

## **Do voters inform managers' capital allocation decisions?**

**Abstract:** Politically engaged individuals actively follow news and are knowledgeable about the economy. As a result, they invest in local firms and have the potential to help managers extract information embedded in stock prices for firm investment decisions. We find evidence of greater managerial learning from stock prices among firms in U.S. counties with higher voter turnout. Managerial learning is greater during presidential election years and during periods of media attention on investment topics. Managerial learning occurs within counties with more household investors, among small firms with retail investors, and relates to information about government policies impacting firm operations, with respect to which voters have an information advantage over managers. Our study suggests that managers can acquire decision-relevant information from local constituents and use this information to make capital allocation decisions, consistent with real effects arising from spillover of politics into financial markets.

**Keywords:** voters; local information environment; managerial learning; capital allocation

**JEL classification:** G31; G38; H31; H32

**Data availability:** All data are available from public sources identified in the paper.

## I. INTRODUCTION

Despite the economic importance of political activism among local constituents, there is strikingly little evidence of its impact in financial markets. We assess whether county-level voter turnout in U.S. presidential elections impacts firm-level investment- $q$  sensitivity. As voters are often investors in local firms, county-level voter turnout proxies for the level of political activism among local investors while investment- $q$  sensitivity proxies for the extent of managerial learning from stock prices. Our central premise is that local voters are information seekers and gatherers and can provide decision-relevant information specifically about policy and regulation to local managers. We propose a novel channel through which fluctuations in voter turnout is transmitted into financial markets and has real effects on firms.

Voter turnout in the U.S. is lower than in many developed countries, hovering around 60% for presidential elections (Council on Foreign Relations, 2022). Concerns have been raised that declining voter turnout during the 21<sup>st</sup> century represents an existential threat to democracy. Low voter turnout can erode legitimacy of elected officials, amplify concerns about unequitable representation, and symbolize political disenfranchisement among citizens (Dahl 1989; Lijphart 1997). An overlooked facet of this issue is that low voter turnout can spillover to financial markets. Voters consume information from media (Jerit, Barabas, and Bolsen 2006) and because of synergies between political and business news, are often investors in local firms (Bonaparte and Kumar 2013). Thus, voters potentially possess information that local managers can learn from (Coval and Moskowitz 1999; 2001; Ivkovic and Weisbenner 2005; Massa and Simonov 2006; Seasholes and Zhu 2010; Shive 2012; Chi and Shanthikumar 2017; Dyer 2021).

Managers of businesses do not have perfect information about all facets of firm operations (Hutton, Lee, and Shu 2012) and look to outsiders to guide capital allocation decisions (Luo 2005; Chen, Goldstein, and Jiang 2007; Bakke and Whited 2010; Bond, Edmans, and Goldstein 2012). Stock prices provide an ideal mechanism for performing this role as prices

aggregate information held by many investors (Hayek 1945), who collectively are more informed than managers (Grossman 1976). Managers learn from stock prices; 86% of managers' report that stock prices provide information about the policy and regulatory environment (Goldstein, Liu, and Yang 2025), with respect to which voters have a comparative information advantage. Our study examines whether managerial learning from stock prices is greater for firms headquartered in counties with greater voter turnout, where voters possess decision-relevant information that can assist managers in making capital allocation decisions for firms.

We collect county-level voter turnout data for U.S. presidential elections spanning 2000 to 2024 from the MIT Elections Data and Science Lab. We collect firm headquarter data and financial data from Compustat. We collect stock price data from CRSP. We merge the data sources using a ZIP-County linking table, emphasizing U.S. non-financial public firm-years. Our sample consists of 59,272 firm-years (6,136 firms) from 1999-2024 with the requisite data.

To test the impact of voter turnout on managerial learning from stock prices, we employ the investment- $q$  sensitivity framework proposed by Chen et al. (2007), which captures how managers adjust investment activities after learning information embedded in stock prices. Investment is measured using two proxies: ratio of capital expenditures to lagged total assets and changes in gross property, plant, and equipment (PPE), scaled by lagged total assets.  $Q$  is defined as the book value of assets plus market value of equities minus book value of equities, scaled by lagged total assets. Voter turnout is calculated as the ratio of total votes during the most recent presidential election cycle in the county relative to the total voting age population in the county. Following Chen et al. (2007) and subsequent studies (Foucault and Fresard 2012, 2014; Loureiro and Taboada 2015; Ye, Zhang Zou 2023), we control for stock returns in the subsequent three years, cash flows, and the inverse of lagged total assets. We also control for three time-varying county characteristics- percentage change in annual GDP, unemployment rate, as well as household income. We additionally include firm, year, and county fixed effects.

We find that the coefficient on the interaction term between Q and voter turnout is significantly positive, suggesting greater managerial learning from stock prices in counties with more voter turnout. In terms of economic magnitude, managerial learning is eight times greater in counties with the highest voter turnout, relative to counties with the lowest voter turnout.

We conduct a series of time-series analyses to shed light on the mechanisms underlying our central finding. First, we expect voters to follow news more intensely during presidential election years (Baloria and Heese 2018). We find that voter turnout has a larger impact on managerial learning from stock prices during election years. This relates managerial learning to years where voters are particularly well informed. Second, voters have more information to share when there is greater news coverage of investment topics (Bybee, Kelly, Manela, and Xiu 2025). We find that voter turnout has a larger impact on managerial learning from stock prices during years in which the *Wall Street Journal* actively discusses investment. This ties managerial learning from voters specifically to investment information gleaned from the media. Third, we find that voter turnout has a larger impact on managerial learning from stock prices during years of low economic policy uncertainty (Baker, Bloom and Davis 2016), when households and firms are actively looking to invest (Agrawal, Aslan, Huang, and Ren 2022).

We also conduct a series of cross-sectional analyses. We find that voter turnout has a larger impact on managerial learning from stock prices in counties with higher household stock market participation rates (Bonaparte and Kumar 2013). Local voters are more likely to invest in small, local firms, with retail ownership (Coval and Moskowitz 1999; 2001). We find that voter turnout has a larger impact on managerial learning from stock prices for smaller firms with more retail investors. Managers of firms with greater exposure to government agencies are more likely to learn valuable policy insights from informed voters (Armstrong, Glaeser, and Hoopes 2025; Goldstein et al. 2025). We find that voter turnout has a larger impact on managerial learning from stock prices for firms with greater exposure to regulatory agencies.

The collective evidence from the time-series and cross-sectional analyses suggests managerial learning from stock prices relates specifically to information about policies and regulation, with respect to which managers actively seeks to learn from outside information sources (Goldstein et al. 2025). This information resides with voters, who as a byproduct of following political news, are routinely exposed to financial news (Bonaparte and Kumar 2013). This information is embedded in prices directly when local voters serve as local investors and indirectly through local voters' interactions with investors (Brown, Stice, and White 2015).

We demonstrate that investment-cash flow sensitivity does not vary with voter turnout. This finding suggests managers are not simply responding readily to investment opportunities (Edmans, Jayaraman and Schneemeier 2017). To assess the extent to which our results reflect forecasting price efficiency (FPE) (i.e., information flows from managers to the market), we control for return non-synchronicity, percentage of days with non-zero returns, and issuance of guidance (Edmans et al. 2017). We continue to find that the coefficient on the interaction term between Q and voter turnout is significantly positive, suggesting our results are consistent with revelatory price efficiency (RPE) (i.e., information flows from the market to managers).

In additional analyses, we use alternative investment measures that incorporate R&D and acquisition expenditures and find similar inferences (Biddle, Hilary, and Verdi 2009). We corroborate that our investment inferences extend to disclosure by demonstrating that stock prices contain information that managers do not otherwise have regarding firms' fundamentals, and that managers incorporate this information within their earnings forecasts (Zuo 2016).

To establish a causal relation, we consider instruments that influence voter turnout but do not directly impact managerial learning. We use county-level election day rainfall (Gomez, Hansford, and Krause 2007) and lagged voter turnout (Cebula, Durden and Gaynor 2008) as instruments to predict voter turnout. We conduct a two-stage least squares regression and find, with both instruments, that instrumented voter turnout impacts managerial learning from prices.

We also employ a difference-in-differences (DID) research design to establish a causal relation. We centre our analysis around the 2020 election cycle, during which the COVID-19 pandemic resulted in some states issuing stay-at-home orders that suppressed resident mobility and led to fewer social interactions, which are central to local information gathering (Shive 2012; Brown et al. 2015). We find that the coefficient on the interaction term between  $Q$  and voter turnout is higher in post-2020 for firms located in states without stay-at-home orders.

The accounting and finance literature has explored managerial learning from outsiders and resulting real effects on firms' capital allocation decisions. This literature emphasizes stakeholders such as debt markets (Kim, Wiedman, and Zhu 2023), equity analysts (Guo and Zhong 2023), options markets (Chen, Ng, and Yang 2021), institutional investors (Zhang 2023), and social media platforms (Cookson, Niessner and Schiller 2025), who supply managers with decision-relevant macroeconomic and industry information for capital allocation decisions.

Scholars have called for a deeper exploration of specifically what and how managers learn from outsiders (Gelsomin and Hutton 2023). 86% of surveyed managers indicate that they seek to learn policy and regulatory information from stock prices. This trails only the 90% response for macroeconomic and industry information, yet extant research sheds limited light on this key information dimension (Goldstein et al. 2025). Economics and political science research suggest that local voters, as news consumers, are likely in possession of information about the policy and regulatory environment (Mondak 1995; Delli Carpini and Keeter 1996; Barabas and Jerit 2009; Druckman 2005; Gentzkow 2006; Barabas and Jerit 2009; Oberholzer-Gee and Waldfogel 2009). Using household, state, and cross-country data sets, Bonaparte and Kumar (2013) provide compelling evidence that voters are more likely to be equity investors. Surprisingly, there is little evidence on whether local constituents, as voters and/or investors in local firms, supply decision-relevant investment information to local managers. We provide this initial evidence by linking county-level voter turnout to firm-level investment- $q$  sensitivity.

Our study reinforces the value of voters to a healthy democracy and economy in a time of rapid change. Our study suggests voters are important not only in political markets because they contribute to a healthy democracy (Verba and Nie 1972; Delli Carpini and Keeter 1996), but also because they aggregate decision-relevant information into prices within financial markets (Chen et al. 2007). Our study finds that managers can learn not only from institutional investors but also informed retail investors (Pinto 2023; Zhang 2023; Goldstein et al. 2025).

## II. THEORY AND HYPOTHESIS DEVELOPMENT

### **Managerial Learning from Outsiders**

Gelsomin and Hutton (2023) provide a summary of the managerial learning hypothesis. The basic premise is that “outsiders have information that is important, useful, and unknown to managers”. Several outsider stakeholders have been explored in the literature, primarily capital market participants (Jayaraman and Wu 2019, 2020; Lin et al. 2019; Chen et al. 2021; Bae et al. 2022; Guo and Zhong 2023; Kim et al. 2023; Pinto 2023; Landsman et al. 2024). Cookson et al. (2025) explore stakeholders outside of capital markets (e.g., social media users). The social media user-investor roles in Cookson et al. (2025) are akin to our voter-investor role.

Gelsomin and Hutton (2023) articulate three key assumptions underlying the managerial learning hypothesis: (i) outsiders have private information unknown to managers; (ii) outsiders’ trading results in the value implications of this private information being impounded into stock prices, and (iii) managers’ learn from this private information embedded in stock prices and alter their capital investment decisions. The authors cite influential studies providing theoretical and empirical validation for the first two assumptions (Grossman 1976; Vega 2006; Bushman, Smith, and Wittenberg-Moerman 2010; Hutton et al. 2012). Gelsomin and Hutton (2023) point to the lack of support for the third assumption, noting “the channel or mechanism of managerial learning remains empirically unexplored, as does the particular information managers are hypothesized to learn and use for their real investment decisions.”

To shed light on precisely what managers, learn from stock prices, Goldstein et al. (2025) survey managers and explicitly ask them what they learn. 90% of managers' report learning macro and industry information, 86% report learning policy and regulatory information, and 85% of firms report learning information about their competitive position. Extant research provides considerable evidence in support of managerial learning about macro, industry, and peer firm information (Hutton et al. 2012; Guo and Zhong 2023; Chen et al. 2023). Evidence on managerial learning of policy and regulatory information is comparatively scant.

### **Local Constituents as Voters and Investors**

Bonaparte and Kumar (2013) provide evidence that higher levels of political activism (e.g., voting in elections) cause individuals to invest in equity markets. This evidence is robust to different settings (i.e., across different states within the U.S. or in the cross-country context). The basic insight from the study is that because of the overlap between political and financial news, voters, as a byproduct of seeking political news, will be exposed to financial news, lowering their costs for gathering information necessary to participate in the stock market. Their validation tests of media consumption patterns of voters leads them to conclude, "politically active households are more sophisticated and appear more knowledgeable about the US economy and the stock market". The economics and political science literature also finds that news consumption renders voters well informed about policy and regulatory issues (Mondak 1995; Druckman 2005; Gentzkow 2006; Jerit et al. 2006; Barbaras and Jerit 2009). Thus, voters are in possession of policy insights that managers can learn from for investment.

Local investors' information set in high voter turnout counties includes a more sizeable policy and regulatory information component. Local investors in high voter turnout counties process information gleaned from the media and use this information to understand the value-implications of news for local firms. Their information set is reflected in prices through trades, which local managers can access through observing prices when making investment decisions.

Local voters are more likely to invest in small, local firms, with retail ownership (Coval and Moskowitz 1999; 2001; Crane. Koch and Lin 2024). These are the type of firms where investors have private information to supply and managers are willing to listen, given lack of access to other information sources (e.g., political intelligence through lobbying resources). While managers, in theory, could learn directly from the news media, stock prices provide an ideal mechanism for managerial learning as prices aggregate information held by many investors (Hayek 1945), who collectively are more informed than managers (Grossman 1976). In contrast, media outlets have private incentives to slant information to serve their economic interests, particularly political information (Baloria and Heese 2018), suggesting that local investors that filter information and reflect it in stock prices are valuable. The timing of information transfer (i.e., elections) and specific information (i.e., policy and regulatory) possessed by voters is apparent, answering the “what” and “how” (Gelsomin and Hutton 2023).

Bonaparte and Kumar (2023) provide compelling evidence that voters are often investors in equity markets. For their sample, they report that 59% of households are registered voters and 49% of households own stocks. Importantly, stock ownership among voters is 55%, while it is 33% among non-voters, consistent with most voters also being investors. Retail investors disproportionately gather information on local firms in which they are investors in (Chi and Shantikumar 2017), and media shapes this information set (Dyer, Lang, and Oh 2025).

We emphasize that our hypothesis does not require that all local voters be local investors. Prior studies argue that local investors gather value-relevant information from local sources, such as employees, managers, customers, and suppliers of local firms, who are not necessarily local investors themselves (Brown, Stice and White 2015). We argue that in high voter turnout counties, these interactions will involve more discussion of value-relevant policy and regulatory information and be embedded in stock prices. This could occur directly if local voters are local investors or indirectly through local voters’ interactions with local investors.

## Hypothesis Development

We propose that – because of local voters’ possession of private, relevant, and material information that is unknown to managers – managerial learning from stock prices is greater in counties with greater voter turnout. We expect some local voters to be investors in local firms and other voters, in their capacity as employees or customers, to interact with investors of local firms.<sup>1</sup> Managerial learning is expected to occur because local voters supply decision-relevant investment information about influence of government policies on firm operations to managers through stock prices. Our hypothesis, in alternative form, can be summarized as follows:

*Hypothesis.* Firms in counties with greater voter turnout exhibit higher investment- $q$  sensitivity.

We note that our hypothesis is not without tension. First, managers of local firms may not perceive local retail investors as a credible source of information, given that prior research finds managerial learning from sophisticated institutional investors (Zhang 2023; Goldstein et al. 2025). It is unclear whether managers can learn from retail investors, including those that vote, consume news, and are knowledgeable about the economic environment (Bonaparte and Kumar 2013). Second, even if managers of local firms perceive local retail investors as a credible information source, their supply of information could be subsumed by competing information sources (i.e., news media, internal and external political intelligence gleaned from lobbyists). Third, while stock prices aggregate information, they contain noise, suggesting managers may not be able to extract relevant information about investment from price, especially when trading involves retail investors (Edmans et al. 2012; Bai et al. 2016; Dessaint et al. 2019). Finally, given fewer opportunities for retail investors to interact directly with managers, it is not clear whether the value implications of information embedded in stock prices is material and contextual enough to alter managers’ investment decisions (Gelsomin and Hutton 2023).

---

<sup>1</sup> In untabulated analysis, we validate, at the county-level, the findings of Bonaparte and Kumar (2013), who find a positive relation between state-level voter turnout and household stock market participation. We use granular county-level data, not state-level data, to allow for variation within states in voter turnout and managerial learning.

### III. RESEARCH DESIGN

#### Sample Selection

We collect county-level voting data for U.S. presidential elections spanning 2000 to 2024 from the MIT Elections Data and Science Lab. We collect annual voting-age population data from the National Institute of Health (NIH) Surveillance, Epidemiology, and End Results Program.<sup>2</sup> We aggregate all age groups older than 18 to capture the voting-age population in each county. Voter turnout is estimated as the ratio of total votes in the most recent presidential election year to voting-age population in the most recent calendar year. Figure 1 illustrates geographical variation in voter turnout for the 2020 presidential election across the U.S. To better illustrate the variation, we divide counties into quintiles based on voter turnout rate. The lowest (highest) quintile has a median voter turnout of 51.3% (75.3%), underscoring the substantial level of heterogeneity in the U.S. Figure 1 also shows that high- and low-turnout counties tend to be spread around the country, with the Southeast region exhibiting lower voter turnout rates.

We merge the aforementioned voter turnout data with firm headquarter data and financial information from Compustat using a ZIP-County linking table. The sample is restricted to U.S. non-financial publicly listed firms. To examine the effect of voter turnout on managerial learning, we adopt the investment- $q$  sensitivity model proposed by Chen et al. (2007), which captures how managers adjust investment decisions after learning information embedded in stock prices. To implement this, we integrate the voter turnout data with stock price data from CRSP, resulting in a final sample of 59,272 firm-years from 1999 to 2024 with the requisite data. Table 1, Panel A summarizes our sample selection process for our main test. We also employ an alternative managerial learning model proposed by Zuo (2016) that captures the sensitivity of management earnings forecast revisions to stock returns. Table 1, Panel B summarizes our sample selection process for a sample of 52,585 firm-years from 1999 to 2024.

---

<sup>2</sup> See <https://electionlab.mit.edu/data> and <https://seer.cancer.gov/popdata/download.html> for the complete data.

## Empirical Model

The main regression model we employ to test the effect of voter turnout on managerial learning from stock prices follows Chen et al. (2007) and is specified as follows:

$$INVESTMENT_t = \beta_0 + \beta_1 Q_{t-1} + \beta_2 Q_{t-1} * VOTER\ TURNOUT_{t-1} + \beta_3 VOTER\ TURNOUT_{t-1} + \beta_4 RET_{t+3} + \beta_5 CF_t + \beta_6 INV\_AST_{t-1} + COUNTY\ FE + FIRM\ FE + YEAR\ FE + \varepsilon \quad (1)$$

The dependent variable, *INVESTMENT*, is measured using two proxies: the ratio of capital expenditures to lagged total assets (*CAPX*) and the change in gross property, plant, and equipment scaled by lagged total assets (*CHGPPEGT*). The variable *Q* is defined as the book value of assets plus market value of equities minus book value of equities scaled by lagged total assets. *VOTER TURNOUT* is calculated as the ratio of total votes during the most recent presidential election cycle in the county to the voting age population in the same county. A positive and significant coefficient on *Q\*VOTER TURNOUT* would support our prediction. Following Chen et al. (2007) and subsequent studies (e.g., Foucault and Fresard 2012, 2014; Loureiro and Taboada 2015; Ye, Zhang, and Zou 2023), we control for stock returns in the following three years (*RET*), cash flow (*CF*), and the inverse of lagged total assets (*INV\_AST*). We also include county, firm, and year fixed effects. For robustness, we additionally control for three time-varying county characteristics, *GDP GROWTH*, unemployment rate (*UNEMP RATE*), and *HOUSEHOLD INCOME*. Variable definitions are detailed in Appendix A.

## Descriptive Statistics

Table 2, Panel A reports the descriptive statistics for the variables used in Equation (1). The mean values of *CAPX*, *CHGPPEGT*, and *Q* are 0.051, 0.044, and 2.365, respectively, similar to statistics reported in Kim et al. (2023). The mean and standard deviation of *VOTER TURNOUT* are 0.555 and 0.092, respectively, indicating meaningful variation in voter turnout across counties. Table 2, Panels B and C reports descriptive statistics for variables used in additional and disclosure analyses. In Table 2, Panel C, the mean values of  $\Delta ACCURACY$  and  $|RETURN|$ , and *Q* are 0.199, and 0.114, respectively, higher than those reported in Zuo (2016).

## IV. MAIN RESULTS

### Effect of Voter Turnout on Managerial Learning

Table 3 presents the results of the effect of voter turnout on investment- $q$  sensitivity. In Columns 1 and 2, in which we do not include any interaction terms, the coefficients on  $Q$  are 0.001 for  $CAPX$  and 0.002 for  $CHGPPEGT$ , both significant at the 1% level. Given that the standard deviation for  $Q$  is 3.916, a one-standard-deviation increase in  $Q$  corresponds to a 0.004 increase in  $CAPX$  and a 0.008 increase in  $CHGPPEGT$ . Considering that the mean values for  $CAPX$  and  $CHGPPEGT$  are 0.051 and 0.044, respectively, this implies that a one-standard-deviation increase in  $Q$  yields a 7.84% increase in  $CAPX$  and 18.18% increase in  $CHGPPEGT$ .

Columns 3 and 4 report the regression results including the full set of interaction terms. The coefficients on  $Q * VOTER\ TURNOUT$  are 0.010 for  $CAPX$  and 0.012 for  $CHGPPEGT$ , both significant at the 1% level. These results support our hypothesis that managers incorporate information from voters when making investment decisions. The overall coefficient on  $Q$  is the sum of the  $Q$  coefficient and the coefficient on the interaction term, multiplied by the mean value of  $VOTER\ TURNOUT$ . Given that the mean value for the voter turnout variable is 0.555, the coefficient on the interaction term multiplied by 0.555 offsets the negative coefficient on the main effect for  $Q$ . Thus, the overall coefficient on  $Q$  is positive as expected in our sample.<sup>3</sup>

Jackson County, Missouri has the lowest  $VOTER\ TURNOUT$  in our sample at 0.360 in 2020. For firms headquarter in this county, the overall coefficient on  $Q$  is  $-0.003 + 0.010 * 0.360 = 0.060\%$  for  $CAPX$ . Storey County, Nevada has a  $VOTER\ TURNOUT$  of 0.797 in 2020, suggesting that firms in this county have the overall coefficient on  $Q$  of  $-0.003 + 0.010 * 0.797 = 0.497\%$  for  $CAPX$ , which is approximately eight times larger than that observed in Jackson County, Missouri. This suggests large economic effects of voter turnout on managerial learning.

---

<sup>3</sup> It is not uncommon in the literature for the coefficient estimate on  $Q$  to be positive in baseline investment regressions but turn negative when interaction terms are also included (e.g., McLean, Zhang, and Zou 2012).

Columns 5 and 6 report the results after controlling for time-varying county-level characteristics. The coefficients on  $Q*VOTER\ TURNOUT$  increase to 0.012 for *CAPX* and 0.014 for *CHGPPEGT* and remain statistically significant at the 1% level. This, in addition to our baseline county fixed effects, mitigates the impact of time-varying county-level factors.

Collectively, the results in Table 3 suggest that investment is more sensitive to  $Q$  for firms headquartered in counties with greater voter turnout. We interpret this as evidence suggesting that managers learn valuable information from voters for firm investment decisions.

### **Time-Series Analyses**

To bolster inferences, we first examine whether managers learn more from voters when voter engagement is heightened. Voters have been shown to follow news more intensely during presidential election years (Baloria and Heese 2018). Accordingly, we expect that the impact of voter turnout on managerial learning from stock prices is stronger during election years.

Presidential election years refer to years 2000, 2004, 2008, 2012, 2016, 2020, and 2024. We split our sample used in Columns 3 and 4 of Table 3 into presidential election years and non-election years. As reported in Columns 1 and 2 of Table 4, the coefficient on  $Q*VOTER\ TURNOUT$  for *CAPX* is 0.018 during presidential election years, compared to 0.008 during other years.<sup>4</sup> The F-statistic for the difference between the two coefficients is 18.14, significant at the 1% level, indicating that managerial learning is heightened during election years. In Columns 3 and 4 of Table 4, similar results are observed for the *CHGPPEGT* investment proxy.

Second, as we focus on managerial learning in the investment setting, we expect more pronounced effects when investment-related topics receive greater attention in the media. Given the influence of the *Wall Street Journal*, we rely on the frequency of topics covered by this media outlet each year, following the topic modeling analysis of Bybee et al. (2024). Topics relevant to investment include takeovers (*TAKEOVER*) and mergers & acquisitions (*M&A*).

---

<sup>4</sup> Other years also include midterm election years, which account for weaker effects on  $Q*VOTER\ TURNOUT$ .

We split the sample used in Column 3 of Table 3 (we omit Column 4 for brevity) based on the median annual frequency of each topic and estimate equation 1 separately for each subsample. As reported in Table 5, the coefficients on  $Q*VOTER\ TURNOUT$  are significantly more positive when investment topics are more frequently discussed in the media. This is further supported by statistically significant, at the 1% level, F-statistics. This lends support to the notion that voters gain valuable information from media, which they transmit to managers.

Third, during periods of low economic policy uncertainty, households and firms are more inclined to invest (Agrawal et al. 2022). We therefore expect that voter turnout will have a stronger impact on managerial learning from stock prices when economic policy uncertainty is low. To test this proposition, we use measures of economic policy uncertainty (EPU) developed by Baker et al. (2016). We start from a national news-based policy uncertainty index based on the number of policy uncertainty articles per year ( $EPU\ NATION$ ) and an economic policy uncertainty index within a state that relates to state and local policy issues ( $EPU\ STATE$ ). We re-estimate equation 1 separately for years with  $EPU\ NATION$  and  $EPU\ STATE$  above and below their respective median values, and report the results in Panel A of Table 6. As expected, the coefficients on  $Q*VOTER\ TURNOUT$  are both 0.017 for years with lower uncertainty, which are significantly more positive than the coefficients for years with higher uncertainty.

To shed light on the nature of economic policy uncertainty driving the effects, we examine specific categories of uncertainty relating to regulation ( $REG$ ), financial regulation ( $FIN\ REG$ ),  $TRADE\ POLICY$ , and entitlement programs ( $ENT\ PROG$ ).  $REG$ ,  $FIN\ REG$ , and  $TRADE\ POLICY$  capture variation in firms' incentives to invest (Baker et al. 2016).  $ENT\ PROG$  (e.g., income assistance) capture variation in households' incentives to invest (Agrawal et al. 2022). As reported in Panel B of Table 6, the coefficients on  $Q*VOTER\ TURNOUT$  are significantly more positive in years with lower levels of categorical policy uncertainty—specifically, in Column 1 for  $REG$ , Column 3 for  $FIN\ REG$ , Column 5 for  $TRADE\ POLICY$ ,

and Column 7 for *ENT PROG*. The F-statistics for the difference in coefficient estimates are all significant at the 1% level. In sum, the findings in Table 6 suggest that when households are more active investors in equity markets, managers tend to learn more from stock prices.

### **Cross-Sectional Analyses**

Local voters' information set is embedded in stock prices directly when local voters also act as local investors and indirectly when local voters interact with local investors (Brown et al. 2015). We posit that voter turnout has a greater impact on managerial learning from stock prices for firms in counties with higher household stock market participation rates, where the direct effect is more prevalent. We estimate the effect of voter turnout separately for firms with below and above sample median stock market participation rates (*STOCK PART*). To measure county-level stock market participation, we collect individual income and tax data from the IRS for 1999 to 2024.<sup>5</sup> *STOCK PART* is calculated as the ratio of number of tax returns filed with dividend income to the number of total tax returns filed in each county each year (Crane et al. 2024).<sup>6</sup> As reported in Columns 1 and 2 of Table 7, the coefficient on  $Q*VOTER\ TURNOUT$  are significantly positive (i.e., 0.005) for firms with lower *STOCK PART* and twice as large for firms with higher *STOCK PART* (i.e., 0.010). The corresponding F-statistic is 7.57, indicating that the difference is statistically significant at the 1% level. The evidence in Table 7 supports the notion that managers of firms located in counties with higher household stock market participation rates learn more capital investment-relevant information from local voters.

Local voters are more likely to be investors in small, local firms with higher retail ownership (Coval and Moskowitz 1999; 2001). We posit that voter turnout has a larger impact on managerial learning from stock prices for smaller firms with lower institutional ownership. We estimate the effect of voter turnout separately for firms with below and above sample

---

<sup>5</sup> See <https://www.irs.gov/statistics/soi-tax-stats-county-data>. 2000-2010 data are available under "County Income Data 1989-2010", and 2011-2024 data are downloadable under "County, metropolitan and micropolitan data".

<sup>6</sup> This variable is not available every year for every county, resulting in sample attrition (Crane et al. 2024). The descriptive statistics reported in Table 2 should be considered a lower bound, as not all firms issues dividends.

median institutional ownership (*INST OWN*). We also estimate the effect of voter turnout separately for firms with below and above sample median total assets (*AST*) to proxy for size.

As reported in Columns 1 and 2 of Table 8, the coefficient on *Q\*VOTER TURNOUT* are significantly positive (i.e., 0.008) for firms with lower *INST OWN*, but significantly negative (i.e., -0.010) for firms with higher *INST OWN*. The corresponding F-statistic is 45.49, indicating that the difference is statistically significant at the 1% level. In Columns 3 and 4 of Table 8, the coefficient on *Q\*VOTER TURNOUT* are significantly positive for smaller firms but are significantly negative for larger firms. The difference between the two coefficients is statistically significant at the 1% level, as indicated by an F-statistic of 105.56. Taken together, the evidence in Table 8 supports the notion that managers of smaller, local firms with greater retail ownership learn more capital investment-relevant information from voters and investors.<sup>7</sup>

We also expect that voter turnout will have a larger impact on managerial learning from prices for firms with greater regulatory exposure. We use time-varying, firm-specific regulatory agency exposure measures capturing proportion of sentences in firms' 10-Ks that reference a government agency scaled by the total number of sentences (Armstrong et al. 2025).

Table 9, Columns 1 to 10 focus on regulatory exposure to the Internal Revenue Service (*IRS*), Securities and Exchange Commission (*SEC*), Federal Trade Commission (*FTC*), Environmental Protection Agency (*EPA*), and Federal Communications Commission (*FCC*).<sup>8</sup> As expected, managerial learning is more pronounced for firms with greater regulatory exposure, as evidenced by more positive coefficients on *Q\*VOTER TURNOUT* in columns 2, 4, 6, 8, and 10, along with statistically significant F-statistics. The evidence in Tables 9 suggests that managerial learning relates to information about regulation, with respect to which informed voters have a comparative information advantage relative to managers (Goldstein et al. 2025).

---

<sup>7</sup> Dyer, Lang, and Oh (2024) also explore variation in firm size and ownership base to proxy for local investors. We find similar evidence using the Garcia and Norli (2012) 10-K state mention geographic dispersion measure.

<sup>8</sup> We choose these agencies as they are all within the top 10 most mentioned agencies (Armstrong et al. 2025).

## V. ADDITIONAL ANALYSES

### Falsification Test Using Investment-Cash Flow Sensitivity

To assess the possibility that firm-level investment- $q$  sensitivity captures investment efficiency, not managerial learning from stock prices, we modify Equation (1) to emphasize the sensitivity of investment to cash flow ( $CF\_Lag$ ), a non-price measure of investment opportunities that should not be impacted by local voters impounding value-relevant information into price (Edmans et al. 2017). In Table 10, the coefficient on  $CF\_Lag*VOTER\ TURNOUT$  is -0.005 for  $CAPX$  and -0.011 for  $CHGPPEGT$ , both of which are insignificant at the 10% level. This evidence mitigates the possibility of improved capital markets and/or governance effects explaining the relation between investment- $q$  sensitivity and voter turnout.

### Assessing Forecasting Price Efficiency (FPE)

Our baseline assumption is that investment- $q$  sensitivity captures revelatory price efficiency (RPE) (i.e., the amount of information in prices known by investors but not managers). Forecasting price efficiency (FPE) posits that investment- $q$  sensitivity could also capture the total amount of information in prices. To rule out this alternative FPE explanation as solely driving our results, we follow Edmans et al. (2017) and add a control (and an interaction with  $Q$ ) for return non-synchronicity ( $1 - R^2$ ), calculated as 1 minus the  $R^2$  from a firm-specific regression of a firm's stock returns on market returns. Following Edmans et al. (2017), we also add a control (and an interaction with  $Q$ ) for the fraction of trading days in a year with non-zero returns ( $NZRET$ ). To further mitigate the possibility of FPE driving our results, we follow Cho et al. (2025) and control for whether the firm issued earning guidance ( $IND\_MF$ ) as a proxy for the flow of information from the firm to the market. In Columns 1 through 6 of Table 11, the coefficient on  $Q*VOTER\ TURNOUT$  is significantly positive at the 1% level, suggesting that our results are at least partially driven by RPE and not solely by FPE. This suggests that policy and regulatory information flows from the market to firm managers.

## Alternative Investment Measures

When we calculate our investment measures, we consider both capital expenditures and changes in PPE (Chen et al. 2007). As a robustness check in Table 12, we also consider *Non-CAPX*, which we define as the sum of acquisition and R&D expenditures, scaled by lagged total assets. We further employ a combination of *CAPX* and *Non-CAPX* as denoted by *TOTAL INVEST* (Biddle et al. 2009). R&D data is often missing leading to sample attrition. In Columns 1 and 4, in which do not include any interaction terms, the coefficients of  $Q$  are 0.005 for *Non-CAPX* and 0.009 for *TOTAL INVEST*, both significant at the 1% level. Columns 2 and 5 report the regression results including the full set of interaction terms. The coefficients on  $Q*VOTER\ TURNOUT$  are 0.043 for *Non-CAPX* and 0.066 for *TOTAL INVEST*, both of which are significant at the 1% level. Columns 3 and 6 report the results after controlling for time-varying county-level characteristics. The coefficients on  $Q*VOTER\ TURNOUT$  increases to 0.061 for *Non-CAPX* and 0.106 for *TOTAL INVEST* and remains statistically significant at the 1% level.

## Alternative Disclosure Based Measurement Framework for Managerial Learning

Equation (1) reflects managerial learning in the investment setting. To strengthen our measurement of managerial learning, we employ an alternative model proposed by Zuo (2016) that captures the sensitivity of the management earnings forecast revisions to stock returns. As managers may revise their earnings forecasts after learning the information embedded in stock prices, any improvement in their forecast accuracy could reflect managerial learning (Arikam et al. 2023). We employ the following model to test the effect of voter turnout on this sensitivity:

$$\begin{aligned} \Delta ACCURACY = & \beta_0 + \beta_1|RETURN| + \beta_2|RETURN|*VOTER\ TURNOUT + \beta_3VOTER \\ & TURNOUT + \beta_4HORIZON + \beta_5BM + \beta_6FIRM\ SIZE + \beta_7GAP + \beta_8\#ANALYST \\ & + COUNTY\ FE + FIRM\ FE + YEAR\ FE + \varepsilon \end{aligned} \quad (2)$$

The dependent variable,  $\Delta ACCURACY$ , equals -100 multiplied by the change in accuracy between a management annual EPS forecast (i.e., MF2) and the most recent forecast issued prior to this forecast for the same forecast period (i.e., MF1), scaled by the most recent

stock price prior to the issuance of MF1. Forecast accuracy is measured specifically as the absolute value of the difference between the forecasted value and the realized value of EPS. The more positive this variable, the larger the improvement in forecast accuracy. To capture the information embedded in stock returns over the period between MF2 and MF1, we control for  $|RETURN|$ , which is the absolute value of the buy-and-hold stock returns between the two forecast issuances. Forecast horizon ( $HORIZON$ ) is used to control for the difficulty of making accurate forecasts over longer horizons. As analyst forecasts can influence management forecast accuracy, we add the number of analysts who issue EPS forecasts for the same forecast period prior to MF1 ( $\#ANALYST$ ). Following Zuo (2016), we also control for book-to-market ratio of equity ( $BM$ ),  $FIRM SIZE$ , and the number of days from MF1 to MF2 ( $GAP$ ).

The results of estimating Equation (2) are presented in Table 13. The coefficient on  $|RETURN| * VOTER TURNOUT$  is 0.939, which is significant at the 5% level. Jackson County, Missouri has the lowest  $VOTER TURNOUT$  in our sample at 0.360 in 2020. For firms headquartered in this county, the overall coefficient on  $|RETURN|$  is  $0.157 + 0.939 * 0.360 = 0.495$ . In contrast, Storey County, Nevada reports a  $VOTER TURNOUT$  of 0.797, suggesting that firms in this county have the overall coefficient on  $|RETURN|$  of  $0.157 + 0.939 * 0.797 = 0.905$ , which is approximately twice as large as that observed in Jackson County, Missouri. This indicates that managers learn information embedded in prices from voters and improve the accuracy of earnings forecasts, suggesting managerial learning extends beyond investment.

### **Two-Stage Least Squares (2SLS) Regression to Establish Causal Relation**

A potential concern is that voter turnout and investment- $q$  sensitivity are driven by the same underlying local factors.<sup>9</sup> To address simultaneity concerns arising from the correlation between  $VOTER TURNOUT$  and other variables, in Table 14, we employ a two-stage least squares (2SLS) approach with lagged  $VOTER TURNOUT$  and precipitation levels on election

---

<sup>9</sup> Kaustia, Knupfer and Torstila (2016) find no evidence of reverse causality (i.e., investment causing turnout).

day in each county (*RAINFALL*) as instrumental variables. No economic intuition links these instruments directly to investment- $q$  sensitivity, supporting the exclusion restriction condition.

The habit-forming theory suggests that persons who voted in the past are more likely to continue their voting behaviour (Cebula et al. 2008). We thus use lagged *VOTER TURNOUT* (in the previous presidential election cycle) to predict current *VOTER TURNOUT* (in the current presidential election cycle). As shown in Column 1 of Table 14, the coefficient on *VOTER TURNOUT\_LAG* is 0.241, significant at the 1% level, implying behaviour persistency.

As rainfall on election day increases costs of voting, it reduces voter turnout (Fujiwara et al. 2016). We expect a negative association between the rainfall value and voter turnout rates. We collect the data on rainfall on election day in each county from the National Oceanic and Atmospheric Administration website.<sup>10</sup> The website reports daily precipitation data for each station, and the county location of each station is identified using its latitude and longitude. As expected, the coefficient on *RAINFALL* in Column 4 is  $-0.0005$ , significant at the 1% level.

For both instruments, we reject the null hypothesis of weak instrument with Kleinbergen-Paap Wald  $F$  statistic exceeding the cutoff of 10, meeting the instrument relevance condition. We calculate the predicted voter turnout based on the two instrumental variables ( $\widehat{VOTER TURNOUT}$ ), and re-estimate Equation (1) by replacing *VOTER TURNOUT* with these predicted values. The second-stage results of using *VOTER TURNOUT\_LAG* as the instrumental variable are reported in Columns 2 and 3. The coefficients on  $Q*\widehat{VOTER TURNOUT}$  are 0.009 for *CAPX* and 0.010 for *CHGPPEGT*, both of which are statistically significant at the 1% level. Columns 5 and 6 report the second-stage results of using *RAINFALL*. The coefficients on  $Q*\widehat{VOTER TURNOUT}$  are 0.019 for *CAPX* and 0.032 for *CHGPPEGT*, significant at the 1% level. These results suggest that after addressing potential endogeneity using two instrumental variables, our results persist, suggesting a causal relation.

---

<sup>10</sup> <https://www.ncei.noaa.gov/pub/data/ghcn/daily/>

### **Difference-in-Differences (DID) Regression to Establish Causal Relation**

To further establish a causal relation, we complement our 2SLS approach with a difference-in-differences (DID) research design. We centre our analysis around 2020, which coincides with both a presidential election cycle as well as the exogenous onset of the COVID-19 pandemic. We define *POST* as an indicator variable equal to one for fiscal years 2021 and 2022, and zero for fiscal years 2018 and 2019 (omitting the fiscal year 2020). 38 states issued stay-at-home orders, but 12 states did not, providing cross-sectional variation to identify our DID (Patterson 2022). We define *TREATMENT* as an indicator variable equal to one for firms headquartered in the 12 states without a stay-at-home order, and zero for firms headquartered in the 38 states with a stay-at-home order. We expect that managerial learning from stock prices should be higher for firms headquartered in treatment states, relative to control states, in the post-COVID 19 period as freedom of movement and social interaction among constituents, which is central to their local information gathering activities (Shive 2012; Brown et al. 2015), was not restricted in states without stay-at-home orders. In Table 15, the coefficients on  $Q*VOTER\ TURNOUT*TREATMENT*POST$  are 0.031 for *CAPX* and 0.086 for *CHGPPEGT*, both of which are statistically significant at the 10% level, supporting a causal interpretation.

### **Relation Between Voter Turnout and Household Stock Market Participation**

In untabulated analysis, we validate, at the county-level, the findings of Bonaparte and Kumar (2013), who find a positive relation between state-level voter turnout and household stock market participation. We use granular county-level data, not state-level data, to allow for variation within states in voter turnout and managerial learning. We note that Bonaparte and Kumar (2013) interpret the relationship as causal and validate it across three different settings. Our 2SLS and DID tests are designed to incrementally demonstrate that the relation between voter turnout and managerial learning from stock prices is causal. Local voters can impact prices both directly as local investors and indirectly through interactions with local investors.

## VI. CONCLUSION

Voting is the primary means by which citizens make use of their “voice” to communicate. While the political science literature examines voter communication with elected officials (Burden and Wichowsky 2014), an overlooked possibility is that voters may also communicate with managers. Voters are information seekers and can aggregate policy and regulatory information into stock prices, thereby communicating with managers. Managers, in turn, can use this information to make capital allocation decisions. We shed light on these dynamics by studying the impact of voter turnout on managerial learning from stock prices, under the assumption that managers and voters have imperfect but complementary information sets (Grossman and Stiglitz 1980; Gilens 2001; Dessaint, Foucault, Fresard, and Matray 2019).

We use a sample period between 1999 to 2024, during which we capture county-level voter turnout across seven presidential election cycles. We measure investment using capital expenditures. We observe that investment- $q$  sensitivity increases with voter turnout, consistent with increased managerial learning from stock prices. We find stronger effects in presidential election years, in years of greater media attention on investment, as well as in years with low economic uncertainty. This time-series evidence corroborates our proposition that managerial learning from voters is greater when voters are active information gatherers. We find stronger effects for firms headquartered in counties with higher household stock market participation rates. We also find stronger effects for small, local firms with greater retail ownership levels, as well as firms with greater exposure to regulatory agencies. This cross-sectional evidence corroborates our proposition that managerial learning from voters is more valuable for firms where local investors have information about policy and regulation to share with managers.

We include an exhaustive set of control for forecasting price efficiency (FPE) and continue to observe results consistent with revelatory price efficiency (RPE). We corroborate our investment inferences by demonstrating that stock prices contain information that managers

do not otherwise have, and that managers incorporate this information within their earnings forecasts (Zuo 2016). We employ a two-stage least squares approach and use two distinct instrumental variables at the county-level – lagged voter turnout and precipitation levels on election day – to mitigate endogeneity concerns. We further use a difference-in-differences (DID) research design and find that managerial learning is higher in states without stay-at-home orders during the COVID-19 pandemic, where local social interactions were maintained.

Notwithstanding an uptick in the 2020 and 2024 elections, there is concern about low and declining voter turnout in U.S. presidential elections (Lijphart 1997). We posit that low voter turnout can spillover to financial markets, where managers in local counties with low voter turnout have access to a poorer information set by which to make important capital allocation decisions that shape the economy. In a rapidly evolving economic environment characterized by regulatory and policy exposure for firms, the decision-relevant information possessed by voters is of paramount importance. Our study suggests that managers should actively engage with local voters and that policy makers should advance policies that increase voter turnout. These initiatives can result in healthier businesses, economies, and societies.

Policy makers have long recognized that the U.S. lags many developed countries in voter turnout. As a result, several efforts are underway to improve voter turnout, including automatic voter registration, no-excuse absentee voting, extended early voting, more polling locations, and advocating for voting day as a Federal holiday (American Bar Association, 2024). While there is no doubt that low voter turnout impacts society by weakening democratic institutions, an overlooked aspect is that low voter turnout can impact the economy by weakening managerial learning from decision-relevant information embedded in stock prices. An oft neglected stakeholder group in these efforts are local firms, managers, and investors. Our study sheds light on the spillover effects of voter turnout on investors, managers and firms, providing a financial markets perspective to complement the societal perspective on this issue.

## References

- Agrawal, V., Aslan, H., Huang, L., & Ren, H. 2022. Political uncertainty and household stock market participation. *Journal of Financial & Quantitative Analysis*, 57: 2899-2928.
- American Bar Association. 2024. Improving participation in democratic processes. Retrieved from: [Improving Participation in Democratic Processes](#)
- Arikam, M., Kara, M., Masli, A., & Xi, Y. 2023. Political euphoria and corporate disclosures: An investigation of CEO partisan alignment with the President of the United States. *Journal of Accounting & Economics*, 75: 101552.
- Armstrong, D., Glaeser, S., & Hoopes, J. 2025. Measuring firm exposure to government agencies. *Journal of Accounting & Economics*, 79: 101703.
- Bae, J., Biddle, G., & Park, C. 2022. Managerial learning from analyst feedback to voluntary capex guidance, investment efficiency, and firm performance. *Management Science*, 68: 583-607.
- Bai, J., Phillippon, T., & Savov, A. 2016. Have financial markets become more informative? *Journal of Financial Economics*, 122: 625-654.
- Baker, S., Bloom, N., & Davis, S. 2016. Measuring economic policy uncertainty. *Quarterly Journal of Economics*, 131: 1593-1636.
- Bakke, T., & Whited, T. 2010. Which firms follow the market? An analysis of corporate investment decisions. *Review of Financial Studies*, 23: 1941-1980.
- Baloria, V.P., & Heese, J. 2018. The effects of media slant on firm behavior. *Journal of Financial Economics*, 129: 184-202.
- Barabas, J., & Jerit, J. 2009. Estimating the causal effect of media coverage on policy-relevant knowledge. *American Journal of Political Science*, 53: 73-89.
- Biddle, G., Hilary, G., & Verdi, R. 2009. How does financial reporting quality relate to investment efficiency? *Journal of Accounting & Economics*, 48: 112-131.
- Bonaparte, Y., & Kumar, A. 2013. Political activism, information costs, and stock market participation. *Journal of Financial Economics*, 107: 760-786.
- Bond, P., Edmans, A., & Goldstein, I. 2012. The real effects of financial markets. *Annual Review of Financial Economics*, 4: 339-360.
- Brown, N., Stice, H., & White, R. 2015. Mobile communication and local information flow: Evidence from distracted driving laws. *Journal of Accounting Research*, 53: 275-329.
- Burden, B., & Wichowsky, A. 2014. Economic discontent as a mobilizer: Unemployment and voter turnout. *Journal of Politics*, 76: 873-1115.
- Bushman, R.M., Smith, A.J., Wittenberg-Moerman, R. 2010. Price discovery and dissemination of private information by loan syndicate participants. *Journal of Accounting Research*, 48: 921-972.
- Bybee, L., Kelly, B., Manela, A., & Xiu, D. 2024. Business news and business cycles. *Journal of Finance*, 79: 3105-3147.
- Cebula R. J., G. C. Durden, and P. E. Gaynor. 2008. The impact of the repeat-voting-habit persistence phenomenon on the probability of voting in presidential elections. *Southern Economic Journal* 75: 429-440.
- Chen, Q., Goldstein, I., & Jiang, W. 2007. Price informativeness and investment sensitivity to stock price. *Review of Financial Studies*, 20: 619-650.
- Chen, Y., Ng, J., & Yang, X. 2021. Talk less, learn more: Strategic disclosure in response to managerial learning from the options market. *Journal of Accounting Research*, 59: 1069-1649.
- Chi, S., & Shanthikumar, D. 2017. Local bias in Google search and the market response around earnings announcements. *The Accounting Review*, 92: 115-143.
- Cho, Y., Yang, H., & Zhao, Y. 2025. Institutional cross-ownership of peer firms and revelatory price efficiency. *Journal of Financial & Quantitative Analysis*, Forthcoming.

- Cookson, J., Niessner, M., & Schiller, C. 2025. Can social media inform corporate decisions? Evidence from merger withdrawals? *Journal of Finance*, Forthcoming.
- Council on Foreign Relations. 2022. How does U.S. voter turnout compare to the rest of the world's? <https://www.cfr.org/in-brief/how-does-us-voter-turnout-compare-rest-worlds>
- Coval, J., & Moskowitz, T. 1999. Home bias at home: Local equity preferences in domestic portfolios. *Journal of Finance*, 54: 2045-2073.
- Coval, J., & Moskowitz, T. 2001. The geography of investment: Informed trading and asset prices. *Quarterly Journal of Economics*, 109: 811-841.
- Crane A D., A Koch, and L Lin. 2024. Real effect of markets on politics: Evidence from US presidential elections. *American Economic Review: Insights*, 6: 73-88.
- Dahl, R. 1989. Democracy and its critics. New Haven: Yale University Press.
- Delli Carpini, M., & Keeler, S. 1996. What Americans know about politics and why it matters. New Haven: Yale University Press.
- Dessaint, O., Foucault, T., Fresard, L., & Matray, A. 2019. Noisy stock prices and corporate investment. *Review of Financial Studies*, 32: 2625-2672.
- Druckman, J. 2005. Media matter: How newspapers and television news cover campaigns and influence voters. *Political Communication*, 22: 463-481.
- Dyer, T. 2021. The demand for public information by local and nonlocal investors: Evidence from investor-level data. *Journal of Accounting & Economics*, 72: 101417.
- Dyer, T., Lang, M., & Oh, J. 2025. Media conglomeration, local news, and capital market consequences. *Management Science*, 71: 6602-6626.
- Edmans, A., Jayaraman, S., & Schneemeier, J. 2017. The source of information in prices and investment-price sensitivity. *Journal of Financial Economics*, 126: 74-96.
- Foucault, T., & Fresard, L. 2012. Cross-listing, investment sensitivity to stock price, and the learning hypothesis. *Review of Financial Studies*, 25: 3305-3350.
- Foucault, T., & Fresard, L. 2014. Learning from peers' stock prices and corporate investment. *Journal of Financial Economics*, 111: 554-577.
- Fujiwara T, K Meng, and T Vogl. 2016. Habit formation in voting: Evidence from rainy elections. *American Economic Journal: Applied Economics* 8: 160-188.
- Garcia, D., & Norli, D. 2012. Geographic dispersion and stock returns. *Journal of Financial Economics*, 106: 547-565.
- Gentzkow, M. 2006. Television and voter turnout. *Quarterly Journal of Economics*, 121: 931-972.
- Gelsomin, E., & Hutton, A. 2023. The learning hypothesis revisited. *Journal of Accounting & Economics*, 76: 101644.
- Gilens, M. 2001. Political ignorance and collective policy preferences. *American Political Science Review*, 95: 379-396.
- Goldstein, I. 2023. Information in financial markets and its real effects. *Review of Finance*, 27: 1-32.
- Goldstein, I., Liu, B., & Yang, L. 2025. Market feedback: Evidence from the horse's mouth. Working paper, University of Pennsylvania.
- Gomez, B, Hansford, T., & Krause, G. 2007. The republicans should pray for rain: Weather, turnout, and voting in U.S. presidential elections. *Journal of Politics*, 69: 649-663.
- Grossman, S. 1976. On the efficiency of competitive stock markets where trades have diverse information. *Journal of Finance*, 31: 573-585.
- Grossman, S. & Stiglitz, J. 1980. On the impossibility of informationally efficient markets. *American Economic Review*, 70: 393-408.
- Guo, R., & Zhong, R. 2023. Do managers learn from analysts about investing? Evidence from internal capital allocation. *The Accounting Review*, 98: 215-246.
- Hayek, 1945. The use of knowledge in society. *American Economic Review*, 35: 519-530.

- Hutton, A., Lee, L., & Shu, S. 2012. Do managers always know better? The relative accuracy of management and analyst forecasts. *Journal of Accounting Research*, 50: 1217-1244.
- Ivkovic, Z., & Weisbenner, S. 2005. Local does as local is: Information content of the geography of individual investors' investments. *Journal of Finance*, 60: 267-306.
- Jayaraman, S., & Wu, J. 2019. Is silence golden? Real effects of mandatory disclosure. *Review of Financial Studies*, 32: 2225-2259.
- Jayaraman, S., & Wu, J. 2020. Should I stay or should I grow? Using voluntary disclosure to elicit market feedback. *Review of Financial Studies*, 33: 3854-3888.
- Jerit, J., Barabas, J., & Bolsen, T. 2006. Citizens, knowledge, and the information environment. *American Journal of Political Science*, 50: 266-282.
- Kausita, M., Knupfer, S., & Torstila, S. 2016. Stock ownership and political behavior: Evidence from demutualizations. *Management Science*, 62: 945-963.
- Kim, J.B., Wiedman, C., & Zhu, C. 2023. Does CDS trading improve managerial learning from outsiders? *Contemporary Accounting Research*, 40: 2032-2070.
- Landsman, W., Pan, J., & Stubben, S. 2024. Equity market fragmentation and capital investment efficiency. *Management Science*, 70: 4381-4406.
- Lijphart, A. 1997. Unequal participation: Democracy's unresolved dilemma. *American Political Science Review*, 91: 1-14.
- Lin, T., Liu, Q., & Sun, B. 2019. Contractual managerial incentives with stock price feedback. *American Economic Review*, 109: 2446-2468.
- Loureiro, G., & Taboada, A. 2015. Do improvements in the information environment enhance insiders' ability to learn from outsiders? *Journal of Accounting Research*, 53: 863-905.
- Luo, Y. 2005. Do insiders learn from outsiders? Evidence from mergers and acquisitions. *Journal of Finance*, 60: 1951-1982.
- Massa, M., & Siminov, A. 2006. Hedging, familiarity, and portfolio choice. *Review of Financial Studies*, 19: 633-685.
- McLean, D., Zhang, T., & Zhao, M. 2012. Why does the law matter? Investor protection and its effects on investment, finance, and growth. *Journal of Finance*, 67: 313-350.
- Mondak, J. 1995. Newspapers and political awareness. *American Journal of Political Science*, 39: 513-527.
- Oberholzer-Gee, F., & Waldfogel, J. 2009. Media markets and localism: Does local news in Espanol boost Hispanic voter turnout? *American Economic Review*, 99: 2120-2128.
- Patterson, S. 2022. The politics of pandemics: The effect of stay-at-home orders on COVID-19 migration. *State Politics & Policy Quarterly*, 22: 1-23.
- Pinto, J. 2023. Mandatory disclosure and learning from external market participants: Evidence from the JOBS act. *Journal of Accounting & Economics*, 75: 1-22.
- Seasholes, M., & Zhu, N. 2010. Individual investors and local bias. *Journal of Finance*, 65: 1987-2010.
- Shive, S. 2012. Local investors, price discovery, and market efficiency. *Journal of Financial Economics*, 104: 145-161.
- Vega, C. 2006. Stock price reaction to public and private information. *Journal of Financial Economics*, 82: 103-133.
- Verba, S., & Nie, N. 1972. Participation in America: Political democracy and social equality. University of Chicago Press.
- Ye, M., Zheng, M., & Zhu, W. 2023. The effect of tick size on managerial learning from stock prices. *Journal of Accounting & Economics*, 75: 101515.
- Zhang, R. 2023. Do managers learn from institutional investors through direct interactions? *Journal of Accounting & Economics*, 75: 101554.
- Zuo, L. 2016. The informational feedback effect of stock prices on management forecasts. *Journal of Accounting & Economics*, 61: 391-413.

## Appendix A. Variable Definitions

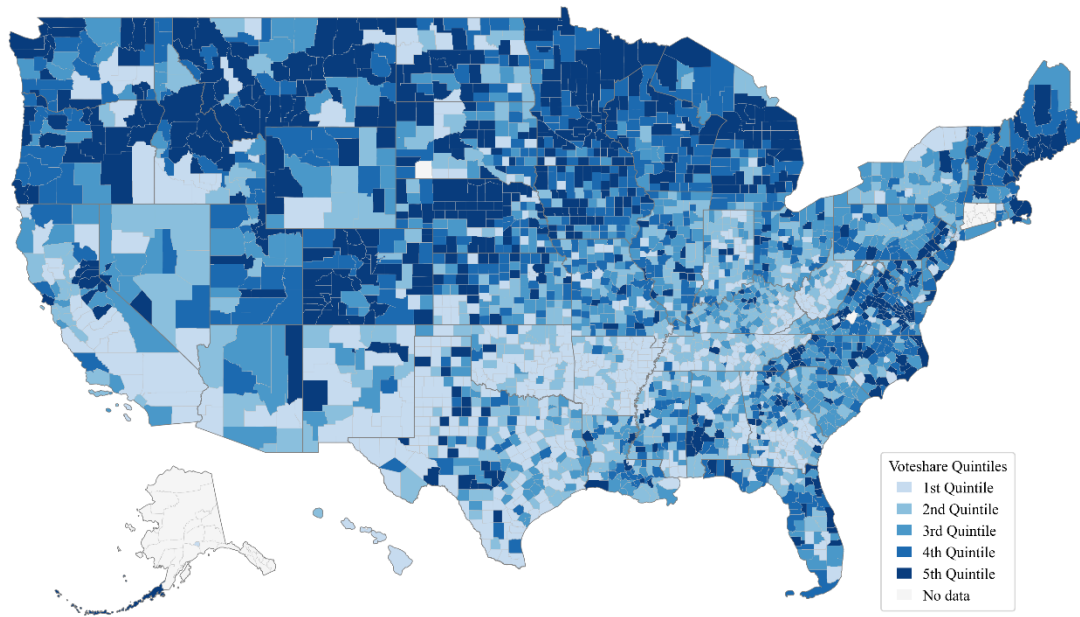
| Variable          | Definition   |
|-------------------|--|
| $\Delta ACCURACY$ | $-100 * ( MF_2 - Actual  -  MF_1 - Actual ) / Stock Price_1$ , where $MF_2$ is the MF issued by firm $i$ at date 2, $MF_1$ is the most recent MF released by the firm prior to $MF_2$ for the same earnings realization, and $Stock Price_1$ is the stock price two days prior to date 1.  |
| #ANALYST          | The log of the number of unique analysts who, prior to the issuance of management EPS forecasts, issue their own EPS forecasts for the same forecast period, from I/B/E/S.   |
| BM                | Book-to-market ratio of equity ( $CEQ/CSHO*PRCC\_F$ ).   |
| CAPX              | Capital expenditure ( $CAPX$ ) scaled by lagged total assets ( $AT$ ).   |
| CF                | Cash flow measured by income before extraordinary item ( $IB$ ) - the change in current asset ( $ACT$ ) + the change in current liability ( $LCT$ ) + cash and cash equivalents increase ( $CHECH$ ) - the change in debt in current liability + depreciation and amortization expense ( $DP$ ) scaled by lagged total assets.                 |
| CF_Lag            | One-year lagged cash flow measured by income before extraordinary item ( $IB$ ) - the change in current asset ( $ACT$ ) + the change in current liability ( $LCT$ ) + cash and cash equivalents increase ( $CHECH$ ) - the change in debt in current liability + depreciation and amortization expense ( $DP$ ) scaled by lagged total assets. |
| CHGPPEGT          | Change in gross property, plant, and equipment ( $PPEGT$ ) scaled by lagged total assets.  |
| ENT PROG          | Economic policy uncertainty index relating to entitlement program, from <a href="https://www.policyuncertainty.com/us_monthly.html">https://www.policyuncertainty.com/us_monthly.html</a> .  |
| EPA               | The number of sentences in firms' 10-Ks that reference Environmental Protection Agency scaled by the total number of sentences in the 10-Ks, shared by Armstrong et al. (2025).  |
| EPU NATION        | News-based policy uncertainty index based on the number of policy uncertainty articles per year.   |
| EPU STATE         | Economic policy uncertainty index within a state that relates to state and local policy issues   |
| FCC               | The number of sentences in firms' 10-Ks that reference Federal Communications Commission scaled by the total number of sentences in the 10-Ks, shared by Armstrong et al. (2025).  |
| FIN REG           | Economic policy uncertainty index relating to financial regulation.  |
| FIRM SIZE         | The natural log of total asset.  |
| FTC               | The number of sentences in firms' 10-Ks that reference Federal Trade Commission scaled by the total number of sentences in the 10-Ks, shared by Armstrong et al. (2025).   |
| GAP               | The number of days between $MF_1$ and $MF_2$ .   |
| GDP GROWTH        | The percentage change in annual GDP in each county.  |
| HORIZON           | The number of months between the announcement date and the forecasted period ending.   |
| HOUSEHOLD INCOME  | The log of household per capital in each county.   |
| IND_MF            | An indicator variable equal to one for firms issuing at least one annual EPS forecast in a year, and zero otherwise, from Cho, Yang, and Zhao (2025).  |

|                          |  |
|--------------------------|--|
| <i>INST OWN</i>          | The proportion of stock shares held by institutional investors.  |
| <i>INV_AST</i>           | Inverse of the log of lagged total assets.   |
| <i>IRS</i>               | The number of sentences in firms' 10-Ks that reference Internal Revenue Service scaled by the total number of sentences in the 10-Ks, shared by Armstrong et al. (2025).   |
| <i>M&amp;A</i>           | The average frequency of the topic "M&A" being discussed in the <i>Wall Street Journal</i> in each year.   |
| <i>Non-CAPX</i>          | The sum of R&D expenditures ( <i>RD</i> ) and acquisition expenditures (AQC), scaled by lagged total assets ( <i>AT</i> ).   |
| <i>NZRET</i>             | The percentage of trading days with non-zero returns in one year, following Edmans, Jayaraman, and Schneemeier (2017).   |
| <i>POST</i>              | An indicator variable equal to one for years of 2021 and 2022, and zero for years of 2018 and 2019.  |
| <i>Q</i>                 | Market-to-Book ratio measured by book value of assets plus market value of equity minus book value of equity divided by lagged total assets.   |
| <i>RAINFALL</i>          | The value of precipitation on the election day in each county, from <a href="https://www.ncei.noaa.gov/pub/data/ghcn/daily/">https://www.ncei.noaa.gov/pub/data/ghcn/daily/</a> . The website reports daily precipitation data for each station, and the county location of each station is identified using its latitude and longitude. |
| <i>REG</i>               | Economic policy uncertainty index relating to regulation.  |
| <i>RET</i>               | Stock returns adjusted by value-weighted market return for next three years.   |
| <i> RETURN </i>          | The buy-and-hold return from one day after <i>MF</i> <sub>1</sub> issuance to one day before <i>MF</i> <sub>2</sub> issuance.  |
| <i>ROA</i>               | The ratio of EBIT to total assets.   |
| <i>SEC</i>               | The number of sentences in firms' 10-Ks that reference Securities and Exchange Commission scaled by the total number of sentences in the 10-Ks, shared by Armstrong et al. (2025).   |
| <i>STOCK PART</i>        | The ratio of the number of tax returns with dividend income to the number of total tax returns filed in each county each year, from IRS at <a href="https://www.irs.gov/statistics/soi-tax-stats-county-data">https://www.irs.gov/statistics/soi-tax-stats-county-data</a> .   |
| <i>TAKEOVER</i>          | The average frequency of the topic "Takeover" being discussed in the <i>Wall Street Journal</i> in each year.  |
| <i>TOTAL INVEST</i>      | The sum of capital expenditures (CAPX), R&D expenditures ( <i>RD</i> ), and acquisition expenditures (AQC), scaled by lagged total assets ( <i>AT</i> ).   |
| <i>TRADE POLICY</i>      | Economic policy uncertainty index relating to trade policy.  |
| <i>TREATMENT</i>         | An indicator variable equal to one for firms in states of Arkansas, Iowa, Massachusetts, Nebraska, New Hampshire, North Dakota, Oklahoma, Rhode Island, South Dakota, Utah, Vermont, and Wyoming, and zero otherwise.  |
| <i>UNEMP RATE</i>        | The unemployment rate in each county.  |
| <i>VOTER<br/>TURNOUT</i> | The ratio of total votes in U.S. presidential election to voting-age population for each county. For non-election years, this variable equals the most recent ratio.   |
| <i>1-R<sup>2</sup></i>   | Return non-synchronicity measured as one minus the R <sup>2</sup> from the firm-year regression of daily stock returns on value-weighted market returns, following Ye, Zheng, and Zhu (2023).  |

---

**Figure 1. Voter Turnout by County in 2020**

County-level Voteshare (Quintiles)



This figure presents county-level voter turnout rates for the 2020 U.S. Presidential Election. Voter turnout is calculated as the ratio of total votes to the voting-age population in each county, and is split into quintiles.

**Table 1. Sample Selection**

**Panel A. Sensitivity of Investment-to-Price**

| <b>Sample Selection Criteria</b>   | <b>Number of Obs.</b> |
|--|-----------------------|
| Non-financial U.S. public firms in Compustat from 1999 to 2024.  | 89,689                |
| Merge with CRSP and ZIP-County linking table.  | 72,767                |
| Merge with the most recent voter turnout data of U.S. presidential election over 2000-2024, and require firms to have non-missing values of control variables. | 59,272                |

**Panel B. Sensitivity of Changes in Management Forecast Accuracy to Stock Returns**

| <b>Sample Selection Criteria</b>   | <b>Number of Obs.</b> |
|--|-----------------------|
| Annual Management earnings forecast (EPS) announced from 1999 to 2024 in I/B/E/S Guidance.   | 206,188               |
| Delete forecasts other than point or closed range estimates.   | 184,426               |
| Merge with actual value in I/B/E/S Actuals.  | 91,564                |
| Merge with CRSP, Compustat, and ZIP-County linking table, and restrict to these issued by non-financial U.S. public firms.                                     | 53,454                |
| Merge with the most recent voter turnout data of U.S. presidential election over 2000-2024, and require firms to have non-missing values of control variables. | 52,585                |

This table presents the sample selection of investment-to- $Q$  sensitivity in Panel A and the sensitivity of changes in management forecast accuracy to stock returns in Panel B. The two panels focus on non-financial U.S. public firms, and examine managerial learning from voters when making investment decisions and revising earnings forecasts, respectively. Voter turnout data is at the year-county level, with the most recent available data for non-election years.

**Table 2. Descriptive Statistics**

| <b>Variable</b>   | <b>Obs</b> | <b>Mean</b> | <b>25<sup>th</sup><br/>Percentile</b> | <b>Median</b> | <b>75<sup>th</sup><br/>Percentile</b> | <b>Standard<br/>Deviation</b> |
|---|------------|-------------|---------------------------------------|---------------|---------------------------------------|-------------------------------|
| <b>Panel A. Sensitivity of Investment-to-Price</b>                                      |            |             |                                       |               |                                       |                               |
| <i>CAPX</i>   | 59,272     | 0.051       | 0.014                                 | 0.031         | 0.061                                 | 0.070                         |
| <i>CHGPPEGT</i>   | 59,272     | 0.044       | 0.003                                 | 0.021         | 0.058                                 | 0.130                         |
| <i>VOTER TURNOUT</i>  | 59,272     | 0.555       | 0.488                                 | 0.558         | 0.622                                 | 0.092                         |
| <i>Q</i>  | 59,272     | 2.365       | 1.194                                 | 1.628         | 2.562                                 | 3.916                         |
| <i>RET</i>  | 59,272     | 0.135       | 0.075                                 | 0.110         | 0.165                                 | 0.092                         |
| <i>CF</i>   | 59,272     | -0.028      | -0.025                                | 0.065         | 0.127                                 | 0.625                         |
| <i>INV_AST</i>  | 59,272     | 0.182       | 0.128                                 | 0.159         | 0.207                                 | 0.108                         |
| <i>GDP GROWTH</i>   | 47,203     | 0.042       | 0.023                                 | 0.042         | 0.063                                 | 0.038                         |
| <i>UNEMP RATE</i>   | 47,203     | 5.726       | 4.200                                 | 5.200         | 7.000                                 | 2.097                         |
| <i>HOUSEHOLD INCOME</i>   | 47,203     | 10.874      | 10.630                                | 10.831        | 11.056                                | 0.353                         |
| <b>Panel B. Cross-Sectional and Time-Series Variables</b>                               |            |             |                                       |               |                                       |                               |
| <i>TAKEOVER</i>   | 46,248     | 0.004       | 0.003                                 | 0.004         | 0.004                                 | 0.001                         |
| <i>M&amp;A</i>  | 46,248     | 0.005       | 0.004                                 | 0.005         | 0.006                                 | 0.001                         |
| <i>INST OWN</i>   | 50,500     | 0.615       | 0.360                                 | 0.687         | 0.877                                 | 0.317                         |
| <i>IRS</i>  | 47,237     | 0.001       | 0                                     | 0.0003        | 0.001                                 | 0.001                         |
| <i>SEC</i>  | 47,237     | 0.003       | 0.001                                 | 0.002         | 0.003                                 | 0.003                         |
| <i>FTC</i>  | 47,237     | 0.0002      | 0                                     | 0             | 0                                     | 0.001                         |
| <i>EPA</i>  | 47,237     | 0.001       | 0                                     | 0             | 0                                     | 0.002                         |
| <i>FCC</i>  | 47,237     | 0.001       | 0                                     | 0             | 0                                     | 0.003                         |
| <i>EPU NATION</i>   | 59,272     | 140.038     | 112.941                               | 142.396       | 153.193                               | 50.606                        |
| <i>EPU STATE</i>  | 58,954     | 93.970      | 54.505                                | 75.288        | 107.431                               | 72.128                        |
| <i>REG</i>  | 59,272     | 120.313     | 101.390                               | 109.676       | 148.058                               | 42.621                        |
| <i>FIN REG</i>  | 59,272     | 123.847     | 68.968                                | 98.530        | 181.824                               | 71.253                        |
| <i>TRADE POLICY</i>   | 59,272     | 113.476     | 42.497                                | 58.633        | 76.296                                | 166.150                       |
| <i>ENT PROG</i>   | 59,272     | 148.483     | 86.859                                | 129.312       | 167.101                               | 105.282                       |
| <i>STOCK PART</i>   | 32,048     | 0.291       | 0.224                                 | 0.278         | 0.363                                 | 0.082                         |
| <b>Panel C. Sensitivity of Changes in Management Forecast Accuracy to Stock Returns</b> |            |             |                                       |               |                                       |                               |
| <i>ΔACCURACY</i>  | 52,585     | 0.199       | 0                                     | 0             | 0.158                                 | 0.602                         |
| <i> RETURN </i>   | 52,585     | 0.114       | 0.035                                 | 0.081         | 0.154                                 | 0.112                         |
| <i>HORIZON</i>  | 52,585     | 5.015       | 1.467                                 | 4.300         | 7.233                                 | 3.416                         |
| <i>BM</i>   | 52,585     | 0.406       | 0.213                                 | 0.356         | 0.551                                 | 0.277                         |
| <i>FIRM SIZE</i>  | 52,585     | 7.899       | 6.673                                 | 7.905         | 9.066                                 | 1.716                         |
| <i>GAP</i>  | 52,585     | 75.020      | 50                                    | 84            | 91                                    | 39.274                        |
| <i>#ANALYST</i>   | 52,585     | 2.471       | 2.079                                 | 2.565         | 2.996                                 | 0.724                         |

This table provides descriptive statistics of the variables used in the two investment sensitivity analyses, as well as time-series and cross-sectional analyses. The statistics include the number of observations, 25<sup>th</sup> percentile, mean, median, 75<sup>th</sup> percentile, and standard deviation for these variables. See Appendix A for variable definitions. All continuous variables are winsorized at the 1% and 99% percentiles.

**Table 3. Effect of Voter Turnout on Investment-to-Q Sensitivity**

|                                   | <i>CAPX</i>          | <i>CHGPPEGT</i>      | <i>CAPX</i>                 | <i>CHGPPEGT</i>             | <i>CAPX</i>                 | <i>CHGPPEGT</i>             |
|-----------------------------------|----------------------|----------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
|                                   | (1)                  | (2)                  | (3)                         | (4)                         | (5)                         | (6)                         |
| <i>Q</i>                          | 0.001***<br>(0.000)  | 0.002***<br>(0.000)  | -0.003***<br>(0.000)        | -0.003***<br>(0.000)        | -0.004***<br>(0.000)        | -0.004***<br>(0.000)        |
| <b><i>Q*VOTER<br/>TURNOUT</i></b> |                      |                      | <b>0.010***<br/>(0.000)</b> | <b>0.012***<br/>(0.000)</b> | <b>0.012***<br/>(0.000)</b> | <b>0.014***<br/>(0.000)</b> |
| <i>VOTER TURNOUT</i>              |                      |                      | 0.000<br>(0.971)            | 0.003<br>(0.906)            | 0.014<br>(0.288)            | 0.002<br>(0.959)            |
| <i>RET</i>                        | -0.023***<br>(0.000) | -0.068***<br>(0.000) | -0.022***<br>(0.000)        | -0.067***<br>(0.000)        | -0.036***<br>(0.000)        | -0.086***<br>(0.000)        |
| <i>CF</i>                         | -0.002***<br>(0.000) | -0.002**<br>(0.028)  | -0.002***<br>(0.000)        | -0.003**<br>(0.012)         | -0.003***<br>(0.000)        | -0.002*<br>(0.067)          |
| <i>INV_AST</i>                    | 0.044***<br>(0.000)  | 0.051***<br>(0.000)  | 0.042***<br>(0.000)         | 0.048***<br>(0.000)         | 0.049***<br>(0.000)         | 0.059***<br>(0.000)         |
| <i>GDP GROWTH</i>                 |                      |                      |                             |                             | 0.073***<br>(0.000)         | 0.159***<br>(0.000)         |
| <i>UNEMP RATE</i>                 |                      |                      |                             |                             | -0.000<br>(0.147)           | 0.000<br>(0.785)            |
| <i>HOUSEHOLD<br/>INCOME</i>       |                      |                      |                             |                             | 0.026***<br>(0.000)         | 0.039***<br>(0.002)         |
| Intercept                         | 0.036***<br>(0.000)  | 0.042*<br>(0.084)    | 0.091***<br>(0.001)         | -0.039<br>(0.565)           | -0.151**<br>(0.014)         | -0.441***<br>(0.004)        |
| County FE                         |                      |                      | Yes                         | Yes                         | Yes                         | Yes                         |
| Firm FE                           | Yes                  | Yes                  | Yes                         | Yes                         | Yes                         | Yes                         |
| Year FE                           | Yes                  | Yes                  | Yes                         | Yes                         | Yes                         | Yes                         |
| Adj R <sup>2</sup>                | 0.559                | 0.225                | 0.561                       | 0.226                       | 0.579                       | 0.232                       |
| N. of Obs                         | 59,272               | 59,272               | 59,272                      | 59,272                      | 47,203                      | 47,203                      |

This table reports the results of the sensitivity in columns 1 and 2, and the results of the effect of voter turnout on the investment-to-Q sensitivity in columns 3 through 6. Investment is measured by two proxies: the ratio of capital expenditures to lagged total assets (*CAPX*) and changes in gross property, plant, and equipment scaled by lagged total assets (*CHGPPEGT*). County fixed effect, firm fixed effect, and year fixed effect are included. *P*-value is displayed in parentheses. See Appendix A for variable definitions. \*\*\*, \*\*, and \* indicate significance at the 1%, 5%, and 10% levels, respectively.

**Table 4. Presidential Election Years vs. Non-Election Years**

|                        | <i>CAPX</i>                           |                             | <i>CHGPPEGT</i>                       |                             |
|------------------------|---------------------------------------|-----------------------------|---------------------------------------|-----------------------------|
|                        | Presidential<br>Election Years<br>(1) | Other Years<br>(2)          | Presidential<br>Election Years<br>(3) | Other Years<br>(4)          |
| <i>Q</i>               | -0.008***<br>(0.000)                  | -0.003***<br>(0.000)        | -0.015***<br>(0.000)                  | -0.001<br>(0.207)           |
| <i>Q*VOTER TURNOUT</i> | <b>0.018***<br/>(0.000)</b>           | <b>0.008***<br/>(0.000)</b> | <b>0.034***<br/>(0.000)</b>           | <b>0.008***<br/>(0.000)</b> |
| F TEST                 | 18.14***<br>(0.000)                   |                             | 19.97***<br>(0.000)                   |                             |
| <i>VOTER TURNOUT</i>   | 0.011<br>(0.671)                      | 0.003<br>(0.791)            | -0.027<br>(0.647)                     | 0.018<br>(0.540)            |
| <i>RET</i>             | -0.034***<br>(0.000)                  | -0.022***<br>(0.000)        | -0.104***<br>(0.000)                  | -0.069***<br>(0.000)        |
| <i>CF</i>              | -0.008***<br>(0.000)                  | -0.001*<br>(0.060)          | -0.015***<br>(0.000)                  | -0.001<br>(0.483)           |
| <i>INV_AST</i>         | 0.011<br>(0.213)                      | 0.049***<br>(0.000)         | -0.018<br>(0.398)                     | 0.051***<br>(0.000)         |
| Intercept              | 0.105***<br>(0.004)                   | 0.088***<br>(0.001)         | 0.228***<br>(0.009)                   | -0.047<br>(0.487)           |
| County FE              | Yes                                   | Yes                         | Yes                                   | Yes                         |
| Firm FE                | Yes                                   | Yes                         | Yes                                   | Yes                         |
| Year FE                | Yes                                   | Yes                         | Yes                                   | Yes                         |
| Adj R <sup>2</sup>     | 0.514                                 | 0.565                       | 0.192                                 | 0.234                       |
| N. of Obs              | 12,849                                | 46,423                      | 12,849                                | 46,423                      |

This table reports the results of the effect of voter turnout conditional upon whether the year is a presidential election year or not. Presidential election years refer to the years of 2000, 2004, 2008, 2012, 2016, 2020, and 2024. An F-test is used to compare the effect of voter turnout on the investment-to-Q sensitivity between presidential election and non-election years. County fixed effect, firm fixed effect, and year fixed effect are included. *P*-value is displayed in parentheses. See Appendix A for variable definitions. \*\*\*, \*\*, and \* indicate significance at the 1%, 5%, and 10% levels, respectively.

**Table 5. Time-Series Analysis on Media Topics**

|                               | <i>CAPX</i>                       |                                   |                                  |                                  |
|-------------------------------|-----------------------------------|-----------------------------------|----------------------------------|----------------------------------|
|                               | <i>TAKEOVER</i><br><Median<br>(1) | <i>TAKEOVER</i><br>>Median<br>(2) | <i>M&amp;A</i><br><Median<br>(3) | <i>M&amp;A</i><br>>Median<br>(4) |
| <i>Q</i>                      | -0.005***<br>(0.000)              | -0.007**<br>(0.000)               | -0.005***<br>(0.000)             | -0.005**<br>(0.000)              |
| <b><i>Q*VOTER TURNOUT</i></b> | <b>0.012***<br/>(0.000)</b>       | <b>0.020***<br/>(0.000)</b>       | <b>0.012***<br/>(0.000)</b>      | <b>0.018***<br/>(0.000)</b>      |
| F TEST                        | 14.09***<br>(0.000)               |                                   | 8.55***<br>(0.004)               |                                  |
| <i>VOTER TURNOUT</i>          | -0.017<br>(0.386)                 | -0.006<br>(0.779)                 | -0.014<br>(0.399)                | 0.033<br>(0.129)                 |
| <i>RET</i>                    | -0.043***<br>(0.000)              | -0.008<br>(0.229)                 | -0.055***<br>(0.000)             | -0.031***<br>(0.000)             |
| <i>CF</i>                     | 0.002**<br>(0.013)                | -0.005***<br>(0.000)              | -0.004***<br>(0.000)             | 0.003***<br>(0.001)              |
| <i>INV_AST</i>                | 0.039***<br>(0.000)               | 0.066***<br>(0.000)               | 0.058***<br>(0.000)              | 0.044***<br>(0.000)              |
| Intercept                     | 0.148***<br>(0.001)               | 0.056<br>(0.115)                  | 0.145***<br>(0.001)              | 0.043<br>(0.239)                 |
| County FE                     | Yes                               | Yes                               | Yes                              | Yes                              |
| Firm FE                       | Yes                               | Yes                               | Yes                              | Yes                              |
| Year FE                       | Yes                               | Yes                               | Yes                              | Yes                              |
| Adj R <sup>2</sup>            | 0.629                             | 0.620                             | 0.632                            | 0.609                            |
| N. of Obs                     | 21,849                            | 24,399                            | 24,768                           | 21,480                           |

This table reports the results of the effect of voter turnout conditional upon the annual frequency of specific topics covered by *Wall Street Journal*. The topics examined include takeover and M&A. An F-test is used to compare the effect of voter turnout on the investment-to-Q sensitivity between years with higher versus lower coverage frequency for each topic. County fixed effect, firm fixed effect, and year fixed effect are included. *P*-value is displayed in parentheses. See Appendix A for variable definitions. \*\*\*, \*\*, and \* indicate significance at the 1%, 5%, and 10% levels, respectively.

**Table 6. Time-Series Analysis on Economic Policy Uncertainty**

**Panel A. National and State Economic Policy Uncertainty**

|                        | <i>CAPX</i>                 |                             |                            |                             |
|------------------------|-----------------------------|-----------------------------|----------------------------|-----------------------------|
|                        | <i>EPU NATION</i>           | <i>EPU NATION</i>           | <i>EPU STATE</i>           | <i>EPU STATE</i>            |
|                        | <Median<br>(1)              | >Median<br>(2)              | <Median<br>(3)             | >Median<br>(4)              |
| <i>Q</i>               | -0.006***<br>(0.000)        | -0.001<br>(0.302)           | -0.005***<br>(0.000)       | -0.004**<br>(0.000)         |
| <i>Q*VOTER TURNOUT</i> | <b>0.017***<br/>(0.000)</b> | <b>0.004***<br/>(0.001)</b> | <b>0.017**<br/>(0.000)</b> | <b>0.009***<br/>(0.000)</b> |
| F TEST                 |                             | 57.48***<br>(0.000)         |                            | 22.95***<br>(0.000)         |
| <i>VOTER TURNOUT</i>   | -0.025<br>(0.104)           | 0.176<br>(0.281)            | -0.024<br>(0.139)          | -0.016<br>(0.228)           |
| <i>RET</i>             | -0.030***<br>(0.000)        | -0.030***<br>(0.000)        | -0.043***<br>(0.000)       | -0.017***<br>(0.000)        |
| <i>CF</i>              | -0.003***<br>(0.000)        | -0.002***<br>(0.000)        | 0.003***<br>(0.000)        | -0.006***<br>(0.000)        |
| <i>INV_AST</i>         | 0.067***<br>(0.000)         | 0.008*<br>(0.075)           | 0.075***<br>(0.000)        | 0.028***<br>(0.000)         |
| Intercept              | 0.119***<br>(0.000)         | 0.024<br>(0.583)            | 0.156***<br>(0.002)        | 0.072**<br>(0.011)          |
| County FE              | Yes                         | Yes                         | Yes                        | Yes                         |
| Firm FE                | Yes                         | Yes                         | Yes                        | Yes                         |
| Year FE                | Yes                         | Yes                         | Yes                        | Yes                         |
| Adj R <sup>2</sup>     | 0.599                       | 0.578                       | 0.606                      | 0.532                       |
| N. of Obs              | 31,323                      | 27,949                      | 29,447                     | 29,507                      |

**Panel B. Categorical Economic Policy Uncertainty**

|                        | <i>CAPX</i>                 |                             |                             |                             |                             |                             |                             |                             |
|------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
|                        | <i>REG</i>                  |                             | <i>FIN REG</i>              |                             | <i>TRADE POLICY</i>         |                             | <i>ENT PROG</i>             |                             |
|                        | <Median<br>(1)              | >Median<br>(2)              | <Median<br>(3)              | >Median<br>(4)              | <Median<br>(5)              | >Median<br>(6)              | <Median<br>(7)              | >Median<br>(8)              |
| <i>Q</i>               | -0.004***<br>(0.000)        | -0.003***<br>(0.000)        | -0.004***<br>(0.000)        | 0.005***<br>(0.000)         | -0.005***<br>(0.000)        | -0.003***<br>(0.000)        | -0.004***<br>(0.000)        | 0.005***<br>(0.000)         |
| <i>Q*VOTER TURNOUT</i> | <b>0.013***<br/>(0.000)</b> | <b>0.008***<br/>(0.000)</b> | <b>0.011***<br/>(0.000)</b> | <b>-0.003**<br/>(0.043)</b> | <b>0.013***<br/>(0.000)</b> | <b>0.009***<br/>(0.000)</b> | <b>0.011***<br/>(0.000)</b> | <b>-0.004**<br/>(0.013)</b> |
| F TEST                 | 9.37***<br>(0.002)          |                             | 57.53***<br>(0.000)         |                             | 5.54**<br>(0.019)           |                             | 62.75***<br>(0.000)         |                             |
| <i>VOTER TURNOUT</i>   | -0.006<br>(0.706)           | -0.003<br>(0.866)           | -0.000<br>(0.982)           | 0.012<br>(0.378)            | -0.011<br>(0.500)           | 0.011<br>(0.475)            | 0.009<br>(0.592)            | 0.009<br>(0.531)            |
| <i>RET</i>             | -0.034***<br>(0.000)        | -0.026***<br>(0.000)        | -0.037***<br>(0.000)        | -0.017***<br>(0.001)        | -0.011*<br>(0.075)          | -0.028***<br>(0.000)        | -0.047***<br>(0.000)        | -0.020***<br>(0.000)        |
| <i>CF</i>              | -0.003***<br>(0.000)        | -0.002***<br>(0.001)        | -0.003***<br>(0.000)        | -0.001**<br>(0.043)         | -0.002***<br>(0.000)        | -0.002***<br>(0.001)        | -0.003***<br>(0.000)        | -0.002**<br>(0.014)         |
| <i>INV_AST</i>         | 0.050***<br>(0.000)         | 0.048***<br>(0.000)         | 0.037***<br>(0.000)         | 0.039***<br>(0.000)         | 0.058***<br>(0.000)         | 0.033***<br>(0.000)         | 0.046***<br>(0.000)         | 0.040***<br>(0.000)         |
| Intercept              | 0.012<br>(0.439)            | 0.086*<br>(0.057)           | 0.107***<br>(0.000)         | 0.083***<br>(0.002)         | 0.105***<br>(0.002)         | 0.089***<br>(0.001)         | 0.100***<br>(0.003)         | 0.085***<br>(0.001)         |
| County FE              | Yes                         | Yes                         | Yes                         | Yes                         | Yes                         | Yes                         | Yes                         | Yes                         |
| Firm FE                | Yes                         | Yes                         | Yes                         | Yes                         | Yes                         | Yes                         | Yes                         | Yes                         |
| Year FE                | Yes                         | Yes                         | Yes                         | Yes                         | Yes                         | Yes                         | Yes                         | Yes                         |
| Adj R <sup>2</sup>     | 0.595                       | 0.560                       | 0.587                       | 0.575                       | 0.585                       | 0.545                       | 0.608                       | 0.567                       |
| N. of Obs              | 28,694                      | 30,578                      | 28,022                      | 31,250                      | 28,094                      | 31,178                      | 28,171                      | 31,101                      |

This table presents the results of the effect of voter turnout conditional upon economic policy uncertainty. Panel A examines the national news-based index of economic policy uncertainty (*EPU NATION*) and the index within a state that relates to state and local policy issues (*EPU STATE*). Panel B focuses on several categories of economic policy uncertainty, including regulation (*REG*), financial regulation (*FIN REG*), *TRADE POLICY*, and entitlement programs (*ENT PROG*). An F-test is used to compare the effect of voter turnout on the investment-to-Q sensitivity between years with higher versus lower uncertainty. County fixed effect, firm fixed effect, and year fixed effect are included. *P*-value is displayed in parentheses. See Appendix A for variable definitions. \*\*\*, \*\*, and \* indicate significance at the 1%, 5%, and 10% levels, respectively.

**Table 7. Cross-Sectional Analysis on Stock Market Participation**

|                        | <i>CAPX</i>                       |                                   |
|------------------------|-----------------------------------|-----------------------------------|
|                        | <i>STOCK PART</i>                 | <i>STOCK PART</i>                 |
|                        | <Median<br>(1)                    | >Median<br>(2)                    |
| <i>Q</i>               | -0.002***<br>(0.000)              | -0.004***<br>(0.000)              |
| <i>Q*VOTER TURNOUT</i> | <b>0.005***</b><br><b>(0.000)</b> | <b>0.010***</b><br><b>(0.000)</b> |
| F TEST                 |                                   | 7.57***<br>(0.006)                |
| <i>VOTER TURNOUT</i>   | -0.021<br>(0.389)                 | 0.025<br>(0.164)                  |
| <i>RET</i>             | -0.036***<br>(0.000)              | -0.011**<br>(0.022)               |
| <i>CF</i>              | -0.002**<br>(0.017)               | -0.003***<br>(0.000)              |
| <i>INV_AST</i>         | 0.035***<br>(0.000)               | 0.019***<br>(0.000)               |
| Intercept              | 0.122***<br>(0.000)               | 0.020<br>(0.535)                  |
| County FE              | Yes                               | Yes                               |
| Firm FE                | Yes                               | Yes                               |
| Year FE                | Yes                               | Yes                               |
| Adj R <sup>2</sup>     | 0.602                             | 0.593                             |
| N. of Obs              | 15,618                            | 15,807                            |

This table presents the results of the effect of voter turnout conditional upon household stock market participation rates in counties in which sample firms are headquartered. An F-test is used to compare the effect of voter turnout on the investment-to-Q sensitivity between firm-years with higher versus lower household stock market participation rates. County fixed effect, firm fixed effect, and year fixed effect are included. *P*-value is displayed in parentheses. \*\*\*, \*\*, and \* indicate significance at the 1%, 5%, and 10% levels, respectively.

**Table 8. Cross-Sectional Analysis on Institutional Ownership and Firm Size**

|                        | <i>CAPX</i>                       |                                    |                                   |                                    |
|------------------------|-----------------------------------|------------------------------------|-----------------------------------|------------------------------------|
|                        | <i>INST OWN</i><br><Median<br>(1) | <i>INST OWN</i><br>>Median<br>(2)  | <i>AST</i><br><Median<br>(3)      | <i>AST</i><br>>Median<br>(4)       |
| <i>Q</i>               | -0.003***<br>(0.000)              | 0.010***<br>(0.000)                | -0.003***<br>(0.000)              | 0.018***<br>(0.000)                |
| <i>Q*VOTER TURNOUT</i> | <b>0.008***</b><br><b>(0.000)</b> | <b>-0.010***</b><br><b>(0.000)</b> | <b>0.008***</b><br><b>(0.000)</b> | <b>-0.022***</b><br><b>(0.000)</b> |
| F TEST                 | 45.49***<br>(0.000)               |                                    | 105.56***<br>(0.000)              |                                    |
| <i>VOTER TURNOUT</i>   | 0.046**<br>(0.024)                | 0.023<br>(0.110)                   | 0.040**<br>(0.035)                | 0.028**<br>(0.024)                 |
| <i>RET</i>             | -0.013**<br>(0.022)               | -0.023***<br>(0.000)               | -0.021***<br>(0.000)              | -0.006<br>(0.259)                  |
| <i>CF</i>              | -0.005***<br>(0.000)              | 0.020***<br>(0.000)                | -0.004***<br>(0.000)              | 0.040***<br>(0.000)                |
| <i>INV_AST</i>         | 0.039***<br>(0.000)               | 0.470***<br>(0.000)                | 0.037***<br>(0.000)               | 0.710***<br>(0.000)                |
| Intercept              | 0.069**<br>(0.035)                | 0.016<br>(0.377)                   | 0.073**<br>(0.018)                | -0.038*<br>(0.072)                 |
| County FE              | Yes                               | Yes                                | Yes                               | Yes                                |
| Firm FE                | Yes                               | Yes                                | Yes                               | Yes                                |
| Year FE                | Yes                               | Yes                                | Yes                               | Yes                                |
| Adj R <sup>2</sup>     | 0.503                             | 0.689                              | 0.533                             | 0.663                              |
| N. of Obs              | 25,250                            | 25,250                             | 29,636                            | 29,636                             |

This table presents the results of the effect of voter turnout conditional upon firms' institutional ownership and firm size. An F-test is used to compare the effect of voter turnout on the investment-to-Q sensitivity between firm-years with higher versus lower institutional ownership, and between larger versus smaller firms. County fixed effect, firm fixed effect, and year fixed effect are included. *P*-value is displayed in parentheses. See Appendix A for variable definitions. \*\*\*, \*\*, and \* indicate significance at the 1%, 5%, and 10% levels, respectively.

**Table 9. Cross-Sectional Analysis on Regulatory Exposure**

|                                   | <i>CAPX</i>                 |                             |                             |                             |                             |                             |                             |                             |                             |                             |
|-----------------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
|                                   | <i>IRS</i>                  |                             | <i>SEC</i>                  |                             | <i>FTC</i>                  |                             | <i>EPA</i>                  |                             | <i>FCC</i>                  |                             |
|                                   | <Median<br>(1)              | >Median<br>(2)              | <Median<br>(3)              | >Median<br>(4)              | =0<br>(5)                   | >0<br>(6)                   | =0<br>(7)                   | >0<br>(8)                   | =0<br>(9)                   | >0<br>(10)                  |
| <i>Q</i>                          | -0.002**<br>(0.039)         | -0.005***<br>(0.000)        | -0.000<br>(0.957)           | -0.005***<br>(0.001)        | -0.002***<br>(0.000)        | -0.008***<br>(0.000)        | -0.003***<br>(0.000)        | -0.004***<br>(0.006)        | -0.001**<br>(0.013)         | -0.014***<br>(0.000)        |
| <b><i>Q*VOTER<br/>TURNOUT</i></b> | <b>0.008***<br/>(0.000)</b> | <b>0.017***<br/>(0.000)</b> | <b>0.007***<br/>(0.000)</b> | <b>0.013***<br/>(0.000)</b> | <b>0.010***<br/>(0.000)</b> | <b>0.019***<br/>(0.000)</b> | <b>0.010***<br/>(0.000)</b> | <b>0.025***<br/>(0.000)</b> | <b>0.008***<br/>(0.000)</b> | <b>0.037***<br/>(0.000)</b> |
| F TEST                            | 19.61***<br>(0.000)         |                             | 8.05***<br>(0.005)          |                             | 7.64***<br>(0.006)          |                             | 26.57***<br>(0.000)         |                             | 17.03***<br>(0.000)         |                             |
| <i>VOTER<br/>TURNOUT</i>          | 0.029<br>(0.111)            | -0.022<br>(0.141)           | -0.001<br>(0.922)           | -0.017<br>(0.342)           | 0.007<br>(0.571)            | -0.077**<br>(0.024)         | -0.020*<br>(0.079)          | -0.003<br>(0.914)           | 0.086<br>(0.457)            | -0.082**<br>(0.048)         |
| <i>RET</i>                        | -0.030***<br>(0.000)        | -0.014**<br>(0.018)         | -0.006<br>(0.265)           | -0.037***<br>(0.000)        | -0.027***<br>(0.000)        | 0.001<br>(0.933)            | -0.022***<br>(0.000)        | -0.047***<br>(0.000)        | -0.029***<br>(0.000)        | 0.020*<br>(0.090)           |
| <i>CF</i>                         | 0.001<br>(0.425)            | 0.008***<br>(0.000)         | 0.009***<br>(0.000)         | 0.002**<br>(0.030)          | 0.004***<br>(0.000)         | -0.003**<br>(0.037)         | 0.001<br>(0.271)            | 0.022***<br>(0.000)         | 0.004***<br>(0.000)         | -0.002<br>(0.622)           |
| <i>INV_AST</i>                    | 0.043***<br>(0.000)         | 0.076***<br>(0.000)         | 0.081***<br>(0.000)         | 0.053***<br>(0.000)         | 0.063***<br>(0.000)         | 0.065***<br>(0.000)         | 0.052***<br>(0.000)         | 0.147***<br>(0.000)         | 0.062***<br>(0.000)         | 0.064***<br>(0.007)         |
| Intercept                         | 0.076***<br>(0.002)         | 0.118***<br>(0.000)         | 0.077***<br>(0.000)         | 0.122***<br>(0.000)         | 0.081***<br>(0.001)         | 0.060**<br>(0.011)          | 0.097***<br>(0.000)         | 0.088***<br>(0.007)         | 0.080***<br>(0.001)         | 0.048*<br>(0.077)           |
| County FE                         | Yes                         | Yes                         | Yes                         | Yes                         | Yes                         | Yes                         | Yes                         | Yes                         | Yes                         | Yes                         |
| Firm FE                           | Yes                         | Yes                         | Yes                         | Yes                         | Yes                         | Yes                         | Yes                         | Yes                         | Yes                         | Yes                         |
| Year FE                           | Yes                         | Yes                         | Yes                         | Yes                         | Yes                         | Yes                         | Yes                         | Yes                         | Yes                         | Yes                         |
| Adj R <sup>2</sup>                | 0.635                       | 0.622                       | 0.626                       | 0.618                       | 0.610                       | 0.627                       | 0.584                       | 0.634                       | 0.607                       | 0.606                       |
| N. of Obs                         | 23,617                      | 23,620                      | 23,625                      | 23,612                      | 41,087                      | 6,150                       | 36,298                      | 10,939                      | 43,480                      | 3,757                       |

This table presents the results of the effect of voter turnout conditional upon regulatory exposure. Such exposure could be to the Internal Revenue Service (*IRS*), Securities and Exchange Commission (*SEC*), Federal Trade Commission (*FTC*), Environmental Protection Agency (*EPA*), or Federal Communications Commission (*FCC*). An F-test is used to compare the effect of voter turnout on the investment-to-Q sensitivity between firm-years with higher versus lower exposure. County fixed effect, firm fixed effect, and year fixed effect are included. *P*-value is displayed in parentheses. See Appendix A for variable definitions. \*\*\*, \*\*, and \* indicate significance at the 1%, 5%, and 10% levels, respectively.

**Table 10. Falsification Analysis Using Investment-to-Cash Flow Sensitivity**

|                             | <i>CAPX</i>                     | <i>CHGPPEGT</i>                 |
|-----------------------------|---------------------------------|---------------------------------|
|                             | (1)                             | (2)                             |
| <i>CF_Lag</i>               | 0.003<br>(0.340)                | 0.006<br>(0.431)                |
| <i>CF_Lag*VOTER TURNOUT</i> | <b>-0.005</b><br><b>(0.324)</b> | <b>-0.011</b><br><b>(0.386)</b> |
| <i>VOTER TURNOUT</i>        | 0.019*<br>(0.078)               | 0.020<br>(0.439)                |
| <i>RET</i>                  | -0.026***<br>(0.000)            | -0.077***<br>(0.000)            |
| <i>INV_AST</i>              | 0.054***<br>(0.000)             | 0.061***<br>(0.000)             |
| Intercept                   | 0.082***<br>(0.005)             | -0.045<br>(0.511)               |
| County FE                   | Yes                             | Yes                             |
| Firm FE                     | Yes                             | Yes                             |
| Year FE                     | Yes                             | Yes                             |
| Adj R <sup>2</sup>          | 0.548                           | 0.238                           |
| N. of Obs                   | 61,056                          | 61,056                          |

This table presents the results of the effect of voter turnout after replacing  $Q$  with lagged cash flow (*CF\_Lag*). County fixed effect, firm fixed effect, and year fixed effect are included  $P$ -value is displayed in parentheses. See Appendix A for variable definitions. \*\*\*, \*\*, and \* indicate significance at the 1%, 5%, and 10% levels, respectively.

**Table 11. Accounting for the Effects of Forecasting Price Efficiency (FPE)**

|                            | <i>CAPX</i>          | <i>CHGPPEGT</i>      | <i>CAPX</i>          | <i>CHGPPEGT</i>      | <i>CAPX</i>          | <i>CHGPPEGT</i>      |
|----------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
|                            | (1)                  | (2)                  | (3)                  | (4)                  | (5)                  | (6)                  |
| <i>Q</i>                   | -0.002***<br>(0.000) | -0.002<br>(0.122)    | 0.002<br>(0.290)     | -0.005<br>(0.344)    | -0.003***<br>(0.000) | -0.003***<br>(0.001) |
| <b><i>Q*VOTER</i></b>      | <b>0.008***</b>      | <b>0.011***</b>      | <b>0.008***</b>      | <b>0.012***</b>      | <b>0.009***</b>      | <b>0.010***</b>      |
| <b><i>TURNOUT</i></b>      | <b>(0.000)</b>       | <b>(0.000)</b>       | <b>(0.000)</b>       | <b>(0.000)</b>       | <b>(0.000)</b>       | <b>(0.000)</b>       |
| <i>VOTER TURNOUT</i>       | 0.005<br>(0.597)     | 0.013<br>(0.607)     | 0.008<br>(0.433)     | 0.018<br>(0.482)     | 0.002<br>(0.831)     | 0.005<br>(0.838)     |
| <i>RET</i>                 | -0.022***<br>(0.000) | -0.069***<br>(0.000) | -0.020***<br>(0.000) | -0.064***<br>(0.000) | -0.022***<br>(0.000) | -0.066***<br>(0.000) |
| <i>CF</i>                  | 0.001**<br>(0.016)   | -0.003**<br>(0.037)  | 0.001**<br>(0.040)   | 0.004***<br>(0.004)  | -0.003***<br>(0.000) | -0.003***<br>(0.003) |
| <i>INV_AST</i>             | 0.062***<br>(0.000)  | 0.086***<br>(0.000)  | 0.059***<br>(0.000)  | 0.090***<br>(0.000)  | 0.042***<br>(0.000)  | 0.049***<br>(0.000)  |
| <i>1-R<sup>2</sup></i>     | 0.004*<br>(0.084)    | 0.004<br>(0.449)     |                      |                      |                      |                      |
| <i>Q*(1-R<sup>2</sup>)</i> | 0.002***<br>(0.001)  | 0.003**<br>(0.022)   |                      |                      |                      |                      |
| <i>NZRET</i>               |                      |                      | 0.110***<br>(0.000)  | 0.183***<br>(0.000)  |                      |                      |
| <i>Q*NZRET</i>             |                      |                      | -0.005**<br>(0.031)  | 0.003<br>(0.549)     |                      |                      |
| <i>IND_MF</i>              |                      |                      |                      |                      | -0.001<br>(0.337)    | 0.003<br>(0.252)     |
| <i>Q*IND_MF</i>            |                      |                      |                      |                      | 0.002***<br>(0.000)  | 0.003***<br>(0.000)  |
| Intercept                  | 0.091***<br>(0.001)  | -0.054<br>(0.413)    | -0.008<br>(0.779)    | -0.206***<br>(0.003) | 0.090***<br>(0.001)  | -0.040<br>(0.549)    |
| County FE                  | Yes                  | Yes                  | Yes                  | Yes                  | Yes                  | Yes                  |
| Firm FE                    | Yes                  | Yes                  | Yes                  | Yes                  | Yes                  | Yes                  |
| Year FE                    | Yes                  | Yes                  | Yes                  | Yes                  | Yes                  | Yes                  |
| Adj R <sup>2</sup>         | 0.568                | 0.225                | 0.567                | 0.226                | 0.562                | 0.227                |
| N. of Obs                  | 58,376               | 58,376               | 58,596               | 58,596               | 59,272               | 59,272               |

This table presents the results of the effect of voter turnout conditional upon controlling for the effect of forecasting price efficiency (FPE). The effect of FPE on investment-to-Q sensitivity is measured by three empirical proxies: (1)  $1-R^2$  equals one minus the  $R^2$  from the firm-year regression of daily stock returns on value-weighted market returns; (2) *NZRET* is the percentage of trading days with non-zero returns in one year; and (3) *IND\_MF* is an indicator variable equal to one for firms issuing at least one annual EPS forecast in a year and zero otherwise. The three proxies and their interactions with *Q* are added into the main regressions. County fixed effect, firm fixed effect, and year fixed effect are included. *P*-value is displayed in parentheses. See Appendix A for variable definitions. \*\*\*, \*\*, and \* indicate significance at the 1%, 5%, and 10% levels, respectively.

**Table 12. Using Alternative Investment Measures**

|                                   | <i>Non-CAPX</i>      |                             |                             | <i>TOTAL INVEST</i>  |                             |                             |
|-----------------------------------|----------------------|-----------------------------|-----------------------------|----------------------|-----------------------------|-----------------------------|
|                                   | (1)                  | (2)                         | (3)                         | (4)                  | (5)                         | (6)                         |
| <i>Q</i>                          | 0.005***<br>(0.000)  | -0.016***<br>(0.000)        | -0.024***<br>(0.000)        | 0.009***<br>(0.000)  | -0.024***<br>(0.000)        | -0.042***<br>(0.000)        |
| <b><i>Q*VOTER<br/>TURNOUT</i></b> |                      | <b>0.043***<br/>(0.000)</b> | <b>0.061***<br/>(0.000)</b> |                      | <b>0.066***<br/>(0.000)</b> | <b>0.106***<br/>(0.000)</b> |
| <i>VOTER TURNOUT</i>              |                      | -0.058<br>(0.167)           | -0.090*<br>(0.086)          |                      | -0.091<br>(0.126)           | -0.135*<br>(0.064)          |
| <i>RET</i>                        | 0.008<br>(0.529)     | 0.013<br>(0.298)            | 0.024<br>(0.120)            | -0.052***<br>(0.005) | -0.043**<br>(0.018)         | -0.022<br>(0.309)           |
| <i>CF</i>                         | -0.046***<br>(0.000) | -0.045***<br>(0.000)        | -0.042***<br>(0.000)        | -0.121***<br>(0.000) | -0.119***<br>(0.000)        | -0.113***<br>(0.000)        |
| <i>INV_AST</i>                    | 0.245***<br>(0.000)  | 0.246***<br>(0.000)         | 0.217***<br>(0.000)         | 0.331***<br>(0.000)  | 0.332***<br>(0.000)         | 0.290***<br>(0.000)         |
| <i>GDP GROWTH</i>                 |                      |                             | 0.060*<br>(0.057)           |                      |                             | 0.096**<br>(0.030)          |
| <i>UNEMP RATE</i>                 |                      |                             | 0.000<br>(0.745)            |                      |                             | -0.001<br>(0.620)           |
| <i>HOUSEHOLD<br/>INCOME</i>       |                      |                             | -0.039**<br>(0.040)         |                      |                             | -0.045*<br>(0.086)          |
| Intercept                         | 0.054<br>(0.209)     | -0.028<br>(0.453)           | 0.377*<br>(0.067)           | 0.078<br>(0.194)     | 0.054<br>(0.306)            | 0.519*<br>(0.069)           |
| County FE                         |                      | Yes                         | Yes                         |                      | Yes                         | Yes                         |
| Firm FE                           | Yes                  | Yes                         | Yes                         | Yes                  | Yes                         | Yes                         |
| Year FE                           | Yes                  | Yes                         | Yes                         | Yes                  | Yes                         | Yes                         |
| Adj R <sup>2</sup>                | 0.549                | 0.552                       | 0.567                       | 0.466                | 0.470                       | 0.493                       |
| N. of Obs                         | 36,729               | 36,729                      | 29,139                      | 36,729               | 36,729                      | 29,139                      |

This table reports the results of the sensitivity in Column 1, and the results of the effect of voter turnout on the investment-to-Q sensitivity in columns 2 and 3. Investment is measured non-capital expenditure (*Non-CAPX*) and total investment (*TOTAL INVEST*). *Non-CAPX* equals the sum of R&D expenditure and acquisition expenditure scaled by lagged total assets. *TOTAL INVEST* equals the sum of R&D expenditure, acquisition expenditure, and capital expenditure scaled by lagged total assets. County fixed effect, firm fixed effect, and year fixed effect are included. *P*-value is displayed in parentheses. See Appendix A for variable definitions. \*\*\*, \*\*, and \* indicate significance at the 1%, 5%, and 10% levels, respectively.

**Table 13. Effect of Voter Turnout on The Sensitivity of Changes in Management Forecast Accuracy to Stock Returns**

|                           | $\Delta ACCURACY$                |
|---------------------------|----------------------------------|
| $ RETURN $                | 0.157<br>(0.506)                 |
| $ RETURN *VOTER\ TURNOUT$ | <b>0.939**</b><br><b>(0.024)</b> |
| $VOTER\ TURNOUT$          | -0.318**<br>(0.013)              |
| $HORIZON$                 | -0.007***<br>(0.000)             |
| $BM$                      | 0.242***<br>(0.000)              |
| $FIRM\ SIZE$              | 0.021***<br>(0.006)              |
| $GAP$                     | 0.002***<br>(0.000)              |
| $\#ANALYST$               | -0.015<br>(0.159)                |
| Intercept                 | -0.135<br>(0.235)                |
| County FE                 | Yes                              |
| Firm FE                   | Yes                              |
| Year FE                   | Yes                              |
| Adj R <sup>2</sup>        | 0.211                            |
| N. of Obs                 | 52,585                           |

This table reports the results of the effect of voter turnout on an alternative measure of managerial learning, i.e., the sensitivity of changes in forecast accuracy to stock returns. This sensitivity reflects how managers adjust EPS forecast accuracy for the same forecast period ( $\Delta ACCURACY$ ) in response to the absolute value of buy-and-hold returns between the two forecast announcement dates ( $|RETURN|$ ). County fixed effect, firm fixed effect, and year fixed effect are included. *P*-value is displayed in parentheses. See Appendix A for variable definitions. \*\*\*, \*\*, and \* indicate significance at the 1%, 5%, and 10% levels, respectively.

**Table 14. Effect of Voter Turnout on Investment-to-Q Sensitivity Using 2SLS**

|                           | First Stage              | Second Stage                |                             | First Stage              | Second Stage                |                             |
|---------------------------|--------------------------|-----------------------------|-----------------------------|--------------------------|-----------------------------|-----------------------------|
|                           | <i>VOTER<br/>TURNOUT</i> | <i>CAPX</i>                 | <i>CHGPPEGT</i>             | <i>VOTER<br/>TURNOUT</i> | <i>CAPX</i>                 | <i>CHGPPEGT</i>             |
|                           | (1)                      | (2)                         | (3)                         | (4)                      | (5)                         | (6)                         |
| <i>Q</i>                  |                          | -0.004***<br>(0.000)        | -0.003***<br>(0.003)        |                          | -0.009***<br>(0.000)        | -0.014***<br>(0.000)        |
| <b><i>Q*VOTER</i></b>     |                          | <b>0.009***<br/>(0.000)</b> | <b>0.010***<br/>(0.000)</b> |                          | <b>0.019***<br/>(0.000)</b> | <b>0.032***<br/>(0.000)</b> |
| <i>VOTER</i>              |                          | 0.333***<br>(0.000)         | 0.652***<br>(0.000)         |                          | -0.545***<br>(0.000)        | -0.255<br>(0.455)           |
| <i>VOTER TURNOUT_LAG</i>  | 0.241***<br>(0.000)      |                             |                             |                          |                             |                             |
| <i>RAINFALL</i>           |                          |                             |                             | -0.0005***<br>(0.000)    |                             |                             |
| <i>STOCK PART<br/>RET</i> |                          | -0.022***<br>(0.000)        | -0.056***<br>(0.000)        |                          | -0.018***<br>(0.000)        | -0.040***<br>(0.001)        |
| <i>CF</i>                 |                          | -0.002***<br>(0.000)        | -0.002<br>(0.187)           |                          | -0.005***<br>(0.000)        | -0.010***<br>(0.000)        |
| <i>INV_AST</i>            |                          | 0.036***<br>(0.000)         | 0.041***<br>(0.000)         |                          | 0.021***<br>(0.000)         | -0.024**<br>(0.013)         |
| Intercept                 | 0.455***<br>(0.000)      | -0.070**<br>(0.037)         | -0.169**<br>(0.040)         | 0.584***<br>(0.000)      | 0.425***<br>(0.000)         | 0.290<br>(0.101)            |
| County FE                 | Yes                      | Yes                         | Yes                         | Yes                      | Yes                         | Yes                         |
| Firm FE                   |                          | Yes                         | Yes                         |                          | Yes                         | Yes                         |
| Year FE                   |                          | Yes                         | Yes                         |                          | Yes                         | Yes                         |
| Adj R <sup>2</sup>        | 0.837                    | 0.573                       | 0.232                       | 0.797                    | 0.508                       | 0.199                       |
| N. of Obs                 | 15,563                   | 47,617                      | 47,617                      | 5,916                    | 21,587                      | 21,587                      |

This table presents the results of the effect of voter turnout on investment-to-Q sensitivity using two-stage least squares (2SLS). Two instrumental variables employed are lagged voter turnout (*VOTER TURNOUT\_LAG*) and precipitation on election day in each county (*RAINFALL*). Columns 1 and 4 report the first-stage regression results based on instruments and are used to predict the fitted value (*VOTER*). Columns 2, 3, 5, and 6 use *VOTER* to estimate the effect. County fixed effect, firm fixed effect, and year fixed effect are included. *P*-value is displayed in parentheses. See Appendix A for variable definitions. \*\*\*, \*\*, and \* indicate significance at the 1%, 5%, and 10% levels, respectively.

**Table 15. Effect of Voter Turnout on Investment-to-Q Sensitivity Using DID**

|  | <i>CAPX</i>                     | <i>CHGPPEGT</i>                 |
|--|---------------------------------|---------------------------------|
|  | (1)                             | (2)                             |
| <i>Q</i>                                     | -0.002<br>(0.130)               | 0.000<br>(0.955)                |
| <i>Q*VOTER TURNOUT</i>                       | 0.005*<br>(0.055)               | 0.002<br>(0.800)                |
| <i>VOTER TURNOUT</i>                         | 0.010<br>(0.786)                | 0.079<br>(0.466)                |
| <i>TREATMENT</i>                             | 0.068<br>(0.315)                | 0.147<br>(0.353)                |
| <i>POST</i>                                  | -0.026**<br>(0.041)             | -0.002<br>(0.948)               |
| <i>TREATMENT*POST</i>                        | 0.048<br>(0.340)                | 0.224<br>(0.168)                |
| <i>Q*TREATMENT</i>                           | 0.001<br>(0.882)                | 0.025<br>(0.195)                |
| <i>Q*POST</i>                                | 0.005**<br>(0.045)              | 0.003<br>(0.704)                |
| <i>Q*TREATMENT*POST</i>                      | -0.018*<br>(0.094)              | -0.050*<br>(0.093)              |
| <i>Q*VOTER TURNOUT*TREATMENT</i>             | -0.001<br>(0.925)               | -0.040<br>(0.236)               |
| <i>Q*VOTER TURNOUT*POST</i>                  | -0.008*<br>(0.053)              | -0.004<br>(0.733)               |
| <b><i>Q*VOTER TURNOUT*TREATMENT*POST</i></b> | <b>0.031*</b><br><b>(0.089)</b> | <b>0.086*</b><br><b>(0.082)</b> |
| <i>VOTER TURNOUT*TREATMENT</i>               | -0.084<br>(0.456)               | -0.329<br>(0.213)               |
| <i>VOTER TURNOUT*POST</i>                    | 0.029<br>(0.169)                | -0.049<br>(0.337)               |
| <i>VOTER TURNOUT*TREATMENT*POST</i>          | -0.073<br>(0.338)               | -0.313<br>(0.203)               |
| <i>RET</i>                                   | 0.019**<br>(0.025)              | 0.027<br>(0.147)                |
| <i>CF</i>                                    | 0.005***<br>(0.000)             | -0.002<br>(0.660)               |
| <i>INV_AST</i>                               | -0.011<br>(0.421)               | -0.036<br>(0.437)               |
| Intercept                                    | 0.093***<br>(0.000)             | 0.173***<br>(0.002)             |
| County FE                                    | Yes                             | Yes                             |
| Firm FE                                      | Yes                             | Yes                             |
| Year FE                                      | Yes                             | Yes                             |
| Adj R <sup>2</sup>                           | 0.155                           | 0.052                           |
| N. of Obs                                    | 9,948                           | 9,948                           |

This table reports the results of a difference-in-differences (DID) model examining the effect of voter turnout on investment-to-Q sensitivity, conditional on the existence of stay-at-home orders during the 2020 COVID-19 pandemic. *TREATMENT* is equal to one for firms headquartered in one of the 12 states without stay-at-home orders, and zero otherwise. *POST* is equal to one for fiscal years 2021 and 2022, and zero for 2018 and 2019. The year 2020 is omitted from the estimation. County fixed effect, firm fixed effect, and year fixed effect are included. *P*-value is displayed in parentheses. See Appendix A for variable definitions. \*\*\*, \*\*, and \* indicate significance at the 1%, 5%, and 10% levels, respectively.