AN EXAMINATION OF STOCK OWNERSHIP AND WEALTH ACCUMULATION BY U.S. CONGRESS MEMBERS

By

Corrine Carr

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ABSTRACT

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Given the profound impact actions of the federal government have on financial markets, U.S. congressmen should be capable of enhancing their wealth through investing on their private government information. However, existing research on U.S. congressmen's common stock trading has yielded conflicting results on whether they trade on their private information. In essay 1 of this dissertation, I reexamine whether members of Congress traded on private information from 2004-2012, and conclude that in the aggregate, they do not. However, House members perform extraordinarily well, earning abnormal returns of 8.2% for a 12-month holding period during their final term in office. This is likely due to incentives provided by the House Committee on Ethics and disinterest in reelection. Essay 2 builds on the first essay by focusing on returns to congressmen's total wealth, which captures their gains in the opaque private and real estate markets where they are more likely to act corruptly, in addition to their returns in public markets. I find that members on average earn abnormal returns to their wealth of 6.39% per year. Using the models suggested by Treynor and Mazuy (1966) and Henriksson and Merton (1981), I find that the abnormal returns to wealth are due to selectivity rather than market timing. Overall, the dissertation suggests that public financial disclosure is effective and reconfirms that incentives are important drivers of behavior. It also supports the public perception that congressmen unethically trade on private government information.

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CHAPTER 1: Introduction

In recent decades large corporations have become increasingly involved in politics. Today, many corporations devote enormous resources to lobbying and making donations to politicians. This increase in corporations participating in government affairs and the development of relationships between corporate executives and politicians has generated concerns about whether corporations are acting in the best interests of their shareholders, whether politicians are acting in the best interests of their constituents, and the ramifications this could have on the U.S. economy. These concerns have resulted in an abundance of research and news reports addressing these questions, numerous shareholder proposals requesting that corporations disclose their political contributions, and the 2012 STOCK Act which prohibits congressmen from using non-public information gained through their official duties for personal profit.

The research that has blossomed from these worries over the relationships between corporations and politicians suggests there are reasons for concern. That is, these studies support the hypothesis that corporations benefit from these relationships, making a positive return on their investments in politics, and suggest this may be a negative for the economy. Most recently, James Bessen (2016) examines whether rising corporate profits are the result of profitable, innovative investments or political rent seeking and finds that, since 2000, the rise in profits has been largely due to political activity and regulation. These results raise concerns about the effects political rent seeking could have on the economy. The link between regulation and profits is concentrated in only a few industries, including pharmaceuticals/ chemicals, petroleum refining, transportation equipment/defense, utilities, and

communications. Such a concentration of political influence could impact policy for the entire economy by skewing it towards these few industries. Additional concern is caused by the enormous amount of financing currently going towards influencing politicians, and the growth in the strength of the relationship between the political and corporate worlds. Since 2000, political campaign spending by firm Political Action Committees (PACs) has increased by thirty times and the Regdata index, which quantifies federal regulation, has increased by approximately 50% for public firms.

Changes in where many corporations are directing investments and the potential impacts on the economy warrant investigations into whether politicians also benefit from these relationships. If politicians and corporations mutually benefit from their relationships with each other, then politicians may be less willing to regulate the flow of money from corporations to Washington, if this is indeed needed. Existing research suggests congressmen benefit from these relationships through increased contributions to their campaigns. There have been mixed results on whether U.S. congressmen make gains in other ways.

Currently, to discourage congressmen from profiting on private government information they are required to file annual reports disclosing detailed information on their financial holdings and transactions in income-producing property, according to the "Ethics in Government Act of 1978". How effective are these public disclosures in discouraging unethical behavior? In this dissertation, I address this question. In chapter 2, I examine whether congressmen earn positive abnormal returns on their stock transactions. If they do, then they likely trade on private information. In chapter 3, I examine whether congressmen earn abnormal returns to their total wealth. While public disclosure may deter congressmen from

trading on their private information in public equity markets, it may not deter them from using their legislative power and private information to make gains in more private markets such as real estate and private business.

CHAPTER 2: Stock Ownership by U.S. Congress Members

2.1 Introduction

In recent years, members of Congress have received extensive criticism for investing on private government information. There is no shortage of anecdotal evidence that congressmen may be able to take advantage of their positions in government to make a nice living outside of their standard government salary. The speculation ranges from Senator John Kerry's well timed trades in pharmaceutical companies around the development and passing of the Affordable Care Act to Representative Nancy Pelosi's impressive track record for IPO participation. The most prominent criticism has come from Schweizer (2011), who provides a plethora of anecdotes of suspiciously well timed stock trades, which resulted in enormous profits, and Ziabrowski et al. (2004, 2011) who find that the average Senator beats the market by 12% per year, while House members beat the market by 6% per year. To put these returns in perspective, the average corporate insider beats the market by about 7% a year (Jeng, Metrick, and Zeckhauser 2003). In a recent paper, Eggers and Hainmueller (2013), question the results found by Ziabrowski et al., which show that congressmen earn large abnormal returns, by finding that congressional portfolios, rather than their transactions, show no evidence of superior stock picking ability or positive abnormal returns for the years 2004 to 2008.

The findings of Eggers and Hainmueller (2013) are surprising given that much research in political economy suggests that firms and politicians benefit mutually from their relationships with each other. There are many examples of the financial benefits of political connections to firms. It has been found that political connections help firms gain access to bank loans (Khwaja and Mian, 2007; Faccio, 2006), receive more government contracts (Tahoun, 2014), increase

firm value (Roberts, 1990; Fisman, 2001) or improve firm performance (Johnson and Mitton, 2003). In addition to these benefits of politician-firm connections, Yu and Yu (2006) find firms that lobby can evade fraud detection on average 117 days, and are 38% less likely to be detected by regulators than firms that do not lobby. There is also evidence of the financial benefits to politicians through their connections to firms. Tahoun (2014) finds that U.S. congressmen tend to invest in firms that make large contributions to their campaigns, thus providing an incentive for them to act in these firms' best interests.

The purpose of this chapter is to reexamine whether congressmen's stock investments tend to outperform the overall market and to examine the effects of self-imposed term limits through retirement on congressmen's behavior. Finding that they outperform the market would support the hypothesis, and popular perception, that congressmen use private government information for personal gain. Eggers and Hainmueller (2014) find that U.S. congressmen earned mediocre returns from 2004 to 2008 because of their "non-connected" investments, but their investments in local firms and campaign contributors beat the market. The mediocre returns during this time period could also be a result of the recent increased attention on congressmen taking advantage of their positions in government for personal gain. Concerns about this possibility led to the proposal of the STOCK Act in 2006 and its passage into law in 2012. The STOCK Act made it illegal for members and employees of Congress to profit from nonpublic information they obtain from their government positions, although they may trade on information they gain through their legislative roles as long it doesn't come from

private meetings and involve confidential information.[1] There has also been increased attention on firm-politician connections, resulting in an increasing number of shareholder proposals suggesting that firms disclose details of their political activities.

The recent attention on firm-politician relationships may deter congressmen from trading on nonpublic government information in the aggregate. However, situations may arise in which the gains of trading on private information outweigh the risks. Specifically, the benefits may outweigh the costs when a House member is already planning to leave office, effectively self-imposing a term limit. Since the House Committee on Ethics doesn't have jurisdiction over former members, departure from the House ends an ethics investigation. This is best explained by a New York Times article on the departure of Michele Bachman, Tim Bishop, Tom Petri, Paul Broun, and Steve Stockman from the House in 2014:

> As the lame duck Congress plays out its final days, five departing House members are breathing sighs of relief. They have been the focus of long-running ethics investigations, but their cases will depart with them from the public record, closed without any official findings. The slates will be instantly cleaned under a provision of the often arcane House ethics rules, which critics complain encourages procrastination and shady behavior.

Thus, if a member of Congress is planning to leave office, she may take advantage of nonpublic information to earn abnormal returns in the stock market without repercussion.

[1] Congress attempted to block the Securities and Exchange Commission's first major investigation of political insider trading. The House refused to hand over evidence and claimed Brian Sutter, the staff member under investigation, had legal immunity. This investigation has not resulted in formal allegations of insider trading. (Mullins, B. and Ackerman, A. (2015, November 17). Court says Congress must comply with Federal insider-trading investigation. *The Wall Street Journal.* Retrieved from http://www.wsj.com)

It has been well documented in the political agency literature that lame duck politicians, those who face term limits and are currently in their final term, tend to exert less effort (Besley and Case, 1995; Alt, de Mesquita, and Rose, 2009). Elections are an important instrument through which voters can hold politicians accountable and thus mitigate moral hazard. Politicians will act in the best interests of the voters if they know they will only be reelected if they perform better than some standard set by the voters (Barro 1973; Ferejohn 1986). Most of the political agency literature is focused on whether retiring members exert less effort. However, some research has focused on whether politicians act corruptly during their final term when they are term limited. Ferraz and Finan (2011) investigate the level of corruption during Brazilian mayors' final term and find that those who are eligible for reelection engage in less corruption, on average, than term-limited mayors. They also find that voters tend to punish corrupt politicians when their corrupt practices are publicized (Ferraz and Finan, 2008). This chapter contributes to the literature by focusing on whether retiring members act in their own best interests through corruption, and by showing that moral hazard problems may exist with or without term limits.

2.2 Congressional Rules of Conduct

The Constitution grants Congress the authority to discipline its members. This authority is found in Article I, Section 5, clause 2 of the Constitution, which explains "each House may determine the rules of its proceedings, punish its members for disorderly behavior, and, with the concurrence of two thirds, expel a member."[2] Since 1967, both the House and Senate have

[2] U.S Congress, House, "Article I, Section 5, clause 2," *The Constitution of the United States*, 108th Cong., 1st sess., H.Doc. 108-96 (Washington: GPO,2003), p.4.

had permanent ethics committees, which were eventually called the House Committee on Ethics and the Senate Committee on Ethics. These committees were established to create formal rules of conduct and disciplinary procedures to investigate and punish illegal or unethical acts by their members.[3] While the Senate and House Committees on Ethics have similar goals, there are significant differences in their ability to enforce ethical behavior.

2.2.1 House of Representatives

Currently, the House Committee on Ethics is comprised of ten members, five from each party. Accusations of misconduct or violations of House rules by House Members or staff can only be filed with the Committee on Ethics by a Member of the House. Accusations may be filed by nonmembers only if it is accompanied by written certification by a Member that the accusations warrant review by the committee. In 2008, the Office of Congressional Ethics (OCE) was established to collect information from non-Members, thus creating an external body to review complaints against House Members. If the Committee on Ethics decides that an investigation is necessary, an investigative subcommittee is formed to judge the evidence of ethics violations. Following a subcommittee investigation, the Committee on Ethics has historically recommended punishments including expulsion, censure, reprimand, and "letters of Reproval" and "Letters of Admonition". About 25 House Members have left the House (by resigning, not running for reelection, or defeat) after court convictions, after inquiries were initiated, or after charges were brought by the committee.[4] This departure from the House ends an investigation because the committee does not have jurisdiction over former Members.

[3] Straus, J.R., 2011, Enforcement of congressional rules of conduct: An historical overview. In *Congressional Research Service, Washington, DC, June* (Vol. 14).

[4] Maskell, J., 2002, Expulsion, censure, reprimand, and fine: legislative discipline in the House of Representatives. Congressional Research Service

This greatly reduces the power of the House Committee on Ethics and is one of the greatest differences between the House Committee on Ethics and the Senate Committee on Ethics.

2.2.2 The Senate

The Senate Committee on Ethics consists of six members, three from each party. Unlike the House committee, the Senate committee has no "statute of limitations" for investigations of past violations. This means Senators can be charged with a crime any number of years following their time in office. Also, there are no restrictions on who can file an allegation with the committee. If the committee receives a complaint, it begins preliminary inquiry, and if it finds substantial evidence of a violation, it determines the appropriate charges. Historically, as a result of committee action, Senators have been expelled and censured for their behavior. Many expulsion proceedings have been initiated by the Senate that did not result in expulsion. In most of these cases the expulsion failed to obtain the necessary two-thirds vote in the Senate. There have also been cases when the Senator facing expulsion resigned. Most recently, in 2011 Senator John Ensign faced expulsion for improper financial conduct stemming from his extramarital affair. He resigned before the expulsion was voted on.[5]

In addition to expulsion and censure, it is possible to punish a Senator with a fine, imprisonment, or suspension of privileges. These punishments are far less common. The latest case was Senator Harrison A. Williams Jr. in 1981. He was convicted on nine counts of bribery and conspiracy, fined $50,000, and sentenced to three years in prison.[6]

[5]Lipton, E. (2011, April 21). Senator Ensign to Resign Amid Inquiry. *The New York Times*. Retrieved from http://www.nytimes.com

[6]U.S. Senate Historical Office, *United States Senate Election, Expulsion and Censure Cases: 1793-1990* (Washington: Government Printing Office, 1995), pp. 434-437.

2.3 Theoretical Framework

It is often believed that the desire to maintain a good reputation is what keeps politicians in check. Politicians that wish to run for reelection in the future must act in the voters' interests to win their votes. I hypothesize that an incumbent who wishes to run for reelection will try to maintain a good reputation, and therefore will choose a low level of corruption. However, if the incumbent decides to retire, and thus decides she does not care about reelection, then she will choose a high level of corruption.

The objective of the following model is to show that a term limit, even a self-imposed term limit, may have implications for a politician to choose to be corrupt. I consider a model of political agency, since voters and politicians engage in a principal-agent relationship (Barro 1973). The interests of voters and politicians are not perfectly aligned, thus the authority given to politicians may cause them to take actions in their own best interests rather than taking actions that are in the best interest of the voters.

I assume the incumbent politician earns rents by acting corruptly, and that this corruption reduces voter utility. The incumbent's objective is to maximize the sum of current and future rents. The preferences of the incumbent can be written as

$$U(r) = r(\kappa) + p(\kappa)\delta V$$

where U is the incumbent's expected utility. This depends positively on current rents, r, and expected future rents, $p(\kappa)\delta V$, where $p(\kappa)$ is the probability of being reelected and δV is the politician's discounted continuation value, which reflects her expected future utility if in office.

I assume the probability of being reelected depends negatively on the amount of corruption the politician engages in. The variable κ measures corruption.

The intuition of the model is straightforward. The incumbent gains utility by acting corruptly and the voter responds to this by conditioning her vote on the level of corruption. If the level of corruption is too high, the voter will punish the incumbent by voting her out of office. Thus, the incumbent faces a trade-off. A higher level of corruption reduces her probability of reelection. As a result, to maximize her utility the politician chooses the level of corruption that makes the voter indifferent about reelection. She will choose this level of corruption for as long as she cares about reelection.

Now consider a term limited incumbent. That is, the incumbent is certain not to have a next period in office. In this case the probability of reelection is zero, $p = 0$, regardless of r, or the level of corruption. The incumbent does not lose anything in terms of reelection possibilities by acting corruptly. Thus, the incumbent's new utility function is given by $U(r) = r(\kappa)$. This is consistent with Besley and Case's (1995) finding that term limited governors tend to care less about economic policy than governors who have a reputation to uphold.

The model suggests that if the threat of being voted out of office effectively keeps politicians in check, then there should be little or no evidence of corruption until a politician's final years in office. Thus, I expect that congressmen earn insignificant abnormal returns on their investments until they decide to retire, suggesting that they do not invest on private information until there is no longer a threat of not being reelected.

2.4 Data Description

My data on politicians' equity transactions comes from annual financial disclosure forms submitted between 2004 and 2012 by members of Congress and transcribed by the Center for Responsive Politics. According to the "Ethics in Government Act of 1978", each year by March 15, members of Congress are required to report their common stock purchases or sales, the date of the transactions, and the approximate value of the transactions. This[7] data has some limitations. First, none of the financial disclosure reports (FDRs) are audited for accuracy. Although these FDRs are not audited, congressmen may not knowingly and willfully make false statements on their FDRs according to the "False Statements Accountability Act of 1996".[8] Second, the care used to fill out the reports varies widely across congressmen. Some are handwritten, some include monthly financial statements from their brokerage firms, and some do not provide specific dates of their transaction (instead they may write that they traded a company "4 times" or "monthly"). Third, the data does not allow for a specific measure of the profits earned by individual congressmen. They are required to report the dollar value of transactions within broad ranges of $1,001 to $15,000, $15,001 to $50,000, $50,001 to $100,000, $100,001 to $250,000, $250,001 to $500,000, $500,001 to $1,000,000 and over $1,000,000.

My dataset includes common stock transactions made by the members of Congress. The transactions are recorded with the name of the congressman, the transaction date,

[7] While members of Congress are free to invest in blind trusts, which block the owners from active involvement in their investments, very few congressmen choose to do so.

[8] Representative Charles Rangel was censured in 2010 for improperly leasing rent-controlled apartments, failing to disclose rental income on his personal financial disclosure forms, and failing to report taxes on rental income, among other ethics charges

Table 2.1: Summary of Annual Transactions

Panel A: HOUSE	**BUYS**		**SELLS**	
	$ Value	**Number**	**$ Value**	**Number**
Min	$53	1	$498	1
25th pctile	8,001	2	8,001	2
Median	8,001	5	8,001	5
75th pctile	21,522	15	26,375	12
Max	3,000,001	2175	11,700,000	1113
Mean	37,896	43	59,003	26

Panel B: SENATE	**BUYS**		**SELLS**	
	$ Value	**Number**	**$ Value**	**Number**
Min	324	1	324	1
25th pctile	8,001	3	8,001	2
Median	8,766	8	11,501	6
75th pctile	32,500	37	37,681	24
Max	1,000,001	497	10,200,000	379
Mean	51,062	35	109,060	26

Summary statistics are annual averages across the 2004-2012 period based on end of year financial disclosure reports for the 477 members of Congress that report common stock transactions between 2004-2012. These averages are conditional on the congressmen trading in common stock.

whether the transaction was a buy or sell, and the approximate value of the transaction. The common stocks were matched by hand with CUSIP numbers from the Center for Research in Security Prices (CRSP) databases. Overall, the dataset includes 84,938 reported transactions in a total of 2,629 companies by 477 members of congress. During 2004-2012, only 477 of the 888 congressmen who were in office invested in common stock.

Table 1 presents summary statistics describing the stock transactions of members in my dataset. For each member who invested in common stocks from 2004-2012, I calculate the value and number of transactions in each year and then average across years. As in Ziabrowski et al. (2004), Ziabrowski et al. (2011), and Eggers and Hainmueller(2013), the distribution of annual transactions is right skewed.

2.5 The Performance of Congressmen's Trades

If congressmen have superior stock picking skills or trade on nonpublic information, then stocks recently purchased should outperform their benchmarks, while stock recently sold should not outperform their benchmarks. However, if the average congressman does not trade on private information then I should find no relation between stock returns and congressmen's trades. Focusing on transactions by congressmen should provide a more powerful test of whether they trade on private information than examining the performance of stock holdings, since I expect the decision to make a stock trade to represent a stronger opinion than the decision to hold onto an existing position in a stock. The decision to hold may be driven by factors unrelated to performance, such as transaction costs or capital gains taxes. Thus, I would expect trading on private information to be more evident through the examination of trades rather than holdings. This section addresses this issue by examining the performance of stock purchases and sales by congressmen.

Table 2, Panel A, displays buy-and-hold returns on various stock portfolios formed based on aggregate congressmen trades. Specifically, it presents returns on the aggregate portfolio of all stocks bought by congressmen (Buys), the aggregate portfolio of all stocks sold by congressmen (Sells) and the hedged portfolio (Buys – Sells). These portfolios are formed each month based on congressmen trades for that month, according to their financial disclosure forms. The returns on each portfolio are computed as the buy and hold return that would be earned through a strategy of purchasing the aggregate congressmen purchases of each stock during the formation month and selling the aggregate congressmen sells of each stock during the formation month (month 0). I report one, three, six, and twelve month buy and hold

Table 2.2: Performance of Stock Traded by Members of Congress

Panel A: Gross Returns

	Month 0	Month +1	Month+1 through Month+3	Month+1 through Month+6	Month+1 through Month+12
ALL CONGRESSMEN					
Buys	.36474	.4048	2.16181**	4.4421***	8.59182***
	(0.6189)	(0.7657)	(2.0871)	(2.9026)	(4.3506)
Sells	1.20775**	1.09182**	2.61588***	5.34125***	10.25542***
	(2.1657)	(2.2888)	(2.7181)	(3.2036)	(4.4574)
Buys-Sells	-.84301*	-.68703**	.45407	-.89914	-1.6636
	(1.8751)	(2.3210)	(0.6996)	(0.8519)	(1.3143)
HOUSE					
Buys	.6638	.44277	2.08972*	4.26807***	10.02381***
	(1.1154)	(0.7956)	(1.9566)	(2.6407)	(5.0699)
Sells	1.03618*	1.11057**	2.78384***	5.08456***	9.12845***
	(1.7394)	(2.1239)	(2.6620)	(2.8722)	(3.6824)
Buys-Sells	-.37237	-.6678*	-.69412	-.81649	.89536
	(0.7649)	(1.7589)	(0.9491)	(0.7078)	(0.6380)
SENATE					
Buys	.09713	.61168	2.0947**	4.36116***	6.86986***
	(0.1606)	(1.1226)	(1.9985)	(2.9380)	(3.3312)
Sells	.94501*	.52099	.86738	2.97959**	6.95525***
	(1.7250)	(1.2818)	(1.0522)	(2.1543)	(3.7722)
Buys-Sells	-.84788**	.0907	1.22732*	1.38156	-.08539
	(2.0282)	(0.2090)	(1.8178)	(1.4368)	(0.0662)

Panel B: DGTW Adjusted Returns

	Month 0	Month +1	Month+1 through Month+3	Month+1 through Month+6	Month+1 through Month+12
ALL CONGRESSMEN					
Buys	-.0193	-.02793	.35155	.26587	-.27475
	(0.0786)	(0.1644)	(1.1950)	(0.5491)	(0.5449)
Sells	.57073**	.48721**	.43852	.95883	1.87259*
	(2.0872)	(2.1411)	(1.0092)	(1.2320)	(1.7693)
Buys-Sells	-.59003	-.51514*	-.08698	-.69297	-2.14734*
	(1.5669)	(1.8973)	(0.1609)	(0.7625)	(1.9153)
HOUSE					
Buys	.23531	-.06856	.31343	.16662	.93663*
	(0.8580)	(0.2808)	(0.8744)	(0.2988)	(1.8626)
Sells	.41199	.49665	.43144	.43361	.4891
	(1.3448)	(1.7759)	(0.8363)	(0.4826)	(0.4059)
Buys-Sells	-.17667	-.56521	-.11802	-.26699	.44753
	(0.4263)	(1.5175)	(0.1982)	(0.2677)	(0.3627)
SENATE					
Buys	-.31862	.18432	.42981	.3635	-1.30111**
	(1.1757)	(0.8770)	(1.1615)	(0.6923)	(2.0433)
Sells	.48148*	.09208	-.38469	.21134	1.17979 *
	(1.8701)	(0.3662)	(1.1298)	(0.4207)	(1.7859)
Buys-Sells	-.8001**	.09225	.8145	.15216	-2.4809***
	(2.4078)	(0.2629)	(1.5535)	(0.2015)	(2.7830)

In Panel A, I compute the buy and hold return on the portfolios of all stocks bought and sold in aggregate by all congressmen. Buy and hold returns on trade portfolios are based on mimicking the buys and sells by congressmen during each calendar month. The portfolio formation period is labeled month 0. Panel B presents buy and hold adjusted returns where each buy and hold return is adjusted by subtracting the buy and hold return on the matching DGTW characteristic portfolio during the holding period. The reported numbers are the average portfolio gross return in Panel A and the average DGTW adjusted returns in Panel B during various holding periods following the formation month. The portfolios are weighted based on month 0 shares traded of each stock. The returns are reported in percent per holding period. *, **, and *** indicate significance at the 10%, 5% and 1% levels, respectively.

returns, averaged across all event months. For example, the average "All Congressmen" return reported for Month 1(-.687%) is the average monthly buy-and-hold return for a strategy that mimics the aggregate purchases and aggregate sales of congressmen.

Table 2, Panel B presents benchmark adjusted returns measured with respect to the portfolio benchmarks developed by Daniel, Grinblatt, Titman, and Wermers ((1997) henceforth referred to as abbreviation DGTW). To form the DGTW benchmarks, start with all stocks that have book equity values listed in Compustat and stock returns and market capitalization of equity listed in CRSP. These stocks are then ranked based on their market capitalization and assigned to size quintiles (using NYSE size quintile breakpoints). Within each quintile, the stocks are assigned to book-to-market quintiles creating 25 size and book-to-market fractals. The stocks in each of these 25 fractals are again sorted into quintiles based on the prior 12-month return of each stock, resulting in 125 portfolios. For further details on the development of these portfolios refer to DGTW. These benchmark portfolios are reconstructed at the end of each June in the manner described above.

The benchmark for each stock is the portfolio to which it belongs. The benchmark-adjusted return for each stock is the difference between the stock return and its benchmark portfolio return over the same holding period. This return is referred to as the DGTW-adjusted return.

The results in Table 2, Panel B do not support the hypothesis that congressmen trade on insider government information, in the aggregate. In fact, the results suggest that Senators make poor investment decisions. The difference in abnormal returns between buys and sells

for month+1 through month+12 for Senators is -2.48%, which is significantly negative at the 1% level. For the House, the difference between buys and sells for the same holding period was positive, but not significantly different from zero. This mediocre performance is surprising given that congressmen are privy to information that the general public is not. However, it is possibly due to overconfidence, trend chasing, and other common failings of individual investors (Odean, 1999; Barber and Odean, 2000; Barberis and Thaler, 2003; Barber et al., 2009; Hoechle et al., 2009)

2.6 Congressmen Net Worth

Finding that congressmen earn negative abnormal returns on their stock transactions is surprising given the results of Ziabrowski et al.(2004, 2011) and much of the research in political economy which suggests firms and politicians mutually benefit from their relationships with each other. However, it is likely that congressmen are taking advantage of their position in government to increase their income in other ways besides trading on private information in the stock market. There is substantial evidence that congressmen may in fact reap the benefits of their positions in Congress in other ways besides investing on private information. For example, Representative Dennis Hastert purchased land near a proposed highway project and then inserted a $207 million earmark into the federal highway bill just two months after making the purchase. The land he purchased for $15,000/acre was sold for $36,000/acre only a year after he made the purchase.[9] Several congressmen have also made large profits through

[9]McNamara, M. (2006, June 22). Speaker Hastert's land deal questioned. *CBS News.* Retrieved from http://cbsnews.com

gaining access to IPOs, including Rep. John LaFalce, Rep. Gary Ackerman, and Sen. Barbara Boxer.[10]

From 2004-2012, the average member of congress saw an inflation adjusted annual percentage increase in their net worth of 28.9% per year and the median increase of 0.29% per year.[11] The net worth estimates used to calculate the change in net worth of each congressman were obtained from the Center for Responsive Politics (CRP). The net worth was calculated by summing each congressman's assets and subtracting any liabilities reported in their FDRs (financial disclosure reports). Congressmen report the value of each of their assets, transactions and liabilities within some range, as described in section II. To determine each congressman's net worth, the CRP summed the minimum possible values for each asset, the maximum possible values for each asset, the minimum liability amount, and the maximum liability amount. The maximum debt figure was then subtracted from the minimum asset figure and the minimum debt figure was subtracted from the maximum asset figure. The average of these two limits is assumed to be their net worth.

There are some shortcomings in disclosure rules that can affect these estimates. Personal residences that do not produce income are not reported and other personal property, such as cars or artwork are not reported unless they are owned for investment purposes. Retirement accounts from employment with the federal government are not reported. Although these types of assets are not required to be disclosed, some congressmen report them and when they do report them, these values are included.

[10] Whelan, C. B. and Hamburger, T. (2002, September 6). Lawmakers joined executives in profiting from IPO access. *The Wall Street Journal.* Retrieved from http://www.wsj.com

[11] Since Representative Chellie Pingree's large net worth increase was due to her marriage, she was removed when calculating the average annual percentage increase.

Table 2.3: House and Senate Net Worth (Top 15 annual % Increase)

Congressman	Year Elected	End Year	Increase in dollars ($2012)	Total % Increase	Annual % Increase
HOUSE					
Pingree, Chellie	2008	2012	40500000	365149	73030
Rooney, Tom	2008	2012	11900000	31966	6393
Pierluisi, Pedro	2008	2012	2657073	6826	1707
Murphy, Patrick	2012	2012	2979288	1448	1448
Fallin, Mary	2006	2010	3703853	5705	1426
Ney, Bob	1994	2006	26686	2193	1097
Veasey, Marc	2012	2012	208072	994	994
Hahn, Janice	2011	2012	430987	870	870
Denham, Jeff	2010	2012	15000000	1981	660
Chu, Judy	2009	2012	2114401	2155	539
Gutierrez, Luis V	1992	2012	2406312	4168	521
Ramstad, Jim	1990	2008	54200000	1607	402
Hastert, Dennis	1986	2006	4680970	776	388
Nussle, Jim	1990	2007	748981	1113	371
McNerney, Jerry	2006	2012	365779	2007	335
SENATE					
Santorum, Rick	1994	2006	1168146	694	347
Blunt, Roy	2010	2012	3188959	1177	147
Chambliss, Saxby	2002	2012	224057	1152	144
Collins, Susan M	1996	2012	2635236	1103	138
Obama, Barack	2004	2012	4001867	1097	137
Feingold, Russ	1992	2010	69757	717	120
Lott, Trent	1988	2007	1545954	320	107
Cruz, Ted	2012	2012	1398788	82	82
Domenici, Pete V	1972	2008	3082653	267	67
McConnell, Mitch	1984	2012	19100000	512	64
Harkin, Tom	1984	2012	14800000	461	58
Burr, Richard	2004	2012	2542326	413	52
Jeffords, James M	1988	2006	224640	87	44
Dodd, Chris	1980	2010	1253243	251	42
Allen, George	2000	2006	2114016	80	40

This table displays the increase in net worth, total percentage increase in net worth, and the annual percentage increase in net worth for the 15 Representatives and Senators who had the largest annual percentage increase in their net worth from 2004-2012. If a congressman was elected after 2004, I used the data available from the time she takes office, and if a congressman leaves office prior to 2012, their net worth data ends at the time of their exit. The dollar values used for these calculations are adjusted for inflation

The averages are adjusted for inflation to observe real changes in net worth. These net worth estimates include assets unrelated to a member's gains through Congress, such as assets gained through marriage, inheritance, or family businesses. Also, since most of the congressmen

included in the calculation of the average increase in net worth have been in office longer than the eight years considered, the real change in net worth for each member during their time in office may be higher than 28.9% per year.

Table 3 shows the average change in net worth in 2012 dollars, the total percentage change in net worth, and the annual percentage change in net worth for the 15 Representatives and Senators whose annual percentage increase in net worth was the highest. The average Senator saw an increase of 10.8% and the average House member saw an increase of 30.8%. Each congressman's average yearly percentage gain was found by dividing their total net worth growth by the number of years included in the calculation. For example, Representative Patrick J. Kennedy's total net worth growth is divided by 6 (2004-2010), since those are the years over which the growth of his net worth is calculated. Congressmen have large average annual percentage increases in net worth during their time in office and earn mediocre returns in the stock market. This suggests that congressmen are earning income in other ways besides trading on private government information. This is a possible explanation for congressmen's mediocre performance in the stock market.

2.7 The Performance of Stocks Traded by Congressmen Close to Retirement

Since the House Committee on Ethics doesn't have jurisdiction over former members, departure from the House ends an ethics investigation. Thus, it is relatively safe for House members to "insider trade" during their final term since, if they are investigated by the ethics committee, the investigation will end as soon as they leave office. I expect House members to

invest on nonpublic information during their last few years in office, resulting in superior returns on their investments.

Table 4, Panel B reports the difference in DGTW-adjusted returns between aggregate House member buys and sells 2, 4, 6, and 8 years prior to retirement. The results in Panel A support the hypotheses that House members trade on private information during their last term in office. House member earn significant positive abnormal returns on their Buy-Sell portfolios during the 6 and 12 month holding periods. The abnormal returns on these portfolios are 4.9% and 8.2%, respectively. The abnormal returns on the buy-sell portfolios 2 years before retirement are also significantly greater than the returns on the buy-sell portfolios 8 years before retirement, further supporting the hypothesis that House members choose to trade on their private information during their final term. These results also strongly support evidence in the political agency literature, that term limited politicians change their behavior (shirk) in their final term (e.g. Besley and Case, 1995).

Unlike the House committee, the Senate committee has no "statute of limitations" for investigations of past violations. Thus, I suspect Senators are less likely to invest on private information at any point during their political career. Table 4, Panel B supports this hypothesis. The difference in abnormal returns between Senator buys and sells are not significantly different from zero during their final years prior to retirement. This difference in results is likely due to the fact that the Senate Ethics Committee has no statute of limitations, while the House Ethics Committee may not begin an ethics investigation once a Representative has left office, or continue an investigation once the Representative leaves office.

Table 2.4: Raw Returns and DGTW adjusted returns 1-8 years before retirement

Panel A: Raw Returns			Month+1	Month+1	Month+1
HOUSE	Month 0	Month +1	through Month+3	through Month+6	through Month+12
Years to retirement					
(1) 1-2 years (Buys)	0.9625	1.8030	4.6482	7.3207	11.91787
(Sells)	0.0613	0.0778	1.0087	0.5880	2.9032
Buy-Sell	0.9013	1.7252*	3.6395*	6.73272*	9.0147**
	(1.18)	(1.71)	(1.74)	(1.81)	(2.05)
(2) 3-4 years (Buys)	0.9625	1.8030	4.6482	7.3207	11.9179
(Sells)	0.6034	1.1552	2.9525	4.6898	7.4637
Buy-Sell	0.3592	0.6477	1.6957	2.6309	4.4542
	(0.41)	(0.65)	(1.00)	(0.98)	(1.27)
(3) 5-6 years	0.5015	-0.7667	-0.7673	0.5273	3.7610
(Sells)	0.1601	-0.5517	0.0959	0.8911	2.9531
Buy-Sell	0.3415	-0.2151	-0.8632	-0.3638	.80782
	(0.42)	(0.29)	(0.67)	(0.25)	(0.37)
(4) 7-8 years	-0.0927	0.1371	-0.0449	-1.1634	1.1285
(Sells)	0.0370	0.2017	0.3159	0.2554	0.0606
Buy-Sell	-.12967	-.0646	-.36083	-1.4188	1.06792
	(0.29)	(0.17)	(0.65)	(1.50)	(0.91)
(1) - (4)	1.0309	1.7898*	4.0003*	8.1515**	7.94673*
	(1.22)	(1.71)	(1.85)	(2.14)	(1.74)
SENATE					
(1) 1-2 years (Buys)	0.3068	0.0843	1.8636	3.1843	9.0031
(Sells)	0.1473	0.7801	1.5565	3.6540	10.4326
Buy-Sell	0.1595	-0.6958	0.3072	-0.4696	-1.4296
	(0.15)	(0.85)	(0.24)	(0.25)	(0.44)
(2) 3-4 years (Buys)	0.7817	0.5042	-0.0978	0.3485	1.3192
(Sells)	0.0741	1.2333	-0.7583	-1.0891	0.4491
Buy-Sell	0.7075	-0.72912	.66052	1.4376	0.8701
	(0.65)	(0.70)	(0.34)	(0.45)	(0.24)
(3) 5-6 years	-0.0474	0.9628	1.9829	2.2535	1.7244
(Sells)	0.1338	-0.3431	-0.9339	0.9561	2.8865
Buy-Sell	-.18116	1.3058	2.9168**	1.2974	-1.16217
	(0.15)	(1.58)	(2.00)	(0.64)	(0.50)
(4) 7-8 years	-0.1427	0.1179	0.9449	2.7227	2.1951
(Sells)	0.2557	0.3880	0.4587	0.6125	1.9685
Buy-Sell	-0.3983	-0.2701	0.4861	2.1102**	0.2267
	(0.76)	(0.66)	(0.76)	(2.01)	(0.15)
(1) - (4)	.5578	-.4257	-.1790	-2.57983	-1.65624
	(0.49)	(0.47)	(0.12)	(1.16)	(0.46)

Table 2.4: (cont'd)

Panel B: DGTW HOUSE	Month 0	Month +1	Month+1 through Month+3	Month+1 through Month+6	Month+1 through Month+12
Years to retirement					
(1) 1-2 years (Buys)	-0.0767	0.8753	1.9211	2.8998	4.64639
(Sells)	-0.4375	-0.2942	-0.3851	-2.0133	-3.5508
Buy-Sell	0.3608	1.169	2.3062	4.9132*	8.19718**
	(0.52)	(1.66)	(1.50)	(1.74)	(2.39)
(2) 3-4 years (Buys)	0.2811	0.1893	0.3458	-0.0448	-1.2360
(Sells)	-0.4375	-0.2942	-0.3851	-2.0133	-3.5508
Buy-Sell	.7187	.4834	.7309	1.9685	2.3148
	(1.31)	(0.89)	(0.89)	(1.59)	(1.14)
(3) 5-6 years	0.1840	-0.7087	-1.0908	-0.3251	1.1507
(Sells)	0.2490	-0.4091	-0.2681	0.1649	1.1553
Buy-Sell	-.6497	-.2995	-.8227	-.4899	-.0046
	(0.09)	(0.45)	(0.68)	(0.36)	(0.00)
(4) 7-8 years	-0.2552	-0.0095	-0.4215	-2.0431	-0.4132
(Sells)	-0.2734	0.0823	0.0678	-0.3315	-0.1512
Buy-Sell	.01821	-.0919	-.4893	-1.7116*	-.2620
	(0.05)	(0.23)	(0.84)	(1.89)	(0.35)
(1) - (4)	.3426	1.2613*	2.7955*	6.6248**	8.4592**
	(0.47)	(1.69)	(1.74)	(2.30)	(2.46)
SENATE					
(1) 1-2 years (Buys)	0.6454	-0.2148	-0.1773	-0.7078	-0.1981
(Sells)	1.3993	0.2237	-0.1033	0.7574	2.5933
Buy-Sell	-0.7539	-.4385	-.0740	-1.4653	-2.7914
	(0.81)	(0.62)	(0.07)	(0.91)	(1.22)
(2) 3-4 years (Buys)	0.4340	0.0799	-1.3145	-1.7752	-3.2388
(Sells)	0.1095	1.0073	-1.5566	-3.2538	-2.1590
Buy-Sell	.3246	-.9274	.2421	1.4785	-1.0798
	(0.33)	(0.95)	(0.15)	(0.52)	(0.35)
(3) 5-6 years (Buys)	-0.3347	0.7016	0.7008	0.4221	-2.2383
(Sells)	0.3790	-0.6759	-1.6802	-1.0912	-0.7809
Buy-Sell	-.7137	1.3775*	2.3810*	1.5133	-1.4574
	(0.67)	(1.90)	(1.87)	(0.77)	(0.59)
(4) 7-8 years (Buys)	-0.4686	-0.0805	0.1205	1.2673	0.0570
(Sells)	0.1269	0.0744	-0.3006	-1.1418	-0.8210
Buy-Sell	-.5955	-.1548	.4211	2.4091**	.8779
	(1.13)	(0.39)	(0.69)	(2.39)	(0.60)
(1) - (4)	-.1584	-.2837	-.4951	-3.8744**	-3.6693
	(0.15)	(0.37)	(0.44)	(2.06)	(1.31)

The reported numbers are the average DGTW adjusted returns during various holding periods following the formation month. The portfolios are weighted based on month 0 shares traded of each stock. Panel A reports returns for House Members 2, 4, 6, and 8 years prior to retirement. It also reports the difference between the buy-sell portfolios 2 years prior to retirement and the buy-sell portfolios 8 years prior to retirement. Panel B reports similar results for Senate members. The returns are reported in percent per holding period. *, **, *** indicate significance at the 10%, 5% and 1% levels, respectively.

2.8 Alternative Explanations for Abnormal Returns

Previous studies have analyzed common stock returns for several subsamples of congressmen. Ziabrowski et al. (2004) find there are no significant differences between the abnormal returns of Democrats and Republicans, but seniority is a significant factor. The common stock investments of Senators with the least seniority (serving less than seven years) significantly outperform the investments of the most senior Senators (serving more than 16 years). Eggers and Hainmueller (2014) investigate whether political relationships between members and firms impact politician portfolio choices. They find that congressmen stock holdings are skewed toward firms in their home districts and firms whose PACs gave them campaign contributions. However, they do not disproportionately invest in companies to which they are connected through their committee assignments. Congressmen's returns on their investments in firms in which they have a connection (firms located in a congressman's home district or that made campaign contributions) tend to outperform their returns on investments in firms with no connection.

I also analyze common stock returns for other subsamples. Specifically I analyze whether abnormal returns vary for Senate and House members depending on their net worth and seniority.

2.8.1 Net Worth

I expect that a congressman with a lower net worth will feel like she has more to gain from investing on private information than a congressman with a high net worth. Table 5 describes the distribution of estimated net worths across all congressmen, House members, and Senators. Each year, I assign the congressmen's net worths to quintiles, where quintile 1

(Q1) is the lowest net worth and quintile 5 (Q5) is the highest. This is done for all congressmen and separately for House members and Senators. Not surprisingly, the Senators tend to be wealthier than the Representatives. If net worth impacts whether congressmen trade on their private information then I expect the effect to be stronger in the House.

Table 2.5: Summary of Congressmen Net Worth

	Mean	Min	Max	Median
ALL CONGRESS				
Q1	-50313.77	-19000000	236013	60503
Q2	373755.6	165505	647015	374003
Q3	924998.5	514511	1695514	870508
Q4	2647182	1181301	4694011	2515658
Q5	31100000	3886521	501000000	10500000
HOUSE				
Q1	-93449.34	-19000000	199506	42361
Q2	312478	115502	525012	306503
Q3	770993.7	430504	1444009	745757.5
Q4	2158189	991524	4005007	2028011
Q5	24,000,000	3257041	5.01E+08	7751982
SENATE				
Q1	236665.7	-1767771	576008	247503
Q2	834578.4	466015	1640031	773506
Q3	2211478	998003	3740014	2000528
Q4	5464595	2405516	12100000	5182015
Q5	61700000	7881552	337000000	28500000

Each year, congressmen's estimated net worth is divided into quintiles, where Q1 is the lowest net worth and Q5 is the highest. This is done for all congressmen, the House members, and Senators. Net worth estimates are from the Center for Responsive Politics.

Table 6 reports the raw and DGTW-adjusted returns for the aggregate portfolio of all stocks bought (buys) or sold (sells) by House members or Senators in each net worth quintile, and the hedged portfolio (Buys – Sells). The most noteworthy results are for the House member net worths that fall in Quintile 3. Specifically, House members with an average net worth of $770,994 earned significantly positive DGTW adjusted returns, at the 5% level, on

Table 2.6: Raw and DGTW Adjusted Returns for Net Worth Quintiles

Panel A: Raw Returns	Month 0	Month +1	Month+1 through Month+3	Month+1 through Month+6	Month+1 through Month+12
HOUSE					
Q1					
Buys	0.1370	0.7882	2.6007	4.9407	9.9261
Sells	1.4888	1.5626	2.9924	4.4268	11.9391
Buy-Sell	-1.35174	-0.7745	-0.3917	0.5139	-2.0129
	(1.62)	(0.93)	(0.24)	(0.25)	(0.58)
Q2					
Buys	1.1442	-0.4093	-1.7462	-0.9153	1.7071
Sells	0.3705	-0.3801	0.5073	2.6871	4.4715
Buy-Sell	0.7737	-0.0292	-2.2535	-3.6024*	-2.76438
	(0.65)	(0.04)	(1.42)	(1.73)	(0.95)
Q3					
Buys	0.3424	0.3209	3.0498	5.9011	11.6619
Sells	2.2008	1.0741	0.9231	2.5922	5.9098
Buy-Sell	-1.8585*	-0.7532	2.1266*	3.3089*	5.7521*
	(1.81)	(1.07)	(1.75)	(1.69)	(1.90)
Q4					
Buys	-0.1930	0.9179	2.7936	6.0897	9.8057
Sells	0.1454	0.5829	1.1095	3.5669	7.0975
Buy-Sell	-0.3384	0.3350	1.6841*	2.5228*	2.7082*
	(0.64)	(0.59)	(1.66)	(1.66)	(1.69)
Q5					
Buys	0.7663	0.3188	1.9414	4.1818	10.2208
Sells	0.9712	1.1328	2.9502	5.2922	9.2799
Buy-Sell	-0.2048	-.8140*	-1.009	-1.1104	0.9408
	(0.40)	(1.92)	(1.27)	(0.92)	(0.62)
Q1-Q5	-1.1469	.03947	.61707	1.62432	-2.95376
	(1.20)	(0.04)	(0.33)	(0.73)	(0.83)
SENATE					
Q1					
Buys	0.8999	1.1403	1.1538	1.2883	0.4992
Sells	-1.0493	-0.7704	-0.6307	-1.3169	0.7555
Buy-Sell	1.9492**	1.9107**	1.7845*	2.6052*	-0.2564
	(2.33)	(2.23)	(1.68)	(1.88)	(0.12)
Q2					
Buys	0.55254	-0.1018	0.0022	0.4247	2.0374
Sells	0.87734	0.6141	-0.2881	0.7103	2.5666
Buy-Sell	-0.3248	-.71586	0.2903	-0.2856	-0.5293
	(0.36)	(1.07)	(0.26)	(0.18)	(0.20)
Q3					
Buys	1.8863	0.98055	2.149	4.8928	7.7807
Sells	0.3089	0.42345	2.0494	3.8923	6.3913
Buy-Sell	1.5774*	0.55711	0.0996	1.0005	1.3894
	(1.81)	(0.66)	(0.08)	(0.57)	(0.54)
Q4					
Buys	1.3449	0.9930	3.0193	5.2492	7.6734
Sells	0.4503	-0.0581	-0.5675	0.6157	3.7520
Buy-Sell	0.8946	1.0511	3.5868***	4.6334***	3.9214*
	(0.95)	(1.62)	(3.04)	(3.57)	(1.96)
Q5					
Buys	-0.1969	0.6920	2.4017	4.4709	6.7799
Sells	1.1363	0.7834	1.2960	3.2007	6.4234
Buy-Sell	-1.3332***	-0.0914	1.1058	1.2703	.3565
	(2.73)	(0.20)	(1.49)	(1.15)	(0.24)
Q1-Q5					
	3.2824***	2.0022**	.6787	1.3349	-.61291
	(3.42)	(2.10)	(0.54)	(0.77)	(0.23)

Table 2.6: (cont'd)

Panel B: DGTW	Month 0	Month +1	Month+1 through Month+3	Month+1 through Month+6	Month+1 through Month+12
HOUSE					
Q1					
Buys	-0.5721	0.3238	0.3544	0.5325	0.7019
Sells	0.8279	0.8829	1.3707	1.1507	4.3410
Buy-Sell	-1.4001**	-0.5591	-1.0163	-0.6182	-3.6390
	(2.31)	(0.83)	(0.84)	(0.36)	(1.32)
Q2					
Buys	0.8463	-0.7916	-2.6655	-3.9344	-5.9121
Sells	-0.1282	-0.4738	-0.8091	-0.9896	-0.7597
Buy-Sell	0.9745	-0.3178	-1.8565	-2.9448	-5.1524*
	(0.86)	(0.52)	(1.22)	(1.26)	(1.89)
Q3					
Buys	0.2533	0.1305	1.8229	2.6735	4.1972
Sells	1.6433	0.6585	-0.5571	-1.4109	-2.4864
Buy-Sell	-1.3901	-0.5280	2.3800**	4.0844**	6.6836**
	(1.49)	(0.87)	(2.28)	(2.43)	(2.51)
Q4					
Buys	-0.5229	0.1729	0.4797	1.6875	0.8988
Sells	-0.1192	0.0410	-0.8305	-0.5272	-1.6847
Buy-Sell	-0.4037	0.1319	1.3102	2.2147*	2.5834*
	(0.79)	(0.28)	(1.50)	(1.72)	(1.81)
Q5					
Buys	0.31985	-0.1717	0.2124	0.0740	1.03113
Sells	0.34151	0.5088	0.5471	0.5125	0.52477
Buy-Sell	-0.02166	-0.6805*	-0.3347	-0.4386	0.50636
	(0.05)	(1.66)	(0.51)	(0.42)	(0.38)
Q1-Q5	-1.3784*	.1214	-.6816	-.1796	-4.1454
	(1.90)	(0.16)	(0.47)	(0.10)	(1.47)
SENATE					
Q1					
Buys	0.3694	0.6685	-0.0153	-0.4275	-1.7033
Sells	-0.8285	-1.0221	-0.9785	-1.7466	-0.1848
Buy-Sell	1.1979*	1.6905**	0.9633	1.3191	-1.5185
	(1.84)	(2.25)	(1.0)	(0.97)	(0.85)
Q2					
Buys	0.19365	-0.8793	-1.3364	-2.5341	-3.302
Sells	0.39711	0.1223	-1.5127	-2.2030	-3.311
Buy-Sell	-0.20346	-1.0016*	0.1763	-0.3311	0.009
	(0.27)	(1.75)	(0.19)	(0.26)	(0.00)
Q3					
Buys	1.0862	0.25178	0.16086	0.1926	-1.8613
Sells	0.1207	-0.18339	0.03952	-0.56996	-0.1158
Buy-Sell	0.9656	0.43518	0.12134	0.76256	-1.7455
	(1.29)	(0.61)	(0.10)	(0.46)	(0.75)
Q4					
Buys	0.6049	0.1939	0.8073	1.2099	-1.6216
Sells	0.6150	-0.4710	-1.5129	-1.2822	-0.4424
Buy-Sell	-0.0101	0.66487	2.3202**	2.4921**	-1.1793
	(0.01)	(1.23)	(2.51)	(2.16)	(0.68)
Q5					
Buys	-0.5543	0.3088	0.7957	0.5967	-1.0761
Sells	0.5593	0.3469	0.1296	0.9295	2.0146
Buy-Sell	-1.1137***	-0.0381	0.6661	-0.3328	-3.0908***
	(2.94)	(0.11)	(1.26)	(0.41)	(3.27)
Q1-Q5					
	2.3115***	1.7286**	.2972	1.65189	1.57229
	(3.17)	(2.05)	(0.26)	(1.03)	(0.77)

The reported numbers are the average Raw (Panel A) and DGTW adjusted (Panel B) returns during various holding periods following the formation month for each net worth quintile for all congressmen, House members, and Senators. The quintiles are formed each year and then averaged across all years (2004-2012). The returns are reported in percent per holding period. *, **, *** indicate significance at the 10%, 5% and 1% levels, respectively.

their portfolios during the 3, 6, and 12 month holding periods. The abnormal returns on these portfolios are 2.37%, 4.08% and 6.68% respectively. House members with net worths that fall in Quintile 4 also earn smaller, but significantly positive abnormal returns during the 6 and 12 month holding periods of 2.21% and 2.58%, respectively. The Senators who have a net worth in Quintile 4 earn significantly positive abnormal returns, at the 5% level, on their buy-sell portfolios during the 3 and 6 month holding periods of 2.32% and 2.49%, respectively.

However, Senators with a net worth in Quintile 5, the richest Senators, earned a significantly negative return at the 1% level of -3.09% for the 12 month holding period. These results suggest that congressman, and especially the House members, with a net worth in the fourth quintile make better investment decisions than the congressman in other quintiles.

2.8.2 Seniority

I expect the most senior congressmen to make more informed investments than those congressmen with the least seniority. Positions of power within Congress, such as committee memberships, are generally determined by party and seniority. Also, it is likely that congressmen develop more and better connections that will gain them access to insider information as they increase their experience in Congress.

Table 7, Panel A reports the DGTW-adjusted returns for the aggregate portfolio of all stocks bought (buys) or sold (sells) by House members 2 through 16 years, and greater than 16 years after being voted into office. The Table also reports the hedged portfolios (Buys – Sells). Panel B reports the same results for Senators. The most surprising results are in the House. House members earn significant positive abnormal returns, 1 to 2 years after being voted into

Table 2.7: DGTW Adjusted Returns for Various Seniorities

	Month 0	Month +1	Month+1 through Month+3	Month+1 through Month+6	Month+1 through Month+12
Panel A: HOUSE					
Years following initial election					
(1) 1-2 years (Buys)	-0.0465	0.0078	0.1104	0.9036	0.0408
Sells	0.6332	0.7499	-0.5097	-2.8644	-3.4844
Buy-Sell	-0.6797	-0.7421	0.6201	3.768*	3.5252**
	(0.97)	(1.05)	(0.53)	(1.83)	(1.99)
(2) 3-4 years (Buys)	0.0370	0.0284	0.5547	0.4546	0.4535
Sells	-0.4047	0.1733	-0.0447	0.1303	0.1561
Buy-Sell	0.4417	-0.1448	0.5994	0.3243	0.2974
	(1.05)	(0.43)	(1.00)	(0.35)	(0.27)
(3) 5-6 years (Buys)	0.97008	0.58023	0.0976	0.5297	1.5784
Sells	-0.57052	-0.1812	-0.2774	-1.3728	-1.3533
Buy-Sell	1.5406***	0.76143	0.3750	1.9025	2.9316*
	(2.81)	(1.61)	(0.41)	(1.47)	(1.86)
(4) 7-8 years (Buys)	-0.2481	-0.52629	-0.3831	-0.8381	-1.9374
Sells	-0.0354	-0.12297	1.5495	0.3652	0.8797
Buy-Sell	-0.2127	-0.40331	-1.9326	-1.2033	-2.8171
	(0.35)	(0.80)	(1.62)	(1.00)	(1.61)
(5) 9-10 years (Buys)	-0.5410	-0.2190	-0.2261	-1.8535	0.7271
Sells	-0.3059	0.8026	1.1245	1.2023	1.3755
Buy-Sell	-0.2351	-1.0216	-1.3505	-3.0558*	-0.6484
	(0.36)	(1.23)	(1.05)	(1.91)	(0.38)
(6) 11-12 years (Buys)	-0.1346	0.2152	0.7208	0.6935	0.274
Sells	-0.1798	0.0656	-1.0831	-0.9838	-1.0918
Buy-Sell	0.0452	0.1495	1.8038	1.6773	1.3658
	(0.07)	(0.29)	(1.79)	(1.03)	(0.58)
(7) 13-14 years (Buys)	-0.0401	-0.3561	-0.2416	-0.0825	0.2512
Sells	0.3928	-0.7539	-0.8712	-1.5688	-2.9801
Buy-Sell	-0.4329	0.3978	0.6296	1.4864	3.2313
	(0.66)	(0.74)	(0.61)	(1.03)	(1.59)
(8) 15-16 years (Buys)	-0.9015	-0.5506	0.1088	0.2894	0.9431
Sells	0.3843	0.0826	0.1169	0.5263	0.3008
Buy-Sell	-1.2859	-0.6332	-0.0081	-0.2369	0.6423
	(2.77)	(1.03)	(0.01)	(0.13)	(0.22)
(9) >16 Terms (Buys)	1.2419	0.1598	-0.1548	-1.5413	-0.8370
Sells	-0.0106	0.2071	0.8647	1.4785	2.3621
Buy-Sell	1.2525	-0.0474	-1.0194	-3.0198**	-3.1991
	(1.64)	(0.10)	(1.10)	(2.26)	(1.64)
(1) - (9)	-1.9322*	-0.6947	1.6395	6.7878**	6.7244**
	(1.71)	(0.77)	(0.95)	(2.49)	(2.40)

Table 2.7: (cont'd)

	Month 0	Month +1	Month+1 through Month+3	Month+1 through Month+6	Month+1 through Month+12
Panel B: SENATE					
Years following initial election					
(1) 1-2 years (Buys)	0.3824	-0.3751	-0.2635	-0.5518	0.3375
Sells	-0.7833	-0.3205	-0.1383	-0.4983	1.5007
Buy-Sell	1.1657*	-0.0546	-0.1253	-.05359	-1.1632
	(1.81)	(0.09)	(0.13)	(0.04)	(0.51)
(2) 3-4 years (Buys)	0.2954	0.5037	-0.0418	-0.3519	-1.6619
Sells	0.5675	0.4587	-0.0690	0.5512	-1.6862
Buy-Sell	-0.2722	0.0450	0.0272	-0.9031	0.0243
	(0.33)	(0.08)	(0.03)	(0.63)	(0.01)
(3) 5-6 years (Buys)	0.5570	-0.1619	-0.2539	-0.6321	-0.7701
Sells	0.0920	0.0419	0.6985	-0.3607	1.2118
Buy-Sell	0.4650	-0.2038	-0.9525	-0.2714	-1.9819
	(0.50)	(0.33)	(0.86)	(0.17)	(0.95)
(4) 7-8 years (Buys)	0.4331	0.4200	-1.0315	-0.6464	-0.1319
Sells	0.2018	0.6000	-0.0914	-0.4808	-1.0555
Buy-Sell	0.2312	-0.1801	-0.9400	-0.1656	0.9237
	(0.27)	(0.26)	(0.91)	(0.12)	(0.47)
(5) 9-10 years (Buys)	0.3866	1.0367	0.0707	0.2839	-1.1535
Sells	0.0728	0.5455	-2.3646	-3.1489	-1.1386
Buy-Sell	0.3138	0.4912	2.4353*	3.4328*	-0.0150
	(0.49)	(0.54)	(1.97)	(1.83)	(0.01)
(6) 11-12 years (Buys)	0.4029	-0.6480	-0.3923	-1.3086	-3.7256
Sells	0.0109	-0.7232	-0.6384	-0.9841	-2.3519
Buy-Sell	0.3920	0.0752	0.2461	-0.3246	-1.3737
	(0.42)	(0.12)	(0.19)	(0.20)	(0.78)
(7) 13-14 years (Buys)	-0.2885	0.4624	-0.0869	-1.0451	-1.7937
Sells	0.0434	-0.8608	-1.4275	-1.5753	-1.4603
Buy-Sell	-0.3319	1.3232	1.3406	0.5303	-0.3335
	(0.63)	(1.33)	(1.19)	(0.34)	(0.17)
(8) 15-16 years (Buys)	-0.6008	0.2110	0.9972	1.6892	1.4466
Sells	-0.7089	-0.0872	0.2107	1.8298	1.4801
Buy-Sell	0.1081	0.2982	0.7865	-0.1405	-0.0335
	(0.16)	(0.59)	(1.03)	(0.10)	(0.02)
(9) >16 Terms (Buys)	-0.3825	0.3627	0.6610	0.6715	-1.2064
Sells	0.4784	0.2832	0.0703	0.7278	2.5141
Buy-Sell	-0.8609**	0.0795	0.5907	-0.0564	-3.7205***
	(2.01)	(0.20)	(1.14)	(0.06)	(3.51)
(1) - (9)	2.0266**	-0.1340	-0.7159	.0028	2.5573
	(2.49)	(0.19)	(0.64)	(0.00)	(0.92)

The reported numbers are the average DGTW adjusted returns during various holding periods following the formation month. The portfolios are weighted based on month 0 shares traded of each stock. Panel A reports returns for House Members 2, 4, 6, 8, 10, 12, 14, and 16 years after being voted into office. It also reports the difference between the buy-sell portfolio returns 2 years after being voted into office and the buy-sell portfolio returns greater than 16 years after being voted into office. Panel B reports similar results for Senate members. The returns are reported in percent per holding period. *, **, *** indicate significance at the 10%, 5% and 1% levels, respectively.

office, on their hedged portfolios during the 6 and 12 month holding periods of 3.77% and 3.53%, respectively. There is also a significant difference between the abnormal returns earned 2 years following being elected in the House and more than 16 years after being elected for the 6 and 12 month holding periods. The differences are 6.79% for the 6-month holding period and 6.72% for the 12-month holding period, which are both significant at the 5% level.

These results are surprising for a couple of reasons. First, I expected the more experienced House members to earn better returns on their common stock transactions than the less experienced House members. Second, the most experienced House members do not earn abnormal returns, but the earlier results suggest House members perform well during their final years prior to retirement. It is important to note that only the House members who choose to retire perform well during their final term. However, the House members who leave office unwillingly because they failed to get reelected do not perform well during their final term, on average.

2.9 Conclusion

In this chapter, I examine the hypothesis that politicians try to maintain a good reputation while they care about reelection, but act corruptly once they decide to retire, thus imposing a term limit. Using a dataset on congressmen's common stock transactions, I find that House members earn abnormal returns of 4.9% and 8.2% for a 6 and 12-month holding period, respectively, during their final term in office. However, Senators do not earn abnormal returns during the 2, 4, 6, or 8 years prior to their retirement. The difference in results between the

House and Senate is likely caused by the difference in the laws governing the House and the Senate.

I also examine whether abnormal returns vary for Senate and House members depending on their net worth and seniority. The most notable result is that House members earn abnormal returns of 3.5% for the 12-month holding period during their first term in office. Otherwise, House members and Senators earn mediocre or negative returns.

This chapter provides evidence that trading on private political information should be regulated. I provide evidence that House members trade on private political information during their final term prior to retiring from office, while Senators do not. A policy implication of this study is that the House Committee on Ethics should have no "statute of limitations" for investigations of past violations of House members. This may discourage unethical behavior during the final term in office.

CHAPTER 3: Wealth Accumulation by U.S. Congress Members

3.1 Introduction

Do members of the United State Congress enhance their wealth by making investments based on private political information? There is substantial evidence in support of the hypothesis that they do. These investments are not only in public corporations, but also in land, private equity, and/or private business ventures. A myriad of examples of congressmen making gains on private government information is provided in a widely cited book by Peter Schweizer (2008) as well as a substantial number of news articles. For example, in 2002 and 2004, House Speaker Dennis Hastert bought farm land in Plano, Illinois before inserting a $207 million earmark[12] into the federal highway bill to build major roads near the farm land which would increase the value of the land as a potential residential area.[13] As a result, the value of the land increased to $36,000 an acre, a 140% profit. This was not considered illegal due to the fact that Hastert was able to demonstrate that at least one other person would benefit from the earmark.

A substantial body of research in political science, finance, and economics supports the idea that politicians may get rich by investing on their private government information. Studies that focus on countries outside of the U.S. have supported this hypothesis primarily through

[12] An earmark is a provision in congressional legislation that allocates a specified amount of money to a specific project, program, or organization.

[13] Another example is Ken Calvert's earmark for $1.5 million to support commercial development around the March Air Reserve Base in Southern California, shortly after he and a partner purchased a 4.3-acre parcel of land just south of the base for $550,000. Less than a year after the earmark, Calvert and his partner sold the land, without making improvements to it, for $985,000. (Hamburger, T., Pugmire, L., and Simon, R. (2006, May 15). Rep. Calvert's Land of Plenty. *Los Angeles Times.* Retrieved from http://articles.latimes.com)

focusing on relationships between politicians and public corporations. For example, it has been found that political connections help firms gain access to bank loans (Claessens, Feijen, and Laeven, 2008; Faccio, 2006; Khwaja and Mian, 2005), obtain special tax exemptions (Faccio, 2006), and increase the likelihood of a government bailout (Faccio, Masulis, and McConnell, 2006). Given these findings, it is not surprising that political connections increase firm value (Fisman, 2001), or improve firm performance (Johnson and Mitton, 2003).

Similar to studies on corruption in foreign countries, the hypothesis that U.S. congressmen may get rich by investing on their private information has been supported through focusing on congressional public equity ownership and relationships between U.S. congressmen and public corporations. It has been found that political connections in the U.S. help firms receive more government contracts (Tahoun, 2014) and receive help in dealing with regulatory agencies (Correia, 2009; Yu and Yu, 2006).[14] In addition, Tahoun and van Lent (2010) found that US congressmen's equity ownership is positively correlated with their voting in favor of legislative proposals to bail out the financial sector during the recent financial crisis. Thus, similar to studies on other countries, it is not surprising that shifts in the controlling party of the U.S. government have a large impact on the market value of firms dependent on the firm's political leaning (Jayachandran, 2006), S&P 500 companies earn positive abnormal stock returns following the announcement of the nomination of a politically connected individual to the board (Goldman, Rocholl, and So, 2009), and congressmen's connected investments generally outperform their other investments (Eggers and Hainmueller, 2014).

[14] Yu and Yu (2006) find that firms' lobbying activities make a significant difference in fraud detection. Correia (2009) finds that firms may use political expenditure to avoid investigation and prosecution by the SEC for misreporting.

In this chapter, I investigate whether congressmen act corruptly by focusing on returns to their total wealth rather than only focusing on their public equity investments. The net wealth data is obtained from congressmen's Financial Disclosure Reports, in which they are required to annually publicly disclose detailed information on their holdings and transactions in income-producing property and assets such as stocks, bonds, mutual funds, hedge funds, private equity funds, and real property. This data was obtained from the Center for Responsive Politics for years 2004 to 2012. The use of total wealth should provide a better estimate of the extent to which congressmen use private government information for individual gain, since total wealth measures capture gains to real estate/ land ownership, private equity investments, and small business ownership. While the actions of public corporations are very much in the public eye, little is known about the activities of private companies and real estate deals. Thus, congressmen may be more likely to act corruptly through these outlets due to their private nature. This idea is supported by Tahoun's (2014) finding that the positive relationship between congressional stock ownership and corporate campaign contributions is stronger for small firms, suggesting that congressmen have a greater ability to provide benefits to firms that are relatively small since this is less likely to attract public scrutiny.

Several studies examine the wealth accumulation of politicians. Eggers and Hainmueller (2009) find that Britain's Conservative Members of Parliament (MPs) make financial gains in public office while Labour MPs do not. Fisman, Schulz, and Vig (2012) and Bhavnani (2012) examine the wealth accumulation of Indian parliamentarians using financial disclosures and find that election winners have a greater rate of wealth accumulation than losers. To the best of my knowledge only two studies have examined wealth accumulation of U.S. congressmen.

Querubin and Snyder (2009) examine the wealth accumulation of U.S. congressmen during 1850-1880 using a regression discontinuity design and find that those who won elections earned more than those who lost only during 1870-1880. Lenz and Lim (2009) compare the wealth accumulation of U.S. House members to the wealth accumulation of a matched sample of non-politicians from the Panel Study on Income Dynamics and find that U.S. representatives accumulate wealth at the same rate as similar households.[15]

My study differs from previous examinations of the wealth accumulation of U.S. congressmen in some key aspects. For example, I use the capital asset pricing model (CAPM) and Fama-French Three-Factor model to measure whether U.S. congressmen earn abnormal returns to their wealth. I also use the human capital CAPM (HCAPM) model developed by Jagannathan and Wang (1996), which significantly improves upon the traditional CAPM. In addition to measuring congressmen's abnormal returns to total wealth, I determine whether these returns are due to market timing or asset selection abilities. That is, can congressmen successfully predict future market movements to appropriately shift their assets in or out of the market, and/or can they consistently select undervalued securities? I use two models to separate market timing and asset selection ability. The first, Treynor and Mazuy's (henceforth TM) (1996) model, adds a quadratic term to the traditional CAPM model to measure market timing skills. The second approach, Henriksson and Merton's (henceforth HM) (1981) model, adds a bull and bear market condition to the traditional CAPM to measure market timing skills.

[15] The Panel Study of Income Dynamics (PSID) interviewed a nationally representative sample of approximately 3,000 households, to ask for the same financial disclosure information that congressmen are required to disclose.

The first main result of this chapter is that congressmen earn large abnormal returns to their wealth, thus confirming the public perception that congressmen unethically trade on private government information. Using the CAPM and Fama-French three-factor models I find that for Congress as a whole, members on average earn abnormal returns to their wealth of 6.68% per year and 6.39% per year, respectively. These results hold when I include a measure of the aggregate return to human capital to improve upon the traditional CAPM, as suggested by Jagannathan and Wang (1996). Using the HCAPM model I find that congressmen earn large abnormal returns to wealth of 8.25%. Similarly, the Fama-French three-factor model with the inclusion of human capital suggests that congressmen earn abnormal returns to wealth of 7.99%.

The second main result is that congressmen earn abnormal returns due to their asset selection abilities. Using the Treynor-Mazuy and Henriksson-Merton models, I find that the average alpha, the measure for selectivity, is 5.93% and 5.53%, respectively. These results withstand the incorporation of the human capital factor in the TM and HM models. Given previous research on relationships between congressmen and firms that suggests congressmen make legislative decisions based on their portfolio holdings, that they invest on their private government information, and that they earn greater returns on investments in firms from which they receive campaign contributions, the result that congressmen earn positive abnormal returns due to their selection abilities is not surprising.[16]

[16] For examples see Correia (2009), Eggers and Hainmueller (2014), Goldman, Rocholl, and So (2009), Jayachandran (2006), Tahoun (2014), Tahoun and van Lent (2010), Yu and Yu (2006).

I conclude my data analysis with an investigation of whether powerful congressmen drive the main results that congressmen earn large abnormal returns to their wealth. The political science literature suggests that members of powerful committees have the ability to award benefits to their connections (Edwards and Stewart, 2006) and affect the distributions of government benefits (Roberts, 1990). Thus, members of powerful committees may earn larger returns to wealth than non-committee members, due to greater access to private information and greater abilities to bestow benefits to their connections. To rule out the possibility that powerful politicians are driving the main results of this chapter, I separately measure the returns to wealth for powerful congressmen using the Fama-French three-factor model with and without the human capital factor. The estimated returns to wealth for powerful congressmen suggest that these do not drive the main results.

3.2 Data Description

According to the "Ethics in Government Act of 1978", members of Congress are required to file annual reports disclosing detailed information on their financial holdings and transactions in income-producing property and assets, such as stocks, bonds, mutual funds, hedge funds, private equity funds, and real property. Personal financial disclosure forms are filed annually by May 15, covering the preceding calendar year for government officials, their spouses, and dependent children. Although the financial disclosure reports (FDRs) are not audited, failure to honestly disclose is a felony and members have been prosecuted.[17]

I obtained data on congressmen's net wealth and financial assets from the annual financial disclosure reports submitted between 2004 and 2012 by members of Congress and

[17] The most recent is Senator Ted Stevens of Alaska.

transcribed by the Center for Responsive Politics (CRP)[18]. The net worth was calculated by summing each congressman's assets and subtracting any liabilities reported in their FDRs. Congressmen report the value of each of their assets and liabilities within broad ranges of $1 to $1,000, $1,001 to $15,000, $15,001 to $50,000, $50,001 to $100,000, $100,001 to $250,000, $250,001 to $500,000, $500,001 to $1,000,000, $1,000,001 to $5,000,000, $5,000,000 to $25,000,000, $25,000,001 to $50,000,000, and over $50,000,000. To determine each congressman's net wealth, the CRP summed the minimum possible values for each asset, the maximum possible values for each asset, the minimum liability amount, and the maximum liability amount. The maximum debt figure was then subtracted from the minimum asset figure and the minimum debt figure was subtracted from the maximum asset figure. The average of these two limits is assumed to be their net worth.

There are some shortcomings in disclosure rules that can affect these estimates. Personal residences that do not produce income are not reported and other personal property, such as cars or artwork are not reported unless they are owned for investment purposes. Retirement accounts from employment with the federal government are not reported. Although these types of assets are not required to be disclosed, some congressmen report them and when they do, these values are included.

Overall, my dataset includes 190,684 reported end-of-year assets holdings and estimated net worth for 1,026 members of Congress. Table 1 provides summary statistics for net wealth and asset ownership. The asset ownership is broken down into subcategories,

[18] I start in 2004 because Financial Disclosure Reports filed since 2004 have been made readily available at opensecrets.org.

Table 3.1: Summary of Net Worth and Assets

	Mean Net Worth	Median Net Worth	Real Estate	Risky	Public Equity	Safe	Blind Trust
Panel A: All Congressmen							
2004	$6,180,330	$743,508	10.96%	14.25%	50.41%	17.87%	6.49%
2005	6,467,371	780,014	10.86	10.17	56.26	19.05	3.65
2006	6,823,783	832,760	12.42	11.31	52.86	19.46	3.94
2007	7,803,586	834,256	12.82	15.35	47.32	21.80	2.71
2008	6,467,679	803,507	14.05	20.19	32.88	30.20	2.67
2009	6,595,942	907,260	17.39	18.93	41.02	21.93	0.73
2010	7,395,009	967,519	16.43	21.22	42.04	18.75	1.57
2011	7,982,701	966,002	17.33	18.68	43.39	19.05	1.55
2012	7,605,058	1,022,762	18.95	12.86	49.00	18.01	1.19
Panel B: House Members							
2004	$4,409,041	$653,008	14.48%	12.88%	60.03%	11.45%	1.17%
2005	4,668,715	656,756	15.32	8.41	64.18	10.97	1.11
2006	5,293,304	742,155	15.69	12.49	56.69	14.16	0.97
2007	5,836,054	732,509	15.78	13.95	54.21	15.79	0.27
2008	4,847,519	698,004	17.59	20.76	33.82	27.78	0.04
2009	5,181,048	789,012	19.78	21.06	42.70	16.44	0.02
2010	6,081,902	809,511	18.68	23.44	42.02	14.43	1.42
2011	6,601,313	858,005	18.35	20.93	43.88	15.44	1.41
2012	6,016,726	878,509	19.81	12.18	51.77	14.68	1.56
Panel C: Senators							
2004	$13,202,844	$1,638,341	8.28%	19.64%	37.33%	22.44%	12.31%
2005	13,677,434	1,744,024	8.66	16.88	38.42	30.44	5.61
2006	13,084,792	1,713,044	8.65	13.11	47.01	24.78	6.45
2007	16,479,072	2,000,528	8.40	22.00	38.15	27.80	3.65
2008	13,135,091	1,927,285	10.98	25.32	30.26	30.03	3.41
2009	12,780,328	2,108,781	15.82	18.31	33.12	30.25	2.50
2010	13,035,817	2,363,023	13.80	18.71	35.82	29.28	2.40
2011	14,503,391	2,778,529	18.24	17.04	37.47	24.74	2.52
2012	14,753,942	2,877,550	17.64	15.47	41.02	25.49	0.38

Estimates are not adjusted for inflation. Real estate assets include land, residential and commercial buildings, and real estate partnerships. Risky assets include private businesses, partnerships, and private equity investments. Public equity assets include stocks and mutual funds, and safe assets include cash, bonds, retirement funds, and insurance. Net wealth and real estate exclude personal residences.

including real estate, risky assets, public equity, and safe assets. Real estate assets include land, residential and commercial buildings, and real estate partnerships. Risky assets include private businesses, partnerships, and private equity investments. Public equity assets include stocks and mutual funds, and safe assets include cash, bonds, retirement funds, and insurance.

The wealth for all congressmen increased from $6,180,330 to $7,605,058, from 2004 to 2012, with a small decline during the financial crisis. Large portions of their wealth are held in real estate and private equity, with the majority of their wealth being held in public equity, ranging from 33% to 56%, which is not unusual for wealthy individuals. Not surprisingly, senators are much wealthier than House members, with the average senator reporting a mean wealth of about $13,820,560 compared to $5,467,092 for House members.

3.3 Methodology

I examine the annual returns to congressmen's wealth. To measure the performance of their portfolios of total assets, I follow the standard approach in the empirical finance literature and initially compare the wealth returns of congressmen to the risk adjusted market return. Specifically I evaluate performance by using the Capital Asset Pricing Model (CAPM):

$$R_{p,t} - R_t^f = \alpha + \beta\left(R_t^m - R_t^f\right) + \varepsilon_{p,t}$$

where $R_{p,t}$ is the net wealth return for member i in year t, R_t^m is the return on the market portfolio, and R_t^f is the risk-free rate or return on US Treasury Bills. The key quantity of interest in this panel regression is the intercept α, which measures the average abnormal return.

In addition, I evaluate performance of congressmen's wealth portfolios by using the Fama-French Three factor model:

$$R_{p,t} - R_t^f = \alpha + \beta_p\left(R_t^m - R_t^f\right) + \beta^{SMB} SMB_t + \beta^{HML} HML_t + \varepsilon_{p,t}$$

where $R_{p,t}$ is the net wealth return for member i in year t, R_t^m is the return on the market portfolio, R_t^f is the risk-free rate or return on US Treasury Bills, SMB is the difference between a portfolio of small stocks and a portfolio of big stocks, and HML is the difference between a portfolio of high book-to-market stocks and a portfolio of low book-to-market stocks. See Fama and French (1993) for details on the construction of the factors.[19]

Next, I test for asset selection ability and market timing abilities of the congressmen. A number of studies have been proposed in the literature for measuring selectivity and market timing ability.[20] Here I consider two different regressions analyses. The first model was proposed by Treynor and Mazuy ((1996), hereafter TM), which adds a quadratic term to the CAPM equation (1). TM argued that if an individual can forecast market returns, he will adjust his portfolios market exposure depending on the signal he receives about future market returns. Thus, the portfolio will be described by the following equation:

$$R_{p,t} - R_t^f = \alpha_p + \beta_p\left(R_t^m - R_t^f\right) + \gamma_p\left(R_t^m - R_t^f\right)^2 + \ \varepsilon_{pt}$$

where the coefficients α_p and γ_p represent selectivity and market timing skills, respectively. I

[19] Data on the Fama-French three-factor model are obtained from Ken French's website http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/

[20] For examples see Treynor and Mazuy (1966), Jensen (1972), Fama (1972), Henriksson and Merton (1981), Bhattacharya and Pfleiderer (1983), Chang and Lewellen (1984), among others.

also consider an extended version of this model, which includes the Fama-French size and value factors to provide greater explanatory power than the basic model.

The second model I use to separate market timing and selectivity ability was proposed by Henriksson and Merton ((1981), hereafter HM). The HM model is shown in the following regression equation:

$$R_{p,t} - R_t^f = \alpha_p + \beta_{Dp}\left(R_t^m - R_t^f\right) + \beta_{(U-D)p}\left(R_t^m - R_t^f\right)D_{Ut} + \varepsilon_{pt}$$

where D_{Ut} is a dummy variable that is equal to 1 if the excess market return is positive and 0 otherwise. The coefficients α_p and $\beta_{(U-D)p}$ represent selectivity and market timing skills, respectively, where $\beta_{(U-D)p}$ equals the difference for portfolio p between its up and down market beta. As with the TM model, I also include an extended version of the HM model, which includes the Fama-French size and value factors.

In addition to the basic CAPM, TM and HM models above, I test for selectivity and market timing skills with an expanded version of each model which includes a measure of the aggregate return to human capital. A significant criticism of the capital asset pricing model (CAPM), which was first addressed by Mayers (1973) and Roll (1977), is that the traditional measures of the market portfolio are incomplete since they do not consider returns to human capital, which accounts for a large portion of wealth. Motivation for including measures of the aggregate return to human capital to improve the definition of the market portfolio is given by Fama and Schwert (1977), Jagannathan and Wang (1996) and Campbell (1996). More specifically, Jagannathan and Wang (1996) find that the growth rate in aggregate labor income is a priced risk factor and therefore, the human capital CAPM (HCAPM) significantly improves

upon the traditional CAPM. To incorporate human capital into CAPM, suppose the return on the market portfolio of all assets is a weighted average of the return to financial wealth, R_t^F, and the return to non-financial (human capital) wealth, R_t^{NF}. That is:

$$R_t^m = \omega R_t^{NF} + (1-\omega) R_t^F$$

where R_t^m is the return on the market portfolio and ω is the aggregate share of human wealth in total wealth.

Some assumptions must be made about how to measure the return to human capital since this is difficult to observe. Fama and Schwert (1977) and Jagannathan and Wang (1996) assume that the expected return to human capital is constant. Under this assumption, the rate of change in wealth is given by:

$$R_t^{NF} = \frac{L_t - L_{t-1}}{L_{t-1}}$$

where L_t is the difference between the National Income and Product Account (NIPA) of the USA measure of annual total personal income and total dividends, normalized by total US population, following Heaton and Lucas (2000)[21]. The return to labor is lagged one year to account for the lags in the official reports of aggregate income. Using this approach, the return to a particular congressman's wealth, R_{it}, can be expressed as:

$$R_{pt} = \alpha_p + \beta^F R_t^F + \beta^{NF} R_t^{NF} + \varepsilon_{pt}$$

I proxy for the return to financial wealth with the value-weight return of all CRSP firms

[21] From Table 2.2 in the National Income and Product Account of the USA published by the Bureau of Economic Analysis, US Department of Commerce.

incorporated in the US and listed on the NYSE, AMEX, or NASDAQ.

In addition to the basic HCAPM model, I evaluate the returns to congressmen wealth by including the three Fama-French factors in the HCAPM model:

$$R_{pt} - R_t^f = \alpha_p + \beta^F R_t^F + \beta^{NF} R_t^{NF} + \beta^{SMB} R_t^{SMB} + \beta^{HML} R_t^{HML} + \varepsilon_{pt}$$

I also include the estimate for the return to human capital in the TM model:

$$R_{p,t} - R_t^f = \alpha_p + \beta^{NF} R_t^{NF} + \beta_p\left(R_t^m - R_t^f\right) + \gamma_p\left(R_t^m - R_t^f\right)^2 + \varepsilon_{pt}$$

and the HM model:

$$R_{p,t} - R_t^f = \alpha_p + \beta^{NF} R_t^{NF} + \beta_{Dp}\left(R_t^m - R_t^f\right) + \beta_{(U-D)p}\left(R_t^m - R_t^f\right)D_{Ut} + \varepsilon_{pt}$$

The inclusion of human capital likely results in more accurate estimates than the standard TM and HM models.

3.4 Empirical Results

The results from the CAPM and Fama-French three factor regressions are displayed in Table 2. The table includes results for all congressmen, House members, and senators, separately. To be included in my sample of wealth returns, congressman year returns must be greater than -100%. The returns worse than -100% are dropped as outliers since many of these largely negative numbers are due to congressmen reporting mortgages without also reporting the value of the house and also due to large legal liabilities for congressmen fighting criminal charges. For Congress as a whole, I find that members on average earn abnormal returns to their wealth of 6.68% per year, using the CAPM model and 6.39%, using the Fama-French three-

Table 3.2: Fama-French Three Factor Model

	Alpha	Mktrf	SMB	HML	Adj. R^2	N
All Congressmen	6.6788***	0.2808***			0.0112	4249
	(8.56)	(6.83)				
	6.3859***	0.2593***	0.2179*	0.083	0.0118	
	(8.18)	(6.07)	(1.96)	(0.98)		
House	6.9762***	0.2753***			0.0102	3376
	(7.74)	(5.71)				
	6.6203***	0.2471***	0.2916**	0.0396	0.0111	
	(7.39)	(4.95)	(2.25)	(0.41)		
Senate	5.5713***	0.2582***			0.0113	839
	(3.63)	(3.59)				
	5.5104***	0.2657***	-0.0866	0.2421	0.0113	
	(3.47)	(3.47)	(-0.42)	(1.39)		

This table presents results for the CAPM and Fama-French Three-Factor models for all congressmen, House members, and senators for the entire time period, 2004-2012. The dependent variable for both models is the net wealth return, R_p, in excess of the risk free rate, R_f, observed at the end of each year. The intercept, α, measures the average annual abnormal return. The t-statistics, in parentheses, are adjusted for heteroscedasticity. ***, **, and * indicate significance at the 1%, 5%, and 10%, levels, respectively

factor model. The results for the House and Senate are of similar strength. House members on average earn positive abnormal returns to their wealth of 6.62%, when senators earn positive abnormal returns of 5.5%. These results are significant at the 1% level in all cases, suggesting that congressmen are able to make superior returns on their wealth portfolios. The t-statistics are adjusted for heteroscedasticity.

Table 3, panels A and B, display the means of the selectivity and timing values for all congressmen, House members and senators, using the TM and HM models, respectively. As in Table 2, the t-statistics are adjusted for heteroscedasticity. The TM model shows a significantly positive mean alpha, the measure of selectivity, and an insignificant γ_p, the measure of market timing ability. Alpha is strongly significant at the 1% level for all congressmen, House members, and senators. The results of the HM model are similar. Alpha is significant at the 1% level

Table 3.3: Treynor-Mazuy and Henriksson-Merton Models

Panel A: Treynor-Mazuy Model

	α	β_p	γ_p	β^{SMB}	β^{HML}	Adj. R^2
All Congressmen	5.9287***	0.3042***	0.0017			0.0112
	(5.35)	(6.22)	(0.89)			
	7.1737***	0.2230***	-0.002	0.3093*	0.0742	0.0117
	(5.23)	(3.21)	(-0.68)	(1.78)	(0.86)	
House	5.5384***	0.3201***	0.0032			0.0105
	(4.35)	(5.56)	(1.46)			
	6.8875***	0.23486***	-0.0007	0.3224	0.0367	0.0108
	(4.29)	(2.87)	(-0.19)	(1.57)	(0.37)	
Senate	7.5596***	0.1970**	-0.0045			0.0119
	(3.30)	(2.39)	(-1.36)			
	8.3865***	0.1330	-0.0072	0.2544	0.205	0.0121
	(3.42)	(1.15)	(-1.54)	(0.89)	(1.15)	

Panel B: HM model

	α	β_{Dp}	$\beta_{(U-D)p}$	β^{SMB}	β^{HML}	Adj. R^2
All Congressmen	5.5257***	0.2234***	0.1451			0.0113
	(4.51)	(3.47)	(1.16)			
	7.4615***	0.3084***	-0.151	0.3283*	0.0859	0.0117
	(4.33)	(3.75)	(-0.69)	(1.69)	(1.01)	
House	5.1173***	0.1833**	0.2329			0.0106
	(3.65)	(2.45)	(1.59)			
	7.1700***	0.2722***	-0.077	0.3477	0.0413	0.0108
	(3.56)	(2.83)	(-0.30)	(1.53)	(0.42)	
Senate	7.2698***	0.3453***	-0.2173			0.011
	(2.83)	(2.88)	(-0.92)			
	8.6856***	0.4124***	-0.4497	0.2461	0.246	0.0115
	(2.77)	(2.86)	(-1.17)	(0.73)	(1.41)	

This table reports results from the basic Treynor-Mazuy and Henriksson-Merton models, as well as the augmented models which include the Fama-French factors SMB and HML. In the TM model the coefficients α_p and γ_p represent the mean values of the selectivity and market timing skills, respectively, for all congressmen, House members, and senators for the entire time period, 2004-2012. In the HM model the coefficient α_p represent selectivity and $\beta_{(U-D)p}$ represents market timing skills. The t-statistics, in parentheses, are adjusted for heteroscedasticity. ***, **, and * indicate significance at the 1%, 5%, and 10%, levels, respectively

while, $\beta_{(U-D)p}$, the measure for market timing, is insignificant in all cases. The results in Table 3 suggests that all congressmen, House members, and senators on average have superior ability to select assets, but do not have market timing skills.

Table 4, Panel A presents results of the standard HCAPM model and the Fama-French three factor model with the inclusion of human capital. Consistent with the results of the traditional CAPM model, the results of the HCAPM model suggest that congressmen earn large abnormal returns to wealth of 8.25%, while House members earn abnormal returns of 8.89% and senators earn abnormal returns of 5.28%. The results in all cases are significant at the 1% level. Also consistent with the results of the traditional Fama-French three factor model, the Fama-French three factor model with the inclusion of human capital suggests that congressmen earn large abnormal returns. Though the results are not as strong as the HCAPM model, they are significant at the 1% level.

Table 4, Panels B presents results for the TM model with the inclusion of human capital. Consistent with results of the standard TM model, the results of the TM model when the average return to human capital is included suggest that all congressmen have asset selection abilities. The TM model results also suggest both House members and senators have asset selection abilities, but to not have market timing abilities. That is, alpha is significant at the 1% level for all congressmen, House members, and senators. However, γ_p, is insignificant for all congressmen, House members, and senators, suggesting they are not able to consistently time the market.

Table 4, Panels C presents results for the HM model with the inclusion of human capital. Consistent with all previous results, the results of the HM model when the return to human capital is included suggest that all congressmen have asset selectivity abilities. Alpha is significant at the 1% level for all congressmen and House members. However, the results of the

Table 3.4: HCAPM Model

Panel A: HCAPM Model

	α	β_p	β^{NF}	β^{SMB}	β^{HML}	Adj. R^2
All Congressmen	8.2510***	0.2619***	0.8775**			0.0121
	(7.73)	(6.39)	(2.16)			
	7.9878***	0.2518***	0.8386*	0.1035	0.1291	0.0123
	(6.59)	(6.03)	(1.75)	(0.78)	(1.38)	
House	8.8873***	0.2519***	1.0772**			0.0114
	(7.24)	(5.34)	(2.30)			
	8.2850***	0.2390***	0.8782	0.1731	0.0870	0.0115
	(5.95)	(4.98)	(1.59)	(1.14)	(0.80)	
Senate	5.2814**	0.2616***	-0.1568			0.0101
	(2.49)	(3.21)	(-0.20)			
	6.2260***	0.2628***	0.3658	-0.1380	0.2635	0.0103
	(2.57)	(3.16)	(0.39)	(-0.53)	(1.44)	

Panel B: Treynor-Mazuy Model

	α	β_p	γ_p	β^{NF}	β^{SMB}	β^{HML}	Adj. R^2
All Congressmen	8.4499***	0.2568***	-0.0003	0.9101**			0.0118
	(4.92)	(4.76)	(-0.15)	(2.12)			
	9.3413***	0.1966***	-0.0029	0.9288**	0.2283	0.1208	0.0123
	(5.20)	(2.81)	(-1.01)	(2.00)	(1.26)	(1.34)	
House	8.1891***	0.2699***	0.0011	0.9633**			0.0112
	(4.25)	(4.28)	(0.44)	(1.99)			
	9.0488***	0.2079**	-0.0017	0.9296*	0.2430	0.0826	0.0113
	(4.40)	(2.51)	(-0.48)	(1.79)	(1.15)	(0.80)	
Senate	8.7256***	0.1757*	-0.0054	0.4129			0.011
	(2.27)	(1.81)	(-1.32)	(0.43)			
	9.7854***	0.1175	-0.0078	0.5943	0.1988	0.2367	0.0114
	(2.66)	(1.02)	(-1.65)	(0.55)	(0.62)	(1.24)	

Panel C: HM model

	α	β_{Dp}	$\beta_{(U-D)p}$	β^{NF}	β^{SMB}	β^{HML}	Adj. R^2
All Congressmen	8.0030***	0.2534***	0.0233	0.8426**			0.0118
	(4.39)	(3.80)	(0.16)	(1.99)			
	9.7844***	0.3248***	-0.2269	0.9332**	0.2565	0.1387	0.0123
	(4.67)	(3.94)	(-1.02)	(2.01)	(1.28)	(1.53)	
House	7.8309***	0.2159***	0.0994	0.9288*			0.0112
	(3.83)	(2.79)	(0.61)	(1.95)			
	9.5174***	0.2889***	-0.1551	0.9442*	0.2772	0.0940	0.0113
	(3.94)	(2.99)	(-0.60)	(1.82)	(1.19)	(0.91)	
Senate	7.9228*	0.3534***	-0.2492	0.2184			0.0099
	(1.90)	(2.75)	(-0.87)	(0.23)			
	10.0674**	0.4217***	-0.4914	0.5559	0.1987	0.2789	0.0107
	(2.40)	(2.91)	(-1.27)	(0.52)	(0.54)	(1.49)	

This table reports results from the CAPM, TM and HM models with the inclusion of the human capital factor, as well as the augmented models which include the Fama-French factors SMB and HML. In the TM model the coefficients α and γ_p represent the mean values of the selectivity and market timing skills, respectively. In the HM model the coefficient α_p represent selectivity and $\beta_{(U-D)p}$ represents market timing skills. The models are used for all congressmen, House members, and senators separately for the entire time period, 2004-2012. The t-statistics, in parentheses, are adjusted for heteroscedasticity. ***, **, and * indicate significance at the 1%, 5%, and 10%, levels, respectively

human capital HM model are significant at the 10% level for senators and significant at the 5% level when the Fama-French factors are included. $\beta_{(U-D)p}$, the measure of market timing ability is insignificant in all cases.

The results in Tables 3 and 4 suggest that all congressmen, as well as both Houses of Congress individually, on average have superior asset selectivity abilities but do not have market timing skills. That congressmen are able to increase their wealth through their ability to select profitable assets is consistent with previous research. Eggers and Hainmueller's (2014) find that members invest disproportionately in local firms and campaign contributors and that these investments outperform their non-local and non-connected investments, as well as the market as a whole.[22] These results suggest that politicians may use information gained through their interactions with local firms and campaign contributors when determining their stock portfolios or are able to influence legislation that impacts corporations in their portfolios through, for example, earmarks or granting government contracts. Tahoun (2014) finds evidence that firms with a strong ownership-contribution relationship, measured by congressmen's stock ownership and firms' campaign contributions, receive more government contracts. In addition, Tahoun and van Lent (2010) find that US congressmen's equity ownership is positively correlated with their voting in favor of legislative proposals to bail out the financial sector. Taken together, these studies support the hypotheses that congressmen use the information they gain through their positions of power to carefully select their investment and/or influence legislation to benefit their portfolios.

[22] This local bias is approximately twice as large as what has been shown for other individuals (Ivkovic and Weisbenner, 2005) and approximately ten times larger than that found for professional money managers (Coval and Moskowitz, 1999)

3.5 Powerful Congressmen

If abnormal returns to wealth are a result of members of Congress granting advantages to companies or communities in which they own assets, then I would expect returns to wealth to depend on the political power of congressmen. The political science literature suggests that congressional committees play a key role in establishing strong politician-firm relationships due to repeated interactions (Kroszner and Stratmann, 1998). In addition, the literature shows that committees do not have equal ability to award benefits to their connections (Edwards and Stewart, 2006) and a politician's power affects the distributions of government benefits (Roberts, 1990). Thus, it is likely that powerful committee members earn larger returns to wealth than non-committee members, due to greater access to private information and greater abilities to bestow benefits to their connections.

To rule out the possibility that powerful politicians are driving the results in the previous section, I separately measure the returns to wealth for powerful politicians. Table 5 replicates the CAPM, TM and HM models, with and without the inclusion of human capital, for members of Congress who serve on powerful committees. Following Eggers and Hainmueller (2014), powerful committees in the House are defined as Rules, Appropriations, Ways and Means, and Commerce and in the Senate they are defined as Appropriations, Finance, and Commerce. The results in Table 5, Panel A are not supportive of the idea that positive abnormal returns to wealth are being driven by the most powerful members. That is, the Fama-French three-factor model shows that powerful congressmen earn abnormal returns to wealth of 5.65%, significant at the 1% level, while the results for "All Congressmen" in Table 3 suggest congressmen on

Table 3.5: Returns to Wealth for Powerful Members of Congress

Panel A: Fama-French three-factor model with and without human capital

	α	β_p	β^{SMB}	β^{HML}	β^{NF}	Adj. R^2	N
All	5.6526***	0.2196***	0.2676	0.2924**		0.0136	1746
Congressmen	(5.17)	(3.50)	(1.60)	(2.52)			
	7.8115***	0.2122***	0.1084	0.3548***	1.0811*	0.0144	
	(4.25)	(3.39)	(0.53)	(2.85)	(1.65)		
House	5.8730***	0.2077***	0.4151*	0.1386*		0.0141	1227
	(4.55)	(2.69)	(1.96)	(1.84)			
	7.0765***	0.2039***	0.3252	0.2880*	0.5932	0.0137	
	(3.49)	(2.64)	(1.32)	(1.96)	(0.81)		
Senate	5.0519**	0.2341**	-0.1520	0.3817		0.0086	505
	(2.41)	(2.20)	(-0.58)	(1.77)			
	9.2115**	0.2172**	-0.4488	0.5151**	2.1564	0.0128	
	(2.34)	(2.07)	(-1.24)	(2.15)	(1.56)		

Panel B: TM model with and without human capital

	α	β_p	γ_p	β^{SMB}	β^{HML}	β^{NF}	Adj. R^2	N
All	4.3630**	0.2783***	0.0032	0.1097	0.3113***		0.0133	1746
Congressmen	(2.15)	(2.73)	(0.74)	(0.38)	(2.60)			
	6.7866**	0.2537**	0.0023	0.0070	0.3645***	1.0195	0.0140	
	(2.58)	(2.49)	(0.51)	(0.02)	(2.87)	(1.55)		
House	4.0942	0.2889**	0.0044	0.1965	0.2812**		0.0140	1227
	(1.58)	(2.22)	(0.78)	(0.51)	(1.96)			
	5.2615*	0.2773**	0.0040	0.1461	0.3056**	0.4835	0.0134	
	(1.68)	(2.13)	(0.69)	(0.37)	(2.03)	(0.66)		
Senate	5.2948*	0.2231	-0.0006	-0.1225	0.3783*		0.0066	505
	(1.70)	(1.48)	(-0.10)	(-0.34)	(1.70)			
	10.4143**	0.1684	-0.0027	-0.3291	0.5045	2.2279	0.0111	
	(2.14)	(1.14)	(-0.44)	(-0.80)	(2.07)	(1.60)		

Panel C: HM model with and without human capital

	α	β_{Dp}	$\beta_{(U-D)p}$	β^{SMB}	β^{HML}	β^{NF}	Adj. R^2	N
All	5.1342**	0.1381	0.2428			0.5247	0.0110	1746
Congressmen	(2.02)	(1.43)	(1.25)			(0.89)		
	6.8465**	0.1720	0.1238	0.0203	0.3526***	1.0377	0.0139	
	(2.27)	(1.38)	(0.37)	(0.06)	(2.83)	(1.59)		
House	3.4876	0.0759	0.4204*			0.2146	0.0116	1227
	(1.26)	(0.66)	(1.86)			(0.32)		
	5.7153	0.1476	0.1741	0.2010	0.2854*	0.5322	0.0131	
	(1.58)	(0.94)	(0.41)	(0.47)	(1.94)	(0.74)		
Senate	9.1417	0.2906	-0.2371			1.1812	0.0048	505
	(1.64)	(1.63)	(-0.62)			(1.00)		
	9.5493*	0.2315	-0.0437	-0.4178	0.5162**	2.1717	0.0108	
	(1.74)	(1.19)	(-0.09)	(-0.88)	(2.17)	(1.57)		

This table reports results from the Fama-French three-factor, TM and HM models with and without the inclusion of the human capital factor. In the TM model the coefficients α and γ_p represent the mean values of the selectivity and market timing skills, respectively. In the HM model the coefficient α_p represent selectivity and $\beta_{(U-D)p}$ represents market timing skills. β^{NF} measures the return to human capital. These models are used for all congressmen, House members, and senators separately for the entire time period, 2004-2012. ***, **, and * indicate significance at the 1%, 5%, and 10%, levels, respectively.

average earn abnormal returns to wealth of 6.39%. The results are similar for House members and senators. In both cases, the alpha estimates for all House members and all senators are slightly greater than the results for powerful House members and senators. The interpretation of the results in Table 5 is similar when the human capital factor is included. Taken together, these results suggest, that if anything, the congressmen who do not serve on powerful committees earn greater returns to wealth than those who do serve on powerful committees.

In Table 5, Panels B and C I examine whether powerful Congress members' returns to wealth are due to selectivity or market timing abilities. Consistent with the results in Tables 3 and 4, the results in Table 5 suggest powerful congressmen have superior abilities to select profitable assets. However, these results are weaker than those for the entire sample of congressmen, House members, and senators, providing further evidence against the hypotheses that powerful congressmen may be driving the results in Tables 3 and 4.

3.6 Conclusion

A substantial body of research in political economy supports the idea that politicians may get rich by investing on their private government information by examining public connections between politicians and firms (Tahoun, 2014; Correia, 2009; Yu and Yu, 2006; Tahoun and van Lent, 2010; Jayachandran, 2006; Goldman, Rocholl, and So, 2009; Eggers and Hainmueller, 2014). By focusing on connections that are subject to public scrutiny, results are subject to a downward bias due to congressmen's concerns about their reputations. In this chapter, I investigated whether congressmen act corruptly by focusing on returns to their total wealth rather than only focusing on their public equity investments. The use of total wealth

likely provides a better estimate of the extent to which congressmen use private government information for personal gain, since total wealth measures capture gains to real estate/ land ownership, private equity investments, and small business ownership. These assets have a more private nature than public equity, thus providing greater opportunities for congressmen to behave unethically.

I find evidence that congressmen's use of private information for personal gain may be more widespread than previous research suggests. Using the Fama-French Three-Factor model and Jagannathan and Wang's (1996) human capital models, I find that congressmen earn large abnormal returns to wealth of 6.39% per year on average, thus providing further support to the public perception that congressmen may unethically gain from their positions of power and proving, once again, that incentives are important drivers of behavior. While Eggers and Hainmueller's (2013) results that congressmen's stock portfolios have mediocre performance suggest that public disclosure of their financial assets has discouraged the use of private information for gains in public markets, the results in this chapter suggest that congressmen may have more private methods of using their private information for personal gain.

In addition to testing for abnormal returns to wealth, I also examine whether congressmen earn large returns as a result of their ability to select profitable assets or successfully time the market. Using two models, the first proposed by Treynor and Mazuy ((1996) and the second proposed Henriksson and Merton ((1981), I find that the large returns to wealth are due to superior asset selectivity rather than market timing skills. These results are consistent with previous literature which suggests congressmen carefully select where to

invest based on their government positions and may attempt to influence legislation depending on their portfolio holdings (Eggers and Hainmueller, 2014; Tahoun, 2014; Tahoun and van Lent; 2010).

The results of this chapter warrant further research. There is evidence that congressmen's local public equity investments perform very well (Eggers and Hainmueller, 2014). This is likely the case for congressmen's private investments as well. While this study indirectly tests for whether congressmen earn large returns to their wealth due to ownership of assets in opaque markets, it may be possible to test this more directly by examining whether there is an association between the earmarks congressmen insert in legislation and increases in their wealth.

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