

Capital Gains and Capitol Games: Evaluating the Stock Trading Performance of U.S. Congress Members

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Abstract

This thesis investigates the securities trading performance of U.S. congressional politicians from 2012 to 2023, leveraging a dataset of over 61,000 transactions disclosed under the STOCK Act. We apply a multi-method empirical approach, integrating portfolio construction, regression analysis, and event study methodologies to analyze investment performance and its determinants based on financial and political data. Our analysis systematically evaluates the impact of risk factors, biographical data, and political characteristics on the observed investment outcomes. Notably, our findings highlight a significant connection between returns and congressional committee assignments, suggesting an informational advantage contributing to investment success. This evidence points toward the potential utilization of private information, a hypothesis further supported by the frequency of transactions in companies acquired shortly after. Our research contributes to the academic discourse on the intersection of financial markets and political influence, providing a nuanced understanding of how specific legislative roles may afford informational benefits in stock trading. By uncovering these dynamics, our thesis not only calls the current regulatory frameworks into question but also suggests avenues for investors to leverage political disclosures in formulating strategies that could potentially generate alpha.

JEL Classification: G11, G12, G14, G15, G18

Keywords: Active investing, Stock returns, U.S. Congress, Private information, Insider trading



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1. Introduction

The intersection between political influence and market performance, particularly within the context of U.S. congressional stock trading, presents a significant area of investigation that has garnered increasing academic and public interest over recent years. The premise of this thesis centers on an in-depth examination of the securities trading activities of U.S. congressional members from 2012 through 2023, employing a dataset of over 61,000 transactions mandated for disclosure under the STOCK Act. The STOCK Act requires every Member of Congress to disclose any financial transaction of stocks, bonds, commodities and options that is above \$1,000 in Periodic Transactions Reports (PTR) within 45 days of the transaction (112th US Congress, 2012). This legislation, aimed at enhancing transparency and curbing alleged insider trading among U.S. lawmakers, sets the regulatory backdrop against which this study is positioned. By integrating a multifaceted empirical methodology encompassing portfolio construction, regression analysis, and event study approaches, this research endeavors to elucidate the factors influencing the investment performance of congressional members, with a particular focus on the role of committee assignments and the potential informational advantages they confer.

The motivation for this study is twofold. First, it seeks to extend the discourse initiated by previous research, which has provided conflicting views on whether congressional members outperform the market, leveraging their unique access to non-public information. Despite the STOCK Act's intent to mitigate insider trading, skepticism persists regarding its efficacy and the ethical dimensions of legislators' market activities. Thus, by analyzing a comprehensive dataset that spans a significant temporal scope, this thesis aims to contribute empirical evidence to this ongoing debate. Second, the study explores the nuanced dynamics between political roles, specifically committee assignments, and stock trading performance, positing that such roles may afford congress members informational benefits that materially impact their investment decisions. For retail traders such as ourselves, an interesting question is furthermore, when politicians are using private information to generate personal gains anyway, whether other investors can use the disclosure information and the politicians' private information contained in these transactions, to generate alpha themselves and benefit off of the politicians' knowledge.

1.1 Literature Review

U.S. politicians have long been alleged to unfairly create personal wealth by using their positions of power as members of the U.S. Congress. One can observe politicians' net worth rise far above any level that can realistically be achieved through work and investments done with average to above-average skill. Nancy Pelosi, the former House speaker, for example has been representing San Francisco as House Representative for more than 36 years, earning a maximum of \$223,500 annually, but saw her net worth increase to >\$114 million in 2018 (Nadelle, 2023, OpenSecrets, 2018). With annual trading volumes of hundreds of million Dollars, securities trading seems like one potential source of said personal wealth. Well-timed transactions before major legislation, such as the Covid-lockdown of the economy in 2020, sparked public doubt about the integrity of congressional stock trading and the information forming the basis of the transactions (Strauss, 2020). In recent years, enabled by the disclosures under the 2012 STOCK Act, researchers have increasingly examined U.S. congressional stock trading activity and its underlying factors. Following recent media attention to this particular issue, the central question so far is whether U.S. politicians generally and consistently outperform the broader market and what risk factors politicians are exposed to. Although research articles focusing on this are not scarce, there is no consensus among them.

Belmont et al., 2022, for example, employs several benchmarks for evaluating the performance of these trades, including industry-size benchmarks and models like the CRSP Value Weighted Index, the Fama-French three-factor, and the Carhart four-factor models, and assess the buy-and-hold abnormal returns (BHARs) and cumulative abnormal returns (CARs) over different time horizons to determine if officials had superior investment performance. They find no evidence supporting this hypothesis. This conclusion is supported by Eggers and Hainmueller, 2013, who analyze existing studies of congressional stock trading between 1985 and 2001 and conduct a new analysis of trades in the 2004–2008 period. However, Abdurakhmonov et al., 2022 finds that stock purchases by senators generate abnormal positive returns around the disclosure date, indicating that the market perceives these purchases positively. It also discovers that this effect is more pronounced when the purchasing senator has jurisdiction over the firm's industry and when the firm has directly engaged with the senator through political activities. This is

supported by Ziobrowski and Boyd, 2011, who analyzes the common stock transactions made by House delegates between 1985 and 2001. They conclude that Senators, as well as House Members, earn significant positive abnormal returns on their stock investments.

Another highly discussed topic among researchers who conclude that the U.S. Congress outperforms the broader market has been why this persistent outperformance exists. The media seems to believe that despite the STOCK Act, politicians can utilize insider information. Recently, a former congressman was sentenced to nearly two years in prison for insider trading (Richards, 2023). As a result of this interest and happenings, academic researchers also try to understand what these abnormal returns can be attributed to.

Abdurakhmonov et al., 2022 partly attributes abnormal returns to the market reaction after disclosures and political activities such as contributions and lobbying. Ziobrowski and Boyd, 2011, on the other hand, concludes that the superior investment performance of Congress may be a result of politicians utilizing non-public information for personal financial gain.

1.2 Research Question

While consistent abnormal returns generated by the U.S. congressional politicians have been covered by academic papers and news articles in the past decade, others have found contradictory results such as consistent underperformance. This thesis builds upon the findings of past research, Belmont et al., 2022 and Abdurakhmonov et al., 2022 in particular, and aims to answer the question of politician stock returns in conclusion and provide additional insights into the driving forces of those returns through our research that spans the 12 years since the STOCK Act was enacted. First of all, we extend and test the previously done research by including the post-pandemic period, when the financial markets were more volatile than they were between 2012 and 2020. Additionally, the COVID pandemic period was marked by many substantial legislative packages such as COVID lockdowns in March 2020, the Coronavirus Preparedness and Response Supplemental Appropriations Act, 2020, and the >\$3 trillion stimulus packages passed in 2020 and 2021 as well as the Inflation Reduction Act of 2022. This increase in political

activity and the larger impact of legislation on the economy created unparalleled trading opportunity especially when using private information about planned legislation. Extending the observation period throughout the entire Covid pandemic until the end of 2023 allows us to examine changes in trading and returns pattern after the pandemic outbreak. We therefore test our hypotheses on new data, and assess whether abnormal returns persist in this highly volatile period. Additionally, we not only reproduce the work done by Belmont et al., 2022 and Abdurakhmonov et al., 2022, including testing returns against various benchmarks, market reaction, short-term and long-term performance, and the impact of political activities, but we also test the impact of investing in companies that get acquired post-transaction, and politician-specific characteristics and experience using in-sample and out-of-sample analyses.

The results of this thesis are highly relevant in a variety of ways. First, it increases transparency of politicians' activities in Washington, D.C., enabling the public to scrutinize their elected officials and assess whether they really put their focus on advancing their voters and serve the American people. Secondly, it calls the current regulatory framework into question and makes a case for a broader ban on individual stock transactions for U.S. politicians while they serve in Congress by uncovering a potential connection between private information gained through their political service and politician portfolio returns. This goes far beyond the current regulation where politicians are free to trade securities and are only obligated to report those transactions within 45 days. Thirdly, it establishes empirical evidence for an investment strategy that generates superior returns by using the transaction disclosure information to replicate the portfolio owned by the U.S. Congress.

The thesis is structured in a comprehensible way that leads the reader through the various empirical analyses that comprise this research and step by step build up the reasoning.

Following the introduction, the thesis outlines the comprehensive process of data collection and preparation, detailing the assembly of a dataset that includes transactions data, politician biographical and political data, corporate action data, and stock price and returns data. This section is critical for understanding the empirical foundation upon which the subsequent analyses are built.

The core of the thesis revolves around the empirical methods employed to investigate the investment performance of U.S. congress members and the determinants of their trading outcomes. Through a series of analyses, including portfolio construction and regression models, the study meticulously evaluates the extent to which risk factors, political attributes, and especially committee assignments, influence stock trading performance. Additionally, event studies provide insights into the markets' reactions to trade disclosures, offering a nuanced perspective on the informational dynamics at play.

In the conclusion, the thesis synthesizes the insights gained from the empirical investigation, reflecting on the implications for financial markets, political accountability, and regulatory policy. It underscores the contribution of the study to the academic discourse on the intersection of finance and political influence, advocating for further research to explore the intricacies of this relationship and the effectiveness of legislative measures like the STOCK Act. Additionally, the thesis outlines avenues for further research, acknowledging limitations and proposing future studies to build on the findings presented. By offering a comprehensive analysis of U.S. congressional stock trading activities and their implications, this thesis aims to enrich the academic understanding of the interplay between political influence and market performance, contributing to informed policy discussions and ethical considerations in the realm of financial regulation.

2. Data Preparation

In this section we describe how we gathered the data used in our analysis. The disclosed information about U.S. politician securities transactions forms the very basis of our thesis. We add several data points to the transaction data to characterize the politician behind each transaction. These data points consist of biographical data such as gender and age, political data such as party, seniority, the number of bills sponsored by each politician, and committee memberships, as well as data that describes the trading activity of each politician. In addition to this data that builds up the main dataset, we compile data on corporate campaign contributions and transactions in close temporal proximity to corporate acquisitions (M&A). We access the CRSP database, provided by Wharton Research Data Services, to get the daily stock prices and returns. Our datasets are enriched with various other data (for example permanent politician identifier codes that allow us to uniquely relate to each politician and stock symbol changes) to increase the functionality and quality. In the following subsections, we describe each part of the data in detail.

2.1 Transactions Data

The U.S. exhibits a notable level of transparency in its political system, particularly regarding securities transactions by members of Congress. Federal politicians are mandated to publish Periodic Transaction Reports (PTR) that disclose any securities transactions exceeding a value of \$1,000 within 45 days post-transaction, a requirement instituted by the STOCK Act of 2012 (112th US Congress, 2012). This obligation extends beyond the politicians themselves to encompass close family members, including spouses, ensuring a broad scope of transparency. These disclosures represents the basis of our analysis.

Our transactions dataset contains over 61,800 individual securities transactions by U.S. congressional members starting in 2012, when the STOCK Act was enacted, through 2023. Periodic Transactions Reports are published as PDF files on the websites of the U.S. Senate and the Clerk of the House of Representatives. Yet, one has to open each individual file and partially read through hand-written notes to gather the transaction data. That is why we rely on previous research and data providers, who already collected the data and put it into an electronically readable dataset.

Thanks to the widespread interest U.S. congressional trading activity gained since 2020 especially, various online data providers were prompted to track and disseminate information on congressional financial disclosures. Prominent platforms such as Senate Stock Watcher (Senate Stock Watcher, 2024) and House Stock Watcher (House Stock Watcher, 2024), which both launched recently, offer insights into transactions over the last one to two years. Meanwhile, Quiver Quantitative (Quiver Quantitative, Inc., 2024) has emerged as a comprehensive source, providing a full dataset of U.S. Congress security transactions beginning in 2020, with continuous updates and expansions to include new datasets. Recently, Quiver Quantitative started offering tracking tools for retail traders on the WallStreetBets forum, analysis of Jim Cramer’s stock recommendations, a CNBC stock pick tracker, and U.S. Congress campaign contribution data. The platform directly accesses the U.S. House and Senate financial disclosure documents and adds them to the database. The accuracy of the data therefore is expected to be high. We therefore use the dataset from QuiverQuant for all securities transactions starting from 2020.

For the period before 2020, we use the dataset compiled by Belmont, Sacerdote, Sehgal, and Van Hoek, who analyzed U.S. congressional trading from 2012 through 2021 in their peer reviewed and published paper (Belmont et al., 2022) and generously provided us with their data package. This dataset contained biographical and political information on the politicians, including gender, date of birth, political party affiliation, and congressional district representation. The authors include an analysis of politician trading performance, hypothesizing an advantage derived from access to non-public information via committee assignments.

We combine the two datasets into a larger unbalanced panel dataset that contains all transactions starting in early 2012 through 2023. We use the overlapping period in 2020 and 2021 to verify the transactions contained in the two datasets. Additionally, we verify a sample of the transactions by analyzing the original disclosure documents (PTR) from both the Senate (U.S. Senate, 2024) and the House of Representatives (U.S. House of Representatives, 2024). The dataset extending through 2021 exhibited missing transaction amount data for a minor fraction of the transactions. To address this gap, we conduct a thorough examination of the original financial disclosure documents and add the missing data manually.

To enrich our dataset, political and biographical information about the politicians is meticulously gathered from a variety of data sources. This process involves the addition of biographical details, including gender and date of birth, alongside political specifics such as party affiliation, chamber membership within Congress (House or Senate), tenure reflecting their seniority, extent of policy-making activities, and committee assignments. We add these additional data points to the combined transactions dataset containing the >61,800 transactions collected from Belmont et al., 2022 as well as Quiver Quantitative, Inc., 2024.

2.2 Politician Data

Given the variety of data sources utilized, we frequently encounter inconsistencies in the naming conventions particularly for U.S. Congress members, presenting a significant challenge. To address this issue, it is imperative to implement a standardized naming protocol for politicians across our dataset. Additionally, we compile personal data of politicians to use as explanatory variables in our analyses. We rely on data providers to gather a consistent naming protocol and personal as well as political data on the U.S. Congressmembers.

Joshua Tauberer, the founder and CEO of govtrack.us, a legislative transparency project, regularly compiles data on U.S. federal legislators, which contains information on all current and historical members of the United States Congress (Tauberer, 2024a), providing us with personal and political data on each U.S. politician. We use the unique and permanent identifier "govtrack ID" to identify individuals in our dataset. This data also includes date of birth, congressional district, and the terms served in Congress.

Congressional committees are focus groups on certain legislative areas and the place where relevant legislation is written. These are core variables in our analyses. We collect the committees each individual politician is assigned to during each of their terms served in Congress (Committee assignments). We therefore extract the current committee assignments for the 118th U.S. Congress from Tauberer's dataset. The committee assignments up to 2017, spanning the 112th through 115th Congress, are taken from MIT political

scientists Stewart III and Woon (III and Woon, 2017). For the missing years from 2019 through 2022, we access the Congressional Directory and add the committee assignments for the 116th and 117th U.S. Congress (U.S. Government Publishing Office, 2020). We also manually incorporate educational and professional data for the approximately 400 U.S. politicians, who have traded stocks during our observation period. Finally, we add legislative activity data, such as bills sponsored or co-sponsored, based on congressional records (Congress.gov, 2024). While compiling all this data, we ensure the highest degree of quality by using only the well-established and renowned data sources and those that have established a cooperation with the original data provider. Although the United States are already very transparent in their political processes, data is rarely available readily compiled and in a useful format. We therefore use providers such as GovTrack (Tauberer, 2024b) that access the original data source and put the data in a usable format.

2.3 Corporate Action Data

As our transaction data sources utilize stock tickers to identify companies, we manually align these tickers with their corresponding permanent numbers (permno), leveraging the database provided by the Center for Research in Security Prices (CRSP). This alignment is particularly challenging due to the necessity of accounting for ticker symbol changes over our observation period, as CRSP associates only the most current ticker with a company's permno. We use stockanalysis.com, a data provider for fundamental securities analysis as well as market news, to compile a list of ticker changes during the observation period (Kris Gunnars, 2024). Additionally, we gather data on corporate actions such as mergers, acquisitions, and bankruptcies. This enables us to analyze congressional securities trading in connection to corporate action events.

2.4 Campaign Donor Data

To analyze a potential connection between U.S. politician stock trading activity and corporate campaign contributions, we use data provided by the Federal Election Commission, which shows flows of campaign donations between corporations and political candidates (Federal Election Committee, 2024). However, these fund flows cannot be observed directly from corporation to politician. In the U.S., much of the campaign

financing is done via Political Action Committees (PACs). PACs are organizations that collect donations and spend on campaigns for or against political candidates or donate them to candidate committees. This system is both complex and very transparent as all fund flows from individuals, corporations, and PACs to other PACs and candidates are publicly disclosed. We analyze both corporate donations and cross-PAC flows to connect campaign donations from publicly traded corporations to U.S. politicians.

2.5 Stock Price and Returns Data

We use the CRSP database to access daily returns and price information for all U.S.-listed companies (Center for Research in Security Prices, LLC, 2024). Additionally, CRSP provides monthly returns as well as returns on market indexes. In our analysis, we use the Fama French Carhart 4-Factor models (Fama and French, 1993, Carhart, 1997). The 4-Factor model return data is provided by the Kenneth R. French Data Library (French, 2024). Furthermore, we use CRSP to generate event studies on politicians' transactions to examine potential market reactions to transaction disclosures.

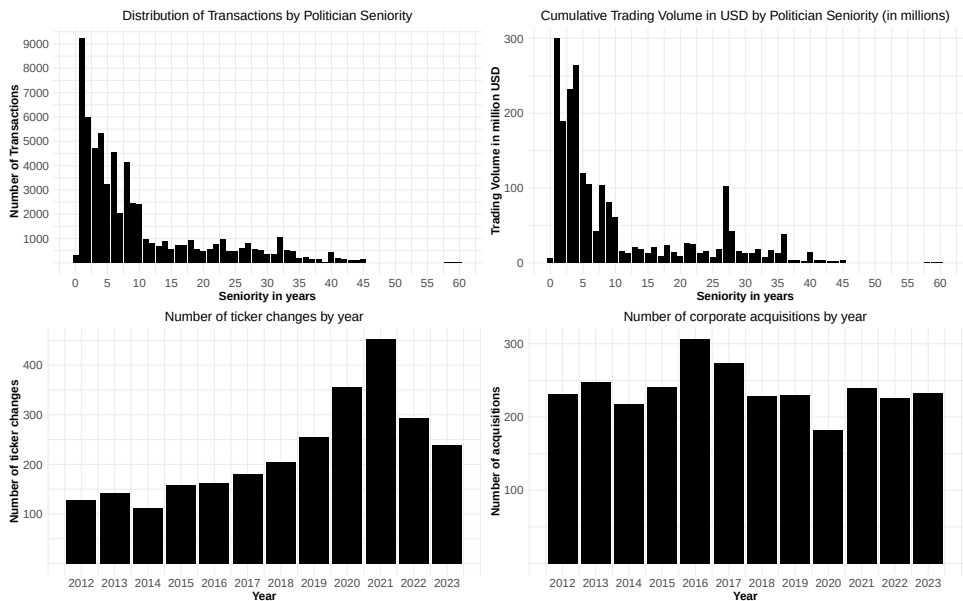


Figure 2.1. Summary statistics on compiled datasets

Our full dataset contains >61,800 transactions. Since the majority of politicians serves one through three terms, meaning a total of 6 years for Representatives and 18 years for senators, most stock transactions are registered from politicians with 0 through 10 years of seniority. The higher the seniority, the less securities transaction are observed as the number of politicians with higher seniority decreases. We observe mostly the same pattern for trading volume, with the exception of higher trading volume for certain seniority groups (e.g. 27 years of seniority and 36 years of seniority). These are few politicians, who trade with large volumes and therefore more substantially influence the overall U.S. Congress portfolio returns. Furthermore, many companies changed their stock symbols (ticker) during the observation period, peaking in 2021 with more than 400 changes. Due to data inconsistencies between the transaction reporting and the CRSP database, we track each symbol change to correctly attribute transactions. Finally, the corporate acquisitions (M&A) activity is consistently high motivates us to examine politician trading activity in this context. These descriptive statistics can be observed in Figure 2.1.

3. Empirical Methods and Results

This thesis aims to analyze the securities trading returns of Members of the U.S. Congress and identify the determining factors behind those returns. Hypothesizing that U.S. politicians might use private information gained through their work in Congress, we focus on analyses that potentially indicate the usage of non-public information as well as stock picking skill. There are several avenues this research question can be assessed. First, we use our comprehensive dataset of more than 61,800 securities transactions to construct the aggregate portfolio of the U.S. Congress on a daily basis. The obtained daily returns are benchmarked against the broader market and examined for Fama-French Carhart risk factor exposures. Furthermore, we analyze portfolio returns and estimate factor loadings for the periods before and after the beginning of COVID to identify eventual changes. Additionally, we sort politicians by explanatory variables and construct grouped portfolios to assess differences in performance based on those variables. Building upon the portfolio returns, we estimate a regression model using biographical, educational, professional and political data points as explanatory variables in an effort to attribute alpha, which was observed in the Fama French Carhart 4-Factor model, to skill or the usage of private information. We support these results by examining transactions in companies shortly before they are acquired in mergers & acquisitions events. Higher trading activity in soon-to-be-acquired companies in comparison to the average investor suggests the availability of information not known by other investors. Equally insightful is the analysis of transactions in the context of corporate campaign donations, where politicians might trade a company due to personal relationships with executives and campaign funds received from them. Finally, we analyze the short-term market's reaction to the disclosure of transactions, assessing whether a part of the observed alpha can be explained by the market's expectation of superior returns of politician trades.

The results obtained in these analyses contribute to answering the research questions, whether U.S. politicians outperform the broader market on a risk-adjusted basis and whether eventual alpha can be explained by skill or the usage of private information. The results furthermore indicate whether it is a profitable investment strategy to reconstruct the U.S. congressional stock portfolio by following the transactions disclosed under the STOCK Act. The empirical approaches as well as the results are explained in detail below.

3.1 Congress Portfolio Performance

Calculating the overall portfolio performance of the U.S. Congress during our observation period allows us to draw comparisons with the broader market. This is core to our research question, as all the other analyses we run are built upon daily congressional portfolio returns and aim to identify their drivers. Additionally, we subset the transactions based on various political and demographic variables. Evaluating these subsets distinctly allows us to initially understand which variables might lead to more significant divergence from average returns.

Methodology

To lay the groundwork for our in-depth analysis, we construct stock portfolios that represent the collective investment activity of the U.S. Congress, along with various subsets of this group. By benchmarking the returns of these portfolios against market proxies such as the S&P 500 and the CRSP value-weighted returns, we can ascertain whether U.S. politicians demonstrate any notable outperformance or underperformance in their trading activities.

The transactions dataset features over 61,800 individual trades made by U.S. politicians with details about the company involved in each transaction, the transaction date, and a range (e.g. \$15,000 - \$50,000) for the transaction value. We integrated daily securities prices from the CRSP database, enabling the calculation of the exact share amount of each transaction. For each day in the observation period from 2012 through 2023, we determined the cumulative position size of the Congress for each company. Subsequently, portfolio weights are calculated for each day. Finally, CRSP returns are used to calculate the daily portfolio returns and model them as an index with a starting value of \$100 on January 2nd, 2012, the first trading day of the observation period.

In the process of constructing these portfolios, we encountered challenges with negative portfolio weights, a situation caused by the sale of securities that were acquired before our observation period began, prior to the politician's tenure in office, or through transactions valued under \$1,000. Such sales during the observation period generate

negative weights for these securities, which causes distortions in portfolio returns. To account for these transactions, we adjust the starting balance of shares owned by each politician in each company, setting it to the highest (peak) negative number of shares any individual politician owned at a time during the 12 years observation period. The portfolio weight of each company can therefore be only as low as zero.

To better understand how various factors - such as party affiliation, age, gender, congressional seniority, and legislative activity - affect politicians' trading performances, we categorize transactions into groups and construct separate portfolios. Some variables such as gender and party are static and do not change over time. Others are dynamic. As all dynamic variables are accumulating (e.g. age linearly increasing or number of sponsored bills building upon previously sponsored bills) we are sorting most variables based on static methods. For example, we sort politicians into five buckets of equal age intervals, based on their age as of 2023. On the other hand, the seniority of a politician is calculated based on the number of years in congress at the time of the transaction. The transactions are then sorted into five buckets of equal seniority intervals. Additionally, we split the transactions into two different time frames. The years 2020 through 2023 are characterized by the COVID-19 pandemic, a black swan event that introduced significant volatility to the stock markets and presented a stark contrast to the low volatility and low interest rate environment in the prior years. Splitting the transactions into two parts, one ranging from 2012 through 2019 and one from 2020 through 2023, allows us to assess any differences in sector (as defined by S&P) and risk factor exposure.

Additionally, we calculate daily sector weights for each portfolio to gather additional insight into the reasons for potential differences in performance. The resulting daily portfolio returns are compared with the mentioned index benchmarks as well as the Fama French Carhart Small-Minus-Big, High-Minus-Low, and Momentum factors (Fama and French, 1993, Carhart, 1997). This analysis showcases the U.S. politicians' performance against the broad market as well as differences in performance for groups of politicians based on various characteristics. The results indicate which factors might be interesting to further examine.

Results

Figure 3.1, paired with figure A.1, displays some interesting characteristics of the dataset. Securities transactions in the U.S. Congress developed steadily over the past 12 years. Especially during 2020 and the beginning of 2021, an increase in both buying and selling activity can be observed. Since the larger market sell-off, which hit technology stocks especially hard, a slowdown in purchases can be seen. Since the total sell volume is higher than the buy volume during the observation period, the adjustment of the starting share ownership balance described above is especially important.

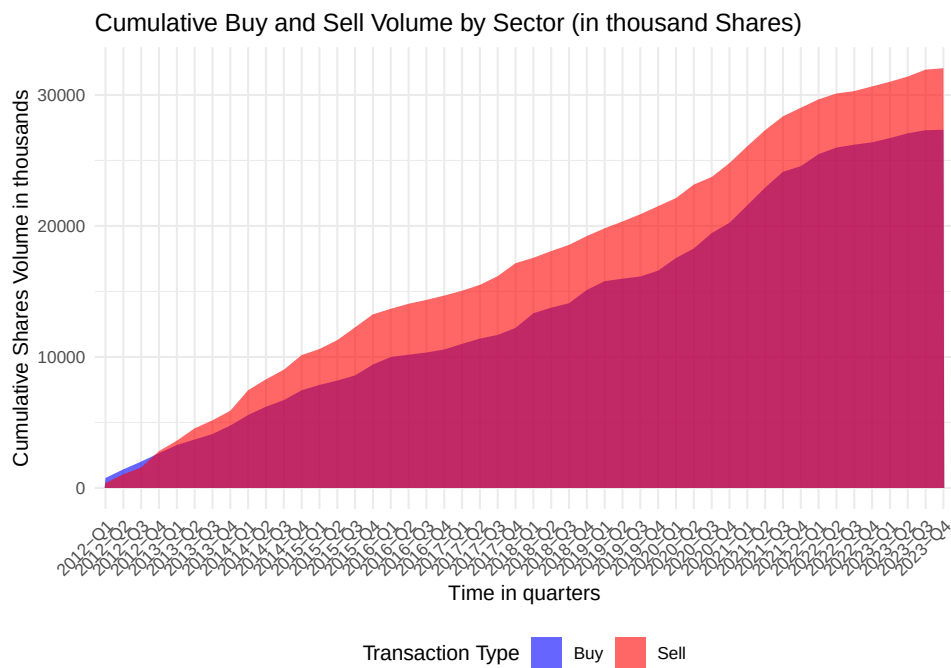


Figure 3.1. Buy and Sell volume of U.S. Congress in shares

The aggregate U.S. Congress portfolio we construct shows a significant outperformance by U.S. politicians in comparison with the broader U.S. stock market. As seen in table A.12, while the S&P 500 index gained a total of 273% from 2012 until the end of 2023, the U.S. Congress portfolio gained 733%. During this period, the annualized return for the S&P 500 stands at 11.8%, while the annualized return for the U.S. Congress portfolio

is notably higher at 19.5%. The standard deviations of both portfolios are similar with 17.0% for the S&P 500 and 16.5% for the Congress portfolio.

As seen in figure 3.2, the politicians consistently outperformed the market, almost quadrupling their investments from 2012 until the end of 2019. Since the onset of the COVID-19 pandemic in March 2020, this outperformance relative to the broader market became more significant, resulting in a total return more than twice as high as the S&P 500. S&P 500 and the value-weighted market index display a very similar return profile, signifying that both indexes are equally valid proxies for the broad market.

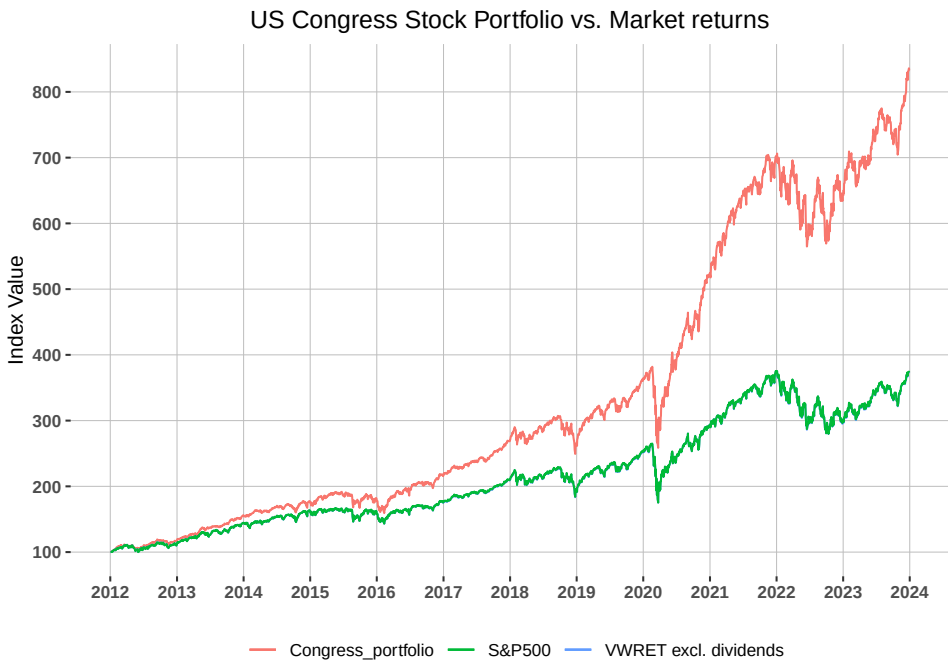


Figure 3.2. Aggregate U.S. Congress performance vs. S&P 500

We analyze the U.S. Congressional portfolio for its risk factor exposures to the market factor as well as the Fama French Carhart factors Small-Minus-Big (SMB), High-Minus-Low (HML), and Momentum (MOM). Due to the astonishing outperformance of the U.S. Congress portfolio, we expected high factor loadings, explaining large parts of the

Table 3.1. Aggregate US congress Factor Loadings

	<i>Dependent variable:</i>
	Congress Returns
excess_market	0.921*** (0.003)
SMB	0.047*** (0.006)
HML	0.068*** (0.005)
MOM	-0.026*** (0.004)
Constant	0.0002*** (0.00004)
Observations	2,998
R ²	0.963
Adjusted R ²	0.962
Residual Std. Error	0.002 (df = 2993)
F Statistic	19,224.620*** (df = 4; 2993)
<i>Note:</i>	*p<0.1; **p<0.05; ***p<0.01

returns. Surprisingly, as seen in table A.12, we find a market beta of only 0.92. Considering the market factor only, the U.S. Congress generates an annual alpha of 8.23%. Since the Fama French Carhart factor loadings are rather small, they expectedly do not contribute much to the return. The politicians have a minor tilt towards small-cap stocks with an SMB loading of 0.047. Also, politicians are tilted towards value stocks with an HML loading of 0.068. There is a small negative exposure to the momentum factor, with a -0.026 loading.

Considering the market as well as the Fama French Carhart factors, the U.S. Congress generates an alpha of 8.37% per annum¹. Since size and value factors have had negative risk premia during our observation period, positive factor loadings actually suggest lower returns.

The U.S. politicians therefore significantly and consistently outperformed the market, even after considering the Fama French Carhart four risk factors, which fail to explain more than 8% in annual alpha. To better assess possible drivers of alpha, we sort the U.S. politicians on several variables and construct subset portfolios.

Performance of the Subset Portfolios

In our analysis of investment performances by political affiliation within Congress, we construct separate portfolios for the two major political parties — the Democratic Party and the Republican Party. The findings indicate small differences in investment performance between these two dominant parties, as depicted in Figure 3.3. Democrats performed slightly better than Republicans during the rally following COVID-19 sell-off, only to give up this relative outperformance in the following years. Independents, on the other hand, perform significantly worse, tracking the S&P 500 very closely. This result for Independents is based on only a few politicians as there are not many independent politicians. Yet, it indicates some superior knowledge about future stock market returns within the established political system in Washington D.C., where independents might not be fully included.

We also analyze seniority and tenure as potential factors. As can be seen in figure 3.3, the longest-tenured politicians outperform their colleagues with a final portfolio index value of \$1,037. Group 4, the politicians with the second longest tenure, fall out of the pattern, with a final portfolio index value of only \$556, significantly underperforming all other groups. In general, the groups with higher seniority perform better than groups

¹Annualized alpha calculated as the annualized difference between the predicted U.S. Congress returns based on estimated FF4 risk factor loadings and the realized U.S. Congress returns over the 12-year observation period.

$$\text{congress_returns} = \beta_1 \text{excess_market} + \beta_2 \text{SMB} + \beta_3 \text{HML} + \beta_4 \text{MOM} + \varepsilon$$

with lower seniority, indicating that time served in Congress might be a factor contributing to the politicians' outperformance. However, as seniority increases, the number of politicians in our sample decreases, which might be affecting these results.

When constructing portfolios by the gender of the politicians, we find somewhat superior returns for female politicians in comparison to male politicians (see Figure 3.3). Our analysis of investment performance across different age groups within Congress reveals considerable disparities, yet no consistent trend emerges (see figure 3.3). Each portfolio we construct starts with an "index value" of \$100. The youngest group of politicians notably achieves the highest portfolio index value at \$1,215 at the end of 12 years. The third age group, positioned in the mid-range of our categories, registers the lowest performance with a portfolio index value of \$731. Both extremes as well as age group 4 (the second youngest group) are performing very well, while age groups 2 and 3 perform significantly worse. These results therefore do not indicate age being a driving factor of politicians' outperformance. When analyzing the investment performance of the U.S. Congress segmented by legislative chamber, we observe an insignificant difference between the two. Our findings indicate that the U.S. Senate's portfolio slightly outperforms that of the U.S. House of Representatives over our observation period. Specifically, the Senate achieved a total return of 807%, while the House saw a slightly lower return of 707%, as detailed in Figure 3.3.

In our final component of the analysis, we evaluated the trading activity of U.S. politicians by examining both the number of securities transactions and the total traded dollar volume during the observation period. We subset the Congress into groups based on how frequently politicians have traded throughout the observed 12 years when they were in Congress. We observe the performance of these subsets individually. The results, depicted in Figures 3.3 and 3.3, do not show a clear trend that conclusively identifies trading frequency or volume as significant predictors of outperformance among politicians. For the number of transactions, Group 3—which represents an intermediate level of trading activity—significantly outperforms other groups. Interestingly, the groups with the highest and lowest transaction counts perform nearly equally. In terms of trading volume, Group 1, which engaged in the lowest total trade volume, exhibits the best performance. Groups 3, 4, and 5, encompassing mid to high trade volumes, show similar outcomes in their performance metrics. Interestingly, Group 5, which had the highest

overall trading volume, demonstrated resilience during the significant market downturn of late 2021 to early 2022. Yet, its annualized standard deviation of 19.1% is slightly above the standard deviations of other groups, which are between 16.0 and 18.5%. The unclear trend mentioned above can be explained by the fact that the frequency of trading we observe is impacted by how long the politicians have been in Congress. Different tenures might be distorting this data.

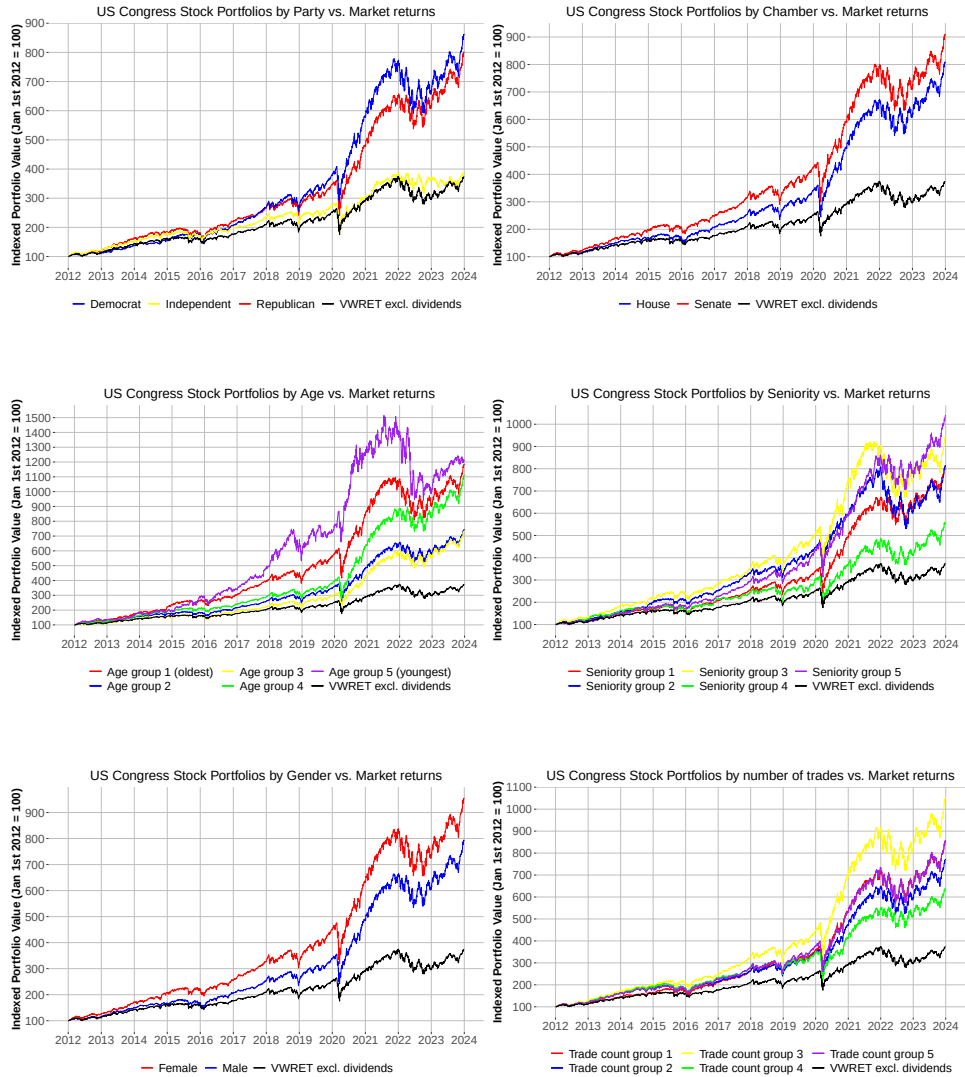


Figure 3.3. Subsetted portfolios by politician characteristics²

Sector Exposure and Factor Loadings Before and After The COVID-19 Pandemic

Besides subsetting the portfolio, we test the aggregate congressional portfolio as well as the subsetted portfolios for sector exposure and potential changes over time. A special focus was on differences in sector exposure or factor loading before and after the COVID-19 pandemic, which drastically changed the pattern of the performance in comparison to the S&P 500. Running Fama French regressions on the returns before and after the start of the stock market sell-off during the onset of COVID, we observe slightly different factor loadings, but not such that the difference in performance can be explained. As seen in Table 3.2, the U.S. Congress significantly increased its annualized performance from 17.6% before COVID to 23.2% after. The market beta is still below 1, posting 0.95 after COVID, versus 0.87 before COVID. The size factor loading increased slightly from 0.03 to 0.05, while the value factor increased quite a bit from -0.05 to 0.1. We observe a change in Momentum exposure from -0.11 to 0.01 after COVID. The changes in factor loadings do not decrease the alpha. Analyzing the two time frames separately and using the Fama French Carhart 4-factor model gives us an annual alpha of 5.6% before COVID and 15.4% after COVID. Risk factors alone are unable to explain the outstanding performance of U.S. politicians.

Table 3.2. Descriptive Statistics for the aggregate U.S. Congress Portfolio before and after Covid

	Congress_pre	SP500_pre	Congress_post	SP500_post
Daily return	0.0006	0.0005	0.0008	0.0004
Annualized return	0.176	0.125	0.232	0.102
Daily SD	0.008	0.008	0.014	0.015
Annualized SD	0.122	0.128	0.228	0.231
Market Beta	0.875	-	0.954	-
SMB Beta	0.031	-	0.049	-
HML Beta	-0.050	-	0.100	-
MOM Beta	-0.115	-	0.010	-
Predicted Annual Return Market	0.124	-	0.075	-
Alpha (Market Factor)	0.053	-	0.157	-
Predicted Annual Return FF4	0.121	-	0.089	-
Alpha (FF4)	0.056	-	0.154	-

²For figure 3.3: Seniority group 1 = shortest tenure, Seniority group 5 = longest tenure. Trade count group 1 = lowest trading activity, Trade count group 5 = highest trading activity

In our sector weight analysis over time, we observe no significant shifts that help explain the performance of the U.S. Congress. As illustrated in Figure A.12, the exposure to various sectors has seen some fluctuations since 2012, but these do not align neatly with changes in portfolio performance. Specifically, the portfolio's exposure to the energy sector has shown a consistent decline over the period. In contrast, the technology sector experienced a dip in weight until around 2015, after which it began to climb, returning to levels similar to those seen in 2012. The consumer discretionary sector, which consists of companies selling discretionary goods and services, notably peaked during the COVID-19 pandemic but this weight has since regressed to about 7% of the overall portfolio. Moreover, although there was an increase in the technology sector following the COVID-19 market sell-off, this rise was not substantial enough to clearly explain the performance outcomes observed.

3.2 Analyzing Potential Sources of Outperformance

The outperformance explained above could be due to a combination of reasons, whose significance we analyze in this section. We first analyze if the outperformance can be explained by politician-specific variables, reflecting their expertise, political activity, and demographics. We then conduct analyses on American politicians' ability to spot companies that are acquired within two years of the transaction, the market reaction to politicians' trade disclosures, and politicians' trades on public companies that have donated to their campaign.

3.2.1 Politician Characteristics and Experience

The initial analysis we conduct to understand potential reasons for Congress' outperformance is delving into whether specific characteristics attributable to politicians significantly influence returns. If explaining returns with personal political and demographic variables is possible, this can significantly reduce the alpha generated by Congress, and therefore weaken the argument that politicians use insider information for trading.

Methodology

Leveraging the comprehensive data collected on each politician who engaged in stock market transactions throughout our observation period, we examine the characteristics of the aggregate Congress portfolio over the span of 12 years. We use 40 different variables seen in table A.2 and conduct both in-sample and out-of-sample analyses with different regression models. The panel data including individual transactions is not used in the regression models directly because of its large size, but is used indirectly as we use it to build the Congress portfolio. This approach is designed to determine which of these variables exhibit predictive capabilities regarding the aggregate returns of Congress.

We develop a regression model that aims to explain the alpha, or excess return, generated by U.S. congressional politicians. The model uses the daily portfolio returns of the aggregate U.S. Congress portfolio as the dependent variable. An extensive array of independent variables including politician-specific details serves to characterize the politician investors. These independent variables are selected based on their potential impact on the politicians' stock-picking ability and their ability to implement superior investment strategies. For example, investing and political experience might improve investment outcomes, which are correlated with age and seniority in Congress. Additionally, variables representing political party and chamber could suggest differences in political influence and access to privileged information within political circles. Metrics such as the cumulative number of stock trades and cumulative trading volume can be good indicators of financial literacy, investing experience, and interest in financial markets. Moreover, we include variables about educational and professional background such as degrees achieved, universities attended, and professional work experience in the private sector and specifically in the finance industry. In addition to all these politician-specific independent variables, we keep the Carhart 4-Factor model variables in the regression. This data could suggest that performance depends on certain educational or professional milestones.

Another variable we use is the committee assignments within the U.S. Congress. U.S. politicians work in a set of committees that focus on specific areas in lawmaking. Some examples include committees working on the federal budget, the armed forces, businesses and entrepreneurship, agriculture, transportation and infrastructure, and

homeland security. It is within these committees that political actions, potentially leading to new legislation or government investments, are deliberated and examined. If the trading performance of Congress members shows a correlation with their committee assignments, this could indicate the use of non-public information acquired through committee involvement to achieve personal financial gains in the securities markets.

We produce a time series of daily returns by aggregating independent variables using politicians' individual weights in the aggregate securities portfolio. We adopt a linear least squares regression model over the entire observation period. Initially, all available independent variables are included in the model to assess any significance in the large model. We expect a certain degree of collinearity among the explanatory variables, such as political party affiliations. Additionally, high correlation can be observed between certain variables, such as age and seniority. We therefore reduce the regression model to a more condensed set of variables. Two different approaches are used to reduce the model.

Initially, the Akaike Information Criterion (AIC) is utilized to systematically prune variables displaying statistical insignificance from our model, steering us towards a refined subset of explanatory variables with substantial predictive capability. Although this methodological application of the AIC facilitates an objective reduction based on statistical metrics, it inherently lacks the capacity to incorporate theoretical justification or intuitive underpinnings for the inclusion of certain variables. To address this limitation and ensure a well-rounded analytical approach, we complement the statistical methodology with a heuristic evaluation for the second iteration of model reduction. This process draws on domain-specific insights and logical analysis to assess the relevance of the variables. When manually reducing the regression model, we omit individual committees as some of them are represented by a limited number of politicians and are relevant only for brief intervals, which fail to accurately reflect aggregate performance across the entire observation period. Instead, we introduce an "economic insights" variable derived from membership in certain committees focused on economic legislation, positing that involvement in these committees equips members with specialized knowledge of economic data and legislation with direct implications for the economy or particular sectors. Variables used in this reduced regression are aggregate (weighted) politician chamber, seniority, total bills sponsored, variables about educational background such as studying at an Ivy League

school, completing Master's, and having a relevant degree that could help with investing, having economic insights from committee assignments, and the four factors from the Fama French Carhart model, including excess return of the market, Small-Minus-Big, High-Minus-Low, and Momentum.

$$\begin{aligned}
 \text{congress_returns} = & \beta_1 \text{weighted_chamber} \\
 & + \beta_2 \text{weighted_average_seniority} + \beta_3 \text{weighted_total_sponsored} \\
 & + \beta_4 \text{weighted_master} + \beta_5 \text{weighted_ivy_league} \\
 & + \beta_6 \text{weighted_economic_insights} + \beta_7 \text{excess_market} \\
 & + \beta_8 \text{SMB} + \beta_9 \text{HML} + \beta_{10} \text{MOM} + \varepsilon
 \end{aligned}
 \tag{3.1}$$

In addition to the regression covering the entire sample period, we are estimating a regression model using the period from 2012 until the end of 2019. The same approaches for reducing the model are employed for this shortened period. Using the estimation model, we run an out-of-sample test to predict the congressional portfolio performance in 2020 through 2023. The out-of-sample prediction including educational, professional, and committee assignment variables is benchmarked against the pure Fama French Carhart 4-Factor model to assess the additional predictive power of the politician-based variables. The results of this regression can be seen in Table A.10.

Results

In-Sample Analysis

We first use all the variables showing daily aggregate characteristics of the Congress portfolio to regress daily portfolio returns through the origin, meaning we exclude the intercept and focus solely on independent variables. This is done to assess the predictive power of these independent variables, without the alpha itself impacting the regression prediction. It also allows us to see the alpha visually when we compare predicted returns to actual returns. These independent variables can be seen in Table A.2. This approach, referred to as the master model, extends throughout the entirety of our observation period.

As a result of this model, we attain a residual standard error of 0.001996 and an R-squared of 0.964. When this master model is used to predict Congress returns during the same observation period, we observe that the Predicted Congress Index closely mirrors the movements of the actual Congress Portfolio Index, suggesting a high degree of predictive accuracy (Figure 3.4).

As a second step, we reduce the regression model using an intuitive approach, as the statistical approach using the Akaike Information Criterion (AIC) lacks the capacity to incorporate theoretical justification and intuitive underpinnings for the inclusion of certain variables. For the construction of this reduced model, our selection criteria prioritize minimizing collinearity and correlation among variables, as well as ensuring that only meaningful variables, which could significantly influence daily returns, are included. With this model, the residual error we achieve slightly declines to 0.001999, and the R-squared slightly declines to 0.963, as seen in table A.5. The insignificance of the decline in these metrics, as well as the visual evaluation of the prediction of the reduced model show that the chosen variables for the reduced model effectively encapsulate the predictive capacity of the broader set. Notably, when applying the reduced model, the Predicted Congress Index exhibits slightly elevated values compared to those derived using the master model (Figure 3.5).

For the final step of the in-sample analysis, we employ the Fama French Carhart 4-factor model for regression, incorporating returns from the High-Minus-Low, Small-Minus-Big, and Momentum portfolios, alongside the market's excess return, as independent variables. The Congress portfolio exhibits a negative correlation with the Momentum portfolio, which has recorded positive returns throughout our observation period, and positive correlations with the High-Minus-Low and Small-Minus-Big portfolios, both of which have depreciated in value during the same time frame. Based on these correlations, the 4-factor model forecasts that the Congress portfolio would underperform relative to the S&P 500 index (Figure 3.6). The regression yields a residual standard error of 0.002119, indicating a slightly lower precision compared to the results obtained from the previous models.

A comparison of the Fama French Carhart 4-factor model and the reduced model

shows that politician-specific variables do a better job at explaining the Congress portfolio returns.

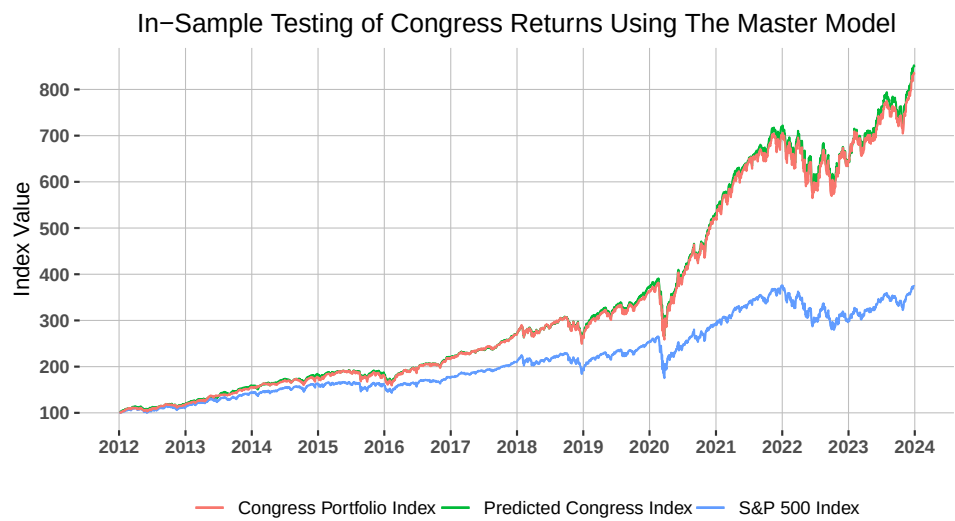


Figure 3.4. In-Sample Testing of Congress Returns Using The Master Model

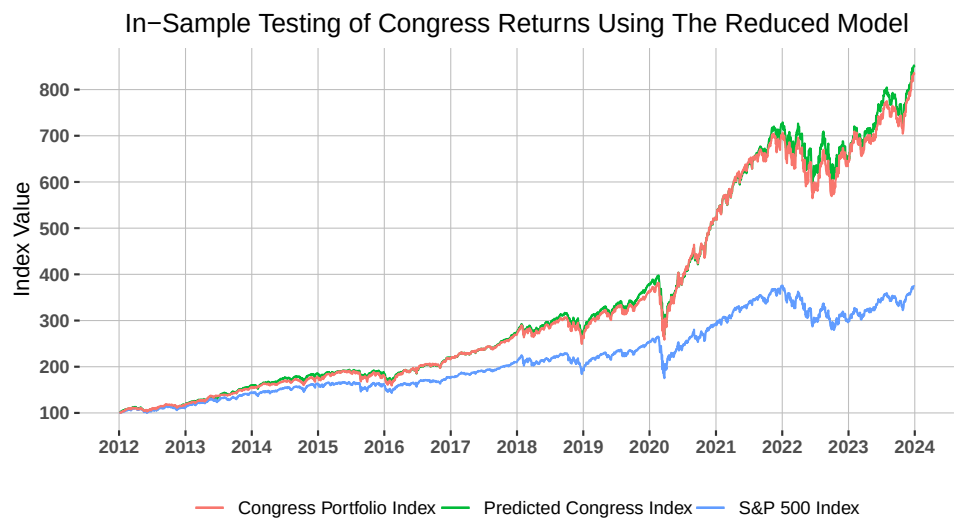


Figure 3.5. In-Sample Testing of Congress Returns Using The Reduced Model

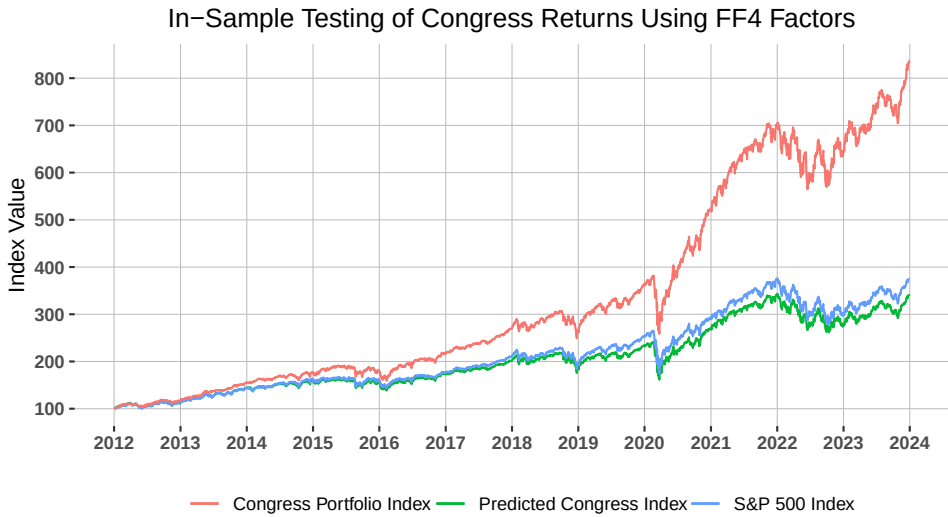


Figure 3.6. In-Sample Testing of Congress Returns Using The FF4 Model

Out-Of-Sample Analysis

Conducting an out-of-sample analysis is pivotal for a more accurate assessment of the predictive strength of politician-specific variables. Unlike in-sample analysis, where the model is evaluated using the same dataset on which it was trained, out-of-sample analysis employs distinct datasets for training and testing phases. For this approach, the period from the beginning of our observation period until the end of 2019 is used as the training data, and the period from the beginning of 2020 until the end of our observation period is used as the testing data.

For the out-of-sample analysis, we replicate the methodologies applied in the in-sample analysis. We use the same reduced model explained. Subsequently, we compare the predictive power of the reduced model with the one of the Fama-French Carhart 4-Factor model. As seen in tables A.10 and A.11, the reduced model, and the FF4 model yield residual standard errors of 0.002061 and 0.00207, and R-squared values of 0.929 and 0.928, respectively. Although these differences in residual standard errors and R-squared values seem minimal, the two models have very different predictive powers.

The reduced model shows a high level of predictive accuracy. In this reduced model, we use variables that show the Congress' aggregate political activity, education level and subject, committee assignments, seniority, and the mix of the two chambers. This model not only mirrors the movements observed in the actual Congress portfolio closely but also surpasses the Fama French Carhart 4-Factor model in predictive capability. By the end of 2023, while the actual Congress portfolio index reaches 832.9, the 4-Factor model's projection lags significantly at 507.1. We start the Congress index predictions at the last actual index value of Congress, which is 361.5 at the end of 2019, as that is when our testing data starts. The S&P 500 index stands at 251.9 on the same day. So, the fact that the prediction by the 4-Factor model has a higher ending value than the S&P 500 is not due to any predictive power, but due to the predicted index's higher starting point in 2020. The reduced model, on the other hand, offers a more accurate forecast, predicting the index to reach 674.3. These predictions can be seen in figures 3.8 and 3.7.

While the alpha of the real U.S. Congress portfolio returns starting in 2020 in a simple comparison with the S&P 500 stands at 13.0% per annum, the alpha in comparison with the FF4 predicted model increases to 14.4%, signifying that risk factors do not at all explain the politicians' investment performance post-COVID. The reduced prediction model, containing educational and political data, on the other hand, substantially reduces the unexplained alpha by more than half to 6.3%, showcasing that the considered factors do, in fact, have considerable predictive power (see table 3.3).

Table 3.3. Descriptive Statistics for the out-of-sample portfolio prediction

	Real	FF4	Refined Model	SP500
Daily return	0.001	0.0003	0.001	0.0004
Annualized return	0.232	0.088	0.169	0.102
Daily SD	0.014	0.014	0.014	0.015
Annualized SD	0.228	0.215	0.215	0.231
Alpha	0.130	0.144	0.063	—

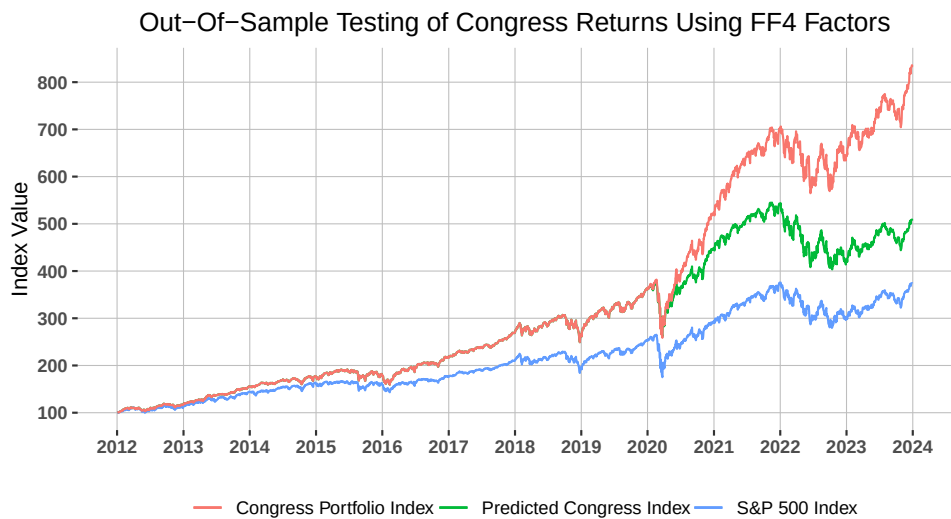


Figure 3.7. Out-Of-Sample Testing of Congress Returns Using The FF4 Model

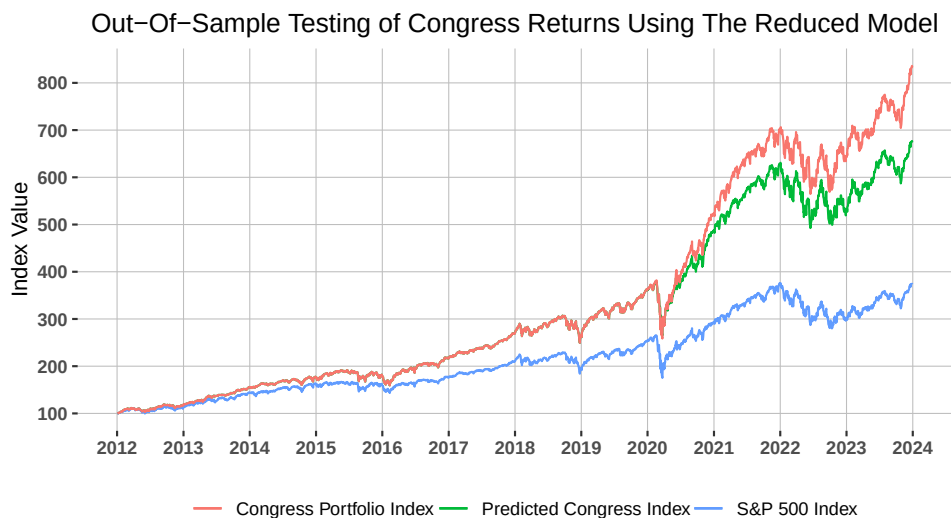


Figure 3.8. Out-Of-Sample Testing of Congress Returns Using The Reduced Model

Insights From Regressions

The comparative analysis of the three models employed to forecast the returns of the Congress portfolio identifies the reduced model, which incorporates both statistical and intuitive factors, as the most precise. This model demonstrates notable predictive accuracy, underscoring the importance of a judicious selection of variables that blend both quantitative analysis and practical insight. While we use various variables about the politicians' political and educational experience that may have impacts on returns, as seen in Table A.5, two variables emerge as particularly impactful: attending an Ivy League institution and membership in key committees with access to economic data before it becomes publicly available. The former variable suggests that a higher level of expertise and a more robust network, typically associated with Ivy League alumni, could enhance investment outcomes. Meanwhile, the latter variable implies a potential advantage derived from the use of non-public information, accessible through committee assignments.

Despite the relative effectiveness of the reduced model with politician-specific variables, there remains a portion of alpha, amounting to 6.8%, that our variables cannot explain. This alpha is not captured by political activity, educational background, other demographics, or committee assignments included in the model. This unaccounted-for alpha suggests the influence of factors beyond those traditionally measurable or observable, lending weight to the hypothesis that private information, possibly accessed through positions of power or unique networks, plays a role in the investment success of politicians, raising important questions about fairness and transparency in the financial markets.

3.2.2. Analyzing Transactions on Acquired Companies

We observe that congressional politicians have invested in 224 unique companies that were later acquired within merger & acquisition transactions (M&A) during our observation period. This has nudged us to analyze the returns achieved on these transactions and politicians' overall ability to identify and invest in such opportunities. When making acquisitions, companies usually pay a higher price than the current market value of the target company. That usually leads to a sudden jump in the stock price. That is why, a higher return on transactions involving companies poised for acquisitions is expected.

However, a higher level of ability to identify these companies can indicate the utilization of private information for personal financial goals.

Methodology

There are two stages of this analysis. We first calculate if politicians' investments in companies that are later acquired generate abnormal returns when compared to other politicians and the broader market. Secondly, we analyze the likelihood that an average investor could have invested in companies that get acquired, and compare that likelihood with politicians' transactions, to understand if politicians are better at identifying these opportunities.

To assess the returns made by trading such companies, we subset for buy transactions involving companies acquired within two years post-transaction and observe how many months after the transaction the acquisition closed. We categorize these transactions based on this time frame into five groups: "0-3 months", "3-6 months", "6-12 months", "12-18 months", and "18-24 months". Using the CRSP dataset, we calculate the politician's return from the transaction date until the acquisition completion assuming the stock was not sold through this period, and also calculate the value-weighted and equal-weighted market returns. This allows us to analyze the difference in performance grouped by the time frames mentioned above.

To assess the politicians' ability to identify companies poised for acquisition, our analysis commences with a quarter-by-quarter examination. For each quarter within our observation period, we calculate the proportion of the total purchasing volume by politicians that was directed towards companies acquired within the subsequent two years. By averaging these quarterly percentages, we obtain a measure of the average tendency for politicians' investments to target firms that are acquired within a two-year time frame. We run a similar analysis for the average investor, utilizing the CRSP database. As we don't have the invested amounts per investor, we use the daily market turnover as a proxy for interest in a company on a given day. We take a similar approach as before, assessing each quarter to determine the percentage of market turnover attributable to companies acquired within two years from the date of turnover. The average of these percentages

across all quarters yields an indicator of the average investor's ability for investing in companies destined for acquisition within a two-year horizon. We break down this percentage into the five time frames mentioned above to compare the average investor and the average politician more accurately.

Finally, we analyze how this ability of politicians varies over time during our observation period. This exploration seeks to uncover any shifts or patterns in investment behavior over time, potentially revealing insights into how external events, regulatory changes, or evolving market conditions might influence politicians' strategic decisions.

Results

Through the steps explained above, we are able to observe the performance of trades made in companies that are acquired within two years of the transaction and Congress' overall ability to spot these companies.

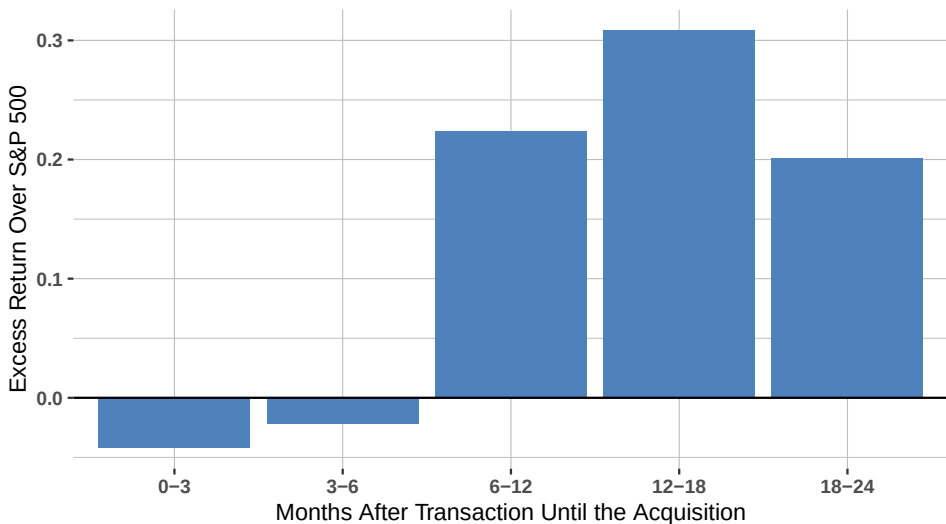


Figure 3.9. Transaction Returns on Companies Acquired Within Two Years

Transaction Returns

When analyzing the returns of these transactions, we segment them into five different categories based on the duration between the transaction and the acquisition. These categories are "0-3 months", "3-6 months", "6-12 months", "12-18 months", and "18-24 months". We benchmark these returns against several indices, including the S&P 500, value-weighted market returns and equal-weighted market returns from CRSP, and the Fama French Carhart 4-Factor indices including Small-Minus-Big, High-Minus-Low, and Momentum. The overall trend we find is that the members of Congress don't generate abnormal returns compared to these benchmarks by trading companies that are acquired within 6 months of the transaction. As seen in Figure 3.9, the average excess return over the S&P 500 for these transactions is slightly negative. We obtain a similar result when different benchmarks are used as seen in Figures A.20, A.21, A.22, A.23, and A.24. This may be because major transactions are typically announced at least 6 months before their completion, the date registered in our data for corporate action, and that is when we observe the market reacting to news related to the acquisition. That reaction cannot be observed when looking at transactions with acquisitions taking place within 6 months.

When we analyze the transactions in companies that are acquired between 6 to 24 months after the transaction, we find significant outperformance compared to benchmarks mentioned above such as S&P 500 and Fama French Carhart 4-Factor portfolios. Transactions on companies that are acquired between 6 to 12 months post-transaction generate an average excess return of 22.4% over the S&P 500 during the same period. This excess return is 22.4%, 21.4%, 28%, 23.5%, and 28.7% when compared to the broader value-weighted market, equal-weighted market, Small-Minus-Big portfolio, High-Minus-Low portfolio, and the momentum portfolio. This overperformance significantly increases within the "12-18 months" time frame and slightly decreases when we observe the "18-24 months" time frame, as seen in Figure 3.9.

The significant difference in returns between investments made 0-6 months and 6-24 months before the acquisition shows that politicians who identify and invest in companies that are poised for acquisition before the acquisition announcement generate significant profits. In the 6 months leading to the acquisition, news of the M&A transaction is usually

public, therefore, politicians are not rewarded with excess returns on their investments right before the transaction.

Ability of Spotting Companies To Get Acquired

We analyze the ability of politicians to identify and invest in companies that become acquisition targets within 24 months following the investment. To understand if politicians are better than the average investor at identifying these companies, we also calculate the market’s ability in this regard. Definitions of politicians’ and the average investors’ abilities to identify and invest in companies to get acquired are explained in the methodology section. A comparison of these two measures provides insightful findings.

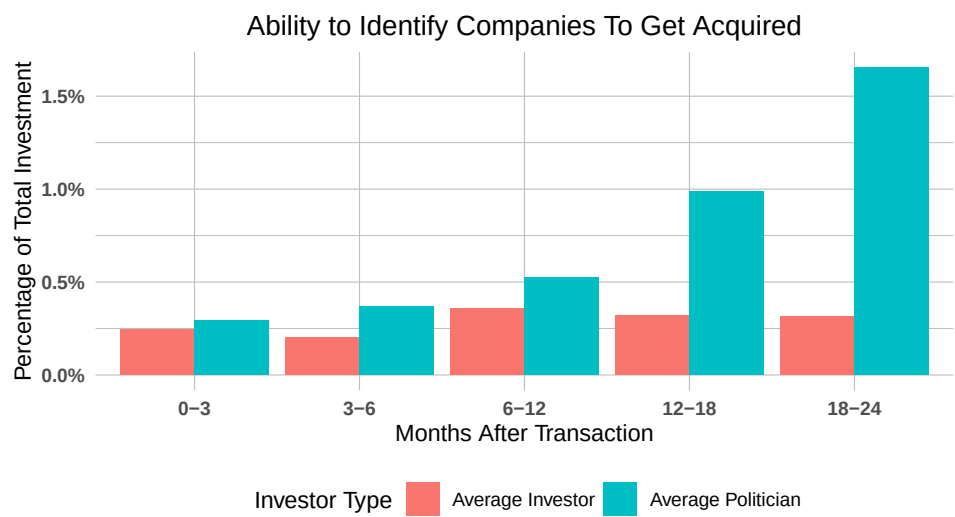


Figure 3.10. Percentage of Investments Made in Companies Acquired Within Two Years

When the metrics showing this ability are broken down into the five different time frames discussed above, which are "0-3 months", "3-6 months", "6-12 months", "12-18 months", and "18-24 months", we see that the politicians’ excess ability compared to an average investor increases over longer periods (Figure 3.10). Politicians are not necessarily better than the average investor when it comes to investing in companies poised for acquisition within three months. However, they are significantly better at identifying

companies that are going to be acquired 18 to 24 months after the transaction.

The average investor allocates 0.25% of their total investments to companies poised for acquisition within three months, a figure slightly surpassed by the average politician's allocation of 0.29%. This doesn't show a significant difference. However, the real difference is found when we observe time frames that exceed 6 months. For example, while the average investor allocates 0.32% of their total investments in companies that are acquired within 18 to 24 months, this allocation for the average politician increases to 1.34%.

Politicians' ability to identify companies destined for acquisition and the returns they generate on these transactions show similar trends. While the outperformance is insignificant for transactions on companies that get acquired within 6 months, when longer timeframes are observed, it becomes larger. Acquisitions are typically announced between 6 to 12 months before their completion, depending on the deal's scale. Politicians, recognizing the rewards for identifying and investing in these companies ahead of the market, seem to put in more effort to find these opportunities, resulting in a higher percentage of their investments being in companies to get acquired. This may be attributable to using private information accessed through their extended political and business networks, which generally surpass the resources available to the average investor.

Additionally, as seen in Figure 3.11, we observe how this ability of politicians changes over time during our observation period from the beginning of 2012 until the end of 2023. For the majority of the quarters during this period, politicians have been significantly better at identifying companies that are poised for acquisitions. While this excess ability has varied across quarters, it became more significant right after the COVID-19 pandemic. This difference between the average investor's and the average politician's ability peaks during the third quarter of 2021 at 1059 basis points, when the 18-24 months time frame is observed. The excess ability of politicians during the aftermath of COVID-19 highlights the significant impact of external economic and global health events on investment performances and the unique advantages politicians may leverage during such periods. We observe similar insights using the 12-18 months and 6-12 months time frames, seen in Figures A.28 and A.27. However, the excess ability declines significantly when smaller time frames are observed in Figures A.25 and A.26.

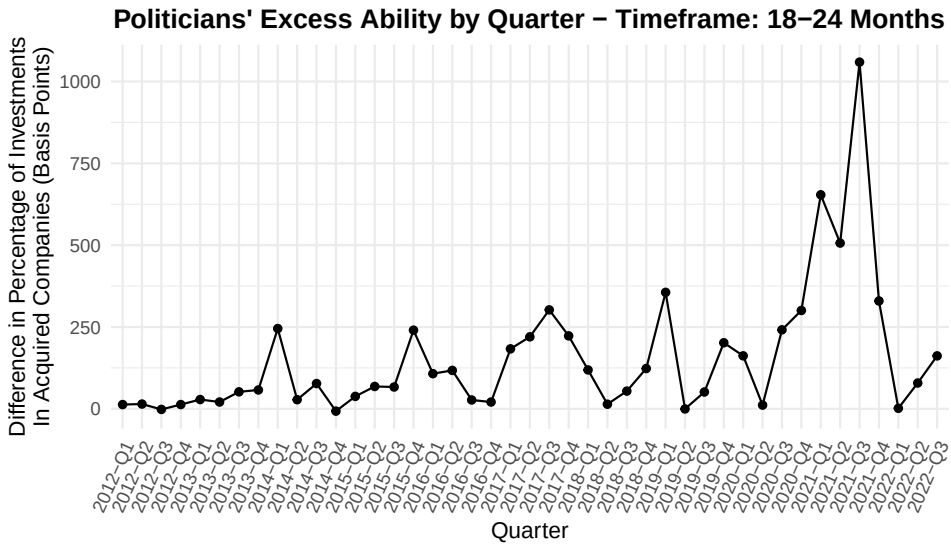


Figure 3.11. Politicians' Excess Ability to Spot Acquired Companies Between 18-24 Months After the Transaction Through Quarters

3.2.3. Market Reaction To Politicians' Trades

Another potential source of contribution to politicians' consistent abnormal returns is the broader market tracking politicians' trades and acting on their trade disclosures. Especially after COVID, lots of politician trackers emerged, which could be an important factor that is boosting politicians' returns. It would explain some part of the alpha if the market's reaction to these disclosures was significant.

Methodology

To assess the contribution of the market's reaction to politician trade disclosures, we conduct an event study focusing on post-transaction returns. This analysis leverages the CRSP event study tool for its implementation. The event study is structured around a 60-day event window that commences on the transaction date, providing a comprehensive view of the market's short-term reaction to these disclosures. The period used for estimating normal performance benchmarks—the estimation window—is set to the 100

trading days leading up to each transaction.

In our event study, we intentionally overlook the immediate aftermath of the transaction date, given the regulatory framework requiring U.S. Congress members to disclose their securities transactions within a 45-day window post-transaction (112th US Congress, 2012). Observationally, most politicians adhere to a monthly reporting cycle, leading us to anticipate potential abnormal market activities predominantly between 30 to 45 days after the transactions. The 60-day event window therefore sufficiently covers this critical observation period. This duration also captures any possible information leakages that may occur between the actual transaction and its subsequent disclosure. As buy and sell transactions each would potentially trigger opposite market reactions, we are running two separate event studies, one for buy transactions and one for sell transactions.

In the wake of the COVID-19 pandemic, a notable influx of younger, social media-savvy retail investors entered the market, gravitating towards alternative news platforms such as "Wallstreetbets" on Reddit (Wallstreetbets, 2024). These new investors, exchanging ideas on platforms like Reddit, closely examined disclosure reports, where they identified several well-timed transactions that resulted in significant personal profits for politicians, especially for figures like House Speaker Nancy Pelosi. Spurred by these findings, these investors began to meticulously track congressional stock transactions, a practice that subsequently caught the attention of media outlets, leading to increased coverage and scrutiny of politicians' financial activities in the stock market (Strauss, 2020, Gara, 2021, Moynihan and Wayt, 2022). This phenomenon suggests an increased public interest and concern over the potential for conflicts of interest and the implications of political insiders' market movements. It is plausible to posit that in the post-pandemic landscape, the market has become more reactive to the disclosure of stock transactions by U.S. politicians. The hypothesis follows that the abnormal returns following these disclosures could now be significantly higher than in the period preceding the COVID-19 pandemic, reflecting a change in market sensitivity to such information and potentially indicating a shift in investor behavior and perception of political trading activities.

We therefore also split our observation period into two parts and analyze pre-COVID and post-COVID transactions separately to identify eventual changes in market reactions to U.S. politician securities transactions. Assuming the market might track some, especially well performing, politicians closer than others, we also create a subset of transactions based on the politicians' overall performance. Using results from the construction of individuals' securities portfolios, we sort politicians by performance. For analyzing the market reaction to congresses' top performer transactions, we filter the top 15% investors of U.S. congress and run the event study on their transactions, separately for buy and sell transactions.

Results

In figures 3.12 and 3.13 the cumulative abnormal returns are presented for all buy transactions. The observation period is split into two parts, one before and one after COVID. Before COVID, we do not find significant market reactions to the disclosures of politicians' transactions. If the market reacted, we would see a change in pattern at around 30 to 45 days after the transaction (here $t = 0$ of the event window). Looking at transactions after the beginning of the COVID pandemic, we find significant negative cumulative abnormal returns. Yet, no pattern change at the disclosure date can be observed. We therefore infer that this is not caused by a market reaction to the disclosure but rather the politicians' inability to time the market in the short term. When looking at the full observation period, we find barely significant abnormal returns of -0.25% over the 60 days event window.

We repeat this analysis with sell transactions and do not find significant cumulative abnormal returns for either time period (see figures A.16 and A.17). We would expect a market reaction in the opposite direction of reactions to buy transactions. Again, we infer that the market is not significantly reacting to the disclosure of U.S. politicians' trades. For the full observation period, we also do not find significant abnormal returns.

Cumulative Abnormal Return: Mean & 95% Confidence Limits

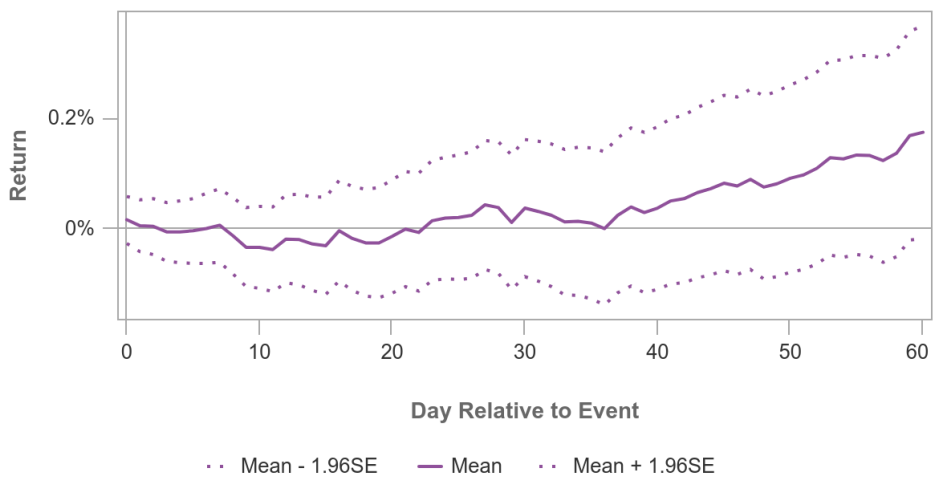


Figure 3.12. CAR before Covid for all congressional buy transactions

Cumulative Abnormal Return: Mean & 95% Confidence Limits

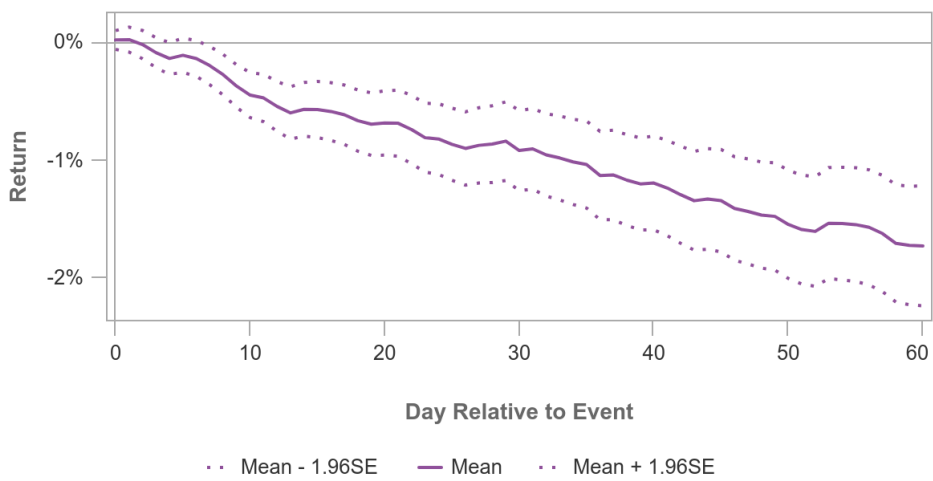


Figure 3.13. CAR after Covid for all congressional buy transactions

Additionally, we conjecture that the market might follow only the historically best-performing politicians, and the stock price movements after their disclosures may be of higher amplitude. In figure A.18 we present the cumulative abnormal returns of buy transactions done by the top 15% of congressional investors. These investors are sorted by their investment performance during our observation period. Contrary to our expectation, we find significant negative cumulative abnormal returns of 1.2% 60 days after the transactions. Consistent with the prior findings, there is no significant change in pattern around the 30 to 45 days range after the transaction, when the disclosure is expected.

To stretch the effort of analyzing the market reactions, we hypothesize that the market might only be tracking the most popular U.S. political investors, such as Nancy Pelosi, and show significant reactions to her disclosure reports, only after gaining widespread popularity during the last couple of years. Figure A.19 analyzes the cumulative abnormal returns of Nancy Pelosi's buy transactions in the 60 days after the transactions were made starting in 2020. Still, we do not find any significant cumulative abnormal returns, that indicate the market reacting strongly to U.S. politicians' securities transactions.

Based on the observed results in this analysis, we posit that the market tracking U.S. politicians' investing activity does not significantly influence stock returns shortly after the disclosures. Additionally, our findings confirm Belmont et al., 2022 such that U.S. politicians seem to not have superior market timing ability in the short term. Rather, the observed outperformance stems from superior long-term stock picking ability. The event study results furthermore provide no evidence for any information leakages before the transaction is formally disclosed, as we do not observe substantial abnormal returns in the direction of the politician stock transactions between transaction and disclosure date.

3.2.4. Trading On Insights From Campaign Donors

Corporations' and famous individuals' contributions to political candidates are a big topic of discussion in the U.S. These corporations include public companies that politicians may trade. In this section, we analyze if this relationship between politicians and companies results in a superior trading performance, which may indicate that politicians obtain private information through this interaction.

Methodology

In our investigation of securities transactions within Congress, we focus on instances where members have engaged in stock trades of publicly traded companies that have also made campaign contributions to them. Based on the corporate donor data by the Federal Election Commission (Federal Election Committee, 2024), we model fund flows from corporations, corporate political action committees (PACs) as well as executive directors within said companies to politicians in Congress. We exclude all donations of less than \$10,000. Since corporations may not directly donate to a candidate committee, but to an intermediary PAC, we first model fund flows to the PACs and then from the PACs to the candidates. A politician is considered to have a campaign donor relationship with a publicly traded company if there is a traceable flow of funds from the company to a PAC associated with the politician. We refine our dataset to include only those transactions where there is a campaign donor relationship. The resulting subset of transactions is used to construct a portfolio during the observation period.

Results

The motivation for this analysis is that politicians might invest in publicly listed companies that contribute to their political campaign efforts in a "quid pro quo" manner. Politicians would therefore purchase companies that have previously donated funds to the politician. Furthermore, politicians could potentially gain private insights from corporate executive donors they have personal relationships with. After analyzing millions of corporate campaign contributions, we identify 155 transactions where the company donated to the campaign prior to the transaction. 60 of them are buy transactions while 95 are sells. Looking at figure 3.14, we find significant outperformance relative to the broader market. The indexed portfolio for Republicans ends up at \$857, while Democrats finish with a staggering \$1292 index value. Both portfolios also outperform the aggregate U.S. congressional portfolio which finishes the observation period with an index value of \$833. However, since only 0.02% of all transactions are in the context of prior corporate donations, we are unable to show that there is a direct link between corporate donations and politician securities transactions in a statistically significant way.

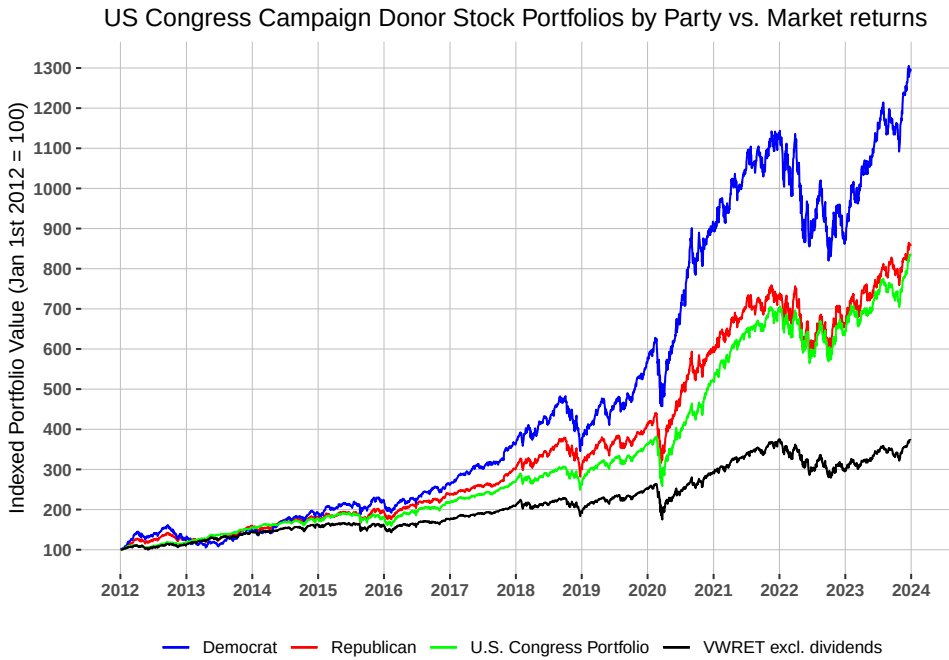


Figure 3.14. US Congressional Portfolio of Companies that have previously donated to the politicians' campaigns

We claim that there is no direct logical reasoning for corporations to donate to political candidates in expectation of them investing in the company. Politicians usually are not large shareholders that might significantly influence stock prices or ownership structures. The average transaction size for these transactions is just above \$61,000. Rather, corporations contribute to political causes in expectation of favorable legislation. Additionally, one would expect a larger number of donation-related transactions, if politicians gained relevant private information. To explain the outperformance of the campaign donor portfolios, there could be a bias in the data, where successful companies are more likely to donate to political candidates. When politicians purchase and sell these successful companies, the resulting portfolio might show superior returns. Since the shown portfolio consists of only 22 companies, where 6 of them make up 84% of the total purchase value, the performance can partially be attributed to luck. Specifically, 26% of the purchase value is concentrated in Amazon (AMZN) and CDW Corp. (CDW), whose stocks both increased by 16x since 2012.

4. Conclusion

This thesis adds to the discussion of U.S. politicians' superior securities trading returns and provides insights regarding the reasons of this outperformance. The first section examines the U.S. Congress' overall stock trading performance, while the second section assesses contributing factors to these returns.

Reconstructing the U.S. politicians' stock portfolios, we find substantial outperformance compared to the S&P 500, proxy for the broader market. Additionally, we find that these superior returns cannot be explained by an increase in risk exposure or unusually high exposure to Fama French Carhart factors. Especially, since the beginning of the COVID-19 pandemic, U.S. Congress increasingly disconnected from the broader U.S. stock market.

Our research employs different analyses to find sources of this outperformance. First of all, we find that certain politician-specific variables can explain parts of the alpha. We come to the conclusion that politicians having access to economic data before the public and working on economic legislation perform better in the stock market. We also find that graduating from an Ivy League school improves trading returns. While this could represent a superior academic background, this coefficient could also suggest that politicians benefit from broad and powerful networks. Both these variables signal the utilization of private information for personal financial benefit. Our regression model including politician-specific variables does a better job predicting actual returns than the Fama French Carhart model, but there still remains alpha. This implies that politicians may be leveraging unobservable factors. It is because of this unexplained alpha that we conduct further analyses.

Our analyses highlight multiple factors that suggest politicians might have an unfair advantage at trading securities. First of all, we find that politicians are exceptional at identifying and investing in companies poised for acquisition. They are consistently better than the average investor in finding companies that will get acquired 1 to 2 years after the transaction, which generate above-market returns. This strengthens the argument that politicians may have informational advantage over the market.

With the expectation that the market reaction after the politicians disclose their trades might be contributing to their returns, we conduct an event study including the period when politicians make the transaction and disclose it. We find that short-term market reactions do not yield significant results that explain the observed alpha. We observe negative cumulative abnormal return in the 60 days event window following the buy transactions by politicians. Moreover, we discover similar insights when we observe the best performing investors of the Congress, and separately Nancy Pelosi, who has become popular with her trading success. These results show that individual investors can benefit off of politicians' stock picking ability, as alpha is only generated after the transactions are already disclosed.

Furthermore, we find that politicians trading stocks of companies that have previously donated in these politicians' political campaigns generate higher returns than the broader market and the aggregate Congress. However, as this sample is very small, we are unable to prove the statistical significance of this result.

These analyses show that the outperformance of the U.S. Congress cannot be fully explained by observed variables. However, there are indications such as the significance of the economic insights variable, politicians' ability to identify companies to get acquired, and the insignificance of the market reaction to disclosures, that potentially point to the utilization of non-public information by politicians for personal financial gains.

These results may bring the legality of politicians' trading activity into question, as there are indications they might be benefiting from non-public information. On the other hand, this research opens up a way to generate abnormal returns for individual investors, simply by tracking politicians' trade disclosures. Our findings show that investors, who strictly followed congressional trades, would have significantly outperformed the market, without taking additional risk. Following U.S. politicians' securities transactions therefore constitutes a valid path to benefit from private information gone public that has so far sparked little interest.

4.1 Further Research

In this thesis we have extensively analyzed the returns, risk factor loadings and alphas of U.S. congressional securities trading activity. We have observed significant alphas, unexplained by common risk factors as seen in the Fama French Carhart four factor model. In order to find out how Congress members are consistently able to generate these superior returns, we observe politician-specific variables, politicians' ability to identify companies poised for acquisition, market reaction to trade disclosures, and politicians' relation with campaign donor companies. As a result, we find indications that politicians may be utilizing private information for their personal benefits.

Due to the difficulty of gathering additional data on politician political activity in Congress, further analysis is out of the scope of this thesis. Additional research on political and personal networks in Washington D.C. and their connection to the executive level of publicly-listed companies could reveal interesting insights that potentially influence the conclusion about the usage of private information.

Furthermore, examining the academic and professional background of close relatives such as spouses of politicians, many of whom are involved in the politicians' securities transactions, could provide indications, whether they might have skill that can explain the superior returns.

We are running a regression on the aggregate U.S. Congress portfolio with aggregate characteristics of the politician investors. Instead, one could use the panel data including all the transactions to run this regression. However, it is no easy task as the dataset is very large, and requires immense computational power.

Moreover, one could develop a "U.S. Congress factor" based on the stock ownership of congressional politicians, which could serve as a proxy for the presence of private information about certain companies. This factor would be meaningful only if investors believe that members of the U.S. Congress can consistently achieve abnormal returns by utilizing private information, among other factors.

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Appendix

Table A.1. Aggregate US congress Factor Loadings before and after Covid

	<i>Dependent variable:</i>	
	Congress Returns	
	Pre-Covid	Post-Covid
	(1)	(2)
excess_market	0.875*** (0.006)	0.954*** (0.003)
SMB	0.031*** (0.010)	0.049*** (0.006)
HML	-0.050*** (0.011)	0.100*** (0.004)
MOM	-0.115*** (0.007)	0.010*** (0.003)
Constant	0.0002*** (0.00005)	0.0004*** (0.00005)
Observations	2,012	986
R ²	0.928	0.990
Adjusted R ²	0.928	0.990
Residual Std. Error	0.002 (df = 2007)	0.001 (df = 981)
F Statistic	6,464.126*** (df = 4; 2007)	24,169.620*** (df = 4; 981)

Note:

* p<0.1; ** p<0.05; *** p<0.01

Table A.2. In-Sample Testing of Congress Returns - Master Model - Part 1

	<i>Dependent variable:</i>
	Congress Returns
weighted_gender	0.026 (0.019)
weighted_Democrat	-0.395 (0.364)
weighted_Republican	-0.421 (0.359)
weighted_Independent	0.699 (3.179)
weighted_chamber	-0.067 (0.062)
weighted_average_age	0.002 (0.002)
weighted_average_seniority	-0.001 (0.001)
weighted_total_sponsored	0.0002 (0.0001)
weighted_total_co_sponsored	-0.00002 (0.00001)
weighted_bachelor	0.304 (0.354)
weighted_master	0.016 (0.019)
weighted_ivy_league	-0.031 (0.023)
weighted_relevant_work_exp	0.021 (0.019)
weighted_relevant_degree	0.026 (0.024)
<i>Note:</i>	*p<0.1; **p<0.05; ***p<0.01
<i>Note:</i>	Continued on next page...

Table A.3. In-Sample Testing of Congress Returns - Master Model - Part 2

	<i>Dependent variable:</i>
	Congress Returns
weighted_economic_insights	0.001 (0.058)
weighted_economic_impact	0.032 (0.058)
weighted_comte_transaction_sector	-0.041 (0.081)
weighted_comte_budget	-0.011 (0.044)
weighted_comte_edu_labor	-0.030 (0.058)
weighted_comte_transport_infrastructure	-0.025 (0.069)
weighted_comte_energy_natural_resources	0.056 (0.043)
weighted_comte_finance	-0.039 (0.055)
weighted_comte_tax	-0.148 (0.116)
weighted_comte_foreign_affairs	-0.046** (0.019)
weighted_comte_homeland_security	-0.001 (0.023)
weighted_comte_SME_entrepreneurship	-0.066 (0.062)
weighted_comte_armed_services	0.029 (0.027)
weighted_comte_deficit_reduction	0.211 (0.275)
weighted_comte_energy_commerce	-0.051 (0.070)
weighted_comte_appropriations	-0.032 (0.067)

Note:

* p<0.1; ** p<0.05; *** p<0.01

Note:

Continued on next page...

Table A.4. In-Sample Testing of Congress Returns - Master Model - Part 3

	<i>Dependent variable:</i>
	Congress Returns
weighted_comte_technology	0.030* (0.018)
weighted_comte_health_edu_labor_pensions	0.022 (0.062)
weighted_comte_econ	-0.028 (0.027)
weighted_comte_commerce_science_transport	0.012 (0.053)
weighted_comte_banking_housing	0.042 (0.056)
weighted_comte_econ_disparity_fairness	0.305** (0.149)
Excess_Market	0.921*** (0.003)
SMB	0.046*** (0.006)
HML	0.069*** (0.005)
MOM	-0.026*** (0.004)
Observations	3,018
R ²	0.964
Adjusted R ²	0.963
Residual Std. Error	0.002 (df = 2978)
F Statistic	1,966.408*** (df = 40; 2978)
<i>Note:</i>	*p<0.1; **p<0.05; ***p<0.01

Table A.5. In Sample Testing of Congress Returns - Reduced Model

	<i>Dependent variable:</i>
	Congress Returns
weighted_chamber	-0.008 (0.006)
weighted_average_seniority	-0.0003* (0.0001)
weighted_total_sponsored	-0.00001 (0.00001)
weighted_master	-0.002 (0.003)
weighted_ivy_league	0.010*** (0.003)
weighted_relevant_degree	-0.005* (0.003)
weighted_economic_insights	0.010** (0.004)
Excess_Market	0.921*** (0.003)
SMB	0.046*** (0.006)
HML	0.068*** (0.005)
MOM	-0.026*** (0.004)
Observations	3,018
R ²	0.963
Adjusted R ²	0.963
Residual Std. Error	0.002 (df = 3007)
F Statistic	7,125.246*** (df = 11; 3007)

Note:

* p<0.1; ** p<0.05; *** p<0.01

Table A.6. In Sample Testing of Congress Returns - FF4

	<i>Dependent variable:</i>
	Congress Returns
vwret_excl_div_ret	0.932*** (0.004)
HML	0.055*** (0.005)
SMB	0.175*** (0.007)
MOM	-0.023*** (0.004)
Observations	3,018
R ²	0.958
Adjusted R ²	0.958
Residual Std. Error	0.002 (df = 3014)
F Statistic	17,343.510*** (df = 4; 3014)
<i>Note:</i>	*p<0.1; **p<0.05; ***p<0.01

Table A.7. Out Of Sample Testing of Congress Returns - Master Model - Part 1

	<i>Dependent variable:</i>
	Congress Returns
weighted_gender	-0.008 (0.039)
weighted_Democrat	0.335 (0.497)
weighted_Republican	0.299 (0.491)
weighted_Independent	-4.180 (4.153)
weighted_chamber	-0.070 (0.084)
weighted_average_age	0.002 (0.002)
weighted_average_seniority	-0.001 (0.002)
weighted_total_sponsored	-0.00002 (0.0002)
weighted_total_co_sponsored	-0.00001 (0.00002)
weighted_bachelor	-0.428 (0.490)
weighted_master	0.004 (0.028)
weighted_ivy_league	-0.028 (0.041)
weighted_relevant_work_exp	-0.0005 (0.033)
weighted_relevant_degree	0.093** (0.039)

Note: *p<0.1; ** p<0.05; *** p<0.01
Continued on next page...

Table A.8. Out Of Sample Testing of Congress Returns - Master Model - Part 2

	<i>Dependent variable:</i>
	Congress Returns
weighted_economic_insights	0.045 (0.124)
weighted_economic_impact	-0.043 (0.120)
weighted_comte_transaction_sector	-0.157 (0.115)
weighted_comte_budget	0.024 (0.064)
weighted_comte_edu_labor	0.084 (0.110)
weighted_comte_transport_infrastructure	-0.025 (0.125)
weighted_comte_energy_natural_resources	0.064 (0.055)
weighted_comte_finance	0.037 (0.079)
weighted_comte_tax	-0.117 (0.325)
weighted_comte_foreign_affairs	0.010 (0.041)
weighted_comte_homeland_security	0.014 (0.050)
weighted_comte_SME_entrepreneurship	-0.155 (0.129)
weighted_comte_armed_services	0.055 (0.046)
weighted_comte_deficit_reduction	0.293 (0.701)
weighted_comte_energy_commerce	-0.034 (0.135)
weighted_comte_appropriations	0.103 (0.093)

Note:

* p<0.1; ** p<0.05; *** p<0.01

Note:

Continued on next page...

Table A.9. Out Of Sample Testing of Congress Returns - Master Model - Part 3

	<i>Dependent variable:</i>
	Congress Returns
weighted_comte_technology	0.031 (0.038)
weighted_comte_health_edu_labor_pensions	0.016 (0.099)
weighted_comte_econ	0.036 (0.047)
weighted_comte_commerce_science_transport	0.006 (0.087)
weighted_comte_banking_housing	0.123 (0.088)
weighted_comte_econ_disparity_fairness	-0.156 (0.562)
Excess_Market	0.875*** (0.006)
SMB	0.030*** (0.010)
HML	-0.048*** (0.011)
MOM	-0.115*** (0.008)
Observations	2,012
R ²	0.930
Adjusted R ²	0.928
Residual Std. Error	0.002 (df = 1972)
F Statistic	651.121*** (df = 40; 1972)
<i>Note:</i>	*p<0.1; **p<0.05; ***p<0.01

Table A.10. Out Of Sample Testing of Congress Returns - Reduced Model

	<i>Dependent variable:</i>
	Congress Returns
weighted_chamber	-0.009 (0.008)
weighted_average_seniority	-0.0003 (0.0002)
weighted_total_sponsored	0.00001 (0.00002)
weighted_master	-0.00000 (0.005)
weighted_ivy_league	0.008 (0.005)
weighted_relevant_degree	-0.0001 (0.007)
weighted_economic_insights	0.004 (0.007)
Excess_Market	0.875*** (0.006)
SMB	0.030*** (0.010)
HML	-0.050*** (0.011)
MOM	-0.115*** (0.007)
Observations	2,012
R ²	0.929
Adjusted R ²	0.928
Residual Std. Error	0.002 (df = 2001)
F Statistic	2,370.421*** (df = 11; 2001)

Note:

* p<0.1; ** p<0.05; *** p<0.01

Table A.11. Out Of Sample Testing of Congress Returns - FF4

<i>Dependent variable:</i>	
Congress Returns	
Excess_Market	0.876*** (0.006)
SMB	0.029*** (0.010)
HML	-0.050*** (0.011)
MOM	-0.115*** (0.008)
Observations	2,012
R ²	0.928
Adjusted R ²	0.928
Residual Std. Error	0.002 (df = 2008)
F Statistic	6,451.580*** (df = 4; 2008)
<i>Note:</i>	*p<0.1; **p<0.05; ***p<0.01

Table A.12. Descriptive Statistics for the aggregate U.S. Congress Portfolio (2012-2023)

	Congress	SP500
Index ending value (Dec. 30th 2023)	832.890	373.501
Daily return	0.001	0.0004
Annualized return	0.195	0.118
Daily SD	0.010	0.011
Annualized SD	0.165	0.170
Market Beta	0.921	-
SMB Beta	0.047	-
HML Beta	0.068	-
MOM Beta	-0.026	-
Predicted Annual Return Market	0.113	-
Alpha (Market Factor)	0.082	-
Predicted Annual Return FF4	0.111	-
Alpha (FF4)	0.084	-

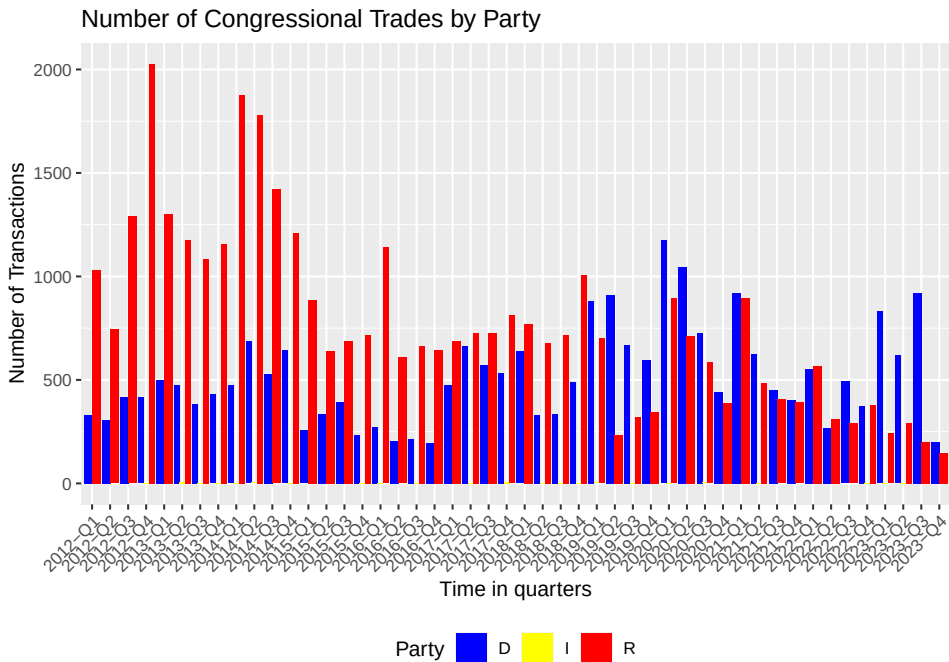


Figure A.1. Number of securities transactions by US politicians

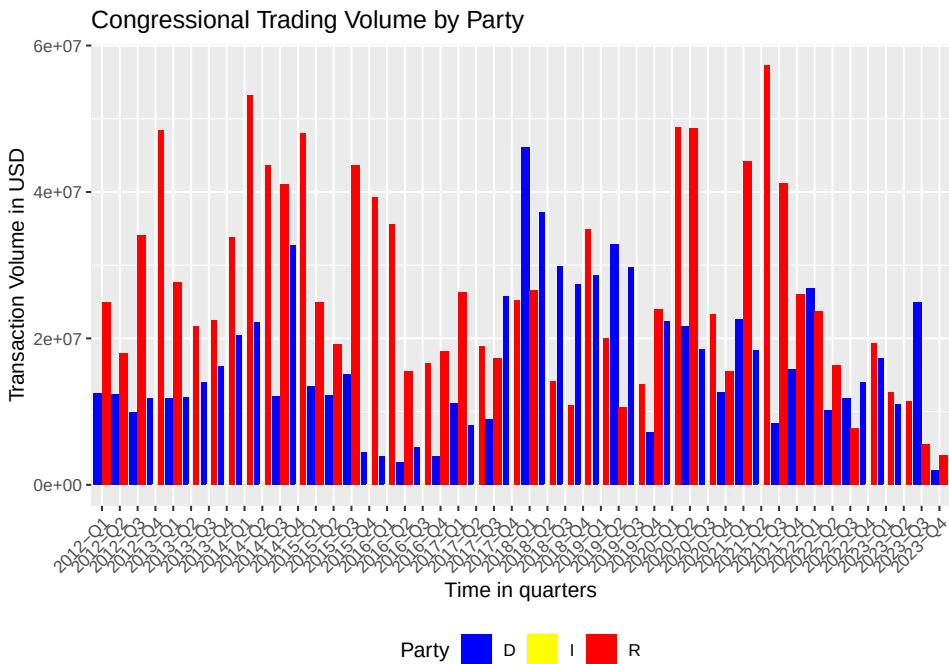


Figure A.2. US congress trade volume by quarter

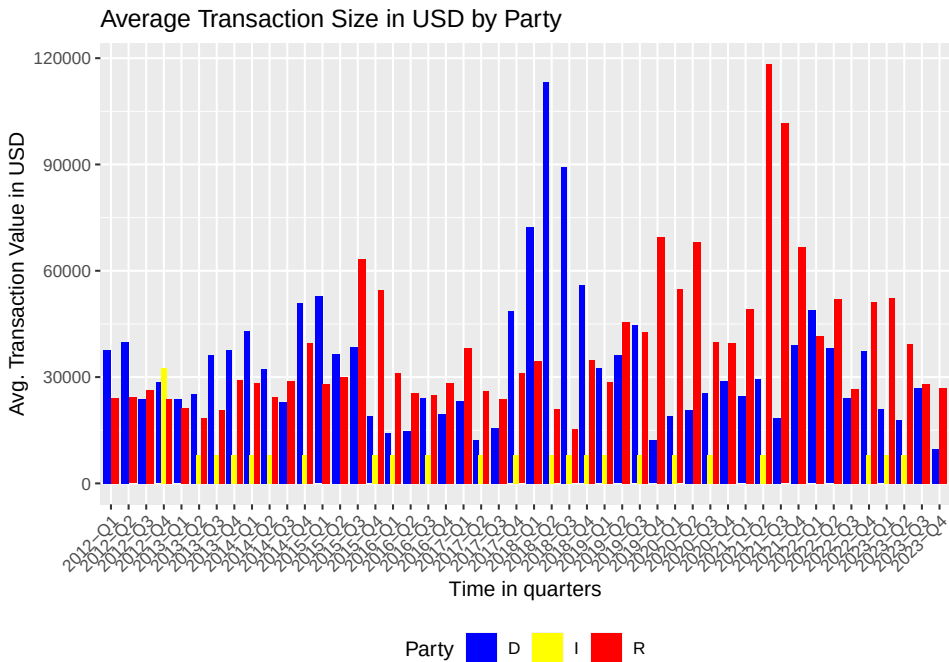


Figure A.3. Average Transaction Value in USD by US politicians

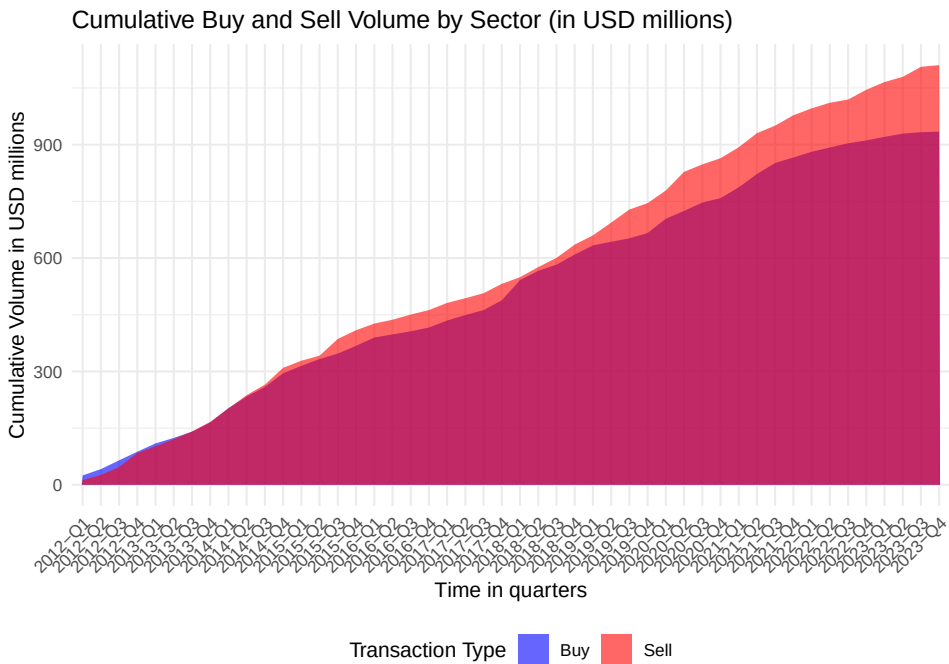


Figure A.4. Cumulative Buy and Sell transaction volume in USD millions

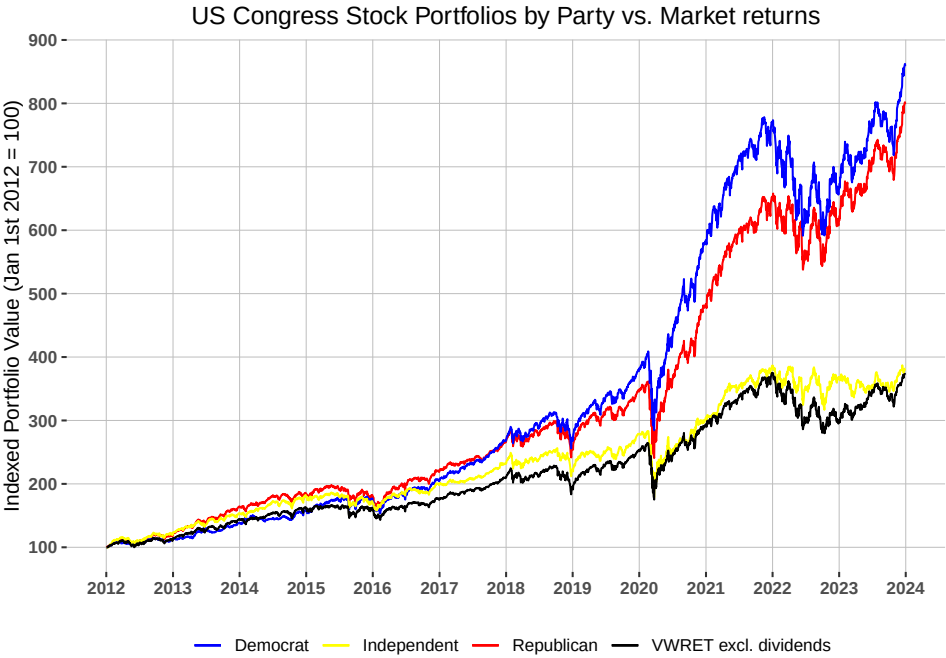


Figure A.5. Portfolio performance by Political Party

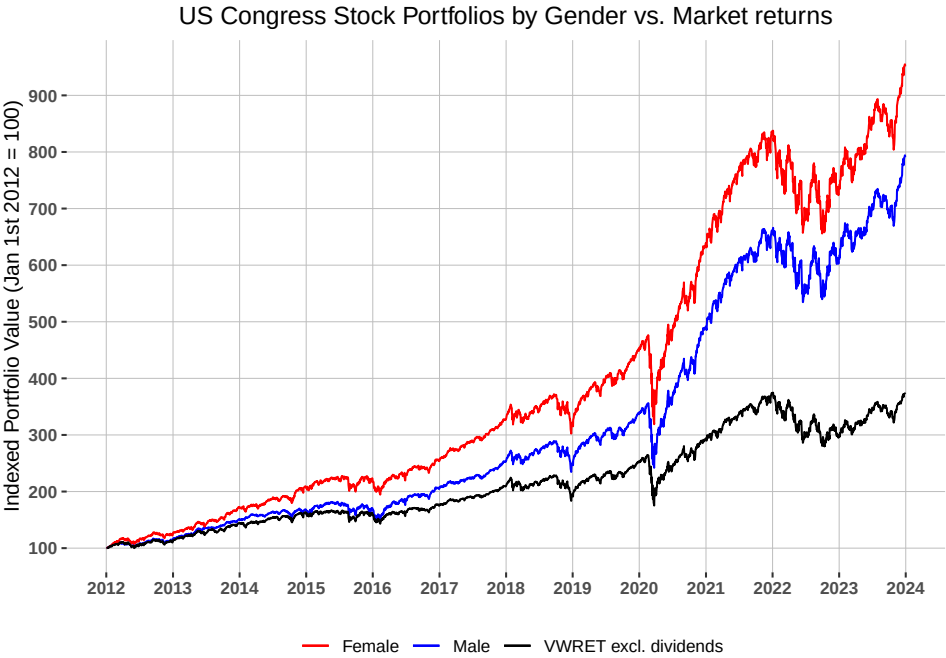


Figure A.6. Portfolio performance by Gender

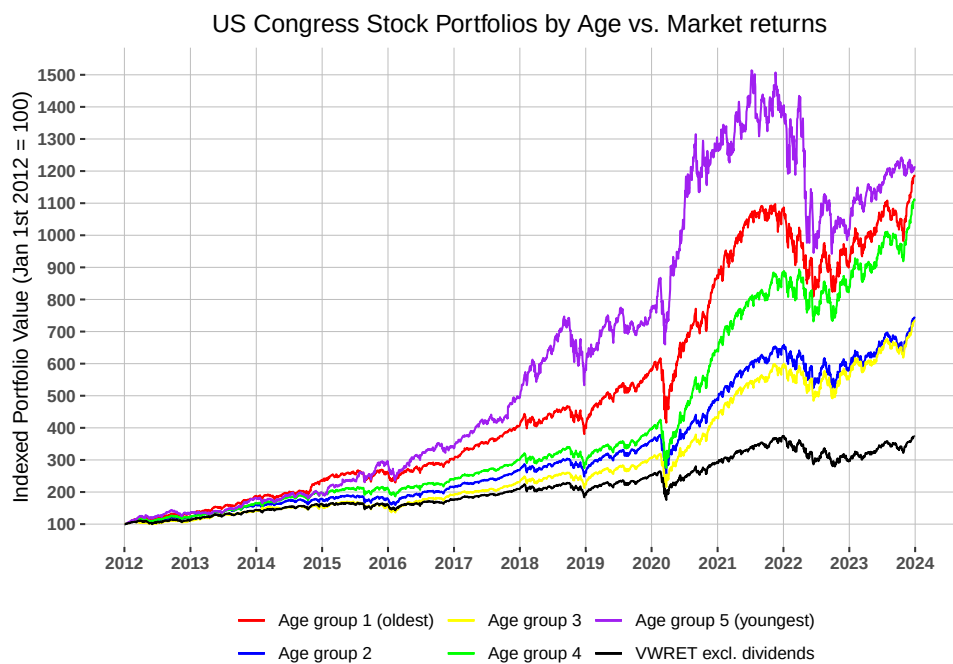


Figure A.7. Portfolio performance by Age groups

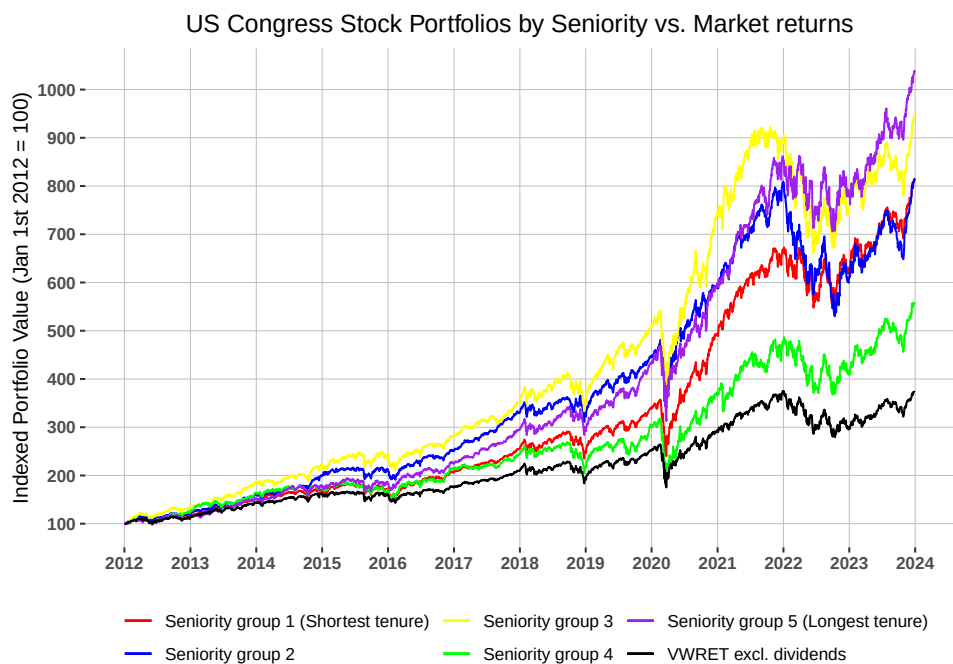


Figure A.8. Portfolio performance by Seniority groups

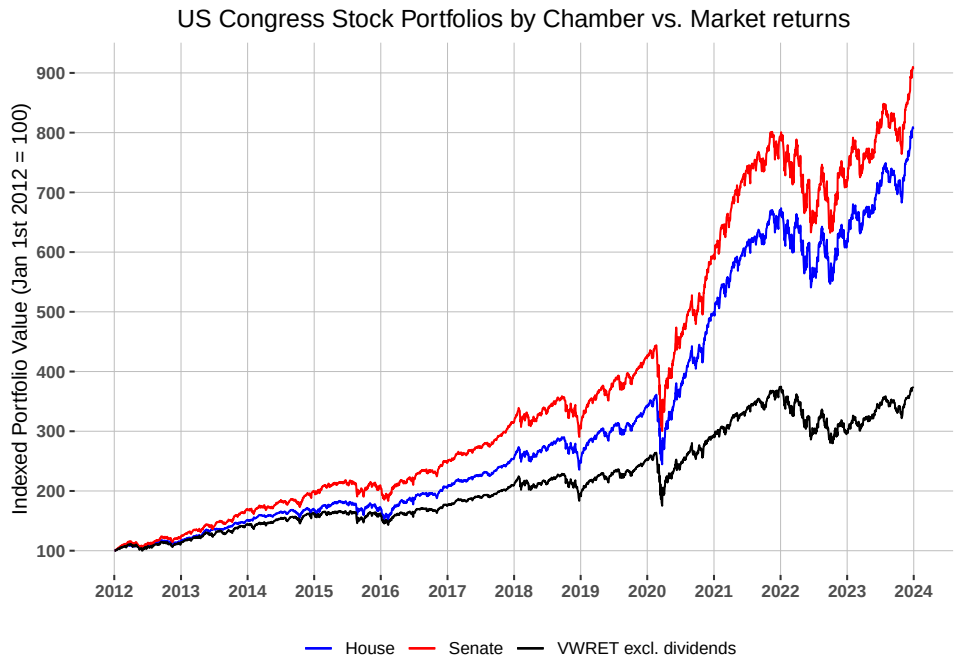


Figure A.9. Subset US Congressional Portfolios by Legislative Chamber

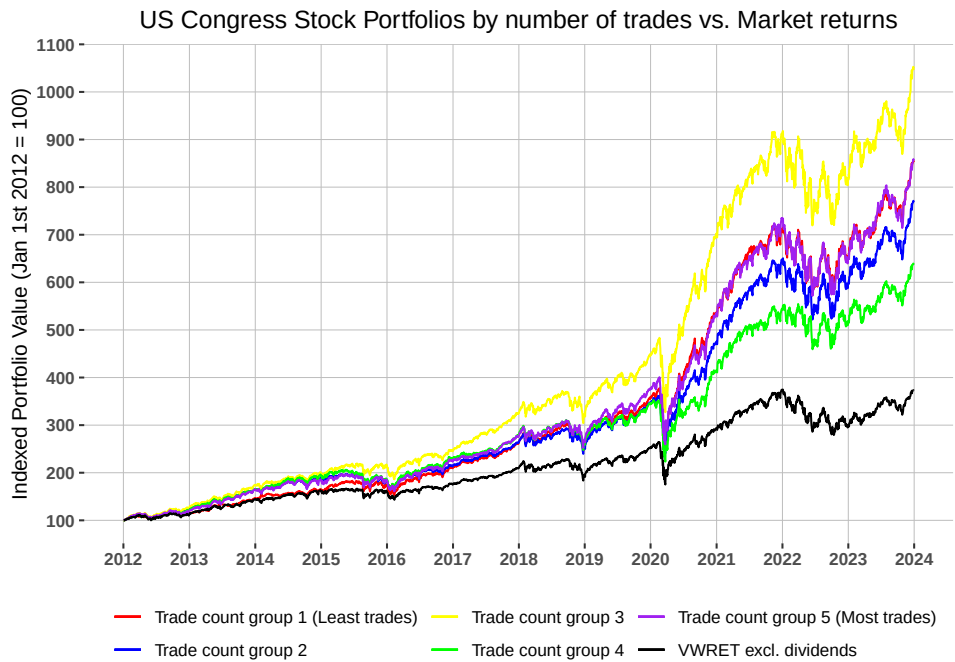


Figure A.10. Subset US Congressional Portfolios by Number of Securities Transactions

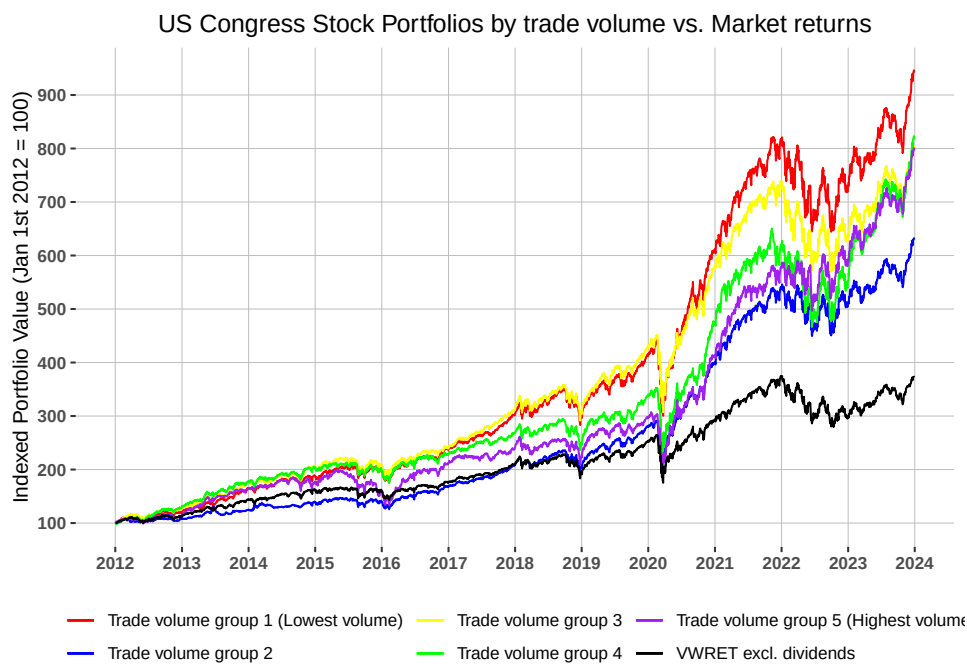


Figure A.11. Subset US Congressional Portfolios by Trading Volume

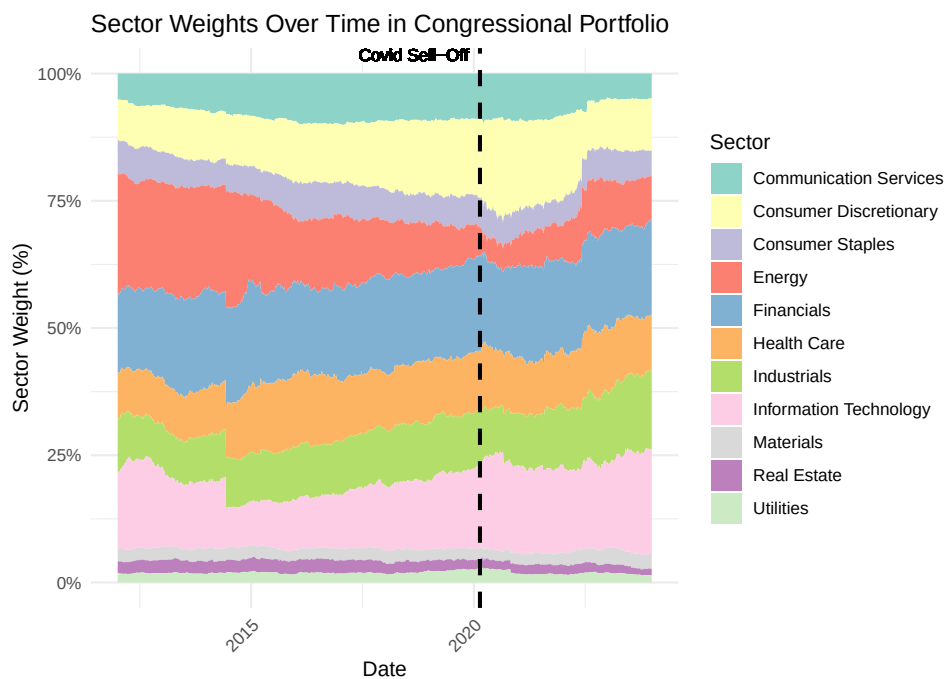


Figure A.12. Sector Weights in the Aggregate US Congressional Portfolio

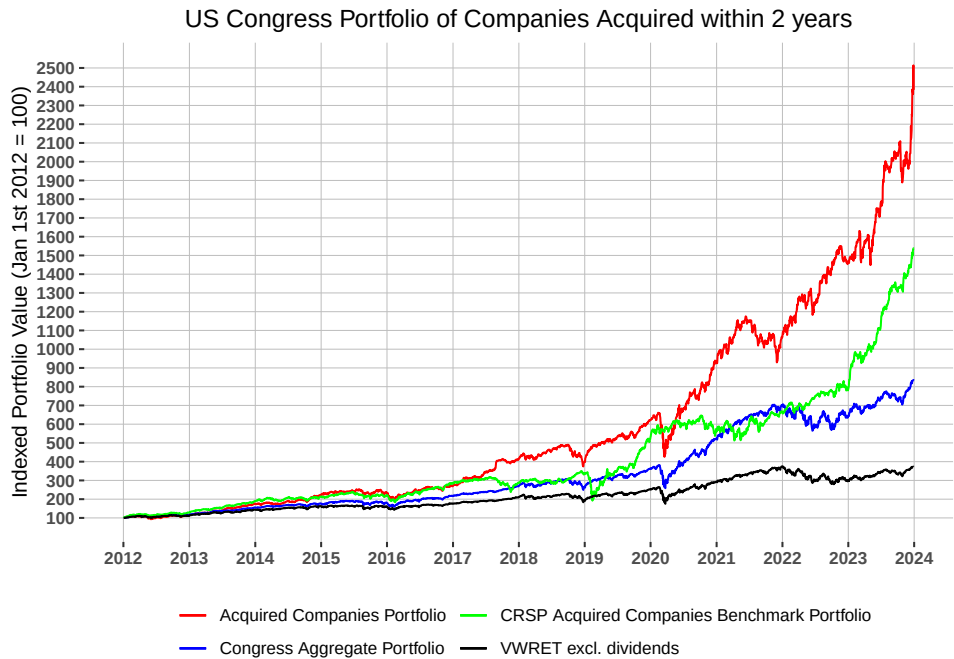
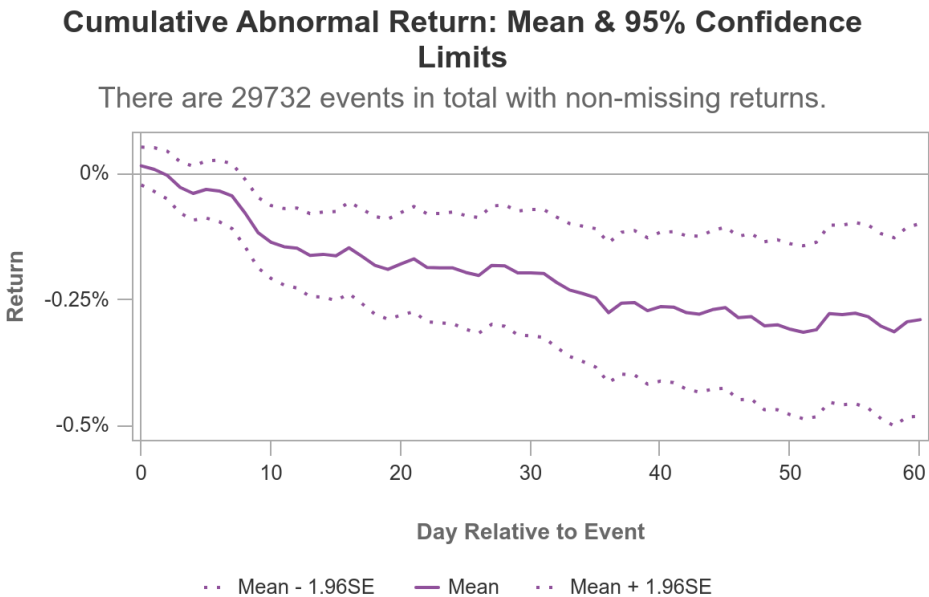


Figure A.13. US Congressional Portfolio of Companies that were acquired in the 24 months after the transaction (closing)



Highcharts.com

Figure A.14. Cumulative Abnormal Returns of all US politicians’ buy transactions

Cumulative Abnormal Return: Mean & 95% Confidence Limits

There are 28255 events in total with non-missing returns.

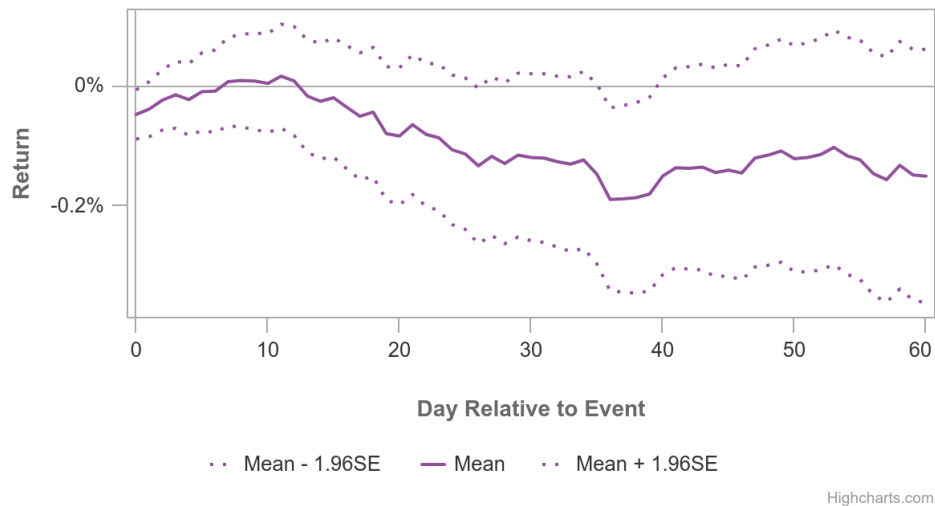


Figure A.15. Cumulative Abnormal Returns of all US politicians' sell transactions

Cumulative Abnormal Return: Mean & 95% Confidence Limits

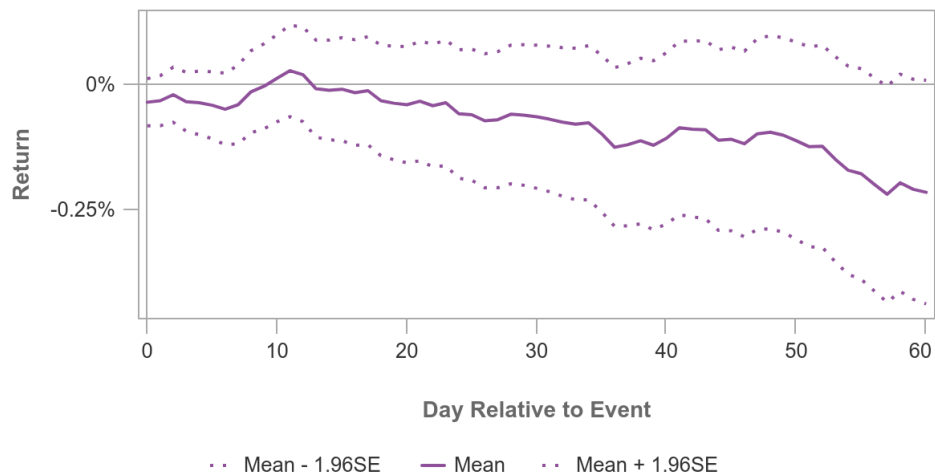


Figure A.16. Cumulative Abnormal Returns of US politicians' sell transactions before Covid

Cumulative Abnormal Return: Mean & 95% Confidence Limits

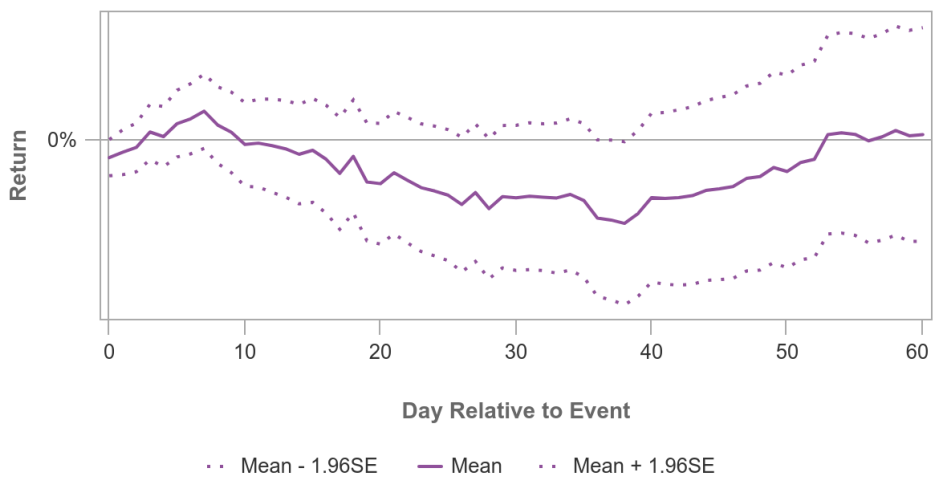


Figure A.17. Cumulative Abnormal Returns of US politicians' sell transactions after Covid

Cumulative Abnormal Return: Mean & 95% Confidence Limits

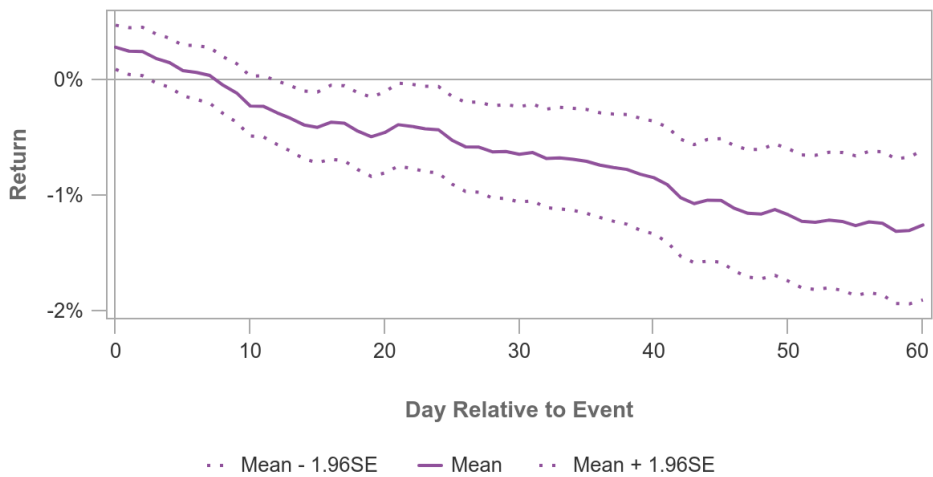


Figure A.18. Cumulative Abnormal Returns of to 15% best performing US politicians' buy transactions

Cumulative Abnormal Return: Mean & 95% Confidence Limits

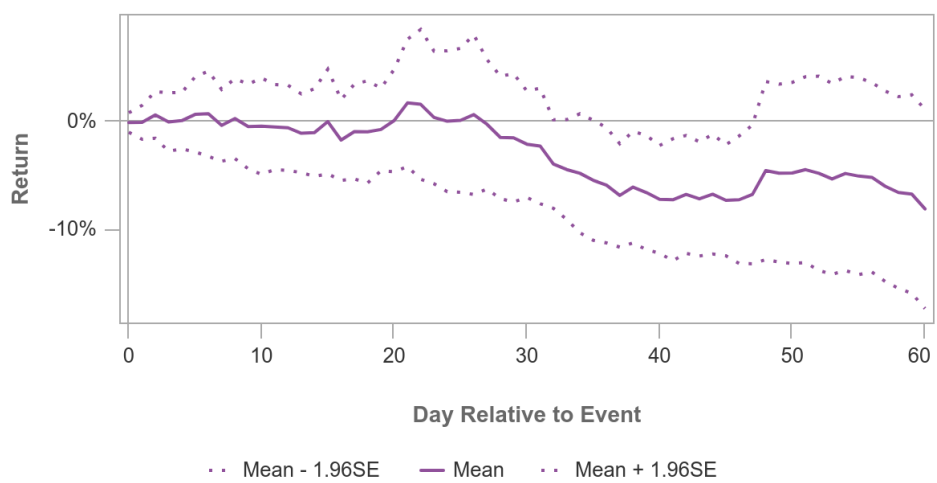


Figure A.19. Cumulative Abnormal Returns of Nancy Pelosi’s buy transactions after Covid

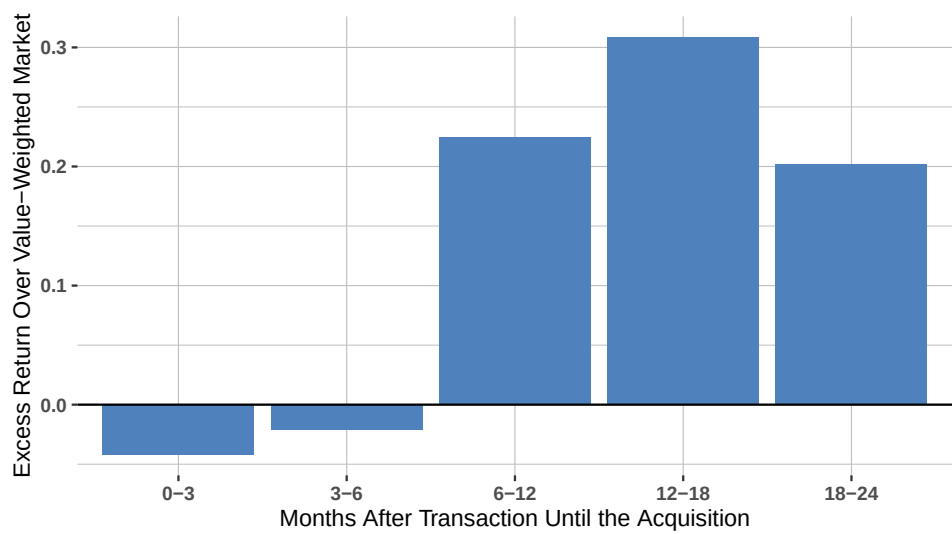


Figure A.20. Excess Returns of Transactions on Acquired Companies over The Value Weighted Market Index

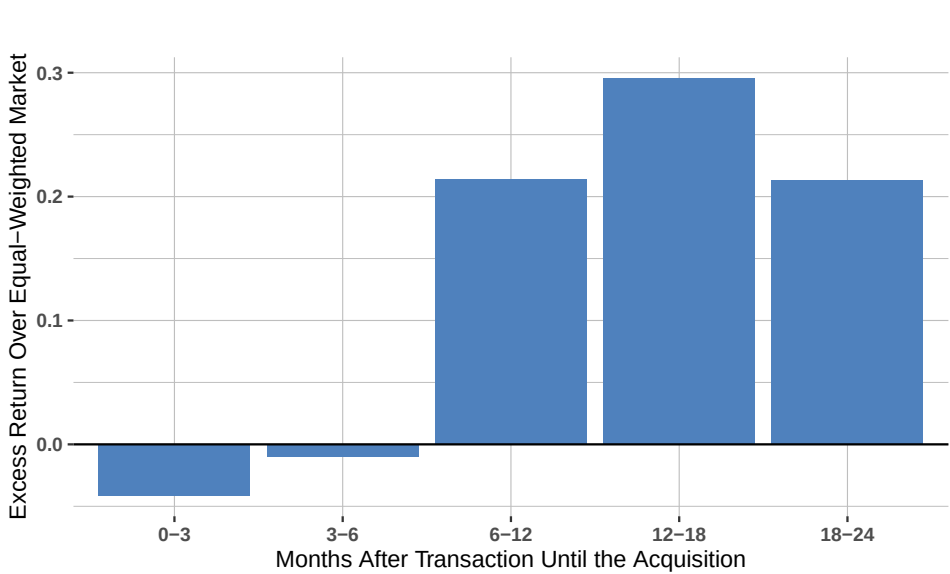


Figure A.21. Excess Returns of Transactions on Acquired Companies over The Equal Weighted Market Index

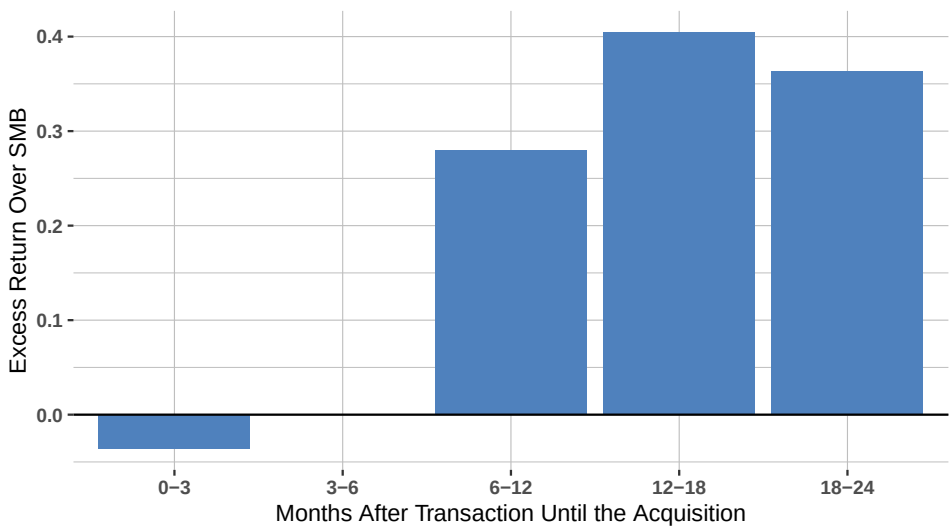


Figure A.22. Excess Returns of Transactions on Acquired Companies over The Small-Minus-Big Index

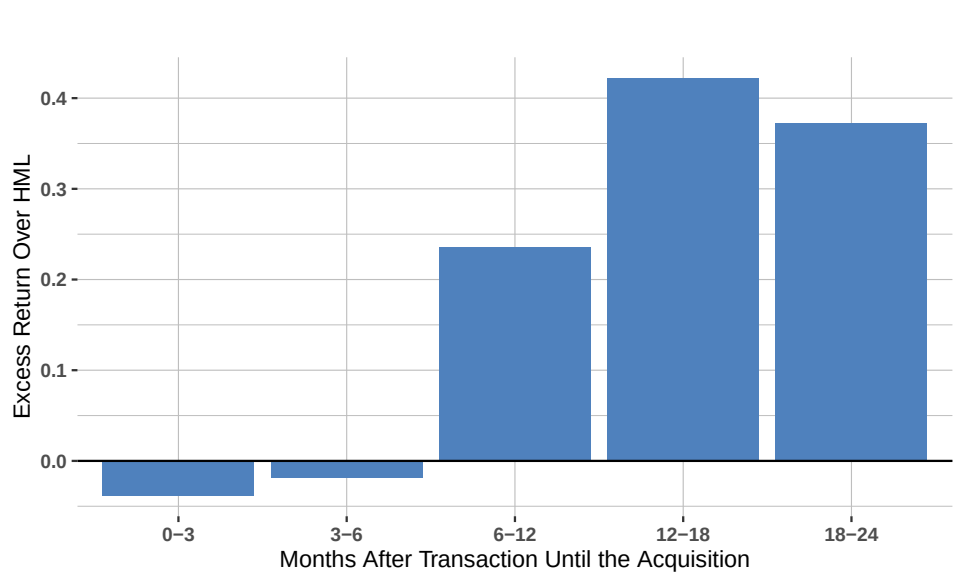


Figure A.23. Excess Returns of Transactions on Acquired Companies over The High-Minus-Low Index

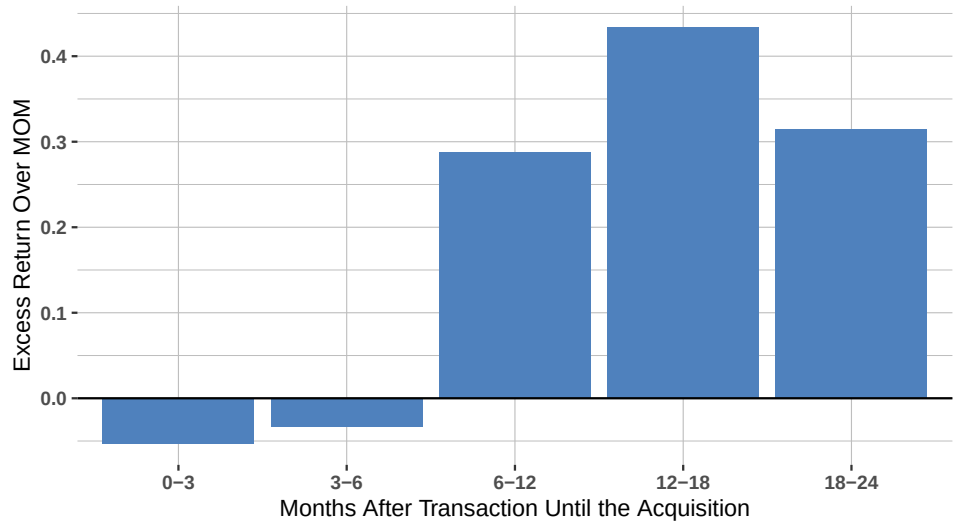


Figure A.24. Excess Returns of Transactions on Acquired Companies over The Momentum Index

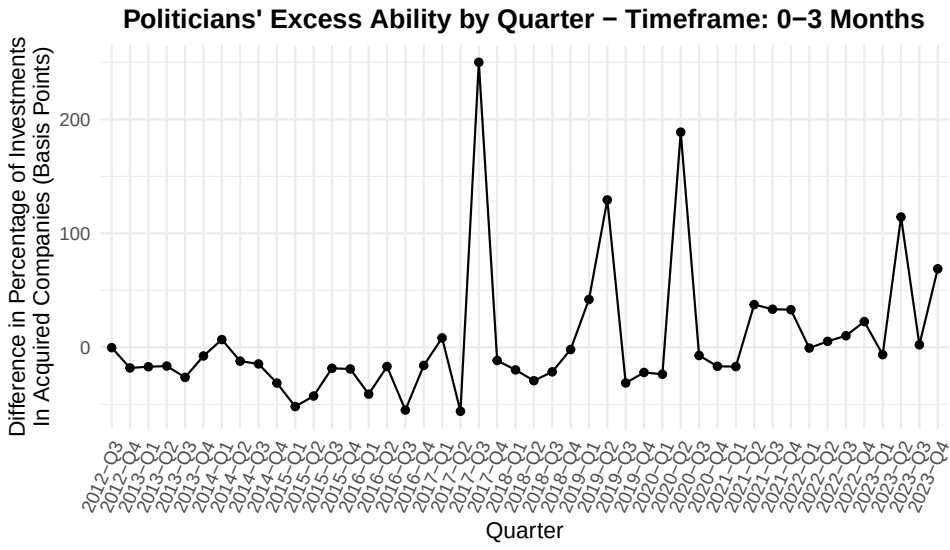


Figure A.25. Politicians’ Excess Ability to Spot Acquired Companies Within 3 Months Through Quarters

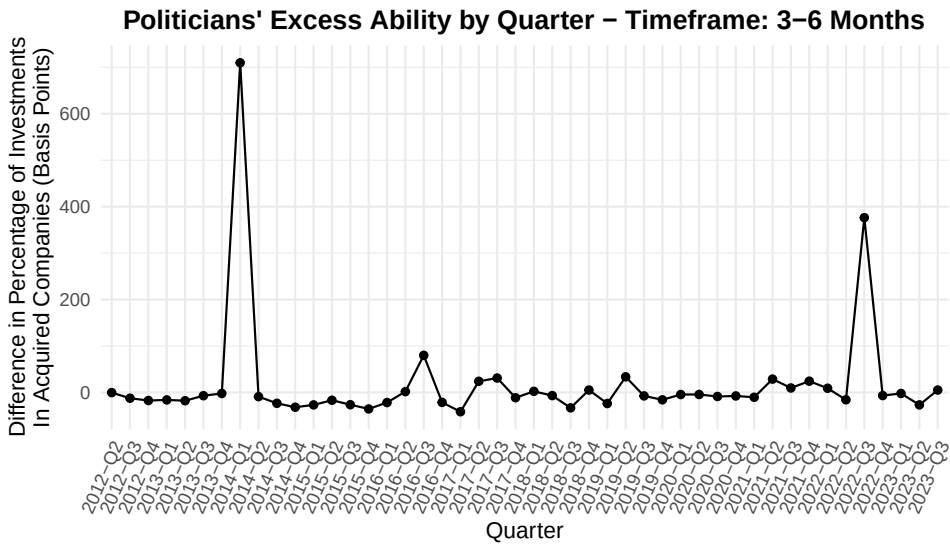


Figure A.26. Politicians’ Excess Ability to Spot Acquired Companies Between 3-6 Months After the Transaction Through Quarters

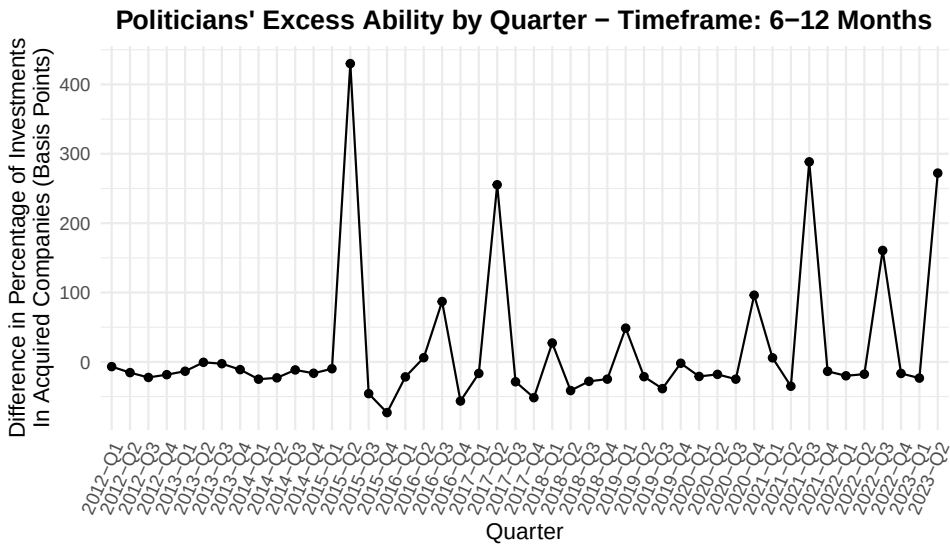


Figure A.27. Politicians’ Excess Ability to Spot Acquired Companies Between 6-12 Months After the Transaction Through Quarters

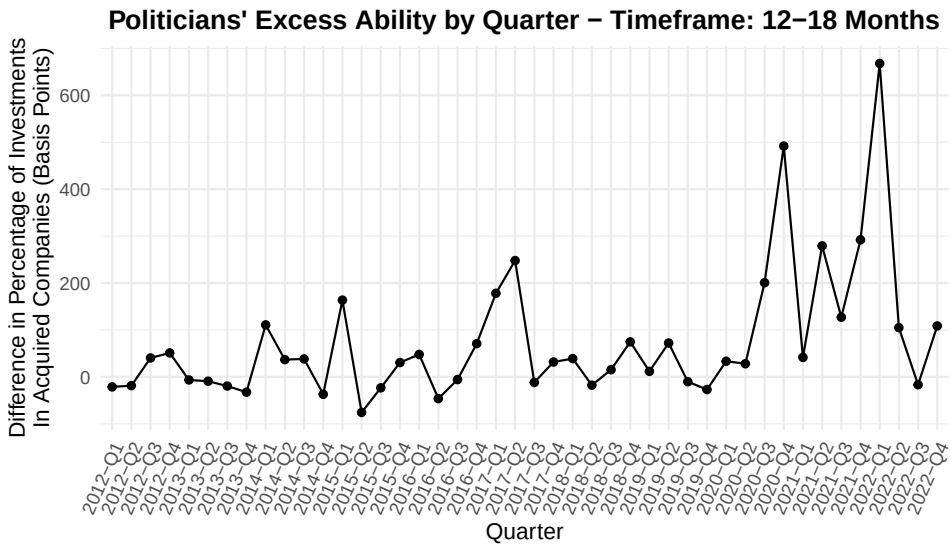


Figure A.28. Politicians’ Excess Ability to Spot Acquired Companies Between 12-18 Months After the Transaction Through Quarters

Table A.13. List of politicians sorted by average annual returns

#	Name	Avg. Annual Return (%)	#	Name	Avg. Annual Return (%)	#	Name	Avg. Annual Return (%)
1	Steve King	85.45%	55	Chris Jacobs	24.13%	109	Susie Lee	19.29%
2	John Lewis	68.67%	56	Bryan Steil	24.11%	110	John Carney	19.23%
3	Marlin Stutzman	62.43%	57	John Culberson	24.01%	111	Jonathan Jackson	19.17%
4	Christopher Coons	61.21%	58	Joseph Crowley	23.88%	112	Brian Mast	19.06%
5	Mike Garcia	52.87%	59	Anthony Gonzalez	23.79%	113	Kelly Loeffler	19.06%
6	Robert Aderholt	51.01%	60	Bill Hagerty	23.55%	114	Harley Rouda	18.95%
7	Tim Griffin	48.84%	61	John Curtis	23.43%	115	Michael Bennet	18.95%
8	Daniel Meuser	47.34%	62	Tim Burchett	23.18%	116	Abigail Spanberger	18.88%
9	Thomas Massie	46.66%	63	David Trone	23.05%	117	Donna Shalala	18.86%
10	Cathy Mcmorris Rodgers	43.07%	64	Jeff Flake	22.89%	118	Michael Burgess	18.86%
11	Warren Davidson	42.33%	65	Bruce Braley	22.83%	119	Zoe Lofgren	18.85%
12	Janice Schakowsky	41.76%	66	Thomas Suozzi	22.82%	120	Thomas Rooney	18.76%
13	Kim Schrier	40.62%	67	Eric Cantor	22.59%	121	Lacy Clay	18.73%
14	David Jolly	40.37%	68	Kevin McCarthy	22.27%	122	Lizzie Fletcher	18.63%
15	Cory Booker	40.08%	69	Alan Lowenthal	22.27%	123	Dan Sullivan	18.60%
16	Morgan McGarvey	39.83%	70	John Garamendi	22.22%	124	Ben Quayle	18.56%
17	Lynn Woolsey	37.12%	71	Marjorie Taylor Greene	22.04%	125	Steve Scalise	18.44%
18	Ro Khanna	36.67%	72	Ann Wagner	21.99%	126	Jeff Bingaman	18.44%
19	Madison Cawthorn	35.16%	73	Fortney Stark	21.94%	127	Carlos Curbelo	18.43%
20	Michael Turner	34.26%	74	Brian Babin	21.69%	128	Leonard Lance	17.99%
21	Shri Thanedar	33.76%	75	David Roe	21.63%	129	Rubén Hinojosa	17.94%
22	Scott Tipton	31.67%	76	Sara Jacobs	21.62%	130	Mario Diaz-Balart	17.92%
23	Pat Roberts	31.39%	77	Dan Crenshaw	21.62%	131	Brad Ashford	17.65%
24	James Langevin	31.39%	78	Dan Newhouse	21.61%	132	Greg Gianforte	17.65%
25	Jim Hagedorn	31.23%	79	Edward Royce	21.52%	133	Adam Schiff	17.63%
26	Marie Newman	30.96%	80	Robert Portman	21.04%	134	Barbara Comstock	17.58%
27	Matthew Cartwright	30.50%	81	John Kerry	21.03%	135	John Larson	17.54%
28	Mark Begich	29.73%	82	Kay Hagan	20.96%	136	Peter Meijer	17.42%
29	Jon Kyl	29.28%	83	Tommy Tuberville	20.82%	137	Rick Larsen	17.41%
30	John Duncan	28.23%	84	Sheldon Whitehouse	20.75%	138	Thomas Kean	17.37%
31	Lloyd Smucker	28.09%	85	John Delaney	20.72%	139	Raúl Grijalva	17.33%
32	Greg Stanton	27.00%	86	John Thune	20.68%	140	Tom Price	17.33%
33	Thomas Coburn	26.94%	87	Katherine Clark	20.64%	141	Fred Upton	17.27%
34	Saxby Chambliss	26.88%	88	Gilbert Cisneros	20.63%	142	Brian Higgins	17.26%
35	Roger Marshall	26.78%	89	Kenny Marchant	20.63%	143	Robert Wittman	17.20%
36	Greg Walden	26.20%	90	John Hickenlooper	20.60%	144	Diane Black	17.20%
37	John Yarmuth	26.18%	91	William Keating	20.52%	145	Kurt Schrader	17.18%
38	Josh Gottheimer	26.04%	92	Debbie Wasserman Schultz	20.39%	146	Mo Brooks	17.15%
39	John Faso	26.01%	93	Nick Rahall	20.39%	147	Bill Cassidy	17.11%
40	Bradley Schneider	25.81%	94	John Dingell	20.38%	148	Blake Farenthold	17.10%
41	David Rouzer	25.75%	95	Ron Wyden	20.28%	149	Susan Davis	17.08%
42	John Cornyn	25.75%	96	Lamar Smith	20.09%	150	Seth Moulton	17.07%
43	Tina Smith	25.75%	97	John Boehner	20.07%	151	Peter Welch	16.93%
44	Tom Malinowski	25.75%	98	John Rose	19.91%	152	Pete Sessions	16.86%
45	Deborah Ross	25.31%	99	Scott Franklin	19.91%	153	Steve Chabot	16.81%
46	David Kustoff	25.29%	100	August Pfluger	19.90%	154	William Timmons	16.75%
47	Ashley Hinson	25.17%	101	Dan Goldman	19.80%	155	David McKinley	16.69%
48	Thomas Harkin	24.90%	102	Ben Nelson	19.62%	156	Jackie Speier	16.64%
49	Stephanie Murphy	24.78%	103	Gary Palmer	19.60%	157	Harold Rogers	16.55%
50	Nancy Pelosi	24.74%	104	Dwight Evans	19.50%	158	Trey Radel	16.42%
51	Donald Beyer	24.44%	105	Andrew Garbarino	19.47%	159	Michael Conaway	16.33%
52	Dianne Feinstein	24.37%	106	Robert Scott	19.40%	160	John Reed	16.33%
53	Howard Coble	24.20%	107	James Renacci	19.40%	161	Dave Camp	16.33%
54	Kathy Manning	24.17%	108	David Dreier	19.29%	162	Brenda Lawrence	16.24%

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Table A.13 – continued from previous page

#	Name	Avg. Annual Return (%)	#	Name	Avg. Annual Return (%)	#	Name	Avg. Annual Return (%)
163	Michael McCaul	16.24%	219	Daniel Coats	14.02%	275	Steve Cohen	11.74%
164	David Perdue	16.21%	220	Connie Mack	14.02%	276	Orrin Hatch	11.74%
165	Derek Kilmer	16.18%	221	Paul Ryan	14.01%	277	Max Miller	11.68%
166	Victoria Spartz	16.15%	222	Tammy Duckworth	14.01%	278	Dave Trott	11.47%
167	Garret Graves	16.08%	223	Richard Hanna	14.01%	279	Xavier Becerra	11.41%
168	Kathy Castor	16.05%	224	Kay Bailey Hutchinson	13.92%	280	Nita Lowey	11.35%
169	Bob Corker	16.02%	225	Todd Rokita	13.89%	281	Virginia Foxx	11.33%
170	Richard Burr	16.00%	226	Jared Polis	13.89%	282	James Hill	11.32%
171	Mark Meadows	15.99%	227	Shelley Capito	13.85%	283	Kevin Yoder	11.29%
172	Thad Cochran	15.98%	228	John Rutherford	13.82%	284	Suzan Delbene	11.09%
173	Patrick Fallon	15.82%	229	Michael Enzi	13.81%	285	Thom Tillis	11.07%
174	Ed Whitfield	15.78%	230	Luis Gutiérrez	13.73%	286	Angus King	11.06%
175	Mitch McConnell	15.71%	231	Debbie Dingell	13.73%	287	Tom Graves	10.97%
176	James Inhofe	15.70%	232	David Price	13.68%	288	Gerald Connolly	10.85%
177	Gary Peters	15.63%	233	Jared Moskowitz	13.68%	289	Mark Green	10.73%
178	Van Taylor	15.52%	234	James Himes	13.64%	290	Roger Williams	10.71%
179	Deb Fischer	15.51%	235	Raul Ruiz	13.59%	291	John Carter	10.66%
180	James Comer	15.40%	236	Mary Bono Mack	13.53%	292	Tom Cole	10.51%
181	Bob Gibbs	15.36%	237	Lou Barletta	13.48%	293	Jeff Duncan	10.49%
182	Paul Broun	15.35%	238	Thomas Carper	13.47%	294	Andy Harris	10.48%
183	Joseph Kennedy	15.14%	239	Billy Long	13.46%	295	Lamar Alexander	10.35%
184	Ed Perlmutter	15.13%	240	Judy Biggert	13.42%	296	Chellie Pingree	10.33%
185	Susan Collins	15.12%	241	Tom MacArthur	13.41%	297	Melvin Watt	10.25%
186	Joseph Morelle	15.10%	242	Neal Dunn	13.32%	298	Ed Case	10.07%
187	Mark Warner	15.09%	243	Mary Scanlon	13.26%	299	Judy Chu	10.00%
188	Michael Fitzpatrick	15.08%	244	Brad Wenstrup	13.22%	300	James Sensenbrenner	10.00%
189	Linda Sánchez	15.01%	245	Claire McCaskill	13.20%	301	Justin Amash	9.99%
190	Curtis Clawson	15.00%	246	Roger Wicker	13.15%	302	Shelley Berkley	9.97%
191	Dina Titus	14.93%	247	Keith Rothfus	13.09%	303	Jean Schmidt	9.91%
192	Lois Frankel	14.93%	248	Angie Craig	13.06%	304	Jim McDermott	9.85%
193	Dean Phillips	14.92%	249	Charles Fleischmann	13.05%	305	Elaine Luria	9.75%
194	Benjamin Cardin	14.88%	250	Carolyn McCarthy	13.04%	306	Richard Shelby	9.59%
195	Chris Collins	14.86%	251	Rick Allen	13.03%	307	Ron Johnson	9.47%
196	Patty Murray	14.82%	252	Charles Bass	12.97%	308	Gregory Steube	9.39%
197	Rodney Frelinghuysen	14.77%	253	Dan Benishek	12.92%	309	Beto O'Rourke	9.38%
198	Francis Rooney	14.75%	254	Vern Buchanan	12.87%	310	Blake Moore	9.31%
199	Cynthia Axne	14.72%	255	Lisa Blunt Rochester	12.71%	311	Andy Barr	9.25%
200	Tim Walberg	14.72%	256	Grace Meng	12.70%	312	Erik Paulsen	9.21%
201	Jeb Hensarling	14.68%	257	Dan Boren	12.70%	313	Frank Pallone	9.11%
202	Mike Kelly	14.64%	258	Earl Blumenauer	12.62%	314	Bradley Byrne	9.11%
203	Chris Van Hollen	14.62%	259	James McGovern	12.61%	315	Michael Simpson	9.06%
204	Bruce Westerman	14.61%	260	Jared Huffman	12.51%	316	Carol Miller	9.05%
205	Ron Estes	14.52%	261	Rob Woodall	12.47%	317	Steve Stivers	9.02%
206	Cheri Bustos	14.49%	262	Bill Flores	12.42%	318	Aaron Schock	8.98%
207	Mike Gallagher	14.46%	263	John McCain	12.38%	319	Reid Ribble	8.98%
208	John Hoeven	14.44%	264	Tim Murphy	12.34%	320	Russ Fulcher	8.97%
209	Timothy Kaine	14.43%	265	Dutch Ruppersberger	12.32%	321	Paul Mitchell	8.95%
210	Earl Carter	14.43%	266	David Joyce	12.32%	322	Mike Pompeo	8.90%
211	Dean Heller	14.26%	267	Mikie Sherrill	12.20%	323	Louise Slaughter	8.84%
212	Eleanor Norton	14.24%	268	Sam Farr	12.11%	324	Lloyd Doggett	8.83%
213	Bill Johnson	14.23%	269	Patrick Toomey	12.03%	325	Susan Brooks	8.79%
214	Frank Lobiondo	14.16%	270	Jerry Moran	12.00%	326	Jo Bonner	8.64%
215	Trey Hollingsworth	14.13%	271	Robert Hurt	12.00%	327	Hakeem Jeffries	8.62%
216	Kevin Hern	14.11%	272	Elizabeth Esty	11.94%	328	Steve Daines	8.48%
217	Adam Kinzinger	14.09%	273	Cedric Richmond	11.85%	329	Peter Roskam	8.47%
218	John Rockefeller	14.08%	274	William Owens	11.78%	330	Jim Webb	8.43%

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Table A.13 – continued from previous page

#	Name	Avg. Annual Return (%)	#	Name	Avg. Annual Return (%)	#	Name	Avg. Annual Return (%)
331	Stephanie Bice	8.32%	356	Bradley Miller	5.71%	381	George Miller	0.15%
332	Albio Sires	8.31%	357	Lindsey Graham	5.64%	382	Jim Banks	0.07%
333	Richard Durbin	8.28%	358	Charlie Crist	5.45%	383	Alan Franken	-0.79%
334	Scott Peters	8.24%	359	Maria Salazar	5.40%	384	Robert Casey	-0.83%
335	Mike Pence	7.99%	360	David Vitter	4.30%	385	Jim Cooper	-1.85%
336	Joseph Lieberman	7.96%	361	Michael Doyle	4.25%	386	Lori Trahan	-1.99%
337	John Campbell	7.95%	362	Mike Johanns	3.96%	387	Bill Pascrell	-2.57%
338	John Boozman	7.91%	363	Lee Terry	3.81%	388	Donald McEachin	-3.90%
339	Scott Rigell	7.79%	364	Jennifer McClellan	3.59%	389	Roy Blunt	-4.31%
340	Mark Udall	7.79%	365	George Holding	3.03%	390	Richard Blumenthal	-4.34%
341	Marshall Sanford	7.76%	366	Ron DeSantis	2.98%	391	Cynthia Lummis	-4.78%
342	Randy Neugebauer	7.53%	367	Jacky Rosen	2.87%	392	Michael Crapo	-7.30%
343	Ander Crenshaw	7.52%	368	Marcy Kaptur	2.85%	393	Jefferson Sessions	-7.95%
344	Niki Tsongas	7.48%	369	Spencer Bachus	2.80%	394	Tom Udall	-8.59%
345	Joe Courtney	7.40%	370	Tom O'Halleran	2.73%	395	Daniel Lipinski	-10.86%
346	Elizabeth Warren	7.34%	371	Darin LaHood	2.72%	396	Maria Cantwell	-10.96%
347	Gary Miller	7.08%	372	Ken Buck	2.45%	397	Denny Heck	-11.01%
348	Mick Mulvaney	7.00%	373	Tom Rice	2.18%	398	Gregory Murphy	-13.23%
349	Teresa Leger Fernandez	6.84%	374	Michael Guest	2.08%	399	Robert Andrews	-15.74%
350	Austin Scott	6.57%	375	Mary Landrieu	1.99%	400	Gus Bilirakis	-16.33%
351	Peter Visclosky	6.46%	376	Ted Yoho	1.93%	401	Jerry Costello	-16.61%
352	Martha Roby	6.05%	377	Robert Latta	1.80%	402	Doug Lamborn	-22.23%
353	Pete Olson	5.94%	378	Marc Veasey	0.99%	403	Larry Bucshon	-24.81%
354	Rodney Blum	5.83%	379	Joe Manchin	0.81%	404	Alan Grayson	-26.79%
355	Ted Cruz	5.80%	380	Ron Barber	0.63%	405	Howard Berman	-49.90%

Generative AI Disclosure

In the course of this master's thesis, generative AI (GenAI) technologies were employed as sophisticated tools designed to enhance efficiency, ensure precision, and foster creativity in various aspects of the research and writing process. The integration of GenAI primarily served to automate repetitive tasks, aid in the development of complex coding solutions, and enhance the overall quality of the manuscript by providing assistance in spelling and grammar corrections. This appendix outlines the specific applications of GenAI, the tools utilized, the potential risks encountered, and the mitigation strategies implemented.

GenAI was utilized in the following capacities throughout the research and composition of this thesis:

- **Data File Type Conversions:** Conversion of data files from JSON format to XLSX format to facilitate easier data manipulation and analysis.
- **Data Retrieval and Integration:** Extraction of specific data points from files and their subsequent integration with other datasets to ensure comprehensive data analysis.
- **Matching Non-Exact Entries:** Identification and matching of non-exact name entries across different datasets, which was crucial for maintaining the integrity of the data.
- **Coding Assistance:** GenAI tools were instrumental in writing and refining code, particularly focusing on enhancing efficiency and reducing computing power requirements, especially in the context of complex calculations in large datasets.
- **Grammar and Spelling Assistance:** Selected paragraphs were processed through GenAI to correct grammatical errors and spelling mistakes, thereby improving the readability and professionalism of the text.
- **Title Generation:** GenAI contributed creative suggestions for potential titles, aiding in capturing the essence of the thesis while engaging the reader.

The sole GenAI tool employed in this thesis was OpenAI's ChatGPT, which provided robust support in all the aforementioned applications (OpenAI, 2024).

While employing GenAI, several risks were identified, including the potential for inaccuracies in data handling and the introduction of bias in textual content. To mitigate these risks, the following measures were implemented:

- **Manual Verification:** All data processed and suggestions made by GenAI were manually verified to ensure accuracy and relevancy.
- **Iterative Review:** Code and textual content were subjected to multiple rounds of review to refine the output and ensure it met the required standards without undue influence from GenAI biases.

The use of generative AI enhanced the quality of this thesis by reducing the time required for data preparation and enabling more focus on analysis and discussion. The iterative process of coding with ChatGPT support resulted in more efficient computational processes, directly benefiting the scope and depth of the research.

Overall, generative AI served as an assistant, supporting in data formatting, optimizing the code and checking for grammar and spelling mistakes to make the thesis more readable and professional. The usage of GenAI mainly focused on the former two functions, while being used sporadically during the writing. We specifically did not use generative AI to create original text content, instead it only improved and optimized text written by the authors.