms adjust their cash portfolio allocations in direct response to changes in political polarization. Instead, political polarization likely exacerbates policy uncertainty, which in turn affects corporate cash portfolio management strategies.

Column 4 of Table 3 presents our two-stage least squares (2SLS) estimates. The estimates demonstrate that the coefficient on the instrumented EPU remains negative and statistically significant. The unreported results show that our instrument is significantly positively related to policy uncertainty, with an F-statistic of 202.574 in the Cragg-Donald weak identification test, indicating strong relevance.

3.4 Active Management of Cash Portfolios

Lower cash portfolio allocations to marketable securities may be driven by either an increase in cash-like holdings, a decrease in marketable securities, or both. To shed light on the nature of the studied strategic behavior, we estimate Model (1) using the ratio of cash-like instruments to total assets (in Compustat terms, CH_t/AT_{t-1}), and marketable securities to total assets ($IVST_t/AT_{t-1}$) as

dependent variables. These additional variables allow us to understand better the nature of the cash allocation adjustment in response to heightened levels of political risk. Our estimates in the first two columns of Table 4 indicate that higher levels of *Policy Uncertainty* are associated with a decline in marketable security holdings and an increase in cash-like instruments. Importantly, these two strategic adjustments almost perfectly counterbalance. As expected, given these results, the relationship between the total portfolio size (i.e., CHE_t/AT_{t-1}) and policy uncertainty is statistically insignificant (Column 3 of Table 4), suggesting that firms derisk their cash portfolios by decreasing marketable securities and holding the proceeds in cash-like instruments.^{27, 28}

These findings are consistent with the predictions of the precautionary savings theory and highlight a more subtle and dynamic approach to corporate cash portfolio management in the face of policy uncertainty.

[Table 4 about here]

3.5 Cross-sectional tests

In this section, we delve into an array of cross-sectional tests to further confirm the robustness of our baseline findings while uncovering potential economic channels that might mediate or exacerbate managers' orientation towards the documented strategic cash reallocation. Further, the cross-sectional tests offer additional evidence supporting the causality of our main findings. If an omitted variable from our main regression model influenced our main results, that variable also needs to account for the cross-sectional outcomes presented here.

²⁷ These results are robust in the subsample of firms reporting non-zero marketable securities for at least one fiscal year during our sample period (see Appendix B, Table B7).

 $^{^{28}}$ Given that the portfolio size does not change in response to higher policy uncertainty in the full sample and in the subsample of firms that invest in marketable securities at least once over the sample period (see Footnote 28), we do not include a control for portfolio size in the cash allocation tests. Nevertheless, for robustness, we explicitly control for portfolio size in our cash allocation regressions in Appendix B, Table B8 – our main results continue to hold.

3.5.1 Financial constraints

The documented negative relationship between policy uncertainty and allocation to corporate marketable securities should be more pronounced for firms facing greater financial constraints. Unexpected cash flow shocks caused by heightened levels of policy uncertainty should indeed be more costly for firms with higher constraints on accessing external funding opportunities. To operationalize this test, we measure financial constraints using the following two proxies: dividend payer status and the *SA index* (Hadlock and Pierce, 2010). Specifically, we classify non-dividend payers and firms with above-median *SA index* as financially constrained, and dividend payers and those with below-median *SA index* as financially unconstrained. We then re-estimate a variant of Model (1) with the addition of an interaction term between the financial constraints proxy and *Policy uncertainty* and the baseline financial constraints term. We follow a similar approach for the rest of the cross-sectional tests in this section.

Table 5 reports our estimates. Consistent with our conjecture, the negative relationship between policy uncertainty and cash portfolio allocation to marketable securities is more pronounced for financially constrained firms. Specifically, in model (2), the estimates show a positive and statistically significant coefficient on the *Policy uncertainty*Dividend dummy* interaction term suggesting that dividend payers do not reduce the allocation to marketable securities as much as do non-dividend payers. Similarly, in model (4), the estimates imply that financially constrained firms based on the SA index, reduce the allocation to marketable securities in the face of policy uncertainty significantly more than financially unconstrained firms.

[Table 5 about here]

3.5.2 *External finance and equity dependence*

Next, we recognize that the negative relationship between *Policy uncertainty* and allocation to corporate marketable securities should be pronounced among firms with relatively greater immediate external funding needs. For such firms, access to highly liquid and safe financial assets is crucial to address unexpected cash flow shocks stemming from increased policy uncertainty. Further, since measures of financial constraints are based on firm-level variables, they are to some extent endogenous to choices made by the firm. Our external capital dependence measures are industry-level and plausibly more exogenous to an individual firm (Rajan and Zingales, 1998; Duchin et al., 2010). We define our external finance and equity dependence measures in Appendix A, Table A1, and assign firms into the high and low external finance and equity dependence groups based on the sample median.

Table 6 presents our findings. As anticipated, the documented strategic adjustments are primarily observed among firms with significant reliance on external financing and equity. This is evident across both key measures, reinforcing the idea that companies manage their cash portfolios based on precautionary savings motives.

[Table 6 about here]

3.5.3 Product market competition

Next, we examine whether product market competition plays a role in the relationship between policy uncertainty and corporate cash portfolio management. Firms facing high product market competition have a greater precautionary motive (Haushalter et al., 2007; Hoberg et al., 2014). Therefore, managers of firms operating in more competitive product markets might prefer cash-like holdings over riskier and less liquid marketable securities in the face of heightened policy uncertainty.

To test this conjecture, we proxy for product market competition using Hoberg et al.'s (2016) text-based product market similarity scores. This metric leverages the detailed text-based analysis of product descriptions from firms' 10-K reports to provide a more nuanced understanding of product market competition than traditional static measures. Firms with above-median similarity in a given year are assigned to the high product market competition group and those with below-median similarity to the low product market competition group.

Our estimates are reported in the first two columns of Table 7. Consistent with our expectations, firms' cash portfolio reallocation appears to be more pronounced for companies facing high competition in the product market, providing further support for our initial economic interpretation.

[Table 7 about here]

3.5.4 Asset Intangibility

We conclude our cross-sectional investigation by examining whether asset intangibility exacerbates the negative relationship between policy uncertainty and allocation to marketable securities. We posit that the high-tech and highly intangible firms have a greater precautionary demand for cash-like assets due to financing frictions that these types of firms face. These arise because intangible assets have limited use as collateral when raising debt finance (Falato et al., 2022) and because raising external equity finance may incur a "lemons premium" due to asymmetric information (Myers and Majluf, 1984), which is particularly high for R&D intensive firms (Opler and Titman, 1994).

To test this idea, we use two proxies for asset intangibility. First, we measure Intangibility as the ratio of intangible capital to total capital (sum of intangible and physical capital). Following Peters and Taylor (2017), intangible capital includes externally purchased intangible assets and internally created intangible capital (knowledge and organization capital). The perpetual-inventory method is applied to past R&D for knowledge capital and a fraction of past SG&A spending for organization capital. Physical capital is the book value of property, plant, and equipment. Firms with above-median intangibility each year are classified into a high intangibility group and those with below-median – into a low intangibility group.

The second proxy is an industry-level measure of intangible capital intensity, which is less prone to endogeneity concerns than a firm-level measure. Begenau and Palazzo (2021) identify the following seven industries that account for most R&D-intensive entrants driving the recent rise in corporate cash holdings: Computer and Data Processing Services (SIC 737), Drugs (SIC 283), Medical Instruments and Supplies (SIC 384), Electronic Components and Accessories (SIC 367), Computer and Office Equipment (SIC 357), Measuring and Controlling Devices (SIC 382), and Communications Equipment (SIC 366). We define hi-tech firms as those in these seven industries.

The results are presented in columns 3-6 of Table 7. Consistent with our conjecture, the decline in cash portfolio allocation to marketable securities is more pronounced in the subsamples of high-tech and highly intangible firms. These results further support our hypothesis that cash portfolio management practices are based on precautionary motives.

3.6 Detailed Asset Allocations and Policy Uncertainty: Evidence from Superstar Firms

While robust, the identified results above rely on Compustat-based measures of cash allocation that extant literature documents to be imprecise (Duchin et al., 2017). Ex-ante, it is challenging to elaborate on whether and how this measurement bias might affect our baseline estimates. However, this established measurement issue calls for hand-verified, accurate proxies for firms' cash portfolio allocations. To this end, we re-examine the relationship between policy uncertainty and detailed asset allocations using the Darmouni and Mota (2024) sample.

This dataset covers 200 publicly traded non-financial firms in the U.S., comprising a union of the 100 largest firms by total book assets in 2017, 2009, and 2000, augmented by another 44 firms with the largest total book assets in 2017.²⁹ For these firms, the authors manually collect data on firms' major financial holdings by asset class from these firms' annual reports. The gathered information includes all financial assets recorded under the "cash and cash equivalents", "short-term investments", and other balance sheet accounts such as "long-term investments" or "other assets". These financial assets are then grouped into the following types: (1) *Cash-like*, which includes cash, cash equivalents, time deposits, bank deposits, money market funds, and commercial paper; (2) *US Gov. Debt*, which includes U.S. Treasuries and other U.S. government debt; (3) *Corporate Debt*, which includes both U.S. and foreign equity securities; and (4) *Other*, which includes asset-backed securities (ABS), mortgage-backed securities (MBS), foreign treasury bonds, and other securities.

We exclude the equity securities category from our analysis.³⁰ Our review of 10-K reports from major equity holders indicates that these investments, while used to manage liquidity, often serve broader strategic objectives such as market entry, technology acquisition, and strategic partnerships (Betton et al., 2009). For instance, Microsoft's investment in LinkedIn, initially classified as a marketable equity security before being acquired entirely, aligned with its goals in professional networking and enterprise services. Similarly, Ford's investment in Rivian, initially classified as a non-marketable equity security, supported its electric vehicle strategy and resulted

²⁹ To deal with outliers in this sample, we remove four firm-year observations for Cheniere Energy Inc. in the period from 2006-2009 because its $Capex_t/Sales_{t-1}$ ratio, one of our key control variables, in this period ranges from 79 to 1283. We also drop firm-years for which we are unable to construct variables for the multivariate tests in Table 9.

 $^{^{30}}$ To be more precise, we exclude both the whole *Equity* category and 'other securities' sub-category from the broad *Other* category. The latter may include equity securities (Darmouni and Mota, 2024).

in Ford becoming one of the all-time largest marketable equity security holders in our sample following Rivian's IPO in 2021.³¹

This sample of large U.S. public firms provides an ideal laboratory to study the identified relationships. The firms covered by the Darmouni and Mota (2024) dataset are large and generally financially unconstrained. Consequently, these are the companies for which the previously identified strategic cash reallocation is least likely to occur for precautionary savings reasons. Confirming our estimates in this subsample and using more granular data would thus provide strong support for our baseline results.

As reported in Table 8, our estimates show a significant negative relationship between policy uncertainty and allocation to risky financial asset holdings, specifically, corporate debt. The relationship between the allocation to cash-like assets and policy uncertainty is positive and statistically significant. Importantly, we confirm that our main results continue to hold if we use Compustat proxies for the cash portfolio in this sample. Specifically, the estimates in Appendix B, Table B9 show a significant negative relationship between policy uncertainty and cash portfolio allocation to marketable securities across all specifications. This result suggests that although the measurement error in Compustat proxies is present, it does not cause severe biases in our estimates.

[Table 8 about here]

The final concern is that the negative relationship between policy uncertainty and marketable securities, particularly corporate bonds, arises because of contemporaneous decreases in the market value of these securities when uncertainty spikes. Indeed, these securities are reported at fair value in the financial statements. This concern is particularly valid for longer duration and riskier securities such as corporate bonds, which are often part of such balance sheet accounts as

³¹ Examples are countless, including Intel's investment in ASML Holding N.V. for semiconductor technology and Abbott's investment in Mylan N.V. shares to strengthen pharmaceutical partnerships.

"long-term investments" or "other assets", rather than "short-term investments". First, we note that all our models include controls for contemporaneous interest rates as well as credit risk and liquidity premiums. Second, to address this concern further, we examine the relationship between policy uncertainty and the likelihood of investing in corporate bonds. Our key dependent variable in this test is an indicator for whether a firm invests in corporate bonds in a particular year. We note that this variable is not affected by the changes in the value of existing corporate bonds in firms' financial portfolios, nor is it affected by changes in the value of other securities in the portfolio.

Our estimates in Table 9 reveal a negative relationship between policy uncertainty and the likelihood of investing in corporate bonds in a given year.³² In Column (1), when examining the whole sample, the relationship is statistically significant at the 10% level. In Column (2), we restrict the sample to only those firms that invest in corporate bonds at least once over the sample period. This filter is motivated by the fact that many firms never invest in corporate bonds during our sample period, resulting in many zero values. The negative relationship between policy uncertainty and the likelihood of investing in corporate bonds is statistically significant at the 5% level in this restricted sample.

[Table 9 about here]

Taken together, the results in this section show that even 'superstar' firms appear to strategically rebalance their cash portfolios away from risky and less liquid securities in response to heightened policy uncertainty.

4. Conclusion

³² In these tests, we employ linear probability models due to issues associated with incorporating highdimensional fixed effects in non-linear models like Probit and Tobit (Greene, 2004).

This study investigates the impact of policy uncertainty on corporate cash portfolio allocation decisions. Utilizing the quasi-exogenous EPU index, we find a robust negative relationship between policy uncertainty and firms' allocation to marketable securities, consistent with the precautionary savings hypothesis. These findings are robust across various model specifications and robustness tests, including the use of alternative policy uncertainty proxies and instrumental variable approaches to address omitted variable concerns.

Our results contribute to the literature by highlighting policy uncertainty as a critical determinant of corporate cash portfolio management strategies. Our findings suggest that firms actively manage their cash portfolios to mitigate the risks associated with policy uncertainty, thereby forgoing higher yields from marketable securities in favor of liquidity and safety. This strategic adjustment underscores the importance of precautionary savings motives in corporate financial decision-making under uncertainty.

The extra yield the corporations miss out on by reducing the allocation to marketable securities can be substantial and could have been used for real investment or payout. A recent Bloomberg Businessweek article notes that almost 1-in-10 non-financial companies in the S&P 500, earned more in interest income than they paid in debt expense during the first quarter of 2024.³³ One standout is chipmaker Nvidia Corp., which reported \$359 million in interest income for the first quarter, enough to cover quarterly interest expense of \$64 million and its \$98 million dividend. Additionally, if one views non-financial firms as investors, lower demand for corporate bonds from such investors, due to policy uncertainty, can contribute to higher yields and increased borrowing costs for such investors' portfolio entities. These are additional channels through which

³³ See "Nvidia Leads Companies Minting Money as Interest Earned From Cash Surges", Bloomberg (June 3rd, 2024: <u>https://www.bloomberg.com/news/articles/2024-06-03/nvidia-leads-companies-minting-money-as-interest-earned-from-cash-surges</u>).

policy uncertainty can affect the real and financial economies, and they warrant further investigation.

References

- Acharya, V.V. and Steffen, S., 2020. The risk of being a fallen angel and the corporate dash for cash in the midst of COVID. *The Review of Corporate Finance Studies*, *9*(3), pp.430-471.
- Agarwal, V., Aslan, H., Huang, L. and Ren, H., 2022. Political uncertainty and household stock market participation. *Journal of Financial and Quantitative Analysis*, *57*(8), pp.2899-2928.
- Almeida, H., Campello, M. and Weisbach, M.S., 2004. The cash flow sensitivity of cash. *The Journal of Finance*, *59*(4), pp.1777-1804.
- Atanassov, J., Julio, B. and Leng, T., 2024. The bright side of political uncertainty: The case of R&D. Forthcoming, *The Review of Financial Studies*.
- Autor, D., Dorn, D., Katz, L.F., Patterson, C. and Van Reenen, J., 2020. The fall of the labor share and the rise of superstar firms. *The Quarterly Journal of Economics*, *135*(2), pp.645-709.
- Azzimonti, M., 2018. Partisan conflict and private investment. *Journal of Monetary Economics*, 93, pp.114-131.
- Baker, S.R., Bloom, N. and Davis, S.J., 2016. Measuring economic policy uncertainty. *The Quarterly Journal of Economics*, *131*(4), pp.1593-1636.
- Baker, S.R., Davis, S.J. and Levy, J.A., 2022. State-level economic policy uncertainty. *Journal of Monetary Economics*, 132, pp.81-99.
- Bates, T.W., Kahle, K.M. and Stulz, R.M., 2009. Why do US firms hold so much more cash than they used to?. *The Journal of Finance*, *64*(5), pp.1985-2021.

- Begenau, J. and Palazzo, B., 2021. Firm selection and corporate cash holdings. *Journal of Financial Economics*, 139(3), pp.697-718.
- Betton, S., Eckbo, B., and Thorburn, K., 2009. Merger negotiations and the toehold puzzle. *Journal of Financial Economics* 91(2), pp. 158-178.
- Bernanke, B.S., 1983. Irreversibility, uncertainty, and cyclical investment. *The Quarterly Journal of Economics*, *98*(1), pp.85-106.
- Bonaime, A., Gulen, H. and Ion, M., 2018. Does policy uncertainty affect mergers and acquisitions?. *Journal of Financial Economics*, *129*(3), pp.531-558.
- Brogaard, J. and Detzel, A., 2015. The asset-pricing implications of government economic policy uncertainty. *Management science*, *61*(1), pp.3-18.
- Campello, M., Graham, J.R. and Harvey, C.R., 2010. The real effects of financial constraints: Evidence from a financial crisis. *Journal of Financial Economics*, 97(3), pp.470-487.
- Cao, C., Li, X. and Liu, G., 2019. Political uncertainty and cross-border acquisitions. *Review of Finance*, *23*(2), pp.439-470.
- Cardella, L., Fairhurst, D. and Klasa, S., 2021. What determines the composition of a firm's cash reserves?. *Journal of Corporate Finance*, 68, p.101924.
- Chen, Z., Cihan, M., Jens, C.E. and Page, T.B., 2023. Political uncertainty and firm investment: Project-level evidence from M&A activity. *Journal of Financial and Quantitative Analysis*, 58(1), pp.71-103.
- Chen, Z. and Duchin, R., 2024. Do Nonfinancial Firms Use Financial Assets to Take Risk?. *The Review of Corporate Finance Studies*, *13*(1), pp.1-37.
- Chodorow-Reich, G., Darmouni, O., Luck, S. and Plosser, M., 2022. Bank liquidity provision across the firm size distribution. *Journal of Financial Economics*, *144*(3), pp.908-932.

- Çolak, G., Durnev, A. and Qian, Y., 2017. Political uncertainty and IPO activity: Evidence from US gubernatorial elections. *Journal of Financial and Quantitative Analysis*, 52(6), pp.2523-2564.
- Darmouni, O. and Mota, L., 2024. The savings of corporate giants. Forthcoming, *The Review of Financial Studies*.
- De Loecker, J., Eeckhout, J. and Unger, G., 2020. The rise of market power and the macroeconomic implications. *The Quarterly Journal of Economics*, 135(2), pp.561-644.

Dixit, A.K. and Pindyck, R.S., 1994. Investment under uncertainty. Princeton university press.

- Duong, H.N., Nguyen, J.H., Nguyen, M. and Rhee, S.G., 2020. Navigating through economic policy uncertainty: The role of corporate cash holdings. *Journal of Corporate Finance*, 62, p.101607.
- Duchin, R., Gilbert, T., Harford, J. and Hrdlicka, C., 2017. Precautionary savings with risky assets: When cash is not cash. *The Journal of Finance*, *72*(2), pp.793-852.
- Duchin, R., Ozbas, O. and Sensoy, B.A., 2010. Costly external finance, corporate investment, and the subprime mortgage credit crisis. *Journal of Financial Economics*, *97*(3), pp.418-435.
- Falato, A., Kadyrzhanova, D., Sim, J. and Steri, R., 2022. Rising intangible capital, shrinking debt capacity, and the US corporate savings glut. *The Journal of Finance*, 77(5), pp.2799-2852.
- Gao, X., Whited, T.M. and Zhang, N., 2021. Corporate money demand. *The Review of Financial Studies*, *34*(4), pp.1834-1866.
- Geelen, T., Hajda, J., Morellec, E. and Winegar, A., 2024. Asset life, leverage, and debt maturity matching. *Journal of Financial Economics*, *154*, p.103796.
- Greene, W., 2004. The behaviour of the maximum likelihood estimator of limited dependent variable models in the presence of fixed effects. *The Econometrics Journal*, 7(1), pp.98-119.

- Gulen, H. and Ion, M., 2016. Policy uncertainty and corporate investment. *The Review of Financial Studies*, *29*(3), pp.523-564.
- Gungoraydinoglu, A., Çolak, G. and Öztekin, Ö., 2017. Political environment, financial intermediation costs, and financing patterns. *Journal of Corporate Finance*, *44*, pp.167-192.
- Haddad, V., Moreira, A. and Muir, T., 2021. When selling becomes viral: Disruptions in debt markets in the COVID-19 crisis and the Fed's response. *The Review of Financial Studies*, *34*(11), pp.5309-5351.
- Hadlock, C.J. and Pierce, J.R., 2010. New evidence on measuring financial constraints: Moving beyond the KZ index. *The Review of Financial Studies*, *23*(5), pp.1909-1940.
- Han, S. and Qiu, J., 2007. Corporate precautionary cash holdings. *Journal of Corporate Finance*, 13(1), pp.43-57.
- Haushalter, D., Klasa, S. and Maxwell, W.F., 2007. The influence of product market dynamics on a firm's cash holdings and hedging behavior. *Journal of Financial Economics*, 84(3), pp.797-825.
- Hoberg, G. and Phillips, G., 2016. Text-based network industries and endogenous product differentiation. *Journal of Political Economy*, *124*(5), pp.1423-1465.
- Hoberg, G., Phillips, G. and Prabhala, N., 2014. Product market threats, payouts, and financial flexibility. *The Journal of Finance*, 69(1), pp.293-324.
- Huang, T. and Sacchetto, S., 2023. Bonding With Risk: Corporate Investment and Savings in Risky Financial Assets. Working Paper.
- Hwang, J.H., 2024. Asymmetric Cost Behavior and Non-Financial Firms' Risky Financial Investments. Working Paper.

- Jens, C.E., 2017. Political uncertainty and investment: Causal evidence from US gubernatorial elections. *Journal of Financial Economics*, *124*(3), pp.563-579.
- Jens, C.E. and Page, T.B., 2024. Uncertainty, precautionary saving, and investment: Evidence from prescheduled election cycles. Forthcoming, *Financial Management*.
- Julio, B. and Yook, Y., 2012. Political uncertainty and corporate investment cycles. *The Journal of Finance*, 67(1), pp.45-83.
- Kargar, M., Lester, B., Lindsay, D., Liu, S., Weill, P.O. and Zúñiga, D., 2021. Corporate bond liquidity during the COVID-19 crisis. *The Review of Financial Studies*, *34*(11), pp.5352-5401.
- Kaviani, M.S., Kryzanowski, L., Maleki, H. and Savor, P., 2020. Policy uncertainty and corporate credit spreads. *Journal of Financial Economics*, *138*(3), pp.838-865.
- Keynes, J. M., 1936. The general theory of employment, interest and money. London :Macmillan.
- Le, N. and Ramsey, M., 2024. Competition, peer firm effects, and cash composition. *Journal of Banking & Finance*, *160*, p.107092.
- McDonald, R. and Siegel, D., 1986. The value of waiting to invest. *The Quarterly Journal of Economics*, 101(4), pp.707-727.
- Myers, S.C. and Majluf, N.S., 1984. Corporate financing and investment decisions when firms have information that investors do not have. *Journal of Financial Economics*, *13*(2), pp.187-221.
- Nguyen, N.H. and Phan, H.V., 2017. Policy uncertainty and mergers and acquisitions. *Journal of Financial and Quantitative Analysis*, *52*(2), pp.613-644.
- Opler, T., Pinkowitz, L., Stulz, R. and Williamson, R., 1999. The determinants and implications of corporate cash holdings. *Journal of Financial Economics*, *52*(1), pp.3-46.

- Opler, T.C. and Titman, S., 1994. Financial distress and corporate performance. *The Journal of Finance*, *49*(3), pp.1015-1040.
- Rajan, R. and Zingales, L., 1998. Financial Dependence and Growth. American Economic Review, 88(3), pp.559-86.
- Pástor, Ľ. and Veronesi, P., 2013. Political uncertainty and risk premia. Journal of financial Economics, 110(3), pp.520-545.
- Peters, R.H. and Taylor, L.A., 2017. Intangible capital and the investment-q relation. *Journal of Financial Economics*, *123*(2), pp.251-272.
- Phan, H.V., Nguyen, N.H., Nguyen, H.T. and Hegde, S., 2019. Policy uncertainty and firm cash holdings. *Journal of Business Research*, *95*, pp.71-82.
- Waisman, M., Ye, P. and Zhu, Y., 2015. The effect of political uncertainty on the cost of corporate debt. *Journal of Financial Stability*, 16, pp.106-117.
- Xu, Z., 2020. Economic policy uncertainty, cost of capital, and corporate innovation. *Journal of Banking & Finance*, 111, p.105698.
- Ysmailov, B., 2021. Interest rates, cash and short-term investments. *Journal of Banking & Finance*, *132*, p.106225.

Appendix A

Variable	Definition (Compustat data items in parentheses)					
Cash-like	Cash and cash equivalents (ch)					
Marketable securities	Short-term investments (ivst)					
Total cash portfolio	The sum of Cash-like and Marketable securities (che)					
Assets	Total book assets (at)					
Net assets	Total book assets (at) minus Total cash portfolio					
Sales	Total sales (sale)					
R&D	Research and development expenditures (xrd), set equal to zero wh missing.					
Capex	Capital expenditures (capx)					
Market to book	Book assets (at) minus book equity (ceq) plus market value of equity, which is fiscal year end price (prcc_f) times common shares outstanding (csho), all divided by book assets (at).					
CF vol.	The standard deviation of a firm's <i>CF/Assets</i> over the previous five year where <i>CF</i> is operating income before depreciation (ebitda), after interes (xint), and taxes (txt). We require three non-missing observations for the calculation of <i>CF vol</i> .					
Return on assets	Operating income before depreciation (oibdp) divided by the previous year's book value of assets (at)					
Dividend dummy	An indicator variable equal to one if a firm pays common dividends in a given year (dvc), and zero otherwise.					
Leverage	Book value of long-term debt (dltt) plus debt in current liabilities (dlc) divided by the book value of assets (at)					
Foreign income	An indicator variable equal to one if a firm has foreign income in a given year (pifo), and zero otherwise.					
3-month T-Bill	The arithmetic average of the 3-Month Treasury Bill Secondary Market Rate over 12 months of fiscal year <i>t</i> for each firm <i>i</i> . (source: Federal Reserve Economic Data).					
AAA-Treasury spread	The arithmetic average of the Moody's Seasoned AAA Corporate Bond Yield Relative to Yield on 10-Year Treasury Constant Maturity over 12 months of fiscal year t for each firm i . (source: Federal Reserve Economic Data).					
Real GDP growth	Average annual Real Gross Domestic Product growth rate. (source Federal Reserve Economic Data).					
Firm size	Total book assets (at)					
SA index	The index is calculated as $(-0.737*\log(\text{Real book assets}) + 0.043*\log(\text{Real book assets})^2 - 0.04*Firm age)$. <i>Real book assets</i> is inflation adjusted book assets (at). <i>Firm age</i> is the number of years since a firm's appearance in the Compustat database with a fiscal year-end price (prcc_f).					

Table A1. Variable Definitions

Funds from operations	Funds from operations (fopt). If missing, it is defined as the sum of income before extraordinary items (ibc), depreciation and amortization (dp), deferred taxes (txdc), equity in net loss/earnings (esubc), sale of property, plan, and equipment, and investments – gain/loss (sppiv), and funds from operations – other (fopo).
External finance dependence	The difference between the sum of <i>Capex</i> and <i>R&D</i> and <i>Funds from operations</i> scaled by the sum of <i>Capex</i> and <i>R&D</i> . The time series for industry-level external finance dependence is created by taking the median of the external finance needs of all companies within each three-digit SIC code industry for each year. Each industry's external finance dependence is measured as its time series median.
External equity dependence	The difference between sale of common and preferred stock (sstk) and the purchase of common and preferred stock (prstkc) scaled by the sum of <i>Capex</i> and <i>R&D</i> . The time series for industry-level external equity dependence is created by taking the median of the external equity needs of all companies within each three-digit SIC code industry for each year. Each industry's external equity dependence is measured as its time series median.

Tables

Table 1. Summary Statistics

The sample consists of U.S. industrial firms over the 1990-2022 period that are included in Compustat and that have positive values for assets, sales, and cash. We exclude utilities (SIC codes 4900-4999), financial firms (SIC codes 6000-6999), and quasi-public firms (SIC codes greater than or equal to 9900). All continuous firm-level variables are winsorized at the 1% level. We also drop firm-years for which we are unable to construct variables for our main multivariate tests. The total number of firm-year observations is 107,518. Variables are defined in Appendix A, Table A1.

Variables	Mean	Std. Dev.	P1	P25	P50	P75	P99
Marketable securities _t / Total cash portfolio _t	0.141	0.257	0.000	0.000	0.000	0.158	0.945
Cash-liket/Assetst-1	0.151	0.211	0.001	0.024	0.075	0.187	1.279
Marketable securities _t /Assets _{t-1}	0.053	0.136	0.000	0.000	0.000	0.018	0.777
Total cash portfolio _t /Assets _{t-1}	0.208	0.287	0.001	0.029	0.097	0.270	1.677
Policy uncertainty _t	1.107	0.339	0.713	0.845	1.087	1.203	2.430
log(Sales) _{t-1}	5.021	2.551	-1.871	3.329	5.141	6.827	10.520
R&D _{t-1} /Sales _{t-1}	0.271	1.286	0.000	0.000	0.000	0.068	10.720
Capex _{t-1} /Sales _{t-1}	0.112	0.291	0.000	0.016	0.035	0.076	2.216
Market to book _{t-1}	2.384	2.758	0.556	1.114	1.533	2.441	20.218
CF volatility _{t-1}	0.139	0.351	0.004	0.020	0.041	0.104	2.732
Return on assets _{t-1}	0.024	0.386	-2.374	0.008	0.110	0.185	0.571
Dividend dummy _{t-1}	0.287	0.452	0.000	0.000	0.000	1.000	1.000
Leverage _{t-1}	0.273	0.310	0.000	0.043	0.210	0.386	1.978
Foreign income _{t-1}	0.272	0.445	0.000	0.000	0.000	1.000	1.000

Table 2. Policy Uncertainty and Strategic Management of Firms' CashPortfolios

This table reports estimates from panel OLS regressions explaining firms' allocation to marketable securities as a proportion of the total cash portfolio. Variable definitions are provided in Appendix A, Table A1. Robust standard errors clustered by firm are in parentheses. Note: *** p<0.01, ** p<0.05, * p<0.1. The coefficient on the constant is not reported for brevity.

	(1)	(2)	(3)	(4)		
Variables	Marketable securities _t /Total cash portfolio _t					
Policy uncertainty,	-0.025***	-0.020***	-0.023***	-0.017***		
• • • •	(0.003)	(0.004)	(0.003)	(0.004)		
log(Sales) _{t-1}			0.000	0.001		
			(0.002)	(0.002)		
R&D _{t-1} /Sales _{t-1}			0.005***	0.005***		
t 1			(0.002)	(0.002)		
Capex _{t-1} /Sales _{t-1}			0.016***	0.018***		
(-1			(0.006)	(0.006)		
Market to book _{t-1}			0.001	0.001		
• •			(0.001)	(0.001)		
CF volatility _{t-1}			-0.003	-0.002		
			(0.005)	(0.005)		
Return on assets _{t-1}			0.013***	0.011**		
			(0.004)	(0.004)		
Dividend dummy _{t-1}			0.009*	0.008*		
			(0.005)	(0.005)		
Leverage _{t-1}			-0.050***	-0.050***		
			(0.005)	(0.005)		
Foreign income _{t-1}			-0.010***	-0.011***		
			(0.004)	(0.004)		
3-month T-Bill _t		-0.436***		-0.428***		
		(0.077)		(0.077)		
AAA-Treasury spread _t		-2.490***		-2.517***		
		(0.351)		(0.351)		
Real GDP growth _t		0.007		0.009		
		(0.051)		(0.051)		
Firm FE?	Yes	Yes	Yes	Yes		
Time trend?	Yes	Yes	Yes	Yes		
Observations	107,518	107,518	107,518	107,518		
R-squared	0.539	0.540	0.542	0.542		

Table 3. Policy Uncertainty and Strategic Management of Firms'Cash Portfolios: Robustness Tests

This table reports estimates from OLS (columns 1-3) and 2SLS (column 4) regressions explaining firms' allocation to marketable securities as a proportion of the total cash portfolio using alternative measures of *Policy uncertainty*. In column 4, we report second-stage results from using the partisan conflict index (Azzimonti, 2018) as an instrument for *Policy uncertainty*. Controls include both firm- and macro-level control variables from Table 2. Variable definitions are provided in Appendix A, Table A1. Robust standard errors clustered by firm are in parentheses. Note: *** p<0.01, ** p<0.05, * p<0.1. The coefficient on the constant is not reported for brevity.

	(1)	(2)	(3)	(4)
Variables	Marketa	ble securities	s _t /Total cash p	ortfolio _t
EPU-S & N _t	-0.004***			
	(0.001)			
EPU-S _t		-0.006***		
		(0.002)		
EPU-N _t			-0.007***	
-			(0.002)	
Policy uncertainty [*]				-0.226**
				(0.095)
				(01070)
Model	OLS	OLS	OLS	2SLS
Controls?	Yes	Yes	Yes	Yes
Firm FE?	Yes	Yes	Yes	Yes
Time trend?	Yes	Yes	Yes	Yes
Observations	102,242	102,242	102,242	106,252
R-squared	0.547	0.547	0.547	-0.051

Table 4. Active Management of Cash Portfolios in the Face of Policy Uncertainty

This table reports estimates from panel OLS regressions explaining firms' holdings of cash-like instruments (column 1), marketable securities (column 2), and their sum (column 3) relative to lagged total book assets. Controls include both firm- and macro-level control variables from Table 2. Variable definitions are provided in Appendix A, Table A1. Robust standard errors clustered by firm are in parentheses. Note: *** p<0.01, ** p<0.05, * p<0.1. The coefficient on the constant is not reported for brevity.

	(1)	(2)	(3)
		X/Assets _{t-1}	
Variables	Cash-like _t	Marketable securities _t	Total cash portfolio
Policy uncertainty _t	0.010***	-0.008***	0.003
	(0.003)	(0.002)	(0.003)
Controls?	Yes	Yes	Yes
Firm FE?	Yes	Yes	Yes
Time trend?	Yes	Yes	Yes
Observations	107,518	107,518	107,518
R-squared	0.529	0.591	0.608

Table 5. Cross-Sectional Tests: Financial Constraints

This table reports estimates from panel OLS regressions explaining firms' allocation to marketable securities as a proportion of the total cash portfolio. Cross-sectional tests in this table consider subsamples of constrained and unconstrained firms based on two measures of financial constraints: dividend payer status and the SA Index (Hadlock and Pierce, 2010). Controls in models (2) and (4) include both firm- and macro-level control variables from Table 2. Variable *X* denotes a financial constraints indicator. Variable definitions are provided in Appendix A, Table A1. Robust standard errors clustered by firm are in parentheses. Note: *** p<0.01, ** p<0.05, * p<0.1. The coefficient on the constant is not reported for brevity.

	(1)	(2)	(3)	(4)
	Dividend	d dummy	SA con	strained
Variables	Marketa	ble Securitie	s/Total Cash I	Portfolio
Policy uncertainty*X	0.017***	0.015**	-0.021***	-0.017***
	(0.006)	(0.006)	(0.006)	(0.006)
Policy uncertainty	-0.031***	-0.022***	-0.015***	-0.010**
	(0.004)	(0.004)	(0.004)	(0.004)
Х	-0.004	-0.005	0.008	0.001
	(0.009)	(0.009)	(0.008)	(0.009)
Controls?	No	Yes	No	Yes
Firm FE?	Yes	Yes	Yes	Yes
Time trend?	Yes	Yes	Yes	Yes
Observations	107,518	107,518	107,518	107,518
R-squared	0.540	0.542	0.540	0.543

Table 6. Cross-Sectional Tests: External Capital Dependence

This table reports estimates from panel OLS regressions explaining firms' allocation to marketable securities as a proportion of the total cash portfolio. Cross-sectional tests in this table consider subsamples of firms with high and low external capital dependence. Controls in models (2) and (4) include both firm- and macro-level control variables from Table 2. Variable X denotes an external capital dependence indicator. Variable definitions are provided in Appendix A, Table A1. Robust standard errors clustered by firm are in parentheses. Note: *** p<0.01, ** p<0.05, * p<0.1. The coefficient on the constant is not reported for brevity.

	(1)	(2)	(3)	(4)
	High ext	. fin. dep.	High ext	. eq. dep.
Variables	Marketa	ble Securities	s/Total Cash]	Portfolio
Policy uncertainty*X	-0.029***	-0.027***	-0.038***	-0.037***
	(0.007)	(0.006)	(0.007)	(0.007)
Policy uncertainty	-0.011***	-0.004	-0.007*	0.000
	(0.004)	(0.005)	(0.004)	(0.004)
Controls?	No	Yes	No	Yes
Firm FE?	Yes	Yes	Yes	Yes
Time trend?	Yes	Yes	Yes	Yes
Observations	107,494	107,494	107,518	107,518
R-squared	0.540	0.542	0.540	0.543

Table 7. Cross-Sectional Tests: Product Market Competition and Asset Intangibility

This table reports estimates from panel OLS regressions explaining firms' allocation to marketable securities as a proportion of the total cash portfolio. Cross-sectional tests in this table consider subsamples of firms facing high and low competition in the product market based on a measure from Hoberg et al. (2016) in models (1) and (2), and the subsamples of firms with high and low asset tangibility based on two measures in the rest of the columns. Controls in models (2), (4), and (6) include both firm- and macro-level control variables from Table 2. Variable X denotes a cross-sectional indicator. Variable definitions are provided in Appendix A, Table A1. Robust standard errors clustered by firm are in parentheses. Note: *** p<0.01, ** p<0.05, * p<0.1. The coefficient on the constant is not reported for brevity.

	(1)	(2)	(3)	(4)	(5)	(6)
	High si	milarity	High	-tech	High	intan.
Variables		Marketa	ble Securities	s/Total Cash]	Portfolio	
Policy uncertainty*X	-0.019***	-0.015**	-0.039***	-0.037***	-0.040***	-0.038***
	(0.006)	(0.006)	(0.007)	(0.007)	(0.008)	(0.008)
Policy uncertainty	-0.020***	-0.013***	-0.012***	-0.005	-0.011**	-0.002
	(0.004)	(0.005)	(0.003)	(0.004)	(0.005)	(0.006)
Х	0.023***	0.018**			0.035***	0.034***
	(0.008)	(0.008)			(0.009)	(0.009)
Controls?	No	Yes	No	Yes	No	Yes
Firm FE?	Yes	Yes	Yes	Yes	Yes	Yes
Time trend?	Yes	Yes	Yes	Yes	Yes	Yes
Observations	92,813	92,813	107,518	107,518	100,063	100,063
R-squared	0.552	0.555	0.540	0.543	0.542	0.545

Table 8. Policy Uncertainty and Strategic Management of Firms' Cash Portfolios: The Case of Superstar Firms

This table reports estimates from panel OLS regressions explaining firms' allocation to various types of marketable securities as a proportion of the total cash portfolio. The sample in this table includes 200 large U.S. public firms from 2000 to 2021 for which detailed data on cash composition is available from the footnotes of 10-K reports. *Total cash portfolio** includes financial assets both within and outside the Compustat item *che*. Variable X in this table denotes a numerator of the dependent variable. Variable definitions are provided in Appendix A, Table A1. Robust standard errors clustered by firm are in parentheses. Note: *** p<0.01, ** p<0.05, * p<0.1. The coefficient on the constant is not reported for brevity.

	(1)	(2)	(3)	(4)
		X/Total cas	sh portfolio [*]	
Variables	Cash-like _t	US Gov. debt _t	Corporate debt _t	Othert
Policy uncertainty _t	0.032**	-0.005	-0.026***	-0.000
	(0.013)	(0.007)	(0.008)	(0.006)
Controls?	Yes	Yes	Yes	Yes
Firm FE?	Yes	Yes	Yes	Yes
Time trend?	Yes	Yes	Yes	Yes
Observations	3,371	3,371	3,371	3,371
R-squared	0.742	0.650	0.637	0.363

Table 9. Policy Uncertainty and the Strategic Management of Firms' Cash Portfolios: Controlling for Changes in the Value of Financial Assets

This table reports estimates from panel OLS regressions explaining the likelihood of investing in corporate bonds. In Column (1), the sample includes 200 large U.S. public firms from 2000 to 2021 for which detailed data on cash composition is available from the footnotes of 10-K reports. In Column (2), we restrict the sample to those firms that invest in corporate bonds at least once over the sample period. Variable definitions are provided in Appendix A, Table A1. Robust standard errors clustered by firm are in parentheses. Note: *** p<0.01, ** p<0.05, * p<0.1. The coefficient on the constant is not reported for brevity.

	(1)	(2)
Variables	Corporate	e debt dummy
Policy uncertainty	-0.039*	-0.112**
	(0.021)	(0.053)
Controls?	Yes	Yes
Firm FE?	Yes	Yes
Time trend?	Yes	Yes
Observations	3,371	1,290
R-squared	0.736	0.500

Table B1. Policy Uncertainty and Strategic Management of Firms' Cash Portfolios: Alternative Scaling Variables

This table reports estimates from panel OLS regressions explaining firms' investment in marketable securities as a proportion of current year *net book assets* (model 1) and as a proportion of last year's *net book assets*. *Net book assets* is defined as the difference between a firm's total book assets and cash. Variable X in this table denotes the numerator of the dependent variable. Variable definitions are provided in Appendix A, Table A1. Robust standard errors clustered by firm are in parentheses. Note: *** p<0.01, ** p<0.05, * p<0.1. The coefficient on the constant is not reported for brevity.

	(1)	(2)		
	Marketable securities			
Variables	X/Net assets	X/Net assets (t-1)		
Policy uncertainty	-0.030***	-0.029***		
	(0.006)	(0.007)		
Controls?	Yes	Yes		
Firm FE?	Yes	Yes		
Time trend?	Yes	Yes		
Observations	107,518	107,518		
R-squared	0.624	0.620		

Table B2. Policy Uncertainty and Strategic Management of Firms'Cash Portfolios: Clustering Standard Errors by Year

This table reports estimates from panel OLS regressions explaining firms' allocation to marketable securities as a proportion of the total cash portfolio. Controls include both firm- and macro-level control variables from Table 2. Variable definitions are provided in Appendix A, Table A1. Robust standard errors clustered by year are in parentheses. Note: *** p<0.01, ** p<0.05, * p<0.1. The coefficient on the constant is not reported for brevity.

	(1)	(2)	(3)	(4)
Variables	Marketa	ble securities	t/Total cash p	ortfolio _t
Policy uncertainty _t	-0.025*** (0.007)	-0.020*** (0.006)	-0.023*** (0.007)	-0.017*** (0.006)
Macro controls?	No	Yes	No	Yes
Firm controls?	No	No	Yes	Yes
Firm FE?	Yes	Yes	Yes	Yes
Time trend?	Yes	Yes	Yes	Yes
Observations	107,518	107,518	107,518	107,518
R-squared	0.539	0.540	0.542	0.542

Table B3. Policy Uncertainty and Strategic Management of Firms' Cash Portfolios: Subsample of Firms That Invest in in Marketable Securities At Least Once

This table reports estimates from panel OLS regressions explaining firms' allocation to marketable securities as a proportion of the total cash portfolio. The sample in this table is restricted to firms that invest in marketable securities at least once over the sample period. Controls include both firm- and macro-level control variables from Table 2. Variable definitions are provided in Appendix A, Table A1. Robust standard errors clustered by firm are in parentheses. Note: *** p<0.01, ** p<0.05, * p<0.1. The coefficient on the constant is not reported for brevity.

	(1)	(2)	(3)	(4)		
Variables	Marketable securities _t /Total cash portfolio _t					
Policy uncertainty,	-0.031***	-0.024***	-0.028***	-0.020***		
·	(0.004)	(0.005)	(0.004)	(0.005)		
Macro controls?	No	Yes	No	Yes		
Firm controls?	No	No	Yes	Yes		
Firm FE?	Yes	Yes	Yes	Yes		
Time trend?	Yes	Yes	Yes	Yes		
Observations	79,000	79,000	79,000	79,000		
R-squared	0.484	0.485	0.488	0.489		

Table B4. Policy Uncertainty and Strategic Management ofFirms' Cash Portfolios: Alternative Specification

This table reports estimates from panel OLS regressions explaining firms' yearahead allocation to marketable securities as a proportion of the total cash portfolio. Controls include both firm- and macro-level control variables from Table 2. In this table, all control variables are measured at time *t*. Variable definitions are provided in Appendix A, Table A1. Robust standard errors clustered by firm are in parentheses. Note: *** p<0.01, ** p<0.05, * p<0.1. The coefficient on the constant is not reported for brevity.

	(1)	(2)	(3)	(4)
Variables	Marketabl	e securities _{t+1}	/Total cash p	ortfolio _{t+1}
Policy uncertainty _t	-0.008***	-0.009***	-0.007**	-0.008**
	(0.003)	(0.004)	(0.003)	(0.004)
Macro controls?	No	Yes	No	Yes
Firm controls?	No	No	Yes	Yes
Firm FE?	Yes	Yes	Yes	Yes
Time trend?	Yes	Yes	Yes	Yes
Observations	97,521	97,521	97,521	97,521
R-squared	0.543	0.545	0.545	0.546

Table B5. Policy Uncertainty and Strategic Management of Firms'Cash Portfolios: Components of EPU

This table reports estimates from panel OLS regressions explaining firms' allocation to marketable securities as a proportion of the total cash portfolio. Controls include both firm- and macro-level control variables from Table 2. Variable definitions are provided in Appendix A, Table A1. Robust standard errors clustered by firm are in parentheses. Note: *** p<0.01, ** p<0.05, * p<0.1. The coefficient on the constant is not reported for brevity.

	(1)	(2)	(3)	(4)				
Variables	Marketable securities _t /Total cash portfolio _t							
News PU _t	-0.015***							
ť	(0.003)							
Gov. spending PU _t		-0.012***						
t		(0.004)						
CPI PU _t			0.001					
			(0.004)					
Tax PU _t				0.000				
				(0.000)				
Controls?	Yes	Yes	Yes	Yes				
Firm FE?	Yes	Yes	Yes	Yes				
Time trend?	Yes	Yes	Yes	Yes				
Observations	107,518	107,518	107,518	107,518				
R-squared	0.542	0.542	0.542	0.542				

Table B6. Policy Uncertainty and Strategic Management of Firms' Cash Portfolios: Categorical EPU

This table reports estimates from panel OLS regressions explaining firms' allocation to marketable securities as a proportion of the total cash portfolio. Controls include both firm- and macro-level control variables from Table 2. Variable definitions are provided in Appendix A, Table A1. Robust standard errors clustered by firm are in parentheses. Note: *** p<0.01, ** p<0.05, * p<0.1. The coefficient on the constant is not reported for brevity.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Variables				Marketa	ble securities	_t /Total cash p	ortfolio _t			
Economic _t	-0.014*** (0.003)									
Monetary _t		-0.006** (0.003)								
Tax _t		. ,	-0.011*** (0.002)							
Gov. spending _t			(0.002)	-0.007*** (0.002)						
Healthcaret				(0.002)	-0.003*** (0.001)					
National security _t					(0.001)	-0.007*** (0.002)				
Entitlement pgms.t						(0.002)	-0.004*** (0.001)			
Regulation _t							(0.001)	-0.015*** (0.003)		
Trade _t								(0.003)	-0.001 (0.001)	
Sovereign debt _t									(0.001)	-0.001** (0.000)
Controls?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time trend?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	107,518	107,518	107,518	107,518	107,518	107,518	107,518	107,518	107,518	107,518
R-squared	0.542	0.542	0.542	0.542	0.542	0.542	0.542	0.542	0.542	0.542

Table B7. Active Management of Cash Portfolios in the Face of Policy Uncertainty: Subsample of Firms That Invest in in Marketable Securities At Least Once

This table reports estimates from panel OLS regressions explaining firms' holdings of cash-like instruments (column 1), marketable securities (column 2), and their sum (column 3) relative to lagged total book assets. The sample in this table is restricted to firms that invest in marketable securities at least once over the sample period. Controls include both firm- and macro-level control variables from Table 2. Variable definitions are provided in Appendix A, Table A1. Robust standard errors clustered by firm are in parentheses. Note: *** p<0.01, ** p<0.05, * p<0.1. The coefficient on the constant is not reported for brevity.

	(1)	(2)	(3)
		X/Assets _{t-1}	
Variables	Cash-like _t	Marketable securities _t	Total cash portfolio _t
Policy uncertainty _t	0.010***	-0.010***	0.000
	(0.003)	(0.002)	(0.004)
Controls?	Yes	Yes	Yes
Firm FE?	Yes	Yes	Yes
Time trend?	Yes	Yes	Yes
Observations	79,000	79,000	79,000
R-squared	0.498	0.570	0.596

Table B8. Policy Uncertainty and Strategic Management of Firms'Cash Portfolios: Controlling for portfolio size

This table reports estimates from panel OLS regressions explaining firms' allocation to marketable securities as a proportion of the total cash portfolio while controlling for portfolio size. Controls include both firm- and macro-level control variables from Table 2. Variable definitions are provided in Appendix A, Table A1. Robust standard errors clustered by firm are in parentheses. Note: *** p<0.01, ** p<0.05, * p<0.1. The coefficient on the constant is not reported for brevity.

	(1)	(2)	(3)	(4)				
Variables	Marketable securities _t /Total cash portfolio _t							
Cash portfolio,/Net assetst	0.029***	0.029***	0.029***	0.029***				
	(0.002)	(0.002)	(0.002)	(0.002)				
Policy uncertainty _t	-0.025***	-0.018***	-0.023***	-0.016***				
	(0.003)	(0.004)	(0.003)	(0.004)				
Controls?	Yes	Yes	Yes	Yes				
Firm FE?	Yes	Yes	Yes	Yes				
Time trend?	Yes	Yes	Yes	Yes				
Observations	107,518	107,518	107,518	107,518				
R-squared	0.545	0.546	0.547	0.548				

Table B9. Policy Uncertainty and Strategic Management of Firms' Cash Portfolios: The Case of Superstar Firms and Compustat Data

This table reports estimates from panel OLS regressions explaining firms' allocation to marketable securities as a proportion of the total cash portfolio. The sample in this table includes 200 large U.S. public firms from 2000 to 2021 for which detailed data on cash composition is available from the footnotes of 10-K reports. The dependent variable in this table is based on Compustat data, as in the main tests. Variable definitions are provided in Appendix A, Table A1. Robust standard errors clustered by firm are in parentheses. Note: *** p<0.01, ** p<0.05, * p<0.1. The coefficient on the constant is not reported for brevity.

	(1)	(2)	(3)	(4)				
Variables	Marketable securities _t /Total cash portfolio _t							
Policy uncertainty _t	-0.034***	-0.030**	-0.035***	-0.031**				
	(0.010)	(0.013)	(0.010)	(0.013)				
Macro controls?	No	Yes	No	Yes				
Firm controls?	No	No	Yes	Yes				
Firm FE?	Yes	Yes	Yes	Yes				
Time trend?	Yes	Yes	Yes	Yes				
Observations	3,371	3,371	3,371	3,371				
R-squared	0.643	0.643	0.646	0.646				

Internet Appendix for

"Strategic Cash Portfolio Management in the Face of Policy Uncertainty: Evidence from U.S. Firms"

IA. Gubernatorial Elections and Cash Portfolio Management

In this Internet Appendix, we examine the relationship between policy uncertainty stemming from gubernatorial elections in the U.S. and cash portfolio management. Unlike the Economic Policy Uncertainty (EPU) index that is largely unpredictable, uncertainty stemming from gubernatorial elections is temporary and predictable. Jens and Page (2024) examine the impact of these events on cash holding levels and document that companies accumulate precautionary cash up to four quarters prior to the elections and subsequently draw down these reserves around the election. This pattern is driven by the firms' desire to avoid tapping expensive external financing around the election. The setting of gubernatorial elections requires the availability of quarterly data. However, the data on companies' marketable security holdings at the quarterly frequency is not widely available in Compustat prior to 2007. Therefore, when examining the broader cash portfolio response, we are limited to studying the post-2007 period. Below we show that this is a significant limitation, which precludes us from drawing meaningful conclusions from this particular test.

In the first step of the analysis, we closely follow Jens and Page (2024) in examining the impact of gubernatorial election uncertainty on cash management practices, and we refer the reader to that study to get the specifics of data construction and the empirical approach. Gubernatorial election data is obtained from Congressional Quarterly (CQ) Press. Firm financial data for the period from 1981 to 2019 is obtained from Compustat. One point of departure from Jens and Page (2024) is in our use of the historical firm headquarters information in linking firms to gubernatorial elections. They instead use the headquarters information reported by Compustat, which displays the most current rather than historical information. Consequently, if a firm relocates, these modifications retroactively overwrite all prior observations, eliminating any direct historical record of the firm's previous geographic status. As such, even if we did use the state of

headquarters information from Compustat, our data extraction for this particular test at the end of 2024, may not have matched the information used in Jens and Page (2024). This is part of the reason for the use of the historical headquarters information.

We obtain the historical headquarters information from a file provided by Gao et al. (2021). They construct their dataset by first obtaining historical headquarters information from Bai et al. (2020) who for firm-years prior to the availability of machine-readable SEC filings hand-collect the historical HQ locations from the Moody's Manuals (later Mergent Manuals) and Dun & Bradstreet's Million Dollar Directory (later bought by Mergent) going back to 1969. Gao et al. (2021) then complement this data with headquarters state information extracted from the SEC 10-K/Q filings provided by the Notre Dame Software Repository for Accounting and Finance. Finally, the headquarters information provided by Compustat is used when the data from the aforementioned two sources is missing.

Following Jens and Page (2024), in Table IA1, we examine whether firms headquartered in states with upcoming elections exhibit different patterns in their cash holdings than those located in states without upcoming elections for the period from 1981 to 2019. The reported coefficients show how much more or less cash do firms headquartered in states that are about to elect a governor hold relative firms headquartered in states without upcoming elections. Consistent with their study, we document that during the period extending from two to four quarters prior to an election, firms headquartered in election states maintain statistically higher cash balances relative to their counterparts in nonelection states. However, as the election approaches, these companies begin to spend down these reserves. By the quarter immediately preceding the election, their cash holdings fall below those of firms in nonelection states. This lower cash position persists through the election quarter and the first quarter of the post-election year. Eventually, by the third and fourth quarters after the election, these election-state firms begin to restore their cash balances.

Taken together, these patterns indicate that companies in states anticipating an election tend to accumulate cash in the quarters leading up to the event. They subsequently draw on these reserves as uncertainty intensifies, and following the resolution of this uncertainty, they revert to prioritizing other aspects of cash management. We note that our estimates do not exactly match those reported in Jens and Page (2024) likely due to the fact that we use historical firm headquarters information in our analysis. Nevertheless, the estimates are broadly consistent with those reported by Jens and Page (2024), and, one could argue, are even more consistent with the that paper's conjectures.

Having established consistency with prior literature, we next turn to examining the impact of gubernatorial elections on cash portfolio composition. This analysis is limited by the fact that Compustat does not widely report data on quarterly marketable security holdings prior to 2007. As such, we limit the sample to years post 2007, and we include only those firms with non-missing values for marketable securities. Consequently, the number of firm-quarter observations drops from 319,717 down to 116,419. In the first step of the analysis, we examine whether the results we document in Table IA1 hold in this limited sample. The results are presented in Table IA2. We find that the patterns documented in Table IA1 almost completely go away. This result suggests that the analysis using Compustat quarterly data on marketable security holdings is unlikely to yield meaningful conclusions. Indeed, when examining the cash portfolio allocation decision in Table IA3, we do not find any meaningful results.

References

- Bai, J., Fairhurst, D. and Serfling, M., 2020. Employment protection, investment, and firm growth. *The Review of Financial Studies*, *33*(2), pp.644-688.
- Gao, M., Leung, H. and Qiu, B., 2021. Organization capital and executive performance incentives. *Journal of Banking & Finance*, *123*, p.106017.
- Jens, C.E. and Page, T.B., 2024. Uncertainty, precautionary saving, and investment: Evidence from prescheduled election cycles. Forthcoming, *Financial Management*.

Table IA1. Gubernatorial Elections and Cash Holdings: 1981-2019

The dependent variable is cash scaled by total book assets multiplied by 100. The estimates in this table aim to replicate those in Table 2 in Jens and Page (2024). One point of departure is in our use of historical states of headquarters information instead of the most current. Robust standard errors clustered by the state of headquarters are in parentheses. Note: *** p<0.01, ** p<0.05, * p<0.1.

	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Variables	-4	-3	-2	-1	0	1	2	3	4
Quarter interaction	0.387***	0.416***	0.228***	-0.122*	-0.521***	-0.239**	-0.017	0.130*	0.121
	(0.122)	(0.141)	(0.084)	(0.070)	(0.143)	(0.107)	(0.080)	(0.068)	(0.095)
Firm controls?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Macroeconomic controls?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year/quarter/firm fixed effects Year before/election/year after	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
indicator	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	319,717	319,717	319,717	319,717	319,717	319,717	319,717	319,717	319,717
R-squared	0.757	0.757	0.757	0.757	0.757	0.757	0.757	0.757	0.757

Table IA2. Gubernatorial Elections and Cash Holdings: 2007-2019

The dependent variable is cash scaled by total book assets multiplied by 100. Compared to Table IA1, the sample in this table is limited to years 2007-2019. Robust standard errors clustered by the state of headquarters are in parentheses. Note: *** p<0.01, ** p<0.05, * p<0.1.

	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Variables	-4	-3	-2	-1	0	1	2	3	4
Quarter interaction	0.519**	0.146	-0.006	0.023	-0.164	0.123	0.176	-0.053	-0.247
	(0.238)	(0.108)	(0.110)	(0.110)	(0.174)	(0.134)	(0.158)	(0.105)	(0.215)
Firm controls?	Yes								
Macroeconomic controls?	Yes								
Year/quarter/firm fixed effects Year before/election/year after	Yes								
indicator	Yes								
Observations	116,419	116,419	116,419	116,419	116,419	116,419	116,419	116,419	116,419
R-squared	0.826	0.826	0.826	0.826	0.826	0.826	0.826	0.826	0.826

Table IA3. Gubernatorial Elections and Allocation to Marketable Securities: 2007-2019

The dependent variable in this table is marketable securities scaled by cash multiplied by 100. The sample period is from 2007 to 2019. Robust standard errors clustered by the state of headquarters are in parentheses. Note: *** p<0.01, ** p<0.05, * p<0.1.

	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Variables	-4	-3	-2	-1	0	1	2	3	4
Quarter interaction	-0.226	-0.309	-0.359**	0.214	0.454	0.070	0.121	-0.047	-0.144
	(0.194)	(0.185)	(0.166)	(0.134)	(0.278)	(0.158)	(0.170)	(0.112)	(0.230)
Firm controls?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Macroeconomic controls?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year/quarter/firm fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year before/election/year after									
indicator	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	116,419	116,419	116,419	116,419	116,419	116,419	116,419	116,419	116,419
R-squared	0.631	0.631	0.631	0.631	0.631	0.631	0.631	0.631	0.631