Wealth Effects and Predictability of Firms' Government Sales Dependency

ABSTRACT

In this paper, using a new channel of political connections, firm dependency on government sales, I study the value of political connections for firms. I find an economically and statistically significant relation between firm dependency on government entities in terms of revenues and the cross-section of future stock returns. Firms experience significantly higher profit margins post government dependency. In addition, past government sales significantly predict future government sales. The atypical features of government contracts and the information asymmetry between the contractor and contractee are likely to be behind the firms' higher profit margins. Further tests based on attention and uncertainty proxies suggest that investors' limited attention and greater valuation uncertainty contribute to abnormal returns. Furthermore, I find evidence suggesting that firms gain the wealth effects of political connections found by Cooper, Gulen, and Ovtchinnikov (2010) by winning material government contracts; however, the wealth effects of government dependency stay strong even after controlling for such connections.

Keywords: Government-Dependent Firms, Political Connections, Stock Returns

JEL Classification: G18, G38, H50, H57, H72

The United States is considered to be a country with a fairly well-functioning legal system; however, stories about firms benefiting from politicians practicing favoritism are not uncommon. In a well-functioning legal system, it is generally expected that firms cannot obtain an unfair advantage from political connections. The negative impact of favoritism in the political system, a form of corruption, on economic growth cannot be overemphasized.[1] In the short and long term, the political favoritism provided to a firm affect the firm's incentive to be or not to be politically connected; therefore understanding the benefits of political connections to firms is highly important.

The body of literature in finance that studies the value of a firm's political connections has found conflicting results with regard to the benefits of political connections to firms. On the one hand, research finds that these connections increase firm value, and politically connected firms receive preferential access to credit; are more likely to win government contracts, receive regulatory protection and receive government aid when they are in financial trouble; and have a lower cost of capital.[2]. On the other hand, research also finds that political connections have an adverse effect on the corporate information environment; campaign donations are ineffective for gaining influence or inducing politicians to adopt favorable policies; and politically connected firms do not seem to enjoy noticeably high rates of returns from their contributions but rather underperform compared with nonconnected firms on an accounting basis and report quality of earnings significantly poorer than that of nonconnected firms.[3]

This paper considers a new channel of political connections that has not yet been considered in the finance literature for studying the relation between political connections and firm value, and I define politically connected firms as firms with material government contracts and study the market as well as the accounting performance of politically connected firms. Post-government dependency, the profit margins and productivity of these firms significantly increase, and these firms earn, even after con-

[1] See Krueger (1974), Mauro (1995), Acemoglu and Verdier (2000), Ades and Di Tella (1999), Bliss and Tella (1997), Banerjee (1997), Shleifer and Vishny (1994), Shleifer and Vishny (1993)

[2] See Johnson and Mitton (2003), Joh, Chiu, et al. (2004), Khwaja and Mian (2005), Goldman, Rocholl, and So (2013), Kroszner and Stratmann (1998), Faccio, Masulis, and McConnell (2006), Boubakri, Guedhami, Mishra, and Saffar (2012b),Roberts (1990) Goldman, Rocholl, and So (2009) Boubakri, Cosset, and Saffar (2012a) Cooper et al. (2010)

[3] See Chaney, Faccio, and Parsley (2011), Faccio (2006), Hellman, Jones, and Kaufmann (2000), Aggarwal, Meschke, Wang, et al. (2012), Faccio (2010), Ansolabehere, De Figueiredo, and Snyder (2003), Ansolabehere, Snyder Jr, and Ueda (2004), Chen, Ding, and Kim (2010)

trolling for a myriad of control variables, as much as approximately 6% in abnormal returns per year. When added to the FF-5, momentum, quality, and few mispricing factor portfolios, the government-dependency weighted (GDW) portfolios increase the Sharpe ratio of the optimal tangency portfolio by 18% and receive approximately 26% of asset allocation. Even after controlling for other forms of political connections (e.g., PAC (political action committee) contributions), a firm's past government sales significantly predict the firm's probability of winning a material government contract in the future. For example, having a government contract 10 years back increases a firm's probability of winning future material contracts by approximately 27.5%.

Furthermore, even though studies find that politically connected firms earn higher abnormal returns (e.g., Cooper et al. (2010)), the means by which they do so are not yet completely understood. Two hypotheses that naturally arise are (1) firms earn higher returns by inducing politicians to adopt favorable policies and (2) firms earn higher returns by winning government contracts. While few findings seem to contradict the first hypothesis, the validity of the second hypothesis is still uncertain.[4] In this paper, I find that the return predictability of political connections that Cooper et al. (2010) find only exists in the sample of politically connected firms that are also government-dependent – evidence that is consistent with the second hypothesis.

To study the value of political connections for firms, the finance literature uses political connections engendered from two sources: (1) connections engendered through contributions to politicians or to political campaigns [5] and (2) connections engendered through the personal associations of top executives of the firms with political parties or politicians.[6]

In addition to the above two channels, firms' political connections could also be established through the business-customer relationship that exists between firms and government entities. Government contractors receive more than $500 billion from the government each year. These firms employ one out of four employees (Greenhouse (2010); and make up approximately 25 to 30% of the total market capital (MCAP) in the US. Hence, these firms are a significant part of the economy, and our understanding of them is very important. Furthermore, unlike political connections established through other means, the political connections established through government con-

[4] See Ansolabehere et al. (2003) and Hellman et al. (2000)

[5] E.g., Cooper et al. (2010), Roberts (1990), and Joh et al. (2004)

[6] E.g., Faccio (2006), Chaney et al. (2011), Goldman et al. (2009), Khwaja and Mian (2005), and Johnson and Mitton (2003)

tracts have direct financial consequences for firms. When firms have this type of political connection, they are directly profiting from government spending, and the incentive to be politically connected is direct and clear.

However, this type of political connection, to the best of my knowledge, is rarely researched in the finance literature. One important paper in this area is Cohen and Malloy (2016). Exploiting the statutory requirement that mandates firms to report the identities of customers who are accountable for at least 10% of total yearly sales, the paper identifies firms that do significant business with the government and studies the causal impact of government sales. The paper finds that these government-linked firms invest less in physical and intellectual capital and have lower future sales growth.

On the other hand, Houston, Maslar, and Pukthuanthong (2017) show that, although a firm's percent of sales obtained from the government is positively related to the firm's cost of debt, these firms are able to offset this effect by taking advantage of their political connections. Dhaliwal, Judd, Serfling, and Shaikh (2016) find a lower cost of equity for suppliers that are dependent on the federal government. Finally, Samuels (2018) shows that the government's monitoring of its suppliers' internal information processes improves the quality of the external reporting of these firms, which in turn can reduce the cost of capital. The literature also finds that these firms hold less cash; hence, they hold less unproductive capital. These firms are less likely to receive going concern opinions, delist from a major stock exchange, and file for bankruptcy.[7]

Studies on government dependency, however, leave numerous questions unanswered. How does the profitability of these firms evolve when they have lower sales growth and less capital and intellectual spending? Does their lower cost of capital transfer into lower or higher returns? Does government dependency predict future government sales (I use government dependency and government sales interchangeably) as these firms learn more about the process? Because they are less likely to file for bankruptcy and are less of an ongoing concern, are these firms less risky in the eyes of investors? In this paper, in addition to answering questions about the market and accounting performance of these firms, I also answer the above-mentioned questions related to government-dependent firms.

In this paper, I use the channel employed by Cohen and Malloy (2016) to identify my sample firms. Exploiting a statutory requirement mandating firms to report large

[7]See Burke, Convery, and Skaife (2015),Cohen and Li (2016)

and important customers (i.e., any single customer that is responsible for at least 10% of a firm's revenue), I identify a sample of firms that do significant business with US federal, state, local, or foreign government entities as government-dependent firms, construct government-dependency variables using *ex ante* information from COMPUSTAT, and then use those variables to examine return predictability. However, my sample includes all firms in the market for which information is available from both the Center for Research in Security Prices (CRSP) and COMPUSTAT for at least some portion of my sample period (the government-dependency variables take the value of zero for all firms that do not report any material government sales).

While constructing my government-dependency variables, I try to capture the aspects of government dependency that are most important to investors. The first government dependency variable GD^{Report} is a plain binary variable that is equal to one for a firm's subsequent 12 firm-month observations if the firm reports any material government sales (for brevity, I call this reporting event "government reporting") at month $t-1$ and zero, otherwise.[8] The length of a firm's government dependency is captured by the variable $GD^{Strength}$, which is the number of incidences of government reporting by the firm between January 1978 and month t divided by the number of months the firm has been in sample since its first government reporting. When a firm does government reporting for the first time or does government reporting followed by a year for which the firm does not do government reporting, I call that "surprise government reporting" or simply "surprise reporting." Consistency of government dependency is captured by the variable $GD^{Surprise}$, which is the number of incidences of surprise government reporting by the firm between January 1978 and month t divided by the number of months the firm has been in sample since its first government reporting. Finally, GD^{Sale} is total sales to government entities as a percentage of the firm's total sales for the year. For all firms that do not report any material government sales, all government-dependency variables take the value of zero.

Following Fama and French (2008), I primarily use panel regressions and portfolio alpha methodologies in my analysis. Within the context of Fama-MacBeth cross-sectional regressions, results are significant after controlling for various economic and political risks, tail risk, well-known anomalies, self-selection bias (using the Inverse Mills Ratio), and other form of political connections [using political action committee (PAC) contributions]. Also, results remain strong even within the sample of firms

[8] See section I.C for a detail explanation of the government dependency variables.

that are government dependent but not politically connected. The abnormal returns remain significant both economically and statistically even after several other robustness checks.

In the portfolio alpha analysis, regardless of whether I use capital asset pricing model (CAPM); a Fama-French (FF) model or Fama-French-Carhart (FFC) model with three, four, five, or six factors; or a FFC six-factor model plus a few mispricing factors as my benchmark asset pricing model, the government dependency (GD) weighted portfolios earn monthly alphas of approximately 50 basis points (in some cases, up to 92 basis points). The results are equally strong in several subsamples. GD-weighted portfolios can achieve annual Sharpe ratios of up to 0.75. Adding government dependency portfolio that uses $GD^{Strength}$ as the weighting variable to Fama-French five, MOM, QMJ (quality minus junk), and three mispricing (management-related factors (MGMT), undervalued minus overvalued factors (UMO) and performance-related factors (PERF)) factor portfolios increases the *ex post* monthly Sharpe ratio of the tangency portfolio by 18% with a weight of 26% on the GD portfolio, and QMJ is the only factor receiving higher weight than GD portfolio.[9]

Considering the results, I next analyze the sources of return predictability and high profit margins. I try to understand the changes in the characteristics or in the business environment of government-dependent firms post-government reporting that led them to earn abnormal returns. I ask questions such as "Do these firms change fundamentally after GD?," "Do these firms have an upper hand in regard to future government contracts?," "What is the interlink between political connections and government sales?," and "Why does profitability increase post GD?"

Using a probit model, I find that having one or more material contracts in the past and the size of past government contracts seems to matter an order of magnitude more than political connections, which are measured by the firms' PAC contributions, for obtaining material government contracts in the future. Having a government contract six or 10 years back increases a firm's probability of winning the future material contracts by approximately 38.8% or 27.5%, respectively. I find that not only having past government contracts but also the size of past government contracts significantly predicts future government sales.

[9] See Asness, Frazzini, and Pedersen (2014), Hirshleifer and Jiang (2010), Stambaugh and Yuan (2016) for QMJ, UMO, MGMT, and PERF factor definitions

With regard to firm characteristics, I find that in a comparison of firms' pre-government reporting with their post-government reporting shows that the firms' assets, MCAP, leverage, and productivity increases significantly. In addition, their implied overall tax rate decreases, and, more interestingly, their profitability ratios across the board increase significantly. Post-government reporting, government-dependent firms become larger, more efficient, productive, and profitable, thus enabling them to earn higher abnormal returns. With regard to the increase in profitability post-GD, when comparing the increase across all FF12 industries, the increase in industries where government sales dollars are concentrated is higher by approximately 50 to 80%.

The strong associations between the operating margin of the government dependent firms after they first report government sales and measures of asset redeployability, proxies of investment irreversibility such as property plant and equipment scaled by total assets, and proxies for information asymmetry such as the bid-ask spread and analyst count suggest that the "Termination for Convenience" clause in government contracts and the information asymmetry between the contractor and contractee probably contribute to the firms' higher profit margins.

The significantly high Sharpe ratio of the GD portfolios suggests that the abnormal returns earned by government-dependent firms might not be entirely explained by the rational risk premia and, hence, I hypothesize that market inefficiency due to investors' psychological constraints such as limited attention might be behind these abnormal returns. Following Hirshleifer, Hsu, and Li (2013), Hong, Lim, and Stein (2000), and Kumar (2009), I use size, analyst coverage, and residual analyst coverage as proxies for attention to a stock and use firm age, idiosyncratic volatility, turnover, and stock volatility as proxies for valuation uncertainty. Using the analysis similar to that of Hirshleifer et al. (2013), I find strong evidence supporting my hypothesis. The results are stronger and more statistically significant in the low attention and high valuation uncertainty subsamples than in the high attention and low valuation uncertainty subsamples.

The remainder of the paper is organized as follows. In Section I, I discuss the data sources and describe how I construct my government-dependency variables. Section II presents the results of the panel regressions and the alpha of the relative GDW portfolios. The section also talks about controls for additional risks and several robustness checks. I discuss the sources of the return predictability of government sales in Section III. Section IV concludes the article.

I. Data Sources and Variable Construction

Most data used in this study were obtained from CRSP and COMPUSTAT, and the sample period runs from January 1979 through December 2014. In my sample, of all the firms reporting that they have a customer that is any type of government entity, 87.81% report the US federal government, 9.59% report foreign governments, 1.63% report US state governments, and 0.96% report US local governments as one of their major customers. The US federal government includes entities such as the US military, the Department of Defense, NASA, and Medicare; foreign governments include entities such as the Ministry of Communications in Columbia, the Germany Department of Defense, and Caina Economica Federal. US local governments include entities such as the National Institute of Health, the city of Cupertino, and New York City. US state governments include entities such as the Pennsylvania Department of Corrections, the New York City Department of Transportation, and the state of Tennessee. The largest-ever yearly sale to the US federal government in my sample was made by General Dynamics in 2010 in the amount of $45.65 billion.

A. Returns, Fundamental Information, and Segment Reporting Data

The data on returns and the fundamental information and segment reporting information used in this paper were obtained from CRSP and COMPUSTAT. Once the CRSP and COMPUSTAT information was merged, to avoid the issue of one to many relation between GVKEYs and PERMNOs or vice versa in the sample, I filter the data on share codes, CRSP COMPUSTAT link type, and MCAP.

From January 1979 through December 2014, according to segment information obtained from COMPUSTAT, 4,905 unique firms (defined as having a unique GVKEY) reported government entities among their major customers. After I merged the COMPUSTAT segment data with the fundamental data, my sample of government-dependent firms reduced to 4,080 firms. Of these, 301 firms disappeared from the sample the year after they reported any government entity as a major customer; hence, they are not included in the abnormal return calculations of government-dependent firms. To avoid the risk of extreme outliers incorrectly influencing the results, I further exclude firm-month observations in which the month-end price of the security was below \$3. After all the data cleaning, my final sample consists of 3,564 unique firms that at least once reported material government sales and 20,323 unique firms that never reported any material government sales.

B. Government-Dependency Variables

I try to capture multiple aspects of GD in my GD variables. In addition to caring about whether a firm conducts significant business with the government, investors might care about the economic magnitude of the sales dollars coming from the government, how long the firm has been dependent on the government for the material portion of its revenue, and how consistent the dependency has been over the years. The first government-dependency variable GD^{Report} is a binary variable that is equal to 1 for the following 12 firm-month observations of a firm once it reports any government entity as a major customer (again, for brevity I call this reporting event "government reporting"). This variable is a dummy that categorizes firms into two groups (i.e., the study group and the control group) to allow for an analysis of wealth effects for the year after a firm does government reporting. This variable assumes that the information provided by the firm about its GD becomes obsolete to investors after a year. In short, GD^{Report} examines whether the firm reported any government entity as a customer in the last year.

$$GD^{Report}_{i,\{t-1<t<t+12\}} = 1 * I,\ I = \begin{cases} 1, & \text{if firm i reports Government as customer} \\ & \text{at month } t-1, \\ 0, & \text{otherwise.} \end{cases} \tag{1}$$

The second government-dependency variable that I use to analyze the wealth effects measures how often a firm reports any government entity as a major customer. The variable $GD^{Strength}$ is the number of incidences of government reporting by the firm between January 1978 and month t ($Report\_Count$) divided by the number of months the firm has been in the sample since it first government reporting ($Firm\_Age$). The number of incidences of government reporting by the firm between January 1987 and month t remains constant with that of the previous year for the subsequent year(s) in which the firm does not perform the government reporting.

$$Report\_Count_{i,\{t-1<t<t+12\}} = Report\_Count_{i,t-1} + 1 * I, \tag{2}$$

$$where, I = \begin{cases} 1, & \text{if firm i reports the government as a customer} \\ & \text{in month } \textit{t-1} \text{ and} \\ 0, & \text{otherwise.} \end{cases}$$

$$Then,\ GD_{i,t}^{Strength} = \frac{Report\_Count_{i,t}}{Firm\_Age_{i,t}} \tag{3}$$

The purpose of creating the variable $GD^{Strength}$ is two-fold, i.e., to create a continuous variable that measures the strength of government-dependency and to let the strength variable decay slowly with time since, from an investor's perspective, the informational strength of subsequent reporting should be smaller than that of previous reporting (however, my results are robust to not applying the decay mechanism and to not dividing the report count by the firm's age). If a firm ceases to report any government entity as a major customer, the value of $GD^{Strength}$ gradually decreases over time because it is divided by the firm's age since the first incidence of government reporting, which leads to the decaying effect.

The third dependency variable used to study the return predictability of GD is the variable $GD^{Surprise}$. From the investor's point of view, the informational content of a firm's first incidence of government reporting should be higher than that of its subsequent continuous government reportings. If there is no uncertainty as to whether a firm will report the government as a major customer in future years, once the informational content of the first-ever government reporting is considered in the price; assuming everything else is equal, future government reportings will have negligible informational value to investors as it is an expected event and has become certain. However, if a firm intermittently perform government reporting, every incidence of surprise government reporting provides new information about the firm's GD. $GD^{Surprise}$ is the number of incidences of surprise government reporting (i.e., first ever government reporting or government reporting followed by a year in which the firm did not perform government reporting) by the firm between January 1978 and month t (*Surprise_Count*) divided by the number of months the firm has been in the sample since its first government reporting ($Firm\_Age$).

The value of $GD^{Surprise}$ increases only when the firm intermittently performs the government reporting. In addition to capturing surprise government reporting, this variable captures the variability in a firm's GD. If a firm always performs the government reporting after its first incidence of government reporting, the numerator of $GD^{Surprise}$ remains at 1 throughout the life of the firm in the sample.

$$Surprise\_Count_{i,\{t-1<t<t+12\}} = Surprise\_Count_{i,t-1} + 1 * I, \quad (4)$$

$$where, I = \begin{cases} 1, & \text{if firm i reports the government as a customer in month} \\ & \text{t-1 and (i) it does not report the government as a customer} \\ & \text{in month } \textit{t-13} \text{ or ii) if firm i is not in the sample in} \\ & \text{month } \textit{t-13} \text{ or before and} \\ 0, & \text{otherwise.} \end{cases}$$

$$Then,\ GD^{Surprise}_{i,t} = \frac{Surprise\_Count_{i,t}}{Firm\_Age_{i,t}} \quad (5)$$

If a firm performs government reporting in one year, followed by a year in which the firm does not perform government reporting, I assume that investors will be surprised by the firm's intermittent government reporting. As is the case with $GD^{Strength}$, the purpose of creating the variable $GD^{Surprise}$ is again two-fold, i.e., to create a continuous variable that measures surprise government reporting and to let this variable decay slowly with time since, from the investors' perspective, the information strength of subsequent surprise reporting should be smaller than that of the previous ones (however, my results are robust to not applying the decay mechanism and to not dividing the surprise count by the firm's age). If a firm continuously performs government reporting, for investors, the surprise factor should slowly decay. The variable $GD^{Surprise}$ captures this notion.

The final and fourth government-dependency variable that I use to study return predictability of GD is GD^{Sale}. This variable is defined as a firm's sum of total sales to all government entities for the year as a percentage of the firm's total sales for the year. This variable is used to analyze the actual dollar amount that a firm receives from government entities. In other words, this variable captures the economic magnitude of the firm's GD.

$$GD^{Sale}_{i,\{t-1<t<t+12\}} = \frac{Total\ Sales\ to\ the\ Governmet\ Entities_{i,t-1}}{Total\ Sales_{i,t-1}} \quad (6)$$

Because approximately 25% of firms' government reportings, as listed in COMPUSTAT, has sales dollars missing (probably due to the sensitivity of confidential government information), the variable GD^{Sale} is not as accurate as the other dependency variables. For a given year, a firm might make sales to multiple government entities, including the US federal government, state or local governments, or foreign governments. In my sample, for a given year for a given firm, I consolidate all the sales made to multiple government entities (if there has been more than one) into a single number and call it a government sale. If one or more of the multiple sale transactions to the government entities are missing the dollar amount, then the consolidated sales dollars are downwardly biased and do not provide true information about the magnitude of the government sale.

Because firms are only required to report if one single customer is accountable for at least 10% of the sales, it does not make sense to have GD^{Sale} values that are less than 10%. In my sample, for any firm that has GD^{Sale} value of less than 10% for a given year due to the missing sales information, I increase the GD^{Sale} value to 10%. The variable GD^{Sale} makes the most economic sense, but the limited availability of the information in COMPUSTAT makes this information somewhat incomplete. Despite these shortcomings, the variable GD^{Sale} is still statistically and economically significant in terms of providing information about the value of GD.

C. Control for Self-Selection Bias

Unlike donating money to politicians, winning a government contract is not always up to a firm. Although firms cannot control the outcome of the bidding process, they can choose whether to participate in it. This choice may introduce self-selection bias into my sample. To address such endogeneity concerns, following Cooper et al. (2010), I use a two-stage approach and estimate a probit regression of whether a firm is government-dependent on the possible determinants of GD. The probit model is estimated every year using monthly data. From this first-stage regression, I calculate inverse mills ratio (IMR) from Heckman (1979) and include the ratio in my second-stage regressions.

First, according to Faccio (2010), politically connected firms pay lower taxes and under perform on an accounting basis (e.g., lower productivity and lower ROA); thus, the first group of variables that I use in the model are some fundamental variables that probably have an impact on a firm's GD: total factor productivity, the effective tax rate, ROA, the gross margin, and earnings before interest, taxes, depreciation, and amortization. In addition, for each FF-49 industry, I include all firms' total sales to government entities as a percentage of all firms' total sales for the year. As the determinants of GD have not yet been studied, I hypothesize that the determinants of GD could be similar to the determinants of political connections. The second group of variables that I add to the model are variables that previous studies have found to be determinants of political connections and are used in Cooper et al. (2010)[10]. These variables are size, sales, the number of employees, the number of business segments, the number of geographic segments, the book-to-market ratio (BM), leverage, cash flow, market share, the quadratic term of market share, the Herfindahl index, an industry regulation indicator, and the number of politically active firms in the industry.

II. Results

Fama and French (2008) claim that portfolio alpha and panel regression are the two methodologies most commonly used to analyze abnormal returns predictability. Compared with the portfolio alpha, the panel regression methodology is a better for examining the functional form of the relations between average returns and explanatory variables. However, a regression estimated on all stocks can be dominated by micro-cap stocks and/or extreme results. Potential pitfalls of the portfolio alpha are its unfair weighting of particular stocks and the fact that it is unduly influenced by micro-cap stocks. To mitigate these issues and because a panel regression and the portfolio alpha method can be used to check each other's results, Fama and French (2008) suggest to using both methodologies. Following Fama and French (2008), I use a panel regression and the portfolio alpha method for my abnormal return analysis.

Overall, the government-dependency variables are both statistically and economically significant in predicting abnormal returns, regardless of whether I control for the IMR and well-known anomalies, regardless of whether the control variables are with or without industry adjustment, regardless of whether I limit my focus on industries with the most government sales dollars or broaden my focus to include all industries,

[10]See Masters and Keim (1985), Grier, Munger, and Roberts (1994), Hart (2001), Zardkoohi (1985)

and regardless of whether I separate the sample into size or time subsamples or treat the whole sample as one single group.

A. Panel Regressions

First, I somewhat mitigate the issues that Fama and French (2008) discuss regarding the micro-cap stocks by dropping all the firm-month observations in which the month-end stock prices are less than \$3. Furthermore, as government sales seem to be concentrated in a few industries, I also focus on the top industries with the highest government sales dollars and run an analysis with FF 49 industries median-adjusted independent variables. When I focus my analysis on the top three FF-12 industries with the most government sales in the previous year rather than using the whole sample, the economic magnitude of the coefficients is approximately 35% higher compared with the results that include all twelve FF-12 industries.

I present the results of the Fama-MacBeth (FM) cross-sectional regressions without any controls in Tables 3 and with controls in Table 4. According to the univariate FM regression results in Table 3, two GD^{Sale} variables are significant at the 5% level, and the remaining GD variables are significant at the 1% level. Before controlling for any other control variables, government-dependent firms in the top three FF-12 industries (by previous year's government sales dollar) earn, on average, abnormal returns of 35 basis points per month.

Models that combine a couple of GD variables provide interesting insights. When I control for $GD^{Surprise}$ [Column (6)], GD^{Report} is no longer significant for predicting abnormal returns, suggesting that between two firms that report government sales, one that has reported government sales intermittently earns higher returns. GD^{Sale} on its own is statistically significant for predicting abnormal returns, but when I control for $GD^{Strength}$ [Column (7)], GD^{Sale} no longer significantly predicts abnormal returns. The evidence suggests that in the sample of firms with similar government sales, the firm that has been government dependent longer earns higher abnormal returns. The results from both models are intuitive and make sense economically. Finally, when I include all my variables in one model [Column (5)], $GD^{Strength}$ and $GD^{Surprise}$ are positively significant at the 5% level; GD^{Sale} is positive and close to being significant at the 10% level; and GD^{Report} is negatively significant at the 5% level.

As I show in Table 4, after I control for well-known empirical regularities, IMR, economic political risks, and tail risks, all eight models [Columns (1) to (8)], except Columns (3) and (7), show that the government-dependency variables are significant at the 1% level. The slope coefficient of GD^{Report} [Column (1)] tells us that a government-dependent firm regardless of its industry, on average, earns approximately 45 basis points of abnormal returns per month in the year following government reporting even after including a battery of controls. However, in the top three FF-12 industries in terms of the previous year's government sales dollars, the abnormal return increases to 45 basis points per month [Column (5)].

Finally, the summary statistics (e.g., standard deviation) of GD variables can be used to interpret the coefficients of the other three GD variables. For example, after controlling for all the control variables, a one standard deviation increases in $GD^{Strength\_T3}$ (Column (6)), $GD^{Surprise\_T3}$ (Column (7)), and GD^{Sale_T3} (Column (8)) predicts the abnormal returns of $34(484*0.070)$, $14(473*0.030)$, and $29(1.06*27.830)$ basis points per month, respectively.

A.1. Results in Industries with the Most Government Sales

As I previously mentioned, the GD variables with $\_T3$ subscripts are the GD variables that exclude government dependent firms if they are not in the top three FF-12 industries in terms of previous year's government sales dollars. I analyze these industries for the following reason: when government sales are concentrated in a particular industry, there will be less competition among firms in that industry for government contracts. Consequently, there will be greater chance that they will win the contract even when they offer less competitive bids (or bids with higher margins). Hence, I hypothesize that GD has larger wealth effects for firms operating in industries with the highest government sales. Every year, using government sales dollars from the previous year, I pick the top-three FF-12 industries with the most sales dollars and study the return predictability of the government-dependency variables, thus limiting my sample of government-dependent firms to only those in the top-three FF-12 industries. Because revenues of finance companies are of different nature that of companies from other industries, the finance industry (Industry 11) is excluded from this analysis.

During the 36 years included in my sample period, only the FF-12 industries 3 (Manufacturing), 6 (Business Equipments), 8 (Utilities), 10 (Health care, Medical

Equipment, and Drugs), and 12 (Other, e.g., Mines, Construction, Building Materials, Transportation, Hotels, Business Services, Entertainment) appear at least once in the top three industries (industries 3, 6, 8, 10, and 12 appear 37, 36, 1, 16, and 21 times, respectively).

I present the return predictability of each of my government-dependency variables (GD^{Report}, $GD^{Strength}$, $GD^{Surprise}$, and GD^{Sale}) for the top three industries in both Tables 3 and 4. Both the univariate results (Table 3) and the results after controlling for a myraid of variables (Table 4), support my hypothesis that the wealth effects of GD are larger in industries with the most government sales dollars. In both Tables 3 and 4, the coefficients of the $\_T3$ subscripted GD variables are approximately 30% higher than the coefficients of the unsubscripted GD variables.

A.2. Results with Industry-Adjusted Variables

For any given year, government sales dollars are not spread evenly across the different industries. If I split the government sales dollars by FF-12 industries, for any given year, the top three industries represent approximately 75% of this amount, with a standard deviation of 7.18%, and the concentration of sales is consistent throughout the years from 1979 through 2014 (Figure II). Hence, as a robustness check, I next perform my analysis of return predictability of government-dependency variables using FF-49 median adjusted variables. Except for two binary variables, GD^{Report} and the Election Years Dummy variable, I adjust all GD variables as well as the control variables using the FF-49 industry median.

I present the results with industry-adjusted variables in Table B2 in the Appendix. Overall, the results with the industry median adjusted variables are similar in terms of coefficients and statistical significance to the results with unadjusted variables. After this industry adjustment, the standard deviation of the GD variables changes slightly, and these summary statistics are presented in Table 1. When controlling for the FF-49 median adjusted control variables, the coefficient of GD^{Report_T3} tells us that a government-dependent firm in the top three FF-12 industries in terms of the previous year's government sales dollars earns approximately 40 basis points of the abnormal return per month. In short, the industry-adjusted variables support the results obtained with the unadjusted variables.

A.3. Channels through which Politically Connected (Using the PAC Contribution Definition) Firms Benefit

Cooper et al. (2010) find that firms' PAC contributions are significantly correlated with the cross-section of future stock returns. However, the mechanism by which these firms obtain wealth effects is not yet clear. Two hypotheses that naturally arise are (1) firms earn higher returns by inducing politicians to adopt favorable policies and (2) firms earn higher returns by winning government contracts. While few findings seem to contradict the first hypothesis, the validity of the second hypothesis is still uncertain.[11].

To better understand this mechanism, I split the sample of government-dependent firms into subsamples of government-dependent firms that did not make any PAC contributions and government-dependent firms that made at least one PAC contribution from 1984 to 2004. Then, I run separate FM regressions of the monthly returns on the lagged values of the variables introduced by Cooper et al. (2010), $PI^{Candidates}$, $PI^{Strength}$, PI^{Power}, and $PI^{Ability}$, including well-known anomalies and several proxies of economic political risks and tail risks, for each subsample of government-dependent firms. I present the results of these regressions in Table 6 - Columns (1) through (4) show the regression results for government-dependent firms that made PAC contributions and Columns (5) through (8) show the results for government-dependent firms that did not make PAC contributions.

When I include several control variables, each of the political connections variables introduced by Cooper et al. (2010) are statistically significantly correlated with future returns in the sample of government-dependent firms that made PAC contributions while, none of the variables are statistically significantly correlated with future returns in the sample of government-dependent firms that did not make PAC contributions. Although the results do not negate the first hypothesis, they provide strong evidence that firms making PAC contributions probably gain the wealth effect found by Cooper et al. (2010) by winning material government contracts.

To summarize, the government-dependency variables are both statistically and economically significant in predicting abnormal returns, regardless of whether I control for IMR and well-known anomalies, regardless of whether the GD variables and the control variables are with or without industry adjustment, regardless of whether

[11]See Ansolabehere et al. (2003) and Hellman et al. (2000)

I focus my study on industries with the most government sales dollars, or broaden by focus to include all industries, and regardless of whether I separate the sample into three subsamples (either based on their MCAP or the time period) or treat the whole sample as one single group.

B. Controlling for Additional Risks

The correlations between GD and future abnormal returns found in this paper are both statistically and economically significant in various settings. The results are not only significant but also material: the overperformance of portfolios of government-dependent firms are approximately 6% greater than what is suggested by FFC six factors, and this result is significant when the equity market premium is in the vicinity of 6% to 7%. Considering these results, it is natural to ask why such market overperformance exists when the relevant information is all public and is timely available. Why do investors, even over the course of weeks or even months, not adjust their expectations such that all the value related to the firms having government entities as material customers is reflected in the firms' stock prices? In short, are investors underreacting to information about the sales to government entities reported by the firms or are they compensated for bearing some kind of additional risks not accounted for by traditional asset pricing models?

There has been an ongoing debate among financial economists regrading which risks or types of risks matter for stock prices and which risk factors are already priced into security prices. However, finance researchers generally use FF three or five factors or FFC four or six factors as a benchmark when calculating abnormal returns. Assuming that FF or FFC factors capture some type of risks, I use a few proxies for relevant additional risks that government-dependent firms might bear to see how the predictability of abnormal returns among government-dependent firms changes after controlling for such additional risks.

B.1. Political Uncertainty and Tail Risks

In Figure IV and V, I present certain excerpts from the 10-Ks of two government-dependent firms in Figures IV and V. For Vectrus Inc., presented in Figure IV, 100% of the revenue comes from the US government; for Teledyne Technologies, presented in Figure V, 25% of the revenue comes from the US government. In its 10-K, Teledyne talks about the material risk of the US government terminating its contracts for convenience, a luxury almost exclusively provided to government entities. The 10-K of Vectrus discusses how its revenue is dependent on the US government's presence and operations in Afghanistan and how it is exposed to any budgetary changes affecting US defense. In this context, investors face an additional layer of uncertainty when processing the information provided by firms reporting any government entity as a customer.

Hence, it is fair to assume that these firms are more sensitive to economic policy uncertainty than the rest of the market. To control for various political and regulatory risks, I use the Economic Political Uncertainty (EPU), Government Spending (GS), Regulation Uncertainty (REGL), and Geopolitical Risks (GPR) indexes. [12].

Furthermore, there is ample evidence that politically connected firms receive a helping hand from the government in bad times and that government spending has a stabilizing effect for firms that do business with the government in times of recession[13]. This evidence suggests that government-dependent firms might bear some additional tail risks over and above what the rest of the market is exposed to, and having a business relationship with government entities might be their hedging mechanism against such tail risks. To control for such tail risks, I use the monthly tail risk measure introduced by Kelly and Jiang (2014). [14].

For each of the four uncertainty indexes, I obtain the firm-level time series of slope coefficients by running univariate predictive regressions of the monthly stock returns of stock i on each index on a rolling 60-month basis. For the tail risk measure, following Kelly and Jiang (2014), I obtain the coefficients running a rolling 120-month regression. β_{EPU}, β_{GPR}, β_{GS}, β_{REGL}, and $\beta_{Tail\,Risk}$ used as control variables in various tables are then regression slope coefficients with respect to Economic Political Uncertainty, Geopolitical Risks, Government Spending, and Regulation Indexes and tail risk measure of Kelly and Jiang (2014), respectively.

[12] The first three indexes were developed by Baker, Bloom, and Davis (2016) and the last one was developed by Dario Cladara and Matteo Lacoviello at the Federal Reserve Board. The values of all indexes are available for download at *http://www.policyuncertainty.com*

[13] See Faccio et al. (2006), Goldman (2016)

[14] Their formula takes the form, $\lambda_t^{Hill} = \frac{1}{K_t} \sum_{k=1}^{K_t} ln \frac{R_{k,t}}{u_t}$, where $R_{k,t}$ is the kth daily return that falls below an extreme value threshold u_t during month t, and K_t is the total number of times this threshold is exceeding in month t.

B.2. US Presidential Election and Postelection Years

As the direction of future government policies becomes even more uncertain, these uncertainties peak during a period right before US presidential election years and are somewhat resolved in postelection years. Thus, I hypothesize that if government-dependent firms truly earn abnormal returns due to the additional political uncertainty risks they bear, their returns should be higher when the political environment is more uncertain. To control for such heightened political uncertainty risks, I create a dummy variable that is equal to 1 for all the presidential election years (the two years leading up to the election) and 0 for all post-presidential election years (the two years following the election) and include the dummy in my cross-sectional regressions.

C. Relative Government-Dependency Weighted Portfolios

The second method I use to study the return predictability of my dependency variables is the portfolio alpha methodology. Here, again, as I mentioned in the previous section, to avoid the issue of micro-cap stocks unfairly influencing the portfolio returns, I keep my sample observations only if their month-end stock prices are higher than $3. First, I treat my whole sample as one group, and second, I split the sample into three subsamples based on size, i.e., small, medium, and large, which represent the bottom, middle, and top 33% of the sample firms' MCAP, respectively, and three subsamples based on the time period, i.e., 1979 to 1992, 1993 to 2003, and 2004 to 2014.

In the beginning of every month, following a methodology similar to that used in Cooper et al. (2010), I form a relative GDW portfolio of all government-dependent firms, meaning that the firms with higher measures of GD, as defined by Equations 1, 3, 5, and 6, relative to the other government-dependent firms in month $t-12$ are given more weight in the portfolios. The reason for calculating the individual security's weight in the portfolios using information from the previous year is because the firms report their government-dependency information annually. Then, based on the values for the end of each month, I calculate the relative GDW portfolios returns. The portfolios are rebalanced every month. The relative weight of stock i in month t is given by the equation below.

$$Weight_{i,t} = \frac{GD_{i,t-12}^{Variable}}{\sum_{i}^{N} GD_{i,t-12}^{Variable}} \tag{7}$$

The $GD^{Variable}$ in the above equation can be any of the four government-dependency variables defined in Equations 1, 3, 5, and 6. The results are robust and consistent across all four dependency variables and across all five asset pricing models [FFC six-factor model (FFC6 hereafter), FF five-factor model (FF5 hereafter), FFC four-factor model (FFC4 hereafter), FF three-factor model (FF3 hereafter), and the CAPM] as the benchmark models. In addition to all the above benchmark models, I also use a benchmark model that includes the FFC6 factors, the financing-related mispricing factor of Hirshleifer and Jiang (2010) (UMO) and two mispricing factors - MGMT and PERF - proposed by Stambaugh and Yuan (2016) that are constructed using several anomalies.

The relative GDW portfolios of government-dependent firms earn the alphas of approximately 50 basis points per month (up to a maximum of 92 basis points per month) regardless of the government-dependency variable used for portfolio weighting and regardless of the benchmark asset pricing model considered. Overall, the GD^{Sale} weighted government-dependency portfolio earns the highest alphas regardless of the benchmark asset pricing model used. I present the results in Table 7.

To ensure that my results are not specific to a particular size of firms or a particular time frame, I split my sample into three size-based groups (i.e., small, medium, and large) corresponding to the bottom, middle, and top 33.33%, respectively, of sample MCAPs in month $t-1$ and three time-based subsamples, i.e., 1979 through 1992, 1993 through 2003, and 2004 through 2014 and repeat the process above using $GD^{Strength}$ as my weighting variable (the results are strong using other GD variables as well). The monthly FFC six factors alpha of the relative GDW portfolios in the three size-based subsamples and time-based subsamples are 50, 31, 44, 46, 84, and 40 basis points, respectively. Again, I show the results in Table 7.

The GDW portfolios that use GD^{Report}, $GD^{Strength}$, $GD^{Surprise}$, and GD^{Sale} achieve annual Sharpe ratios of 0.77, 0.68, 0.46, and 0.76, respectively. Except for the one that uses $GD^{Surprise}$ as the weighting variable, the Sharpe ratios of the GD portfolios are higher than those of FFC six factor portfolios. Adding the government-dependency portfolio that uses $GD^{Strength}$ as the weighting variable to FF3 factor portfolios increases the *ex post* annual Sharpe ratio of tangency portfolio from 1.01 to 1.16 with a weight of 43% on the GD portfolio. Even when I include all FF5, MOM, QMJ, UMO, MGMT, and PERF factor portfolios in the mix, the weight of the GD portfolio in the tangency portfolio remains at 26%, and QMJ is the only factor with a higher weight than the GD portfolio.

In short, the results for the relative government-dependency portfolio alphas show that the abnormal returns earned by the government-dependent firms are strong and consistent across *GD* variables and across different base asset pricing models and, even though the returns are stronger in small firms and during the decade of 1990s, abnormal returns occur for firms of all sizes and for all time periods.

C.1. Results of the First-Stage Probit Model

I present the results of the first-stage (probit) model in Table B1 in the appendix. As I previously mentioned, only 43% of the politically connected firms report the government as a major customer at least once in my sample period, evidence suggesting that political connections and GD are different phenomena, but they are related and not mutually exclusive. Hence, some of the variables are consistent in regard to how they affect the likelihood of political connections and GD. In line with the results in Cooper et al. (2010) for political connections, it is clear that firms with more employees, a larger number of business segments, a higher market share; firms in regulated industries; and firms in industries where there is large number of politically active firms are more likely to be government dependent. In addition, operating in a large number of geographic segments decreases the likelihood that a firm is government-dependent.

However, some variables affect the likelihood that a firm will have political connections and be GD differently. Having more leverage increases the likelihood that a firm will be a politically connected, but it decreases the likelihood that a firm will be government dependent. The BM, quadratic term of market share, and Herfindahl index are not significant in having an impact on the likelihood that a firm will be politically connected; however, they impact the likelihood that a firm will be government-dependent positively, negatively, and positively, respectively. A firm's size and its sales have a positive impact on the likelihood that it will have political connections, but they also have a negative impact on GD. This occurs because, for bigger firms the value of a government contract has to be bigger to be above the threshold for mandatory reporting, which is 10% of a firm's total revenue for the year; therefore, the results with regard to the size of the firm and its sales are likely to be biased.

With regard to the relation between firm fundamentals and the likelihood that a firm will be government dependent, total factor productivity and earnings before interest tax depreciation and amortization have an negative impact on this likelihood. However, the gross margin, effective tax rate, and ROA have a positive impact on the likelihood that a firm will be government dependent.

D. Other Robustness Checks

D.1. Are GD Effects Same As Political Connections Effects?

In my sample, 43% of the politically connected firms, as defined in Cooper et al. (2010), reported the government as one of their major customers at least once in their lifetime (in the context of my sample). Although there is no complete overlap between politically connected firms and government-dependent firms, concerns arise that what I find in this paper may simply be the result of political connections and not that of government dependency. I address such concerns two ways: one, by including political connections and its interaction terms with the GD variables in my Fama-MacBeth cross-sectional (FMC) regressions and two, by performing my analysis with the subsample of firms that are government-dependent but not politically connected.

In the appendix, Table B3 presents the results that replicate the main results but include the political connections variables, as defined in Cooper et al. (2010), as well as the interaction terms of the GD variables and the political connections, in the FMC regressions. Although the slope coefficients of the GD variables, especially those of $GD^{Strength}$ and $GD^{Surprise}$, decrease, I find that my results are robust to the inclusion of political connections variables and their interactions with government-dependency variables in my models. Second, the interaction term between the GD variable and political connections is never significant; further, the evidence shows that GD does not become stronger or weaker as the magnitude of political connections changes.

To address the concern that political connections are driving my results, I excluded all government-dependent firms that become politically connected at any point in their life in my sample period, even if they reported government sales first and later become politically connected as defined by Cooper et al. (2010). The results of the return predictability of the GD variables in this restricted sample are presented in Table 5. Again, in the sample of government-dependent but not politically connected firms, my main results are not only robust but also stronger than in the full sample with regard to a few of the GD variables.

In short, the results suggest that the benefits GD provides are above and beyond the benefits of political connections; the benefits of GD are not due to the presence of political connections; and the benefits of GD do not become better or worse as the extent of the political connections change.

D.2. Are GD Effects Same As Customer Concentration Effects?

Dhaliwal et al. (2016) find a positive association between customer concentration and a supplier's cost of equity; however, they also find a lower cost of equity (19.1 basis points) for suppliers that are dependent on the federal government. Thus, as a robustness check, I replicate my main analysis for the sample of firms that are corporate-dependent firms (at least 10% of the revenue comes from a single business customer) but not government dependent. All corporate-dependency (CD) variables are created following the same methodology as that used to create the government-dependency variables. As Dhaliwal et al. (2016) use accounting data and I used market measures, it is not surprising that our results differ. Table B4 shows the results when I replicate my main results using the CD variables. The results show that none of the CD variables are significant in predicting future returns. The results further suggest that it is highly unlikely that my findings can be explained by customer concentration.

D.3. Do the Results Depend on the Types of Returns Used?

As a robustness check, following Cooper et al. (2010), I also perform my analysis using stocks' characteristic-adjusted returns, computed following Daniel, Grinblatt, Titman, and Wermers (1997) (DGTW hereafter)[15]. Additionally, because the DGTW method adjusts the individual security's BM with the industry (FF 49) average BM from 1963 until t before it sorts the BM, but most papers that follow DGTW do not, I calculate the DGTW-adjusted returns both ways, and my results are robust

[15]I follow the methodology used by Daniel et al. (1997) to calculate the characteristic-matched portfolio returns. Using the values for the end of each month, I first sort the stocks in quintiles based on their market cap using NYSE breakpoints. Then, for each size quintile, I sort the stocks using the BM of the previous year. Finally, I further sort the stocks in double-sorted size-BM portfolios based on their cumulative returns over the prior 12 months except the most recent month. Then, I calculate the value weighted returns of each of the 125 portfolios. The DGTW-adjusted return is then the raw stock return minus the return of the benchmark portfolio in which the stock belongs based on i's size, the BM, and its cumulative returns over the prior 12 months except the most recent month.

to using either type of DGTW-adjusted returns. Second, I also perform my analysis using excess returns (in excess of the T-bill rate). My results are robust to using all three types of returns, i.e., plain raw returns, excess returns, and returns over and above the returns of the characteristic-matched portfolio.

D.4. Do the Results Depend on the Government-Dependency Variable Used in the Analysis?

The primary result of this paper indicates that GD has positive wealth effects. To study the wealth effects of GD, I construct the variables in such a way that they can act as a robustness check for each other. Regardless of whether I define GD as a binary variable (GD^{Report}) for government reporting, a monotonically increasing function of how long a firm has been government dependent firm ($GD^{Strength}$), a monotonically increasing function of how intermittently a firm has been government dependent ($GD^{Surprise}$), or a monotonically increasing function of the percentage of a firm's revenues that come from government entities (GD^{Sale}), in my sample, GD is both statistically and economically significant in predicting the cross-section of future returns even after the inclusion of a plethora of control variables.

D.5. Are the Results Robust to Changing the Definition of the Government-Dependency Variables?

With regard to the government-dependency variables, my results are robust to changing the definitions of the dependency variables. Furthermore, my results are robust to redefining GD^{Report} to include less than one year or multiple years as the period to study the wealth effects of government reporting. My results are robust to $GD^{Strength}$ and $GD^{Surprise}$ being just categorical variables that simply count the number of incidences of government reporting and the number of incidences of surprise government reporting, respectively. In other words, my results are robust to not applying the decay mechanism (dividing the incidences of government reporting by the firm's age) to the variables $GD^{Strength}$ and $GD^{Surprise}$.

III. Source of Return Predictability

A. *Government Dependency, Political Connections, and the Predictability of Government Sales*

In my sample, I find that once a firm engages in material business with any government entity, it is likely that the firm will again do business with government entities in the future. In my sample, 21% of the firms continuously report government sales until they are in my sample, and 37% of the firms report government sales 75% of the time at some point in future after they first report government sales. Second, once a firm does business with a government entity, it is likely that the firm will be able to increase the amount of its sales to government entities in the future. In my sample, where data on the amount of the sales is available, of the firms reported government sales at least twice in my sample period, approximately 43% of the firms were able to increase their sales to government entities by more than 100%, and approximately 10% of the firms were able to increase their sales to government entities by more than 1,000% from the first reported sale to a government entity. A hand-full of firms were able to increase their sales to government entities by more than 25,000% from the first time they reported government sales. These statistics support the idea that once a firm has a material government contract, it will have an advantageous position in terms of winning more and bigger government contracts in the future.

In this section, I examine how a firm's probability of winning material government contracts is impacted by having a political connection (as defined by Cooper et al. (2010)) and/or having material government contracts in the past (e.g., six or 10 years back). Paragraph 17.204(e) of the Federal Acquisition Regulation (FAR) states that, *"unless otherwise approved in accordance with agency procedures, the total of the basic and option periods shall not exceed five years in the case of services, and the total of the basic and option quantities shall not exceed the requirement for five years in the case of supplies."* Hence, I lag my GOV_REP variable at least six years in my analysis to address the contract tenure issue.

Table 8 presents the results of a *probit* analysis of a firm's probability of winning a material government contract. In Columns (1) through (4), I show how the political connections variables developed by Cooper et al. (2010) are associated with a firm's probability of winning the material government contracts. The results show that all political connections variables affect the politically connected firm's probability of winning a material government contract positively and significantly. The results provide evidence of the channels through which politically connected firms benefit from the government by increasing their chances to win material government contracts. When I place all four variables used by Cooper et al. (2010) into one regression, PI^{Power} and $PI^{Ability}$ remain positively significant, $PI^{Strength}$ becomes insignificant, and $PI^{Candidates}$ becomes negatively significant.

Next, I introduce two binary variables in the *probit* regressions: the first binary variable is equal to 1 if a firm had one or more material government contracts six years back (GOV_REP_{t-76}), and the second binary variable is equal to 1 if a firm had one or more material government contracts 10 years back (GOV_REP_{t-120}). Both fo these variables are lagged versions of the dependent variable GOV_REP. Table 8 presents the results of six *probit* regressions.

Columns (6) and (7) of Table 8 show that after controlling for political connections and including other controls, a firm's probability of winning the material government contracts, all else equal, increases by approximately 38.8% or by approximately 27.5% if the firm had one or more material government contracts six year back or 10 years back, respectively. Even though I do not show the results here, a firm's probability of winning material government contracts, after controlling for the political connections and other controls, increases by approximately 12.2% and 11.8% if the firm had one or more material government contracts 15 years back and 20 years back, respectively.

The results in Columns (6) and (7) show that having government sales in the past and the size of the sales have a material impact on a firm's probability of winning material contracts in the future. Given that a firm had one or more material contracts six years back or 10 years back, a one standard deviation increase in the variable GD^{Sale} increases a firm's probability of winning material government contracts in the future by approximately 11.9% or 11.2%, respectively.

When I introduce any of the lagged (between six to 20 years) government sales dummies and the size of such government sales in the *probit* regression, even recent political connections (one year lagged) lose their statistical power to predict future government sales. It seems as though government-dependent firms belong to an exclusive club, and, once you join the club, you have significant leverage on government dollars.

B. *Changes in Firm Characteristics Post-Government Reporting*

Next, I analyze the changes in firm characteristics post-GD. To understand the abnormal returns earned by government-dependent firms, I first examine the differences in the accounting and profitability measures, i.e., total assets, MCAP, the gross margin, EBIT (earning before interest and taxes) margin, operating profit margin, net income margin, leverage, the implied overall tax rate, the implied federal tax rate, productivity, sales growth, capital expenditures (capex), and R&D spending as a percentage of total assets, [16] between, first, government-dependent firms and the rest of the market and second, pre- and post-government reporting in the sample of government-dependent firms. All characteristics are FF-49 industry median adjusted, and total assets and MCAP are further inflation adjusted.

Column (1) of Table 9 presents the results of the univariate regressions of the dummy variable *PRE_GOV_REPORT* on firm characteristics with year times FF 49 industry fixed effects and standard errors clustered at the year level. The dummy variable equals 1 for all government-dependent firms for all the years before the year in which they first report material government sales, null for the year in which they first report the sales and all the years after that, and 0 for all years of firms that never report material government sales. Columns (2) through (4) of Table 9 present the results of the univariate regressions of the dummy variable *POST_GOV_REPORT* on firm characteristics for the government-dependent firms in all FF-12 industries, the top three FF-12 industries based on the previous year's government sales dollars, and the top three FF-12 industries with the highest Herfindahl Index (HHI) of government sales in the previous year, respectively. All models from columns (2) through (4) are with year times FF 49 industry fixed effects with standard errors clustered at the year level.

Column (1) shows that compared with the firms that never report any material government sales, government-dependent firms, on average, are larger in terms of MCAP but have smaller assets, lower profitability margins, higher leverage, lower productivity, higher sales growth and less capital spending scaled by total assets before they report any material government sales. However, Columns (2) through (4) show that things start to change significantly after firms report material sales to the government. Post-government reporting, most interestingly, their profitabil-

[16] I included sales growth, capex and R&D spending as a percentage of total assets to see whether my findings are consistent with those of Cohen and Malloy (2016).

ity margins become significantly higher across the board. These firms also acquire more assets, become even larger in terms of MCAP, accumulate even more leverage, start paying lower taxes, and increase their productivity. Consistent with the findings of Cohen and Malloy (2016), my findings show that post-government reporting, sales growth and capital spending as a percentage of assets decrease. However, it appears that these firms compensate for lower sales growth with better profitability and compensate for lower capex spending with higher productivity.

In the previous section, I hypothesize that when government sales dollars are concentrated in some industries, the competition for government contracts decreases, and hence, firms are able to win contracts by submitting bids with built in aspects designed to increase profitability. The results in shown in Columns (3) and (4) strongly support this hypothesis. Regardless of whether I consider the top three FF12 industries in terms of government sales dollars in the previous year or the top three FF12 industries with the highest HHI value of government sales in the previous year, the coefficients of the profitability measures become larger by approximately 50-80% compared to the coefficients in shown Column (2). The profitability of government contracts is higher in industries where government sales dollars are concentrated.

Novy-Marx (2013) finds that profitable firms generate significantly higher returns compared with unprofitable firms, despite having higher valuation ratios. The fact that profitability impacts stock returns is so widely accepted that it is one of the factors in the widely used FF five-factor asset pricing model. Thus, the significant improvement in profitability of government-dependent firms post government dependence is consistent with my general findings. One of the reasons behind the return predictability of government-dependent firms seems to be coming from the fact that government-dependent firms' fundamentals improve significantly after these firms begin receiving government dollars.

C. Profitability of Government Contracts

In the previous section, I find that the firms' profit margins increase significantly post-government dependence. Here, I explore possible reasons why government contracts are more profitable than contracts where the counterparty is another firm.

C.1. Termination for Convenience Clause in Government Contracts

Just as the name implies, the "Termination for Convenience" clause allows a party to terminate a contract at his/her convenience without any justification for termination. Unlike typical contracts between two corporations in the corporate world, the "Termination for Convenience" clause is implied in all government contracts regardless of whether the contracts expressly provide it or not. According to Congressional Research Service Report for Congress R43055, course cases have been given the right to the Government even when the contract expressly disclaims the right. A 10-K excerpt of Teledyne in Figure V says that the company had three, four, and six US Government contracts terminated for convenience in 2014, 2013, and 2012, respectively. In short, "Termination for Convenience" clause of government contracts exposes government contractors to a real and significant risk.

Since the products and services the government needs change frequently, the clause is a way to protect public interest and ensure the government does not have to pay for something it may no longer need. In the case of contract termination, since the government is exercising its right to terminate the contract, contractors generally cannot recover any consequential damages (Manuel (2015)). Even though contractors are entitled to a termination settlement when the government terminates the contract, often, the contractor will be in a substantially worse position than it would have been had the contract not been awarded (Perlman and Goodrich Jr (1978)).

Since a firm that participates in a bidding process for government contracts is aware of this clause, on average, managers will participate in the process only if the government contracts provide a higher level of profitability that can mitigate possible losses due to Termination for Convenience. Firms that are required to invest in assets with a lower redeployable value or lower resale value to perform under government contracts will have higher risks due to this clause then the firms that are not required to invest in such assets. Hence, I hypothesize that former types of firms will require higher profitability to participate in the government contracting process than the later firms.

To test my hypothesis, I use firm-level asset redeployability - the extent to which assets have alternative uses - measures proposed by Kim and Kung (2016) and the capital intensity ratio, which is calculated as property, plant and equipment (PPE) divided by total assets, following Gulen and Ion (2015). The capital intensity ratio is a rather rough proxy of investment irreversibility because it does not take into account adjustment costs, such as asset specificity or mobility (Kessides (1990)). The results presented in Columns (1), (2), (5), and (6) of Table 10 support my hypothesis. After government-dependent firms first report government sales, asset redeployability and the operating margin have a significant negative relation.

C.2. Information Asymmetry between Managers and Regulators

Classical regulation theory largely assumes that the regulator or the governmental body that provides procurement contracts and firm managers are equally informed about the general industry conditions and the firm. However, in reality, the governmental body is often not perfectly informed about industry conditions and knows little about a particular firm or bidder's cost function, productivity, and innovativeness. Laffont and Tirole (1993) propose that there is information asymmetry between a firm's managers and regulators (or governmental body that handles procurement contracts). The main result is that the information asymmetry between the two parties allows the contracting firm to enjoy rent. Furthermore, in the presence of information asymmetry, the contracting firm also exerts less effort.

In this setting, with the advancement of production technologies, it is plausible that there exists considerable information asymmetry about industrial knowledge and the cost functions of the products and services between the managers of the bidding firms and regulators. Hence, I hypothesize that this information environment lets managers extract higher rents from the government, and hence, these contracting firms' profitability increases post GD.

To test my hypothesis, following Armstrong, Core, Taylor, and Verrecchia (2011), I use the bid-ask spread and the number of analysts covering the firm as two measures of information asymmetry between the managers and regulators. The results are shown in Columns (3), (4), (7), and (8) of Table 10 and support my hypothesis. For firms that are not dependent on the government, a larger bid-ask spread is associated with a lower operating margin; however after government-dependent firms report their first material government contract, the bid-ask spread is positively significantly associated with the operating margin. For government-dependent firms, it seems to be the case that higher information asymmetry helps firms to increase their profitability.

D. Mispricing and Abnormal Returns of Government-Dependent Firms

A high Sharpe ratio of a government-dependency portfolio (e.g., one where $GD^{Strength}$ is the weighting variable) may suggest that the returns of the portfolio might be too high for rational risk premia to explain them. The Sharpe ratio of the GD portfolio is higher than any of the FFC six factor portfolios. FFC six-factor alphas of approximately 40 to 80 basis points per month and the significant return predictabilty of the GD variables, even after controlling for well-known anomalies as well as various political, economical, and tail risks, indicate that some kind of mispricing is at play here.

Furthermore, when I use a benchmark asset pricing model that includes three mispricing factors to the FFC6 model, the alpha of GD portfolios increases from that of the FFC6 approximately five to 10 basis points, and all alphas are significant at the 1% level. The results show that the GD effect is incremental to the mispricing effect captured by UMO, MGMT, and PERF.

Next, following Hirshleifer et al. (2013), I further test to see if the abnormal returns are driven by some psychological constraints of the investors.

D.1. Investor Inattention and Hard-to-value Firms

Despite being rational, investors may face incomplete information about the change in a firm's value that results from doing business with government entities. Investors may lack critical knowledge needed to evaluate the provisions in government contracts, such as the flexibility to terminate the contract at the government's convenience, as this clause is very rare in contracts between two corporate entities. As mentioned above, the 10-K excerpts of Vectrus Inc., a government-dependent firm, indicates the firm's exposure to budgetary changes in US defense. In such circumstances, valuing the firm's future prospects is harder as defense policy is kept secret. Therefore, it makes sense to hypothesize that valuation uncertainty should contribute to the abnormal returns of these firms.

Stice (1991) examines the stock price reactions to 10-K and 10-Q filings with the Securities and Exchange Commission (SEC) and the stock price reactions corresponding to earning announcements published in the *The Wall Street Journal* (WSJ) for instances where the 10-Ks and 10-Qs were filed at least four trading days before the actual earnings announcements that appeared in the WSJ. The paper finds no significant market reactions, on average, on the SEC filing dates but finds market reactions to the subsequent WSJ earnings announcements, even though the SEC filings were the first public announcements of the earnings for the quarter. Similarly, You and Zhang (2009) find investors' reactions to 10-K information to be sluggish. Because firms report information about material customers such as the US government in 10-Ks, 10-Qs, and 8-Ks and because in most cases, the information may not appear in earnings announcements, it is plausible that investors' inattention or limited attention contribute to return predictability.

Here, my hypothesis is the same as that of Hirshleifer et al. (2013), which is as follows: If government-dependent firms earn abnormal returns because of investors' psychological constraints, I expect to see higher return predictability of GD among stocks with low investor attention and among hard-to-value firms. Following Hirshleifer et al. (2013), I use firm size and analyst coverage as proxies for attention to a stock and firm age, turnover, and idiosyncratic volatility as proxies for valuation uncertainty. I also add a natural candidate, stock return volatility, as another proxy for valuation uncertainty. In addition to using plain analyst coverage, following Hong et al. (2000), I also use residual analyst coverage, where the residual comes from a regression of analyst count on firm size, to control for the impact of size on analyst count.

Again, following Hirshleifer et al. (2013), using the median of each of the variables, firm size, analyst count, firm age, turnover, idiosyncratic volatility, and return volatility, in the previous year, I split current year's sample into two groups - below the median and above the median. Stocks that are smaller in size, younger in age, covered by few analysts and have higher turnover, stock return volatility, and idiosyncratic volatility are considered stocks with low attention from investors and higher uncertainties around their valuation.

In Table 11, I present the FMC regressions results within low attention and higher valuation uncertainty sample in Columns (1) through (7) and the results within high attention and lower valuation uncertainty sample in Columns (8) through (14). In the subsamples divided using analyst count, residual analyst count, and idiosyncratic volatility, return predictabilities of $GD^{Strength}$ are significant only within the low attention and high valuation uncertainty subsamples. In the subsamples divided using other variables, the slope coefficients of $GD^{Strength}$ in the low attention and high valuation uncertainty subsamples are materially higher than the coefficients in the high attention and low valuation uncertainty subsamples. The results provide strong evidence that investors' psychological constraints contribute to the return predictability of GD variables.

IV. Conclusion

In this paper, using a new channel of political connections, I identify politically connected firms, which refers to firms that receive at least 10% of their revenues from either US federal, state, or local governments or foreign government entities, and study their market and accounting performance. Government-dependent firms' political connectedness is measured using different GD variables. These variables capture different aspects of a firm's GD that investors are most likely to care about, e.g., whether a firm is a government-dependent firm; if it is dependent, the percentage of its sales dollars coming from the government; how long the firm has been government dependent; and how consistently the firm has been government dependent over the years. Then, I study the return predictability of these government-dependency variables.

I find that all of my government-dependency variables are both statistically and economically significant in predicting the cross-section of future returns. The results are robust to using different types of returns (e.g., excess returns and DGTW-adjusted returns), controlling for IMR and well-known anomalies, controlling for economic political risks and tail risks, controlling for political connections, in the sample of government dependent but not politically connected firms, and using different definitions of government-dependency variables. I also find that the return predictability of the political connection variables proposed by Cooper et al. (2010) exists only in the sample of government-dependent firms, evidence suggesting that politically connected firms, as defined in Cooper et al. (2010), obtain wealth effects by winning material government contracts.

Two possible sources of return predictability are the significant increase in the profitability measures and the probability of winning future material government contracts post reporting government sales. First, compared with pre-government reporting, post-government reporting, profitability of government-dependent firms significantly increases. In addition, post-government reporting, government-dependent firms become significantly larger both in terms of assets and MCAP and start paying lower taxes. The increase in profitability is probably caused by the atypical structure of government contracts (e.g., the Termination for Convenience clause) and information asymmetry between the contractor and contractee.

Second, the probability that a firm will win material government contracts, all else equal, increases by approximately 38.8% or by approximately 27.5% if the firm had one or more material government contracts six years back or 10 years back, respectively. When controlling for past government contracts, even recent political connections lose their statistical power to predict future government sales. If a firm had one or more material contracts six years back or 10 years back, a one standard deviation increase in the variable GD^{Sale} increases the probability that the firm will win material government contracts in the future by approximately 11.9% or 11.2%, respectively.

The GDW portfolios have Sharpe ratios higher than that of any FFC6 factor portfolios. Adding the GDW portfolio to FFC6, UMO, MGMT, and PERF factor portfolios increases the *ex post* Sharpe ratio of the tangency portfolio by approximately 18% with 26% asset allocation to the portfolio. Further tests reveal that investors inattention and high uncertainty regarding firm valuation contribute to the effect – return predictability is higher in low attention and higher valuation uncertainty samples.

Political connections engendered through government sales dependency not only provide the firms with lucrative government contracts but also provide significant leverage to firms in terms of future government contracts, helping firms to become larger, more productive, and more profitable, thus enabling them to earn abnormal returns for their investors.

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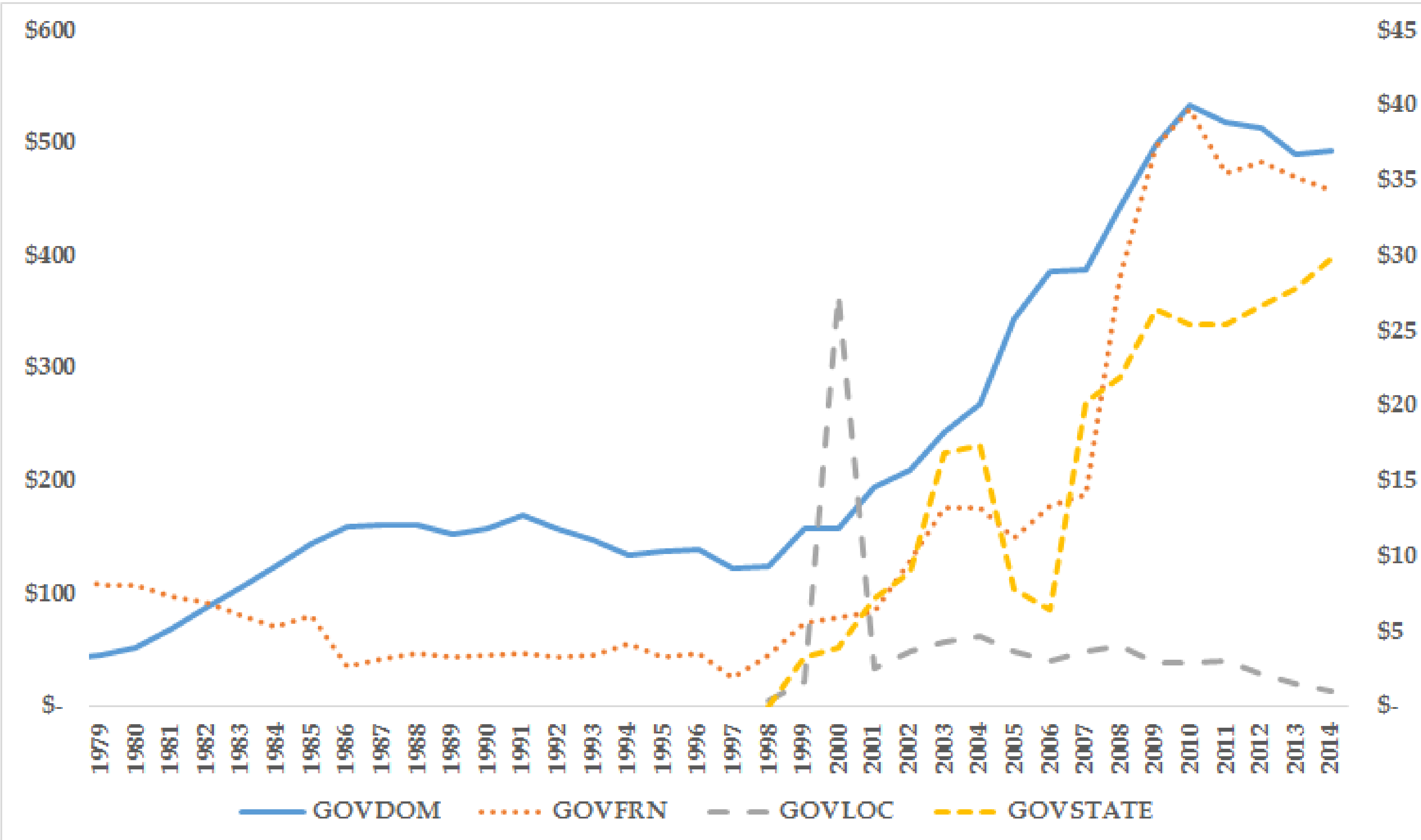

Figure I: Sales to Government Entities. GOVDOM represents the US federal government and is plotted on the left axis. GOVFRN, GOVLOC, and GOVSTATE represent foreign governments, US local governments, and US state governments, respectively, and all three are plotted on the right axis.

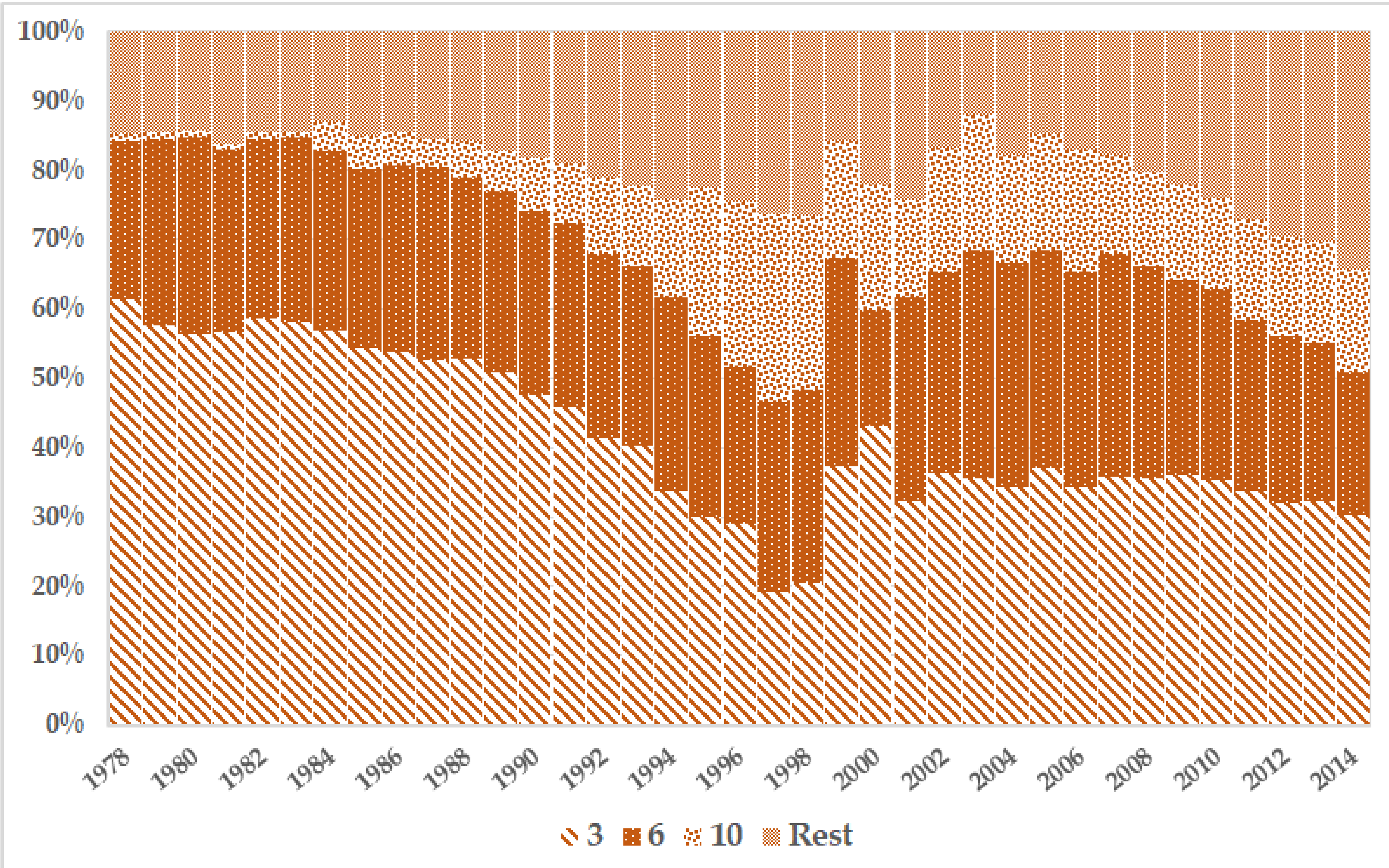

Figure II: Concentration of Sales to Government Entities in FF-12 Industries. For each year, this graph plots the percentage of government sales from firms in FF-12 industries 3, 6, 10 and the rest of the nine industries lumped together. Industry 3 is Manufacturing, Machinery, Trucks, Planes, Office Furniture, Paper, and Printing; industry 6 is Business Equipments, Computers, Software, and Electronic Equipments. Industry 10 is Health care, Medical Equipments and Drugs. Each year, the top three FF-12 industries in terms of total government sales dollars represent approximately 75% (with a standard deviation of 7.18%) of total government sales for the year.

Vectrus, Inc.

Customers

We attribute the strength of our relationship with the DoD and other branches of the U.S. government to our focus on program performance, global responsiveness and operational excellence, as well as our core values of integrity, respect and responsibility. Our primary customer is the DoD. Our revenue from the U.S. government for the periods presented below was as follows:

	Year Ending December 31,		
(In thousands)	2014	2013	2012
DoD	$ 1,172,018	$ 1,473,830	$ 1,790,020
Other U.S. government[1]	31,251	37,808	38,344
Total Revenue	$ 1,203,269	$ 1,511,638	$ 1,828,364

	December 31,		
Contract type	2014	2013	2012
Firm-Fixed-Price	24%	28%	25%
Cost-Plus and Cost Reimbursable [1]	76%	72%	75%
Total Revenue	100%	100%	100%

[1] Includes time and material contracts

Risks Relating to Our Business

We face the following risks in connection with the general conditions and trends of the industry in which we operate:

We are dependent on the U.S. government's presence and operations in Afghanistan for a material portion of our revenue and operating income, and the announced withdrawal of military personnel and suspension or removal of funding for security and training activities in the region by the U.S. government may have an adverse effect on our revenue and operating income prospects.

A decline in the U.S. government defense budget, changes in spending or budgetary priorities or delays in contract awards may significantly and adversely affect our future revenue and limit our growth prospects. Further, because we depend on U.S. government contracts, a delay in the completion of the U.S. government's budget process could delay procurement of the services and solutions we provide and have an adverse effect on our future revenue.

We may not be successful in winning new contracts, which will have an adverse impact on our business and prospects.

Figure IV: Excerpts from the 2014 10-K. Vectrus offers services including infrastructure asset management and logistics and supply chain management; 100% of its revenue comes from the US Government.

TELEDYNE TECHNOLOGIES INCORPORATED

Approximately 25%, 27% and 32% of our total sales for 2014, 2013 and 2012, respectively, were derived from contracts with agencies of, and prime contractors to, the U.S. Government. Information on our sales to the U.S. Government, including direct sales as a prime contractor and indirect sales as a subcontractor, is as follows (in millions):

	2014	2013	2012
Instrumentation	**$ 38.6**	$ 40.6	$ 39.9
Digital Imaging	**102.2**	120.2	128.8
Aerospace and Defense Electronics	**245.3**	260.2	269.9
Engineered Systems	**221.8**	209.2	245.4
Total U.S. Government sales	**$607.9**	$630.2	$684.0

Our principal U.S. Government customer is the U.S. Department of Defense. These sales represented 20%, 21% and 26% of our total sales for 2014, 2013 and 2012, respectively. In 2014 and 2013, our largest program with the U.S. Government was the Objective Simulation Framework contract with the Missile Defense Agency, which represented 1.3% and 1.4% of our total sales, respectively. In 2012, our largest program with the U.S. Government was the Systems Development and Operations Support contract with NASA's Marshall Space Flight Center, which represented 1.9% of our total sales in 2012.

As described under risk factors, there are risks associated with doing business with the U.S. Government. In 2014, approximately 58% of our U.S. Government prime contracts and subcontracts were fixed-price type contracts, compared to 60% in 2013 and 59% in 2012. Under these types of contracts, we bear the inherent risk that actual performance cost may exceed the fixed contract price. Such contracts are typically not subject to renegotiation of profits if we fail to anticipate technical problems, estimate costs accurately or control costs during performance. Additionally, U.S. Government contracts are subject to termination by the U.S. Government at its convenience, without identification of any default. When contracts are terminated for convenience, we typically recover costs incurred or committed, settlement expenses and profit on work completed prior to termination. We had three U.S. Government contracts terminated for convenience in 2014, compared with four in 2013 and six in 2012.

Fig V: Excerpts from the 2014 10-K. Teledyne provides enabling technologies for industrial markets. Approximately 25% of its revenue comes from the US Government.

Table 1:
Correlations and Summary Statistics of the GD Variables

This table presents the descriptive statistics of the variables *Report_Count* and *Surprise_Count* and the descriptive statistics and correlation matrixes of four government dependency (GD) variables, i.e., GD^{Report}, $GD^{Strength}$, $GD^{Surprise}$, and GD^{Sale}. All the firm-month observations in which the value of the GD variables are zero because either the firm never reported any government sales or the observations are from the time period before the firm reported any government sales for the first time are excluded from the summary. Panel A presents the pair-wise correlations between the GD variables. Panel B presents the descriptive statistics of the GD variables and of *Report_Count* and *Surprise_Count* before I apply any adjustments to the variables. Panel C presents the descriptive statistics of the GD variables as well as those of the GD variables only for firms in the top three FF-12 industries in terms of previous year's government sales (see Section A.2) after I apply FF-49 industry median adjustments. The sample period is January 1979 to December 2014 and includes only observations for which the month-end stock price is at least \$3. All variables are defined in Appendix A.

Panel A: Correlations among Government Dependency Variables

	GD^{Report}	$GD^{Strength}$	$GD^{Surprise}$	GD^{Sale}
GD^{Report}	1			
$GD^{Strength}$	0.775	1		
$GD^{Surprise}$	0.391	0.243	1	
GD^{Sale}	0.606	0.526	0.153	1

Panel B: Summary Statistics (Unadjusted Variables)

Variables	Mean	Std. Dev	Min	25th Percentile	Median	75th Percentile	Max
No. of Govt. Reporting	5.959	6.177	1	1	3	9	37
No. of Surp. Reporting	1.137	0.408	1	1	1	1	6
GD^{Report}	1	0	1	1	1	1	1
$GD^{Strength}$	0.053	0.061	0.002	0.023	0.057	0.077	9.000
$GD^{Surprise}$	0.019	0.029	0.002	0.006	0.011	0.021	2.000
GD^{Sale}	28.370	25.930	10.000	10.000	13.560	40.000	100.000

Panel C: Summary Statistics (FF-49 Industry Median Adjusted Variables)

Variables	Mean	Std. Dev	Min	25th Percentile	Median	75th Percentile	Max
GD^{Report}	1	0	1	1	1	1	1
GD^{Report_T3}	1	0	1	1	1	1	1
$GD^{Strength}$	0.045	0.062	-0.064	0.016	0.042	0.073	8.920
$GD^{Strength\_T3}$	0.053	0.070	-0.064	0.020	0.058	0.078	8.923
$GD^{Surprise}$	0.018	0.029	-0.004	0.006	0.010	0.021	2.000
$GD^{Surprise\_T3}$	0.019	0.030	-0.004	0.006	0.011	0.022	1.000
GD^{Sale}	13.275	22.566	-25.043	0.000	0.000	12.426	100.000
GD^{Sale_T3}	31.713	27.830	-15.044	10.000	19.819	48.000	100.000

Table 2:
Summary Statistics: Firm Characteristics

This table presents the means of the sample firms' accounting and fundamental measures. Column (1) includes all firm-month observations for the firms in the sample. The sample firms are all the firms in the market that have both CRSP and COMPUSTAT information available for at least one year in my sample period regardless of whether they report government sales. Column (2) includes all the firm-month observations of firms in the sample that never reported the government as a major customer. Column (3) includes all the firm-month observations of firms that reported the government as a major customer at least once during my sample period regardless of when they reported the sales. Columns (4) through (8) include the firm-month observations in corresponding $GD^{Strength}$ quintiles. For each year, I sort all the firm-month observations of the year into five quintiles based on the values of $GD^{Strength}$ in month $t-1$, where $GD^{Strength}$ is not missing and not equal to zero. The summary statistics show the average of each of the measures averaged across all firm-month observations that fall in each corresponding quintile for the year. The sample period is January 1979 to December 2014 and only includes observations for which the month-end stock price is at least $3. All variables are defined in Appendix A.

	All	Non_Govt	Govt	GD Quintiles ($GD^{Strength}$ Sorted)				
	Firms	Dependent	Dependent	Qtl 1	Qtl 2	Qt3	Qtl 4	Qtl 5
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
MCAP_REAL	2435.82	2198.89	3188.49	3402.53	3810.36	4893.55	3770.06	2949.25
BM	0.6897	0.5684	0.9641	0.5874	1.0262	1.3714	1.5352	0.9723
AT_G	0.2068	0.2134	0.1911	0.1526	0.2162	0.1885	0.1423	0.1775
AT_REAL	9037.53	10563.96	5029.97	5631.67	6113.92	7153.37	5657.96	4929.95
SALE_REAL	3240.76	3224.9	3282.2	3119.38	3935.55	4688.43	3903.38	3117.71
EMP	9.3887	8.9951	10.3707	9.4306	11.1961	12.8933	13.2354	11.1348
LEV	0.2329	0.2294	0.2423	0.2449	0.245	0.2472	0.2457	0.2259
CF	0.0243	0.0229	0.0274	0.0441	0.0327	0.0349	0.0464	0.0387
M_SHARE	0.0023	0.0022	0.0028	0.0026	0.0034	0.0033	0.0037	0.0038
ROA	0.0885	0.0883	0.0888	0.1088	0.0945	0.0947	0.1032	0.0887
SALE_G	0.4624	0.4931	0.3861	0.1509	0.2638	0.2051	0.1547	0.1517
CAPX_SCALED	0.0646	0.0658	0.0616	0.0616	0.0571	0.0581	0.0566	0.0537
R&D_SCALED	0.0673	0.0661	0.0698	0.0646	0.0734	0.0711	0.0594	0.0586
GM	-1.0198	-1.0424	-0.961	-1.4488	-1.4286	-0.2561	0.0646	0.1012
NI_MARGIN	-1.74	-1.7734	-1.6531	-3.0589	-2.0112	-0.7876	-0.3427	-0.2513
TAX	0.2563	0.2522	0.267	0.2446	0.2448	0.1984	0.2505	0.2865
TAXFED	0.1318	0.1229	0.1506	0.1549	0.1262	0.1727	0.17	0.1651

Table 3:
Return Predictability of the GD Variables (Univariate Regressions)

This table shows the results of the univariate FM cross-sectional regressions of the monthly returns on GD variables, i.e., GD^{Report}, $GD^{Strength}$, $GD^{Surprise}$, and GD^{Sale}, without controlling for any well-known empirical regularities. All RHS variables are lagged by one month. GD^{Report} is a plain binary variable that is equal to 1 for a firm's subsequent 12 firm-month observations if the firm reports any government entity as a major customer in month $t-1$ and zero, otherwise; therefore, its slope coefficients have straight forward interpretation. The other slope coefficients can be easily interpreted using the summary statistics of the GD variables provided in Table 1. The sample period is January 1979 to December 2014 and only includes the observations for which the month-end stock price is at least $3. The sample firms include all firms, and all GD variables are set to zero for firms that do not report any government sales. The coefficient of GD^{Report_T3} (Model 8) indicates that a government-dependent firm operating in the top three FF-12 industries in terms of the previous year's government sales dollars earns an abnormal return of 35.3 basis points per month in the year following the reporting of government sales. All variables are defined in Appendix A. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	M_Ret (1)	M_Ret (2)	M_Ret (3)	M_Ret (4)	M_Ret (5)	M_Ret (6)	M_Ret (7)	M_Ret (8)	M_Ret (9)	M_Ret (10)	M_Ret (11)
GD^{Report}	0.00226***				-0.00239**	-0.00112					
	(2.848)				(-2.093)	(-1.352)					
$GD^{Strength}$		0.0567***			0.0359**		0.0246**				
		(5.962)			(2.477)		(2.572)				
$GD^{Surprise}$			0.122***		0.0699**	0.131***					
			(6.059)		(2.343)	(6.266)					
GD^{Sale}				0.0000568**	0.0000346		0.0000263				
				(2.586)	(1.565)		(1.264)				
GD^{Report_T3}								0.00353***			
								(2.964)			
$GD^{Strength\_T3}$									0.0687***		
									(4.325)		
$GD^{Surprise\_T3}$										0.147***	
										(4.291)	
GD^{Sale_T3}											0.0000659**
											(2.551)
Constant	0.0164***	0.0160***	0.0161***	0.0140***	0.0138***	0.0163***	0.0138***	0.0164***	0.0161***	0.0162***	0.0140***
	(6.778)	(6.627)	(6.697)	(6.020)	(5.986)	(6.763)	(5.970)	(6.778)	(6.662)	(6.688)	(5.984)
Months	432	432	432	432	432	432	432	432	432	432	432

Table 4:
Return Predictability of the GD Variables (Multivariate Regressions)

This table shows the results of the FM cross-sectional regressions of the monthly returns on the GD variables, i.e., GD^{Report}, $GD^{Strength}$, $GD^{Surprise}$, and GD^{Sale}, while controlling for well-known empirical regularities, IMR, several proxies for economic and political risks, and a tail risk measure. BM, AG, and ROA are lagged by one year; all other RHS variables are lagged by one month; and none of these variables are industry adjusted. The GD variables with the $\_T3$ subscript are the GD variables that exclude all government-dependent firms if they do not operate in the top three FF-12 industries in terms of the previous year's government sales dollars. The slope coefficients can be easily interpreted using the summary statistics of the GD variables provided in Table 1. Due to the availability of data on EPU indexes, the sample period is January 1990 to December 2014 and only includes the observations for which the month-end stock price is at least $3. The sample firms include all firms in the market, and all GD variables are set to zero for firms that never report any government sales. The coefficient of GD^{Report_T3} (Model 5) indicates that a government-dependent firm operating in the top three FF-12 industries in terms of the previous year's government sales dollars earns an abnormal return of 45.1 basis points per month in the following year after the reporting of government sales. All variables are defined in Appendix A. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	M_Ret (1)	M_Ret (2)	M_Ret (3)	M_Ret (4)	M_Ret (5)	M_Ret (6)	M_Ret (7)	M_Ret (8)
GD^{Report}	0.00332***							
	(3.555)							
$GD^{Strength}$		0.0341***						
		(2.987)						
$GD^{Surprise}$			0.0532					
			(1.535)					
GD^{Sale}				0.0000836***				
				(3.722)				
GD^{Report_T3}					0.00451***			
					(4.012)			
$GD^{Strength\_T3}$						0.0484***		
						(3.454)		
$GD^{Surprise\_T3}$							0.0473	
							(0.928)	
GD^{Sale_T3}								0.000106***
								(4.090)
BM	-0.000276	-0.000320	-0.000289	-0.0000355	-0.000172	-0.000301	-0.000360	0.0000146
	(-0.380)	(-0.438)	(-0.398)	(-0.051)	(-0.236)	(-0.408)	(-0.487)	(0.021)
MCAP	-0.00176***	-0.00179***	-0.00174***	-0.00123***	-0.00176***	-0.00184***	-0.00181***	-0.00121***
	(-5.367)	(-5.401)	(-5.319)	(-3.835)	(-5.291)	(-5.460)	(-5.410)	(-3.753)
AG	-0.00312***	-0.00307***	-0.00309***	-0.00306***	-0.00329***	-0.00367***	-0.00370***	-0.00324***
	(-5.456)	(-5.393)	(-5.405)	(-5.201)	(-5.671)	(-5.657)	(-5.696)	(-5.498)
BHR12M	0.000606	0.000604	0.000618	0.000586	0.000658	0.000840	0.000862	0.000715
	(0.448)	(0.450)	(0.459)	(0.365)	(0.473)	(0.608)	(0.624)	(0.434)
ROA	0.000696	0.000837	0.000419	0.00236	0.000862	0.00147	0.000958	0.00232
	(0.197)	(0.238)	(0.119)	(0.641)	(0.241)	(0.390)	(0.255)	(0.621)
IMR	0.00374***	0.00374***	0.00305***	0.00399***	0.00408***	0.00406***	0.00307***	0.00417***
	(4.567)	(4.466)	(3.700)	(4.869)	(5.029)	(4.860)	(3.741)	(5.106)
β_{EPU}	1.183	1.096	1.088	2.041	1.450	1.722	1.669	2.373
	(0.624)	(0.578)	(0.574)	(1.094)	(0.751)	(0.907)	(0.880)	(1.245)
β_{GPR}	-3.454**	-3.421**	-3.482**	-3.840***	-3.473**	-3.730***	-3.754***	-3.810***
	(-2.540)	(-2.523)	(-2.579)	(-2.733)	(-2.528)	(-2.645)	(-2.684)	(-2.703)
β_{GS}	-0.340	-0.244	-0.243	-0.591	-0.957	-0.971	-0.968	-1.403
	(-0.126)	(-0.090)	(-0.090)	(-0.214)	(-0.345)	(-0.354)	(-0.353)	(-0.494)
β_{REGL}	-0.253	-0.196	-0.196	-0.389	-0.394	-0.523	-0.504	-0.536
	(-0.133)	(-0.103)	(-0.103)	(-0.200)	(-0.204)	(-0.268)	(-0.257)	(-0.268)
$\beta_{Tail\ Risk}$	0.00165	0.00166	0.00160	0.00174	0.00172	0.00179	0.00175	0.00182
	(1.237)	(1.255)	(1.200)	(1.285)	(1.277)	(1.359)	(1.321)	(1.327)
Election Yrs	0.00693***	0.00661**	0.00768***	0.00430*	0.00654**	0.00663**	0.00811***	0.00396
	(2.648)	(2.495)	(2.896)	(1.737)	(2.541)	(2.563)	(3.022)	(1.586)
Constant	0.00602***	0.00633***	0.00674***	0.00400*	0.00562***	0.00586***	0.00651***	0.00377*
	(2.841)	(2.925)	(3.188)	(1.950)	(2.627)	(2.621)	(2.920)	(1.786)
Months	300	300	300	300	300	300	300	300

Table 5:
Return Predictability of the GD Variables for a Sample of Government Dependent but not Politically Connected (using the PAC Contribution Definition) Firms (Unadjusted Variables)

This table shows the results of th FM cross-sectional regressions of the monthly returns on the GD variables - GD^{Report}, $GD^{Strength}$, $GD^{Surprise}$, and GD^{Sale} - both with and without controlling for well-known empirical regularities, IMR, several proxies for economic and political risks, and a tail risk measure in the sample that excludes firms that are both politically connected and government dependent from the sample of firms. If a firm has ever contributed to PAC and reports government sales, regardless of which year the firm reports the government as a material customer (either before or after the PAC contribution), the firm-month observations of the firm for all years are excluded from the sample. BM, AG, and ROA are lagged by one year; all other RHS variables are lagged by one month; and none of these variables are industry adjusted. Columns (1) through (4) show the results of the univariate FMC regressions of the GD variables. Columns (5) through (8) control for, among other things, IMR to control for endogeneity bias. Due to the availability of data on EPU indexes and PI variables, the sample period is January 1985 to December 2005 for the first four models and January 1990 to December 2005 for the next four models. The sample only includes observations for which the month-end stock price is at least $3. The sample firms include all firms, and all GD variables are set to zero for firms that do not report government sales. The coefficient of GD^{Report} (Model 5) indicates that a government-dependent but not politically connected firm, regardless of its industry, earns an abnormal return of 44.3 basis points per month in the following year after the reporting of government sales. All variables are defined in Appendix A. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	M_Ret (1)	M_Ret (2)	M_Ret (3)	M_Ret (4)	M_Ret (5)	M_Ret (6)	M_Ret (7)	M_Ret (8)
GD^{Report}	0.00295** (2.091)				0.00443*** (2.860)			
$GD^{Strength}$		0.0682*** (3.679)				0.0378** (2.272)		
$GD^{Surprise}$			0.108*** (3.755)				0.0505 (1.285)	
GD^{Sale}				0.0000389 (1.072)				0.000103*** (2.693)
BM					-0.000628 (-0.581)	-0.000628 (-0.582)	-0.000638 (-0.588)	-0.000218 (-0.219)
MCAP					-0.00295*** (-5.799)	-0.00295*** (-5.773)	-0.00295*** (-5.792)	-0.00202*** (-4.033)
AG					-0.00349*** (-4.734)	-0.00352*** (-4.753)	-0.00349*** (-4.711)	-0.00376*** (-4.635)
BHR12M					0.00415*** (3.359)	0.00415*** (3.349)	0.00415*** (3.337)	0.00495*** (3.328)
ROA					0.00190 (0.396)	0.00185 (0.389)	0.00165 (0.343)	0.00332 (0.669)
IMR					0.00379** (2.548)	0.00378** (2.533)	0.00320** (2.112)	0.00389*** (2.674)
β_{EPU}					1.501 (0.733)	1.401 (0.684)	1.413 (0.689)	2.539 (1.227)
β_{GPR}					-4.296** (-2.324)	-4.271** (-2.319)	-4.278** (-2.338)	-4.793** (-2.437)
β_{GS}					2.816 (0.942)	2.945 (0.978)	2.854 (0.952)	3.831 (1.198)
β_{REGL}					-0.198 (-0.150)	-0.115 (-0.087)	-0.130 (-0.098)	-1.103 (-0.875)
$\beta_{Tail\ Risk}$					0.00159 (1.084)	0.00153 (1.043)	0.00155 (1.053)	0.00191 (1.240)
Election Yrs					0.0142*** (3.514)	0.0141*** (3.495)	0.0149*** (3.580)	0.00991*** (2.646)
Constant	0.0178*** (5.688)	0.0175*** (5.620)	0.0176*** (5.651)	0.0147*** (4.956)	0.00594** (2.055)	0.00609** (2.080)	0.00671** (2.301)	0.00408 (1.460)
Obs	1,229,119	1,229,119	1,229,119	1,060,836	309,684	309,684	309,684	293,858
Months	252	252	252	252	192	192	192	192

Table 6:
Return Predictability of the PI variables proposed by Cooper et al. (2010) in the Subsamples of the Government Dependent and NonDependent Firms

This table shows the results of the FM cross-sectional regressions of the monthly returns on the (PI) variables, i.e., $PI^{Candidates}$, $PI^{Strength}$, PI^{Power}, and $PI^{Ability}$, while controlling for well-known empirical regularities, IMR, several proxies for economic and political risks and a tail risk measure in the two subsamples. The first and second subsamples consist of firms that are PAC contributors and government dependent and PAC contributors but not government dependent, respectively. The four PI variables are replaced with zeros for all firms that were not PAC contributors or for the firm-month observations of PAC contributors before they made any PAC contributions. BM, AG, and ROA are lagged by one year; all other RHS variables are lagged by one month; and none of these variables are industry adjusted. The results show that the PI variables significantly and positively predict the future returns only for the subsample of firms that are both PAC contributors and report material government sales. Due to the availability of data on EPU indexes and PI variables, the sample period is January 1990 to December 2005 and only includes observations for which the month-end stock price is at least $3. All variables are defined in Appendix A. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	Politically Connected & Government Dependent				Politically Connected but not Government Dependent			
	M_Ret (1)	M_Ret (2)	M_Ret (3)	M_Ret (4)	M_Ret (5)	M_Ret (6)	M_Ret (7)	M_Ret (8)
$PI^{Candidates}$	0.0152** (2.316)				0.00617 (1.274)			
$PI^{Strength}$		0.000413*** (2.710)				0.000119 (1.062)		
PI^{Power}			0.00417** (2.358)				0.00143 (1.057)	
$PI^{Ability}$				0.126* (1.779)				0.0312 (0.468)
BM	0.000528 (0.360)	0.000619 (0.422)	0.000554 (0.377)	0.000510 (0.347)	-0.000149 (-0.126)	-0.000137 (-0.115)	-0.0000947 (-0.080)	-0.0000234 (-0.020)
MCAP	-0.00240*** (-3.433)	-0.00241*** (-3.490)	-0.00240*** (-3.480)	-0.00205*** (-3.271)	-0.00199*** (-3.651)	-0.00192*** (-3.583)	-0.00195*** (-3.582)	-0.00184*** (-3.533)
AG	-0.00460** (-2.066)	-0.00466** (-2.086)	-0.00462** (-2.076)	-0.00486** (-2.169)	-0.00159 (-0.855)	-0.00172 (-0.926)	-0.00162 (-0.869)	-0.00204 (-1.098)
BHR12M	0.000888 (0.301)	0.000908 (0.309)	0.000891 (0.302)	0.000989 (0.339)	0.00592* (1.952)	0.00590* (1.940)	0.00592* (1.951)	0.00592* (1.953)
ROA	0.0286 (1.576)	0.0291 (1.596)	0.0287 (1.586)	0.0272 (1.517)	-0.00211 (-0.267)	-0.00221 (-0.278)	-0.00197 (-0.249)	-0.00250 (-0.314)
IMR	0.00217 (1.616)	0.00245* (1.754)	0.00223 (1.638)	0.00205 (1.618)	0.00749*** (3.088)	0.00739*** (3.036)	0.00751*** (3.098)	0.00766*** (3.209)
β_{EPU}	-0.502 (-0.160)	-0.265 (-0.083)	-0.562 (-0.179)	-0.579 (-0.186)	3.879 (1.088)	3.955 (1.112)	3.933 (1.103)	3.749 (1.056)
β_{GPR}	-9.443* (-1.661)	-9.610* (-1.687)	-9.445* (-1.663)	-8.724 (-1.546)	-1.154 (-0.215)	-1.256 (-0.235)	-1.152 (-0.215)	-1.418 (-0.266)
β_{GS}	7.823 (1.177)	7.718 (1.159)	7.930 (1.192)	7.014 (1.052)	-4.942 (-0.866)	-5.296 (-0.927)	-5.178 (-0.906)	-5.230 (-0.919)
β_{REGL}	4.159 (1.362)	3.947 (1.289)	4.183 (1.370)	4.043 (1.324)	-1.600 (-0.586)	-1.531 (-0.562)	-1.611 (-0.591)	-1.307 (-0.480)
$\beta_{Tail\ Risk}$	0.00719*** (2.866)	0.00725*** (2.894)	0.00716*** (2.856)	0.00724*** (2.896)	0.00400 (1.647)	0.00395 (1.621)	0.00394 (1.624)	0.00396 (1.635)
Election Yrs	0.00919** (2.235)	0.00953** (2.298)	0.00922** (2.234)	0.00841** (2.020)	0.00182 (0.385)	0.00181 (0.383)	0.00183 (0.386)	0.00199 (0.423)
Constant	0.00824* (1.725)	0.00769 (1.621)	0.00813* (1.711)	0.00724 (1.510)	0.00509 (1.155)	0.00499 (1.145)	0.00485 (1.103)	0.00396 (0.922)
Obs	46,496	46,496	46,496	46,496	49,172	49,172	49,172	49,172
Months	192	192	192	192	192	192	192	192

Table 7:
GD-Weighted Portfolio Alphas

This table shows the alphas of the CAPM, FF, and FFC three-, four-, five-, six- factor models, and of a model that includes FFC six-factor and three mispricing factors of the government-dependency portfolios. The three mispricing factors are UMO proposed by Hirshleifer and Jiang (2010), and MGMT and PERF proposed by Stambaugh and Yuan (2016). At the beginning of each month, I form the relative GDW (each stock's weight is given by the equation below) portfolios of the government-dependent firms. Then, at the end of each month, I calculate the returns of these portfolios. I repeat the process for all months using each of the four government-dependency variables as the weighting variable. Three size-based subsamples, i.e., small, medium, and large, are the bottom, middle, and top 33.33% of the sample MCAPs at the end of month $t-1$, respectively. $GD^{Strength}$ is used as a weighting variable to form the GDW portfolios for three size-based and three time-based subsamples. I then regress the monthly returns of each of these portfolios against the set number of FF, FFC, and mispricing factors to obtain the factor alphas. The standard errors are clustered at the year level. Data on the factors MKT ($R_m - R_f$), SMB, MOM, HML, RMW, and CMA are downloaded from Kenneth French's website. The sample period is January 1979 to December 2014 and only includes observations for which the month-end stock price is at least $3. By construction, the firms that never report any government sales are automatically assigned zero weight in the portfolios. All variables are defined in Appendix A. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

$$Stock\ i's\ weight\ in\ a\ portfolio\ is\ given\ by,\ Weight_{i,t} = \frac{GD^{Variable}_{i,t-12}}{\sum_i^N GD^{Variable}_{i,t-12}}$$

	Portfolio Weightings				$GD^{Strength}$ Weighted			$GD^{Strength}$ Weighted		
Models	GD^{Report} Weighted	$GD^{Strength}$ Weighted	$GD^{Surprise}$ Weighted	GD^{Sale} Weighted	Small	Medium	Large	1979-1992	1993-2003	2004-2014
CAPM α	0.00502**	0.00406**	0.00443**	0.00573**	0.00488**	0.00274	0.00369**	0.00208	0.00787	0.00319*
	(2.459)	(2.302)	(2.435)	(2.346)	(2.052)	(1.172)	(2.631)	(1.101)	(1.597)	(1.906)
FF-3 α	0.00461***	0.00401***	0.00443***	0.00554***	0.00424**	0.00247	0.00372***	0.00350***	0.00581**	0.00323***
	(3.641)	(4.429)	(4.774)	(3.381)	(2.652)	(1.627)	(4.094)	(3.085)	(2.596)	(3.267)
FFC-4 α	0.00493***	0.00493***	0.00532***	0.00602***	0.00527***	0.00353**	0.00466***	0.00324***	0.00805***	0.00343***
	(3.986)	(4.995)	(5.239)	(3.73)	(3.134)	(2.193)	(4.737)	(3.223)	(3.873)	(4.262)
FF-5 α	0.00397***	0.00441***	0.00488***	0.00503***	0.00426***	0.00235	0.00384***	0.00474***	0.00684*	0.00392***
	(3.42)	(4.213)	(4.642)	(3.703)	(2.746)	(1.334)	(3.747)	(3.912)	(2.141)	(3.904)
FFC-6 α	0.00425***	0.00498***	0.00542***	0.00540***	0.00495***	0.00306*	0.00444***	0.00456***	0.00839***	0.00392***
	(3.862)	(5.091)	(5.473)	(4.056)	(3.124)	(1.867)	(4.757)	(3.791)	(3.355)	(5.138)
FFC-6 & MISP α	0.00472***	0.00549***	0.00600***	0.00578***	0.00536***	0.00418***	0.00528***	0.00445**	0.00920***	0.00409***
	(4.490)	(5.772)	(6.414)	(4.301)	(3.200)	(3.090)	(5.079)	(2.989)	(3.361)	(5.559)
Months	420	420	420	420	420	420	420	420	420	420

Table 8:
Political Connections, GD, and Winning Government Contracts

This table shows the results of the *probit* regressions of the government sales dummy GOV_REP on GD and the political connections variables along with several firm fundamental variables such as profitability and cash flow measures, size, the tax rate, and the BM ratio. The variables of interest are two lagged GOV_REP terms and two lagged GD^{Sale} terms. Because FAR restricts the government contracts terms to five years, with some exceptions, GOP_REP is lagged by both 76 months and 120 months, and these values are included as independent variables. Other than GD^{Sale}, which is lagged by 76 months and 120 months to match similarly lagged GOV_REP variables, all other variables are lagged by one year. The four PI variables are the political connections variables used in Cooper et al. (2010). Columns (1) to (4) include each of the political connections variables along with other controls as the predictor of government sales. Column (5) includes all four PI variables. Columns (6) and (7) include all four PI variables and other controls along with lagged values of the government sales dummy and GD^{Sale} variable. Due to the availability of data on PI variables, the sample period is January 1985 to December 2005 and only includes observations for which the month-end stock price is at least $3. All variables are defined in Appendix A. The standard errors are clustered at the year level. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	1 if a Firm Reports Government as Major Customer in Current Year; 0 otherwise						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
GOV_REP_{t-76}						1.468***	
						(11.825)	
GD^{Sale}_{t-76}						0.0219***	
						(10.272)	
GOV_REP_{t-120}							1.109***
							(7.938)
GD^{Sale}_{t-120}							0.0206***
							(11.439)
$PI^{Candidates}$	0.00206***				-0.00209**	0.000657	-0.0000803
	(11.643)				(-2.495)	(0.750)	(-0.057)
$PI^{Strength}$		0.0000512***			-0.0000135***	-0.0000142	0.00000858
		(16.786)			(-2.605)	(-1.337)	(0.989)
PI^{Power}			0.000659***		0.00118***	0.000207	0.000248
			(13.892)		(4.632)	(0.888)	(0.681)
$PI^{Ability}$				0.0264***	0.0129***	-0.00129	0.00324
				(12.749)	(7.067)	(-0.638)	(1.128)

Table 8 Continued...

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
MCAP_{t-12}	-0.0425***	-0.0387***	-0.0446***	-0.0405***	-0.0464***	-0.0212	-0.0578***
	(-4.060)	(-3.750)	(-4.179)	(-3.941)	(-4.325)	(-1.275)	(-3.774)
Sale_{t-12}	-0.230***	-0.230***	-0.231***	-0.235***	-0.234***	-0.235***	-0.227***
	(-9.135)	(-9.109)	(-9.142)	(-9.184)	(-9.269)	(-5.045)	(-5.194)
Employees_{t-12}	0.242***	0.247***	0.243***	0.244***	0.244***	0.247***	0.249***
	(8.573)	(8.642)	(8.559)	(8.508)	(8.605)	(5.772)	(5.364)
No. Bus. Segments_{t-12}	0.0319***	0.0335***	0.0308***	0.0369***	0.0320***	-0.0183	-0.0197*
	(3.615)	(3.681)	(3.446)	(4.074)	(3.573)	(-1.563)	(-1.722)
No. Geo. Segments_{t-12}	-0.0678***	-0.0693***	-0.0677***	-0.0681***	-0.0673***	-0.0149*	-0.0289***
	(-13.251)	(-14.344)	(-13.548)	(-14.014)	(-13.470)	(-1.849)	(-3.800)
BM_{t-12}	-0.000486	-0.000265	-0.000495	-0.000512	-0.000570	-0.00116	-0.0444**
	(-0.605)	(-0.336)	(-0.616)	(-0.633)	(-0.695)	(-1.009)	(-2.005)
Leverage_{t-12}	-0.299***	-0.305***	-0.300***	-0.302***	-0.300***	-0.0858	-0.121
	(-4.699)	(-4.719)	(-4.678)	(-4.726)	(-4.683)	(-1.274)	(-1.618)
Cash Flow_{t-12}	0.421**	0.376**	0.399**	0.386**	0.377**	-0.517***	-0.344*
	(2.376)	(2.157)	(2.276)	(2.170)	(2.164)	(-2.924)	(-1.797)
Market Share_{t-12}	3.387*	4.175**	2.229	6.714***	2.847	0.379	3.518
	(1.783)	(2.189)	(1.108)	(4.559)	(1.508)	(0.133)	(1.613)
$(\text{Market Share})^2_{t-12}$	-30.89*	-44.77***	-29.00*	-33.58**	-25.34	15.98	-27.66
	(-1.915)	(-2.856)	(-1.773)	(-2.408)	(-1.612)	(0.945)	(-1.291)
Herfindahl Index_{t-12}	29.17***	29.46***	29.23***	28.88***	29.05***	20.12***	25.34***
	(13.792)	(13.841)	(13.781)	(13.635)	(13.682)	(8.545)	(9.682)
Regul. Indicator_{t-12}	-0.0261	-0.0260	-0.0272	-0.0425	-0.0363	0.0317	-0.173*
	(-0.839)	(-0.839)	(-0.872)	(-1.313)	(-1.121)	(0.509)	(-1.680)
No. PActive Firms_{t-12}	0.0164***	0.0165***	0.0163***	0.0157***	0.0160***	0.0129***	0.0155***
	(13.636)	(13.705)	(13.461)	(12.739)	(12.853)	(5.881)	(5.264)
$\text{Productivity}_{t-12}$	0.0281	0.0275	0.0281	0.0314	0.0299	-0.00762	-0.0442
	(1.025)	(0.994)	(1.023)	(1.176)	(1.101)	(-0.160)	(-0.927)
Gross Margin_{t-12}	0.00140	0.00140	0.00140	0.00141*	0.00141*	0.0106	0.0417
	(1.634)	(1.633)	(1.637)	(1.647)	(1.647)	(1.352)	(1.591)
Overall Tax Rate_{t-12}	0.000651	0.000656	0.000665	0.000638	0.000666	0.000926*	-0.000162
	(1.064)	(1.077)	(1.070)	(1.100)	(1.086)	(1.923)	(-0.386)
ROA_{t-12}	-0.258	-0.227	-0.234	-0.218	-0.204	0.632***	0.211
	(-1.333)	(-1.189)	(-1.216)	(-1.125)	(-1.069)	(3.530)	(1.265)
Constant	-0.202**	-0.218**	-0.189**	-0.192**	-0.168*	-0.774***	-0.430***
	(-2.264)	(-2.449)	(-2.139)	(-2.173)	(-1.926)	(-5.562)	(-3.354)
Observations	764,044	764,044	764,044	764,044	764,044	424,180	276,558

Table 9: Firm Profitability and the Implied Tax Rate of Government-Dependent and Nondependent Firms and Changes in Firm Characteristics Post-Government Reporting

This table shows the results of the univariate regression of several FF-49 industry median adjusted firm measures on the dummy variables *PRE_GOV_REPORT* [Column (1)] and *POST_GOV_REPORT* [Columns (2) through (4)]. *POST_GOV_REPORT* is a dummy variable that is equal to 1 for all government-dependent firms for all the years after the year in which they first report material government sales, 0 for all years of firms before they report material government sales and for the year for which they report government sale, and null for all years of firms that never report material government sales. *PRE_GOV_REPORT* is a dummy variable that is equal to 1 for all the government-dependent firms for all the years before the year in which they first report material government sales, null for the year in which they first report the sales and all the years after that, and 0 for all years of firms that never report material government sales. The sample period is January 1979 to December 2014 and only includes observations for which the month-end stock price is at least $3. All variables are defined in Appendix A. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively. The standard errors are clustered at the year level.

	(1 = Government Dependent Firms Pre) (0 = Government Non-dependent Firms)	(1 = Government Dependent Firm Post) (0 = Government Dependent Firm Pre		
		All FF12 Industries	Top 3 Ind. by Sales	Top 3 Ind. by HHI
	(1)	(2)	(3)	(4)
Log Assets	-0.0487*** (-2.878)	0.154*** (10.650)	0.149*** (7.333)	0.144*** (9.679)
Log Market Capital	0.0678*** (3.872)	0.0650*** (4.107)	0.0341 (1.473)	0.0681*** (3.924)
Gross Margin	-0.0384*** (-4.365)	0.0241*** (3.476)	0.0434***(4.241)	0.0375*** (3.339)
EBIT Margin	-0.0746*** (-4.986)	0.0475*** (3.337)	0.0772*** (4.659)	0.0810***(3.456)
Op. Profit Margin	-0.0687*** (-4.862)	0.0476*** (3.561)	0.0737***(4.725)	0.0717*** (3.501)
Net Income Margin	-0.0578*** (-4.091)	0.0418*** (2.931)	0.0736*** (4.053)	0.0676***(3.127)
Leverage	0.00363** (2.582)	0.0126*** (5.847)	0.00502* (1.776)	0.00633** (2.084)
Overall Tax Rate	-0.00314 (-1.590)	-0.0112** (-2.144)	-0.0160** (-2.645)	-0.0165*** (-3.098)
Federal Tax Rate	0.000317 (0.136)	0.00519 (1.307)	-0.00228 (-0.390)	-0.00342 (-0.644)
Productivity	-0.0358*** (-4.917)	0.0137*** (3.528)	0.0152** (2.134)	0.0157** (2.628)
Sales Growth	0.0214*** (4.718)	-0.0527*** (-4.986)	-0.0683*** (-5.007)	-0.0425*** (-3.549)
Capex Scaled	-0.00183*** (-3.093)	-0.00419*** (-5.200)	-0.00447*** (-4.592)	-0.00398***(-3.198)
R&D Scaled	0.00570*** (5.023)	0.00273* (1.971)	0.00304** (2.538)	0.00400*(2.025)
Firm FE	NO	YES	YES	YES
Year * FFI49 FE	YES	YES	YES	YES
Avg Obs	1,458,861	521,149	267,197	242,557

Table 10:
Operating Margin, Asset Redeployability, and Information Asymmetry

This table shows the results of the contemporaneous time regressions of the operating margin on the firms' asset redeployability and irreversibility, bid-ask spread, analyst count, and several other firm characteristics. Asset redeployability is the asset redeployability measure proposed Kim and Kung (2016). Asset Irreversibility is simply PPE divided by total assets. The bid-ask spread is calculated as in Armstrong et al. (2011). In addition, analyst count is the log of the number of analysts covering the firm. The sample period is January 1979 to December 2014 and only includes observations for which the month-end stock price is at least $3. All variables are defined in Appendix A. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively. The standard errors are clustered at the year level.

	Government Non-Dependent Firms				Government Dependent Firms Post			
	OP Margin (1)	OP Margin (2)	OP Margin (3)	OP Margin (4)	OP Margin (5)	OP Margin (6)	OP Margin (7)	OP Margin (8)
Asset Redeployability	0.0178				-0.355*			
	(0.202)				(-1.925)			
Asset Irreversibility		0.264***				0.351***		
		(3.718)				(3.412)		
Bid-Ask Spread			-0.231				0.369*	
			(-1.341)				(1.937)	
Analst Count				0.0356***				0.0137
				(4.831)				(0.981)
BM	-0.00967	-0.0131	-0.0114	-0.0264***	-0.0189*	-0.0216**	-0.0188*	-0.0333**
	(-0.934)	(-1.386)	(-1.218)	(-3.113)	(-1.714)	(-2.223)	(-1.948)	(-2.635)
MCAP	0.0346***	0.0351***	0.0317***	0.0323***	0.0556***	0.0484***	0.0488***	0.0435***
	(4.769)	(5.369)	(4.797)	(3.778)	(7.762)	(7.376)	(7.189)	(4.874)
Sales Growth	0.00104*	0.00105*	0.00105*	0.000681*	0.0407	0.0412	0.0412	0.0901***
	(1.722)	(1.723)	(1.717)	(1.796)	(1.525)	(1.562)	(1.558)	(4.369)
Capex Scaled	0.278***	0.0968	0.269***	0.242***	0.415	-0.00104	0.288	0.334
	(3.478)	(1.651)	(3.851)	(3.017)	(1.653)	(-0.006)	(1.515)	(1.039)
R&D Scaled	-2.445***	-2.449***	-2.420***	-1.908***	-1.884***	-2.058***	-2.017***	-1.644***
	(-9.358)	(-9.798)	(-9.719)	(-6.295)	(-4.609)	(-5.142)	(-5.095)	(-3.233)
AG	-0.00214	-0.000574	-0.00199	0.0293*	-0.0227***	-0.0203***	-0.0224***	-0.00820
	(-0.504)	(-0.145)	(-0.485)	(1.971)	(-2.988)	(-2.757)	(-3.110)	(-0.904)
Constant	-0.130**	-0.168***	-0.0864**	-0.234***	-0.138	-0.260***	-0.206***	-0.255***
	(-2.053)	(-4.540)	(-2.321)	(-3.800)	(-1.688)	(-5.628)	(-4.784)	(-2.997)
Firm FE	YES	YES	YES	YES	YES	YES	YES	YES
Year * FFI49 FE	YES	YES	YES	YES	YES	YES	YES	YES
Obs.	386,490	442,393	443,405	266,509	158,912	184,160	184,279	108,072

Table 11:
Return Predictability of the GD Variables for the Low Attention & High Valuation Uncertainty and High Attention & Low Valuation Uncertainty Subsamples

This table shows the results of the FM cross-sectional regressions of the monthly returns on the GD variable, $GD^{Strength}$, well-known anomalies, IMR, economic and political risks, tail risk, and the US presidential election cycles for two subsamples. Following Hirshleifer et al. (2013), at the beginning of each year, I split all firm-month observations for the year into below-median and above-median subsamples using the previous year's median values of each of the investor attention and valuation uncertainty proxies. Then, the FM regression is run separately for each of the fourteen subsamples divided using seven proxy variables. The proxies for investor attention are firm age (*Firm_Age*), analyst count (*Anlst*), residual analyst count (*Anlst_Res*), and the proxies for valuation uncertainty are stock turnover (TO), idiosyncratic volatility ($IVOL$), stock return volatility (*Vlty*), and the reciprocal of the market value (*Res_MV*). BM, AG, and ROA are lagged by one year; all other RHS variables are lagged by one month; and none of these variables are industry adjusted. Due to the availability of data on EPU indexes, the sample period is January 1990 to December 2014 and only includes observations for which the month-end stock price is at least \$3. All variables are defined in Appendix A. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	Low Attention & High Valuation Uncertainty Sample							High Attention & Low Valuation Uncertainty Sample						
	Firm_Age (1)	Anlst (2)	Anlst_Res (3)	TO (4)	IVOL (5)	Vlty (6)	Res_MV (7)	Firm_Age (8)	Anlst (9)	Anlst_Res (10)	TO (11)	IVOL (12)	Vlty 1(3)	Res_MV (14)
$GD^{Strength}$	0.0467*	0.0292*	0.0296*	0.0374**	0.0451***	0.0354*	0.0358**	0.0317***	0.0135	0.0134	0.0264**	0.000858	0.0182*	0.0289**
	(1.716)	(1.924)	(1.948)	(2.482)	(2.696)	(1.793)	(2.251)	(2.716)	(1.031)	(0.993)	(2.333)	(0.094)	(1.764)	(2.309)
BM	-0.000209	-0.000605	-0.00105	-0.000315	0.000366	-0.000372	0.00114	-0.000361	-0.000638	-0.000326	0.00125**	0.00102**	0.000559	-0.00135
	(-0.222)	(-0.739)	(-1.242)	(-0.358)	(0.410)	(-0.434)	(1.547)	(-0.494)	(-0.637)	(-0.339)	(2.254)	(2.156)	(1.046)	(-1.531)
MCAP	-0.00305***	-0.00305***	-0.00212***	-0.00316***	-0.00374***	-0.00374***	-0.0144***	-0.00161***	-0.00106**	-0.00101**	-0.000909***	0.00128***	-0.0000201	-0.00540***
	(-6.283)	(-5.886)	(-5.082)	(-7.149)	(-7.494)	(-7.659)	(-19.885)	(-4.871)	(-2.215)	(-2.084)	(-3.075)	(4.442)	(-0.080)	(-11.341)
AG	-0.00447***	-0.00576***	-0.00557***	-0.00546***	-0.00510***	-0.00377***	-0.00681***	-0.00362***	-0.00577***	-0.00576***	-0.00155*	-0.000899	-0.00104	-0.00292***
	(-4.051)	(-4.758)	(-4.610)	(-6.928)	(-6.200)	(-5.548)	(-6.782)	(-4.962)	(-5.143)	(-5.005)	(-1.745)	(-0.780)	(-1.114)	(-4.385)
BHR12M	0.00224	0.000603	0.000766	-0.00145	-0.000395	-0.000383	-0.00607***	-0.000111	0.00118	0.00122	0.00511***	0.00633***	0.00998***	0.000185
	(1.479)	(0.413)	(0.513)	(-0.945)	(-0.293)	(-0.291)	(-4.560)	(-0.074)	(0.507)	(0.527)	(3.581)	(4.638)	(5.431)	(0.106)
ROA	-0.00327	-0.000171	-0.000910	-0.00118	-0.000771	0.00192	0.00509	0.00268	-0.00369	-0.00302	0.0124***	0.0286***	0.0138***	-0.0105**
	(-0.641)	(-0.032)	(-0.169)	(-0.281)	(-0.202)	(0.499)	(1.411)	(0.742)	(-0.621)	(-0.524)	(4.145)	(10.360)	(4.039)	(-2.113)
IMR	0.00583***	0.00296**	0.00287**	0.00495***	0.00691***	0.00570***	0.00376***	0.00364***	0.00317***	0.00334***	0.00252***	0.000504	0.00219***	0.00413***
	(3.045)	(2.219)	(2.150)	(4.439)	(5.238)	(4.286)	(3.015)	(4.228)	(2.812)	(2.933)	(3.046)	(0.624)	(2.946)	(4.286)
β_{EPU}	1.520	1.837	1.721	2.512	0.591	1.031	1.224	1.326	5.031**	4.901*	-0.0389	3.361*	5.660**	-0.427
	(0.548)	(0.823)	(0.786)	(1.101)	(0.261)	(0.486)	(0.545)	(0.644)	(2.052)	(1.952)	(-0.019)	(1.816)	(2.312)	(-0.182)
β_{GPR}	-2.617	-5.951***	-5.814***	-3.697**	-3.606**	-2.772*	-4.649***	-4.148**	-1.720	-1.925	-4.652***	-4.430***	-8.180***	-2.564
	(-1.434)	(-3.292)	(-3.050)	(-2.220)	(-2.187)	(-1.914)	(-3.039)	(-2.591)	(-0.738)	(-0.864)	(-2.849)	(-2.911)	(-4.240)	(-1.341)
β_{GS}1	3.342	2.038	1.911	-1.582	0.112	0.0433	1.073	-1.717	-4.933	-4.201	0.732	-3.320	-1.809	-1.152
	(0.826)	(0.529)	(0.478)	(-0.489)	(0.038)	(0.016)	(0.340)	(-0.567)	(-1.269)	(-1.097)	(0.233)	(-0.950)	(-0.540)	(-0.368)
β_{REGL}	-2.951	-2.205	-2.525	0.225	0.0132	-0.536	-0.167	0.363	-2.203	-2.107	-1.714	-2.845	-4.093*	1.306
	(-1.092)	(-1.096)	(-1.258)	(0.091)	(0.006)	(-0.229)	(-0.081)	(0.177)	(-0.789)	(-0.765)	(-0.983)	(-1.496)	(-1.656)	(0.520)
$\beta_{Tail\ Risk}$	0.00322**	0.00339***	0.00354***	0.000833	0.00211*	0.00151	0.00262**	0.00111	0.00103	0.00101	0.00165	-0.00166	0.00220	0.00159
	(2.197)	(2.618)	(2.730)	(0.606)	(1.730)	(1.358)	(2.446)	(0.816)	(0.591)	(0.586)	(1.422)	(-1.065)	(1.530)	(1.006)
Election Yrs	0.00747**	0.0101***	0.00824**	0.0124***	0.0109***	0.0106***	0.0307***	0.00586**	0.00453	0.00353	0.00271	-0.00264	-0.00131	0.0215***
	(2.173)	(2.842)	(2.495)	(3.295)	(3.418)	(3.200)	(9.319)	(2.269)	(1.110)	(0.877)	(1.305)	(-1.487)	(-0.783)	(5.337)
Constant	0.00916**	0.00965***	0.00699**	0.0111***	0.0115***	0.0107***	0.0281***	0.00590***	0.00543	0.00557	0.00431**	-0.00303*	0.00219	0.0211***
	(2.397)	(3.061)	(2.316)	(3.194)	(3.727)	(3.594)	(9.128)	(2.795)	(1.571)	(1.592)	(2.359)	(-1.908)	(1.331)	(6.076)
Months	300	300	300	300	300	300	300	300	300	300	300	300	300	300

Appendix A. Variable Definitions

AT: Total assets.

AG: Year over year assets growth.

Anlst: Log of the number of analysts covering the firms.

Anlst_Res: Residual of the analyst count calculated following Hong et al. (2000). First, I run the regression of analyst count on MCAP and then the residual of analyst count predicted using the regression coefficients.

β_{EPU}: Slope coefficient of the univariate predictive regressions of the monthly stock returns of stock i on the Economic Political Uncertainty Index, which was developed by Baker et al. (2016), on a rolling 60-month basis.

β_{GPR}: Slope coefficient of the univariate predictive regressions of the monthly stock returns of stock i on the Geopolitical Risks index, which was developed by Dario Cladara and Matteo Lacoviello at the Federal Reserve Board, on a rolling 60-month basis.

β_{GS}: Slope coefficient of the univariate predictive regressions of the monthly stock returns of stock i on the Government Spending Index, which was developed by Baker et al. (2016), on a rolling 60-month basis.

β_{REGL}: Slope coefficient of the univariate predictive regressions of the monthly stock returns of stock i on the Regulation Index, which was developed by Baker et al. (2016), on a rolling 60-month basis.

$\beta_{Tail\ Risk}$: Slope coefficient of the univariate predictive regressions of the monthly stock returns of stock i on the tail risks measure, which was developed by Kelly and Jiang (2014), on a rolling 120-month basis (as in the original paper).

BHR12M: Past 12 months' buy-and-hold returns from the month $t-2$ to the month $t-13$.

BM ratio: I calculate the BM following Cooper et al. (2010). Book equity is total common ordinary equity (*ceq*) plus deferred taxes and investment tax credits (*txditc*) minus the book value of the preferred stock (in the following order: preferred stock redemption value (*pstkrv*) or preferred stock liquidating value (*pstkl*) or preferred stock at carrying value (*upstk*), and market equity is the closing price - calender (*prcc_c*) times common shares outstanding (*csho*).

Capex Scaled: Capital expenditures divided by total assets.

CD^{Report}: A binary variable that is equal to 1 for a firm's subsequent twelve firm-month observations once the firm performs the corporate reporting (the reporting of any corporate entity as a major customer by the firm).

$CD^{Strength}$: The number of incidences of corporate reporting by the firm between January 1978 and month t divided by the number of months the firm has been in the sample since its first corporate reporting.

$CD^{Surprise}$: The number of incidences of surprise corporate reporting (i.e., first ever reporting of any corporate entity as a customer or reporting of any corporate entity as a customer followed by a year in which the firm did not report any corporate entity as a customer) by the firm between January 1978 and month t divided by the number of months the firm has been in the sample since its first corporate reporting.

CD^{Sale}: A firm's total sales to all major corporate customers as a percentage of the firm's total sales for the year.

CF (Cash Flow): Operating income before depreciation(*oibdp*) minus the sum of interest and (*xint*), total income taxes t(*txt*), dividends - preferred stock (*dvp*), and dividends - common stock (*dvc*) divided by total assets (*at*).

CMA: The average returns on the two conservative investment portfolios minus the average returns on the two aggressive investment portfolios.

EBITDA (earning before interest tax depreciation and amortization): Sum of earnings before interest and taxes (*ebit*) and depreciation and amortization (*dp*).

EBITDA_COV (EBITDA Coverage): EBITDA divided by the sum of debt in current liabilities total (*dls*) and total long term debt (*dltt*).

EBIT_Margin: Earnings before interest and taxes (*ebit*) divided by sales_turnover (net)(*sale*)

Federal Tax Rate: Federal income tax (*txfed*) divided by pretax income (*pi*).

Firm_Age: Number of months since the firm first appeared in the CRSP database.

GD^{Report}: A binary variable that is equal to 1 for a firm's subsequent twelve firm-month observations once the firm performs the government reporting.

$GD^{Strength}$: The number of incidences of government reporting between January 1978 and month t divided by the number of months the firm has been in the sample since its first government reporting.

$GD^{Surprise}$: The number of incidences of surprise government reporting (i.e., reporting of any government entity as a customer or reporting of any government entity as a customer followed by a year in which the firm did not report any government entity as a customer) by the firm between January 1978 and month t divided by the number of months the firm has been in the sample since its first government reporting.

GD^{Sale}: A firm's total sales to all government entities as a percentage of the firm's total sales for the year.

GOVERNMENT SALE/TOTAL SALE: Total government purchases for the year for the FF 49 industry divided by the total sales for the year for the industry.

GOV_REP: A binary variable that is equal to 1 for all firm-month observations of the year in which a firm reports material government sales and 0 otherwise

GOV_TYPE: A binary variable that is equal to 1 for all firm-month observations of a firm if the firm reports the government as a major customer in month $t-1$ or before and 0 otherwise.

GOV_TYPE_LIFE: A binary variable that is equal to 1 for all firm-month observations of a firm if the firm reports the government as a major customer anytime during my sample period and 0 for all the firm-month observations of firms that never report the government as a major customer in the sample period.

GM (Gross Margin): Gross profit (*gp*) divided by sales_turnover (net)(*sale*).

HERFINDAHL INDEX: Herfindahl index of industry concentration computed with firm net sales figures obtained from COMPUSTAT.

HML: The average returns of the two value portfolios minus the average returns of the two growth portfolios.

IVOL: Idiosyncratic volatility calculated by following Ang, Hodrick, Xing, and Zhang (2006).

LEV (Leverage): The sum of debt in total current liabilities (*dlc*) and total long-term debt (*dltt*) divided by total assets (*at*).

MCAP: Market capital calculated as the price (*prc*) times shares outstanding (*shrout*) at the end of the month (t).

MKT (Market): Excess returns on the market.

MOM (Momentum): The average returns of the two high prior return portfolios minus the average returns of the two low prior return portfolios.

M_SHARE (Market Share): Firm's sales (*at*) divided by the total sales of the FF 49 industry.

Net Income Margin: Net income (*ni*) divided by total sales (*sale*).

NO. BUSINESS SEGMENTS: Number of a firm's business segments.

NO. GEOGRAPHIC SEGMENTS: Number of a firm's geographic segments.

NO. POLITICALLY ACTIVE FIRMS: The number of firms in a firm's industry with an established PAC.

Op. Profit Margin (Operating Profit Margin): Operating income before depreciation (*oibdp*) divided by total assets (*at*)

Overall Tax Rate (same as the Effective Tax Rate or Tax Rate): Total income tax (*txt*) divided by pretax income (*pi*).

$PI^{Candidates}$: As defined in Cooper et al. (2010), this variable is the number of supported candidates.

$PI^{Strength}$: As defined in Cooper et al. (2010), this variable is the strength of the relationships between candidates and the contributing firm,

PI^{Power}: As defined in Cooper et al. (2010), this variable is the power of the candidates, and

$PI^{Ability}$: As defined in Cooper et al. (2010), this variable is the ability of the candidates to help the firm.

PRE_GOV_REPORT: Dummy variable that equals 1 for all firm-month observations of government-dependent firms before and during the year in which the firms report a government sale. The variable is equal to 0 for all the firm-month observations of firms that never report any government sales in my sample period. The variable is null for all the firm-month observations of government-dependent firms after their first-ever reporting of government sales.

POST_GOV_REPORT: Dummy variable that equals 1 for all firm-month observations of government-dependent firms after their first-ever reporting of government sales and 0 for all firm-month observations of government-dependent firms before and during the year in which the firm reports government sales. The variable is null for all firm-month observations of firms that never report any government sales.

PROD (Productivity): Total factor productivity is calculated following Faccio (2010). To estimate productivity, the paper assumes the standard Cobb-Douglas production function of $Y_i = P_i K_i^{\alpha} L_i^{\beta} M_i^{\gamma}$. To estimate P_i, the author takes the natural log of the above equation to obtain $y_i = p_i + \alpha k_i + \beta l_i + \gamma m_i + \epsilon_i$. Using OLS, the author obtains productivity $\hat{p}_i = y_i - \hat{\alpha} k_i - \hat{\beta} l_i - \hat{\gamma} m_i$.

REGULATION INDICATOR: Dummy variable that equals 1 if a firm operates in the financial services industry or in the utilities industry and 0 otherwise.

RES_MV: The reciprocal of market value, where market value is the stock price times the shares outstanding.

RMW (Robust Minus Weak): The average returns of the two robust operating profitability portfolios minus the average returns of the two weak operating profitability portfolios.

R&D Scaled: Research and development divided by total assets.

ROA: Operating income before depreciation (*oibdp*) divided by total assets (*at*).

ROE (Return on Equity): Income before extraordinary items (*ib*) divided by total common ordinary equity (*ceq*).

Sales Growth: Year over year revenue growth.

SMB (Small Minus Big): The average returns of the nine small stock portfolios minus the average returns of the nine big stock portfolios.

TO: The ratio of the number of shares traded each day to the number of shares outstanding

Vlty: Return volatility, defined as the standard deviation of the weekly market excess returns over the year ending in month t.

Appendix B. Additional Tables

Table B1:
First-Stage Probit Model: Determinants of the GD of Firms

This table shows the results of the first-stage *probit* regression that I use to calculate IMR (IMR), which then I use in the second-stage FM cross-sectional regressions. The dependent variable of the regression is the dummy variable *GOV_REP*, which is 1 if a firm reports the government as a major customer in current year and 0 otherwise. For each year, I run the regression separately; using information from the regression, I calculate the IMR. Based on the results of Faccio (2010) and others, the first group of independent variables includes firm fundamentals, profitability, and tax variables. Some of these variables are total factor productivity; the effective tax rate, ROA; the gross margin; and earnings before interest, taxes, depreciation and amortization. The second group of variables includes the determinants of political connections used to calculate the IMR, as in Cooper et al. (2010). Some of these variables are the number of business and geographic segments, leverage, market share, BM, the Herfindahl index, the industry relation indicator, and the number of politically active firms in the industry. The sample period is January 1979 to December 2014 and only includes observations for which the month-end stock price is at least $3. The sample firms include all firms in the market. All variables are defined in Appendix A. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	Dependent Variable *GOV_REP*: 1 if a Firm Reports Government as Major Customer in Current Year and 0 otherwise
LnMCAP	-0.0559***
	(-45.064)
LnSALE	-0.134***
	(-55.601)
LnEMP	0.166***
	(76.275)
NO. BUSINESS SEGMENTS	0.0655***
	(61.955)
NO. GEOGRAPHIC SEGMENTS	-0.0436***
	(-41.753)
BOOK TO MARKET	0.000115***
	(4.235)
LEVERAGE	-0.222***
	(-28.900)
PRODUCTIVITY	-0.0422***
	(-9.186)
EBITDA	-0.00000470***
	(-4.333)

Table B1 Continued...

	Dependent Variable *GOV_REP*: 1 if a Firm Reports Government ; as Major Customer in Current Year 0 otherwise
GROSS MARGIN	0.00134***
	(13.435)
EFFECTIVE TAX RATE	0.000877**
	(3.228)
RETURN ON ASSETS	0.128***
	(6.396)
CASH FLOW	0.00940
	(0.465)
MARKET SHARE	2.613***
	(7.692)
$(\text{MARKET SHARE})^2$	-16.15***
	(-7.543)
HERFINDAHL INDEX	13.65***
	(60.546)
REGULATION INDICATOR	0.0547***
	(9.300)
GOVERNMENT SALE/TOTAL SALE	4.124***
	(230.595)
NO. POLITICALLY ACTIVE FIRMS	0.0124***
	(130.599)
Constant	-0.580***
	(-64.998)
Observations	1,312,447
Log Likelihood	-451,133.66
Pseudo R^2	.1073

Table B2:
Return Predictability of the GD Variables (FF-49 Industry Median Adjusted Variables)

This table shows the results of the FM cross-sectional regressions of the monthly returns on the GD variables, i.e., GD^{Report}, $GD^{Strength}$, $GD^{Surprise}$, and GD^{Sale}, while controlling for well-known empirical regularities, the IMR, several proxies for economic and political risks,and a tail risk measure. BM, AG, and ROA are lagged by one year, and all other RHS variables are lagged by one month. All RHS variables are FF 49 industry median adjusted except GD^{Report}. Because GD^{Report} is a binary variable, it is not industry adjusted. The GD variables with the _T3 subscript are the GD variables that exclude all the government-dependent firms that do not operate in the top three FF12 industries in terms of total government sales dollars of the previous year. The slope coefficients can be easily interpreted using the summary statistics of the GD variables provided in Table 1. Due to the availability of data on EPU indexes, the sample period is January 1990 to December 2014 and only includes observations for which the month-end stock price is at least $3. The sample firms include all firms in the market and all GD variables are set to zero for the firms that never report government sales. The coefficient of GD^{Report_T3} (Model 5) indicates that a government dependent firm operating in the top three FF-12 industries in terms of the previous year's government sales dollars earns an abnormal return of 39.5 basis points per month in the following year after the reporting of government sales. All other coefficients can be easily interpreted using the summary statistics presented in Table 1. All variables are defined in Appendix A. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	M_Ret (1)	M_Ret (2)	M_Ret (3)	M_Ret (4)	M_Ret (5)	M_Ret (6)	M_Ret (7)	M_Ret (8)
GD^{Report}	0.00259***							
	(2.722)							
$GD^{Strength}$		0.0255**						
		(2.224)						
$GD^{Surprise}$			0.0368					
			(1.084)					
GD^{Sale}				0.0000693***				
				(2.853)				
GD^{Report_T3}					0.00399***			
					(3.337)			
$GD^{Strength\_T3}$						0.0395**		
						(2.347)		
$GD^{Surprise\_T3}$							0.0415	
							(0.735)	
GD^{Sale_T3}								0.0000896***
								(3.089)
BM	0.000915*	0.000884	0.000906	0.00105**	0.00103*	0.000961*	0.000963*	0.00113**
	(1.651)	(1.588)	(1.633)	(2.022)	(1.844)	(1.722)	(1.723)	(2.171)
MCAP	-0.00186***	-0.00187***	-0.00185***	-0.00132***	-0.00186***	-0.00193***	-0.00191***	-0.00131***
	(-6.159)	(-6.160)	(-6.131)	(-4.552)	(-6.059)	(-6.122)	(-6.098)	(-4.439)
AG	-0.00320***	-0.00321***	-0.00321***	-0.00310***	-0.00336***	-0.00377***	-0.00380***	-0.00326***
	(-5.466)	(-5.475)	(-5.479)	(-5.188)	(-5.696)	(-5.738)	(-5.780)	(-5.485)
BHR12M	0.00128	0.00127	0.00130	0.00122	0.00133	0.00144	0.00151	0.00136
	(0.956)	(0.945)	(0.968)	(0.771)	(0.962)	(1.045)	(1.100)	(0.830)
ROA	0.00432	0.00435	0.00406	0.00627*	0.00434	0.00454	0.00418	0.00604*
	(1.352)	(1.370)	(1.270)	(1.906)	(1.336)	(1.310)	(1.197)	(1.807)
IMR	0.00712***	0.00694***	0.00684***	0.00705***	0.00753***	0.00788***	0.00769***	0.00714***
	(4.672)	(4.547)	(4.485)	(4.618)	(5.118)	(5.285)	(5.245)	(4.896)
β_{EPU}	-0.240	-0.306	-0.333	0.618	-0.143	-0.313	-0.361	0.861
	(-0.117)	(-0.149)	(-0.163)	(0.299)	(-0.070)	(-0.155)	(-0.179)	(0.414)
β_{GPR}	-3.983***	-4.010***	-4.095***	-4.311***	-4.041***	-4.172***	-4.245***	-4.373***
	(-2.619)	(-2.635)	(-2.686)	(-2.685)	(-2.622)	(-2.717)	(-2.771)	(-2.699)
β_{GS}	0.456	0.554	0.549	0.0802	0.0541	0.226	0.267	-0.504
	(0.158)	(0.191)	(0.190)	(0.027)	(0.019)	(0.079)	(0.093)	(-0.170)
β_{REGL}	0.351	0.401	0.427	0.127	0.367	0.442	0.487	0.149
	(0.175)	(0.199)	(0.212)	(0.061)	(0.181)	(0.212)	(0.233)	(0.070)
$\beta_{Tail\ Risk}$	0.000873	0.000844	0.000800	0.00101	0.000925	0.000928	0.000850	0.00107
	(0.767)	(0.739)	(0.702)	(0.888)	(0.798)	(0.801)	(0.732)	(0.918)
Election Yrs	0.00527***	0.00519***	0.00531***	0.00463***	0.00521***	0.00514***	0.00535***	0.00461***
	(3.129)	(3.118)	(3.185)	(2.819)	(3.095)	(3.052)	(3.178)	(2.792)
Constant	0.00566***	0.00570***	0.00577***	0.00495***	0.00554***	0.00562***	0.00566***	0.00483***
	(3.031)	(3.072)	(3.101)	(2.718)	(2.958)	(2.944)	(2.955)	(2.616)
Months	300	300	300	300	300	300	300	300

Table B3:
Return Predictability of the GD Variables after Controlling for Political Connectedness (Unadjusted Variables)

This table shows the results of the FM cross-sectional regressions of the monthly returns on the GD variables - GD^{Report}, $GD^{Strength}$, $GD^{Surprise}$, and GD^{Sale} - while controlling for political connections using the variable $PI^{Candidates}$ as well as its interactions with GD variables both with and without controlling for well-known empirical regularities, IMR, several proxies for economic and political risks, and a tail risk measure. The interaction term GD^{Var} x (1) is the interaction between $PI^{Candidates}$ and the particular GD variable included in the corresponding model. BM, AG, and ROA are lagged by one year; all other RHS variables are lagged by one month; and none of these variables are industry adjusted. Columns (1) through (4) only control for $PI^{Candidates}$ and its interaction with the corresponding GD variable. Columns (5) through (8) control for, in addition to $PI^{Candidates}$ and its interaction with the corresponding GD variable, well-known empirical regularities, IMR, several proxies for economic and political risks, and a tail risk measure. The slope coefficients can be easily interpreted using the summary statistics of the GD variables provided in Table 1. Due to the availability of data on EPU indexes and PI variables, the sample period is January 1985 to December 2005 for the first four models and January 1990 to December 2005 for the next four models. The sample only includes observations for which the month-end stock price is at least $3. The sample firms include all firms and all GD variables are set to zero for the firms that do not report government sales. All variables are defined in Appendix A. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	M_Ret (1)	M_Ret (2)	M_Ret (3)	M_Ret (4)	M_Ret (5)	M_Ret (6)	M_Ret (7)	M_Ret (8)
GD^{Report}	0.00178**				0.00318***			
	(2.227)				(3.316)			
$GD^{Strength}$		0.0274***				0.0321***		
		(2.623)				(2.818)		
$GD^{Surprise}$			0.0716**				0.0385	
			(2.579)				(1.115)	
GD^{Sale}				0.0000511**				0.0000784***
				(2.232)				(3.314)
(1) $PI^{Candidates}$	-0.00529	-0.00513	-0.00469	-0.00557	0.0104***	0.0101**	0.0119***	0.0103***
	(-1.043)	(-1.069)	(-0.978)	(-1.089)	(2.648)	(2.502)	(3.183)	(2.628)
GD^{Var} X (1)	-0.00120	-0.0418	-0.212	-0.0000486	0.00118	0.0347	-0.00471	-0.0000190
	(-0.341)	(-0.714)	(-0.919)	(-0.594)	(0.251)	(0.509)	(-0.020)	(-0.151)
BM					-0.000117	-0.000162	-0.000147	-0.000107
					(-0.170)	(-0.235)	(-0.214)	(-0.156)
MCAP					-0.00140***	-0.00144***	-0.00141***	-0.00139***
					(-4.244)	(-4.319)	(-4.247)	(-4.206)
AG					-0.00300***	-0.00296***	-0.00298***	-0.00302***
					(-5.126)	(-5.077)	(-5.101)	(-5.168)
BHR12M					0.000550	0.000550	0.000561	0.000549
					(0.345)	(0.347)	(0.353)	(0.342)
ROA					0.00252	0.00266	0.00224	0.00255
					(0.681)	(0.722)	(0.607)	(0.689)
IMR					0.00411***	0.00409***	0.00339***	0.00408***
					(4.982)	(4.874)	(4.091)	(4.868)
β_{EPU}					2.014	1.960	1.957	2.040
					(1.082)	(1.054)	(1.053)	(1.097)
β_{GPR}					-3.797***	-3.787***	-3.856***	-3.800***
					(-2.711)	(-2.711)	(-2.768)	(-2.713)
β_{GS}					-0.470	-0.450	-0.449	-0.506
					(-0.171)	(-0.163)	(-0.163)	(-0.183)
β_{REGL}					-0.414	-0.370	-0.359	-0.415
					(-0.212)	(-0.190)	(-0.184)	(-0.213)
$\beta_{Tail\ Risk}$					0.00183	0.00186	0.00179	0.00181
					(1.358)	(1.387)	(1.334)	(1.344)
Election Yrs					0.00426*	0.00402	0.00517**	0.00454*
					(1.722)	(1.611)	(2.102)	(1.810)
Constant	0.0136***	0.0135***	0.0135***	0.0137***	0.00449**	0.00478**	0.00519**	0.00427**
	(5.772)	(5.753)	(5.798)	(5.797)	(2.174)	(2.275)	(2.512)	(2.104)
Months	252	252	252	252	192	192	192	192

Table B4:
Return Predictability of the CD Variables (Unadjusted Variables)

This table shows the results of the FM cross-sectional regressions of the CD variables - GD^{Report}, $GD^{Strength}$, $GD^{Surprise}$, and GD^{Sale} - with and without controlling for well-known empirical regularities and the IMR on monthly returns. The analysis is a robustness check with regard to customer concentration effect found by Dhaliwal et al. (2016). The results of the paper indicate that government-dependent firms have a lower cost of equity and corporate-dependent firms have a higher cost of equity. BM, AG, and ROA are lagged by one year; all other RHS variables are lagged by one month; and none of these variables are industry adjusted. Columns (1) through (4) are the results of the univariate FMC regressions of the CD variables. Columns (6) through (10) controls for the BM ratio, MCAP, asset growth, momentum and the IMR to control for endogeneity bias. Columns (5) and (10) include all four CD variables with and without controls, respectively. The sample period is January 1979 to December 2014 and only includes observations for which month-end stock price is at least $3. The sample firms include all firms, and all CD variables are set to zero for the firms that do not report material corporate sales. All variables are defined in Appendix A. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	M_Ret (1)	M_Ret (2)	M_Ret (3)	M_Ret (4)	M_Ret (5)	M_Ret (6)	M_Ret (7)	M_Ret (8)	M_Ret (9)	M_Ret (10)
CD^{Report}	0.000326				-0.00144*	-0.000223				-0.000431
	(0.323)				(-1.884)	(-0.366)				(-0.488)
$CD^{Strength}$		-0.000158			0.00279***		-0.0000239			0.000490
		(-0.375)			(4.358)		(-0.083)			(0.643)
$CD^{Surprise}$			-0.000798**		-0.00266***			-0.000205		-0.000413
			(-2.227)		(-4.999)			(-0.623)		(-0.608)
CD^{Sale}				-0.0000220	-0.000393				-0.000295	-0.000425
				(-0.053)	(-1.231)				(-1.027)	(-1.288)
BM						-0.000383	-0.000378	-0.000385	-0.000398	-0.000407
						(-0.566)	(-0.558)	(-0.569)	(-0.589)	(-0.604)
MCAP						-0.00361***	-0.00362***	-0.00362***	-0.00362***	-0.00362***
						(-11.449)	(-11.439)	(-11.430)	(-11.445)	(-11.525)
AG						-0.00442***	-0.00443***	-0.00447***	-0.00447***	-0.00452***
						(-8.918)	(-8.948)	(-9.030)	(-9.024)	(-9.191)
BHR12M						-0.00133	-0.00130	-0.00132	-0.00130	-0.00132
						(-0.942)	(-0.926)	(-0.934)	(-0.922)	(-0.937)
ROA						-0.0203***	-0.0203***	-0.0204***	-0.0202***	-0.0203***
						(-5.168)	(-5.181)	(-5.215)	(-5.180)	(-5.199)
IMR						0.00169**	0.00170**	0.00170**	0.00169**	0.00168*
						(1.974)	(1.978)	(2.001)	(1.985)	(1.950)
Constant	0.0118***	0.0119***	0.0120***	0.0119***	0.0121***	0.0353***	0.0354***	0.0354***	0.0354***	0.0353***
	(4.836)	(4.632)	(4.631)	(4.630)	(4.745)	(9.080)	(8.928)	(8.923)	(8.974)	(8.984)
Months	432	432	432	432	432	432	432	432	432	431