

Fiscal Risk Perception: Evidence from Analyst Forecasts*

Nancy R. Xu[†] Yuxi Yang[‡] Yang You[§]

January 31, 2025

Abstract

In a stylized model with loss aversion, fiscal uncertainty, and imperfect information, we predict that analysts systematically under-forecast firm earnings linked to government contracts. Empirically, we construct a comprehensive transaction-level dataset of federal procurement contracts spanning 2009–2019. The fiscal uncertainty associated with procurement revenues stems from budgetary risks, as the federal government may modify or terminate contracts. Our findings reveal that firm-quarter procurement earnings significantly and positively predict analyst earnings surprises, with predictability intensifying during periods of heightened budgetary uncertainty (e.g., in the lead-up to debt ceiling events) and for firms with weaker bargaining power. In addition, we find that fiscal risk is priced into stock returns through earnings surprises. Overall, analysts perceive revenue dependence on fiscal spending as a source of “bad” uncertainty rather than a growth safety net.

JEL Classification: G1, E6, H5, D8

Keywords: fiscal uncertainty, procurement, analyst, earnings forecasts

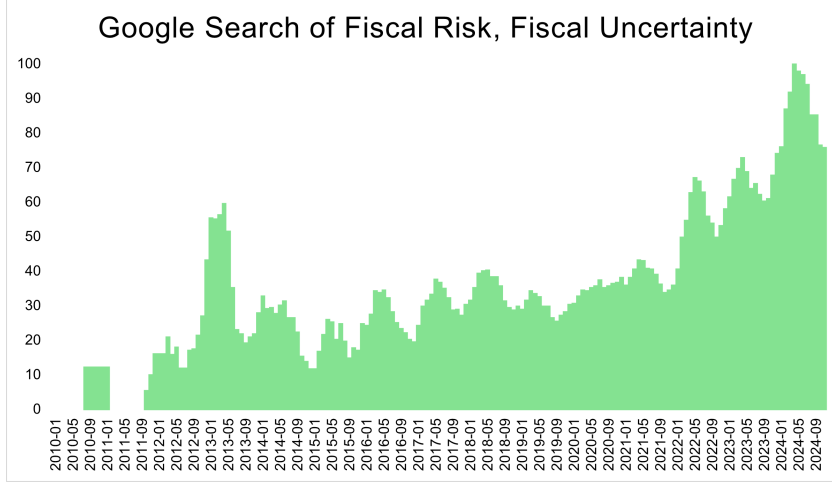
*First public draft: November 18, 2024. We would like to thank Dongho Song and Ran Duchin for early-stage discussions, and seminar and conference participants at the AEA annual meeting. We would also like to thank our excellent research assistant team: Ziming Dong, Zikang Fu, Zimin Qiu, Guangtao Wang. Nancy Xu acknowledges the financial support from Boston College Kelley Research Grant, and Yang You acknowledges the financial support from the Research Grant Council of the Hong Kong SAR, China (Project No. T35-710/20-R) and HKU Shenzhen Research Grant SZRI2023-CRF-03. All errors are our own.

[†]Seidner Department of Finance, Carroll School of Management, Boston College. nancy.xu@bc.edu.

[‡]Faculty of Business and Economics, The University of Hong Kong. yuxiyang@connect.hku.hk.

[§]Faculty of Business and Economics, The University of Hong Kong. yangyou@hku.hk.

“Current fiscal policy dysfunction,” warning that the inability of Congress and the White House to work together on budget and spending bills “creates a level of fiscal uncertainty that is damaging to the U.S. economy.” – International Monetary Fund (IMF) Managing Director Christine Lagarde, June 4, 2015; The News & Observer.



– Authors’ calculation.

1 Introduction

Fiscal uncertainty looms large — policymakers have raised concerns about it, and the general public has taken notice. However, our understanding of how market participants perceive this uncertainty remains limited, despite its potential significance to the economy and financial markets. Attempts to address this lacuna in our knowledge face major empirical challenges, including a lack of large-scale surveys or futures markets to help reveal perceptions and the nature of broad interpretations of fiscal policy.

In this paper, we focus on one major form of fiscal spending, procurement contracts, and construct a *transaction*-level dataset from 2009 to 2019 building on information from [USAspending.gov](https://www.usaspending.gov). The type of fiscal uncertainty associated with procurement transactions would come from government budgetary changes – namely, the risk that the federal government may modify or terminate contracts after they have been initially signed. We find that firm-quarter actual procurement earnings significantly and positively predict analyst earnings surprises. The predictability is stronger during periods with heightened budgetary uncertainty (i.e., during the months prior to debt limits

events) and for firms with lower bargaining power. Around the earnings announcement day, a one SD increase in procurement exposure corresponds to a 1.97% higher chance of the actual EPS beating the analyst forecast and a 9.6 basis point increase in stock return, equivalent to 8.4% per annum abnormal stock returns (over market returns). Through the lens of a rational expectation model featuring investor loss aversion, fiscal uncertainty and imprecise information, we demonstrate this predictability in a closed form solution. Analysts under-forecast firm earnings associated with fiscal uncertainty; in other words, analysts perceive government contracts as rather risky.

[USAspending.gov](https://www.usaspending.gov) is an online portal managed by the federal government to provide detailed information about government spending. For each procurement contract, federal agencies are mandated to report every transaction and its obligated amount, representing the funds committed by the federal government to the recipient (firm). Our two independent scraping exercises (10/1/2023-1/18/2024 and 8/8/2024-11/5/2024) demonstrate that most of the government agencies release transactions in a timely (but not immediate) manner, within 30-40 days after the transaction date, except for Department of Defense, which has a 90-day delay mandate for security reasons. Transaction-level data becomes available in 2008 and becomes reliable following the global financial crisis. As a result, our main sample period covers June 2009 to December 2019. Given our empirical design, we focus on a group of firms for which procurement contracts should matter, specifically those that have a positive obligated transaction amount for more than half of our sample period. After we incorporate financial and I/B/E/S databases, our final sample includes 474 firms and 19,027 firm-fiscal quarters. As expected, manufacturing, information and utility industries are well-represented, while industries related to retail trades, hotels and arts and entertainment are not.

To align with our model's predictions and variable constructs, our first firm-quarter dependent variable is a simple earnings surprise dummy, "Beat," which equals one if the firm's actual earnings per share (EPS) are greater than the I/B/E/S consensus

forecast median immediately prior to the announcement. We also use two standardized unexpected earnings (SUE) measures scaled by analyst disagreement or price (e.g., [Froot, Kang, Ozik, and Sadka \(2017\)](#)). The predictor capturing procurement or fiscal exposure is measured as the total transaction obligated amount for each firm-fiscal quarter, scaled by average revenue over the past 4 quarters. Various robustness variables are also considered. This exposure can be quite sizable; for instance, the procurement exposure of the construction industry averages approximately 7% during the sample period, and that of an individual firm can be as high as 32%.

We find that actual procurement exposure during the current quarter significantly and positively predicts earnings surprises on the earnings announcement day, with results significant at the 1% level. In terms of economic magnitude, a one standard deviation (SD) increase in fiscal dependence predicts an around 1.97% higher chance of the actual EPS beating the analyst forecast and a 0.2 SD increase in standardized earnings surprises. It is important to note that the predictability mostly comes from (within industry) across firm variation. Additionally, we do not find evidence of analysts exhibiting learning patterns over time. This is the first indication from our empirical exercise of a risk-based explanation.

Three additional tests are particularly noteworthy. First, our results remain robust excluding all Department of Defense (DoD)-related transactions. As previously noted, these transactions are subject to a 90-day reporting delay mandated for public disclosure. The fact that our results – both statistically and economically – remain largely unchanged with or without DoD transactions suggests that an explanation based on a lack of publicly available information is less likely to be a primary driver. We rationalize both channels in our theoretical model. Second, our results are robust at the pure intensive margin, i.e., firm-quarters with strictly positive transactions. The predictability remains significant and strong leading into late 2015, peaking again in late 2017 and 2019. This pattern is economically meaningful, as it aligns with several major episodes of fiscal uncertainty in recent history: the “Fiscal Cliff” of 2013–2014

and the series of debt limit suspensions required by Congress in late 2017 and late 2019. This serves as our second indication of a risk-based explanation, which informs the mechanism analysis presented next.

We next present evidence supporting fiscal uncertainty as a mechanism. We construct empirical proxies for fiscal uncertainty state variables from two dimensions. First, we use debt limit events to identify a time-series “macro” fiscal uncertainty proxy that should capture specifically government budgetary uncertainty (i.e., higher uncertainty during the months prior to the debt limit events). In particular, we create a debt limit dummy variable and use an *EPU* variable that is attributed to uncertainty mentions around the debt ceiling context from newspapers ([Baker, Bloom, and Davis \(2016\)](#)). In a validation exercise, we show that the latter indeed increases significantly in the months prior to debt limit events. Second, we closely follow [Brogaard, Denes, and Duchin \(2021\)](#) and construct proxies for firm bargaining power with the government to identify a cross-firm “micro” fiscal uncertainty proxy (i.e., there is greater cash flow uncertainty for firms with lower bargaining power). In particular, our renegotiation index is an average of three indicators (as documented in [Brogaard, Denes, and Duchin \(2021\)](#)) of bargaining power: chances of increased contract amounts, chances of increased contract lengths, and chances of weaker monitoring. Consistent with our model prediction, we find robust results that predictability increases significantly with fiscal uncertainty, both in the cross section and over time.

In the last part of the paper, we discuss stock market implications and examine empirical possibilities for alternative mechanisms that are conceptualized in our model. We project a log three-day cumulative abnormal return (in excess of value-weighted market returns) from a [-1 day, 1 day] window around the earnings announcement day on our procurement exposure variable, and find significant and positive coefficients. A one SD increase in procurement exposure predicts a 9.6 basis point increase over the [-1, 1] window around the earnings announcement day, which translates to an 8.4% per annum stock abnormal returns. Importantly, with stock returns, we are able to

examine whether predictability also appears on non-announcement days. We find that procurement exposures explain stock returns significantly only during the earnings announcement period. This is an economically important finding because it shows that fiscal risk is priced into stock returns through earnings surprises.

Our rational expectations model predicts that predictability decreases with greater information timeliness and precision. While testing this mechanism is challenging due to the lack of real-time posting data, our scraping exercises suggest that major disclosure delays are unlikely the main channel. An event study of the 1,000 largest firm-quarter transactions shows no significant reduction in predictability when earnings are announced the following quarter. Additionally, a textual analysis of earnings call transcripts reveals that variation in analyst attention to procurement does not significantly explain the predictability.

Related Literature

Our research contributes to three strands of research. First, there is scant research on how market participants form their expectations of fiscal policy – in particular, how they perceive fiscal risk – in the finance and economics literature. Among them, [Bianchi, Gómez-Cram, and Kung \(2024\)](#) and [Xu and You \(forthcoming\)](#) are two recent empirical papers that use various identification strategies (i.e., the timing of tweets by members of Congress and the arrivals of exogenous events such as macroeconomic announcements, respectively). Both document that stock market investors are actively forming expectations about future fiscal policies, with sizable implications in the stock market. Our paper joins this ongoing effort and is among the first to study how one important group of market participants – analysts – perceive fiscal risk. Our use of actual procurement data and wide firm-quarter coverage brings a comprehensive perspective. We find that analysts believe that fiscal uncertainty transmits to the private sector through procurement contracts, which is a new empirical fact to the

literature.

Second, our paper contributes to a large group of papers exploring the economics of procurement contracts. Among the many influential works in the public finance and industrial organization literature, [Klemperer \(2004\)](#) discusses how auction design influences bidder behavior and procurement efficiency; [Bajari, McMillan, and Tadelis \(2009\)](#) compare competitive bidding with negotiation in procurement; [Søreide \(2002\)](#) reviews strategies to mitigate corruption in procurement; and [Gereffi, Humphrey, and Sturgeon \(2005\)](#) examine the working of procurement contracts in global value chains. We contribute to this literature from the perspective of financial economists and demonstrate how procurement contracts are vehicles for fiscal uncertainty to enter the financial markets – forecasts and, importantly, asset prices. Overall, our main finding highlights the notion that the government can serve as a source of risk for the financial market, rather than solely acting as a safety net as suggested by traditional models.

Third, we contribute to the extensive literature on earnings surprises. Among these works, [Froot, Kang, Ozik, and Sadka \(2017\)](#) is especially relevant to our research. They track actual sales (real-time consumer activity data) during the quarter and find that their within-quarter sales measure is highly predictive of earnings surprises. Their channel focuses on private or delayed information flows from managers to analysts and the public. While our study shares a similar predictive specification framework, it differs fundamentally in its economic focus. We investigate government contracts as a key component of accrual earnings and uniquely emphasize a risk-based mechanism. Additionally, we formalize our main findings and mechanism within a rational expectations model that yields a closed-form solution.

In the remainder of the paper, [Section 2](#) provides a conceptual framework and model prediction in a simplified world with investor loss aversion, fiscal uncertainty and imprecise information. [Section 3](#) discusses data. [Sections 4](#) and [5](#) present the main predictability and mechanism evidence, respectively. [Section 6](#) presents return

implications and examines alternative mechanisms. Concluding remarks are included in Section 7.

2 Conceptual Framework

We consider a stylized model of analyst expectations formation, featuring investor loss aversion, fiscal uncertainty and imperfect information.¹ Detailed proofs are relegated to Appendix A. We set up the minimization problem as follows. We drop firm indicator i for simplicity. Firm actual earnings from time $t-2$ to $t-1$ (i.e., $(t-2, t-1]$) are announced at time t , and we denote it as X_t . Analysts form earnings forecasts at time $t-1$ (without loss of generality) to be compared with actual earnings X_t announced at time t ; we denote earnings forecast as $X_{t(t-1)}^F$, or X_t^F for simplicity. We next assume that buy-side investors are loss averse and they follow sell-side analysts' recommendations. As a result, analysts will be penalized more if their forecasts turn out to be higher than the actual value. To summarize, analysts choose forecast value X_t^F by solving the following minimization problem:

$$\min_{X_t^F} \mathbb{E}_{t-1} \left[(X_t - X_t^F)^2 + \lambda \cdot \mathbf{1}_{X_t^F > X_t} \cdot \frac{48(X_t^F - X_t)^2}{(X_t^F - \min(X_t))^2} \right], \quad (1)$$

where $\lambda (> 1)$ captures the loss aversion of investors. $\frac{48}{(X_t^F - \min(X_t))^2}$ is the scaling parameter in order to obtain a closed-form solution under uniform-distributed shock assumptions. $X_t - X_t^F$ denotes the earnings surprise, and we explain data generating process of X_t next.

¹Imperfect information could represent imprecise information when it arrives or delayed information. Both mechanisms are often modeled differently in the information literature. However, since they would result in the same model implication in our framework, our model is oblivious of exact channel that results in imperfect information.

2.1 The data generating process of X_t

The actual earnings of period $(t-2, t-1]$ announced at time t , X_t , is a flow variable that consists of two components: earnings made from retail sales, R_t , and earnings made from existing procurement contract transactions, κG_t :

$$X_t = R_t + \kappa G_t, \quad (2)$$

where κ measures the fiscal dependence of the firm.² In the longer term, $\frac{\kappa \bar{G}}{\bar{R} + \kappa \bar{G}}$ corresponds to fiscal dependence, which is the measure we construct in our empirical section.

We assume that analysts can collect sufficient information about retail sales and form rational expectations about R_t with uncertainty following a uniform distribution,

$$R_t = \bar{R} + \eta_t, \text{ where } \eta_t \sim U(-1, 1). \quad (3)$$

For government spending, we assume that G_t has three components: G_{t-1} , government spending during period $(t-3, t-2]$ known at time $t-1$; D_{t-1} , information about government spending deviations from G_{t-1} during period $(t-2, t-1]$ that analysts are able to observe during period $(t-2, t-1]$; and ϵ_t , an error term that introduces fiscal uncertainty, and is core to our theory:

$$G_t = G_{t-1} + D_{t-1} + \epsilon_t, \text{ where } \epsilon_t \sim U\left(-\frac{\phi}{K}, \frac{\phi}{K}\right). \quad (4)$$

Parameter $\phi > 0$ reflects the procurement revenue risk (relative to retail revenue risk as we normalize retail uncertainty above). Intuitively, higher ϕ indicates higher fiscal uncertainty. To understand it more concretely, the federal government could change contracts such as decreasing promised payment amounts. In fact, we find that

² X_t , R_t and κ would have a superscript i .

promised payment amounts decrease statistically significantly during high budgetary uncertainty periods (see Appendix Table A1). This finding is unlikely explained by firm-specific characteristics because firms should want to negotiate payment increases (rather than decreases).³ Next, parameter $K > 0$ controls for how precisely and timely the spending deviation D_{t-1} becomes known to analysts. As K goes to ∞ , analysts know precise and full information. Empirically, K could be measured by posting delay of this information or analyst attention. Lastly, we assume $E(D_{t-1}) = 0$ and denote $E(G_t) = \bar{G}$. Shocks η_t and ϵ_t i.i.d. from each other.

2.2 Model solution and testable predictions

After substituting the X_t process in the objection function (1) and applying the rules of integrals, our minimization problem can be simplified in closed form as:

$$\min_{X_t^F} \left[(\bar{R} + \kappa G_{t-1} + \kappa D_{t-1} - X_t^F)^2 + \frac{1}{3} \left(1 + \frac{\kappa^2 \phi^2}{K^2} \right) + \lambda \cdot \frac{\left(X_t^F - \bar{R} - \kappa G_{t-1} - \kappa D_{t-1} + \frac{\kappa \phi}{K} + 1 \right)^2}{\frac{\kappa \phi}{K}} \right]. \quad (5)$$

The first-order condition is obtained by differentiating this with respect to X_t^F :

$$X_t^F = \frac{(\kappa G_{t-1} + \kappa D_{t-1} + \bar{R})(2 + \lambda/(\kappa \phi/K)) - \frac{\lambda(\kappa \phi/K + 1)}{\kappa \phi/K}}{2 + \lambda/(\kappa \phi/K)}. \quad (6)$$

³We formally explain our empirical sample later starting Section 4; what is useful to mention here is to learn that almost 30% of all government contracts show some patterns of revisions (i.e., amount, time needed, monitoring force) after a government contract is signed. In a more concrete example, the DoD canceled several large-scale programs such as the Army's Ground Combat Vehicle (GCV) program in 2014 due to funding constraints and shifting priorities within a reduced defense budget. Lockheed Martin (NYSE: LMT), a major U.S. defense contractor, was immediately impacted, among many other.

The expected earnings surprise, $\text{Surprise}_t(\kappa, \lambda, \phi, K)$, can be derived in closed form:

$$\text{Surprise}_t(\kappa, \lambda, \phi, K) = \bar{R} + \kappa G_{t-1} + \kappa D_{t-1} - X_t^F, \quad (7)$$

$$= \frac{\lambda(1 + \kappa\phi/K)}{\lambda + \kappa\phi/K} > 0. \quad (8)$$

Prediction 1: *Under reasonable parameter assumptions (i.e., $\kappa, \phi, K > 0$ and $\lambda > 1$), it is always optimal for analysts to underestimate earnings.*

Next, we produce three testable predictions that guide our empirical baseline and interaction analyses. In a stylized world with loss aversion $\lambda > 1$, non-zero fiscal uncertainty $\phi \neq 0$ and non-perfect information arrivals $K \neq \infty$, there is a clear implication of the relationship between fiscal dependence κ and earnings surprises. The derivative of $\text{Surprise}_t(\kappa, \lambda, \phi, K)$ with respect to κ , $\frac{\partial \text{Surprise}}{\partial \kappa}$, has a closed-form solution that is strictly positive:

$$\frac{\partial \text{Surprise}(\kappa, \lambda, \phi, K)}{\partial \kappa} = \frac{\lambda(\lambda - 1)\phi/K}{(\lambda + \kappa\phi/K)^2} > 0. \quad (9)$$

Prediction 2: *Under reasonable parameter assumptions, earnings surprises monotonically increase with firm fiscal exposure κ .*

Intuitively, when there is imprecise or delayed information ($K \neq \infty$), analysts choose to under-forecast more greatly the earnings of a firm with greater exposure to fiscal budgetary risk, leading to a more positive earnings surprise. This is consistent with several influential papers in the accounting literature that discuss the relationship between analyst forecast accuracy and uncertainty (see e.g. [Moffat \(1988\)](#), [Gong, Li, and Wang \(2011\)](#), [You and Zhang \(2009\)](#), [Bonsall IV, Green, and Muller III \(2020\)](#) among others). Our model differs by introducing fiscal uncertainty.

In addition, the relationship in Equation (9) should also in a general case increase

with fiscal budgetary uncertainty ϕ . This generates an important testable prediction for our empirical analysis. Specifically, the quotient rule can be solved as follows:

$$\frac{\partial \text{Surprise}(\kappa, \lambda, \phi, K)}{\partial \kappa \partial \phi} = \frac{\frac{\lambda(\lambda-1)}{K}(\lambda + \kappa\phi/K) \left[\lambda - \frac{\phi\kappa}{K}\right]}{(\lambda + \kappa\phi/K)^4} > 0, \text{ if } \lambda > \frac{\phi\kappa}{K}. \quad (10)$$

The denominator, $\frac{\lambda(\lambda-1)}{K}$, and $(\lambda + \kappa\phi/K)$ are always positive. When λ (loss aversion) is sufficiently large relative to $\phi\kappa/K$ (which can be interpreted as scaled fiscal uncertainty), the predictability of fiscal exposure to earnings surprises should increase with fiscal uncertainty ϕ . This is likely the case as empirically κ typically is < 0.1 (i.e., a small κ) and we observe timely but not perfect transaction data postings (i.e., a large K). We provide empirical evidence later.

One side product of this optimization is the implication with parameter K , timeliness and precision of information: $\frac{\partial \text{Surprise}(\kappa, \lambda, \phi, K)}{\partial \kappa \partial K} = \frac{-\frac{\lambda(\lambda-1)\phi}{K^2}(\lambda + \kappa\phi/K)(\lambda - \frac{\kappa\phi}{K})}{(\lambda + \kappa\phi/K)^4} < 0$, if $\lambda > \frac{\phi\kappa}{K}$. Intuitively, the predictability of fiscal exposure on earnings surprises should decrease with information precision and timeliness K .

Predictions 3 & 4: *Under reasonable parameter assumptions, the predictability of fiscal exposure to earnings surprises should **increase** with fiscal uncertainty (Prediction 3) and **decrease** with information precision and timeliness (Prediction 4).*

Predictions 1-3 are tested and examined in Sections 3-5, which constitute our main results. Prediction 4 is discussed in Section 6 as alternative mechanisms.

3 Data and Summary Statistics

3.1 A transaction-level procurement contract database

Before 2020, government spending to firms primarily took the form of procurement contracts. For example, in fiscal year 2019, total discretionary government spending amounted to approximately \$1.3 trillion, with \$586 billion allocated to procurement-related expenditures. The remainder of discretionary spending included operational costs, grants, and subsidies that did not involve procurement contracts.⁴ In this section, we explain how we obtain and use a transaction-level procurement contract database in our research.

Our analysis begins with downloading the complete archival data from [USAspending.gov](https://www.usaspending.gov), a federal government portal that offers comprehensive and detailed records of government expenditures.⁵ The archival data is provided at the transaction level. By law, federal agencies are required to report each accrual transaction in a timely manner, typically within days or weeks. However, the Department of Defense (DoD) is permitted a 90-day delay in publishing its expenditures, citing national security concerns. Each transaction record includes details such as firm information, the date, and the obligated amount, which represents the funds committed by the federal government to the recipient for accrued services and products. For our research, we aggregate those obligated amounts to the firm-fiscal quarter level.

Next, we evaluate the data coverage on [USAspending.gov](https://www.usaspending.gov) and find that transaction-level data becomes sparsely available starting in 2008 but gains reliability following the Global Financial Crisis (GFC).⁶ As a result, our main sample period spans from

⁴According to Figure 7 in [Xu and You \(forthcoming\)](#), which is also based on data from [USAspending.gov](https://www.usaspending.gov), economic stimulus was the primary form of government spending during 2020 and 2021, accounting for approximately 68% of the total annual government spending. From 2010 to 2019, economic stimulus accounted for a nearly negligible fraction of annual government spending.

⁵Here is the link for accessing the archival data: https://www.usaspending.gov/download_center/award_data_archive. This archival dataset is maintained and updated by [USAspending.gov](https://www.usaspending.gov) on a monthly basis.

⁶Specifically, we compare the total procurement spending amount replicated from this website

June 2009 to December 2019. We detail our firm sample after introducing our financial variables later. To the best of our knowledge, we are among the first in the finance and economics literature to utilize the comprehensive transaction-level data provided by [USAspending.gov](https://www.usaspending.gov).

This website also provides contract-level – or what it refers to as “award-level” – information, including details such as award agency, start date, potential end date, contract type, revision history and so on. We obtain and merge this information into our analysis as well. It is noteworthy that [Brogaard, Denes, and Duchin \(2021\)](#) are among the first to systematically examine patterns in these contracts using the same data source, and we are able to replicate their main summary statistics in an overlapped sample (2009-2012). We relegate more details about to Internet Appendix [IA.1](#).

3.2 100-day scraping exercises: Measuring information delays

The publication schedules of actual transactions on this platform could have profound implications for predictability, according to our model. To assess this plausibility, we conducted two extensive scraping exercises aimed at quantifying the typical delay between the *actual* transaction date and the *posting* date. Our strategy is to capture real-time transaction posts on the website that have not entered the archival data.⁷ Transactions obtained through the API interface that are not present in the most recent updated archival dataset represent incremental transactions since the last update. For each incremental transaction, we calculate an “entry delay days” variable that equals the number of days between the date the transaction is retrieved from the API endpoint and its actual action date (which is provided in the entry). Given that our question is whether information becomes available before the announcement day

with headline numbers reported by the federal government.

⁷On the technical front, we find that [USAspending.gov](https://www.usaspending.gov) provides multiple API endpoints for accessing more timely data. We mainly utilize two of them to download real-time updated award information (https://api.usaspending.gov/api/v2/search/spending_by_award/) and real-time updated historical transaction data related to specific parent awards (<https://api.usaspending.gov/api/v2/transactions/>).

after quarter ends, we conduct daily scraping for a total of around 100 days, which is just a bit longer than 3 months.

We conducted two independent scraping exercises (October 1, 2023, to January 18, 2024, and August 8, 2024, to November 5, 2024). As shown in Figure A1 in the Appendix, the results are consistent across both exercises. Most agencies – except for the DoD, which has a special 90-day delay mandate as mentioned above – publish their transactions quite quickly, typically within 30 to 40 calendar days of the transaction date. Even if the last transaction occurs on the final day of the fiscal quarter, it should generally become publicly available before earnings announcement days, as announcements typically occur at around 40 days for most public companies (Form 10-Q). This finding underscores the importance of conducting robustness tests both with and without the inclusion of DoD data in our analysis.

3.3 Financial datasets

Building on the full procurement transaction database that we construct above, we first only consider firms that have positive obligated amounts in more than half of the quarters during our sample period (2009/06-2019/12). This allows us to focus on a group of firms for which procurement contracts should matter. We also exclude firms classified under NAICS code 54 *Professional, Scientific, and Technical Services*, as these firms exhibit consistently higher and significantly persistent dependence on government procurement contracts, primarily due to the high-tech, scientific and mostly non-profit nature of their services and products.⁸

Finally, we use the standard treatments when merging firm-time earnings forecasts and stock variables. Specifically, we further focus on firm-quarters with common shares traded on NYSE, AMEX or NASDAQ, with at least one analyst forecast according

⁸For example, Leidos, which provides IT and cybersecurity solutions to federal agencies; Booz Allen Hamilton, a firm known for its work with the U.S. government, especially in defense and cybersecurity consulting; AECOM, which works on major public works projects; and RAND Corporation, a nonprofit that undertakes research for policy and decision-making, often funded by government grants and contracts.

to I/B/E/S, and with quarterly revenue greater than zero. These ensures that our variable constructions are meaningful. All other financial data (such as market capitalization, book-to-market, daily returns and so on) are sourced from CRSP. Our final sample includes 474 firms and 19,027 firm-fiscal quarters.

3.4 Main variables and summary statistics

At the firm-quarter level $\{i, t\}$, our first dependent variable is a simple earnings surprise dummy, “Beat $_{i,t}$,” which equals one if the firm’s actual earnings per share (EPS) exceed the I/B/E/S consensus forecast median immediately prior to the announcement. This variable is particularly well-suited to our research objective because it is not influenced by standardization methods or scaling choices, which is an ongoing area of debate, and is popularly used by industry professionals and investors. We also construct two standardized unexpected earnings (SUE) measures. The first measure SUE $_{1,i,t}$ is constructed as earnings surprises (actual EPS minus the forecast median), divided by analyst disagreement.⁹ The second measure, SUE $_{2,i,t}$, is the same measure as in a recent article, [Froot, Kang, Ozik, and Sadka \(2017\)](#), and is constructed as earnings surprises (actual EPS minus the forecast mean) divided by the quarter-end stock price. We consider all three measures in all analyses of the paper and more robustness in the appendix (see Table [IB.4](#)).

Table [A2](#), Panels A and B, presents summary statistics for these main variables at both the panel and cross-firm levels. There is a 66% chance we observe a Beat, which is statistically and significantly higher than 50% ($p\text{-value}=0.00$). This finding indicates that analysts under-forecast more on average, consistent with the literature and our theoretical *Prediction 1*. In economic terms, the actual EPS is on average 1.2 SD higher than the forecast median.

⁹Specifically, analyst disagreement is proxied by the standard deviation (SD) of analyst forecasts from this and the last quarter. We choose to use two quarters because the number of forecasts within one quarter could be too small for standard deviation calculation. Nevertheless, results are not sensitive to this empirical choice.

Another key variable is “Procurement $_{i,t}$,” constructed as the total transaction obligated amount scaled by the average quarterly revenues over the past four quarters (including the current quarter). This size adjustment accounts for the well-documented positive relationship between firm size and earnings surprises (see, e.g., [Loughran and McDonald \(2011\)](#) among many others). The measure therefore can be interpreted as how much of a firm-quarter’s revenue is contributed by procurement earnings, conceptually aligning with κ in our theoretical framework (Section 2). For the average firm-quarter during our sample period, this fiscal exposure is approximately 2%, though it can reach as high as 50% in certain cases.

Figure 1 illustrates our final firm sample at the NAICS-2 digit industry level, highlighting three information: the total number of firms (indicated by numbers atop the bars), average procurement exposure (represented by the bars), and average total market capitalization (depicted by the line). Of the 474 firms in our sample, the manufacturing industry (NAICS=33) – mostly heavier and more complex manufacturing such as metals, machinery, electronics, and transportation equipment – accounts for 171 firms. Information and utility industries are also well-represented, while industries related to retail trade – hotels or the arts and entertainment – are basically not in our final firm sample. The construction industry exhibits the highest average procurement exposure, with procurement earnings constituting approximately 7% of revenues across all quarters in our sample period, and exceeding 10% for the top 25% of firm-quarters in the sample (see Figure [IB.1](#) in the Internet Appendix).

Additionally, significant within-industry variation exists, which turns out to be a key source of variation to our empirical tests later. Finally, there is a near zero correlation between our industry procurement exposure measure and stock market capitalization (firm size), which confirms that our findings are not driven by the firm size.

[Insert Figure 1 here]

4 Predictability Results

Assuming loss aversion and government budgetary uncertainty, our closed-form model solution in Section 2 predicts that analysts are more likely to under-forecast earnings for firm-quarters with greater fiscal risk exposure, as stated in our primary prediction *Prediction 2*. We use a firm’s share of procurement-based incomes relative to its total revenue, $\text{Procurement}_{i,t}$, as the empirical proxy for fiscal risk exposure. Section 4.1 presents the main predictive results, while Sections 4.2 and 4.3 provide robustness checks and additional evidence. Section 5 explores the fiscal uncertainty mechanism, under the guidance of other model predictions.

4.1 Main results

The main specification at the firm-fiscal quarter level is as follows:

$$\text{Beat}_{i,t} = \gamma_t \times \alpha_{d(i)} + \beta \text{Procurement}_{i,t} + \boldsymbol{\delta} \mathbf{X}_{i,t} + \varepsilon_{i,t}, \quad (11)$$

where i denotes a firm and t denotes a quarter. $\text{Beat}_{i,t}$ and $\text{Procurement}_{i,t}$, measuring earnings surprises and procurement risk exposures, are both discussed in detail in Section 3.4. $\mathbf{X}_{i,t}$ represents a set of control variables commonly used in the literature (see, e.g., Loughran and McDonald (2011), Akbas (2016), Akbas, Jiang, and Koch (2020)); they are market capitalization, book-to-market, past returns during the [-61 days,-12 days] and [-6,-2] windows prior to the earnings announcement day, idiosyncratic volatilities calculated over the [-11,-2] and [-61,-12] windows, and the last earnings surprise. Detailed descriptions of these variables are provided in the appendix. $\gamma_t \times \alpha_{d(i)}$ indicates industry-quarter fixed effects, where $d(i)$ indicates firm i ’s industry classification based on NAICS two-digit codes. β is the coefficient of interest.

Table 1 reports the regression results. Columns (1)-(5) are at the firm-quarter level and Column (6) collapses the data to the industry-quarter level; the columns

are designed to help isolate the source of variations. At the firm-quarter level, the coefficient of procurement exposure is significantly and statistically positive at mostly the 1% level, even after controlling for industry, quarter, or industry-quarter fixed effects. At the industry-quarter level, as shown in Column (6), the coefficient retains the expected sign but is statistically weaker. Panel B, which includes control variables, demonstrates consistent results that are slightly stronger both economically and statistically. In addition, a specification with firm and quarter fixed effects and control variables generates a positive but borderline significant coefficient ($t=1.66$).

Overall, firms' procurement transactions are strong predictors of earnings surprises, particularly in explaining variation *across firms*. In terms of economic magnitude, a one standard deviation (SD) increase in the fiscal dependence predicts an around 1.97% higher chance of the actual EPS beating the analyst forecast consensus. The variation explained by procurement exposure is notably persistent. This result suggests that analysts constantly under-forecast procurement-related income, and our tests reveal no evidence of learning; specifically, there is no significant negative coefficient when last quarter's procurement exposure is included as a predictor. This is our first indication for a risk-based explanation.¹⁰

[Insert Table 1 here]

4.2 Robustness

We next conduct a series of robustness tests using the same panel specification. To conserve space, Table 2 reports the relevant coefficient estimates for β . Columns (4)–(6) present results with control variables, while Columns (1)–(3) present results without controls.

In Panel A, we consider three alternative fiscal exposure measures: the logarithm of total obligated amounts, and the obligated amount scaled by average quarterly

¹⁰We discuss possible mechanisms as our model implies (i.e., fiscal uncertainty, attention, delay information) in Sections 5 and 6.

revenues from the past two quarters, or that scaled by the stock market cap at the end of the quarter. Notably, the first measure does not control for size effects; the literature has shown that size significantly and positively predicts earnings surprises (see, e.g., [Loughran and McDonald \(2011\)](#) among many others). Regardless, all alternative measures yield highly robust results with statistically significant positive coefficients.

In Panel B, we focus on predictability along the intensive margin by including only firms with active transaction obligated amounts in every quarter of our sample period (2009/Q2–2019/Q4). The results remain highly robust in terms of both economic and statistical significance. The economic magnitude of the coefficients decreases slightly compared to Table 1, suggesting that the extensive margin—comparing firms with inactive transactions to those with year-round active transactions—also contributes to our main findings.

Panel C excludes all transactions sponsored by the Department of Defense before creating the procurement exposure variable. The DoD accounts for 2.23 million out of 10.78 million numbers of contracts and 416.06 billion out of 1.84 trillion dollar amounts during our sample period. This robustness test is motivated by Section 3.2, which confirms the DoD’s mandate to delay information release by 90 days. The results indicate that our findings are not driven by the DoD.

Finally, while the $\text{Beat}_{i,t}$ measure is not sensitive to size and scaling choices, we also examine two continuous SUE measures, $\text{SUE}_{1,i,t}$ and $\text{SUE}_{2,i,t}$, as introduced in Section 3.4. As mentioned before, SUE_1 normalizes earnings surprises using analyst disagreement, while SUE_2 uses stock prices. In Panel D, this β estimate is reported as 2.6074*** ($SE=0.9151$).¹¹ In terms of economic magnitude, a one standard deviation increase in procurement earnings leads to a 0.2 SD increase in earnings surprises. This is economically sizable as the average magnitude of SUE_1 in our sample is 1.26 SD, and procurement earnings account for 16% of it. The second measure, $\text{SUE}_{2,i,t}$, is based on

¹¹The predictive coefficient is 2.2821** ($SE=1.0813$) when the denominator of analyst disagreement is constructed using only the same quarter, excluding firm-quarters with a single forecast. This result is consistent with the findings reported in Panel D.

the methodology of [Froot, Kang, Ozik, and Sadka \(2017\)](#), using the quarter-end stock price as the denominator. The results remain robust and statistically significant.

[Insert Table 2 here]

4.3 Additional evidence

We provide two additional pieces of evidence: one confirming robust results at the cross-firm level and another exploring time variation in the main coefficient. First, we aggregate the firm-quarter data to the firm level and estimate the predictive coefficient. Table 3 reports significant and positive coefficients at the 1%-5% significance level across all specifications, except for Column (5), which excludes industry fixed effects. The economic magnitude is comparable to the panel analysis, as expected, since the predictability of procurement earnings for earnings surprises is strongest at the cross-firm margin (see Section 4.1), even after accounting for industry-quarter fixed effects.

[Insert Table 3 here]

Figure 2 uses a rolling eight-quarter window to examine potential time variation in the predictive coefficient β (using the most restrictive fixed effect specification with control variables). The predictability is notably strong and significant leading into late 2015, with peaks observed again in late 2017 and late 2019. This pattern highlights interesting and potentially economically meaningful time variation, aligning with several major fiscal uncertainty episodes in recent history: the “Fiscal Cliff” during 2013-2014 and the sequence of debt limit suspensions needed in Congress in late 2017 and late 2019.

[Insert Figure 2 here]

5 Fiscal Uncertainty

Our theoretical *Prediction 3* indicates that predictability should increase with budgetary uncertainty, consistent with a risk-based explanation. Budgetary uncertainty can vary over time for all firms, which is intuitive. Additionally, budgetary uncertainty and its impact can vary across firms, even when exposed to the same level of aggregate fiscal risk, due to differences in firm bargaining power with the federal government. To capture these distinct concepts, we construct and examine two empirical proxies for budgetary uncertainty, at varying levels of granularity.

In Section 5.1, we build on Brogaard, Denes, and Duchin (2021) to develop a firm-level (micro) fiscal uncertainty proxy that reflects the renegotiation and bargaining power of firms with the federal government. It should capture the government budgetary uncertainty that is *effective* to them, as firms with a higher renegotiation index – elicited from actual contract-level records – exhibit greater bargaining power and, consequently, lower procurement-based cash flow uncertainty. In Section 5.2, we construct a time-series (macro) fiscal uncertainty proxy that specifically captures budgetary uncertainty. For identification, periods characterized by heightened debt limit debates as indicators of increased budgetary uncertainty.

5.1 Micro uncertainty

Bajari and Tadelis (2001), in their influential work, argue that firms still face uncertainty about ex post adaptations after a procurement contract is signed. These uncertainties arise from factors on both the firm’s side (e.g., design failures, unexpected site or environmental conditions) and the federal government’s side (e.g., regulatory changes, budgetary risks). In a study more directly relevant to our work, Brogaard, Denes, and Duchin (2021) analyze historical patterns in procurement contracts¹² and find that successful contract renegotiation signals a firm’s strong bargaining power

¹²The authors also use [USAspending.gov](https://www.usaspending.gov) as their data source.

and political connectedness with the federal government. In line with our model’s implications, firms with a robust renegotiation history and high bargaining power are expected to exhibit lower predictability, as analysts perceive these firms as having less cash flow uncertainty (e.g., if the government decides to modify or terminate contracts). We test this implication in the following section.

We construct a firm-level “renegotiation index” based on [Brogaard, Denes, and Duchin \(2021\)](#), who identify three key variables that capture firm bargaining power. Using the same method and data source, we calculate, for each contract, the cumulative changes in promised award amounts over time and create an “award increase” indicator that equals one if the cumulative amount changes are greater than zero. Similarly, we compute the cumulative day changes in the contract end dates and create an “award extension” indicator that equals one if the cumulative day changes are greater than zero. Finally, we construct a “weak monitoring” indicator, which equals one if the contract does not require incentive or performance features. All three variables are constructed at the contract level and each firm can have multiple contracts during our sample period.

Given our focus on explaining cross-firm variation, we make two adjustments to their measures. First, we calculate the average values of the indicators at the firm level, which can be interpreted as a firm’s likelihood of renegotiation success. Second, we recognize that renegotiation channels may vary based on the nature of firms and contracts.¹³, and therefore create an index in order to compare across firms. Specifically, to reflect the higher importance of “award increase” and “award extension” as documented in [Brogaard, Denes, and Duchin \(2021\)](#) Table 4, we apply a (0.4, 0.4, 0.2) weighting scheme to the three indicators to construct the firm-level renegotiation index. Our results remain robust when using equal weights.

Panel C of Table [A2](#) shows that, for an average firm in our sample, 24% of con-

¹³For instance, military weapons contracts often face strict deadlines and monitoring due to time sensitivities, making renegotiation more likely to occur through changes in the total award amount.

tracts have been successfully renegotiated, and all firms have exhibited some degree of renegotiation activity (i.e., the minimum value is not zero). There is considerable cross-firm variation in renegotiation success with the federal government, with rates ranging from 1% to 47%. Figure 3 illustrates a well-behaved distribution of our renegotiation index values within each industry. There is not much variation across industries in terms of the median renegotiation success rates.

[Insert Figure 3 here]

Table 4 presents the heterogeneous effect by bargaining power. We find that firms with greater bargaining power with the federal government exhibit significantly lower predictability, as indicated by the negative interaction coefficient estimates. For example, comparing two firms with the same procurement obligated amounts, analysts are more likely to under-forecast the earnings of Firm A, which has lower bargaining power, than those of Firm B. This implies that analysts perceive Firm B as having lower cash flow uncertainty. In terms of economic magnitude, a one standard deviation increase in the renegotiation index above the average reduces the procurement coefficient β in predictability by approximately -1, which is economically sizable as the main coefficient is 1.8460*** (t=2.64). This finding remains robust after controlling for industry fixed effects.

[Insert Table 4 here]

5.2 Macro uncertainty

At the macro level, we construct and identify empirical proxies that should be informative about time-varying government budgetary uncertainty, which is an important state variable in our conceptual framework (Section 2). We start with an intuitive event series: the months leading up to a new debt limit. This approach offers the advantage of providing consistent interpretations across time. Moreover, public

finance literature highlights that debt limit events have historically caused significant budgetary uncertainty in the U.S. (see e.g., [Missale \(1997\)](#), [Austin and Levit \(2013\)](#), [Escolano and Escolano \(2010\)](#) among many others). As a result, our first proxy is a dummy variable that equals one during debt limit event months and the preceding month (source: [whitehouse.gov](#)), and zero otherwise.

We next test and validate its interpretation as uncertainty by regressing a few risk variables on our debt limit event dummy (as constructed above). Results are shown in Table 5. According to Column (1), the general measure of fiscal policy uncertainty (henceforth FPU) variable constructed by [Baker, Bloom, and Davis \(2016\)](#) is statistically and significantly higher when our debt limit event indicator equals one ($t=2.45$). Figure 4 displays time variation in FPU using a green dashed line and highlights our debt limit events using gray shaded areas. Interestingly, the narratives behind major FPU spikes reflect both *budgetary* uncertainty associated with debt limits (e.g., mid-2011’s Budgetary Control Act, early 2013’s No Budget, No Pay Act, 2013’s Fiscal Cliff, late 2013’s Obamacare funding debate and government shutdown, 2017’s hurricane rescue) and *non-budgetary* uncertainty unrelated to debt limit debates but driven by economic and political events (e.g., 2010’s midterm election, early 2015’s European debt crisis, late 2016’s U.S. election, 2019’s trade war).

These facts motivate the use of our second measure, which is EPU attributed to debt limits mentioned in the news articles (source: [Baker, Bloom, and Davis \(2016\)](#), https://www.policyuncertainty.com/categorical_epu.html).¹⁴ According to Figure 4 and Table 5, The EPU attributed to debt limits is notably large, measuring 59.8% ($t = 2.15$) higher when our debt limit event indicator equals one compared to when it equals zero. Comparing Column (1) to Column (2) of Table 5, we also observe a meaningful increase in the R^2 from 6.4% to 14%. Results are robust if we

¹⁴According to the website, EPU includes a category labeled “fiscal policy,” which corresponds to what we refer to as “FPU” above. Additionally, their website provides a series called “Ratio: EPU w/DebtCeiling to wo/DebtCeiling.” The original EPU series is what the authors also call EPU *without* Debt Ceiling. Therefore, given EPU and this ratio, we obtain EPU attributed to debt ceiling mentions in the news articles as $(\text{ratio}-1)*\text{EPU}$.

include year fixed effects (i.e., within year inferences) or quarter fixed effects (i.e., controlling for seasonality).¹⁵ In contrast, according to Columns (3)-(6), fear and anxiety driven by government shutdown (source: EPU website), market risk aversion (source: www.nancyxu.net), the VIX (source: CBOE), and the 22-day realized variance of stock market returns (source: DataStream and authors' calculation) show no significant changes during debt limit events. It is comforting to observe that these coefficients have a positive sign, which is expected given a certain degree of expected comovement among risk variables (e.g., [Martin \(2017\)](#), [Xu \(2019\)](#)). Taken together our findings streamline the interpretation of debt limit events to be associated with heightened fiscal uncertainty.

[Insert Table 5 here]

[Insert Figure 4 here]

Next, we discuss the interaction term involving the debt limit dummy. As before, the specification is at the firm-quarter level. From Panel A of Table 6, we find that across various earnings surprise measures (Beat , SUE_1 , SUE_2), the predictability result becomes significantly stronger during periods of heightened fiscal budgetary uncertainty as proxied by debt limit event dummy. By comparing the coefficient magnitudes of the main and interaction effects, we observe that the interaction effect accounts for approximately half of the total predictability effect. Instead of using the debt limit event dummy, in Panel B of Table 6, we replace the debt limit dummy variable with actual changes in debt limits, thereby allowing for the intensive margin effect. The interaction coefficient estimates exhibit more statistical significance across all specifications.

Table 7 uses the EPU attributed to debt limits as a more direct measure for fiscal budgetary *uncertainty*. This is a crucial test for two reasons: first, the measure by [Baker, Bloom, and Davis \(2016\)](#) is constructed independently of our research, ensuring

¹⁵Panels B and C show the result; R^2 s become difficult to interpret given the fixed effects.

exogeneity; second, budgetary uncertainty may increase in public discussions even outside of debt limit cycles, providing variation outside the two months prior to the debt limit events.

The results remain strong and largely robust, with the exception of the final two columns, which display similar estimate magnitudes despite losing statistical significance. Economically, a one standard deviation increase in fiscal budgetary uncertainty significantly enhances predictability by approximately 25-30%. Analyst underforecasts become more positively associated with firm procurement accrual earnings, as budgetary uncertainty rises. Overall, all these findings in this section are consistent with our model prediction.

[Insert Table 6 here]

[Insert Table 7 here]

6 Discussions

In this section, we first discuss the stock market implications in Section 6.1 and then explore the possibilities of alternative mechanisms, such as delayed information and analyst inattention in the rest of the section.

6.1 Return Dynamics

We find that announcement-day stock returns also respond significantly to procurement exposures. Table 8 presents the results. Specifically, we obtain the log of the three-day cumulative abnormal return “CAR” over the [-1 day, 1 day] window around the earnings announcement day, where abnormal returns use raw returns in excess of the value-weighted market return. Then, we regress log CAR on our procurement exposure variable at the firm-quarter level. Columns (1)-(3) and Columns (4)-(6) show results without and with control variables (as introduced in Table 1),

respectively.¹⁶ The results consistently show positive coefficients with similar magnitudes across specifications. In terms of economic magnitude, a one standard deviation increase in procurement exposure predicts a 9.6 basis point increase in cumulative abnormal returns over the $[-1, 1]$ window around the earnings announcement day. This effect is economically significant, corresponding to an annualized abnormal return of approximately 8.4%.

[Insert Table 8 here]

Then, we find that procurement exposures significantly explain stock returns only during the earnings announcement period. This finding is economically significant, as it demonstrates that fiscal risk is incorporated into stock returns via the earnings growth channel. To investigate this, we use the following specification that expands our analysis to the firm i -trading day τ level (including trading days when there are no earnings announcements), as follows:

$$\begin{aligned} aRet_{i,\tau} = & \gamma_{t(\tau)} \times \alpha_i + \beta_1 \text{Procurement}_{i,t(\tau)-1} + \beta_2 I_{i,ann.} \\ & + \beta_3 I_{i,ann.} \text{Procurement}_{i,t(\tau)-1} + \varepsilon_{i,\tau}, \end{aligned} \quad (12)$$

where $aRet_{i,\tau}$ represents the logarithm of abnormal returns for stock i on trading day τ , computed as the difference between the daily logarithmic stock return and the CRSP daily logarithmic value-weighted market return (including distributions). $\text{Procurement}_{i,t(\tau)-1}$ reflects the procurement exposure from the last fiscal quarter, and $t(\cdot)$ denotes quarters. $I_{i,ann.}$ is an indicator variable for the announcement period, defined over a $[-1d, 1d]$ window, with Day 0 corresponding to the earnings announcement date. $\gamma_{t(\tau)} \times \alpha_i$ indicates various sets of fixed effects. The coefficient of interest is β_3 , and we use double-clustered standard errors as in the rest of the paper.

¹⁶To conserve space, we do not report specific coefficient estimates of control variables, which are available upon request.

From Table 9, we find that during earnings announcement days, a one standard deviation increase in procurement exposure corresponds to higher abnormal stock returns by 9.1% on an annualized basis. This result remains robustly strong even after adding both firm and time fixed effects.

As expected, the economic magnitude is consistent with that reported in Table 8, as previously discussed (i.e., approximately 8.4% per annum). However, the key new insight from Table 9 is that firm fiscal risk is priced in stock returns solely on earnings announcement event days. This highlights the earnings growth channel, consistent with recent evidence in the finance literature (Bianchi, Gómez-Cram, and Kung (2024), Xu and You (forthcoming)).

Figure 5 further demonstrates this result by displaying average daily abnormal returns on high- and low-fiscal exposure bins (defined using the mean cutoff, which can be found from Table A2). Specifically, solid (shaded) bars represent announcement-day (non-announcement-day) averages. We highlight several noteworthy observations. The solid bars are consistently taller than the shaded bars, underscoring the well-documented “announcement effect” as uncertainty being resolved. In addition, consistent with the regression results, the differences between high- and low-fiscal-exposure bars on non-announcement days are not statistically significant. In contrast, the bars for announcement days exhibit a statistically significant difference.

[Insert Table 9 here]

[Insert Figure 5 here]

6.2 Information delay

Prediction 4 of our model shows that predictability should decrease as information timeliness and precision improve. It is empirically challenging to test this channel, as we did not document the real-time posting dates of each transaction on [USAspending.gov](https://www.usaspending.gov), and the website does not provide this information.

Nevertheless, our two scraping exercises (10/1/2023–1/18/2024 and 8/8/2024–11/5/2024) as discussed in Section 3.2 reveal consistent patterns and delay statistics. Most government agencies – except for the Department of Defense, which adheres to a 90-day reporting mandate for national security reasons – post transactions to the public domain within a reasonable timeframe (i.e., within 30 days). It is unlikely that variations in information disclosure delays are the primary driver of the observed predictability. In addition, we conduct an event study using the 1,000 largest firm-quarter transactions, assuming that such transactions, due to their sheer magnitude and size, are likely to be well-studied with less information disclosure uncertainty. Figure 6 illustrates our findings. We do not find evidence that predictability significantly decreased when earnings were announced during the subsequent quarter.

[Insert Figure 6 here]

6.3 Limited analyst attention to government contracts

Limited attention might also account for the predictability results, as also indicated by *Prediction 4*. However, it is hard to believe that this explanation is a dominant channel for two reasons. First, during periods of heightened budgetary uncertainty in the market (such as approaching debt limits), attention to procurement and fiscal risk would be expected to increase so much that we should see weaker predictability result. This contrasts with our empirical findings in Section 5 (i.e., higher predictability during heightened budgetary uncertainty). Second, recent literature, notably [Hassan, Hollander, Van Lent, and Tahoun \(2019\)](#), employs advanced computational linguistics tools and provides evidence that financial analysts are acutely aware of the political risks faced by firms.

Nonetheless, we conduct a comprehensive analysis, including a replication of selected aspects of [Hassan, Hollander, Van Lent, and Tahoun \(2019\)](#)’s work using earnings call transcripts. Our findings do not indicate that variations in analyst attention

play a significant role in explaining the primary predictability result.

We first conduct textual analysis of firm-quarter earnings call transcripts (source: Capital IQ), and construct a firm-quarter variable that measures analyst mentions of procurement-related keywords. Specifically, for each transcript, we identify the total number of words in *paragraphs* spoken by analysts that mention “government contracts” or “procurement contracts” (or their variations). We then normalize this count in two ways: by the total number of words in the transcript (excluding operator words) when constructing variable “Analyst_mention1” or by the total number of words spoken by analysts when constructing variable “Analyst_mention2.” Both measures are considered as they capture distinct aspects of attention. The first measure reflects the proportion of attention to procurement relative to the overall content of the call, while the second reflects the proportion of attention relative to all analyst discussions.

Figure 7 illustrates a significant positive relationship between executive mentions of government contracts and analyst mentions. This finding suggests that discussions about government contracts are actively initiated and maintained between executives and analysts, and that analyst attention to government contracts reasonably responds to the information provided by firm executives. Then, Table 10 presents the firm-level evidence. Firms with more analyst mentions of government contracts do not exhibit lower predictability. Results are robust using both analyst attention measures.

[Insert Figure 7 here]

[Insert Table 10 here]

7 Conclusion

In this paper, we construct a detailed transaction-level dataset of federal government procurement contracts spanning 2009 to 2019. We find that firm-quarter actual procurement earnings (scaled by recent revenue) significantly and positively predict

analyst earnings surprises. This predictability intensifies during periods of heightened budgetary uncertainty (e.g., months prior to debt limit events, reflecting higher macro uncertainty) and for firms with lower bargaining power (indicating higher micro uncertainty). Analyst underforecasts imply return predictability across differential fiscal exposure on earnings announcement days. Specifically, we find that a one standard deviation increase in procurement exposure corresponds to an 8.4% per annum increase in abnormal stock returns on earnings announcement days. Fiscal risk is priced into stock returns on

While government spending can spur growth, deadlines of debt limits each year generate huge uncertainty not only to the political sphere but also the business sphere, which then has real effects. Our paper documents analyst perception of whether and to what extent budgetary uncertainty transmits to the private sector through procurement contracts. Our findings indicate that analysts perceive revenue flows from procurement contracts riskier than non-government revenue sources.

References

- Akbas, F., 2016. The calm before the storm. *The Journal of Finance* 71, 225–266.
- Akbas, F., Jiang, C., Koch, P. D., 2020. Insider investment horizon. *The Journal of Finance* 75, 1579–1627.
- Austin, D. A., Levit, M. R., 2013. The debt limit: history and recent increases .
- Bajari, P., McMillan, R., Tadelis, S., 2009. Auctions versus negotiations in procurement: an empirical analysis. *The Journal of Law, Economics, & Organization* 25, 372–399.
- Bajari, P., Tadelis, S., 2001. Incentives versus transaction costs: A theory of procurement contracts. *Rand journal of Economics* pp. 387–407.
- Baker, S. R., Bloom, N., Davis, S. J., 2016. Measuring economic policy uncertainty. *The quarterly journal of economics* 131, 1593–1636.
- Bekaert, G., Engstrom, E. C., Xu, N. R., 2022. The time variation in risk appetite and uncertainty. *Management Science* 68, 3975–4004.
- Bianchi, F., Gómez-Cram, R., Kung, H., 2024. Using social media to identify the effects of congressional viewpoints on asset prices. *The Review of Financial Studies* 37, 2244–2272.
- Bonsall IV, S. B., Green, J., Muller III, K. A., 2020. Market uncertainty and the importance of media coverage at earnings announcements. *Journal of Accounting and Economics* 69, 101264.
- Brogaard, J., Denes, M., Duchin, R., 2021. Political influence and the renegotiation of government contracts. *The Review of Financial Studies* 34, 3095–3137.
- Escolano, J., Escolano, J., 2010. A practical guide to public debt dynamics, fiscal sustainability, and cyclical adjustment of budgetary aggregates, vol. 2. International Monetary Fund Washington, DC.
- Froot, K., Kang, N., Ozik, G., Sadka, R., 2017. What do measures of real-time corporate sales say about earnings surprises and post-announcement returns? *Journal of Financial Economics* 125, 143–162.
- Gereffi, G., Humphrey, J., Sturgeon, T., 2005. The governance of global value chains. *Review of international political economy* 12, 78–104.
- Gong, G., Li, L. Y., Wang, J. J., 2011. Serial correlation in management earnings forecast errors. *Journal of Accounting Research* 49, 677–720.
- Hassan, T. A., Hollander, S., Van Lent, L., Tahoun, A., 2019. Firm-level political risk: Measurement and effects. *The Quarterly Journal of Economics* 134, 2135–2202.
- Klemperer, P., 2004. Auctions: theory and practice .

- Loughran, T., McDonald, B., 2011. When is a liability not a liability? textual analysis, dictionaries, and 10-ks. *The Journal of finance* 66, 35–65.
- Martin, I., 2017. What is the expected return on the market? *The Quarterly Journal of Economics* 132, 367–433.
- Missale, A., 1997. Managing the public debt: The optimal taxation approach. *Journal of economic surveys* 11, 235–265.
- Moffat, R. J., 1988. Describing the uncertainties in experimental results. *Experimental thermal and fluid science* 1, 3–17.
- Søreide, T., 2002. Corruption in public procurement. Causes, consequences and cures. Chr. Michelsen Intitute.
- Xu, N. R., 2019. Global risk aversion and international return comovements. Available at SSRN 3174176 .
- Xu, N. R., You, Y., forthcoming. Main street’s pain, wall street’s gain. *Journal of Financial Economics* .
- You, H., Zhang, X., 2009. Financial reporting complexity and investor underreaction to 10-k information. *Review of Accounting studies* 14, 559–586.

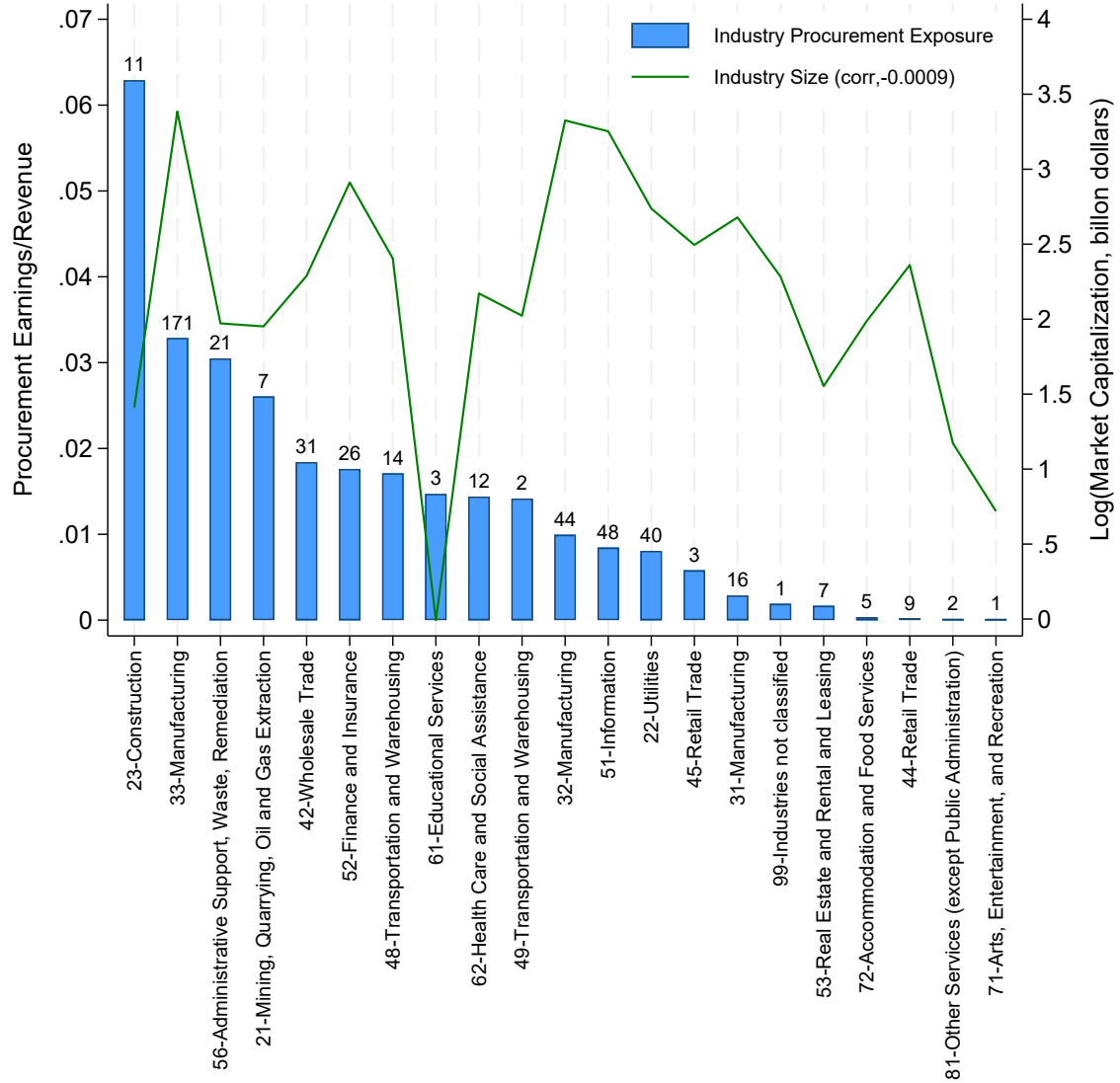


Figure 1: **Firm Sample Description.** This figure describe our firm sample: (1) the number on top of each bar represents the number of firms in each NAICS-2 digit industry classification, and they add up to $N=474$; (2) the bar denotes average firm-quarter $\text{Procurement}_{i,t}$ for each industry, which is calculated as total transaction obligated amount scaled by average quarterly revenues in the past 4 quarters; (3) the solid line denotes the logarithm of total market capitalization (in billion dollars) of each industry represented in our firm sample. The x-axis denotes the industry classification; the left y-axis corresponds to (2), and the right y-axis corresponds to (3). Figure [IB.1](#) in the Internet Appendix also shows where the largest 25% firm-quarter transactions sit.

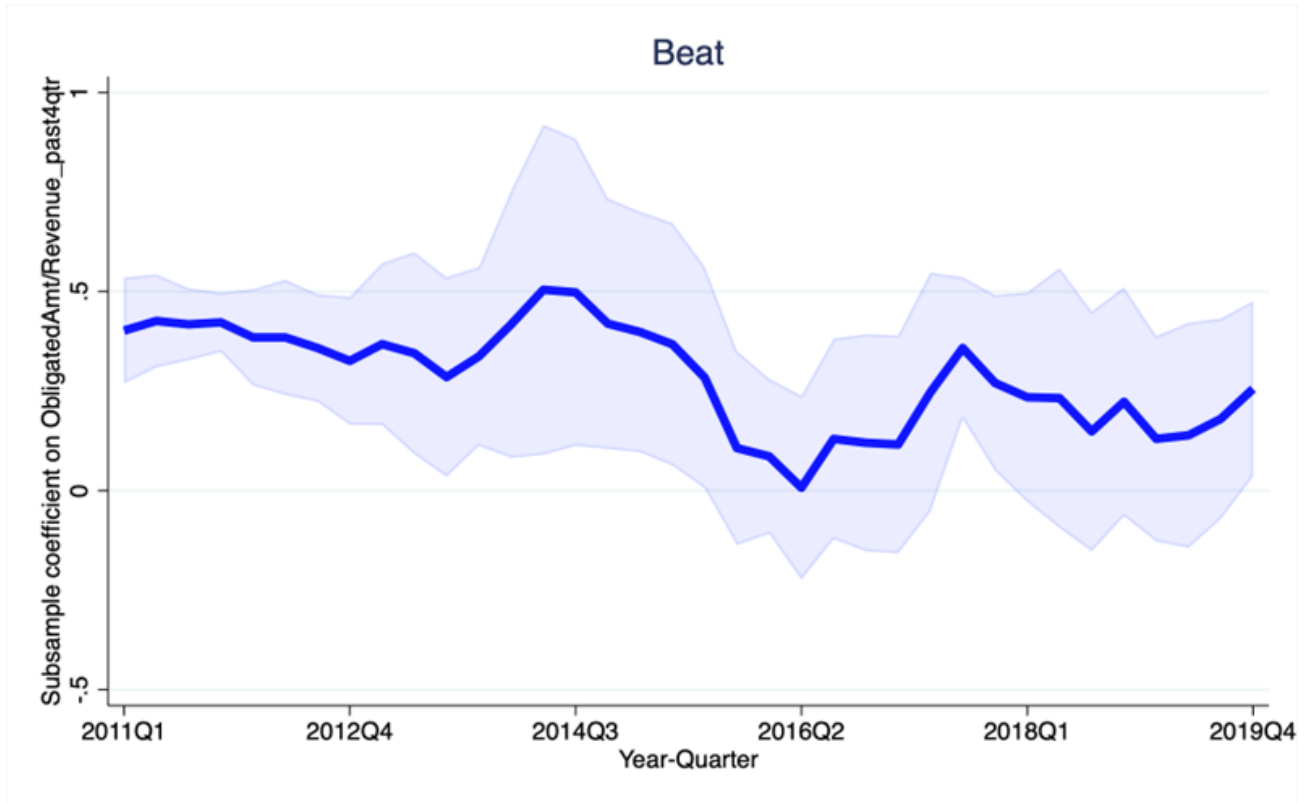


Figure 2: **Rolling Coefficient of the Main Predictive Result.**

This figure depicts the time series of rolling coefficients of “ObligatedAmt/Revenue_past4qtr” in regressions with control variables as shown in Table 1. Each regression uses a rolling window of 8 quarters. Robust standard errors are clustered at firm and calendar year-quarter level. Shaded areas indicate 90% confidence intervals.

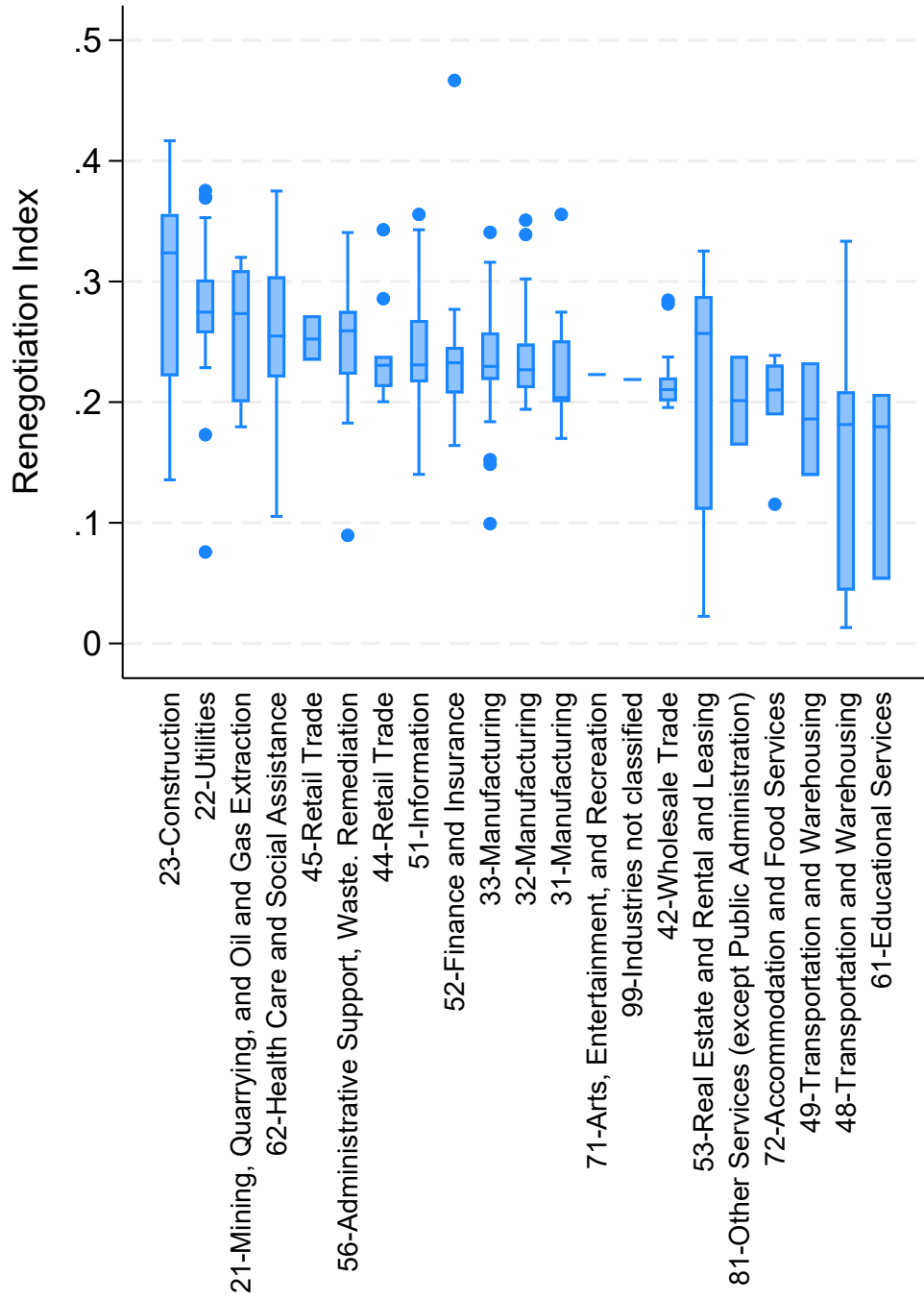


Figure 3: **Renegotiation Index, illustrated by industry.** This plot shows the box plot of firm renegotiation index within each NAICS-2 digit industry.

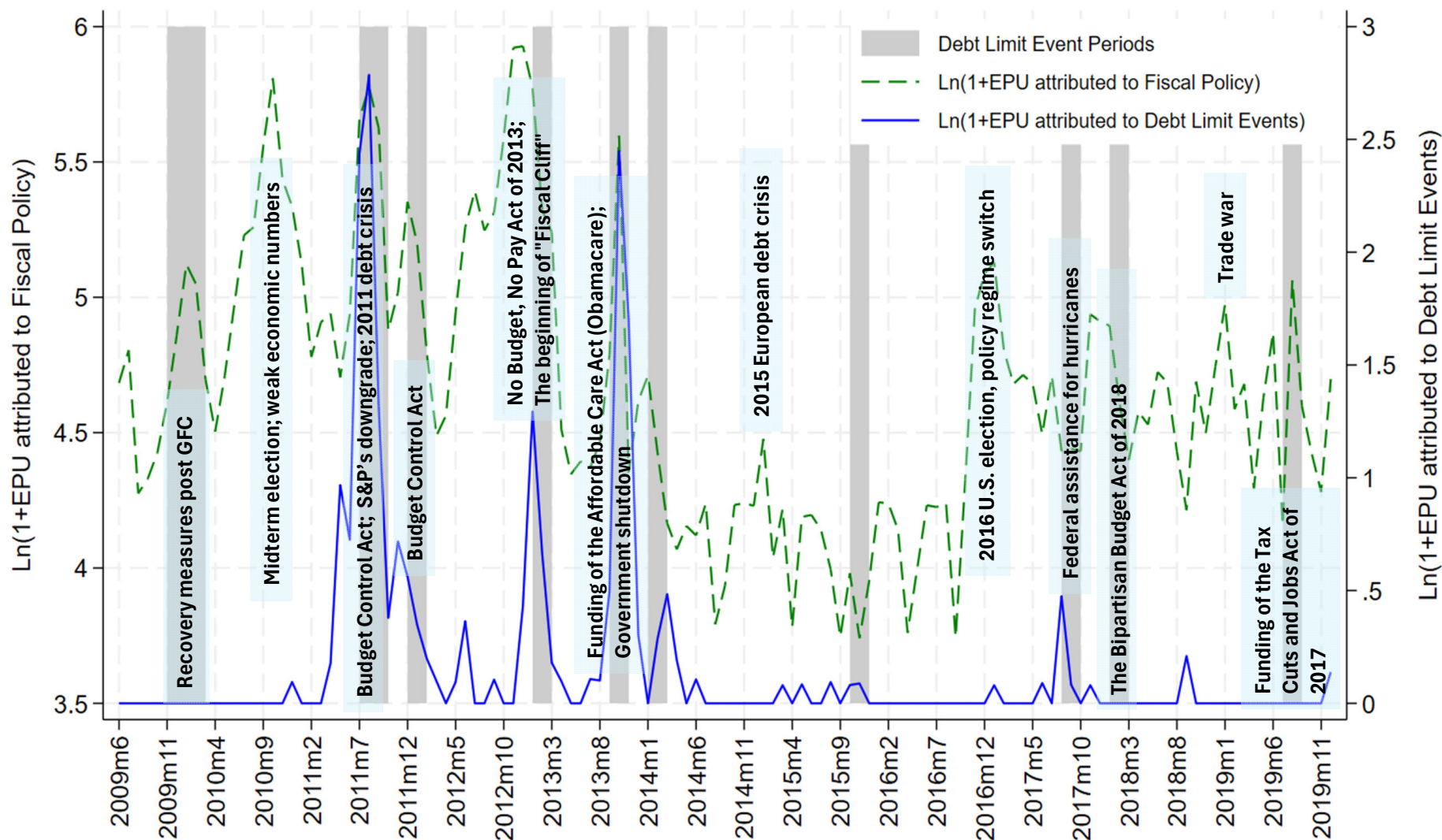


Figure 4: **Fiscal uncertainty interpretation of debt ceiling events.**

This figure illustrates Table 5 in a more direct way; the shaded area indicates the month and the month prior of U.S. debt ceiling events, where the events were obtained from <https://www.whitehouse.gov/omb/budget/historical-tables/>.

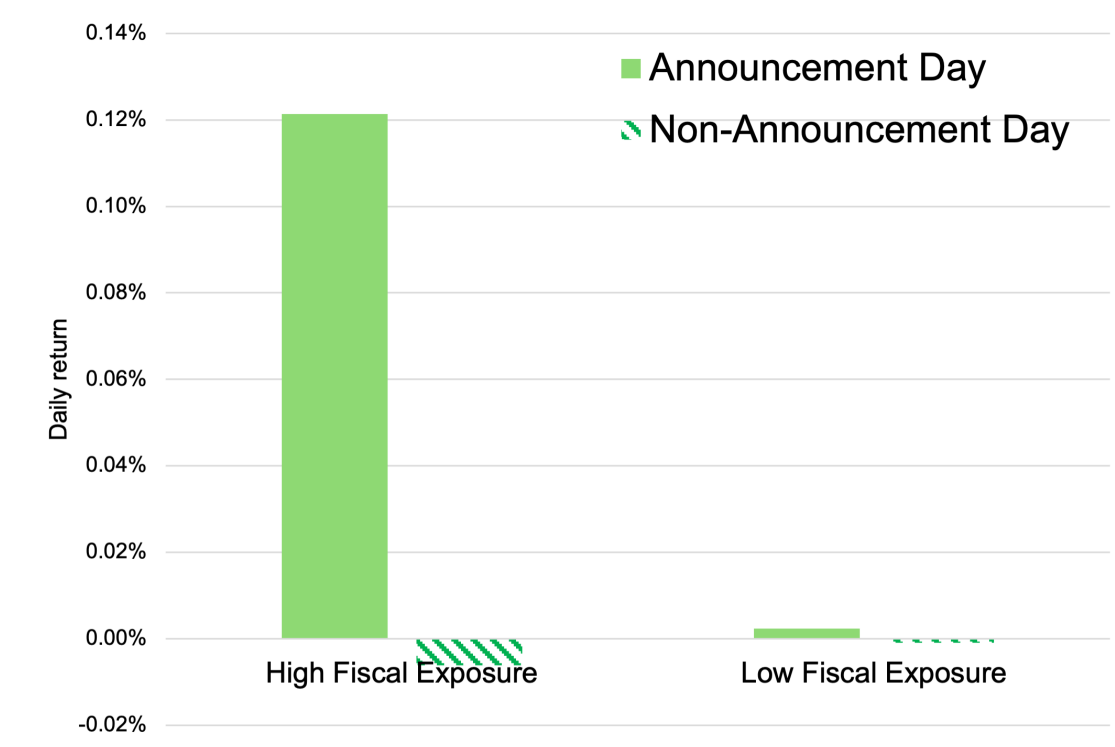


Figure 5: **Announcement vs. Non-announcement day.**

This figure demonstrates average abnormal daily returns in four bins: (high fiscal exposure, low fiscal exposure) x (during announcement periods $[-1,1]$, outside announcement periods). Fiscal exposure is the Procurement variable used as our predictor throughout the paper; and we use its mean as cutoff to separate firm-quarters in high versus low fiscal exposure. This figure demonstrates Table 9 (which uses continuous Procurement measures) in a simple way.

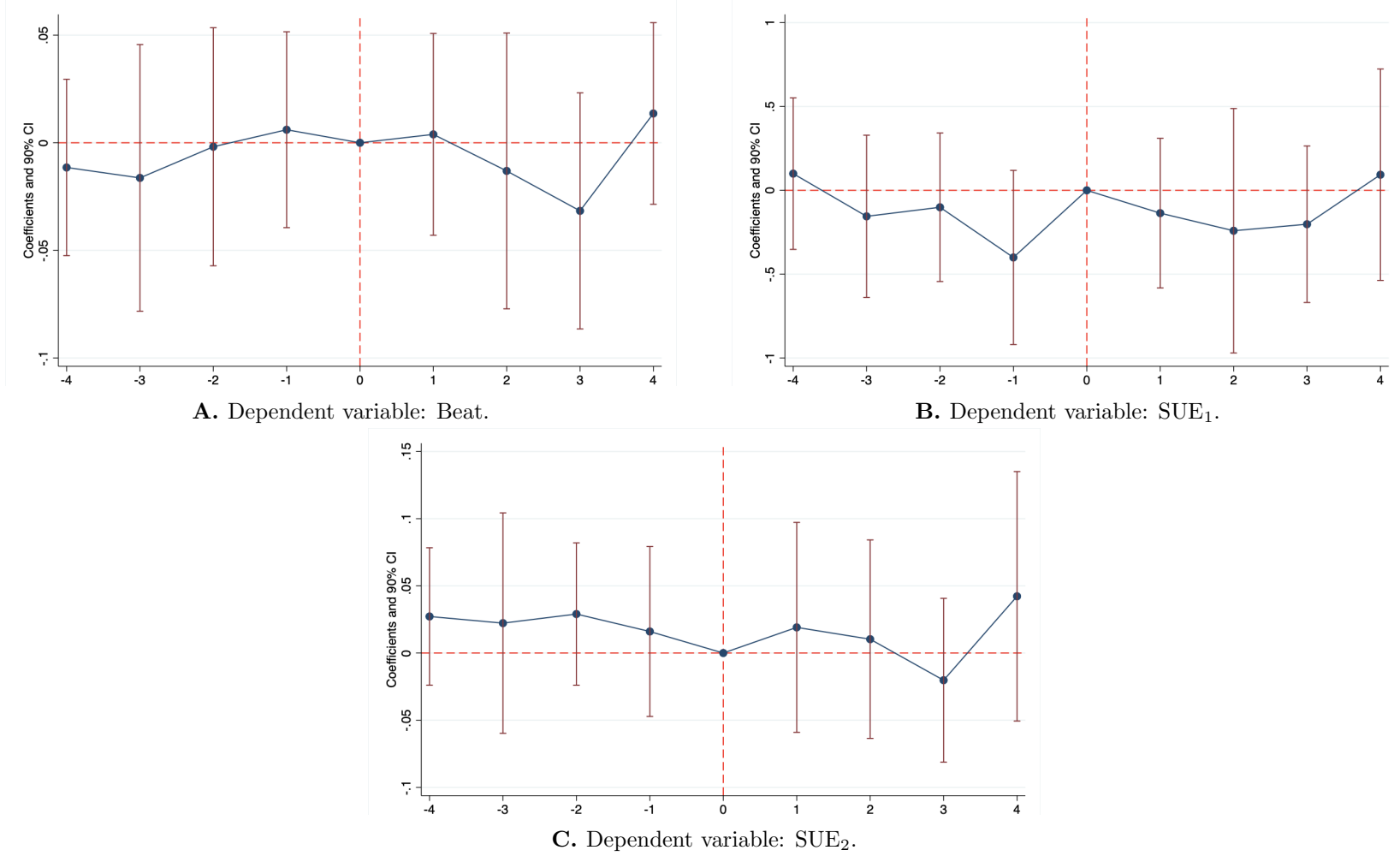
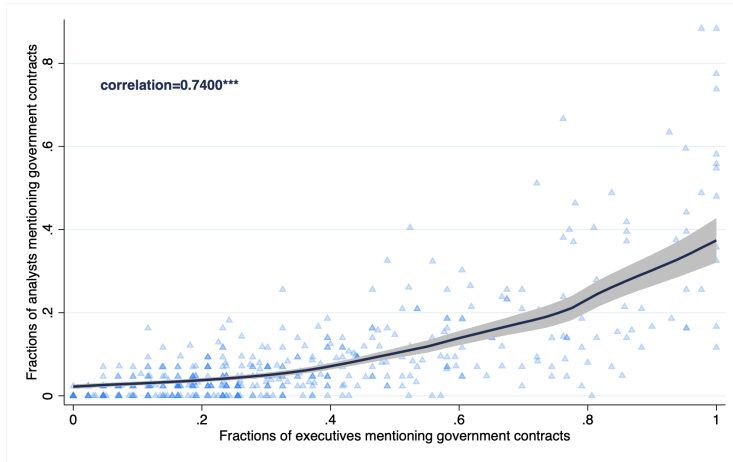


Figure 6: **Event Study using largest 1000 firm-quarter obligated transactions.**

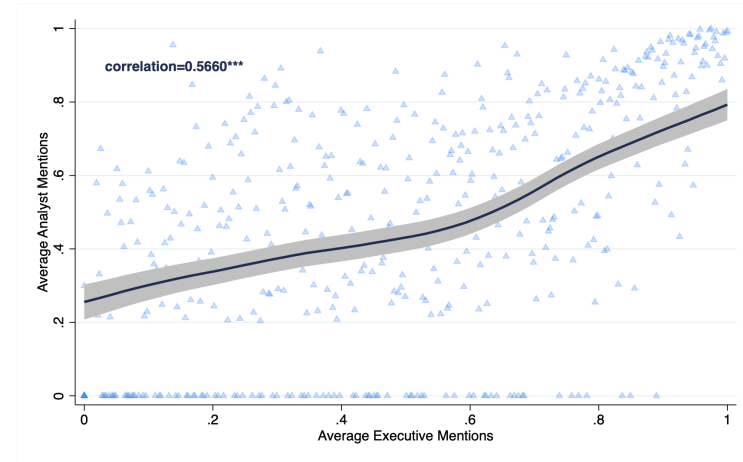
These plots display the regression results of the following specification and show estimates of β_t (and its 90% CI) in the following specification:

$$EarningsSurprise_{i,t} = \alpha_i + \gamma_m + \sum_{t=-4}^4 (\beta \times (t + 5)) + \sum_{t=-4}^4 (\beta_t \times ObligatedAmt/Revenue_{past4qtr_i} \times (t + 5)) + \epsilon_{i,t} \quad (t \neq 0),$$

where i denotes an event, t denotes the event time (quarter), m denotes the corresponding quarter-end year-month. α_i indicates the event fixed effects, γ_m indicates the year-month fixed effects. $\epsilon_{i,t}$ is the residual term. The three plots use different empirical measures of earnings surprises, as in the rest of the paper.



A. Analyst and executive mentions, scaled by total number of words in the transcript.



B. Analyst and executive mentions, scaled by total number of words in the transcript by analysts and executives, respectively.

Figure 7: Earnings Call Transcripts: How often do analysts and executives mention government contract-related words?

This figure demonstrates that analysts' and executives' mentions of government contracts in earnings calls are strongly and positively correlated. Specifically, for each earnings call transcript (firm-time level), we first construct two measures of analyst (executive) mentions of government: (A) number of words in paragraphs spoken by analysts (executives) that mention "government contracts" or "procurement contracts" divided by total number of words in the transcript excluding operator words, (B) and that divided by total number of words in the transcript excluding operator words that are spoken by analysts (executives). For demonstration purpose (as most variation comes from cross-firm), this figure depicts the percentile ranks of firm-level averages. The shaded band (and the solid line within) indicates a local prediction and 95% confidence interval. The correlations using raw analyst and executive averages are 0.67 and 0.74 for plot (A) and (B), respectively.

Table 1: **Main result: Procurement Transactions and Earnings Beat.**

This table shows the main earnings surprise regression results using the panel. The unit of observation is at the firm-quarter level. The specification is also discussed in Equation (11) or here:

$$\text{Beat}_{i,t} = \gamma_t \times \alpha_{d(i)} + \beta \text{Procurement}_{i,t} + \delta \mathbf{X}_{i,t} + \varepsilon_{i,t},$$

where i denotes a firm and t denotes a quarter. $\text{Beat}_{i,t}$ compares firm i 's actual earnings during quarter t and the I/B/E/S consensus forecast immediately prior to the earnings announcement (which happens typically some time in quarter $t + 1$). $\text{Beat}_{i,t}$ equals 1 if actual beats forecast median, and 0 otherwise. $\text{Procurement}_{i,t}$ is the (obligated) transaction amount from procurement contracts a firm i receives from the government during quarter t , scaled by the firm's past 4 quarter revenue. $\mathbf{X}_{i,t}$ denote a series of control variables that are commonly used in the literature. γ_t ($\alpha_{d(i)}$) indicates quarter (industry) fixed effects. Standard errors for columns (1)-(5) are double-clustered at the firm and quarter levels and are reported in parentheses. Column (6) is double-clustered at the NAICS and quarter levels. ***, p-value <1%; **, <5%; *, <10%.

| | | | | | | |
|---|--|------------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Year-Calendar Quarter FE: | | Yes | | Yes | | Yes |
| NAICS2 FE: | | | Yes | Yes | | Yes |
| NAICS2 x Quarter FE: | | | | | Yes | |
| Unit of observation: | Firm-Quarter | Firm-Quarter | Firm-Quarter | Firm-Quarter | Firm-Quarter | NAICS2-Quarter |
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Panel A: Baseline. | | | | | | |
| <i>Dependent variable:</i> | <i>Beat (1 if surprise > 0; 0, otherwise)</i> | | | | | |
| ObligatedAmt/Revenue_past4qtr | 0.2722** (0.1016) | 0.2676** (0.1005) | 0.2716*** (0.0946) | 0.2656*** (0.0934) | 0.2624*** (0.0959) | 0.4781 (0.7051) |
| Constant | 0.6568*** (0.0100) | 0.6569*** (0.0067) | 0.6568*** (0.0097) | 0.6569*** (0.0062) | 0.6577*** (0.0063) | 0.6151*** (0.0070) |
| Observations | 16737 | 16737 | 16737 | 16737 | 16663 | 824 |
| R-squared | 0.0014 | 0.011 | 0.014 | 0.023 | 0.070 | 0.18 |
| Panel B: With control variables. | | | | | | |
| <i>Dependent variable:</i> | <i>Beat (1 if surprise > 0; 0, otherwise)</i> | | | | | |
| ObligatedAmt/Revenue_past4qtr | 0.3074*** (0.0669) | 0.2983*** (0.0648) | 0.2860*** (0.0665) | 0.2752*** (0.0638) | 0.2693*** (0.0657) | 0.4221 (0.7636) |
| Log(1+MarketCap) | 0.0232*** (0.0036) | 0.0236*** (0.0036) | 0.0269*** (0.0037) | 0.0272*** (0.0038) | 0.0272*** (0.0038) | 0.0056 (0.0317) |
| Log(1+Book-to-Market) | -0.0793*** (0.0249) | -0.0752*** (0.0265) | -0.0200 (0.0248) | -0.0131 (0.0267) | -0.0159 (0.0281) | 0.0191 (0.1794) |
| Log(1+Ret_m61tom12) | 0.1773*** (0.0405) | 0.2113*** (0.0365) | 0.1682*** (0.0410) | 0.2059*** (0.0371) | 0.1878*** (0.0365) | 0.2464* (0.1409) |
| Log(1+Ret_m6tom2) | 0.6327*** (0.1040) | 0.6079*** (0.1053) | 0.6027*** (0.1023) | 0.5771*** (0.1047) | 0.5858*** (0.1170) | 0.7893* (0.4281) |
| Log(1+InstitutionOwnPct) | 0.2249*** (0.0586) | 0.2584*** (0.0573) | 0.1671** (0.0619) | 0.1978*** (0.0603) | 0.1924*** (0.0628) | 0.5059* (0.2527) |
| Log(1+IVOL_m11tom2) | 0.2834 (0.6055) | 0.1834 (0.6003) | -0.1873 (0.5693) | -0.3836 (0.5337) | -0.3237 (0.5666) | -3.4837 (2.8030) |
| Log(1+TOV_m61tom12) | 0.5006 (1.1470) | -0.3025 (1.1509) | 0.4217 (1.2284) | -0.3888 (1.2030) | -0.4311 (1.2324) | 1.2067 (6.6003) |
| L.Beat | 0.1581*** (0.0105) | 0.1533*** (0.0106) | 0.1504*** (0.0107) | 0.1454*** (0.0107) | 0.1498*** (0.0114) | -0.0278 (0.0568) |
| Constant | -0.0827 (0.0932) | -0.1021 (0.0941) | -0.1407 (0.0941) | -0.1555 (0.0960) | -0.1524 (0.0964) | 0.2497 (0.8846) |
| Observations | 16696 | 16696 | 16696 | 16696 | 16622 | 824 |
| R-squared | 0.048 | 0.056 | 0.055 | 0.063 | 0.11 | 0.19 |

Table 2: **Robustness to Table 1: Alternative Measures and Intensive Margin.**

This table complements Table 1 by using alternative left-hand-side and right-hand-side variables (from the existing literature) in Panels A, C, and D, respectively, and considering the intensive margin in Panel B. **Notes:** This table only reports the coefficients and SE of main variable of interest, and each column should *not* be read as one regression. For Panels A, C, and D, we discuss exact constructions of alternative measures in Appendix Table IB.1. For Panel B, we include only firms with at least one active transaction (non-zero amount) in each quarter (we have 43 quarters in our sample period). Detailed regression results for Panel B are relegated to Appendix Table IB.3. Robustness test for Panel D with different SUE constructions is shown in Table IB.4. Standard errors are double-clustered at the firm and quarter levels and are reported in parentheses. ***, p-value <1%; **, <5%; *, <10%.

| | | | | | | |
|---|---|--------------------------|--------------------------|---------------------------|---------------------------|---------------------------|
| Year-Calendar Quarter FE: | | Yes | | | Yes | |
| NAICS2 FE: | Yes | Yes | | Yes | Yes | |
| NAICS2 x Quarter FE: | | | Yes | | | Yes |
| With Controls: | | | | Yes | Yes | Yes |
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Panel A: Alternative fiscal dependence measures | | | | | | |
| <i>Dependent variable:</i> | <i>Beat</i> | | | | | |
| Log(1+ObligatedAmt) | 0.0071*** (0.0012) | 0.0071*** (0.0012) | 0.0070*** (0.0012) | 0.0038*** (0.0011) | 0.0035*** (0.0010) | 0.0033*** (0.0010) |
| ObligatedAmt/Revenue_past2qtr | 0.2397** (0.0977) | 0.2242** (0.0986) | 0.2208** (0.1003) | 0.2583*** (0.0690) | 0.2387*** (0.0692) | 0.2340*** (0.0698) |
| ObligatedAmt/MarketCap | 835.0857*** (307.7815) | 795.0571** (311.3754) | 802.7230** (314.6267) | 957.7549*** (225.4826) | 896.3433*** (224.6480) | 898.5603*** (224.8623) |
| Panel B: Intensive margin | | | | | | |
| <i>Dependent variable:</i> | <i>Beat</i> | | | | | |
| ObligatedAmt/Revenue_past4qtr | 0.2570*** (0.0886) | 0.2434*** (0.0873) | 0.2479*** (0.0896) | 0.2162*** (0.0724) | 0.1886*** (0.0694) | 0.1896** (0.0714) |
| Panel C: Drop Department of Defense-sponsored transactions | | | | | | |
| <i>Dependent variable:</i> | <i>Beat</i> | | | | | |
| Non-DoD ObligatedAmt/Revenue_past4qtr | 1.5338*** (0.4764) | 1.5205*** (0.4845) | 1.4992*** (0.5001) | 1.3415*** (0.3376) | 1.3041*** (0.3423) | 1.2687*** (0.3485) |
| Panel D: Alternative scaled earnings surprise measures | | | | | | |
| <i>Dependent variable:</i> | <i>SUE (surprise, scaled by analyst forecast standard deviation); SUE₁</i> | | | | | |
| ObligatedAmt/Revenue_past4qtr | 3.1667** (1.2952) | 3.1109** (1.3056) | 3.1061** (1.3055) | 2.7052*** (0.9197) | 2.6122*** (0.9207) | 2.6074*** (0.9151) |
| <i>Dependent variable:</i> | <i>SUE (Froot, Kang, Ozik, and Sadka (2017)); SUE₂</i> | | | | | |
| ObligatedAmt/Revenue_past4qtr | 0.2369* (0.1189) | 0.2228* (0.1164) | 0.2265** (0.1091) | 0.2173* (0.1113) | 0.2051* (0.1094) | 0.2093** (0.1009) |

Table 3: **Main Result at the Firm Level.**

$$\overline{\text{Beat}}_i = \alpha_{d(i)} + \beta \overline{\text{Procurement}}_i + \delta \overline{\mathbf{X}}_i + \varepsilon_i, \quad (14)$$

where i denotes a firm and the bar above a variable z , \bar{z} , denotes average. This table complements Table 1 at the firm level by collapsing variables into the firm level using full sample, 2009-2019. Detailed regression results with controls using full sample and (mostly) equally-spaced subsamples, 2009-2012, 2013-2016, and 2017-2019, are relegated to Appendix Table IB.5. Robust standard errors are reported in parentheses. ***, p-value <1%; **, <5%; *, <10%.

| NAICS2 FE | Yes | Yes | Yes | Yes | Yes | Yes |
|-------------------------------|-----------------------|----------------------|----------------------|----------------------|--------------------|----------------------|
| With controls: | Yes | Yes | Yes | Yes | Yes | Yes |
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Dependent variable: | Beat | Beat | SUE ₁ | SUE ₁ | SUE ₂ | SUE ₂ |
| ObligatedAmt/Revenue_past4qtr | 0.3522*** (0.1312) | 0.3181** (0.1249) | 3.9806** (1.6264) | 3.9405** (1.5587) | 0.2451 (0.1911) | 0.3103** (0.1571) |
| Observations | 474 | 472 | 474 | 472 | 474 | 472 |
| R-squared | 0.25 | 0.30 | 0.18 | 0.25 | 0.033 | 0.14 |

Table 4: **Mechanism Test: Renegotiation and bargaining power with government, micro.**

This table examines whether firms' bargaining power can help explain variation in predictability across firms. For each contract, we first construct three measures of renegotiation level following [Brogaard, Denes, and Duchin \(2021\)](#): (A) an "award increase" indicator that equals one if the cumulative change in potential award amount is greater than zero, (B) an "award extension" indicator that equals one if the cumulative days change in the contract end date is greater than zero, (C) and a "weak monitoring" indicator that equals one if the contract lacks incentive or performance features. We average these three indicator variables within each firm, and further construct the firm-level renegotiation index by summing the three variables with weights of (0.4, 0.4, 0.2). Detailed regression results of Columns (1)-(2) as well as alternative renegotiation index construction are relegated to Appendix Table [IB.6](#). Robust standard errors are reported in parentheses. ***, p-value <1%; **, <5%; *, <10%.

| NAICS2 FE | Yes | Yes | Yes | Yes | Yes | Yes |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| With controls: | Yes | Yes | Yes | Yes | Yes | Yes |
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Dependent variable: | Beat | Beat | SUE ₁ | SUE ₁ | SUE ₂ | SUE ₂ |
| ObligatedAmt/Revenue_past4qtr | 1.8460*** (0.6992) | 1.8182*** (0.6304) | 13.4117 (10.0373) | 12.9891 (8.9920) | 3.2343** (1.4733) | 2.8713*** (1.0401) |
| Renegotiation Index | -0.1135 (0.1398) | -0.1372 (0.1697) | -0.1878 (1.0544) | -0.3941 (1.1776) | -0.0757 (0.1729) | -0.0807 (0.1765) |
| ObligatedAmt/Revenue_past4qtr × RenegotiationIndex | -5.7224** (2.8137) | -5.7493** (2.5154) | -36.3102 (37.0289) | -34.8091 (32.1748) | -11.5017* (5.9320) | -9.8632** (4.0963) |
| Observations | 473 | 471 | 473 | 471 | 473 | 471 |
| R-squared | 0.26 | 0.31 | 0.19 | 0.25 | 0.070 | 0.16 |

Table 5: **Economic interpretations of debt limit events.**

This table provides economic interpretations of debt limit events using time-series regressions and various monthly asset pricing variables. The right-hand-side variable equals one for debt ceiling event month and the previous month, and equals zero otherwise. Figure 4 shows that the debt ceiling events are frequent, typically once a year since 2009. The dependent variables in Columns (1)-(3) are Baker, Bloom, and Davis (2016)'s Economic Policy uncertainty variables that should capture perceived fundamental uncertainty related to fiscal policy, debt ceiling, and government shutdown; these EPU series are directly constructed and downloadable from https://www.policyuncertainty.com/categorical_epu.html. Columns (4)-(6) capture stock market risk and uncertainty according to the literature, such as Bekaert, Engstrom, and Xu (2022)'s risk aversion index (source: www.nancyxu.net), VIX (source: FRED/CBOE), and 22-day realized volatility, the square root of the sum of the daily return-squared within the same month as commonly constructed in the literature (source: authors' calculation; daily S&P500 returns obtained from the DataStream; unit is the same as VIX, i.e., annual volatility percent for comparison purpose). Panel B and C use the same specifications with year and quarter fixed effects, respectively. Robust standard errors are reported in parentheses. ***, p-value <1%; **, <5%; *, <10%.

| | (1) | (2) | (3) | (4) | (5) | (6) |
|---|-------------------------|--------------------------------|---------------------------------------|-----------------------|------------------------|------------------------|
| Dependent variable: | EPU Fiscal Policy | EPU Attributed to Debt Ceiling | EPU Attributed to Government Shutdown | Risk Aversion | VIX | RV |
| Panel A. Without any fixed effects. | | | | | | |
| is_debtlimit | 46.1706** (18.8417) | 1.9634** (0.9147) | 1.1277 (1.3039) | 0.1230 (0.1364) | 2.1909 (1.5880) | 2.8876 (1.9847) |
| Constant | 112.2147*** (6.3201) | 0.1302** (0.0506) | 0.3631** (0.1550) | 2.8884*** (0.0325) | 17.1709*** (0.5154) | 13.1406*** (0.5949) |
| Observations | 127 | 127 | 127 | 127 | 127 | 127 |
| R-squared | 0.064 | 0.14 | 0.021 | 0.014 | 0.022 | 0.027 |
| Panel B. With year fixed effects. | | | | | | |
| is_debtlimit | 40.7374*** (13.7480) | 1.6178** (0.7354) | 0.7741 (1.1127) | 0.0642 (0.1029) | 1.3420 (1.0706) | 2.1365 (1.6032) |
| Constant | 113.1987*** (4.5527) | 0.1928** (0.0907) | 0.4272** (0.1809) | 2.8990*** (0.0223) | 17.3246*** (0.3765) | 13.2767*** (0.5477) |
| Observations | 127 | 127 | 127 | 127 | 127 | 127 |
| R-squared | 0.52 | 0.30 | 0.16 | 0.50 | 0.55 | 0.32 |
| Panel C. With quarter fixed effects. | | | | | | |
| is_debtlimit | 41.3638** (20.1895) | 2.0295** (0.9267) | 1.1937 (1.3954) | 0.1353 (0.1352) | 2.2050 (1.6070) | 3.0365 (2.0362) |
| Constant | 113.0852*** (6.3100) | 0.1183* (0.0615) | 0.3512** (0.1660) | 2.8862*** (0.0316) | 17.1683*** (0.5098) | 13.1137*** (0.6020) |
| Observations | 127 | 127 | 127 | 45 | 127 | 127 |
| R-squared | 0.10 | 0.16 | 0.061 | 0.052 | 0.043 | 0.033 |

Table 6: **Mechanism Test: budgetary uncertainty, triggered by debt ceiling events.**

This table shows the interaction results using the three dependent variables. Panel A adds an interaction term with an indicator variable that equals one if a firm-quarter ends in debt limit event month and the month prior (source: [whitehouse.gov](https://www.whitehouse.gov)) and zero otherwise. Panel B adds an interaction term with the percentage change in the debt ceiling levels if a firm-quarter ends in debt limit event month and the month prior and zero otherwise. Detailed regression results of Panel A and Panel B are relegated to Appendix Table IB.8 and Appendix Table IB.9, respectively. Standard errors are double-clustered at the firm and quarter levels and are reported in parentheses. ***, p-value <1%; **, <5%; *, <10%.

| | | | | | | | | | |
|---|-----------|-----------|-----------|------------------|------------------|------------------|------------------|------------------|------------------|
| Year-Calendar Quarter FE: | | Yes | | | Yes | | | Yes | |
| NAICS2 FE: | Yes | Yes | | Yes | Yes | | Yes | Yes | |
| NAICS2 \times Quarter FE: | | | Yes | | | Yes | | | Yes |
| With Controls: | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
| Dependent variable: | Beat | Beat | Beat | SUE ₁ | SUE ₁ | SUE ₁ | SUE ₂ | SUE ₂ | SUE ₂ |
| Panel A. Measure with extensive margin: An indicator variable for the debt ceiling event period. | | | | | | | | | |
| ObligatedAmt/Revenue_past4qtr | 0.2670*** | 0.2578*** | 0.2591*** | 2.3769** | 2.2778** | 2.3031** | 0.1784 | 0.1669 | 0.1773 |
| | (0.0736) | (0.0713) | (0.0734) | (0.9421) | (0.9447) | (0.9392) | (0.1264) | (0.1235) | (0.1131) |
| is_debtlimit | -0.0079 | -0.0063 | -0.0072 | -0.0921 | 0.1092 | 0.0100 | -0.0171* | -0.0056 | -0.0079 |
| | (0.0102) | (0.0255) | (0.0267) | (0.1045) | (0.2598) | (0.3079) | (0.0101) | (0.0180) | (0.0209) |
| ObligatedAmt/Revenue_past4qtr \times is_debtlimit | 0.1195** | 0.1062* | 0.0621 | 2.0000** | 2.0060** | 1.8357** | 0.2531** | 0.2395** | 0.2015** |
| | (0.0572) | (0.0549) | (0.0773) | (0.7911) | (0.7984) | (0.7773) | (0.1058) | (0.1002) | (0.0906) |
| Observations | 16696 | 16696 | 16622 | 16298 | 16298 | 16218 | 16390 | 16390 | 16316 |
| R-squared | 0.055 | 0.063 | 0.11 | 0.076 | 0.083 | 0.12 | 0.023 | 0.030 | 0.077 |
| Panel B. Measure with intensive margin: Percent changes in the actual debt ceiling levels. | | | | | | | | | |
| ObligatedAmt/Revenue_past4qtr | 0.2679*** | 0.2576*** | 0.2562*** | 2.4817** | 2.3957** | 2.4243** | 0.1897 | 0.1773 | 0.1850* |
| | (0.0705) | (0.0681) | (0.0705) | (0.9251) | (0.9286) | (0.9268) | (0.1187) | (0.1166) | (0.1074) |
| % Changes in debt ceiling levels | 0.0002 | 0.0014 | 0.0009 | 0.0132 | 0.0349* | 0.0291 | -0.0013 | 0.0021 | 0.0012 |
| | (0.0019) | (0.0019) | (0.0020) | (0.0230) | (0.0200) | (0.0252) | (0.0021) | (0.0018) | (0.0021) |
| ObligatedAmt/Revenue_past4qtr \times % Changes in debt ceiling levels | 0.0224*** | 0.0223*** | 0.0167** | 0.2660*** | 0.2703*** | 0.2321*** | 0.0360** | 0.0360** | 0.0315** |
| | (0.0071) | (0.0073) | (0.0075) | (0.0648) | (0.0757) | (0.0732) | (0.0168) | (0.0164) | (0.0152) |
| Observations | 16696 | 16696 | 16622 | 16298 | 16298 | 16218 | 16390 | 16390 | 16316 |
| R-squared | 0.055 | 0.063 | 0.11 | 0.076 | 0.083 | 0.12 | 0.023 | 0.030 | 0.077 |

Table 7: **Mechanism Robustness: budgetary uncertainty.**

This table complements Table 6 and adds an interaction term with the monthly average EPU attributed to debt ceiling mentions in the news article.

$$\text{EPU Attributed to Debt Ceiling} = \left(\frac{\text{EPU with debt ceiling}}{\text{EPU}} - 1 \right) \times \text{EPU},$$

where the right-hand-side EPU variables are Baker, Bloom, and Davis (2016)'s Economic Policy uncertainty variables that are directly downloadable from https://www.policyuncertainty.com/categorical_epu.html. Robust evidence with alternative interaction term construction is relegated to Table IB.10. Standard errors are double-clustered at the firm and quarter levels and are reported in parentheses. ***, p-value <1%; **, <5%; *, <10%.

| | | | | | | | | | |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|---------------------|---------------------|---------------------|
| Year-Calendar Quarter FE: | | Yes | | | Yes | | | Yes | |
| NAICS2 FE: | Yes | Yes | | Yes | Yes | | Yes | Yes | |
| NAICS2 × Quarter FE: | | | Yes | | | Yes | | | Yes |
| With Controls: | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
| Dependent variable: | Beat | Beat | Beat | SUE ₁ | SUE ₁ | SUE ₁ | SUE ₂ | SUE ₂ | SUE ₂ |
| ObligatedAmt/Revenue_past4qtr | 0.2633*** (0.0707) | 0.2559*** (0.0684) | 0.2471*** (0.0708) | 2.4251** (0.9714) | 2.3561** (0.9741) | 2.3558** (0.9678) | 0.1993* (0.1153) | 0.1899 (0.1127) | 0.1940* (0.1037) |
| Monthly Average EPU Attributed to Debt Ceiling | -0.0016 (0.0026) | -0.0014 (0.0077) | -0.0051 (0.0059) | -0.0279 (0.0284) | 0.1115* (0.0596) | 0.0926 (0.0678) | -0.0006 (0.0028) | -0.0118 (0.0148) | -0.0153 (0.0148) |
| ObligatedAmt/Revenue_past4qtr × Monthly Average EPU Attributed to Debt Ceiling | 0.0281*** (0.0086) | 0.0235*** (0.0074) | 0.0274*** (0.0079) | 0.3498*** (0.0945) | 0.3004*** (0.0957) | 0.2995*** (0.0961) | 0.0228* (0.0130) | 0.0198 (0.0154) | 0.0202 (0.0167) |
| Observations | 16696 | 16696 | 16622 | 16298 | 16298 | 16218 | 16390 | 16390 | 16316 |
| R-squared | 0.055 | 0.063 | 0.11 | 0.076 | 0.083 | 0.12 | 0.023 | 0.030 | 0.077 |

Table 8: **Cumulative Abnormal Returns on earnings announcement days.**

This table examines fiscal exposure's predictability on cumulative abnormal returns of our panel framework.

$$\text{Log}(1 + \text{CAR}_{m1to1})_{i,t} = \gamma_t \times \alpha_{d(i)} + \beta \text{Procurement}_{i,t} + \boldsymbol{\delta} \mathbf{X}_{i,t} + \varepsilon_{i,t},$$

where i denotes a firm and t denotes a quarter. $\text{Log}(1 + \text{CAR}_{m1to1})_{i,t}$ is the logarithm of one plus cumulative abnormal (absolute) return over CRSP value-weighted market return from day -1 to day 1 around earnings announcement for firm i quarter t .] $\text{Procurement}_{i,t}$ is the (obligated) transaction amount from procurement contracts a firm i receives from the government during quarter t , scaled by the firm's past 4 quarter revenue. $\mathbf{X}_{i,t}$ denote the same series of control variables that used in Table 1. γ_t ($\alpha_{d(i)}$) indicates quarter (industry) fixed effects. Standard errors for columns (1)-(5) are double-clustered at the firm and quarter levels and are reported in parentheses. ***, p-value <1%; **, <5%; *, <10%.

| | | | | | | |
|-------------------------------|----------------------|---------------------|--------------------|----------------------|---------------------|--------------------|
| NAICS2 FE | Yes | Yes | | Yes | Yes | |
| Year-Calendar Quarter FE | | Yes | | | Yes | |
| NAICS2 x Quarter FE | | | Yes | | | Yes |
| With Controls | | | | Yes | Yes | Yes |
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Dependent variable: | Log(1+CAR_m1to1) | | | | | |
| ObligatedAmt/Revenue_past4qtr | 0.0152** (0.0069) | 0.0129* (0.0069) | 0.0114 (0.0073) | 0.0142** (0.0066) | 0.0130* (0.0066) | 0.0117 (0.0071) |
| Observations | 16734 | 16734 | 16660 | 16693 | 16693 | 16619 |
| R-squared | 0.0020 | 0.0074 | 0.054 | 0.0043 | 0.0094 | 0.055 |

Table 9: **Announcement vs. Non-Announcement Day Stock Excess Returns.**

This table examines the impact of fiscal exposure on stock excess returns around earnings announcement day.

$$aRet_{i,\tau} = \gamma_{t(\tau)} \times \alpha_i + \beta_1 \text{Procurement}_{i,t(\tau)-1} + \beta_2 I_{i,ann.} + \beta_3 I_{i,ann.} \text{Procurement}_{i,t(\tau)-1} + \varepsilon_{i,\tau},$$

where $aRet_{i,\tau}$ represents the logarithm of abnormal returns for stock i on trading day τ , computed as the difference between the daily logarithmic stock return and the CRSP daily logarithmic value-weighted market return (including distributions). $\text{Procurement}_{i,t(\tau)-1}$ reflects the procurement exposure from the last fiscal quarter, and $t(\cdot)$ denotes quarters. $I_{i,ann.}$ is an indicator variable for the announcement period, defined over a [-1d, 1d] window, with Day 0 corresponding to the earnings announcement date. $\gamma_{t(\tau)} \times \alpha_i$ indicates various sets of fixed effects. Returns are in unit of percentage. Standard errors are double-clustered at the firm and quarter levels and are reported in parentheses. ***, p-value <1%; **, <5%; *, <10%.

| | | | | | | |
|--|--------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Firm FE | | | | | Yes | Yes |
| NAICS2 FE | | Yes | Yes | | | |
| Year-Calendar Quarter FE | Yes | | Yes | | | Yes |
| NAICS2 x Quarter FE | | | | Yes | | |
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Dependent variable: | Log Excess Return $\times 100$ | | | | | |
| ObligatedAmt/Revenue_past4qtr | -0.0351 (0.0402) | -0.0058 (0.0398) | -0.0219 (0.0367) | -0.0237 (0.0367) | 0.0125 (0.0898) | -0.0471 (0.0739) |
| Dummy(In Announcement Day -1 to 1 Window) | 0.0106 (0.0290) | 0.0108 (0.0290) | 0.0106 (0.0290) | 0.0106 (0.0290) | 0.0108 (0.0290) | 0.0106 (0.0291) |
| ObligatedAmt/Revenue_past4qtr \times Dummy(In Announcement Day -1 to 1 Window) | 0.5446*** (0.1515) | 0.5438*** (0.1513) | 0.5446*** (0.1515) | 0.5452*** (0.1512) | 0.5437*** (0.1513) | 0.5445*** (0.1523) |
| Constant | -0.0010 (0.0015) | -0.0016 (0.0052) | -0.0012 (0.0015) | -0.0012 (0.0015) | -0.0020 (0.0047) | -0.0007 (0.0025) |
| Observations | 1030270 | 1030270 | 1030270 | 1030270 | 1030270 | 1030270 |
| R-squared | 0.00043 | 0.000071 | 0.00047 | 0.0020 | 0.00048 | 0.00088 |

Table 10: **Mechanism Test: Lack of Analyst Attention to Government Contracts.**

This table shows whether the cross-firm variation in predictability (from previous tables) can be explained by analyst attention to firms' government contract exposures. Specifically, we construct 2 firm-quarter measures using detailed earnings call transcripts. For each earnings call transcript (firm-time level), we first construct two measures of analyst mentions of government: (A) number of words in paragraphs spoken by analysts that mention "government contracts" or "procurement contracts" divided by total number of words in the transcript excluding operator words, (B) and that divided by total number of words in the transcript excluding operator words that are spoken by analysts. Then, for each firm, "Analyst_measure1" is the average of (A) and "Analyst_measure2" is the average of (B). Results at the firm-quarter level with controls are relegated to Appendix Table [IB.11](#). Robust standard errors are reported in parentheses. ***, p-value <1%; **, <5%; *, <10%.

| NAICS2 FE: | Yes | Yes | Yes | Yes |
|--|----------------------|-----------------------|----------------------|----------------------|
| With Controls: | Yes | Yes | Yes | Yes |
| | (1) | (2) | (3) | (4) |
| Dependent variable: | Beat | | | |
| ObligatedAmt/Revenue_past4qtr | 0.3356** (0.1673) | 0.3420** (0.1651) | 0.3473** (0.1762) | 0.3687** (0.1729) |
| Analyst_mention1 | 1.3365 (3.2404) | 1.5575 (3.0449) | | |
| ObligatedAmt/Revenue_past4qtr × Analyst_mention1 | -2.6421 (31.6769) | -10.7303 (31.0956) | | |
| Analyst_mention2 | | | 0.3599 (0.5492) | 0.4666 (0.5331) |
| ObligatedAmt/Revenue_past4qtr × Analyst_mention2 | | | -1.3802 (5.5642) | -3.3823 (5.5365) |
| Observations | 472 | 471 | 472 | 471 |
| R-squared | 0.25 | 0.30 | 0.25 | 0.30 |

Paper Appendices

A Detailed proof of model in Section 2

(a). Notations.

We first clarify time stamps in the model. Time stamp t always denotes when events arrive. In our context, actual earnings of the last period $t - 1$ are announced at time t , so firm actual earnings in period $t - 1$ is denoted as $X_{t(t-1)}$, or X_t for simplicity in the rest of the model. Analyst earnings forecast has information set $t - 1$ but median forecasts are elicited at time t , so analyst forecast of a firm's cash flow in period $t - 1$ is denoted as $X_{t(t-1)}^F$, or X_t^F for simplicity in the rest of the model. Without loss of generality, we ignore firm indicator i for brevity.

(b). Analyst problem.

Analysts solve the following minimization problem:

$$\min_{X_t^F} \mathbb{E}_{t-1} \left[(X_t - X_t^F)^2 + 48\lambda \mathbf{1}_{X_t^F > X_t} \frac{(X_t^F - X_t)^2}{(X_t^F - \min(X_t))^2} \right], \quad (\text{A1})$$

where $\lambda (> 1)$ captures the loss aversion of investors/clients. $X_t - X_t^F$ denotes realized earnings surprise. $\frac{48}{(X_t^F - \min(X_t))^2}$ are scaling parameters in order to obtain a closed-form solution under uniform distributed shock assumptions.

(c). Data generating process (for closed-form solution).

Actual earnings of period $t - 1$ announced at time t , $X_{t(t-1)}$ or X_t , which is a flow variable, consists of two components: earnings made by retail sales R_t , and earnings paid by government from existing procurement contracts G_t ,

$$X_t = R_t + \kappa G_t, \quad (\text{A2})$$

where κ (which would have a superscript i) measures the fiscal dependence of the firm. In the longer term, $\frac{\kappa \bar{G}}{R + \kappa \bar{G}}$ corresponds to the fiscal dependence, which is the measure we use in our empirical section.

For simplicity, we assume that analysts can collect sufficient information about retail sales and can form rational expectation about $R_{t(t-1)}$ or R_t with uncertainty following a uniform distribution,

$$R_t = \bar{R} + \eta_t, \text{ where } \eta_t \sim U(-1, 1). \quad (\text{A3})$$

The conditional mean and variance values are then $\mathbb{E}_{t-1}[R_t] = \bar{R}$, $\mathbb{E}_{t-1}[\eta_t^2] = \frac{1}{3}$.

For government spending during period $t-1$ and known by time t , without loss of generality, we assume that $G_{t(t-1)}$ or G_t has (1) a known smoothing component G_{t-1} (which is government spending during period $t-2$ and known by time $t-1$), (2) a *true* spending deviation from previous period D_{t-1} (which under perfectly timely disclosure and precision of information of these transactions is known during period $t-1$), and (3) an error term ϵ_t :

$$G_t = G_{t-1} + D_{t-1} + \epsilon_t, \quad (\text{A4})$$

$$\epsilon_t \sim U\left(-\frac{\phi}{K}, \frac{\phi}{K}\right). \quad (\text{A5})$$

The error term ϵ_t is core to our model. Parameter ϕ measures the relative risk associated with fiscal spending; in our context, this means that government could change or terminate contracts. Intuitively, higher ϕ indicates higher fiscal uncertainty. Parameter K controls for how precise the *true* spending deviation D_{t-1} is known to analysts. Intuitively, as K goes to ∞ , analysts know precise information. Lastly, we assume $E(D_{t-1}) = 0$ and denote $E(G_t) = \bar{G}$. The conditional mean and variance values are then $\mathbb{E}_{t-1}[G_t] = G_{t-1} + D_{t-1}$, $\mathbb{E}_{t-1}[(\epsilon_t)^2] = \frac{\phi^2}{3K^2}$. Both shocks η_t and ϵ_t i.i.d. from each other.

(d). Solving minimizing problem.

Process X_t can be rewritten as

$$X_t = \bar{R} + \kappa G_{t-1} + \kappa D_{t-1} + \eta_t + \kappa \epsilon_t. \quad (\text{A6})$$

After substituting the X_t process to Equation (A1), our minimization problem can be expanded as:

$$\begin{aligned} \min_{X_t^F} & \underbrace{\mathbb{E}_{t-1} \left[(\bar{R} + \kappa G_{t-1} + \kappa D_{t-1} + \eta_t + \kappa \epsilon_t - X_t^F)^2 \right]}_{\text{Part 1}} \\ & + \underbrace{\mathbb{E}_{t-1} \left[48\lambda \mathbf{1}_{X_t^F > \bar{R} + \kappa G_{t-1} + \kappa D_{t-1} + \eta_t + \kappa \epsilon_t} \frac{(X_t^F - \bar{R} - \kappa G_{t-1} - \kappa D_{t-1} - \eta_t - \kappa \epsilon_t)^2}{(X_t^F - \bar{R} - \kappa G_{t-1} - \kappa D_{t-1} - 1 - \kappa \phi/K)^2} \right]}_{\text{Part 2}}. \end{aligned}$$

- Part 1: The first quadratic loss term can be easily derived as $(\bar{R} + \kappa G_{t-1} + \kappa D_{t-1} - X_t^F)^2 + \frac{1}{3}(1 + \kappa^2 \phi^2 / K^2)$.
- Part 2: The second penalty term has the following closed-form solution: $\lambda \cdot \frac{(X_t^F - \bar{R} - \kappa G_{t-1} - \kappa D_{t-1} + \kappa \phi / K + 1)^2}{\kappa \phi / K}$. We provide the proof next:

- The relevant range is $X_t^F > \bar{R} + \kappa G_{t-1} + \kappa D_{t-1} + \eta_t + \kappa \epsilon_t$. One should integrate only over the range where this condition holds. η_t and ϵ_t are independent, with $f_\eta(\eta_t) = \frac{1}{2} \forall \eta_t \in [-1, 1]$ and $f_\epsilon(\epsilon_t) = \frac{K}{2\phi} \forall \epsilon_t \in [-\frac{\phi}{K}, \frac{\phi}{K}]$. The joint PDF is $f_{\eta,\epsilon}(\eta_t, \epsilon_t) = f_\eta(\eta_t) \cdot f_\epsilon(\epsilon_t) = \frac{K}{4\phi}$, $(\eta_t, \epsilon_t) \in [-1, 1] \times [-\frac{\phi}{K}, \frac{\phi}{K}]$.
- Define $C = \bar{R} + \kappa G_{t-1} + \kappa D_{t-1}$. The double integral question becomes:

$$\text{Part 2} = \tag{A7}$$

$$\frac{48\lambda K}{4\phi(X_t^F - C + 1 + \kappa\phi/K)^2} \cdot \underbrace{\int_{-\frac{\phi}{K}}^{\frac{X_t^F - C + 1}{\kappa}} \int_{-1}^{X_t^F - C - \kappa\epsilon_t} (X_t^F - C - \eta_t - \kappa\epsilon_t)^2 d\eta_t d\epsilon_t}_{\text{Part 2.1}}$$

And Part 2.1 can be solved as follows:

$$\begin{aligned} \text{Part 2.1} &= \int_{-1}^{X_t^F - C - \kappa\epsilon_t} (X_t^F - C - \eta_t - \kappa\epsilon_t)^2 d\eta_t \\ &= \int_{-1}^{X_t^F - C - \kappa\epsilon_t} (X_t^F - C - \kappa\epsilon_t)^2 d\eta_t + \int_{-1}^{X_t^F - C - \kappa\epsilon_t} -2(X_t^F - C - \kappa\epsilon_t) \eta_t d\eta_t \\ &\quad + \int_{-1}^{X_t^F - C - \kappa\epsilon_t} \eta_t^2 d\eta_t \\ &= (X_t^F - C - \kappa\epsilon_t)^2 ((X_t^F - C - \kappa\epsilon_t) + 1) \\ &\quad - (X_t^F - C - \kappa\epsilon_t) \left[(X_t^F - C - \kappa\epsilon_t)^2 - 1 \right] \\ &\quad + \frac{1}{3} \left[(X_t^F - C - \kappa\epsilon_t)^3 - (-1)^3 \right] \\ &= \frac{1}{3} (X_t^F - C - \kappa\epsilon_t + 1)^3 \end{aligned} \tag{A8}$$

We then substitute Equation (A8) back to Equation (A7), and define $A = X_t^F - C + 1$. The second integral can be solved:

$$\text{Part 2} = \frac{48\lambda K}{4\phi(A + \kappa\phi/K)^2} \cdot \underbrace{\frac{1}{3} \cdot \int_{-\frac{\phi}{K}}^{A/\kappa} (A - \kappa\epsilon_t)^3 d\epsilon_t}_{\text{Part 2.2}}. \tag{A9}$$

And Part 2.2 can be solved as follows:

$$\begin{aligned}
\text{Part 2.2} &= \int_{-\frac{\phi}{K}}^{A/\kappa} (A - \kappa\epsilon_t)^3 d\epsilon_t \\
&= \int_{-\frac{\phi}{K}}^{A/\kappa} A^3 - 3A^2\kappa\epsilon_t + 3A\kappa^2\epsilon_t^2 - \kappa^3\epsilon_t^3 d\epsilon_t \\
&= A^3 \left(\frac{A}{\kappa} + \frac{\phi}{K} \right) - \frac{3}{2}A^2\kappa \left(\frac{A^2}{\kappa^2} - \frac{\phi^2}{K^2} \right) + A\kappa^2 \left(\frac{A^3}{\kappa^3} + \frac{\phi^3}{K^3} \right) - \frac{\kappa^3}{4} \left(\frac{A^4}{\kappa^4} - \frac{\phi^4}{K^4} \right) \\
&= \frac{1}{4\kappa}A^4 + \frac{\phi}{K}A^3 + \frac{3}{2}\kappa\left(\frac{\phi}{K}\right)^2A^2 + \kappa^2\left(\frac{\phi}{K}\right)^3A + \frac{\kappa^3}{4}\left(\frac{\phi}{K}\right)^4 \\
&= \frac{1}{4\kappa} \left(A + \frac{\kappa\phi}{K} \right)^4. \tag{A10}
\end{aligned}$$

– Finally, we then substitute Equation (A10) back to Equation (A9) and obtain:

$$\text{Part 2} = \lambda \cdot \frac{(X_t^F - \bar{R} - \kappa G_{t-1} - \kappa D_{t-1} + \kappa\phi/K + 1)^2}{\kappa\phi/K}. \tag{A11}$$

As a result, the objective function can be further simplified into:

$$\begin{aligned}
\min_{X_t^F} &\left[(\bar{R} + \kappa G_{t-1} + \kappa D_{t-1} - X_t^F)^2 + \frac{1}{3} \left(1 + \frac{\kappa^2\phi^2}{K^2} \right) \right. \\
&\quad \left. + \lambda \cdot \frac{(X_t^F - \bar{R} - \kappa G_{t-1} - \kappa D_{t-1} + \frac{\kappa\phi}{K} + 1)^2}{\frac{\kappa\phi}{K}} \right].
\end{aligned}$$

The first-order condition is obtained by differentiating this with respect to X_t^F :

$$-2(\bar{R} + \kappa G_{t-1} + \kappa D_{t-1} - X_t^F) + \frac{2\lambda}{\kappa\phi/K} (X_t^F - \bar{R} - \kappa G_{t-1} - \kappa D_{t-1} + \kappa\phi/K + 1) = 0. \tag{A12}$$

$$2(\bar{R} + \kappa G_{t-1} + \kappa D_{t-1} - X_t^F) = \frac{2\lambda}{\kappa\phi/K} (X_t^F - \bar{R} - \kappa G_{t-1} - \kappa D_{t-1} + \kappa\phi/K + 1). \tag{A13}$$

$$X_t^F = \frac{(\kappa G_{t-1} + \kappa D_{t-1} + \bar{R})(2 + \lambda/(\kappa\phi/K)) - \frac{\lambda(\kappa\phi/K + 1)}{\kappa\phi/K}}{2 + \lambda/(\kappa\phi/K)}. \tag{A14}$$

(e). The forecast bias variable.

The expected bias can be derived as a closed-form function, $\text{Surprise}_t(\kappa, \lambda, \phi, K)$:

$$\text{Surprise}_t(\kappa, \lambda, \phi, K) = \bar{R} + \kappa G_{t-1} + \kappa D_{t-1} - X_t^F, \quad (\text{A15})$$

$$= \frac{\lambda(1 + \kappa\phi/K)}{\lambda + \kappa\phi/K} > 0. \quad (\text{A16})$$

Prediction 1: *It is always optimal to underestimate the earnings, as $\kappa, \phi, K > 0$ and $\lambda > 1$.*

(f). Testable predictions.

First, we study the relationship between fiscal dependence κ and Bias. The derivative of Bias with respect to κ , $\frac{\partial \text{Surprise}}{\partial \kappa}$, becomes:

$$\frac{\partial \text{Surprise}}{\partial \kappa} = \frac{\lambda(\lambda - 1)\phi/K}{(\lambda + \kappa\phi/K)^2} > 0. \quad (\text{A17})$$

Prediction 2: *The earnings surprises or biases monotonically increase with fiscal exposure κ , as long as $\lambda > 1$.*

Next, we study how $\frac{\partial \text{Surprise}}{\partial \kappa}$ change with uncertainty ϕ and information precision K , one at a time, more explicitly. We use $g(\phi)$ to denote $\frac{\lambda(\lambda-1)\phi/K}{(\lambda+\kappa\phi/K)^2}$ and differentiate $g(\phi)$ with respect to ϕ using the quotient rule. The numerator is:

$$f(\phi) = \lambda(\lambda - 1)\phi/K,$$

and the denominator is:

$$h(\phi) = (\lambda + \kappa\phi/K)^2.$$

The quotient rule gives:

$$\begin{aligned} \frac{dg}{d\phi} &= \frac{f'(\phi)h(\phi) - f(\phi)h'(\phi)}{h(\phi)^2}, \\ &= \frac{\frac{\lambda(\lambda-1)}{K}(\lambda + \kappa\phi/K)^2 - \frac{\lambda(\lambda-1)\phi}{K} \cdot 2(\lambda + \kappa\phi/K) \cdot \frac{\kappa}{K}}{(\lambda + \kappa\phi/K)^4} \\ &= \frac{\frac{\lambda(\lambda-1)}{K}(\lambda + \kappa\phi/K) \left[\lambda + \kappa\phi/K - \frac{2\phi\kappa}{K} \right]}{(\lambda + \kappa\phi/K)^4}, \\ &= \frac{\frac{\lambda(\lambda-1)}{K}(\lambda + \kappa\phi/K) \left[\lambda - \frac{\phi\kappa}{K} \right]}{(\lambda + \kappa\phi/K)^4}. \end{aligned}$$

The denominator of $\frac{dg}{d\phi}$, $\frac{\lambda(\lambda-1)}{K}$, and $(\lambda + \kappa\phi/K)$ are always positive. The key term

in the numerator is $\lambda - \frac{\phi\kappa}{K}$. Thus, $\frac{dg}{d\phi}$ is positive if:

$$\lambda > \frac{\phi\kappa}{K}.$$

When λ (loss aversion) is sufficiently large relative to $\phi\kappa/K$ (which can be interpreted as scaled fiscal uncertainty), the predictability of fiscal exposure to earnings surprises or biases (the derivative of the Bias with respect to κ) increases with ϕ . This is likely the case as empirically κ typically is < 0.1 and we observe timely transaction data being posted (i.e., large K).

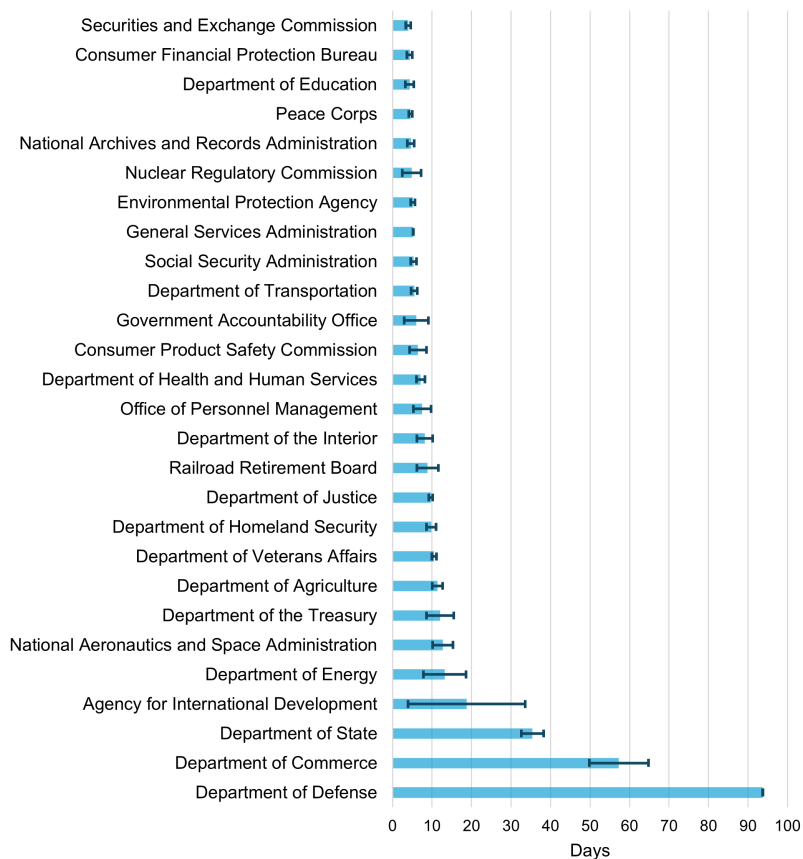
Prediction 3: *Under reasonable parameter assumptions, the predictability of fiscal exposure to earnings surprises or biases should **increase** with fiscal uncertainty.*

We then use $g(K)$ to denote $\frac{\lambda(\lambda-1)\phi/K}{(\lambda+\kappa\phi/K)^2}$ and differentiate $g(K)$ with respect to K using the quotient rule. Using the quotient rule, let $f(K) = \lambda(\lambda-1)\phi/K$, $h(K) = (\lambda + \kappa\phi/K)^2$. The derivative is:

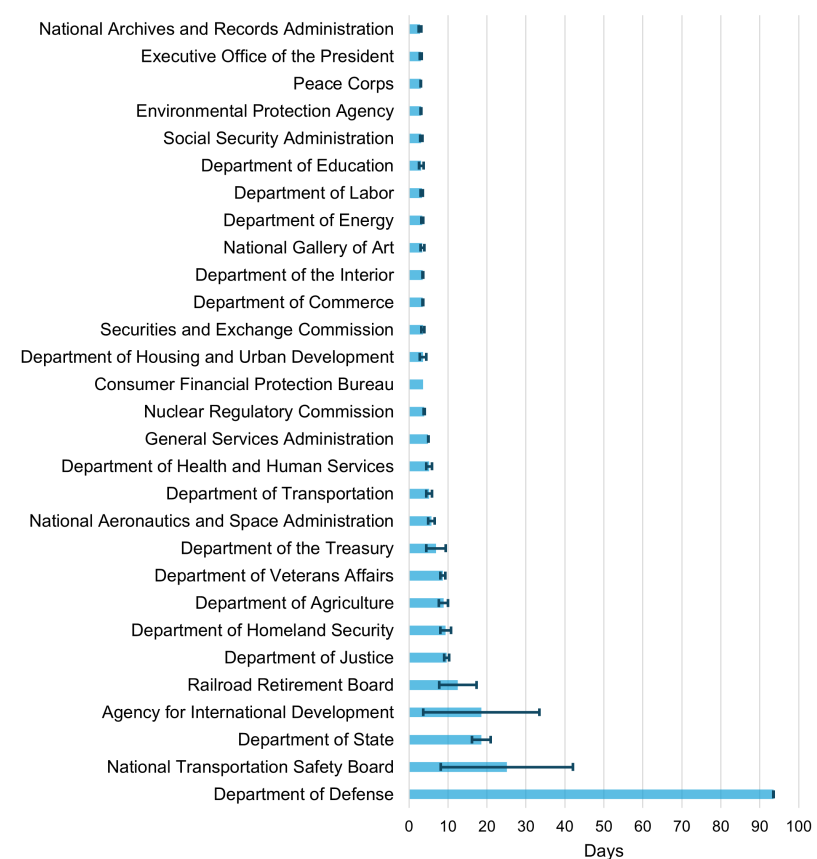
$$\begin{aligned} \frac{dg}{dK} &= \frac{f'(K)h(K) - f(K)h'(K)}{h(K)^2}, \\ &= \frac{\left(-\frac{\lambda(\lambda-1)\phi}{K^2}\right)(\lambda + \kappa\phi/K)^2 - \left(\frac{\lambda(\lambda-1)\phi}{K}\right)\left(2(\lambda + \kappa\phi/K) \cdot \frac{-\kappa\phi}{K^2}\right)}{(\lambda + \kappa\phi/K)^4}, \\ &= \frac{-\frac{\lambda(\lambda-1)\phi}{K^2}(\lambda + \kappa\phi/K)(\lambda - \frac{\kappa\phi}{K})}{(\lambda + \kappa\phi/K)^4}. \end{aligned}$$

The denominator and $(\lambda + \kappa\phi/K)$ is always positive. $(\lambda - \frac{\kappa\phi}{K})$ is positive if $\lambda > \frac{\kappa\phi}{K}$, which is typically satisfied under reasonable parameter values, as also assumed to derive Prediction 3 (see above). Finally, $-\frac{\lambda(\lambda-1)\phi}{K^2}$ is negative if $\lambda > 1$, which is also the general assumption. As a result, $\frac{dg}{dK}$ is negative.

Prediction 4: *Under reasonable parameter assumptions, the predictability of fiscal exposure to earnings surprises or biases should **decrease** with information precision.*



A. Scraping exercise #1: 10/1/2023–1/18/2024



B. Scraping exercise #2: 8/8/2024–11/5/2024

Figure A1: **Two scraping exercises: Average delay (in days) of transaction data being published on [USAspending.gov](https://www.usaspending.gov), sorted by agency.** We discuss the technical details in Section 3.2. In short, on each day, we scrape the entire domain of [USAspending.gov](https://www.usaspending.gov); as a result, we capture incremental transactions added and calculate the delay differences in real time. To produce this figure, we sort the transactions by award agencies. The bar chart shows average and its 95% confidence interval.

Table A1: **Changes in contract terms and budgetary uncertainty periods.**

For each contract-month, calculate the potential award amount change from month-begin to month-end and use *amount increase* to indicate the direction of the change. Specifically, *amount increase* equals to 1, 0 and -1 indicate an increase, no change and a decrease in the contract amount, respectively. Amount Increase Ratio 1 is calculated by averaging *amount increase* within each firm-month, and then take the average across firms for each month. Amount Increase Ratio 2 is the average *amount increase* for each month. Robust standard errors are reported in parentheses. ***, p-value <1%; **, <5%; *, <10%.

| Quarter FE | | Yes | | Yes |
|--|-------------------------|-------------------------|-------------------------|-------------------------|
| | (1) | (2) | (3) | (4) |
| Dependent variable: | Amount Increase Ratio 1 | Amount Increase Ratio 1 | Amount Increase Ratio 2 | Amount Increase Ratio 2 |
| Panel A. EPU related to fiscal policy | | | | |
| EPU Fiscal Policy / 10000 | -0.0318*** (0.0111) | -0.0319** (0.0144) | -0.0074*** (0.0025) | -0.0077*** (0.0027) |
| Constant | 0.0010*** (0.0003) | 0.0010*** (0.0003) | 0.0002*** (0.0000) | 0.0002*** (0.0000) |
| Observations | 127 | 127 | 127 | 127 |
| R-squared | 0.013 | 0.018 | 0.046 | 0.049 |
| Panel B. EPU related to government spending | | | | |
| EPU Fiscal Policy: Spending / 10000 | -0.0330*** (0.0094) | -0.0339*** (0.0109) | -0.0065*** (0.0017) | -0.0067*** (0.0017) |
| Constant | 0.0010*** (0.0003) | 0.0010*** (0.0003) | 0.0002*** (0.0000) | 0.0002*** (0.0000) |
| Observations | 127 | 127 | 127 | 127 |
| R-squared | 0.040 | 0.046 | 0.099 | 0.10 |
| Panel C. EPU attributed to debt ceilings | | | | |
| EPU Attributed to Debt Ceiling / 10000 | -0.7056** (0.3086) | -0.7916** (0.3809) | -0.1377* (0.0720) | -0.1460* (0.0745) |
| Constant | 0.0006*** (0.0002) | 0.0006*** (0.0002) | 0.0001*** (0.0000) | 0.0001*** (0.0000) |
| Observations | 127 | 127 | 127 | 127 |
| R-squared | 0.0056 | 0.012 | 0.013 | 0.017 |

Table A2: Summary statistics in main results.

| | Count | Mean | SD | Min | p5 | p25 | p50 | p75 | p95 | Max |
|--|-------|--------|-------|---------|--------|--------|--------|--------|--------|--------|
| Panel A. Variables used in the main panel specification (2009/06-2019/12) | | | | | | | | | | |
| Beat | 19027 | 0.663 | 0.473 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| SUE ₁ | 18602 | 1.255 | 3.756 | -60.000 | -3.250 | -0.200 | 1.000 | 2.667 | 6.667 | 76.000 |
| SUE ₂ | 18710 | 0.067 | 0.543 | -14.152 | -0.390 | -0.011 | 0.044 | 0.161 | 0.608 | 13.757 |
| ObligatedAmt/Revenue_past4qtr | 16737 | 0.021 | 0.064 | 0.000 | 0.000 | 0.000 | 0.001 | 0.008 | 0.133 | 0.504 |
| Non-DoD ObligatedAmt/Revenue_past4qtr | 16702 | 0.004 | 0.013 | 0.000 | 0.000 | 0.000 | 0.000 | 0.002 | 0.027 | 0.102 |
| Log(1+MarketCap) | 19027 | 22.237 | 1.766 | 16.782 | 19.420 | 20.979 | 22.156 | 23.437 | 25.356 | 27.702 |
| Log(1+Book-to-Market) | 19027 | 0.402 | 0.231 | 0.001 | 0.097 | 0.236 | 0.365 | 0.537 | 0.809 | 3.450 |
| Log(1+Ret_m61tom12) | 19021 | 0.025 | 0.124 | -1.216 | -0.181 | -0.038 | 0.031 | 0.093 | 0.206 | 1.093 |
| Log(1+Ret_m6tom2) | 19024 | 0.003 | 0.040 | -0.685 | -0.060 | -0.016 | 0.005 | 0.024 | 0.062 | 0.264 |
| Log(1+InstitutionOwnPct) | 19027 | 0.586 | 0.099 | 0.000 | 0.412 | 0.534 | 0.604 | 0.654 | 0.707 | 1.786 |
| Log(1+IVOL_m11tom2) | 19023 | 0.016 | 0.009 | 0.002 | 0.006 | 0.010 | 0.014 | 0.019 | 0.032 | 0.197 |
| Log(1+TOV_m61tom12) | 19021 | 0.008 | 0.005 | 0.000 | 0.003 | 0.005 | 0.007 | 0.009 | 0.016 | 0.150 |
| Panel B. Variables used in the main cross-sectional specification | | | | | | | | | | |
| Beat | 474 | 0.660 | 0.154 | 0.235 | 0.395 | 0.558 | 0.674 | 0.767 | 0.907 | 1.000 |
| SUE ₁ | 474 | 1.240 | 1.328 | -4.397 | -0.695 | 0.484 | 1.114 | 1.829 | 3.566 | 9.169 |
| SUE ₂ | 474 | 0.068 | 0.147 | -0.700 | -0.133 | 0.020 | 0.059 | 0.116 | 0.288 | 0.786 |
| ObligatedAmt/Revenue_past4qtr | 474 | 0.021 | 0.054 | 0.000 | 0.000 | 0.000 | 0.002 | 0.013 | 0.133 | 0.321 |
| Non-DoD ObligatedAmt/Revenue_past4qtr | 474 | 0.004 | 0.011 | 0.000 | 0.000 | 0.000 | 0.001 | 0.003 | 0.025 | 0.065 |
| Log(1+MarketCap) | 474 | 22.182 | 1.725 | 17.992 | 19.350 | 20.875 | 22.155 | 23.399 | 25.222 | 26.901 |
| Log(1+Book-to-Market) | 474 | 0.403 | 0.196 | 0.026 | 0.120 | 0.259 | 0.378 | 0.523 | 0.761 | 1.438 |
| Log(1+Ret_m61tom12) | 474 | 0.024 | 0.019 | -0.099 | -0.004 | 0.014 | 0.026 | 0.036 | 0.051 | 0.084 |
| Log(1+Ret_m6tom2) | 474 | 0.003 | 0.008 | -0.038 | -0.010 | -0.001 | 0.004 | 0.007 | 0.015 | 0.028 |
| Log(1+InstitutionOwnPct) | 474 | 0.584 | 0.090 | 0.185 | 0.428 | 0.531 | 0.602 | 0.650 | 0.695 | 0.752 |
| Log(1+IVOL_m11tom2) | 474 | 0.016 | 0.005 | 0.007 | 0.009 | 0.012 | 0.015 | 0.019 | 0.025 | 0.035 |
| Log(1+TOV_m61tom12) | 474 | 0.008 | 0.003 | 0.002 | 0.004 | 0.005 | 0.007 | 0.009 | 0.014 | 0.029 |
| Panel C. Interaction variables | | | | | | | | | | |
| Renegotiation Index | 473 | 0.238 | 0.052 | 0.013 | 0.172 | 0.211 | 0.231 | 0.264 | 0.324 | 0.467 |
| is_debtlimit | 19027 | 0.124 | 0.330 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 1.000 | 1.000 |
| % Changes in debt ceiling levels | 19027 | 0.617 | 2.247 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 3.400 | 29.170 |
| Monthly Average EPU Attributed to Debt Ceiling (within each firm-quarter) | 19027 | 0.472 | 1.663 | 0.000 | 0.000 | 0.000 | 0.028 | 0.180 | 1.431 | 10.087 |
| Monthly Average Risk Aversion (within each firm-quarter) | 19027 | 2.920 | 0.376 | 2.505 | 2.546 | 2.670 | 2.818 | 3.000 | 3.630 | 4.305 |
| Monthly Average VIX (within each firm-quarter) | 19027 | 17.592 | 5.229 | 10.093 | 10.833 | 14.683 | 15.817 | 19.430 | 29.553 | 34.847 |
| Monthly Average RV (within each firm-quarter) | 19027 | 13.754 | 5.664 | 5.977 | 7.151 | 10.226 | 12.302 | 15.896 | 26.101 | 36.102 |

Internet Appendices for “Fiscal Risk Perception”

IA Data Appendix

This appendix section complements and provides more details on the material covered in Section 3.

IA.1 USAspending.gov

We construct our database and conduct our scraping experiments from this public domain: <https://www.usaspending.gov/>. Section 3 provided some detailed explanations to help the reading of the main draft. In this internet appendix, we present raw interfaces and discuss other downloading details for future replications and extension work.

Key variables for each award:

- award unique identifier
- awarding agency
- funding agency
- award start date: the start of the entire contract period of performance
- award end date
 - For “Contract” type award, the field name is “Period of Performance Potential End Date”, official definition: The date that the award ends, as agreed upon by the parties involved after exercising any pre-determined extension options. Note that the latest transaction for the award (known as the Latest Transaction Action Date) may be different than this date. Administrative actions related to this award may continue to occur after the Period of Performance Potential End Date. The Period of Performance Potential End Date does not apply to Contract Indefinite Delivery Vehicles under which Definitive Contracts may be awarded.
 - For “IDVs” type award, the field name is “Ordering Period End Date”, official definition: For procurement, the date on which, for the award referred to by the action being reported, no additional orders referring to it may be placed. This date applies only to procurement indefinite delivery vehicles (such as indefinite delivery contracts or blanket purchase agreements). Administrative actions related to this award may continue to occur after this date. The period of performance end dates for procurement orders issued under the indefinite delivery vehicle may extend beyond this date.
- potential award amount (official definition: the total amount that could be obligated on a contract, if the base and all options are exercised.)

Key variables for each transaction:

- transaction unique identifier
- action date
- federal_action_obligation (“Amount”)

In general, for each firm, we observe three groups of information at the transaction level: firm specifics, transaction obligated amounts, awarding agency and timing. <https://www.usaspending.gov/recipient/53927ae0-321e-4c80-2dc9-430ca5135e33-P/latest> In Figures IA.1, IA.2, IA.3 below, we show overview webpages of three distinct companies: Boeing receives annual transactions around 16 billion dollars from procurement contracts and 92% of them come from one single agency, Department of Defense; AT&T receives annual transactions around 168 million dollars and the awarding agencies are quite evenly distributed, whereas ARCHER-DANIELS-MIDLAND COMPANY receives similar amount but the awards are 100% coming from Department of Agriculture.

THE BOEING COMPANY

Also known by 20 other names ▶

Overview

PARENT RECIPIENT View child recipients ▶

Total Awarded Amount
\$15.8 Billion
from 14,050 transactions

[View awards to this recipient](#)

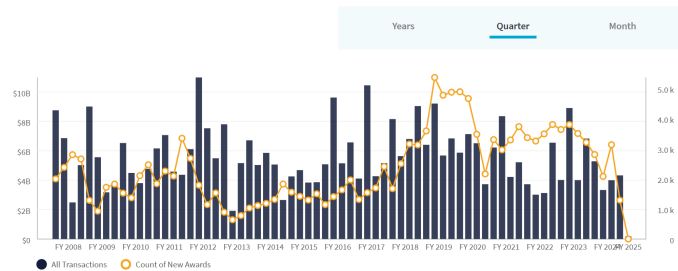
Face Value of Loans ⓘ
\$0
from 0 transactions

Details

| | |
|------------------------|--|
| Recipient Identifier | NU2UC8MXGNK1 (UEI ⓘ) 009256819 (Legacy DUNS ⓘ) |
| Address | 929 LONG BRIDGE DR ARLINGTON, VA UNITED STATES 22202-4208 |
| Congressional District | VA-08 ⓘ |
| Business Types | Business Corporate Entity Not Tax Exempt Manufacturer of Goods Other Than Small Business Special Designations U.S. Owned Business |

Transactions Over Time

This graph shows trends over time for all transactions to this recipient. Hover over the bars for more detailed information.



Top 5

The set of tables below provide a summary of awards to this recipient through multiple angles. To see more than the top 5, you can visit our [Advanced Search](#) page.

Awarding Agencies

| Name | Obligations | % of Total |
|-------------------------------------|-------------|------------|
| 1. Department of Defense (DOD) | \$14.60B | 92.24% |
| 2. National Aeronautics and Sp... | \$1.20B | 7.55% |
| 3. Department of Homeland Se... | \$16.18M | 0.1% |
| 4. General Services Administrati... | \$8.63M | 0.05% |
| 5. Department of Energy (DOE) | \$3.77M | 0.02% |

Awarding Sub-Agencies

| Name | Obligations | % of Total |
|--------------------------------------|-------------|------------|
| 1. Department of the Air Force (...) | \$9.62B | 60.81% |
| 2. Department of the Navy (USN) | \$3.59B | 22.71% |
| 3. National Aeronautics and Sp... | \$1.20B | 7.55% |
| 4. Defense Logistics Agency (DLA) | \$406.12M | 2.57% |
| 5. Department of the Army (USA) | \$386.11M | 2.44% |

Federal Accounts

| Name | Obligations | % of Total |
|-------------------------------------|-------------|------------|
| 1. 057-3600 - Research, Develop... | \$2.93B | 18.5% |
| 2. 057-3010 - Aircraft Procurem... | \$2.51B | 15.88% |
| 3. 057-3400 - Operation and Mai... | \$2.47B | 15.6% |
| 4. 080-0124 - Exploration, Natio... | \$1.17B | 7.4% |
| 5. 097-4930 - Department of Def... | \$609.52M | 3.85% |

Assistance Listings (CFDA Programs)

| Name | Obligations | % of Total |
|--------------------------------------|-------------|------------|
| 1. 43.002 - Aeronautics | \$13.43M | 0.08% |
| 2. 81.135 - Advanced Research ... | \$3.32M | 0.02% |
| 3. 12.431 - Basic Scientific Rese... | \$1.37M | 0.01% |
| 4. 81.086 - Conservation Resear... | \$0 | 0% |
| 5. 12.630 - Basic, Applied, and A... | -\$390,000 | 0% |

NAICS Codes

| Name | Obligations | % of Total |
|--------------------------------------|-------------|------------|
| 1. 336411 - Aircraft Manufacturing | \$10.78B | 68.11% |
| 2. 336414 - Guided Missile and ... | \$1.09B | 6.88% |
| 3. 336413 - Other Aircraft Parts ... | \$835.72M | 5.28% |
| 4. 336412 - Aircraft Engine and ... | \$642.74M | 4.06% |
| 5. 541330 - Engineering Services | \$545.39M | 3.45% |

Product Service Codes

| Name | Obligations | % of Total |
|----------------------------------|-------------|------------|
| 1. 1510 - AIRCRAFT, FIXED WING | \$7.70B | 48.66% |
| 2. 1560 - AIRFRAME STRUCTUR... | \$1.36B | 8.61% |
| 3. AR11 - R&D- SPACE: AERONA... | \$868.99M | 5.49% |
| 4. 1520 - AIRCRAFT, ROTARY WING | \$557.92M | 3.53% |
| 5. R499 - SUPPORT- PROFESSION... | \$552.68M | 3.49% |

Countries

| Name | Obligations | % of Total |
|--------|-------------|------------|
| 1. USA | \$15.79B | 99.76% |
| 2. CAN | \$32.15M | 0.2% |
| 3. KWT | \$4.75M | 0.03% |
| 4. SAU | \$691,000 | 0% |
| 5. AUS | \$171,594 | 0% |

U.S. States or Territories

| Name | Obligations | % of Total |
|-------|-------------|------------|
| 1. MO | \$6.26B | 39.57% |
| 2. WA | \$5.07B | 32.05% |
| 3. AL | \$1.21B | 7.62% |
| 4. CA | \$771.79M | 4.88% |
| 5. OK | \$751.46M | 4.75% |

Figure IA.1: Boeing webpage: <https://www.usaspending.gov/recipient/419ccd27-d6f4-d363-aeaf-b9e2c3ae6f5d-P/latest>

AT&T INC.

Also known by 28 other names ▶



Overview

PARENT RECIPIENT View child recipients ▶

Total Awarded Amount

\$168.3 Million

from 2,524 transactions

[View awards to this recipient](#)

Face Value of Loans ⓘ

\$0

from 0 transactions

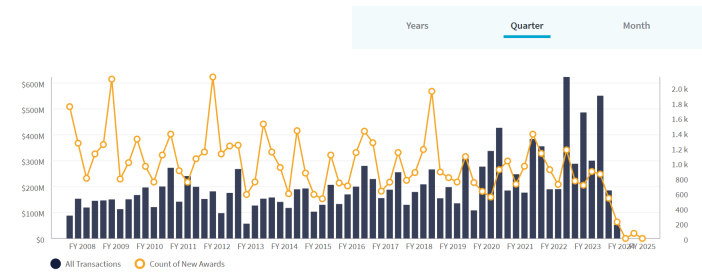
Details

| | |
|------------------------|--|
| Recipient Identifier | FYZWKUHGUSW4 (UEI ⓘ) 108024050 (Legacy DUNS ⓘ) |
| Address | 208 S AKARD ST DALLAS, TX UNITED STATES 75202-4295 |
| Congressional District | TX-30 |
| Business Types | Business Other Than Small Business Special Designations U.S. Owned Business |



Transactions Over Time

This graph shows trends over time for all transactions to this recipient. Hover over the bars for more detailed information.



Top 5

The set of tables below provide a summary of awards to this recipient through multiple angles. To see more than the top 5, you can visit our [Advanced Search page](#).



Awarding Agencies

| Name | Obligations | % of Total |
|------------------------------------|-------------|------------|
| 1. Department of Justice (DOJ) | \$76.18M | 45.26% |
| 2. Department of Agriculture (U... | \$41.21M | 24.48% |
| 3. Department of Defense (DOD) | \$33.77M | 20.06% |
| 4. Federal Communications Co... | \$31.49M | 18.71% |
| 5. Department of State (DOS) | \$6.01M | 3.57% |



Awarding Sub-Agencies

| Name | Obligations | % of Total |
|--------------------------------------|-------------|------------|
| 1. Offices, Boards and Divisions | \$76.17M | 45.25% |
| 2. Office of the Chief Financial ... | \$41.21M | 24.48% |
| 3. Federal Communications Co... | \$31.49M | 18.71% |
| 4. Defense Information Systems... | \$15.35M | 9.12% |
| 5. Defense Health Agency (DHA) | \$12.57M | 7.47% |



Federal Accounts

| Name | Obligations | % of Total |
|-------------------------------------|-------------|------------|
| 1. 015-0134 - Justice Informatio... | \$76.17M | 45.25% |
| 2. 015-4526 - Working Capital F... | \$76.17M | 45.25% |
| 3. 012-4609 - Working Capital F... | \$41.21M | 24.48% |
| 4. 027-1911 - Affordable Connec... | \$25.25M | 15% |
| 5. 097-0130 - Defense Health Pr... | \$12.66M | 7.52% |



Assistance Listings (CFDA Programs)

| Name | Obligations | % of Total |
|-------------------------------------|-------------|------------|
| 1. 32.008 - Affordable Connectiv... | \$25.25M | 15% |
| 2. 32.004 - UNIVERSAL SERVICE ... | \$4.98M | 2.96% |
| 3. 32.005 - UNIVERSAL SERVICE ... | \$183,987 | 0.11% |
| 4. 32.009 - Emergency Connecti... | -\$102,345 | -0.06% |



NAICS Codes

| Name | Obligations | % of Total |
|-----------------------------------|-------------|------------|
| 1. 517110 - Wired Telecommuni... | \$60.80M | 36.12% |
| 2. -- | \$44.39M | 26.37% |
| 3. 541512 - Computer Systems ... | \$12.57M | 7.47% |
| 4. 517311 - Wired Telecommuni... | \$10.74M | 6.38% |
| 5. 517919 - All Other Telecomm... | \$5.33M | 3.17% |



Product Service Codes

| Name | Obligations | % of Total |
|----------------------------------|-------------|------------|
| 1. D399 - IT AND TELECOM- OTH... | \$76.25M | 45.3% |
| 2. -- | \$43.76M | 26% |
| 3. R408 - SUPPORT-PROFESSIO... | \$12.57M | 7.47% |
| 4. -- | \$11.60M | 6.89% |
| 5. -- | \$6.01M | 3.57% |



Countries

| Name | Obligations | % of Total |
|--------|-------------|------------|
| 1. USA | \$168.32M | 100% |
| 2. DEU | \$6,722 | 0% |



U.S. States or Territories

| Name | Obligations | % of Total |
|-------|-------------|------------|
| 1. DC | \$87.95M | 52.25% |
| 2. CO | \$41.18M | 24.46% |
| 3. CA | \$22.72M | 13.49% |
| 4. VA | \$6.05M | 3.6% |
| 5. TN | \$2.24M | 1.33% |

Figure IA.2: AT&T webpage: <https://www.usaspending.gov/recipient/53927ae0-321e-4c80-2dc9-430ca5135e33-P/latest>

ARCHER-DANIELS-MIDLAND COMPANY

Also known by 5 other names ▶

Overview

PARENT RECIPIENT View child recipients ▶

Total Awarded Amount

\$128.8 Million

from 70 transactions

[View awards to this recipient](#)

Face Value of Loans ⓘ

\$0

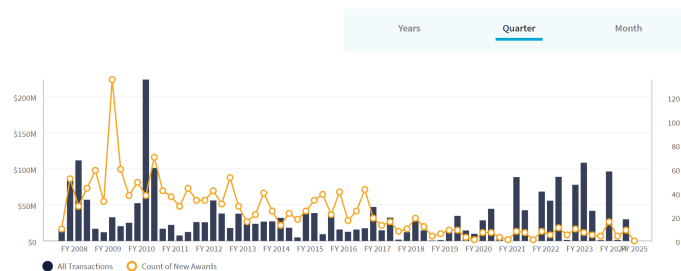
from 0 transactions

Details

| | |
|------------------------|--|
| Recipient Identifier | N1EULGP2USK3 (UEI ⓘ) 001307586 (Legacy DUNS ⓘ) |
| Address | 77 W WACKER DR STE 4600 CHICAGO, IL UNITED STATES 60601-1667 |
| Congressional District | IL-07 ⓘ |
| Business Types | Business Corporate Entity Not Tax Exempt Manufacturer of Goods Other Than Small Business Special Designations U.S. Owned Business |

Transactions Over Time

This graph shows trends over time for all transactions to this recipient. Hover over the bars for more detailed information.



Top 5

The set of tables below provide a summary of awards to this recipient through multiple angles. To see more than the top 5, you can visit our [Advanced Search page](#).

Awarding Agencies

| Name | Obligations | % of Total |
|---|-------------|------------|
| 1. Department of Agriculture (U.S. ...) | \$128.84M | 100% |

Awarding Sub-Agencies

| Name | Obligations | % of Total |
|--------------------------------------|-------------|------------|
| 1. Agricultural Marketing Service... | \$128.84M | 100% |
| 2. Agricultural Research Service... | -\$936 | 0% |

Federal Accounts

| Name | Obligations | % of Total |
|-------------------------------------|-------------|------------|
| 1. 012-3539 - Child Nutrition Pr... | \$4.11M | 3.19% |
| 2. 012-2903 - McGovern-Dole In... | \$1.31M | 1.02% |
| 3. 012-3505 - Supplemental Nut... | \$156,350 | 0.12% |
| 4. 012-1400 - Salaries and Expe... | -\$936 | 0% |

NAICS Codes

| Name | Obligations | % of Total |
|--|-------------|------------|
| 1. 311999 - All Other Miscellaneous... | \$50.37M | 39.09% |
| 2. 311224 - Soybean and Other ... | \$42.61M | 33.07% |
| 3. 311212 - Rice Milling | \$29.50M | 22.9% |
| 4. 311211 - Flour Milling | \$6.36M | 4.94% |
| 5. 311119 - Other Animal Food ... | -\$936 | 0% |

Product Service Codes

| Name | Obligations | % of Total |
|----------------------------------|-------------|------------|
| 1. 8945 - FOOD, OILS AND FATS | \$92.98M | 72.17% |
| 2. 8920 - BAKERY AND CEREAL P... | \$35.86M | 27.83% |
| 3. 8710 - FORAGE AND FEED | -\$936 | 0% |

Countries

| Name | Obligations | % of Total |
|--------|-------------|------------|
| 1. USA | \$128.84M | 100% |

U.S. States or Territories

| Name | Obligations | % of Total |
|-------|-------------|------------|
| 1. LA | \$79.99M | 62.08% |
| 2. TX | \$42.49M | 32.98% |
| 3. IN | \$2.03M | 1.58% |
| 4. KS | \$1.76M | 1.37% |
| 5. TN | \$1.57M | 1.22% |

Figure IA.3: ARCHER-DANIELS-MIDLAND COMPANY webpage: <https://www.usaspending.gov/recipient/ef6337ce-be34-980c-d110-5c0e70f2a666-P/latest>

IB Additional Tables and Figures

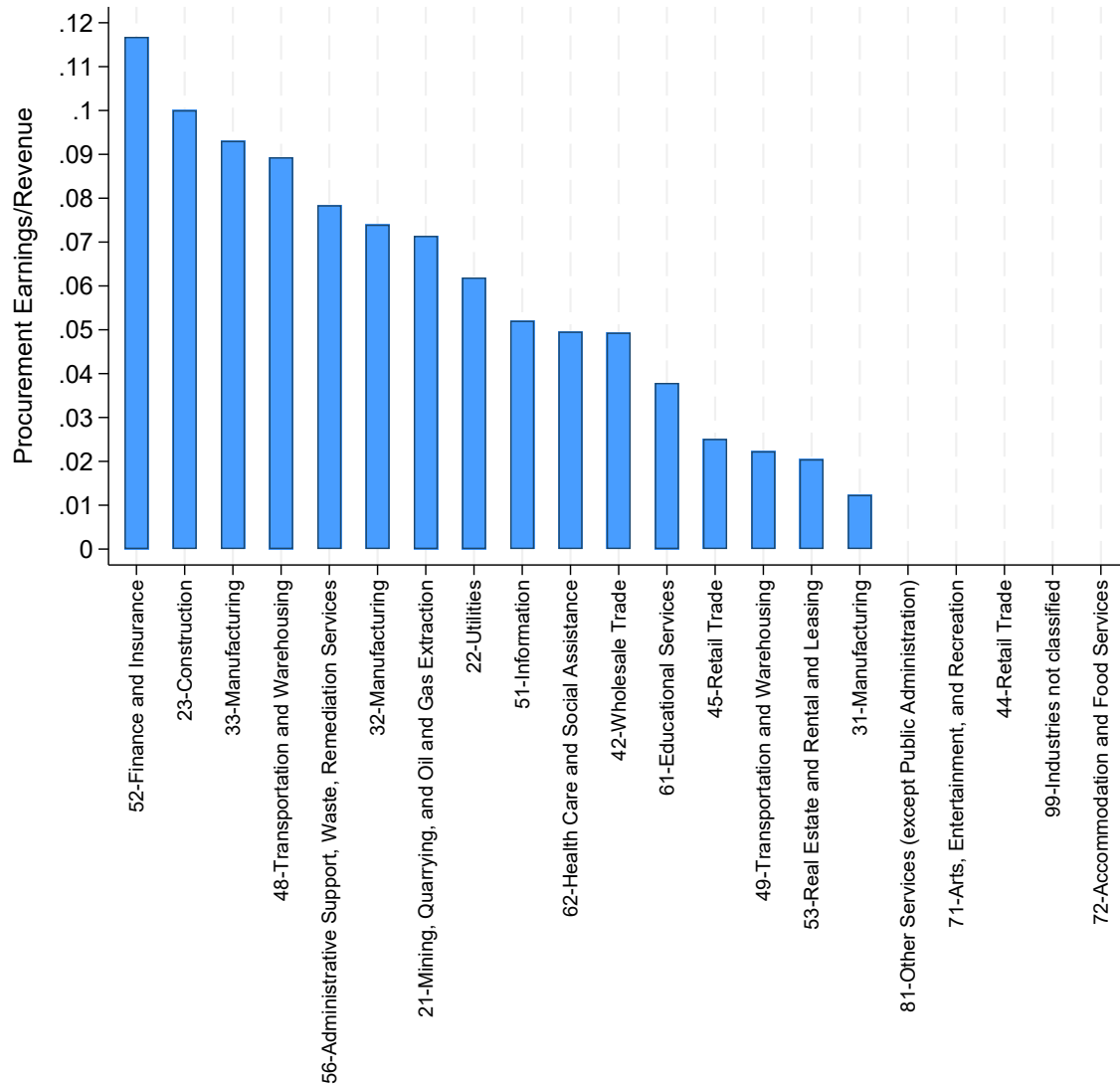


Figure IB.1: **Where are large transactions going to?** The figure uses the larger 25% firm-quarter transactions, and each bar calculates average firm-quarter $\text{Procurement}_{i,t}$ for each industry using data from this subsample. The x-axis denotes the industry classification; the left y-axis corresponds to the fraction of procurement earnings scaled by average revenue in the past 4 quarters (as in the paper). Figure 1 in the main draft shows the full sample result.

Table IB.1: Descriptions of variables used in Tables 1 and 2.

| Variables | Construction details |
|---------------------------------------|---|
| Beat | An indicator variable equalling 1 when actual EPS is above the final analysts' consensus estimate and 0 otherwise. |
| SUE ₁ | Actual EPS minus the median estimated EPS (by analyst), scaled by the mean of the standard deviations of the analyst estimates for the current quarter and the previous quarter. |
| SUE ₁₁ | Actual EPS minus the mean of estimated EPS (by analyst), scaled by the mean of the standard deviations of the analyst estimates for the current quarter and the previous quarter. |
| SUE ₁₂ | Actual EPS minus the median estimated EPS (by analyst), scaled by the mean of the standard deviations of the analyst estimates for the current quarter. |
| SUE ₂ | Actual EPS minus the mean of estimated EPS (by analyst), scaled by the quarter-end stock price. |
| SUE ₂₁ | Actual EPS minus the median estimated EPS (by analyst), scaled by the quarter-end stock price. |
| ObligatedAmt | Total obligated amount received within each firm-fiscal quarter. |
| ObligatedAmt/Revenue | Total obligated amount scaled by quarterly revenue. |
| ObligatedAmt/Revenue_past2qtr | Total obligated amount scaled by the average revenue in the past two quarters. |
| ObligatedAmt/Revenue_past4qtr | Total obligated amount scaled by the average revenue in the past four quarters. |
| Non-DoD ObligatedAmt/Revenue_past4qtr | Total obligated amount sponsored by agencies other than the Department of Defense, scaled by the average revenue in the past four quarters. |
| MarketCap | Previous quarter-end market capitalization. |
| Book-to-Market | Previous quarter-end book-to-market ratio. |

(Continuation of Table [IB.1](#))

| Variables | Construction details |
|----------------------------------|--|
| Ret_m61tom12 | Buy-and-hold return from day -61 to -12 before earnings announcement day. |
| Ret_m6tom2 | Buy-and-hold return from day -6 to -2 before earnings announcement day. |
| InstitutionOwnPct | Percentage of shares held by institutions at the previous quarter-end. |
| IVOL_m11tom2 | Standard deviation of daily stock returns between day -11 and -2 before earnings announcement. |
| TOV_m61tom12 | Stock turnover ratio between day -61 to -12 before earnings announcement. |
| Analyst_measure1 | Words in <i>paragraphs</i> spoken by analysts that mention “government contracts” or “procurement contracts” (or their variations), divided by total number of words in the transcript (excluding operator words). |
| Analyst_measure2 | Words in <i>paragraphs</i> spoken by analysts that mention “government contracts” or “procurement contracts” (or their variations), divided by total number of words spoken by analysts. |
| Analyst_measure3 | Same as “Analyst_measure1” except using <i>speaker blocks</i> rather than paragraphs. |
| Analyst_measure4 | Same as “Analyst_measure2” except using <i>speaker blocks</i> rather than paragraphs. |
| is_debtlimit | An indicator variable that equals one if a firm-quarter ends in debt limit event month and the month prior and zero otherwise. |
| % Changes in debt ceiling levels | Percentage change in the debt ceiling levels if a firm-quarter ends in debt limit event month and the month prior and zero otherwise. |

(End of Table [IB.1](#))

Table IB.2: Robustness to the sample choices.

| Firm FE | | | | | | | | | |
|-------------------------------|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------------------|----------------------|----------------------|
| NAICS2 FE | Yes | Yes | | Yes | Yes | | Yes | Yes | |
| Year-Calendar Quarter FE | | Yes | | | Yes | | | Yes | |
| NAICS2 times Quarter FE | | | Yes | | | Yes | | | Yes |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
| | Beat | Beat | Beat | SUE ₁ | SUE ₁ | SUE ₁ | SUE ₂ | SUE ₂ | SUE ₂ |
| | Include only firms that have transactions for at least 15 quarters | | | | | | | | |
| ObligatedAmt/Revenue_past4qtr | 0.2725*** (0.0702) | 0.2608*** (0.0682) | 0.2578*** (0.0703) | 2.6409*** (0.9656) | 2.5327** (0.9687) | 2.5443** (0.9613) | 0.2232** (0.1078) | 0.2098* (0.1065) | 0.2118** (0.0990) |
| | Include only firms that have transactions for at least 16 quarters | | | | | | | | |
| ObligatedAmt/Revenue_past4qtr | 0.2884*** (0.0699) | 0.2747*** (0.0676) | 0.2711*** (0.0698) | 2.7280*** (0.9747) | 2.6170** (0.9780) | 2.6277** (0.9720) | 0.2359** (0.1107) | 0.2222** (0.1091) | 0.2270** (0.1021) |
| | Include only firms that have transactions for at least 17 quarters | | | | | | | | |
| ObligatedAmt/Revenue_past4qtr | 0.2787*** (0.0702) | 0.2659*** (0.0676) | 0.2626*** (0.0694) | 2.6934*** (0.9771) | 2.5797** (0.9795) | 2.5863** (0.9729) | 0.2201* (0.1150) | 0.2075* (0.1132) | 0.2126** (0.1049) |
| | Include only firms that have transactions for at least 18 quarters | | | | | | | | |
| ObligatedAmt/Revenue_past4qtr | 0.2838*** (0.0701) | 0.2703*** (0.0674) | 0.2678*** (0.0693) | 2.7274*** (0.9737) | 2.6068** (0.9755) | 2.6132** (0.9701) | 0.2260* (0.1145) | 0.2109* (0.1124) | 0.2179** (0.1036) |
| | Include only firms that have transactions for at least 19 quarters | | | | | | | | |
| ObligatedAmt/Revenue_past4qtr | 0.2850*** (0.0697) | 0.2728*** (0.0669) | 0.2699*** (0.0688) | 2.7310*** (0.9729) | 2.6143** (0.9753) | 2.6178** (0.9693) | 0.2264* (0.1142) | 0.2113* (0.1121) | 0.2172** (0.1032) |
| | Include only firms that have transactions for at least 20 quarters | | | | | | | | |
| ObligatedAmt/Revenue_past4qtr | 0.2859*** (0.0682) | 0.2752*** (0.0654) | 0.2693*** (0.0675) | 2.7181*** (0.9502) | 2.6157*** (0.9518) | 2.6106*** (0.9473) | 0.2158* (0.1135) | 0.2026* (0.1116) | 0.2069* (0.1028) |
| | Include only firms that have transactions for at least 21 quarters (our main result sample) | | | | | | | | |
| ObligatedAmt/Revenue_past4qtr | 0.2860*** (0.0665) | 0.2752*** (0.0638) | 0.2693*** (0.0657) | 2.7052*** (0.9197) | 2.6122*** (0.9207) | 2.6074*** (0.9151) | 0.2173* (0.1113) | 0.2051* (0.1094) | 0.2093** (0.1009) |
| | Include only firms that have transactions for at least 22 quarters | | | | | | | | |
| ObligatedAmt/Revenue_past4qtr | 0.2766*** (0.0668) | 0.2665*** (0.0642) | 0.2586*** (0.0661) | 2.5958*** (0.9217) | 2.5224*** (0.9212) | 2.5116*** (0.9156) | 0.2095* (0.1140) | 0.2001* (0.1119) | 0.2029* (0.1038) |
| | Include only firms that have transactions for at least 23 quarters | | | | | | | | |
| ObligatedAmt/Revenue_past4qtr | 0.2710*** (0.0682) | 0.2592*** (0.0657) | 0.2507*** (0.0676) | 2.5415*** (0.9347) | 2.4498** (0.9342) | 2.4500** (0.9297) | 0.2155* (0.1144) | 0.2036* (0.1126) | 0.2115** (0.1040) |
| | Include only firms that have transactions for at least 24 quarters | | | | | | | | |
| ObligatedAmt/Revenue_past4qtr | 0.2661*** (0.0679) | 0.2544*** (0.0655) | 0.2458*** (0.0674) | 2.5012*** (0.9181) | 2.4100** (0.9162) | 2.4051** (0.9123) | 0.2102* (0.1142) | 0.2001* (0.1123) | 0.2070* (0.1037) |
| | Include only firms that have transactions for at least 25 quarters | | | | | | | | |
| ObligatedAmt/Revenue_past4qtr | 0.2618*** (0.0672) | 0.2498*** (0.0648) | 0.2420*** (0.0666) | 2.4631*** (0.8822) | 2.3611** (0.8814) | 2.3479** (0.8768) | 0.2106* (0.1085) | 0.1994* (0.1069) | 0.2051** (0.0988) |
| | Include only firms that have transactions for at least 26 quarters | | | | | | | | |
| ObligatedAmt/Revenue_past4qtr | 0.2568*** (0.0663) | 0.2442*** (0.0640) | 0.2364*** (0.0654) | 2.3936*** (0.8758) | 2.2933** (0.8748) | 2.2720** (0.8690) | 0.2053* (0.1078) | 0.1938* (0.1062) | 0.1982* (0.0980) |
| | Include only firms that have transactions for at least 27 quarters | | | | | | | | |
| ObligatedAmt/Revenue_past4qtr | 0.2568*** (0.0643) | 0.2437*** (0.0621) | 0.2361*** (0.0636) | 2.3351*** (0.8537) | 2.2348** (0.8541) | 2.2107** (0.8468) | 0.1998* (0.1052) | 0.1878* (0.1039) | 0.1920* (0.0959) |

Table IB.3: Detailed Regression Results for Panel B, Table 2.

| | | | | | | |
|-------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|------------------------|------------------------|
| Year-Calendar Quarter FE | | Yes | | | Yes | |
| NAICS2 FE | Yes | Yes | | Yes | Yes | |
| NAICS2 x Quarter FE | | | Yes | | | Yes |
| With Controls | | | | Yes | Yes | Yes |
| | (1) | (2) | (3) | (4) | (5) | (6) |
| <i>Dependent variable:</i> | <i>Beat</i> | | | | | |
| ObligatedAmt/Revenue.past4qtr | 0.2570*** (0.0886) | 0.2434*** (0.0873) | 0.2479*** (0.0896) | 0.2162*** (0.0724) | 0.1886*** (0.0694) | 0.1896** (0.0714) |
| Log(1+MarketCap) | | | | 0.0327*** (0.0059) | 0.0343*** (0.0063) | 0.0345*** (0.0062) |
| Log(1+Book-to-Market) | | | | -0.0462 (0.0475) | -0.0363 (0.0503) | -0.0462 (0.0543) |
| Log(1+Ret_m61tom12) | | | | 0.1291* (0.0741) | 0.2192*** (0.0628) | 0.1951*** (0.0613) |
| Log(1+Ret_m6tom2) | | | | 0.8580*** (0.1278) | 0.7705*** (0.1158) | 0.7658*** (0.1318) |
| Log(1+InstitutionOwnPct) | | | | 0.4465*** (0.1335) | 0.5397*** (0.1235) | 0.5557*** (0.1292) |
| Log(1+IVOL_m11tom2) | | | | 0.4202 (0.8163) | 0.0708 (0.7637) | 0.0794 (0.8277) |
| Log(1+TOV_m61tom12) | | | | 0.4365 (2.3399) | -0.4178 (2.0125) | -0.3836 (2.1198) |
| L.Beat | | | | 0.1325*** (0.0153) | 0.1241*** (0.0153) | 0.1290*** (0.0155) |
| Constant | 0.6917*** (0.0130) | 0.6921*** (0.0096) | 0.6935*** (0.0099) | -0.4134** (0.1729) | -0.4932*** (0.1803) | -0.5057*** (0.1790) |
| Observations | 6943 | 6943 | 6812 | 6941 | 6941 | 6810 |
| R-squared | 0.018 | 0.031 | 0.100 | 0.056 | 0.067 | 0.14 |

Table IB.4: **Robustness to Panel D, Table 2**, where we use SUE₁₁, SUE₁₂, and SUE₂₁ as the right-hand-side variables. Detailed variable definition can be found in Table IB.1.

| Year-Calendar Quarter FE | Yes | Yes | | | Yes | | | Yes | |
|-------------------------------|-----------------------|------------------------|------------------------|------------------------|------------------------|------------------------|----------------------|-----------------------|----------------------|
| NAICS2 FE | Yes | Yes | | Yes | Yes | | Yes | Yes | |
| NAICS2 x Quarter FE | | | Yes | | | Yes | | | Yes |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
| Dependent variable: | SUE ₁₁ | SUE ₁₁ | SUE ₁₁ | SUE ₁₂ | SUE ₁₂ | SUE ₁₂ | SUE ₂₁ | SUE ₂₁ | SUE ₂₁ |
| ObligatedAmt/Revenue_past4qtr | 2.7103*** (0.9109) | 2.6166*** (0.9114) | 2.6151*** (0.9052) | 2.8414*** (1.0289) | 2.7247** (1.0244) | 2.6706** (1.0238) | 0.2267* (0.1134) | 0.2143* (0.1115) | 0.2161** (0.1027) |
| Log(1+MarketCap) | 0.0817*** (0.0275) | 0.0790*** (0.0287) | 0.0804*** (0.0288) | 0.1176*** (0.0292) | 0.1159*** (0.0294) | 0.1183*** (0.0291) | -0.0067* (0.0038) | -0.0062 (0.0040) | -0.0056 (0.0040) |
| Log(1+Book-to-Market) | -0.3843* (0.2193) | -0.3194 (0.2281) | -0.3368 (0.2364) | -0.3616 (0.2226) | -0.3193 (0.2302) | -0.3386 (0.2391) | 0.0047 (0.0527) | 0.0070 (0.0540) | 0.0050 (0.0549) |
| Log(1+Ret_m61tom12) | 1.1738*** (0.3755) | 1.5212*** (0.3267) | 1.3198*** (0.3599) | 0.8704** (0.3635) | 1.1198*** (0.3254) | 0.9060** (0.3503) | 0.1107 (0.0733) | 0.1737** (0.0819) | 0.1648* (0.0832) |
| Log(1+Ret_m6tom2) | 4.6119*** (0.9591) | 4.5391*** (0.9611) | 4.5756*** (1.0079) | 4.6163*** (1.1249) | 4.4944*** (1.1083) | 4.3721*** (1.1695) | 0.8229** (0.3287) | 0.8675*** (0.3136) | 0.7830** (0.2893) |
| Log(1+InstitutionOwnPct) | 1.2747** (0.5065) | 1.4729*** (0.4798) | 1.5050*** (0.5035) | 1.2543** (0.4900) | 1.4870*** (0.4772) | 1.4771*** (0.5005) | -0.0793 (0.0535) | -0.0314 (0.0473) | -0.0652 (0.0514) |
| Log(1+IVOL_m11tom2) | -9.5211** (4.3273) | -12.8188** (4.9955) | -11.8441** (5.4199) | -8.3350 (5.1043) | -11.3619** (5.3725) | -11.0071* (5.6742) | -2.0665 (1.2751) | -2.5493* (1.4211) | -2.1946 (1.4191) |
| Log(1+TOV_m61tom12) | 6.0884 (9.8063) | 1.2818 (9.8277) | -0.4669 (9.9756) | 4.8979 (11.1638) | 0.1453 (11.1126) | -0.6082 (11.4723) | 4.3360** (2.1308) | 3.5365* (1.9160) | 3.7931** (1.8382) |
| L.SUE ₁₁ | 0.2116*** (0.0147) | 0.2070*** (0.0149) | 0.2088*** (0.0150) | | | | | | |
| L.SUE ₁₂ | | | | 0.1723*** (0.0166) | 0.1674*** (0.0166) | 0.1691*** (0.0166) | | | |
| L.SUE ₂₁ | | | | | | | 0.0678 (0.0538) | 0.0649 (0.0533) | 0.0741 (0.0522) |
| Constant | -1.4485* (0.7742) | -1.4418* (0.7889) | -1.4816* (0.8107) | -2.1609*** (0.7766) | -2.1912*** (0.7844) | -2.2239*** (0.7954) | 0.2426** (0.1170) | 0.2132* (0.1214) | 0.2137* (0.1228) |
| Observations | 16298 | 16298 | 16218 | 15678 | 15678 | 15589 | 16390 | 16390 | 16316 |
| R-squared | 0.075 | 0.082 | 0.12 | 0.057 | 0.064 | 0.10 | 0.024 | 0.030 | 0.081 |

Table IB.5: Detailed and Subsample Regression Results for columns (1)-(2), Table 3.

| Samples: | 2009-2019 | | 2009-2012 | | 2013-2016 | | 2017-2019 | |
|-------------------------------|------------------------|------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| NAICS2 FE: | Yes | | Yes | | Yes | | Yes | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| <i>Dependent variable:</i> | <i>Beat</i> | | | | | | | |
| ObligatedAmt/Revenue_past4qtr | 0.3522*** (0.1312) | 0.3181** (0.1249) | 0.4333*** (0.1283) | 0.4005*** (0.1255) | 0.3449* (0.1815) | 0.2911* (0.1684) | 0.1837 (0.1923) | 0.1580 (0.2019) |
| Log(1+MarketCap) | 0.0415*** (0.0052) | 0.0416*** (0.0054) | 0.0220*** (0.0067) | 0.0216*** (0.0071) | 0.0350*** (0.0059) | 0.0371*** (0.0062) | 0.0381*** (0.0069) | 0.0379*** (0.0073) |
| Log(1+Book-to-Market) | -0.0851*** (0.0307) | -0.0181 (0.0361) | -0.0819** (0.0402) | -0.0130 (0.0474) | -0.0807** (0.0353) | -0.0196 (0.0415) | -0.0883** (0.0431) | -0.0310 (0.0510) |
| Log(1+Ret_m61tom12) | 0.9963*** (0.3838) | 0.9380** (0.3998) | -0.1210 (0.3974) | -0.0541 (0.4047) | 1.4941*** (0.3731) | 1.3284*** (0.3617) | 1.2883*** (0.3084) | 1.2511*** (0.3274) |
| Log(1+Ret_m6tom2) | 1.9769** (0.8128) | 1.0859 (0.8417) | 3.0678*** (0.9174) | 2.6683*** (0.9535) | 0.9137 (0.8066) | 0.4791 (0.8477) | 0.2497 (0.8641) | 0.0017 (0.8722) |
| Log(1+InstitutionOwnPct) | 0.4389*** (0.0699) | 0.3691*** (0.0778) | 0.2762*** (0.0886) | 0.2120** (0.0909) | 0.2573*** (0.0893) | 0.1900** (0.0945) | 0.4698*** (0.1296) | 0.3892*** (0.1428) |
| Log(1+IVOL_m11tom2) | 7.4059*** (1.9031) | 4.8425** (2.0971) | 2.1818 (2.0676) | -0.9584 (2.4947) | 4.2074* (2.3361) | 3.3398 (2.4976) | 6.5033** (2.5573) | 2.7932 (2.8990) |
| Log(1+TOV_m61tom12) | -5.3240** (2.5714) | -4.4748* (2.6681) | -1.9251 (2.5457) | -0.9724 (2.7258) | -1.8851 (3.1223) | -2.3719 (3.3487) | -6.7118* (3.9411) | -4.8343 (4.1160) |
| Constant | -0.5962*** (0.1440) | -0.5448*** (0.1520) | 0.0131 (0.1889) | 0.0742 (0.1977) | -0.3500** (0.1651) | -0.3571** (0.1731) | -0.4933** (0.2085) | -0.4177* (0.2254) |
| Observations | 474 | 472 | 454 | 452 | 474 | 472 | 465 | 463 |
| R-squared | 0.25 | 0.30 | 0.13 | 0.18 | 0.18 | 0.25 | 0.18 | 0.22 |

Table IB.6: Detailed regression results for Table 4.

| | | | | |
|--|-------|-------|-------------|-------------|
| NAICS2 FE | | Yes | | Yes |
| With controls: | Yes | Yes | Yes | Yes |
| Contract Renegotiation – Award Increase: | Yes | Yes | Yes | Yes |
| Contract Renegotiation – Contract Extension: | Yes | Yes | Yes | Yes |
| Contract Renegotiation – Weaker Monitoring: | Yes | Yes | Yes | Yes |
| Index weighted scheme: | Equal | Equal | 0.4,0.4,0.2 | 0.4,0.4,0.2 |

| | (1) | (2) | (3) | (4) |
|--|------------------------|------------------------|------------------------|------------------------|
| <i>Dependent variable:</i> | | | <i>Beat</i> | |
| ObligatedAmt/Revenue_past4qtr | 1.7487* (0.9085) | 2.0109** (0.8219) | 1.8460*** (0.6992) | 1.8182*** (0.6304) |
| Renegotiation Index | 0.0171 (0.1129) | -0.0484 (0.1412) | -0.1135 (0.1398) | -0.1372 (0.1697) |
| ObligatedAmt/Revenue_past4qtr × RenegotiationIndex | -4.0655 (2.7619) | -4.9453** (2.4444) | -5.7224** (2.8137) | -5.7493** (2.5154) |
| Log(1+MarketCap) | 0.0404*** (0.0053) | 0.0401*** (0.0054) | 0.0395*** (0.0052) | 0.0395*** (0.0054) |
| Log(1+Book-to-Market) | -0.0872*** (0.0302) | -0.0189 (0.0361) | -0.0786*** (0.0301) | -0.0151 (0.0356) |
| Log(1+Ret_m61tom12) | 1.0016*** (0.3804) | 0.9344** (0.3969) | 0.9525** (0.3817) | 0.8756** (0.3963) |
| Log(1+Ret_m6tom2) | 2.1276*** (0.8211) | 1.2488 (0.8578) | 1.9340** (0.8141) | 1.0573 (0.8463) |
| Log(1+InstitutionOwnPct) | 0.4320*** (0.0698) | 0.3558*** (0.0775) | 0.4114*** (0.0700) | 0.3448*** (0.0774) |
| Log(1+IVOL_m11tom2) | 7.0614*** (1.9056) | 4.3810** (2.0888) | 6.9732*** (1.8950) | 4.5743** (2.0985) |
| Log(1+TOV_m61tom12) | -5.2535** (2.5823) | -4.3573 (2.6921) | -4.9687* (2.6062) | -4.1012 (2.7038) |
| Constant | -0.5683*** (0.1539) | -0.4808*** (0.1611) | -0.5077*** (0.1518) | -0.4502*** (0.1580) |
| Observations | 473 | 471 | 473 | 471 |
| R-squared | 0.25 | 0.31 | 0.26 | 0.31 |

Table IB.7: **Debt Ceiling Events.**

This table summarizes all debt ceiling events (source: <https://www.whitehouse.gov/omb/budget/historical-tables/>, Table 7.3). Gray rows indicate debt ceiling logs that are mentioned in the white house records but result in zero change in the debt limit; we do not focus on these days in our analysis.

| Debt Ceiling Date | Description | % Increase |
|-------------------|---|------------|
| 2009/2/17 | Increased the debt limit to \$12104 billions. | 6.97% |
| 2009/12/28 | Increased the debt limit to \$12394 billions. | 2.40% |
| 2010/2/12 | Increased the debt limit to \$14294 billions. | 15.33% |
| 2011/8/2 | Increased the debt limit to \$14694 billions. | 2.80% |
| 2011/9/21 | Effective after September 21, 2011, increased the debt limit to \$15194 billions. | 3.40% |
| 2012/1/27 | Effective after January 27, 2012, increased the debt limit to \$16394 billions. | 7.90% |
| 2013/2/4 | Suspended the existing debt limit from February 4, 2013, through May 18, 2013, and prospectively increased the limit to \$16999.4 billions to accommodate the increase in such debt outstanding as of May 19, 2013. | 3.69% |
| 2013/5/19 | Effective May 19, 2013, reestablished the debt limit at \$16699.4 billions. | -1.76% |
| 2013/10/17 | Suspended the existing debt limit from October 17, 2013, through February 7, 2014, and prospectively increased the limit to \$17211.6 billions to accommodate the increase in such debt outstanding as of February 8, 2014. | 3.07% |
| 2014/2/8 | Effective February 8, 2014, reestablished the debt limit at \$17211.6 billions. | 0.00% |
| 2014/2/15 | Suspended the existing debt limit from February 15, 2014, through March 15, 2015, and prospectively increased the limit to \$18113 billions accommodate the increase in such debt outstanding as of March 16, 2015. | 5.24% |
| 2015/3/16 | Effective March 16, 2015, reestablished the debt limit at \$18113 billions. | 0.00% |
| 2015/11/2 | Suspended the existing debt limit from November 2, 2015, through March 15, 2017, and prospectively increased the limit to \$19808.8 billions accommodate the increase in such debt outstanding as of March 16, 2017. | 9.36% |
| 2017/3/16 | Effective March 16, 2017, reestablished the debt limit at \$19808.8 billions. | 0.00% |
| 2017/9/8 | Suspended the existing debt limit from September 8, 2017, through December 8, 2017, and prospectively increased the limit to \$20456 billions to accommodate the increase in such debt outstanding as of December 9, 2017. | 3.27% |
| 2017/12/9 | Effective December 9, 2017, reestablished the debt limit at \$20456 billions. | 0.00% |
| 2018/2/9 | Suspended the existing debt limit from February 9, 2018, through March 1, 2019, and prospectively increased the limit to \$21987.7 billions to accommodate the increase in such debt outstanding as of March 1, 2019. | 7.49% |
| 2019/3/1 | Effective March 1, 2019, reestablished the debt limit at \$21987.7 billions. | 0.00% |
| 2019/8/2 | Suspended the existing debt limit from August 2, 2019, through July 31, 2021, and prospectively increased the limit to \$28401.5 billions to accommodate the increase in such debt outstanding as of July 31, 2021. | 29.17% |

Table IB.8: Detailed regression results for Panel A, Table 6.

| | | | | | |
|--|------------------------|------------------------|-----------------------|-----------------------|-----------------------|
| Year-Calendar Quarter FE: | Yes | | Yes | | |
| NAICS2 FE: | | | Yes | Yes | |
| NAICS2 times Quarter FE: | | | | | Yes |
| With Controls: | Yes | Yes | Yes | Yes | Yes |
| | (1) | (2) | (3) | (4) | (5) |
| <i>Dependent variable:</i> | <i>Beat</i> | | | | |
| ObligatedAmt/Revenue_past4qtr | 0.2900*** (0.0747) | 0.2819*** (0.0727) | 0.2670*** (0.0736) | 0.2578*** (0.0713) | 0.2591*** (0.0734) |
| is_debtlimit | -0.0075 (0.0099) | 0.0005 (0.0254) | -0.0079 (0.0102) | -0.0063 (0.0255) | -0.0072 (0.0267) |
| ObligatedAmt/Revenue_past4qtr × is_debtlimit | 0.1098** (0.0519) | 0.1008* (0.0530) | 0.1195** (0.0572) | 0.1062* (0.0549) | 0.0621 (0.0773) |
| Log(1+MarketCap) | 0.0232*** (0.0036) | 0.0236*** (0.0036) | 0.0269*** (0.0037) | 0.0272*** (0.0038) | 0.0272*** (0.0038) |
| Log(1+Book-to-Market) | -0.0795*** (0.0249) | -0.0753*** (0.0265) | -0.0202 (0.0248) | -0.0132 (0.0267) | -0.0160 (0.0282) |
| Log(1+Ret_m61tom12) | 0.1772*** (0.0404) | 0.2107*** (0.0364) | 0.1681*** (0.0409) | 0.2057*** (0.0370) | 0.1881*** (0.0363) |
| Log(1+Ret_m6tom2) | 0.6343*** (0.1047) | 0.6078*** (0.1052) | 0.6044*** (0.1027) | 0.5766*** (0.1046) | 0.5854*** (0.1168) |
| Log(1+InstitutionOwnPct) | 0.2245*** (0.0586) | 0.2583*** (0.0573) | 0.1666** (0.0619) | 0.1975*** (0.0603) | 0.1921*** (0.0628) |
| Log(1+IVOL_m11tom2) | 0.2891 (0.6173) | 0.1868 (0.5939) | -0.1819 (0.5805) | -0.3869 (0.5245) | -0.3282 (0.5616) |
| Log(1+TOV_m61tom12) | 0.5001 (1.1465) | -0.3057 (1.1501) | 0.4223 (1.2276) | -0.3902 (1.2025) | -0.4314 (1.2330) |
| L.Beat | 0.1581*** (0.0105) | 0.1533*** (0.0106) | 0.1503*** (0.0107) | 0.1453*** (0.0108) | 0.1497*** (0.0114) |
| Constant | -0.0811 (0.0932) | -0.1022 (0.0937) | -0.1391 (0.0941) | -0.1544 (0.0953) | -0.1512 (0.0962) |
| Observations | 16696 | 16696 | 16696 | 16696 | 16622 |
| R-squared | 0.048 | 0.056 | 0.055 | 0.063 | 0.11 |

Table IB.9: Detailed regression results for Panel B, Table 6.

| | | | | | |
|---|------------------------|------------------------|-----------------------|-----------------------|-----------------------|
| Year-Calendar Quarter FE: | Yes | | Yes | | |
| NAICS2 FE: | | | Yes | Yes | |
| NAICS2 times Quarter FE: | | | | | Yes |
| With Controls: | Yes | Yes | Yes | Yes | Yes |
| | (1) | (2) | (3) | (4) | (5) |
| <i>Dependent variable:</i> | <i>Beat</i> | | | | |
| ObligatedAmt/Revenue_past4qtr | 0.2906*** (0.0710) | 0.2821*** (0.0689) | 0.2679*** (0.0705) | 0.2576*** (0.0681) | 0.2562*** (0.0705) |
| % Changes in debt ceiling levels | 0.0004 (0.0020) | 0.0019 (0.0018) | 0.0002 (0.0019) | 0.0014 (0.0019) | 0.0009 (0.0020) |
| ObligatedAmt/Revenue_past4qtr \times % Changes in debt ceiling levels | 0.0209*** (0.0069) | 0.0209*** (0.0073) | 0.0224*** (0.0071) | 0.0223*** (0.0073) | 0.0167** (0.0075) |
| Log(1+MarketCap) | 0.0233*** (0.0036) | 0.0237*** (0.0036) | 0.0270*** (0.0037) | 0.0273*** (0.0038) | 0.0272*** (0.0038) |
| Log(1+Book-to-Market) | -0.0792*** (0.0248) | -0.0748*** (0.0265) | -0.0200 (0.0247) | -0.0130 (0.0266) | -0.0159 (0.0281) |
| Log(1+Ret_m61tom12) | 0.1767*** (0.0405) | 0.2097*** (0.0365) | 0.1677*** (0.0409) | 0.2046*** (0.0370) | 0.1869*** (0.0364) |
| Log(1+Ret_m6tom2) | 0.6309*** (0.1046) | 0.6104*** (0.1048) | 0.6012*** (0.1029) | 0.5789*** (0.1041) | 0.5871*** (0.1166) |
| Log(1+InstitutionOwnPct) | 0.2250*** (0.0587) | 0.2590*** (0.0574) | 0.1670** (0.0620) | 0.1983*** (0.0605) | 0.1926*** (0.0630) |
| Log(1+IVOL_m11tom2) | 0.2763 (0.6118) | 0.1936 (0.6013) | -0.1934 (0.5732) | -0.3736 (0.5330) | -0.3145 (0.5659) |
| Log(1+TOV_m61tom12) | 0.4920 (1.1470) | -0.3117 (1.1498) | 0.4130 (1.2283) | -0.3977 (1.2022) | -0.4379 (1.2323) |
| L.Beat | 0.1581*** (0.0105) | 0.1533*** (0.0106) | 0.1504*** (0.0107) | 0.1453*** (0.0108) | 0.1497*** (0.0114) |
| Constant | -0.0832 (0.0933) | -0.1048 (0.0941) | -0.1411 (0.0941) | -0.1574 (0.0959) | -0.1537 (0.0965) |
| Observations | 16696 | 16696 | 16696 | 16696 | 16622 |
| R-squared | 0.048 | 0.056 | 0.055 | 0.063 | 0.11 |

Table IB.10: **Robustness to Table 7.**

This table presents robustness evidence to Table 7 using alternative calculation for the interaction term.

$$\text{EPU Attributed to Debt Ceiling} = \left(\frac{\text{EPU with debt ceiling}}{\text{EPU}} - 1 \right) \times \text{EPU with fiscal policy},$$

Standard errors are double-clustered at the firm and quarter levels and are reported in parentheses. ***, p-value <1%; **, <5%; *, <10%.

| | | | | | | | | | |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|---------------------|---------------------|---------------------|
| Year-Calendar Quarter FE: | | Yes | | | Yes | | | Yes | |
| NAICS2 FE: | Yes | Yes | | Yes | Yes | | Yes | Yes | |
| NAICS2 × Quarter FE: | | | Yes | | | Yes | | | Yes |
| With Controls: | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
| Dependent variable: | Beat | Beat | Beat | SUE ₁ | SUE ₁ | SUE ₁ | SUE ₂ | SUE ₂ | SUE ₂ |
| ObligatedAmt/Revenue_past4qtr | 0.2641*** (0.0706) | 0.2565*** (0.0682) | 0.2478*** (0.0706) | 2.4350** (0.9706) | 2.3641** (0.9733) | 2.3644** (0.9671) | 0.1990* (0.1156) | 0.1895 (0.1130) | 0.1936* (0.1039) |
| Monthly Average EPU Attributed to Debt Ceiling | -0.0009 (0.0017) | -0.0006 (0.0048) | -0.0029 (0.0032) | -0.0165 (0.0183) | 0.0775** (0.0373) | 0.0654 (0.0427) | -0.0002 (0.0018) | -0.0069 (0.0091) | -0.0093 (0.0092) |
| ObligatedAmt/Revenue_past4qtr × Monthly Average EPU Attributed to Debt Ceiling | 0.0179*** (0.0060) | 0.0151*** (0.0049) | 0.0177*** (0.0052) | 0.2236*** (0.0620) | 0.1933*** (0.0623) | 0.1924*** (0.0629) | 0.0152* (0.0076) | 0.0135 (0.0090) | 0.0138 (0.0098) |
| Observations | 16696 | 16696 | 16622 | 16298 | 16298 | 16218 | 16390 | 16390 | 16316 |
| R-squared | 0.055 | 0.063 | 0.11 | 0.076 | 0.083 | 0.12 | 0.023 | 0.030 | 0.077 |

Table IB.11: Panel version of analyst attention result in Table 10.

| | | | | | | | | | | | | |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Year-Calendar Quarter FE: | Yes | Yes | | Yes | Yes | | Yes | Yes | | Yes | | Yes |
| NAICS2 FE: | Yes | Yes | | Yes | Yes | | Yes | Yes | | Yes | | Yes |
| NAICS2 x Quarter FE: | | | Yes | | | Yes | | | Yes | | | Yes |
| With Controls: | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) |
| <i>Dependent variable:</i> | <i>Beat</i> | | | | | | | | | | | |
| ObligatedAmt/Revenue_past4qtr | 0.2685*** (0.0767) | 0.2620*** (0.0738) | 0.2667*** (0.0759) | 0.2699*** (0.0763) | 0.2629*** (0.0734) | 0.2652*** (0.0759) | 0.2686*** (0.0767) | 0.2622*** (0.0738) | 0.2668*** (0.0759) | 0.2700*** (0.0762) | 0.2630*** (0.0734) | 0.2653*** (0.0759) |
| Analyst_mention1 | 0.8134 (0.9798) | 0.9293 (0.9841) | 0.8451 (0.9874) | | | | | | | | | |
| ObligatedAmt/Revenue_past4qtr × Analyst_mention1 | 2.0203 (6.3363) | 1.3123 (6.7026) | 0.7055 (6.6845) | | | | | | | | | |
| Analyst_mention2 | | | | 0.1610 (0.1543) | 0.1700 (0.1548) | 0.1746 (0.1556) | | | | | | |
| ObligatedAmt/Revenue_past4qtr × Analyst_mention2 | | | | 0.1462 (0.9719) | 0.0815 (1.0176) | 0.0179 (1.0347) | | | | | | |
| Analyst_mention3 | | | | | | | 0.8144 (0.9784) | 0.9295 (0.9826) | 0.8453 (0.9860) | | | |
| ObligatedAmt/Revenue_past4qtr × Analyst_mention3 | | | | | | | 1.9868 (6.3233) | 1.2762 (6.6885) | 0.6712 (6.6691) | | | |
| Analyst_mention4 | | | | | | | | | | 0.1611 (0.1541) | 0.1700 (0.1546) | 0.1746 (0.1554) |
| ObligatedAmt/Revenue_past4qtr × Analyst_mention4 | | | | | | | | | | 0.1408 (0.9703) | 0.0757 (1.0160) | 0.0121 (1.0330) |
| Observations | 16347 | 16347 | 16298 | 16317 | 16317 | 16261 | 16347 | 16347 | 16298 | 16317 | 16317 | 16261 |
| R-squared | 0.055 | 0.063 | 0.11 | 0.055 | 0.063 | 0.11 | 0.055 | 0.063 | 0.11 | 0.055 | 0.063 | 0.11 |