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Trading on Private Information: Evidence from Members of Congress

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Trading on Private Information: Evidence from Members of Congress

Abstract

We examine the stock trades of members of Congress and find that over 2004–2010 the buy-minus-sell portfolios of powerful Republicans have the highest abnormal returns, exceeding 35% on an annual basis under a one-week holding period. Among powerful Republicans, the abnormal returns are mostly concentrated in the portfolios of those with less trading experience. We also find that the positive abnormal returns disappear after the Stop Trading on Congressional Knowledge (STOCK) Act was passed in 2012. Our results imply that the STOCK Act affected politicians' incentives to trade on private information, which they acquired through their power and party membership.

1. Introduction

The STOCK Act makes it clear that if members of Congress use nonpublic information to gain an unfair advantage in the market, then they are breaking the law. It creates new disclosure requirements and new measures of accountability and transparency for thousands of federal employees. That is a good and necessary thing. We were sent here to serve the American people and look out for their interests—not to look out for our own interests.

Former President Barack Obama, April 4, 2012[1]

Alleged insider trading by members of Congress caused mounting public pressure, which served as a catalyst for the passage of the Stop Trading on Congressional Knowledge (STOCK) Act of 2012.[2] The STOCK Act was enacted "to prohibit Members of Congress and employees of Congress from using nonpublic information derived from their official positions for

[1] http://www.whitehouse.gov/blog/2012/04/04/president-obama-signs-stock-act

[2] For example, see Economist (2011) and Kroft (2011) for the public's view of congressional trading.

personal benefit, and for other purposes."[3] Legislating the way that members of Congress trade stocks has received a great deal of media attention, but there are very few academic studies on this issue (see Ziobrowski, Cheng, Boyd and Ziobrowski [2004] and Ziobrowski, Boyd, Cheng, and Ziobrowski [2011] for examples). Also, there are still unanswered questions such as *Do politicians actually trade on private information, or do they possess superior skills?*; *What determines access to private information?*; and so forth. Furthermore, there is an ongoing debate on whether the STOCK Act was really necessary and whether it had any purpose beyond improving Congress's image.

Members of Congress (politicians) differ from ordinary traders in that they generate or have access to private information that has the potential to move stock prices substantially. For example, the *Washington Post* reports that there was an unusual trading activity in the options of Humana, a health insurer, after a staffer on the Senate Finance Committee talked about the prospects of a critical Medicare bill in a conference call organized by Capitol Street, a consulting firm, on March 18, 2013. On April 2, 2013, the government officially announced a rate increase for Medicare-participating insurers, which generated 500% or more returns on the options bought right after the conference call.[4]

In this paper, we ask whether politicians trade on private information. If they do, we strive to understand the nature of their private information and to find out what factors contribute to their access to private information. The possibility exists that politicians may choose not to trade on private information even if they possess it. However, public choice theory suggests that politicians, like any other individual, also work toward pursuing their self-interests. For example, Buchanan (1989, p. 20) states that "individuals must be modeled

[3]http://www.gpo.gov/fdsys/pkg/PLAW-112publ105/pdf/PLAW-112publ105.pdf

[4]See Elboghdady and Hamburger (2013a, 2013b) and Yang, Hamburger, and Elboghdady (2013) for some of the press coverage by the *Washington Post* on this incidence of alleged insider trading. The Wall Street Journal also covered this story (see Mullins, Strasburg, and McGinty [2013] and Mullins and McGinty [2013a, 2013b, 2013c, 2013d]).

as seeking to further their own self-interest, narrowly defined in terms of their measured net wealth positions, as predicted or expected."

We build our empirical framework on calendar-time transaction-based portfolios using 61,998 stock trades that politicians made over the 2004–2010 period. We first separately calculate the returns on a portfolio that contains the stocks bought by politicians and the returns on a portfolio that contains the stocks sold by politicians (i.e., previously long positions). We refer to these portfolios as the buy portfolio and the sell portfolio, respectively. We assume five different holding periods, ranging from one week to one year, in our return calculations. For example, under a one-week holding period, a buy transaction stays in the buy portfolio for one week and then it gets discarded. Similarly, a sell transaction stays in the sell portfolio for one week and then it gets discarded. Our empirical analysis focuses on the return differences between the buy portfolio and the sell portfolio (i.e., the returns on the buy-minus-sell portfolio).[5]

We document that the portfolios of powerful politicians (those with powerful committee assignments) outperform the market by more than 20% on an annual basis under a one-week holding period. However, there is very weak evidence of informed trading for nonpowerful members of Congress. Among powerful politicians, the portfolios of Republicans outperform the market by more than 35% on an annual basis under a one-week holding period. This superior performance persists even after Republicans lost majority control of Congress in the 2006 elections. On the other hand, the portfolios of Democrats mostly earn average returns, even when they controlled Congress. Our further analysis of powerful Republicans' transactions reveals that the portfolios of inexperienced (i.e., unsophisticated) investors earn abnormal returns under a one-week, one-month, two-month, and three-month holding period,

[5]It is important to note that the sell side of the buy-minus-sell portfolio contains the stocks that politicians sold, not those that politicians shorted. For example, let's suppose that politician A owns shares of ABC Inc. in her portfolio. When she sells shares of ABC Inc., this transaction becomes part of the sell portfolio.

whereas the abnormal returns on the portfolios of experienced (i.e., sophisticated) investors do not extend beyond a one-week holding period. This result implies that the abnormal returns are driven mostly by private information, not by trading experience or skill.

We present evidence that both the advisor-assisted and the self-managed portfolios of unsophisticated powerful Republicans earn abnormal returns, suggesting that politicians obtain some of their private information from their financial advisors. We explore whether powerful Republicans also acquire private information through their interactions with firms that provide them with campaign contributions and through their involvement in the purchasing decisions of the federal government. We find evidence that these channels produce economically significant, but statistically insignificant, abnormal returns. We further find that the portfolios of powerful Republicans no longer outperform the market in the post–STOCK Act era.

To the best of our knowledge, our study is the first paper that investigates and reveals the joint effect of committee power and party membership on congressional stock returns. In particular, we show robust evidence that committee power is the channel through which politicians acquire time-sensitive private information. This study is also unique in presenting evidence that it is mostly private information, not skills, that is driving the abnormal returns on congressional stock portfolios. Our study is also the first to explore the role of financial advisors and the purchasing decisions of the federal government as potential channels of information for members of Congress. In addition, our paper provides new results by not only identifying the most informed group of politicians (powerful Republicans) but also showing how the STOCK Act affected the use of private information in stock trades by these politicians. Furthermore, the short-term nature of abnormal returns provides empirical support for a key provision of the STOCK Act that reduces the reporting lag (i.e., the time between the transaction date and public access to the transaction records) to 45 days from

17 months.

Our study directly contributes to the research on congressional trading. Using transactions-based calendar-time portfolios, Ziobrowski, Cheng, Boyd and Ziobrowski (2004) and Ziobrowski, Boyd, Cheng, and Ziobrowski (2011) find that the stock transactions by U.S. senators (over 1993–1998) and by U.S. House of Representatives (over 1985–2001) outperform the market. These studies do not control for the power of congressional committees. They also do not distinguish between informed trading based on skill and informed trading based on private information. Furthermore, they use only a one-year holding period, which does not have the ability to detect short-term trading profits. We instead measure the abnormal returns in a dynamic setup with holding periods ranging from one week to one year and find that politicians trade on time-sensitive private information with the most benefits accruing within the first week of transactions. Such a finding suggests a close relationship between the legislative and trading activities of politicians.[6]

Eggers and Hainmueller (2013) examine the performance of politicians' stock holdings and their transactions over the 2004–2008 period, but they do not find abnormal returns. Their transaction-based analysis does not conduct any of the specific subsample analyses that we perform in our paper, and it mostly focuses on long-term returns. Our study resembles more their holdings-based approach in that we focus on similar subsamples, but there are some major differences. Most importantly, their holdings-based approach does not have the ability to detect time-sensitive trades as the authors form portfolios of all stock positions through time without assessing the portfolio performance at various horizons (see Section 4 of our study for more details). Because they do not document any abnormal returns, Eggers and

[6]The time-sensitivity of information is of great interest to the Securities and Exchange Commission (the SEC). The press releases by the SEC on insider trading prosecutions often involve some parties trading on information with highly time-sensitive components such as mergers and acquisitions announcements (e.g., SEC, 2017a, 2017b), earnings reports (e.g., SEC, 2016a, 2016b), and the drug approval/rejection announcements by the Food and Drug Administration (SEC, 2011).

Hainmueller (2013) conclude that the STOCK Act is mostly for improving Congress's image and for making congressional service a more rewarding experience for honest politicians. Focusing on short-term holding periods, we find that politicians' portfolios do outperform the market, but they do so only prior to the STOCK Act. Therefore, we reach a different conclusion: The STOCK Act helped curb the incidences of informed trading by members of Congress, which justifies its existence beyond improving Congress's image.

Eggers and Hainmueller (2014) sort politicians' stock holdings and transactions into connected and unconnected portfolios based on firms' proximity to a politician's district, campaign contributions, and lobbying activities targeting a politician's committee. They find that politicians have strong preferences to invest in companies headquartered in their districts (congressional districts for representatives and states for senators), and these local investments generate 3% annualized abnormal returns. Nevertheless, the transactions that politicians made based on their connections (location, lobbying, and campaign contribution) do not earn short-term abnormal returns. Overall, the authors argue that politicians invest in local stocks based on their general knowledge of the local management of companies but not on time-sensitive information. Our study exclusively focuses on the politicians' stock transactions. Also, we do not restrict our empirical analysis to local transactions, which allows us to study a much larger sample.[7]

Our study complements the research on how politics affects the value and decisions of firms. Cohen, Coval, and Malloy (2011) find that when a politician becomes the chairperson of a powerful committee, the federal spending in his or her state increases (e.g., 24% increase

[7]When we identify the local transactions as those in stocks headquartered in the same states that politicians represent in Congress (e.g., representative from Illinois's 4th district trading stocks of companies headquartered in Illinois), the resulting transactions account for approximately 7% of the sample that we study in this paper. Given that the majority of transactions come from the House of Representatives, sorting the transactions into their election districts (e.g., representative from Illinois's 4th district trading stocks of companies headquartered in Illinois's 4th district) is very likely to reduce the share of local investments below 7% of our sample. As a robustness check, we drop the local transactions (defined based on the states of firm headquarters) from our sample and find that our results are robust to the exclusion of these transactions.

in government contracts). Tahoun and van Lent (2013) document that politicians are more likely to bail out a firm if they hold its stock. Furthermore, the chance of a bailout is higher for firms with investors from powerful congressional committees. Tahoun (2014) finds that members of Congress invest more in firms that give them campaign contributions, and their stock ownership in the contributing firms is positively related to the amount of government contracts that these firms receive. Cooper, Gulen, and Ovtchinnikov (2010) document a positive relationship between the number of candidates a firm supports during an election and subsequent abnormal returns on its stock. Christensen, Mikhail, Walther, and Wellman (2017), using campaign contributions, present evidence that politically-connected equity analysts possess an informational advantage over analysts who are not politically connected. Kim, Pantzalis, and Park (2012) construct a political alignment index (PAI) between a state's politicians and the president as a proxy for political risk. They find a positive relationship between their PAI index and stock returns. Belo, Gala, and Li (2013) present evidence that firms with higher levels of exposure to government spending perform better (worse) than those with lower levels of exposure when the president is a Democrat (Republican).

Our paper is also closely related to the stream of studies on the investment performance of retail traders and corporate insiders. Odean (1999) finds that the intercept (alpha) on the buy-minus-sell portfolios of retail traders is significantly negative. His analysis implies that investors have poor skills in projecting which stocks will rise and which stocks will fall in value. Seasholes and Zhu (2010) construct holdings-based and transactions-based calendar-time portfolios for individual traders. They document that individual traders do not earn abnormal returns on their holdings, and that their transactions do not contain value-relevant information. On the other hand, Lakonishok and Lee (2001) present evidence that corporate insiders are able to predict market returns and cross-sectional stock returns, and the source of this predictive ability comes from buy transactions and insiders in smaller firms. Jeng, Metrick, and Zeckhauser (2003) document that buy transactions by corporate insiders out-

perform the market in excess of 6% a year, while sell transactions do not have any abnormal performance. Cohen, Malloy, and Pomorski (2012) filter out routine trades by corporate insiders and document abnormal returns around 10% a year for the nonroutine transactions. By focusing on Bolsa Mexicana de Valores, Bhattacharya, Daouk, Jorgenson, and Kehr (2000) find that insider trading takes place ahead of corporate news announcements, causing a lack of response in the stock returns to the actual announcements.

The rest of this paper proceeds as follows. Section 2 develops the testable hypotheses. Section 3 introduces transactions and committee assignment data. Section 4 outlines the empirical methods, and Section 5 presents the results. Section 6 separately examines the portfolio performance of skill-driven and information-driven trades, and Section 7 investigates sources of private information that politicians use in their stock trades. Section 8 examines the portfolio performance of congressional stock transactions in the post–STOCK Act period. Section 9 provides robustness checks, and Section 10 concludes the paper and provides policy recommendations.

2. Hypotheses

We are primarily interested in uncovering the information content of congressional stock trades. If politicians trade on value-relevant information (i.e., information relevant to stock value), then we should see positive abnormal returns on a portfolio that buys what politicians buy and sells what they sell (i.e., buy-minus-sell portfolio, hedged portfolio). Such a relationship does not necessarily establish that politicians capture all of the abnormal returns (if there is any) because we use hypothetical holding periods and take into consideration the losses avoided by selling at the right time. Nevertheless, this methodology is instrumental for determining whether the value in the congressional stock trades is material enough to generate abnormal returns. Therefore, our first hypothesis is:

- H_1: Politicians trade on value-relevant information such that their trades generate abnormal returns.

Politicians widely differ with respect to how much power they have. We argue that powerful politicians, in general, possess more value-relevant information than other politicians (i.e., nonpowerful politicians). Powerful politicians can acquire value-relevant information from a variety of channels. First, they have significant control over government spending (Cohen, Coval, and Malloy, 2011). Powerful politicians also have more authority and control in enacting and overseeing legislation that can affect stock prices. An example of such influence is the bailout decisions (Tahoun and van Lent, 2013). Powerful politicians can also acquire information via their connections outside Congress. Outside groups such as constituents, special interest groups, and lobbyists are more likely to target powerful politicians due to their influence over legislation. These groups may share private information with powerful politicians in anticipation of or in exchange for legislative favors. Vidal, Braca, and Fons-Rosen (2012) demonstrate the importance of powerful politicians by focusing on lobbyists. Their study finds that the revenue generated by lobbyists is highly dependent on their connections in Congress. Once a connected senator or representative in a powerful committee leaves Congress, the lobbying revenue suffers drastically. For example, they document a 45% drop in the lobbying revenue experienced by the lobbyists once their connected senator on the Appropriations Committee leaves Congress. In conclusion, we formulate our second hypothesis as:

- H_2: The portfolios of powerful politicians earn higher abnormal returns than the portfolios of nonpowerful politicians do.

We now turn our attention to party membership and being a majority party in Congress. Being a majority party has a variety of benefits ranging from setting the legislative agenda to the assignment of committee chairs.[8] Furthermore, controlling a chamber is likely to expand

[8]http://www.senate.gov/artandhistory/history/common/briefing/Committees.htm

the majority party's network outside Congress. Therefore, it is highly likely that possessing the majority in a given chamber provides the members of the majority party with a second layer of power and influence besides their already-powerful positions in Congress.

Ziobrowski, Cheng, Boyd, and Ziobrowski (2004) separately examine the portfolio performance of Republican and Democratic senators over the 1993-1998 period without dividing the sample based on who controlled Congress. They find some evidence of abnormal returns on the buy and the buy-minus-sell portfolios of Democratic senators at a 12-month holding period. On the other hand, they do not find any abnormal returns for Republican senators on their buy, sell or buy-minus-sell portfolios. We show the time line of majority control in the Senate in Panel A of Figure 1. Democrats controlled the Senate over the 1987–1994 period. As a result, they were in control of Senate leadership only in the first two years of the period that Ziobrowski, Cheng, Boyd, and Ziobrowski (2004) examined. However, Democrats still had some abnormal returns, and Republicans did not earn any abnormal returns despite being in control of the Senate for the next four years of the sample examined by Ziobrowski, Cheng, Boyd, and Ziobrowski (2004).

[Figure 1 About Here]

Ziobrowski, Boyd, Cheng, and Ziobrowski (2011) analyze the information content of stock trades by members of the U.S. House of Representatives over the 1985–2001 period. They document that the portfolios of both Democrats and Republicans outperform the market, but Democrats' portfolios perform better than Republicans' portfolios. The authors indicate that the superior performance by Democrats is in conflict with the common belief that Republicans are in better terms with Wall Street compared to Democrats, and they attribute this difference to the power change in Congress. Panel B of Figure 1 shows that Democrats were in control of the House for four decades before they lost the majority following the 1994

elections. The authors do not separate their sample based on majority control periods, but they argue that being in power for decades was beneficial to Democrats (Ziobrowski, Boyd, Cheng, and Ziobrowski, 2011, p. 14):

> Democrats controlled the House for 10 of the 17 years covered by this study. Furthermore, Democrats were deeply entrenched in the leadership of the House for decades prior to the study. Thus when Republicans finally took control [of the House] in 1995, they arguably had far less experience at handling the reins of power and may therefore have been unable to immediately enjoy all its perquisites.

It is reasonable to assume that as a party stays longer in the majority (thus maintains long-term majority control), it consolidates more power and influence, and its members may benefit from such influence in the form of higher returns on their portfolios. The results presented by Ziobrowski, Boyd, Cheng, and Ziobrowski (2011) tend to provide support for such a relationship. However, the authors do not delineate the perquisites associated with being a majority party. The party that holds the majority in a chamber determines who will chair powerful committees as well as playing a more important role in determining the legislative agenda (Baker, 2008). Once a party loses the majority in Congress, it also loses the aforementioned perquisites. We then expect that members of Congress will benefit from these perquisites only when they officially have the majority of the seats.

We argue that there could also be a more persistent channel through which long-term majority control provides benefits to the members of the controlling party. In particular, long-term majority control may lead to the establishment of information sources inside and outside Congress that share private information with members of Congress. We refer to this channel as the network effect. It may take a long time for a party to build a private information network for its members. But once established, this network of connections is likely to be persistent. As a result, the party with long-term majority control may continue

producing benefits for its members, even after an election defeat that results in the loss of majority control in Congress. We formulate our third hypothesis based on the anticipated benefits of the network effect:

- H_3: The party with long-term majority control in Congress establishes private information networks such that an election defeat (thus losing the majority) does not immediately cause the loss of access to private information for its members.

3. Data

3.1. Raw data

We obtain daily stock returns from the Center for Research in Security Prices (CRSP) and daily congressional common stock transactions from the Center for Responsive Politics (www.opensecrets.org) for the 2004–2010 period. 2004 is the first year that the Center for Responsive Politics provides digitized and downloadable congressional trading data.[9] During our sample period, which precedes the STOCK Act of 2012, politicians were required to file paper-based annual financial disclosure reports (FDRs) by May 15 of every calendar year. The FDRs would cover politicians' own transactions and their family members' transactions that took place during the previous calendar year. Thus, the trading data in our study were released to the public with five to 17 months delay.

The long delay in releasing data to the public, coupled with the painstaking process that the Center for Responsive Politics undertakes to transform paper-based filings to downloadable data meant that there was an even longer lag between when the politicians made these transactions and when the researchers could use them in their empirical analyses. Despite

[9]For our main results, we end the sample in 2010. This avoids the inclusion of congressional stock transactions potentially affected by the STOCK Act. Later in the study, we investigate whether our results also hold in the post–STOCK Act era.

the STOCK Act being in effect, the Center for Responsive Politics still expends a significant amount of resources in making the FDRs available to researchers.[10] The STOCK Act had strong transparency provisions such as the creation of downloadable and searchable database, but many of these provisions were amended in 2013 due to national security concerns (Dennis, 2013; Vardi, 2013).

The raw transactions data from the Center for Responsive Politics do not come with security identifiers. As a result, we match the raw data set with the CRSP data set by using company names. We ensure that each security has a permanent identifier (CRSP PERMNO) in the matched sample. Following Ziobrowski, Cheng, Boyd, and Ziobrowski (2004), we only keep transactions on U.S. common stocks (CRSP share code 10 or 11) trading on the NYSE, AMEX or NASDAQ. We also eliminate transactions without a transaction date or a transaction amount, or if the transaction amount is less than $100.[11] We refine our sample further by following Ziobrowski, Boyd, Cheng, and Ziobrowski (2011) and eliminate transactions if there are not any stock returns within −/+ 15 days of the transaction date to possibly drop the transactions involving initial public offerings (IPOs). Our final sample has 61,998 transactions and 2,671 unique stocks. 49.76%, 46.72%, and 3.52% of the stocks are listed on the NYSE, NASDAQ, and AMEX, respectively. Out of 61,998 transactions in our sample, 30,785 and 31,213 of them are buy and sell transactions, respectively. Finally, there are a total of 403 politicians in our sample. We provide the number of politicians and

[10] https://www.opensecrets.org/news/2014/05/most-senators-file-financial-disclosures-electronically-sort-of/

[11] Members of Congress are required to report the date of financial transactions on their financial disclosure forms. However, we identified 1,809 common stock transactions without a valid date that were reported by 52 members of Congress. Our further analysis revealed that 47 of these 52 members reported transactions with a valid date as well. There are 459 securities in the no-date sample, and 444 of these 459 securities appear also in the final sample with a valid date. Furthermore, the observations in the no-date sample does not follow a particular trend. The year 2009 has the highest number of observations (897 transactions), and the year 2008 has the lowest number of observations (3 transactions). Overall, there does not appear to be a systematic exclusion of transaction dates by a select group of politicians (given that the overwhelming majority of the politicians in the no-date sample also reported transactions with valid dates) or for a select group of securities (given that most of the securities in the no-date sample also appear in the final sample with a valid date).

the number of transactions in our sample by year in Table 1. The sample has the highest number of transactions (10,946) in 2010 and the highest number of traders (206) in 2006.

[Table 1 About Here]

3.2. Committee data

We obtain the committee assignment data from Stewart and Woon (2016) to identify powerful members of Congress.[12] We merge the transaction data with the committee assignments by precisely matching the transaction dates and the period of committee membership. Let's suppose that politician A served on the Senate Appropriations Committee in 2007 and 2008, but he had common stock transactions during, before, and after his service period on this committee. We ensure that only the transactions that politician A carried out in 2007 and 2008 are associated with the Senate Appropriations Committee. As a result, this matching methodology eliminates look-ahead bias, meaning that a politician's transactions are associated with a given congressional committee if and only if he or she was serving on that committee at the time the transactions took place.

Similar to Cohen, Coval, and Malloy (2011), we focus on the most powerful 20 committees (top 20), 10 from each chamber. We follow a more recent ranking produced by Stewart (2012) while Cohen, Coval, and Malloy (2011) employ an earlier version of the committee rankings that have less overlap with our sample period (Edwards and Stewart, 2006). Stewart (2012) uses a statistical technique, called the Grosewart method, based on the revealed preferences of politicians. For example, if a politician gives up his seat on the House Foreign Affairs Committee to serve on the House Rules Committee, the value from serving on Rules exceeds the value from serving on Foreign Affairs. Here, value refers to the set of monetary and non-monetary benefits that politicians can extract from serving on a committee, such as

[12]We are thankful to Charles Stewart for making committee assignment data available to the public at http://web.mit.edu/17.251/www/data_page.html. See www.opensecrets.org for the descriptions of congressional committees.

landing a private sector job after leaving Congress or accomplishing key legislative changes. The Grosewart method yields values for each congressional committee, which are later used to rank congressional committees.

The top 10 House committees in order of importance are Ways and Means, Energy and Commerce, Appropriations, Rules, Foreign Affairs, Financial Services, Armed Services, Judiciary, House Administration, and Budget.[13] In the Senate, the top 10 committees in order of importance are Finance, Appropriations, Rules and Administration, Armed Services, Commerce, Governmental Affairs, Health, Judiciary, Budget, and Veterans' Affairs. For our study, we refer to these top 10 committees in each chamber (i.e., top 20 committees) as *powerful* committees. At a given time, we classify a member of Congress as *powerful* if he or she serves on any of these top 20 committees, and as *nonpowerful* if he or she does not serve on any of these committees. It is important to note that a member can transition from being powerful to being nonpowerful if he or she no longer serves on a powerful committee. Similarly, a member can transition from being nonpowerful to being powerful if he or she starts serving on a powerful committee.

4. Empirical analysis: Calendar-time portfolios

4.1. Empirical motivation

Our data have overlapping return windows and event clustering that plague the event study-based inferences. Also, politicians sometimes invest in the same stocks over similar time periods, generating correlations between their portfolios. When there is cross-sectional dependence in the abnormal returns, the test statistic based on the cumulative abnormal returns is inflated, and it over-rejects the null of no abnormal returns (Lyon, Barber, and

[13]We do not have any transactions associated with the Ethics Committee, which ranks number 9 in the House. We instead use the next committee, House Administration, for which we have available data.

Tsai, 1999). As a result, we do not calculate cumulative abnormal returns in our empirical investigation. Fama (1998) and Mitchell and Stafford (2000) strongly favor the use of the calendar-time portfolio approach in the presence of cross-sectional dependence in the data. The construction of calendar-time portfolios yields a single time series of returns, which eliminates the problem of cross-sectional dependence (Seasholes and Zhu, 2010).

The calendar-time portfolio approach has some drawbacks. Mitchell and Stafford (2000) list some of the issues with the calendar-time portfolio approach. First, standard asset pricing regressions assume constant coefficients on asset pricing factors, but the number and the type of firms in the monthly calendar-time portfolios change, which may cause estimates to be biased. Second, an issue also raised by Fama (1998), the changing portfolio composition could also be at odds with the homoskedasticity assumption. Third, Loughran and Ritter (2000) point out that this approach treats each month identically with equal weights and ignores the possibility of some months having different abnormal return patterns than others. Finally, Fama (1998) argues that the bad model problem can generate anomalies that do not exist in reality.

In dealing with the heteroskedasticity problem, we follow Seasholes and Zhu (2010) and estimate the asset pricing equations with Newey-West heteroskedasticity and autocorrelation robust standard errors. We attempt to alleviate the bad model problem by estimating four different models (capital asset pricing model, three-factor, four-factor, and five-factor models). Given that we have up to 96 months of time series data, we argue that the remaining issues, assigning equal weights to each month and constant coefficient assumption, are less of a concern than the problems associated with the cumulative abnormal returns calculations.

4.2. Calendar-time portfolios

There are two different calendar-time portfolios: holdings-based and transactions-based calendar-time portfolios. This study is based on the latter. The former is the actual portfolios held by traders. The transactions-based approach creates synthetic portfolios under different holding periods based on what traders buy and sell. The main focus in these synthetic portfolios is the buy-minus-sell portfolio. We determine the returns on the buy-minus-sell portfolio by subtracting the returns on the sell portfolio (i.e., the portfolio of the stocks sold by politicians) from the returns on the buy portfolio (i.e., the portfolio of the stocks bought by politicians).

Ideally, we would want to use both of these portfolio methods in our analysis in the same manner as Seasholes and Zhu (2010). However, we are severely limited by the availability of the data to construct actual portfolios held by members of Congress. Politicians do not provide the numbers of shares bought or sold in a given transaction, and for the majority of transactions, they report a broad interval for the size of their trades, some of which are \$50,001–\$100,000, \$250,001–\$500,000, and \$1,000,001–\$5,000,000. Politicians are required to report their year-end holdings of financial assets in a similar fashion to their during-year financial transactions, but they also use broad intervals in reporting their asset holdings. For example, senator A may report that he bought \$50,001 to \$100,000 worth of XYZ Inc. shares for the first time on October 15, 2008, and that the value of his XYZ Inc. holdings was between \$50,001 and \$100,000 on December 31, 2008. Without knowing the exact amounts, it becomes impossible to determine how much this member of Congress actually earned on this transaction.[14]

[14]It is also difficult to identify the actual round-trip trades of politicians (i.e., an open buy order and a close sell order matched together). We list some of the reasons here. First, the data source does not specify the round-trip trades. Furthermore, not knowing the exact amounts (hence, the exact number of shares) in congressional stock trades makes it difficult to establish the position (i.e., exact number of shares held by a politician) in a stock at a given time and to track how this position changes due to the subsequent trades by this politician. We also have many cases where we have politicians' sell transactions, but we do not have the buy transactions preceding the sell transactions, which could be due to politicians closing a position that

Eggers and Hainmueller (2013) attempt to construct actual portfolios based on the limited number of transactions and asset holdings that politicians reported with exact amounts. They state that they have exact amounts for 25% of the transactions and 8% of the end-of-year holdings for the 2004–2008 period. For the same sample period, we find that only 13% of politicians reported exact transaction amounts. For politicians who reported exact transaction and asset amounts, Eggers and Hainmueller (2013) impute the transaction and asset values for the rest of their transactions and assets by fitting the reported exact values into a distribution. Next, they assume that these imputed values should be the same for the rest of the politicians too, as long as we look at the same intervals. In their final step, the authors simply backtrack the value of a stock holding from the end of the year to the beginning of the year using daily returns and adjusting for buy and sell transactions.

For their holdings-based approach, the exact and imputed values do not directly become part of the return calculations in Eggers and Hainmueller (2013), but they are used in determining the portfolio composition and the length of the holding periods.[15] However, given that 92% of end-of-year values and 75% of transaction amounts in Eggers and Hainmueller (2013) are stated in broad intervals, the estimates may not fully reflect the actual portfolios. Let's suppose that in 2008, representative B opened a long position in XYZ Inc. for $1,001 to $15,000 on January 5, sold XYZ Inc. shares on January 20 for $4,250, bought shares of XYZ Inc. on December 1 for $1,001 to $15,000, and he ended up with $1,001 to $15,000 worth of XYZ Inc. shares on December 31. It could be that the January 20 transaction closed the January 5 long position in XYZ Inc., and the December 1 transaction opened a new long position. However, the imputed values may suggest that this was a yearlong position, possibly

they opened prior to the beginning of our data (i.e., prior to January 1, 2004) or due to filing errors (see Mullins [2015] for anecdotal evidence). Furthermore, approximately 13% of the politicians in our sample reported only one trade. All these add to the challenges of identifying round-trip transactions.

[15]The authors use the imputed values in some of the transactions-based estimations in their online appendix.

adding periods of no information into the portfolio returns. Furthermore, portfolio values at the end and at the beginning of a year may be confounded by the estimated transaction and end-of-year values. Therefore, we prefer the transactions-based approach for the purpose of this study. Also, the transactions-based approach is better suited for detecting the extent and the type of informed trading by politicians, and we explain our reasoning below.

(i) Measuring time-sensitivity of information

The transactions-based approach allows us to measure abnormal returns under different holding periods (one week, one month, etc.) and to investigate whether there is any time-sensitive information in stock trades. If politicians trade on time-sensitive information, we should expect abnormal returns on the buy-minus-sell portfolios under shorter holding time periods. On the other hand, if politicians trade on long-term information, we should observe abnormal returns under longer holding time periods. The presence of abnormal returns over long-term holding periods (one year or more) implies that politicians possess the skills to extract information that has value relevance beyond short-term trading windows and that their trading decisions are mostly independent of the current bills or projects that they are working on. In other words, they could be uniquely positioned to process congressional knowledge, similar to retail traders who collect and process local information at an advantage (Ivkovic and Weisbenner, 2005).

The difference between short-term versus long-term information has become more important since the STOCK Act brought down the reporting lag to a maximum of 45 days that used to range from five to 17 months in the pre–STOCK Act period. If the evidence shows that politicians trade on time-sensitive information, it will provide support for this critical provision of the STOCK Act. Furthermore, the presence of short-term abnormal returns will suggest that politicians trade on information that is related to their current activities in Congress because such information is more likely to have a time-sensitive nature. This

will be an important finding given that the STOCK Act was mainly enacted to prevent politicians from trading on information related to their role as members of Congress.[16]

(ii) Quantifying losses avoided

We are interested in determining whether politicians are informed traders capitalizing on private information. However, informed trading is not only about buying at the right time and acquiring profits, but it is also about selling at the right time and avoiding losses. By constructing buy-minus-sell portfolios, the transactions-based approach takes both buy and sell transactions into consideration. Nevertheless, the holdings-based approach focuses only on the existing stocks in a portfolio and discards useful information from sell transactions. For example, a politician owning a single stock with an average performance learns that the company will face lawsuits from the government in the coming weeks and immediately sells all of his holdings. The actual holdings-based analysis will show that the politician did not outperform the market because the stock had an average performance during the actual holding period. However, the transactions-based analysis will help us answer whether there were any losses that the politician managed to avoid shortly after the transaction date. The losses avoided and profits earned using nonpublic and material information both concern the SEC. Under the Insider Trading Sanctions Act (ITSA) of 1984, the SEC can seek civil penalties up to three times the profits acquired or losses avoided in an insider trading case.[17]

[16]It is important to note that the transactions-based approach may not necessarily reflect the realized abnormal returns by members of Congress. This is because we assume various holding periods. For example, we may find that a given politician earns abnormal returns under a one-week holding period but does not earn abnormal returns over holding periods longer than one week. The possibility exists that this given politician may have held on to his investments more than one week and thus earned average returns. When our reference point is a one-week holding period, the transactions-based approach will overestimate the abnormal returns on this politician's investments. We can also have an opposite situation where this given politician may have held on to his investments actually for a week, but if our reference point is longer than a week (e.g., one year), our results will underestimate the abnormal returns on this politician' investments. Despite these shortcomings, the transactions-based portfolio will help us reveal whether time-sensitive information is used in congressional stock trades, which is of great interest to the SEC.

[17]Profits do not have to be realized for the SEC to launch an investigation (see Heller [2016] and Stempel [2016] for examples). Furthermore, the act of buying on inside information can be in itself sufficient for an investigation regardless of profits acquired. For example, Berenson (2009) reports that Rajaratnam received nonpublic information that the government of Abu Dhabi was going to buy billions of dollars worth of shares in Advanced Micro Devices (AMD). Galleon Group, run by Rajaratnam, bought AMD shares worth between

(iii) Active positions and active traders

It is likely that many politicians have positions in stocks that they opened a long time ago, but they have not rebalanced yet. Also, many members of Congress are not active traders to begin with. For example, Eggers and Hainmueller (2013) use portfolios from 422 politicians in their analysis, but we are able to identify only 348 politicians who placed at least one trade during their sample period. This finding suggests that approximately 18% of the politicians in the Eggers and Hainmueller (2013) study did not place a single trade during their sample period. As a result, the holdings-based approach incorporates the returns on passive positions and the portfolios of passive traders into the overall performance analysis, which is likely to dampen the overall portfolio returns. The transactions-based approach focuses on only active positions and active traders. If a politician bought shares of company XYZ 20 years ago and has not changed his or her position, the returns on company XYZ's stock will not be part of the transactions-based portfolio analysis.

4.3. Setup

Ziobrowski, Cheng, Boyd, and Ziobrowski (2014) and Ziobrowski, Boyd, Cheng, and Ziobrowski (2011) use the calendar-time portfolio approach in capturing the long-run abnormal returns following Fama's (1998) recommendation. They assume a fixed one-year holding period and calculate portfolio returns for each calendar day by including all the transactions that took place within the prior year. We follow their approach, but construct the portfolios assuming 1/4-, one-, two-, three-, and 12-month holding periods to capture the time-sensitivity of information embedded in the common stock transactions. We use the following formula to derive daily portfolio returns:

$85 million and $90 million. Due to various subsequent events and despite the investment from Abu Dhabi in AMD, Galleon Group lost approximately $30 million on its AMD investment. Berenson (2009) states that "Mr. Rajaratnam lost millions from what prosecutors characterize as illegal trading."

$$R_{port,t} = \frac{\sum_{j=1}^{J} comp_{jt} R_{jt}}{\sum_{j=1}^{J} comp_{jt}} \quad (1)$$

where $R_{port,t}$ represents the return on the calendar-time portfolio on trading day t, $comp_{jt}$ is the compounded value of transaction j from transaction date until trading day $t-1$, and R_{jt} is the return on transaction j on trading day t. If the value of a transaction is stated in intervals, we use the midpoint of intervals as the dollar amount of transactions (Ziobrowski, Cheng, Boyd, and Ziobrowski, 2004). The denominator in Equation (2) is the sum of the compounded value of each transaction at the beginning of trading day t. The numerator is the sum of the dollar returns on each transaction on trading day t, based on the compounded value of the transaction at the beginning of trading day t. Suppose that the entire portfolio is composed of two transactions involving stock A ($1,000 purchase) and stock B ($5,000 purchase). On day 0 (transaction date), stock A appreciated 10%, but stock B lost 5%. On day 1, stock A and stock B went up by 20% and 10%, respectively. The denominator for day 1 portfolio return is $\$1,000 * 1.10 = \$1,100$ plus $\$5,000 * (0.95) = \$4,750$, which is $5,850. In other words, we start day 1 with $5,850 wealth. The numerator for day 1 return is $\$1,100 * 0.20 = \$220$ plus $\$4,750 * 0.10 = \$475$, which is $695. In other words, on day 1, we earned $695 on an initial investment of $5,850, which corresponds to $\frac{\$695}{\$5,850} = 11.88\%$ return.

Using the setup above, we first calculate daily portfolio returns on buy and sell transactions. In doing so, following Ziobrowski, Cheng, Boyd, and Ziobrowski (2004) and Ziobrowski, Boyd, Cheng, and Ziobrowski (2011), we adopt a two-stage weighting scheme to get more robust results (see Figure 2). In the first stage, we compute both equal-weighted portfolio returns assuming $1 initial value for each transaction and trade-weighted (i.e., value-weighted) portfolio returns using original transaction amounts.[18] In the second stage,

[18] In the paper, we also refer to these weighting schemes as *equal-weighted transactions* and *value-weighted transactions*.

we average the returns across politicians on each calendar day to prevent results being influenced by a single trader. In the next steps, we compound the daily portfolio returns to generate monthly returns (Ziobrowski, Cheng, Boyd, and Ziobrowski, 2004; Ziobrowski, Boyd, Cheng, and Ziobrowski, 2011) and then calculate the buy-minus-sell portfolio returns as the difference between the buy and the sell portfolio returns.

[Figure 2 About Here]

The original transaction data cover the 2004–2010 period, but we have the monthly returns up to December 2011 (up to 96 months). This is because the calendar-time portfolio approach allows us to keep a transaction in the sample as long as it took place within the holding period. For example, senator A buys the stock of company XYZ on March 9, 2010. If we want to calculate the portfolio returns on January 9, 2011 based on a one-year holding period, this stock will be part of the portfolio on this day because there are fewer than 252 trading days between the transaction date and January 9, 2011.

4.4. Measuring abnormal returns

We measure the abnormal returns using the capital asset pricing model (the CAPM), Fama-French Three-Factor Model, Carhart Four-Factor Model, and five-factor model. We estimate the following time series models using monthly data:

$$r_{p,t} = \alpha + \beta_p(r_{m,t} - r_{f,t}) + \varepsilon_{p,t} \tag{2}$$

where $r_{p,t}$ is the return on the buy-minus-sell portfolio, $r_{m,t}$ is the CRSP value-weighted index return, and $r_{f,t}$ is the interest rate on the one-month Treasury bill, which represents the risk-free rate. Next, we add smal-minus-big (SMB) and high-minus-low (HML) for the three-factor model, up-minus-down (UMD) for the four-factor model, and finally LIQUID

for the five-factor model to this equation. SMB is the Fama-French size factor constructed by longing a portfolio of small firms and shorting a portfolio of big firms. HML is the Fama-French value factor constructed by longing a portfolio of high value firms and shorting a portfolio of low value firms (see Fama and French [1993] for more details). UMD is the momentum factor constructed by subtracting the returns of a portfolio of losing stocks from the returns of a portfolio of winning stocks (Carhart, 1997). $LIQUID$ is the Pastor and Stambaugh (2003) liquidity factor that is equal to the return difference between the most and least liquid beta portfolios. We collect all of these series from Wharton Research Data Services (WRDS).

Our interest primarily lies in the alphas (abnormal returns) on the buy-minus-sell portfolios (Odean, 1999). The null hypothesis is that α is not statistically significantly different from zero, which implies an average investment performance and lack of value-relevant private information. The alternative hypothesis is that α is statistically significantly different from zero, which implies either below-average performance (if alpha is negative) or above-average performance (if alpha is positive).

5. Empirical results

5.1. Main results

We present the main results of the calendar-time portfolio analysis in Panels A and B of Table 2. When the holding period is assumed to be one week (i.e., 1/4 of a month), the abnormal returns range from 17.69% (1.474% x 12) to 19.12% (1.593% x 12) on an annual basis, depending on the way we weight the transactions.[19] However, the abnormal returns

[19]Throughout this paper, we convert the monthly abnormal returns in the tables to annual abnormal returns by multiplying them with 12. We do not take the trading costs into account when we convert the monthly returns to annual returns. We would like to note that the accounting for trading costs would have the largest effect on the abnormal returns under a one-week holding period due to the frequency of portfolio rebalancing.

disappear under holding periods exceeding three months. We also observe that raw and abnormal returns in Panels A and B are very similar in terms of statistical significance and magnitude and that abnormal returns (i.e., alphas) are similar across different models.[20] Overall, the presence of abnormal returns on congressional stock portfolios provides empirical support for Hypothesis 1. Given that we find the highest abnormal returns immediately after politicians made their trades, our results imply the following: (1) there is a close relationship between politicians' congressional activities and their trading decisions, and (2) politicians trade on private information that will become public shortly after their trades (i.e., time-sensitive private information).[21]

[Table 2 About Here]

5.2. Powerful politicians

Hypothesis 2 anticipates that the common stock portfolios of powerful politicians have higher abnormal returns than those of nonpowerful politicians. We present the results from testing this hypothesis in Panels C and D of Table 2. There is strong evidence of informed trading by powerful members of Congress with annualized abnormal returns ranging from 24.82% (2.068% x 12) to 25.22% (2.102% x 12) under a one-week holding period. On the other hand, there is very weak evidence of informed trading for nonpowerful members of Congress. Despite significant alphas under a 12-month holding period, the average portfolio returns are statistically indistinguishable from zero. The results in Table 2 also indicate that the portfolios of powerful politicians earn economically larger returns than the portfolios of nonpowerful politicians do under a one-week, one-month, two-month, and three-month holding period. For example, the difference in monthly abnormal returns equals 1.09% (0.596%–(–0.494%)) under a one-month holding period using the CAPM.

[20]For the rest of the estimations, due to the similarity in results, we present only the alphas from the CAPM and the Fama-French Three-Factor Model based on the value-weighted transactions (unless otherwise stated).

[21]We also separately estimate the abnormal returns for senators and representatives. Both groups earn abnormal returns, but the performance of senators' portfolios is superior to that of representatives' portfolios. There is also evidence that some of the superior returns in the portfolios of senators are also statistically significantly different from those in the portfolios of representatives. The results are available upon request.

We conduct tests to determine whether the differences across Panels C and D are also statistically significant.[22] We find that both the average returns and the alphas for powerful politicians are statistically significantly different from those for nonpowerful politicians under a one-week holding period (at the 1% level). When the abnormal returns are superior for nonpowerful politicians compared to powerful politicians, which happens under a 12-month holding period, this difference is also statistically significant (at the 10% level). However, the average returns and the abnormal returns on the portfolios of powerful politicians do not statistically significantly differ from those on the portfolios of nonpowerful politicians under a one-month, two-month, and three-month holding period despite the large economic differences across these portfolios. We do not rule out the possibility that our test may lack the power to reject the null hypothesis of no differences across panels due to small sample size, which spans the period from January 2004 up to December 2011. Overall, the magnitude and consistency of the abnormal returns on the portfolios of powerful politicians are in line with Hypothesis 2. However, the lack of statistically significantly higher returns on the portfolios of powerful politicians under holding periods exceeding one week reduces the support for Hypothesis 2.

5.3. Party membership and majority control

Hypothesis 3 suggests that once a party has had long-term control of Congress, it will produce persistent benefits for its members, thanks to the network effect. Because we do not find strong evidence of informed trading by nonpowerful members of Congress, we use only the transactions by powerful politicians to test Hypothesis 3. Our sample facilitates the empirical investigation of the network effect as it covers the periods of Republican and Democratic majority control in Congress. The Republican Party controlled both the House

[22]Throughout the paper, we discuss the results of such examinations (i.e., those involving testing whether the differences in the average returns and the abnormal returns across different samples are statistically significant) within the text, and we do not report a separate set of tables for brevity. The results are available upon request.

and the Senate in 2004, 2005, and 2006. The Democratic Party controlled both chambers in 2007, 2008, 2009, and 2010. We call the 2004–2006 and the 2007–2010 intervals "Republican Majority" period and "Democratic Majority" period, respectively.

The Republican takeover of Congress ensuing the 1994 elections (so-called Republican Revolution) changed the power balance in Congress in favor of the Republican Party. Stewart (2012) documents that the transition of power from Democrats to Republicans had an especially significant effect in the House of Representatives, which represents approximately 75% of all transactions and traders in our sample. From their takeover of Congress in 1995 until the end of our sample period, Republicans controlled the U.S. House for 12 out of 16 years and the U.S. Senate for 10 out of 16 years (see Figure 1). We argue that this time period is sufficient enough for the Republican Party to build and consolidate its network both inside and outside Congress.

The presence of the network effect suggests that powerful members of the Republican Party will continue having access to private information after losing the majority in the 2006 elections. To test this claim, we estimate the abnormal returns on the portfolios of powerful Republicans during the Republican Majority and the Democratic Majority period, and report the results in Panels A and B of Table 3. The portfolios of powerful Republicans outperform the market during both the Republican Majority period and the Democratic Majority period. The results do not show any deterioration in the portfolio performance of Republicans after they lost the control of Congress in the 2006 elections. In fact, there is no statistically significant difference in the average returns and the abnormal returns across Panels A and B. Overall, the results provide support for the network effect because powerful members of the Republican Party continue having access to private information ensuing their election defeat.

[Table 3 About Here]

To provide a complete picture for our party membership and majority control analysis, we also estimate the abnormal returns on the portfolios of powerful Democrats during the Republican Majority and the Democratic Majority periods. Analyzing the returns on the portfolios of powerful Democrats indirectly aids the empirical investigation of the network effect. The 1994 midterm elections shifted the House and Senate leadership to Republicans from Democrats. The network effect suggests that despite officially losing the control of Congress, Democrats would continue making informed trades after the 1994 elections. The key question is how long the network effect will persist. The performance of powerful Democrats' portfolios over the 2004–2006 period (Republican Majority period) has the potential to answer this question.

The portfolio performance of powerful Democrats over the 2007–2010 period is quite difficult to relate to a single reason. If there are abnormal returns, this could be due to the network effect or the advantages associated with being the majority party, such as picking committee chairs and setting the legislative agenda. If there are no abnormal returns, this could be due to either the fact that Democrats have not learned how to utilize their party power or the fact that they have not had enough time to build networks.

We present the results for powerful Democrats (conditional on majority control) in Panels C and D of Table 3. The average returns earned by powerful Democrats during the Republican Majority period are statistically indistinguishable from zero. Also, there is not consistent evidence for abnormal returns, suggesting that the network effect does not extend to longer horizons.[23] Furthermore, the portfolios of powerful Democrats do not earn any abnormal returns during the Democratic Majority period. There is also no statistically significant difference in the average returns and the abnormal returns across Panels C and D. These results imply that there is only partial support for Hypothesis 2 due to the mostly

[23]We observe abnormal returns (significant at the 10% level) at a one-week holding period under equal-weighted transactions.

mediocre performance of powerful Democrats' portfolios.

For completeness, we also estimate the abnormal returns for powerful Democrats and powerful Republicans during the 2004–2010 period and present the results in Panels E and F of Table 3. The results reveal no evidence of informed trading by powerful members of the Democratic Party. On the other hand, the annualized abnormal returns exceed 35% on the portfolios of powerful Republicans under a one-week holding period. Furthermore, the differences in the average returns and the abnormal returns across Panels E and F are statistically significant under a one-week holding period (at the 5% level), one-month holding period (at the 10% level), and two-month holding period (at the 5% level).

The earlier studies documented abnormal returns for Democrats and average returns for Republicans during the 1993–1998 period in the Senate (Ziobrowski, Cheng, Boyd, and Ziobrowski, 2004) and abnormal returns for both parties' members, but superior performance for Democrats, during the 1985-2001 period in the House (Ziobrowski, Boyd, Cheng, and Ziobrowski, 2011). Our results are not directly comparable to these earlier studies in that they do not distinguish between powerful and nonpowerful members of Congress based on committee power, and they look at only the abnormal returns at a 12-month holding period, which reveals no information in our sample. However, despite these limitations, we believe a comparison of our results to those reported by Ziobrowski, Cheng, Boyd, and Ziobrowski (2004) and Ziobrowski, Boyd, Cheng, and Ziobrowski (2011) is warranted.

Our results suggest that there is a reversal of fortunes in the portfolio performance of Democrats and Republicans from the earlier periods to our sample period. We argue that the long-term control of Congress and thus the network effect are important factors in explaining this reversal of fortunes. Ziobrowski, Cheng, Boyd, and Ziobrowski (2004) and Ziobrowski, Boyd, Cheng, and Ziobrowski (2011) examine the information content of congressional stock

transactions at a period when Democrats lost the control of Congress after being in power for a long time. Despite officially losing the control of Congress, Democrats still had better portfolio performance than Republicans. On the other hand, we study the information content of congressional stock transactions at a period when Republicans lost the control of Congress after being in power for a long time. We provide evidence that despite losing the majority control, Republicans still have better portfolio performance than Democrats.

The synthesis between our study and earlier studies has the following implications. Party membership has an effect on access to private information, but its benefits are conditional on the length of the majority control in Congress. Therefore, there is not an inherent advantage associated with being a Democrat or a Republican when it comes to trading common stocks. Furthermore, the benefits of powerful committee membership mostly accrue to the members of the party that has controlled Congress for a long time and thus has established networks inside and outside Congress that channel private information to its members.

6. Information versus skill

We document that power and party membership jointly affect both the presence and the magnitude of abnormal returns on congressional stock portfolios. Our analysis has implicitly assumed that the use of private information drives these abnormal returns. There is, however, a possibility that politicians may possess superior skills, and these skills may explain the observed abnormal returns. In other words, politicians could be informed traders due to their superior skills, access to value-relevant private information, or both. We have documented that the nature of information in congressional stock trades is highly time sensitive. However, such a finding still does not establish whether it is skill or private information that generates the abnormal returns on congressional stock portfolios. We tackle this issue by separating powerful Republicans who are experienced in trading stocks from the rest of

powerful Republicans.

Seru, Shumway, ad Stoffman (2009) separate sophisticated retail traders from unsophisticated retail traders based on whether a trader used options. They argue that there is a close relationship between familiarity with the financial markets and the use of options. We follow a similar approach and identify the sophisticated politicians as the ones who traded options. We use the terms *sophisticated* and *experienced* interchangeably. We assume that experienced traders possess strong trading skills. If sophisticated powerful Republicans earn abnormal returns, these returns can be explained by both trading skills and private information. On the other hand, if unsophisticated powerful Republicans earn abnormal returns, private information should be the main contributor, as these politicians do not possess strong trading skills.

There are 9,104 and 18,788 transactions in the sophisticated and unsophisticated samples, respectively. The number of sophisticated powerful Republicans is 14, while the number of unsophisticated powerful Republicans is 149. We present the results for sophisticated powerful Republicans in Panel A and those for unsophisticated powerful Republicans in Panel B of Table 4. The results indicate that powerful Republicans with less trading experience capture most of the abnormal returns ranging from 37.81% (3.151% x 12) to 39.56% (3.297% x 12) on an annual basis under a one-week holding period. While the portfolios of unsophisticated powerful Republicans consistently earn abnormal returns up to a three-month holding period, the portfolios of sophisticated ones earn abnormal returns only under a one-week holding period.

[Table 4 About Here]

The differences in the portfolio performance across Panels A and B are also economically large. For example, the difference in monthly abnormal returns is 1.49% (3.297%–1.810%)

under a one-week holding period and 1.11% (1.513%–0.399%) under a one-month holding period based on the CAPM. We also find that the average returns and the abnormal returns for unsophisticated powerful Republicans are statistically superior to those for sophisticated powerful Republicans when the holding period is assumed to be two-month (at the 10% level) and three-month (at the 10% level). Overall, there is evidence in favor of private information used in congressional stock trades. It appears that trading for skill-related reasons depresses the abnormal returns on the common stock investments of sophisticated politicians. This result may not be surprising given that it is generally difficult to outperform the market by skill, as is evident with mutual fund managers (Fox, 2009). However, it is possible to beat the market by using private information, as is evident with corporate insiders (Jeng, Metrick, and Zeckhauser, 2003).

7. Identifying sources of information

Our analysis of congressional stock portfolios shows that most of the abnormal returns are driven by private information as in the case of unsophisticated powerful Republicans. Politicians may obtain private information from sources inside Congress (e.g., their own legislative activities, colleagues, staffers, etc.) and from sources outside Congress. Identifying all sources of information is beyond the scope of this paper. However, we attempt to identify three potential sources of information by focusing on politicians' brokers and financial advisors (financial advisors hereafter), politically connected firms, and government-dependent industries.

7.1. Financial advisors

We argue that financial advisors represent a possible outside information source for politicians. Financial advisors may share private information with members of Congress for personal favors or for favors to their institutions. There is indeed a recent media report sug-

gesting that politicians receive private information from such sources (Mullins and McGinty, 2015). We identify the financial institutions that work closely with a politician based on whether he or she mentions their names in the financial disclosure reports. Politicians must use financial institutions such as brokerage and investment firms to trade stocks, but only in some cases do they report the names of those financial institutions. The selective reporting of the names suggests that these institutions work closely with members of Congress when it comes to making trading decisions or filing financial disclosure reports. This is an imperfect measure of information source because sometimes politicians may make all the investment decisions on their own even if they mention the name of a financial institution.

We sort the transactions by unsophisticated powerful Republicans into two portfolios based on the relationship between politicians and their financial institutions. If a politician made a transaction and reported the name of a financial institution, we put this transaction into the *advisor-assisted* portfolios. If he or she did not mention any names, we put this transaction into the *self-managed* portfolios. It is possible for the same politician to have transactions in both the advisor-assisted and the self-managed portfolios. Overall, we have 4,055 (14,733) transactions in the construction of the advisor-assisted (self-managed) portfolios. There are transactions from 24 (147) politicians in the advisor-assisted (self-managed) portfolios. We present the abnormal returns on the advisor-assisted and the self-managed portfolios in Panels C and D of Table 4. There are abnormal returns on the advisor-assisted portfolios, implying that politicians receive private information from their financial advisors. However, information provided by financial advisors accounts for only part of the information used in congressional stock transactions. This is because politicians' self-managed portfolios also outperform the market. This view is further supported by the additional tests that find no statistically significant differences in the average returns and the abnormal returns earned by the self-managed portfolios and the advisor-assisted portfolios.

7.2. Role of campaign contributions

In this subsection, we explore the possibility that politicians could acquire private information when they interact with firms connected to them via campaign contributions (i.e., politically connected firms). We obtain campaign contributions data from the Federal Election Commission (FEC) and focus on the contributions by Political Action Committees (PACs) affiliated with publicly traded companies to members of Congress. To use the contributions data in our analysis, we retrieve the list of all the companies with PAC contributions in the FEC data and then match these companies to all the domestic companies in the CRSP universe using company names. At the end of this matching process, we establish a correspondence between the CRSP data and the PAC data by assigning CRSP firm identifiers to PAC contributors. The final data set has 293,273 unique contributions from all the publicly traded domestic firms in the CRSP universe to all members of Congress over the 2004–2010 period.

Because campaign contributions are a new measure, our analysis initially includes all the transactions in our sample. We establish the link between the PAC contributions and the congressional stock transactions based on the contributing firm, the contribution year, and the contribution recipient (politician). If a politician receives a contribution from a company in a given year and trades its stock in the same year, we classify this transaction as a *connected transaction* and the other transactions by this politician as *nonconnected transactions*. For example, let's suppose that company ABC made a campaign contribution to politician A in 2004, and it did not make contributions in the subsequent years. Politician A traded the stock of company ABC in 2004 and in 2006. We classify the 2004 transaction as a connected transaction and the 2006 transaction as a nonconnected transaction. For the 2004-2010 period, we identify 6,317 connected transactions from 235 politicians and 55,681 nonconnected transactions from 393 politicians. It is important to note that the politicians overlap between connected and nonconnected samples due to the fact that the same politician

can have transactions in both samples.[24]

We estimate the abnormal returns on the connected and the nonconnected transactions and report the results in Table 5. We find some evidence, albeit weak, of abnormal returns on the connected transactions under a 12-month holding period, which are statistically significantly different from those on the nonconnected transactions under the same holding period (at the 10% level). On the other hand, the nonconnected transactions earn consistent abnormal returns under a one-week and one-month holding period. However, it is worth noting that when the nonconnected transactions earn abnormal returns, the difference in the abnormal returns across Panels A and B are not statistically significant.

[Table 5 About Here]

We repeat our estimations by matching the contributions in year $t-1$ to transactions in year t and obtain similar results (unreported) to those in Table 5. These results suggest that individual campaign contributions overall may not represent a direct channel through which politicians acquire private information.[25] The results in this section raise the possibility that campaign contributions may work to transfer benefits from politicians to contributors, not the other way around. This is consistent with the findings in the literature (e.g., Cooper, Gulen, and Ovtchinnikov, 2010; Tahoun, 2014; Christensen, Mikhail, Walther, and Wellman, 2017).[26] We, however, do not rule out the possibility that PAC contributions may contain

[24]We would like to reiterate that Tahoun (2014) finds that politicians invest more in contributing firms than noncontributing firms where "investment" is measured as the dollars invested in a firm's stock based on politicians' portfolio holdings (not as the number of transactions). We examine politicians' transactions instead of their portfolio holdings. Also, a synthesis between this study and the one by Tahoun (2014) suggests that politicians do not trade the stocks of contributing firms very often. When they do, they put more dollars in these investments relative to noncontributing firms.

[25]We also split the connected transactions into two groups based on the median value of contributions from firms to politicians in a given year. We found abnormal returns at a three-month holding period in the sample with higher contributions amount and abnormal returns at a one-week holding period in the sample with lower contributions amount. However, in both cases, the results are marginally significant at the 10% level. Furthermore, the differences in the average returns and the abnormal returns across these two samples are not statistically significant. The findings are available upon request.

[26]We also separately assess the portfolio performance of connected buy transactions (i.e., politicians bought stocks of their contributors) and that of connected sell transactions (i.e., politicians sold stocks of their

information in the aggregate. In other words, aggregate PAC contributions received by a politician can potentially help us identify more informed trades from less informed trades. We propose two reasons why this might be the case: aggregate signal extraction and market-based power.

Politicians may receive information from individual PAC contributors, but the content of this information may not be rich enough for them to make a profitable trade. On the other hand, in the aggregate, politicians may combine signals from individual firms and thus form a strong base of information. For example, firms ABC and DEF could be competitors, and they could each share information individually with members of Congress. These firms may not possess private information about their rivals, but they are likely to possess private information about themselves. A politician with connections to both firms may end up with superior private information relative to the management of individual firms. Another possibility is that higher aggregate contributions may be related to higher political market power. Politicians deemed more powerful by firms may collect more campaign contributions, and there is also some evidence for this phenomenon in the literature.[27] Under this scenario, the level of aggregate campaign contributions may provide a market-based measure of political power and may act as a supplement to the committee-based power, developed by Stewart (2012).

To investigate the information content of aggregate contributions, we first retrieve the list of politicians in our transactions data and then aggregate contributions to these politicians from all the firms in our contributions data (not just from those whose stocks politicians traded) on an annual basis. We later sort the politician-year level aggregate contributions into two groups (high contributions and low contributions) based on the me-

contributors). We did not find consistent and persistent evidence of informed trading in either sample.

[27]See Ansolabehere, de Figueiredo, and Snyder (2003) for a literature review on the relationship between PAC contributions and political power.

dian value of aggregate contributions.[28] We have 33,334 transactions from 247 politicians in the high-contributions sample and 28,664 transactions from 282 politicians in the low-contributions sample. We estimate the abnormal returns for the high-contributions and the low-contributions samples and report the results in Panels A and B of Table 6.

[Table 6 About Here]

The transactions in the high-contributions sample earn persistent abnormal returns up to a three-month holding period. On the other hand, there is very weak evidence of abnormal performance in the low-contributions sample (based on the unreported equal-weighted transactions method). Overall, these results show that the portfolios of politicians with higher aggregate campaign contributions outperform the market, and the portfolios of those with lower aggregate campaign contributions mostly earn average returns. However, we like to caution the readers that the differences in the average returns and the abnormal returns across Panels A and B are not statistically significant despite being economically significant (e.g., a 0.55% [0.651%–0.102%] difference in monthly abnormal returns under a one-month holding period using the CAPM).

Consistent with our earlier estimations, we also separately assess the portfolio performance of Democrats and Republicans. Because there is almost no evidence of informed trading in the low-contributions sample, we restrict our estimations to the high-contributions sample. We have 23,345 transactions from 156 Republicans and 9,971 transactions from 89 Democrats in this sample. We do not find any abnormal returns on the portfolios of Democrats, and we report the results for only Republicans in Panel C of Table 6. The portfolios of powerful Republicans persistently earn abnormal returns under holding periods up to three months. Furthermore, the average returns and the abnormal returns on the

[28]The median value of aggregate campaign contributions ranges from $66,250 (2005) to $94,625 (2008). It is important to note that these figures are only for direct contributions from corporations to members of Congress. Cooper, Gulen, and Ovtchinnikov (2010) find that direct contributions from corporations account for 10% to 12% of the total contributions received by members of Congress. Politicians also receive campaign contributions from other sources such as labor groups, trade associations, party committees, and individuals.

portfolios of Republicans are also statistically superior to those of Democrats (unreported) under a one-week holding period (at the 1% level) and one-month holding period (at the 5% level). The results here are similar to those we find by interacting committee power with party membership: Republicans possess an informational advantage over Democrats.

We further refine our tests by investigating whether aggregate contributions add any information to our estimations beyond party and powerful committee membership. We split the transactions by powerful Republicans into two groups: a high-contributions sample that has 18,839 transactions from 123 politicians and a low-contributions sample that has 9,053 transactions from 97 politicians. We report the estimation results for the high-contributions sample in Panel D and for the low-contributions sample in Panel E of Table 6. A cursory look at the results reveals that relative to those in the low-contributions sample, the transactions in the high-contributions sample earn higher abnormal returns under a one-week and one-month holding period and lower abnormal returns under a two-month and three-month holding period. Also, the transactions in the low-contributions sample underperform the market under a 12-month holding period, implying lack of an informational advantage at longer horizons.

The difference in the portfolio performance across Panels D and E is most apparent under a one-week holding period. For example, based on the CAPM, the abnormal returns on the transactions in the high-contributions sample exceed those on the transactions in the low-contributions sample by 1.62% (3.979%–2.357%) on a monthly basis. This suggests that for powerful Republicans, high contributions are associated with more time-sensitive information that they may have been provided with due to their power or they may have aggregated interacting with many different companies. We test whether there is empirical support for the observed differences in the average returns and the abnormal returns across Panels D and E. We find that these differences are statistically significant only under a

12-month holding period (at the 5% level), during which there are no abnormal returns in the high-contributions sample. This suggests that aggregate campaign contributions overall do not add value-relevant information in a statistically meaningful way after we control for party membership and committee power.[29] However, it is worth noting that separating the congressional stock transactions based on aggregate campaign contributions still leads to economically significant differences in portfolio outcomes.

7.3. Government-dependent industries

Industries widely differ in terms of how much they depend on government purchases for their revenue. For example, Belo, Gala, and Li (2013) find that 94.7% of the output in the guided missile and space vehicle manufacturing industry is purchased by the government. On the other hand, bowling centers industry does not depend on government purchases at all. Given that politicians influence the purchasing decisions of the federal government (e.g., Cohen, Coval, and Malloy, 2011; Goldman, Rocholl, and So, 2013; Tahoun, 2014), it is possible that they may acquire private information on how such decisions will affect the firms in government-dependent industries. Also, to the extent that these firms interact with government officials for favors (e.g., continuation of procurement contracts, increases in the dollar value of procurement contracts) or for other reasons, politicians may acquire private information from such interactions.

We explore the presence and extent of informed trading by politicians in government-dependent industries based on the government dependency (or government exposure) measured developed by Belo, Gala, and Li (2013).[30] Belo, Gala, and Li (2013) use the Benchmark Input-Output accounts provided by the Bureau of Economic Analysis (BEA) and calculate

[29]We also split the transactions by powerful Democrats into the low-contributions and high-contributions samples (unreported). We do not find any abnormal returns in the low-contributions sample. On the other hand, we document abnormal returns (significant either at the 5% level or at the 10% level) in the high-contributions sample at a 12-month holding period. However, these returns are not statistically significantly different from those in the low-contributions sample.

[30]We are immensely thankful to Frederico Belo for sharing his government-dependency data with us.

the extent to which an industry's revenue depends on the purchases made by the government at the three-digit Standard Industrial Classification (SIC) code level. We sort this government dependency variable into two groups based on its median value: high-dependency industries (above the median) and low-dependency industries (below the median). In the next step, we match this dependency indicator with our transaction data based on the three-digit SIC codes associated with the stock transactions (when available). This matching process produces 34,134 transactions from 350 politicians in the high-dependency sample and 25,810 transactions from 334 politicians in the low-dependency sample.

We report the estimation results for the transactions in the high-dependency and the low-dependency industries in Panels A and B of Table 7. We observe abnormal performance only at a one-week holding period for the low-dependency industries. However, based on the magnitude of the reported coefficients, the abnormal returns are not only higher at the same holding period for the high-dependency industries, but they also extend until a three-month holding period. Furthermore, the differences in the average returns and the abnormal returns across Panels A and B are also statistically significant under a two-month holding period (at the 5% level) and three-month holding period (at the 10% level). This provides evidence that the information content of transactions in the high-dependency industries is richer compared to that of transactions in the low-dependency industries in a statistically meaningful way.

[Table 7 About Here]

Similar to our earlier analyses, we separate the high-dependency sample along the party lines and estimate the portfolio performance of Democrats and Republicans using their transactions in the high-dependency industries. We have 22,208 transactions from 197 Republicans and 11,903 transactions from 150 Democrats for this analysis. There is almost no evidence of informed trading for Democrats (unreported). We present the results for Re-

publicans in Panel C of Table 7. We observe abnormal returns up to a three-month holding period. Consistent with the earlier findings, Republican members of Congress tend to capture most of the abnormal returns in congressional stock transactions. We also find that the abnormal returns on the portfolios of Republicans are also economically superior to those on the portfolios of Democrats. For example, based on the CAPM, the difference in monthly abnormal returns is 1.80% (2.250%–0.446%) under a one-week holding period and 0.54% (0.751%-0.210%) under a one-month holding period. However, it is worth noting that the difference between Republicans' portfolios (Panel C) and Democrats' portfolios (unreported) are statistically significant under only a one-week holding period (at the 10% level).

We extend the government-dependency analysis to powerful Republicans. Our goal here is to assess whether government-dependency offers us any additional insight beyond that we have already found using party membership and committee power. We form two samples: transactions by powerful Republicans in the high-dependency industries and transactions by powerful Republicans in the low-dependency industries. The first sample has 15,708 transactions from 141 politicians, and the second sample has 11,202 transactions from 136 politicians. We present the estimation results in Panels D and E of Table 7. The size of the coefficients indicates that the transactions by powerful Republicans in the high-dependency industries earn higher abnormal returns (and for longer periods) compared to those in the low-dependency industries. We, however, also find that the differences in the average returns and the abnormal returns across Panels E and D are not statistically significant. This suggests that for powerful Republicans, access to information in the high-dependency and the low-dependency industries does not differ in a statistically meaningful way.

For completeness, we also split the transactions by powerful Democrats into a high-dependency sample and a low-dependency sample (unreported). There is evidence of abnormal returns on the transactions in the high-dependency industries under a 12-month holding

period (statistically significant either at the 5% or the 10 % level). Furthermore, for the same holding period, these returns are statistically significantly different (at the 10% level) from those that we obtain on the transactions in the low-dependency industries. The synthesis of the results in this section suggests that when used just by itself, government-dependency indicator sorts out more informed trades from less informed trades in both an economically significant and a statistically significant way. However, after controlling for the party and powerful committee membership, it plays a very limited role in identifying transactions that are driven by private information.

8. The STOCK Act of 2012

Former president Obama signed the STOCK Act on April 4, 2012, declaring that "the powerful shouldn't get to create one set of rules for themselves and another set of rules for everybody else."[31] The STOCK Act came to fruition after a tumultuous year for members of Congress. Schweizer (2011) released a book on alleged congressional insider trading, arguing that members of Congress were exempt from insider trading laws. Subsequently, an influential episode of the CBS show *60 Minutes* confronted individual members of Congress and inquired about their controversial trades (Kroft, 2011). A natural question to ask is whether the STOCK Act deterred members of Congress from trading on their private information. We address this question by focusing on the post–STOCK Act era.

[Table 8 About Here]

We use all the post–STOCK Act data available from the Center for Responsive Politics. 2014 is the last year for which we have data. We focus on the transactions by powerful Republicans because this group captures most of the abnormal returns in the pre–STOCK Act era. Our sample includes 18,259 transactions from 92 powerful Republicans. We present the findings in Table 8. Our best-performing group in the pre–STOCK Act era, powerful

[31] https://obamawhitehouse.archives.gov/blog/2012/04/04/president-obama-signs-stock-act

Republicans, no longer outperform the market in the post–STOCK Act era with their portfolios either earning below-average returns (under equal-weighted transactions) or average returns (under value-weighted transactions). These results suggest that the STOCK Act managed to have an effect on its intended target: politicians with private information. Once faced with clear legal restrictions, the performance of politicians' portfolios is similar to that of retail traders: average or below-average returns (Odean, 1999).[32]

9. Robustness check: Is it really power?

Our analysis has shown that powerful members of the Republican Party capture most of the abnormal returns. However, there could be two other explanations for this success: (1) being a member of the Republican Party may suffice to earn abnormal returns in that one does not have to serve on a powerful committee to be an informed trader, and (2) powerful Republicans may have been informed traders to begin with, and thus serving on a powerful committee has no effect on their portfolio performance. In order to address the first alternative explanation, we construct calendar-time portfolios for all nonpowerful Republicans and report the results in Panel A of Table 9. There is some evidence of informed trading for nonpowerful members of the Republican Party, but there is stronger and more consistent evidence of abnormal returns for powerful Republicans based on Panel E of Table 3. The differences between the portfolios of powerful and nonpowerful Republicans are economically large. For example, using the CAPM, we find the difference in monthly abnormal returns to be 0.83% (1.247%-0.422%) under a one-month holding period.

[Table 9 About Here]

The statistical analysis of differences across portfolios reveals that the average returns and

[32]For completeness, we also measure the portfolio performance of powerful Democrats in the post–STOCK Act period. This analysis uses 3,411 transactions from 70 powerful Democrats. The portfolios of powerful Democrats underperform the market at a one-week holding period and earn average returns for the rest of the holding periods.

the abnormal returns on the portfolios of powerful Republicans are statistically significantly different from those on the portfolios of nonpowerful Republicans under a one-week holding period (at the 1% level). On the other hand, the differences in the average returns and the abnormal returns are statistically significant in favor of nonpowerful politicians under a 12-month holding period (at the 5% level). We find it noteworthy that there are no statistically significant differences in the abnormal returns (also in the average returns) between the portfolios of powerful Republicans and the portfolios of nonpowerful Republicans under a one-month, two-month, and three-month holding period despite economically significant differences. As we discussed in Section 5.2, the possibility exists that our tests may lack the statistical power to detect meaningful differences across portfolios due to small sample size.

To address the second alternative explanation, we identify 50 powerful members of the Republican Party whose status shifted between powerful and nonpowerful. These politicians have transactions from the periods that they were powerful and nonpowerful. The comparison of their portfolio performance from these two distinct periods helps illuminate the exact role of power on access to value-relevant information. These 50 politicians have a total of 20,799 and 4,233 transactions in the power period and pre-/postpower (i.e., nonpower) period, respectively.[33] The same set of politicians traded almost five times more when they were powerful compared to the periods when they were not powerful.

We report the results of our power-based analysis in Panels B and C of Table 9. There is a drastic change in the portfolio performance of the same politicians between the time they were in power and the time they were not. The annualized abnormal returns in the power period exceed 34% under a one-week holding period, while there is actually some evidence of underperformance in the nonpower period (based on the unreported equal-weighted transactions method). There are also noticeable economic differences across Panels B and C.

[33]The majority of these 4,233 transactions come from prepower period.

For example, there is a 1.80% (1.211%–(–0.592%)) difference in monthly abnormal returns across Panels B and C under a one-month holding period using the CAPM. However, the differences in the average returns and the abnormal returns across Panels B and C are statistically significant at only a one-week holding period (at the 5% level), further raising the possibility that the small sample may be driving the lack of statistically significant differences in portfolio outcomes across panels.

We provide further tests to examine whether more committee power is associated with higher portfolio returns. We use two new variables by focusing on the members of the Republican Party. The first variable is the number of powerful committee assignments. If serving on a powerful committee provides access to information, the abnormal returns should be positively related to the number of powerful committee assignments that a politician has. To test this prediction, we determine the number of powerful committee assignments for a given politician at a given time and merge this variable with the transactions of this politician. The majority of the transactions are made by politicians with only one powerful committee assignment. Therefore, we split the sample into two groups: transactions under one powerful committee assignment (20,310 transactions from 116 politicians) and transactions under multiple powerful committee assignments (7,582 transactions from 62 politicians). We then carry out our estimations for each group and report the results in Panels A and B of Table 10. Both groups have abnormal returns, and the abnormal returns are higher in the group with multiple committee assignments based on the size of the reported coefficients. However, the average returns and the abnormal returns in Panel A are not statistically significantly different from those in Panel B.

[Table 10 About Here]

The second variable that we use to show the relationship between committee power and portfolio performance is tenure on powerful committees. To the extent that committee power

is associated with higher abnormal returns, we anticipate that politicians with longer tenure on powerful committees have more power and thus have better portfolio outcomes. To test this conjecture, we first determine the length of powerful committee service (committee tenure in years) for a given politician every year based on the committee tenure data from Stewart and Woon (2016). For politicians with multiple powerful committee assignments, we add their committee tenure across committees. Next, we sort the committee tenure into two groups based on the median length of the committee tenure: long committee tenure and short committee tenure. We have 13,304 transactions from 84 politicians in the long committee tenure sample and 14,588 transactions from 134 politicians in the short committee tenure sample. The results in Panels C and D of Table 10 show stark differences between the two samples. The abnormal returns are only associated with politicians who have a long committee tenure. We also find that the average returns and the abnormal returns in Panel C are statistically significantly different from those in Panel D under a one-week holding period (at the 10% level) and three-month holding period (at the 10% level).[34] Overall, the results provide support for the notion that more power is associated with better access to private information, hence better portfolio performance.[35] [36]

[34]We also found abnormal returns significant either at the 5% or the 10% level under a one-week holding period for Democrats with long powerful committee tenure (i.e., long-tenured powerful Democrats). These abnormal returns are approximately 2 percentage points lower compared to those for Republicans with long powerful committee tenure (i.e., long-tenured powerful Republicans) under the same holding period (on a monthly basis). Furthermore, the differences in the average returns and the abnormal returns between the portfolios of long-tenured powerful Republicans and long-tenured powerful Democrats are statistically significant under a one-week holding period (at the 10% level) and one-month holding period (at the 5% level). These results still imply that party membership matters for access to information.

[35]Ziobrowski, Cheng, Boyd, and Ziobrowski (2004) and Ziobrowski, Boyd, Cheng, and Ziobrowski (2011) use politicians' seniority in general (i.e., number of years in Congress) to identify powerful politicians and find that this measure is not associated with better portfolio performance. Instead of using seniority of politicians, we focus on their tenure on powerful committees. The findings in Ziobrowski, Cheng, Boyd, and Ziobrowski (2004) and Ziobrowski, Boyd, Cheng, and Ziobrowski (2011) are consistent with the declining importance of seniority by itself following the 1994 Republican Revolution (Stewart, 2012).

[36]We also assessed the performance of the buy-minus-sell portfolios that belong to Republicans with long powerful committee tenure in the post–STOCK Act era. We found that these portfolios do not outperform the market, similar to the results reported in Table 8. We also separately assessed the performance of buy and sell portfolios in the post–STOCK Act period for the following groups: powerful Republicans, unsophisticated powerful Republicans, and long-tenured powerful Republicans (i.e., Republicans with long powerful committee tenure). Except for the presence of abnormal returns significant at the 10% level on the buy portfolios of long-tenured powerful Republicans, we find no evidence of informed trading in any of the portfolios examined. The results are available upon request.

10. Conclusion and policy implications

We provide evidence that over the 2004–2010 period, members of Congress trade on time-sensitive value-relevant information capable of generating short-term abnormal returns on a portfolio that tracks their buy and sell transactions. The short-term nature of abnormal returns on congressional portfolios implies a close relationship between Congress's legislative activities and congressional trading. We also find that membership on powerful committees serves as a mechanism through which politicians acquire private information. Furthermore, we show that powerful members of the Republican Party capture most of the abnormal returns on the congressional stock transactions. Our analysis identifies financial advisors as a source of private information for members of Congress. Our analysis also reveals that the portfolios of the most informed politicians in the pre–STOCK Act period (powerful Republicans) no longer outperform the market in the post–STOCK Act period.

Our study has some limitations. It is not feasible to construct trading strategies based on congressional trading during our sample period due to substantial lags between when these transactions took place and when the public became aware of them (five to 17 months). It is also not possible to calculate actual earnings on politicians' stock portfolios due to data limitations. Furthermore, it is difficult to comment on whether members of Congress broke any laws. We found abnormal returns only in the pre–STOCK Act period. At that time, there was regulatory uncertainty on whether members of Congress were subject to the same insider trading laws as other market participants (Bainbridge, 2010; Kroft, 2011; Mullins and Ackerman, 2012).

Another limitation of this study is the sample of investments that we examine. In addition to common stocks, politicians are also required to report their transactions in other financial securities such as mutual funds, bonds, futures, and options.[37] However, this study does not

[37]See the *Senate Ethics Manual* here: https://www.ethics.senate.gov/downloads/pdffiles/manual.pdf and

examine the performance of transactions in these additional financial securities, potentially underestimating the extent of informed trading by members of Congress. Furthermore, the possibility exists that politicians may take advantage of their private information trading through the accounts of other individuals such as their friends, but our study is unable to capture the returns on such transactions due to a lack of publicly available data.

The STOCK Act does not explicitly address the possibility of politicians trading on private information provided to them from sources outside Congress, which we find as a nontrivial source of information. The STOCK Act requests that the Senate and House Ethics Committees clarify "a Member of Congress or employee of Congress may not use nonpublic information derived from such person's position as a Member of Congress or employee of Congress or gained from the performance of such person's official responsibilities as a means for making a private profit."[38] The lack of an explicit ban on information from outside sources may lead to the assumption that the STOCK Act does not ban trading on information that politicians obtain from sources outside Congress. This is an area that we hope that legal scholars clarify. To enhance the transparency of congressional stock transactions, we also hope that Congress amends the STOCK Act by requiring that trades be released within one week of the transaction date and that transaction details (number of shares traded and exact transaction amounts) be specified in the financial disclosure reports.

the *House Ethics Manual* here: http://www.afsa.org/sites/default/files/Portals/0/2008_house_ethics_manual.pdf.

[38]http://www.gpo.gov/fdsys/pkg/PLAW-112publ105/pdf/PLAW-112publ105.pdf

References

[1] Ansolabehere, S., J.M. de Figueiredo, and J.M. Snyder, 2003. Why is there little money in U.S. politics? *Journal of Economic Perspectives* 17, 105–130.

[2] Bainbridge, S.M., 2010. Insider trading inside the beltway. *Working paper*, UCLA School of Law. Available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1633123

[3] Baker, R., 2008. *House and Senate*. New York, London, W. W. North.

[4] Belo, F., V.D. Gala, and J. Li, 2013. Government spending, political cycles, and the cross section of stock returns, *Journal of Financial Economics* 107, 305–324.

[5] Bhattacharya, U., H. Daouk, B. Jorgenson, and C. Kehr, 2000. When an event is not an event: The curious case of an emerging market, *Journal of Financial Economics* 55, 69–101.

[6] Berenson, A., 2009. A deal that lost millions for Galleon. *New York Times*, October 20.

[7] Buchanan, J., 1989. *Essays on the Political Economy*, Honolulu, University of Hawaii Press.

[8] Carhart, M.M., 1997. On persistence in mutual fund performance, *Journal of Finance* 52, 57–82.

[9] Christensen, D.M., M.B. Mikhail, B.R. Walther, and L.A. Wellman, 2017. From K Street to Wall Street: Political connections and stock recommendations, *Accounting Review* 92, 87–112.

[10] Cohen, L., J. Coval, and C. Malloy, 2011. Do powerful politicians cause corporate downsizing? *Journal of Political Economy* 119, 1015–1060.

[11] Cohen, L., C. Malloy, and L. Pomorski, 2012. Decoding inside information, *Journal of Finance* 67, 1009–1043.

[12] Cooper, M.J., H. Gulen, and A.V. Ovtchinnikov, 2010. Corporate political contributions and stock returns, *Journal of Finance* 65, 687–724.

[13] Dennis, S.T., 2013. Obama signs partial repeal of STOCK Act. *Roll Call*, April 15.

[14] Economist, 2011. Capitol crimes. *Economist*, December 10.

[15] Edwards, K.M. and C. Stewart III, 2006. The value of committee assignments in Congress since 1994. *Working paper*, The Massachusetts Institute of Technology. Available at http://web.mit.edu/cstewart/www/papers/transfers.pdf.

[16] Eggers, A. and J. Hainmueller, 2013. Capitol losses: The mediocre performance of congressional stock portfolios, 2004–2008, *Journal of Politics* 75, 535–551.

[17] Eggers, A. and J. Hainmueller, 2014. Political capital: Corporate connections and stock investments in the U.S. Congress, 2004–2008, *Quarterly Journal of Political Science* 9, 169-202.

[18] ElBoghdady, D. and T. Hamburger, 2013a. Timing of political intelligence is probed. *Washington Post*, May 3.

[19] ElBoghdady, D. and T. Hamburger, 2013b. More political intelligence is under scrutiny in connection with Medicare funding decision. *Washington Post*, May 5.

[20] Fama, E.F., 1998. Market efficiency, long-term results and behavioral finance, *Journal of Financial Economics* 49, 283–306.

[21] Fama, E.F. and K.R. French, 1993. Common risk factors in returns on stocks and bonds, *Journal of Financial Economics* 33, 3–56.

[22] Fox, J., 2009. Breaking news: Mutual fund managers keep failing to beat the market. *Time*, April 20.

[23] Goldman, E., J. Rocholl, and J. So, 2013. Politically connected board of directors and the allocation of procurement contracts, *Review of Finance*, 1617–1648.

[24] Heller, M., 2016. Tenn. bank director accused of insider trading. *CFO.com*, October 26.

[25] Ivkovic, Z. and S. Weisbenner, 2005. Local does as local is: Information content of the geography of individual investors' common stock investments, *Journal of Finance* 60, 267–306.

[26] Jeng, L.A., A. Metrick, and R. Zeckhauser, 2003. Estimating returns to insider trading: A performance-evaluation perspective, *Review of Economics and Statistics* 85, 453–471.

[27] Kim, C., C. Pantzalis, and J.C. Park, 2012. Political geography and stock returns: The value and risk implications of proximity to political power, *Journal of Financial Economics* 106, 196–228.

[28] Kroft, S., 2011. Congress: Trading stock on inside information. *60 Minutes* (CBS Show), available at http://www.cbsnews.com/video/watch/?id7388130n.

[29] Lakonishok, J. and I. Lee, 2001. Are insider trades informative? *Review of Financial Studies* 14, 79–111.

[30] Loughran, T. and J.R. Ritter, 2000. Uniformly least powerful tests of market efficiency, *Journal of Financial Economics* 55, 361–389.

[31] Lyon, J.D., B.M. Barber, and C. Tsai, 1999. Improved methods for tests for long-run abnormal stock returns, *Journal of Finance* 54, 165–201.

[32] Mitchell, M.L. and E. Stafford, 2000. Managerial decisions and long-term stock price performance, *Journal of Business* 73, 287–320.

[33] Mullins, B., 2015. Sen. Bob Corker failed to properly disclose millions of dollars in income. *Wall Street Journal*, December 13.

[34] Mullins, B. and A. Ackerman, 2012. Senate passes insider-trading ban. *Wall Street Journal*, February 3.

[35] Mullins, B. and T. McGinty, 2013a. Tip on policy shift jolted health shares. *Wall Street Journal*, April 3.

[36] Mullins, B. and T. McGinty, 2013b. Probe into Medicare tips grow. *Wall Street Journal*, May 2.

[37] Mullins, B. and T. McGinty, 2013c. SEC broadens its probe of "Political Intelligence". *Wall Street Journal*, May 3.

[38] Mullins, B. and T. McGinty, 2013d. Health-policy move widely shared. *Wall Street Journal*, May 13.

[39] Mullins, B. and T. McGinty, 2015. Sen. Bob Corker profits on quick stock trades. *Wall Street Journal*, November 3.

[40] Mullins, B., J. Strasburg, and T. McGinty, 2013. Stock surge linked to lobbying. *Wall Street Journal*, April 17.

[41] Odean, T., 1999. Do investors trade too much? *American Economic Review* 89, 1279–1298.

[42] Pastor, L. and R. F. Stambaugh, 2003. Liquidity risk and expected stock returns, *Journal of Political Economy* 111, 642–685.

[43] Schweizer, P., 2011. *Throw them all out: How politicians and their friends get rich off insider stock tips, land deals, and cronyism that would send the rest of us to prison.* Boston, Houghton Mifflin Harcourt.

[44] Seasholes, M.S. and N. Zhu, 2010. Individual investors and local bias, *Journal of Finance* 65, 1988–2010.

[45] Securities and the Exchange Commission (SEC), 2011. SEC charges FDA chemist with insider trading ahead of drug approval announcements. *Press Release* 2011-76.

[46] Securities and the Exchange Commission (SEC), 2016a. SEC charges company executive with insider trading. *Press Release* 2016-24.

[47] Securities and the Exchange Commission (SEC), 2016b. IT specialist settles charges of insider trading on hacked nonpublic information. *Press Release* 2016-256.

[48] Securities and the Exchange Commission (SEC), 2017a. Auditor charged with insider trading on client's nonpublic information. *Press Release* 2017-66.

[49] Securities and the Exchange Commission (SEC), 2017b. SEC uncovers wide-reaching insider trading scheme. *Press Release* 2017-143.

[50] Seru, A., T. Shumway, and N. Stoffman, 2009. Learning by trading, *Review of Financial Studies* 23, 705–739.

[51] Stempel, 2016. Chinese physicist settles U.S. SEC insider charges over tech buyout. *Reuters*, June 9.

[52] Stewart, C. III, 2012. The value of committee assignments since 1994. *Working paper*, The Massachusetts Institute of Technology. Available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2035632.

[53] Stewart, C. III and J. Woon, 2016. Congressional committee assignments, 103rd to 115th Congresses, 1993-2017. *Raw data set*, The Massachusetts Institute of Technology. Retrieved from http://web.mit.edu/17.251/www/data_page.html.

[54] Tahoun, A., 2014. The role of stock ownership by US members of Congress on the market for political favors, *Journal of Financial Economics* 111, 86–110.

[55] Tahoun, A., and L. van Lent, 2013. The personal wealth interests of politicians and government intervention in the economy. *Working paper*, London Business School. Available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1570219.

[56] Vardi, N., 2013. Did Obama and Congress use national security fears to gut the Stock Act? *Forbes*, April 21.

[57] Vidal, J.B., M. Draca, and C. Fons-Rosen, 2012. Revolving door lobbyists, *American Economic Review* 102, 3731–3748.

[58] Yang, J.L., T. Hamburger, and D. Elboghdady, 2013. How "political intelligence" can come from Congress itself. *Washington Post*, May 6.

[59] Ziobrowski, A.J., P. Cheng, J.W. Boyd, and B.J. Ziobrowski, 2004. Abnormal returns from the common stock investments of the U.S. Senate, *Journal of Financial and Quantitative Analysis* 39, 661–676.

[60] Ziobrowski, A.J., J.W. Boyd, P. Cheng, and B.J. Ziobrowski, 2011. Abnormal returns from the common stock investments of the members of the U.S. House of Representatives, *Business and Politics* 13, 1-22.

Figure 1
History of party majority in Congress

This time line shows the periods the Republican and Democratic Party controlled Congress. It also shows the sample periods in the previous studies and in our study. The time line is not to scale. The data used in constructing the time line come from Russell D. Renka's website (Source: http://cstl-cla.semo.edu/rdrenka/ui320-75/presandcongress.asp).

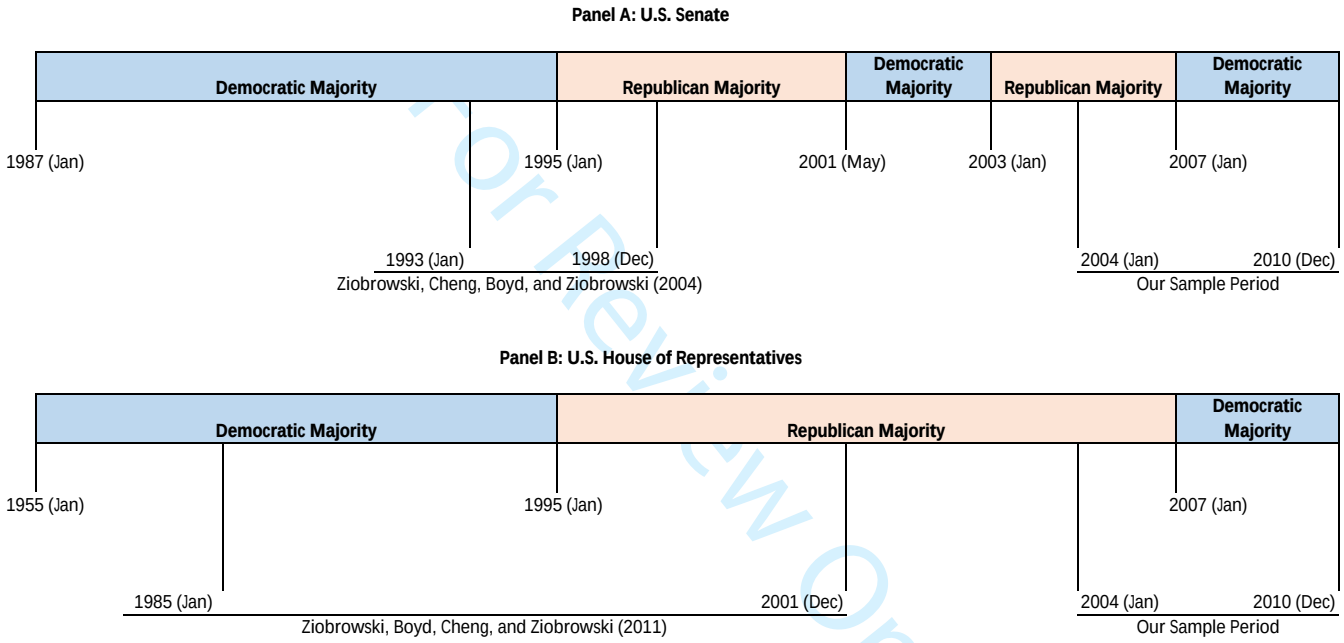

Figure 2
Calendar time portfolio construction

This chart shows the two-step weighting scheme used to calculate the calendar-time portfolio returns.

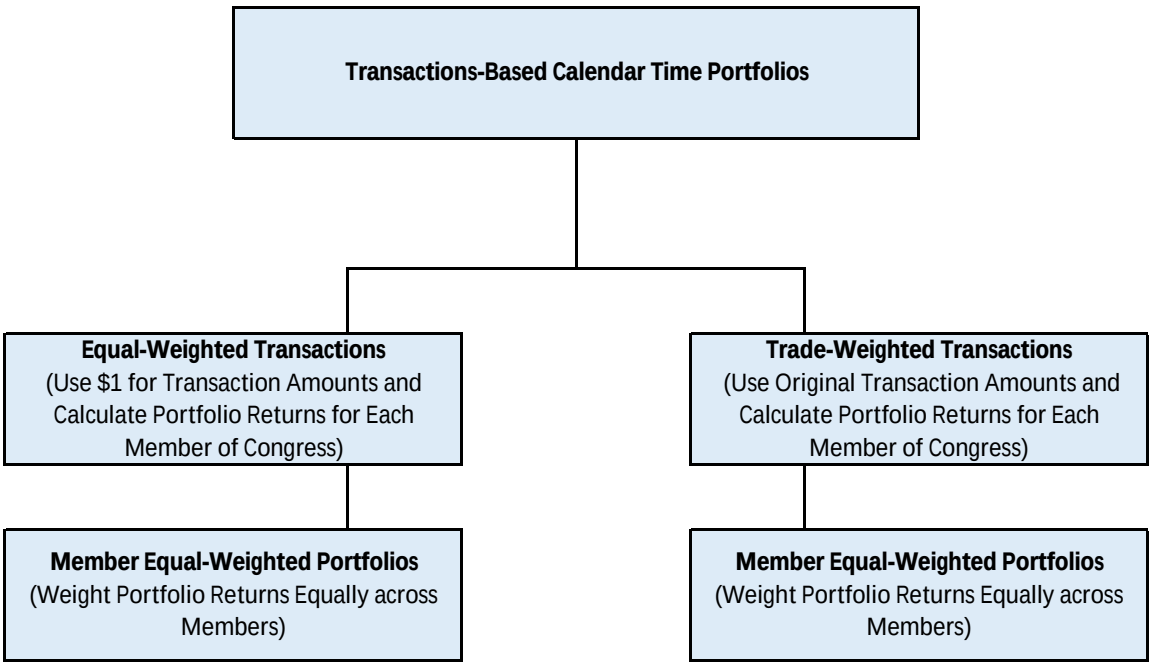

Table 1
Sample properties

This table presents information on members of Congress who traded domestic common stocks during the 2004–2010 period. *Transaction* is the number of transactions, and *Politician* is the number of politicians. We obtain the stock transactions of members of Congress for the 2004–2010 period from the Center for Responsive Politics (OpenSecrets).

Transaction year	Transactions	Politicians
2004	9,073	201
2005	7,996	196
2006	10,657	206
2007	8,666	158
2008	8,400	156
2009	6,260	133
2010	10,946	159

Table 2
Portfolio performance of politicians and role of power

This table presents average monthly raw and risk-adjusted returns (alphas) in percentages over the 2004M01–2011M12 period on the buy-minus-sell portfolios of all the politicians, powerful (serving on any of the top 20 committees in Congress) politicians, and nonpowerful (the rest) politicians, based on their domestic common stock transactions. Transaction data are from the Center for Responsive Politics, and returns (stock returns and asset pricing factors) are from CRSP and WRDS. Transactions are weighted equally or by value. Daily portfolio returns are equally weighted across politicians under holding periods from 1/4 to 12 months and compounded to monthly returns. Newey-West robust t-statistics (three lags) are in parentheses. For Panels C and D, we present only the alphas from the CAPM and the Fama-French Three-Factor Model based on the value-weighted transactions to save space. (Also, the complete results, available upon request, are similar across different weighting schemes and asset pricing models.) The number of transactions (politicians) in Panels A through D are as follows: 61,998 (403), 61,998 (403), 46,353 (292), and 15,645 (217).

Holding period (months):	1/4	1	2	3	12
Panel A: All politicians (equal-weighted transactions)					
Avg. return	1.423***	0.305	0.364*	0.246	–0.039
	(3.38)	(1.44)	(1.85)	(1.41)	(–0.32)
CAPM alpha	1.538***	0.365**	0.398**	0.277*	–0.020
	(4.33)	(2.18)	(2.40)	(1.75)	(–0.18)
FF alpha	1.511***	0.356*	0.427***	0.329**	–0.007
	(4.27)	(1.87)	(2.82)	(2.36)	(–0.07)
Carhart alpha	1.508***	0.352*	0.418***	0.321**	–0.008
	(4.15)	(1.92)	(2.76)	(2.21)	(–0.09)
5-factor alpha	1.474***	0.310	0.408**	0.334**	–0.009
	(3.64)	(1.58)	(2.56)	(2.24)	(–0.10)
Panel B: All politicians (value-weighted transactions)					
Avg. return	1.466***	0.310	0.317	0.221	–0.052
	(3.28)	(1.46)	(1.61)	(1.28)	(–0.42)
CAPM alpha	1.593***	0.364**	0.342**	0.241	–0.042
	(4.04)	(2.04)	(2.06)	(1.50)	(–0.36)
FF alpha	1.567***	0.355*	0.371**	0.289**	–0.029
	(3.99)	(1.78)	(2.46)	(2.01)	(–0.27)
Carhart alpha	1.565***	0.352*	0.361**	0.281*	–0.028
	(3.92)	(1.81)	(2.42)	(1.92)	(–0.26)
5-factor alpha	1.513***	0.325	0.374**	0.315**	–0.014
	(3.48)	(1.58)	(2.44)	(2.09)	(–0.13)
Panel C: Powerful politicians					
Avg. return	1.968***	0.508*	0.325	0.269	–0.178
	(3.87)	(1.78)	(1.43)	(1.59)	(–1.23)
CAPM alpha	2.102***	0.596***	0.376**	0.305*	–0.174
	(4.12)	(3.02)	(2.13)	(1.95)	(–1.07)
FF alpha	2.068***	0.589***	0.409**	0.341**	–0.159
	(4.09)	(2.82)	(2.45)	(2.23)	(–1.03)
Panel D: Nonpowerful politicians					
Avg. return	–0.355	–0.428	–0.163	–0.264	0.231
	(–0.49)	(–0.82)	(–0.33)	(–0.53)	(1.17)
CAPM alpha	–0.265	–0.494	–0.265	–0.324	0.260*
	(–0.42)	(–0.85)	(–0.53)	(–0.87)	(1.72)
FF alpha	–0.251	–0.428	–0.209	–0.224	0.263*
	(–0.39)	(–0.78)	(–0.48)	(–0.68)	(1.72)

*, **, *** denote the 10%, 5%, and 1% significance levels, respectively.

Table 3
Majority control, party membership, and portfolio performance

For each majority party period in Congress, Panels A, B, C, and D of this table present average monthly raw returns and alphas (in percentages) over 2004M01–2011M12 period on the buy-minus-sell portfolios of powerful (on any of the top 20 committees) members of Congress, based on their domestic common stock transactions. For completeness, we present the full sample results in Panels E and F. Transactions are from the Center for Responsive Politics; returns are from CRSP and WRDS. Transactions are weighted either equally or by value. Daily portfolio returns are equally weighted across politicians under holding periods from 1/4 to 12 months and compounded to monthly returns. Newey-West t-statistics (three lags) are in parentheses. We present only the results based on the value-weighted transactions to save space. The number of transactions (number of politicians) in Panels A through F are as follows: 12,155 (140), 15,737 (100), 7,238 (83), 11,200 (101), 27,892 (163), and 18,438 (127).

Holding period (months):	1/4	1	2	3	12
Panel A: Powerful Republicans during Republican majority period (2004–2006)					
Avg. return	2.033***	0.653**	0.665**	0.145	–0.165
	(4.43)	(2.51)	(2.45)	(0.48)	(–0.91)
CAPM alpha	1.736***	0.680***	0.629**	0.152	–0.192
	(3.42)	(3.59)	(2.24)	(0.51)	(–1.23)
FF alpha	1.350**	0.529**	0.520*	–0.029	–0.178
	(2.31)	(2.28)	(1.93)	(–0.09)	(–1.19)
Panel B: Powerful Republicans during Democratic majority period (2007–2010)					
Avg. return	3.433***	1.426*	0.899*	0.664	–0.332
	(3.39)	(1.97)	(1.81)	(1.59)	(–1.20)
CAPM alpha	3.497***	1.486***	0.970***	0.733**	–0.325
	(4.13)	(3.06)	(2.71)	(2.20)	(–1.08)
FF alpha	3.159***	1.157**	0.794**	0.645*	–0.349
	(3.65)	(2.38)	(2.16)	(1.88)	(–1.19)
Panel C: Powerful Democrats during Republican majority period (2004–2006)					
Avg. return	0.964	0.292	0.274	–0.101	–0.467
	(1.18)	(0.53)	(0.61)	(–0.24)	(–1.41)
CAPM alpha	1.106	0.443	0.142	–0.130	–0.526
	(1.56)	(1.06)	(0.39)	(–0.36)	(–1.48)
FF alpha	1.340	0.624	0.468	–0.114	–0.616
	(1.52)	(1.04)	(1.16)	(–0.34)	(–1.54)
Panel D: Powerful Democrats during Democratic majority period (2007–2010)					
Avg. return	0.729	–0.418	–0.336	0.068	0.111
	(0.72)	(–0.78)	(–0.60)	(0.16)	(0.33)
CAPM alpha	0.749	–0.412	–0.353	0.028	0.106
	(0.68)	(–0.99)	(–0.90)	(0.09)	(0.36)
FF alpha	0.696	–0.493	–0.351	0.059	0.055
	(0.62)	(–1.19)	(–0.98)	(0.22)	(0.20)
Panel E: Powerful Republicans (2004–2010)					
Avg. return	2.868***	1.096**	0.756**	0.509*	–0.302
	(4.61)	(2.52)	(2.44)	(1.93)	(–1.64)
CAPM alpha	3.016***	1.247***	0.881***	0.632***	–0.281
	(5.19)	(3.82)	(3.52)	(2.74)	(–1.47)
FF alpha	2.967***	1.207***	0.889***	0.637***	–0.274
	(5.10)	(4.24)	(3.82)	(2.78)	(–1.42)
Panel F: Powerful Democrats (2004–2010)					
Avg. Return	0.828	–0.158	–0.192	–0.112	–0.042
	(1.21)	(–0.41)	(–0.52)	(–0.37)	(–0.17)
CAPM Alpha	0.884	–0.137	–0.233	–0.184	–0.054
	(1.35)	(–0.42)	(–0.82)	(–0.71)	(–0.24)
FF Alpha	0.852	–0.125	–0.168	–0.109	–0.028
	(1.29)	(–0.37)	(–0.60)	(–0.45)	(–0.14)

*, **, *** denote the 10%, 5%, and 1% significance levels, respectively.

Table 4
Powerful Republicans: Investor sophistication and financial advisors

Panels A and B of this table present average monthly raw returns and alphas in percentages over 2004M01–2011M12 period on the buy-minus-sell portfolios of sophisticated (i.e., option trader) and unsophisticated (i.e., not option trader) powerful Republicans (i.e., those serving on any of the top 20 committees in Congress). Panels C and D of this table present average monthly raw returns and alphas in percentages over 2004M01–2011M12 on the advisor-assisted and the self-managed buy-minus-sell portfolios of unsophisticated powerful Republicans. Only domestic common stock transactions are used. Transactions are from the Center for Responsive Politics; returns are from CRSP and WRDS. Transactions are weighted equally or by value. Daily portfolio returns are equally weighted across politicians under holding periods from 1/4 to 12 months and compounded to monthly returns. Newey-West t-statistics (three lags) are in parentheses. We present only the results based on the value-weighted transactions to save space. (Also, the results are similar across different weighting schemes and are available upon request.) The number of transactions (number of politicians) in Panels A through D are as follows: 9,104 (14), 18,788 (149), 4,055 (24), and 14,733 (147).

Holding period (months):	1/4	1	2	3	12
Panel A: Sophisticated powerful Republicans					
Avg. return	1.761*	0.146	–0.295	–0.322	–0.467
	(1.83)	(0.16)	(–0.37)	(–0.50)	(–1.40)
CAPM alpha	1.810**	0.399	–0.009	–0.089	–0.441
	(2.10)	(0.46)	(–0.01)	(–0.18)	(–1.49)
FF alpha	1.915**	0.481	0.070	–0.063	–0.457
	(2.39)	(0.64)	(0.12)	(–0.15)	(–1.61)
Panel B: Unsophisticated powerful Republicans					
Avg. return	3.180***	1.403***	1.024***	0.689***	–0.187
	(3.67)	(2.75)	(3.29)	(2.69)	(–1.09)
CAPM alpha	3.297***	1.513***	1.105***	0.782***	–0.170
	(4.95)	(3.38)	(3.90)	(2.99)	(–1.17)
FF alpha	3.151***	1.426***	1.091***	0.788***	–0.157
	(4.49)	(3.60)	(4.04)	(2.99)	(–1.09)
Panel C: Advisor-assisted portfolios of unsophisticated powerful Republicans					
Avg. return	2.893*	1.395*	1.011	0.728	–0.378
	(1.98)	(1.67)	(1.52)	(1.35)	(–0.81)
CAPM alpha	2.949**	1.475**	1.191**	0.801	–0.352
	(2.04)	(2.55)	(2.08)	(1.62)	(–0.75)
FF alpha	2.702*	1.503**	1.297**	0.922*	–0.308
	(1.96)	(2.52)	(2.42)	(1.89)	(–0.65)
Panel D: Self-managed portfolios of unsophisticated powerful Republicans					
Avg. return	2.683***	1.317**	1.084***	0.689**	–0.160
	(3.06)	(2.33)	(3.43)	(2.58)	(–0.87)
CAPM alpha	2.754***	1.409***	1.152***	0.776***	–0.146
	(3.81)	(2.89)	(4.01)	(2.96)	(–0.89)
FF alpha	2.651***	1.308***	1.143***	0.777***	–0.145
	(3.39)	(2.93)	(4.21)	(2.99)	(–0.87)

*, **, *** denote the 10%, 5%, and 1% significance levels, respectively.

Table 5
Contributions from Political Action Committees and portfolio performance

This table presents average monthly raw and risk-adjusted returns (alphas) in percentages over the 2004M01–2011M12 period on the buy-minus-sell portfolios of members of Congress, based on their domestic common stock transactions and the campaign contributions to their election committees. We collect data on contributions from Political Action Committees (PACs) affiliated with publicly traded firms to members of Congress and identify the firms that gave campaign contributions to the politicians in our sample. We separately assess the portfolio performance of investments in firms that provided members of Congress with campaign contributions (connected transactions) and of those in firms that did not (nonconnected transactions). PAC data come from the Federal Election Commission. Transactions are from the Center for Responsive Politics; returns are from CRSP and WRDS. Transactions are weighted equally or by value. Daily portfolio returns are equally weighted across politicians under holding periods from 1/4 to 12 months and compounded to monthly returns. Newey-West t-statistics (three lags) are in parentheses. We present only the results based on the value-weighted transactions to save space. (Also, the results are similar across different weighting schemes and are available upon request.) Panel A uses 6,317 transactions from 235 politicians, and Panel B uses 55,861 transactions from 393 politicians.

Holding period (months):	1/4	1	2	3	12
Panel A: All politicians and connected transactions					
Avg. return	0.759	0.344	0.328	0.327	0.308
	(0.92)	(0.89)	(1.29)	(1.32)	(1.58)
CAPM alpha	0.841	0.373	0.324	0.334	0.316
	(1.42)	(1.31)	(1.38)	(1.53)	(1.66)
FF alpha	0.806	0.341	0.281	0.310	0.312*
	(1.49)	(1.24)	(1.29)	(1.51)	(1.66)
Panel B: All politicians and nonconnected transactions					
Avg. return	1.572***	0.363	0.294	0.218	–0.099
	(3.33)	(1.57)	(1.32)	(1.10)	(–0.74)
CAPM alpha	1.685***	0.417**	0.309	0.233	–0.090
	(3.91)	(2.22)	(1.62)	(1.23)	(–0.67)
FF alpha	1.681***	0.418*	0.345*	0.287	–0.075
	(3.86)	(1.98)	(1.93)	(1.66)	(–0.60)

*, **, *** denote the 10%, 5%, and 1% significance levels, respectively.

Table 6
Aggregate campaign contributions and portfolio performance

This table presents average monthly raw and risk-adjusted returns (alphas) in percentages over the 2004M01–2011M12 period on the buy-minus-sell portfolios of politicians (all, Republicans, and powerful Republicans [on any of the top 20 committees in Congress]), based on their domestic common stock transactions. We aggregate campaign contributions to politicians from all publicly traded domestic firms on an annual basis and sort these data into two groups based on the median aggregate contribution: high contributions (above the median) and low contributions (below the median). Campaign contributions data come from the Federal Election Commission. Transactions are from the Center for Responsive Politics; returns are from CRSP and WRDS. Transactions are weighted equally or by value. Daily portfolio returns are equally weighted across politicians under holding periods from 1/4 to 12 months and compounded to monthly returns. Newey-West t-statistics (three lags) are in parentheses. We present only the results based on the value-weighted transactions to save space. (Also, the results are similar across different weighting schemes and are available upon request.) The number of transactions (number of politicians) in Panels A through E are as follows: 33,334 (247), 28,664 (282), 23,345 (156), 18,839 (123), and 9,053 (97).

Holding period (months):	1/4	1	2	3	12
Panel A: All politicians and high contributions					
Avg. return	2.024***	0.556	0.431	0.336	0.150
	(3.15)	(1.64)	(1.48)	(1.45)	(0.94)
CAPM alpha	2.230***	0.651**	0.505**	0.388*	0.170
	(4.08)	(2.51)	(2.40)	(1.80)	(1.15)
FF alpha	2.259***	0.637**	0.553***	0.439**	0.175
	(4.33)	(2.37)	(2.74)	(2.30)	(1.34)
Panel B: All politicians and low contributions					
Avg. return	0.790	0.084	0.248	0.199	–0.210
	(1.28)	(0.31)	(1.00)	(0.90)	(–1.24)
CAPM alpha	0.888	0.102	0.228	0.187	–0.201
	(1.54)	(0.38)	(0.95)	(0.91)	(–1.26)
FF alpha	0.803	0.100	0.235	0.228	–0.185
	(1.47)	(0.37)	(0.99)	(1.12)	(–1.18)
Panel C: Republicans and high contributions					
Avg. return	3.071***	1.181***	0.699**	0.553**	0.205
	(4.16)	(2.80)	(2.08)	(2.18)	(1.09)
CAPM alpha	3.258***	1.303***	0.802***	0.627**	0.223
	(4.38)	(3.69)	(3.32)	(2.50)	(1.45)
FF alpha	3.209***	1.236***	0.822***	0.658***	0.222
	(4.39)	(3.94)	(3.43)	(2.78)	(1.44)
Panel D: Powerful Republicans and high contributions					
Avg. return	3.788***	1.215**	0.691*	0.492*	0.031
	(4.75)	(2.30)	(1.76)	(1.70)	(0.15)
CAPM alpha	3.979***	1.383***	0.822**	0.593**	0.058
	(4.49)	(3.14)	(2.56)	(2.03)	(0.28)
FF alpha	3.944***	1.334***	0.847***	0.615**	0.058
	(4.68)	(3.42)	(2.84)	(2.34)	(0.29)
Panel E: Powerful Republicans and low contributions					
Avg. return	2.248*	1.111*	0.954**	0.955**	–0.609**
	(1.92)	(1.68)	(2.28)	(2.32)	(–2.49)
CAPM alpha	2.357**	1.287**	1.085***	1.108**	–0.580**
	(2.38)	(2.42)	(2.83)	(2.59)	(–2.16)
FF alpha	2.309**	1.220**	1.064***	1.072**	–0.577**
	(2.33)	(2.55)	(2.90)	(2.61)	(–2.14)

*, **, *** denote the 10%, 5%, and 1% significance levels, respectively.

Table 7
Government dependency and portfolio performance

This table presents average monthly raw and risk-adjusted returns (alphas) in percentages over the 2004M01-2011M12 period on the buy-minus-sell portfolios of politicians (all, Republicans, and powerful Republicans [on any of the top 20 committees in Congress]), based on their domestic common stock transactions and the industry dependency (exposure) to government purchases. The measure of government dependency comes from Belo, Gala, and Li (2013) at the three-digit SIC code level, and it quantifies the share of an industry's output bought by the government. We partition these data in two groups based on the median value of government dependency: high-dependency industries (above the median) and low-dependency industries (below the median). Next, we merge this indicator variable (high versus low dependency) with our transactions data using the three-digit SIC code. Transactions are from the Center for Responsive Politics; returns are from CRSP and WRDS. Transactions are weighted equally or by value. Daily portfolio returns are equally weighted across politicians under holding periods from 1/4 to 12 months and compounded to monthly returns. Newey-West t-statistics (three lags) are in parentheses. We present only the results based on the value-weighted transactions to save space. The number of transactions (number of politicians) in Panels A through E are as follows: 34,134 (350), 25,810 (334), 22,208 (197), 15,708 (141), and 11,202 (136).

Holding period (months):	1/4	1	2	3	12
Panel A: All politicians and high-dependency industries					
Avg. return	1.606***	0.514**	0.558***	0.397**	0.026
	(3.38)	(2.24)	(2.71)	(2.02)	(0.20)
CAPM alpha	1.592***	0.528**	0.572***	0.397**	0.036
	(3.46)	(2.55)	(3.32)	(2.56)	(0.33)
FF alpha	1.569***	0.489**	0.574***	0.409**	0.044
	(3.31)	(2.54)	(3.32)	(2.63)	(0.41)
Panel B: All politicians and low-dependency industries					
Avg. return	0.933	0.068	0.045	–0.022	–0.184
	(1.62)	(0.23)	(0.21)	(–0.11)	(–1.17)
CAPM alpha	1.117***	0.138	0.077	0.014	–0.188
	(2.74)	(0.66)	(0.38)	(0.07)	(–1.15)
FF alpha	1.090***	0.163	0.116	0.059	–0.170
	(3.04)	(0.80)	(0.70)	(0.29)	(–1.14)
Panel C: Republicans and high-dependency industries					
Avg. return	2.287***	0.739***	0.691***	0.600***	–0.112
	(3.94)	(2.66)	(2.93)	(3.02)	(–0.70)
CAPM alpha	2.250***	0.751***	0.731***	0.634***	–0.096
	(3.56)	(3.23)	(4.49)	(4.79)	(–0.60)
FF alpha	2.308***	0.721***	0.723***	0.634***	–0.095
	(3.70)	(3.00)	(4.36)	(4.63)	(–0.59)
Panel D: Powerful Republicans and high-dependency industries					
Avg. return	2.809***	1.044***	0.893***	0.756***	–0.201
	(3.37)	(2.72)	(3.21)	(3.15)	(–1.17)
CAPM alpha	2.715***	1.085***	0.942***	0.819***	–0.182
	(3.84)	(3.74)	(4.77)	(5.09)	(–1.23)
FF alpha	2.736***	1.050***	0.927***	0.794***	–0.187
	(3.69)	(3.62)	(4.89)	(5.19)	(–1.27)
Panel E: Powerful Republicans and low-dependency industries					
Avg. return	2.289***	0.814	0.451	0.111	–0.320
	(2.75)	(1.51)	(1.16)	(0.30)	(–1.43)
CAPM alpha	2.579***	0.991**	0.583	0.248	–0.300
	(3.33)	(2.08)	(1.60)	(0.66)	(–1.29)
FF alpha	2.489***	0.967**	0.586	0.278	–0.270
	(3.56)	(2.23)	(1.64)	(0.76)	(–1.24)

*, **, *** denote the 10%, 5%, and 1% significance levels, respectively.

Table 8
Powerful Republicans and the STOCK Act

This table presents average monthly raw and risk-adjusted returns (alphas) in percentages over the 2012M04–2015M12 period on the buy-minus-sell portfolios of powerful (on any of the top 20 committees in Congress) Republicans, based on their domestic common stock transactions. The sample period covers the post–STOCK Act era. Transactions are from the Center for Responsive Politics; returns are from CRSP and WRDS. Transactions are weighted equally or by value. Daily portfolio returns are equally weighted across politicians under holding periods from 1/4 to 12 months and compounded to monthly returns. Newey-West *t*-statistics (three lags) are in parentheses. The results are based on 18,216 transactions from 92 Republicans.

Holding period (months):	1/4	1	2	3	12
Panel A: Powerful Republicans (equal-weighted transactions)					
Avg. return	–1.203*	–0.412	–0.086	0.152	0.223
	(–2.01)	(–1.52)	(–0.32)	(0.62)	(1.37)
CAPM alpha	–0.906*	–0.476*	–0.401	0.129	0.127
	(–1.84)	(–1.73)	(–1.48)	(0.60)	(0.83)
FF alpha	–0.750	–0.325	–0.327	0.192	0.127
	(–1.57)	(–1.36)	(–1.15)	(0.85)	(0.81)
Panel B: Powerful Republicans (value-weighted transactions)					
Avg. return	–1.049*	–0.435	–0.052	0.191	0.289*
	(–1.72)	(–1.47)	(–0.19)	(0.79)	(1.77)
CAPM alpha	–0.715	–0.470	–0.337	0.164	0.211
	(–1.35)	(–1.64)	(–1.19)	(0.70)	(1.40)
FF alpha	–0.581	–0.321	–0.269	0.212	0.202
	(–1.16)	(–1.07)	(–0.84)	(0.85)	(1.45)

*, **, *** denote the 10%, 5%, and 1% significance levels, respectively.

Table 9
Republicans: Power versus nonpower periods

Panel A of this table presents average monthly raw and risk-adjusted returns (alphas) in percentages over the 2004M01–2011M12 period on the buy-minus-sell portfolios of all nonpowerful (not on any of the top 20 committees in Congress) Republicans based on their domestic common stock transactions. Panels C and D of this table present average monthly raw returns and alphas in percentages over 2004M01–2011M12 period on the buy-minus-sell portfolios of Republicans who transitioned between powerful (any of the top 20) and nonpowerful committees in Congress (i.e., power years versus pre- and postpower years). Transactions data are from the Center for Responsive Politics; returns are from CRSP and WRDS. Transactions are weighted equally or by value. Daily portfolio returns are equally weighted across politicians under holding periods from 1/4 to 12 months and compounded to monthly returns. Newey-West t-statistics (three lags) are in parentheses. We present only the results based on the value-weighted transactions to save space. (Also, the results are similar across different weighting schemes and are available upon request.) Panel A uses 11,646 transactions from 119 politicians. Panel B uses 20,799 transactions, and Panel C uses 4,233 transactions. The transactions in Panels B and C come from the same 50 politicians.

Holding period (months):	1/4	1	2	3	12
Panel A: Nonpowerful Republicans					
Avg. return	–0.092	0.603	0.608	0.692	0.423
	(–0.11)	(0.87)	(1.14)	(1.14)	(1.65)
CAPM alpha	–0.060	0.422	0.431	0.579	0.439*
	(–0.07)	(0.82)	(1.00)	(1.13)	(1.92)
FF alpha	–0.031	0.560	0.532	0.760	0.438*
	(–0.03)	(1.14)	(1.15)	(1.34)	(1.90)
Panel B: Republicans in power years					
Avg. return	2.871***	1.109**	0.703**	0.588*	–0.150
	(3.95)	(2.33)	(2.08)	(1.91)	(–0.61)
CAPM alpha	2.933***	1.211***	0.797***	0.684**	–0.130
	(4.39)	(3.03)	(2.80)	(2.60)	(–0.62)
FF alpha	2.864***	1.133***	0.811***	0.668***	–0.137
	(4.43)	(3.45)	(3.23)	(2.71)	(–0.60)
Panel C: Republicans in pre- and postpower years					
Avg. return	–0.399	–0.446	–0.491	–0.432	0.725
	(–0.34)	(–0.40)	(–0.51)	(–0.57)	(1.41)
CAPM alpha	–0.539	–0.592	–0.779	–0.477	0.727
	(–0.51)	(–0.53)	(–0.80)	(–0.63)	(1.16)
FF alpha	–0.560	–0.732	–0.893	–0.236	0.784
	(–0.57)	(–0.73)	(–0.94)	(–0.31)	(1.22)

*, **, *** denote the 10%, 5%, and 1% significance levels, respectively.

Table 10
Republicans, committee assignments, and committee tenure

This table presents average monthly raw and risk-adjusted returns (alphas) in percentages over the 2004M01–2011M12 period on the buy-minus-sell portfolios of Republican members of Congress who serve on any of the top 20 committees in Congress. Panels A and B present the results based on the number of powerful committee assignments (one or more), and Panels C and D present the results based on the length of the powerful committee tenure (long or short based on the median value of committee tenure in years). Only domestic common stock transactions are used. Transactions are from the Center for Responsive Politics; returns are from CRSP and WRDS. Transactions are weighted equally or by value. Daily portfolio returns are equally weighted across politicians under holding periods from 1/4 to 12 months and compounded to monthly returns. Newey-West t-statistics (three lags) are in parentheses. We present only the results based on the value-weighted transactions to save space. (Also, the results are similar across different weighting schemes and are available upon request.) The number of transactions (number of politicians) in Panels A through D are as follows: 20,310 (116), 7,582 (62), 13,304 (84), and 14,588 (134).

Holding period (months):	1/4	1	2	3	12
Panel A: Powerful committee assignments (= 1)					
Avg. return	2.892***	1.067**	0.619*	0.463	–0.287
	(3.65)	(2.21)	(1.74)	(1.48)	(–1.37)
CAPM alpha	3.070***	1.252***	0.751***	0.600**	–0.273
	(4.24)	(3.24)	(2.82)	(2.35)	(–1.28)
FF alpha	3.012***	1.237***	0.767***	0.623**	–0.256
	(4.02)	(3.48)	(3.01)	(2.52)	(–1.17)
Panel B: Powerful committee assignments (> 1)					
Avg. return	3.035***	1.127**	0.913*	0.634*	–0.221
	(2.64)	(2.01)	(1.95)	(1.71)	(–0.86)
CAPM alpha	3.115***	1.196***	1.048***	0.730**	–0.178
	(2.64)	(2.88)	(2.74)	(2.33)	(–0.62)
FF alpha	3.055**	1.106***	1.034***	0.697**	–0.184
	(2.51)	(3.03)	(2.79)	(2.25)	(–0.67)
Panel C: Long powerful committee tenure					
Avg. return	3.721***	1.600***	1.040***	0.751**	–0.079
	(4.18)	(2.97)	(2.79)	(2.52)	(–0.34)
CAPM alpha	3.934***	1.782***	1.162***	0.865***	–0.047
	(4.79)	(4.18)	(3.55)	(3.07)	(–0.20)
FF alpha	3.848***	1.751***	1.182***	0.849***	–0.048
	(4.92)	(4.70)	(3.93)	(3.33)	(–0.22)
Panel D: Short powerful committee tenure					
Avg. return	0.979	0.611	0.313	–0.075	–0.260
	(1.02)	(0.92)	(0.58)	(–0.16)	(–0.89)
CAPM alpha	0.876	0.669	0.470	0.091	–0.248
	(1.01)	(1.18)	(1.05)	(0.23)	(–0.80)
FF alpha	0.759	0.544	0.451	0.130	–0.232
	(0.82)	(0.94)	(0.96)	(0.32)	(–0.74)

*, **, *** denote the 10%, 5%, and 1% significance levels, respectively.