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# Abnormal Returns From the Common Stock Investments of Members of the U.S. House of Representatives

Alan J. Ziobrowski, James W. Boyd, Ping Cheng, and Brigitte J. Ziobrowski

## Abstract

A previous study suggests that U.S. Senators trade common stock with a substantial informational advantage compared to ordinary investors and even corporate insiders. We apply precisely the same methods to test for abnormal returns from the common stock investments of Members of the U.S. House of Representatives. We measure abnormal returns for more than 16,000 common stock transactions made by approximately 300 House delegates from 1985 to 2001. Consistent with the study of Senatorial trading activity, we find stocks purchased by Representatives also earn significant positive abnormal returns (albeit considerably smaller returns). A portfolio that mimics the purchases of House Members beats the market by 55 basis points per month (approximately 6% annually).

**KEYWORDS:** abnormal returns, U.S. Congress, event study

## Introduction

In recent years, "event analysis" has become perhaps the most commonly applied method for analyzing whether actors have profited from confidential information in their possession. The Securities and Exchange Commission, U.S. courts, and many financial analyses have all employed event studies. Indeed, it is probably fair to say that event studies have become routine. In the course of performing their normal duties, members of Congress have access to non-public information that could have a substantial impact on certain businesses, industries, or the economy as a whole. If used as the basis for common stock transactions, such information could yield significant personal trading profits. A previous study of the stock returns of U.S. Senators in a leading finance journal indicates that their portfolios show some of the highest excess returns ever recorded over a long period of time, significantly outperforming even hedge fund managers. Until now, there has been no similar study of Members of the U.S. House of Representatives. This study attempts to fill that gap. We use a standard event analysis methodology to examine the portfolio returns of Members of the U.S. House.

Members of the U.S. House of Representatives trade common stocks without special restrictions.[1] Representatives need not divest themselves of common stocks when they assume office, are permitted to trade common stocks freely while in office, and are not required to recuse themselves from voting on legislation that could affect the value of their common stock holdings. But members of Congress are not permitted to use their official positions for private profit and may not use confidential information obtained in the performance of their government duties for personal gain.[2]

The *Ethics Manual for Members, Officers, and Employees of the U.S. House of Representatives* defends unrestricted stock trading by arguing that

> ...a Member of Congress must exercise judgment concerning legislation across the entire spectrum of business and economic endeavors. The wisdom of divestiture may ... be questioned as likely to insulate a legislator from the personal and economic interests that his/her constituency, or society in general, has in governmental decisions and policy.

[1] Boller 1995 shows that members of the United States Congress regularly purchase common stock in companies that they regulate through legislation. From a random selection of 111 Congressional delegates (House and Senate) who purchased common stock in 1991 through 1993, Boller found that 25% of the members sampled "showed stock transactions that directly coincided with legislative activity."

[2] *Ethics Manual for Members, Officers, and Employees of the U.S. House of Representatives*, Chapter 4, 1992.

Regarding the mandatory disqualification of Members from voting on issues in which they have a personal financial interest,

> Such disqualification could result in the disenfranchisement of a Member's entire constituency on particular issues. A Member may often have a community of interests with his constituency, may arguably have been elected because of and to serve these common interests, and thus would be ineffective in representing the real interests of his constituents if he were disqualified from voting on issues touching those matters of mutual concern.

In short, while divestiture and voting restrictions might eliminate conflicts of interest, they could prevent House Members from effectively representing their constituencies.

To restrain Members from taking personal advantage of non-public information and using their positions for personal gain, Congress has decided that such unethical behavior is best discouraged by the public disclosure of financial investments by Representatives and the discipline of the electoral process. Each year, every Member of the House is required to submit a Financial Disclosure Report (FDR) which identifies all common stock purchases or sales made by the Representative, the Representative's spouse and their dependent children during the previous calendar year, provides the dates of the transactions, and indicates the approximate value of the transactions.[3] Such disclosures are intended to provide the electorate with the necessary information to judge the Representatives' official conduct in light of their private financial interests. However, the electoral process can only be an effective restraint against unethical conduct if the electorate is well-informed both in terms of the assets held by their Representatives and the Representatives' voting records.

Both the Financial Disclosure Reports (FDRs) and Congressional voting records are available to the public. FDRs, submitted annually by House Members, are printed, bound together typically in two or three large volumes, and are sent to Federal document depositories throughout the country. Some FDRs can also be examined on the websites of private "government watchdog" groups.[4] Voting records are officially available in the *Congressional Record*, which is likewise printed and

[3] The Ethics in Government Act of 1978 requires that each representative file this report by May 15 every year. The sanctions for failing to file or report required information, or for knowingly and willfully providing false information can include Congressional disciplinary action, fines up to $10,000 and federal criminal prosecution.

[4] For example, the Center for Responsive Politics presents the FDRs of most current members of Congress on its website, www.opensecrets.org.


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sent to Federal document depositories. Voting records are also available on-line at various websites.[5]

FDRs can be complicated, sometimes containing more than 100 pages for a single Representative. New laws can be more complex, often thousands of pages long and frequently containing provisions that provide substantial benefits to special interest groups, entire industries, or individual companies. Thus to form a reasonable opinion of a Representative's conflicts of interest, voters must familiarize themselves with their Representative's personal asset holdings, the details of each law under consideration in the House and the voting record of the Representative. This could be difficult for any voter.

The main concern is that the opportunity to earn abnormal trading profits could affect the Representatives' judgment and voting patterns and cause agency problems between the Representatives and their constituents. Ultimately voters could decide that the cost of permitting Members of the House to earn excess returns is more than offset by the benefits of effective representation. Nonetheless, if Representatives are using their positions to make trading profits, the average voter would be interested in this kind of information, just as he or she would be interested in campaign contributions, outside employment, consulting relations, nepotism, and so on.

The only other work related to this research is a recent paper by Ziobrowski, Cheng, Boyd and Ziobrowski.[6] They examine abnormal returns from the common stock investments of U.S. Senators from 1993 to1998. Using the calendar-time portfolio approach, a portfolio that mimics the purchases of U.S. Senators outperforms the market by 85 basis points per month (approximately 10% per year). The positive abnormal returns for Senate stock acquisitions are both economically large and statistically significant. Although Democrats outperform Republicans, the researchers find no statistical difference between the abnormal returns earned by Members of the two political parties. However, the investments of Senators in their first term of office significantly outperformed the investments of the most senior Senators who had served more than two terms.

On the other hand, Members of the House of Representatives are not Senators. Being one of 435, as opposed to one of 100, is likely to result in a significant dilution of power relative to members of the Senate. In addition, the filibuster rules in the Senate further amplify the influence of each Senator since the passage of controversial legislation in the Senate effectively requires the support of a super majority (60 Senators) under threat of filibuster. Thus, assuming that privilege

[5] For example www.vote-smart.org, the website of Project Vote Smart, presents voting records of most federal lawmakers on major pieces of legislation. Complete details of the legislation are not provided.

[6] Ziobrowski *et al* 2004.

is derived from power, the fact that Senators have been shown to enjoy a significant information advantage over ordinary investors (and the propensity to use it), would not necessarily lead us to expect that Members of the House of the Representatives enjoy the same access to financial information. Furthermore, even if Members of the House have an information advantage, we hypothesize that the magnitude of the abnormal returns derived from that information is likely to be less than the gains obtained by Senators.

It is also worth noting that legislation has been proposed in Congress which would limit trading by members of Congress and their staffs. The proposed legislation, the Stop Trading on Congressional Knowledge (STOCK) Act, has been the subject of Congressional hearings and provides additional motivation for this study.

Our goal in this research is to determine whether House Members' investments also tend to outperform the overall market. We test whether, on an aggregate level, common stocks purchased by Members of the House of Representatives exhibit positive abnormal returns. Without an information advantage, stocks acquired by House Members should not outperform the market in subsequent trading days. Alternatively, if these transactions yield significant positive abnormal returns, such a finding would suggest that Representatives also trade with information unavailable to ordinary investors in a manner similar to Senators.

In the context of this paper an investment return is the percentage increase in wealth that results from holding a financial asset or portfolio for a given period of time. An abnormal return is that part of an investment return that remains unexplained after most unsystematic (idiosyncratic or firm-specific) variability in returns has been eliminated by diversification, and after the return that compensates investors for systematic (market driven) variability has been factored out. The suggestion that significant positive abnormal returns are evidence of an information advantage is based on the Efficient Markets Hypothesis (EMH). The EMH is the theoretical foundation for much of modern financial economics, and it is supported by a large body of empirical evidence.[7] Essentially, the EMH holds that the market incorporates all new information pertinent to stock values very quickly, with the result that future stock price changes and investment returns are unpredictable, rendering it impossible for investors to devise strategies based on available information that will consistently produce abnormal returns. After decades of empirical testing the literature of financial economics largely supports the EMH in that no conclusive evidence has been produced showing that abnormal returns can be earned based on patterns of past price histories (weak form efficiency) or current publicly available information (semi-strong form efficiency). However, the EMH is

[7] A detailed discussion of the EMH is far beyond the scope of this paper. For readers who are not familiar with this literature the recommended starting points are Fama 1970, 1991, and 1998.


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not supported in its strong form, which holds that investors can not earn abnormal returns on the basis of any information at all, including information that is not available to the general public. Studies of corporate insider trading such as Jaffe,[8] Givoly and Palmon,[9] and Seyhun[10] have shown that investors who have an information advantage can indeed earn significant abnormal returns.

Using data available from congressional financial disclosures, we build a sample of stocks purchased by House Members during the period 1985 to 2001. Using the same methodology as Ziobrowski, Cheng, Boyd and Ziobrowski (2004), we test for abnormal returns with a calendar-time portfolio analysis. In addition to whole sample analysis, we perform sub-sample analyses by dividing our sample by the political party of the Representatives and their seniority in the House of Representatives.

We also build and test a sample of common stock sell transactions made during the same period. However, it is important to recognize that the interpretation of results from the sell sample is difficult and inconclusive regardless of the findings. Specifically, if we observe negative abnormal returns immediately after the sale, we might infer that the Representatives had advanced warning of negative forthcoming information and therefore sold to avoid the inevitable losses. On the other hand, positive abnormal returns observed after the sale, might suggest that the Representatives took their "abnormal" profits "off the table" before the stock prices had peaked. Finally, no abnormal returns may indicate that they sold after all the positive excess returns had been squeezed from the investment. In short, any result obtained from the sell sample can be interpreted as support for the hypothesis. Thus we present results from the sell sample in the interest of completeness and they are not used as a basis for any conclusions.

Overall we find that the common stocks purchased by Members of the U.S. House of Representatives earn statistically significant positive abnormal returns. Our results indicate that Representatives, like Senators, also trade with a substantial information advantage. A portfolio that imitates the common stock purchases of U.S. Representatives on a trade-weighted basis outperforms the market by 55 basis points per month (over 6% per year). Using the Capital Asset Pricing Model (CAPM)[11] and the Fama-French Three-Factor Model[12] (augmented by a factor for momentum),[13] the

[8] Jaffe 1974.
[9] Givoly and Palmon 1985.
[10] Seyhun 1986.
[11] The CAPM is a bedrock theoretical model in modern financial economics that specifies the return that a financial asset should earn to compensate investors for risk, originally developed by Sharpe 1964, Lintner 1965, and Mossin 1966.
[12] This model is related to the original CAPM, but Fama and French 1993 show that is does a much better job of explaining observed security returns than the empirical form of the original CAPM.

positive abnormal returns are both economically large and statistically significant. However, consistent with our hypothesis, the magnitude of these abnormal returns is substantially smaller than those earned by Senators during roughly the same time period suggesting less access to valuable information. Consistent with the Senate, we find that stocks purchased by the junior Representatives with the least seniority, significantly outperform stocks purchased by the most senior Representatives. Finally, again as in the Senate, stocks purchased by Democrats outperform stocks purchased by Republicans. But unlike the Senate, in the House of Representatives the difference between parties is statistically significant.

## Data and Research Design

We use a sample of common stock transactions made by Members of the U.S. House of Representatives from nine different Congresses, (the 99th to the 107th) during the period 1985 to 2001. Our source of information on common stock transactions is the annual Financial Disclosure Report (FDR). Our sample includes transactions by all family members since we make no distinction between the wealth of the individual and the wealth of the family unit. We obtain party affiliation and seniority data from the annual *Congressional Directory*.

The data do have some serious limitations. The FDRs are not audited by any government agency or any independent organization outside the government. Therefore, we cannot verify the accuracy or completeness of these reports. Second, the care used to fill out these reports varies widely. Thus extraction of the data is extremely difficult and, despite our best efforts, may result in occasional errors. Third, the value of these transactions is reported only within very broad ranges ($0 to $1000, $1001 to $15000, $15001 to $50000, $50001 to $100000, $100,001 to $250,000, $ 250,001 to $500,000 $500,001 to $1,000,000 and over $1,000,000). Thus it is not possible to estimate the number of shares purchased or sold. Finally, holding period could not be determined for most transactions because of the significant turnover in the House membership over the sample period.

We only include transactions made during odd-numbered years in this research (1985, 1987, 1989, 1991, 1993, 1995, 1997, 1999, and 2001). During odd-numbered years, all FDRs contain the record of transactions made during a year in which each reporting Representative is actually a member of Congress. Thus, the odd-year FDRs provide a complete record of the financial behavior of the entire House.

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[13] Jegadeesh and Titman 1993 and Carhart 1997 have shown that there is some significant tendency (momentum) for security portfolios formed on the basis of recent performance (winners or losers) to continue to exhibit similar investment performance in an immediately subsequent investment period. In our analysis we include a momentum variable to rule out any possibility that Representatives' abnormal returns might be due to momentum trading.


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In contrast, FDRs published by the House of Representatives for even-numbered years cannot provide a full and accurate picture. Congressional elections occur late in even-numbered years, and Members of the succeeding Congress, reflecting the changes in membership, file the FDRs covering those even-numbered years. New Representatives report financial activity for the year prior to their entry into Congress, so we cannot use those transactions. FDRs for Members of the preceding Congress who choose to retire and those who do not return because of electoral defeat (or other reasons) are not published for their final year in office. Therefore, the record of House transactions for even-numbered years is both incomplete and biased to the extent that non-returning Representatives tend to have had above-average seniority, experience, influence, and political power. However, the sample from odd-numbered years is sufficient for our purpose, since it constitutes roughly 50% of all common stock purchases made by the 99th through 107th Congressional membership. We are confident that the sample is unbiased with respect to seniority-related factors.

We apply several screens to the initial sample of 10,075 stock purchases. We eliminate observations where the historical CUSIP (Committee on Uniform Securities Identification Procedures) number could not be matched with a Center for Research in Security Prices (CRSP) permanent issue identification number or where the CRSP data base shows nothing but missing return codes in the interval -15 days to +15 days of the reported transaction data. This reduces the sample to 9020 purchases transactions. We drop transactions involving securities not classified as common stock of U.S. firms according to the CRSP share codes (10 or 11). This screening removed from our data set securities like American depository receipts, real estate investment trusts, preferred stocks, mutual funds, and foreign stocks leaving us with 8322 transactions. We then eliminate all transactions for which the investment return pattern (no return history prior to or surrounding the purchase date) suggests a possible Initial Public Offering (IPO) giving us our final sample of 8120 buy transactions. In this final sample, approximately 68% of the stocks are traded on the New York Stock Exchange, about 30% are traded in the over-the-counter market and less than 2% are from the American Stock Exchange. Identical screens are applied to the sell sample leaving us with 8294 sell transactions.

The trigger events in our study are stock transactions made by Members of Congress as reported in the FDRs. These transactions are not reported in the FDRs until long after they have taken place (anywhere from five to 17 months later), so the reports themselves cannot cause the results we observe in this study.

For this study, it is necessary to examine long-term performance. Without knowing any details about the information the Representatives may possess, we cannot assume that abnormal returns would necessarily be seen within days, weeks, or even months of the common stock transactions. Furthermore, the timing of

abnormal performance is likely to vary across securities depending on the political and economic issues under discussion and the companies or industries affected.

We use essentially the same methodology used by Ziobrowski et al (2004). The calendar-time portfolio approach has been strongly recommended by Fama (1998) and Mitchell and Stafford (2000) to measure long-term stock performance of an event portfolio. To construct the portfolio, each trading day we include all those stocks that have an event date within the prior 255 days. An equal-weighted portfolio return is then calculated as

$$R_{p,t} = \sum_{i=1}^{N} c_{i,t} R_{i,t} \Big/ \sum_{i=1}^{N} c_{i,t} \tag{1}$$

where $c_{i,t}$ is the cumulative return of stock $i$ from the event date to $t$-$1$. For an equal-weighted portfolio, we set the initial value of transaction $i$ at \$1. To calculate the trade-weighted portfolio, we replace the weight of \$1 on the purchase date with the value of the trade. As indicated previously, Representatives report transaction amounts only within broad ranges. We therefore estimate the value of their trades using the midpoint of the range reported by the Representatives for all transactions less than \$250,000. For all transactions above \$250,000, we assume a transaction size equal to \$250,000. The time span of these return series is from January 1, 1985 to December 31, 2002.

We obtain daily portfolio return series for four calendar-time portfolios: an equally-weighted portfolio of the buy transactions, a trade-size weighted portfolio of the buy transactions, an equally-weighted portfolio of the sell transactions and a trade-size weighted portfolio of the sell transactions. To draw statistical inferences, we compound daily returns to yield monthly returns. We then calculate portfolio excess returns by subtracting the risk-free rate from the monthly return series. We regress the portfolio excess return series on two models: the Capital Asset Pricing Model (CAPM) and the Fama-French three factor model with Carhart's momentum factor. The addition of Carhart's momentum factor to the Fama-French three factor model is the only thing that distinguishes our methodology from that used by Ziobrowski et al (2004). The Capital Asset Pricing Model is shown in equation (2):

$$R_{p,t} - R_{f,t} = \alpha_i + \beta_i (R_{m,t} - R_{f,t}) + \varepsilon_{i,t} \tag{2}$$

where $R_{p,t}$ is the monthly calendar-time portfolio return at month $t$, $R_{m,t}$ is the monthly return on the CRSP value-weighted index at month $t$, $R_{f,t}$ is the risk-free rate at month $t$, $\alpha_i$ and $\beta_i$ are the regression parameters, and $\varepsilon_{p,t}$ is the error term. The intercept, $\alpha$, measures the average monthly abnormal return.


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The modified Fama-French model is shown in equation (3):

$$R_{p,t} - R_{f,t} = \alpha_i + \beta_i (R_{m,t} - R_{f,t}) + s_p SMB_t + h_p HML_t + m_p UMD + \varepsilon_{p,t} \quad (3)$$

The regression parameters for the Fama-French model are $\alpha_i$, $\beta_i$, $s_p$, $h_p$, and $m_p$. The four factors $\beta_i$, $s_p$, $h_p$ and $m_p$ are zero-investment portfolios representing the excess return of the market ($R_m - R_f$), the difference between a portfolio of small stocks and a portfolio of big stocks (*SMB*), the difference between a portfolio of high book-to-market stocks and a portfolio of low book-to market stocks (*HML*) and the difference between two high prior return portfolios and two low prior return portfolios (*UMD)* respectively. The intercept, $\alpha_i$ (Fama-French alpha), again measures the average monthly abnormal return, given the model, and should be non-distinguishable from zero.[14]

## Results

Table 1 presents a breakdown of the stock transactions in the House samples used in the calendar-time portfolio analyses. We divide the transactions by year, showing number of traders each year, the mean number of transactions per trader, and the median number of transactions per trader. Only a minority (never more than 27% in any one year) of the Representatives invests in individual common stocks. However, the number of Representatives trading stocks has been steadily increasing over the period examined, going from 41 traders in 1985 to 91 traders in 2001. The median number of transactions each year per trader is between three and four, suggesting those Members of the House who buy common stocks do not buy very many. However, the mean number of transactions each year per trader is much higher, between 8 and 21 purchases per trader each year, indicating there is a small number of Representatives who trade disproportionately often. It is also worth noting that in addition to a general increase in the number of traders among House Members, the average number of trades per trader more than doubled from 1985 to 2001. In short,

[14] Data for the Fama-French four factor model ($R_{mt}$, SMB, HML, and UMD) are obtained from Professor Ken French's website: <http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/>.

**Table 1**
**Frequency of Common Stock Purchases by Members of the U.S. House of Representatives**

| *YEAR* | *1985* | *1987* | *1989* | *1991* | *1993* | *1995* | *1997* | *1999* | *2001* | *Total* |
|---|---|---|---|---|---|---|---|---|---|---|
| Total number of transactions | 350 | 595 | 464 | 632 | 848 | 707 | 1439 | 1184 | 1901 | 8120 |
| Number of traders | 41 | 62 | 52 | 52 | 75 | 61 | 78 | 119 | 91 | |
| Avg. number of transactions/trader | 8.7 | 9.6 | 8.9 | 12.2 | 11.3 | 11.6 | 18.4 | 9.9 | 20.9 | |
| Median number of transactions/trader | 3 | 3 | 3 | 4 | 3 | 3 | 4 | 4 | 4 | ------ |
| Min. number of transactions/trader | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | ------ |
| Max. number of transactions/trader | 147 | 74 | 115 | 158 | 320 | 211 | 254 | 164 | 418 | ------ |
| Transactions $15,000 or less | 184 | 360 | 290 | 385 | 627 | 498 | 1035 | 912 | 1704 | 5995 |
| Transactions $15,001 to $50,000 | 127 | 163 | 152 | 197 | 165 | 173 | 187 | 240 | 180 | 1584 |
| Transactions $50,001 to $100,000 | 39 | 46 | 19 | 43 | 37 | 23 | 39 | 22 | 13 | 281 |
| Transactions greater than $100,000 | 6 | 26 | 3 | 7 | 17 | 12 | 111 | 63 | 15 | 260 |

Panel A Buy Transactions

Panel B Sell Transactions

| *YEAR* | *1985* | *1987* | *1989* | *1991* | *1993* | *1995* | *1997* | *1999* | *2001* | *Total* |
|---|---|---|---|---|---|---|---|---|---|---|
| Total number of transactions | 469 | 633 | 524 | 579 | 885 | 574 | 1309 | 1323 | 1998 | 8294 |
| Number of traders | 66 | 66 | 77 | 66 | 77 | 77 | 83 | 112 | 117 | |
| Avg. number of transactions/trader | 7.1 | 9.6 | 6.8 | 8.8 | 11.2 | 7.5 | 15.8 | 11.8 | 17.1 | |
| Median number of transactions/trader | 3 | 3 | 3 | 2.5 | 2 | 2 | 3 | 3 | 3 | ------ |
| Min. number of transactions/trader | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | ------ |
| Max. number of transactions/trader | 120 | 77 | 81 | 101 | 271 | 167 | 250 | 274 | 261 | ------ |
| Transactions $15,000 or less | 321 | 386 | 386 | 373 | 649 | 395 | 872 | 1052 | 1725 | 6159 |
| Transactions $15,001 to $50,000 | 119 | 178 | 116 | 166 | 182 | 133 | 177 | 218 | 217 | 1506 |
| Transactions $50,001 to $100,000 | 23 | 42 | 15 | 30 | 35 | 25 | 61 | 35 | 30 | 296 |
| Transactions greater than $100,000 | 6 | 27 | 7 | 10 | 19 | 21 | 199 | 18 | 26 | 333 |

This table shows the number of common stock purchases and sales made by Members of the U.S. House of Representatives during every year that was included in the final study sample. Traders for each year are the numbers of individual Representatives who made one or more of the transactions included in the final sample.


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Representatives became far more active in the stock market in the later years of the study.

**Full Sample**

Table 2 shows the results of the calendar-time portfolio analysis for the samples. Both the equal-weighted and trade-weighted buy portfolios produce positive mean market–adjusted returns. The mean annualized return for the equal-weighted House buy portfolio is 15.9% versus 13.1% for the market portfolio. The mean annualized return for the trade-weighted House buy portfolio is 20.7%. The higher trade-weighted return suggests that Representatives invested larger sums in the better performing stocks.

Regressing the equal-weighted buy portfolio on CAPM and the Fama-French model, neither alpha is statistically significant. However, when the portfolios are trade-weighted both the CAPM alpha and Fama-French alpha become positive and statistically significant at the 5% level. In looking at the other coefficients generated by the Fama-French regressions, we find that the beta coefficients for both buy portfolios are relatively close to one, suggesting that the Members of the House favored stocks with average market risk. Coefficients associated with the size factor, SMB, are positive and statistically different from zero, suggesting that Representatives favor smaller companies. Coefficients associated with the value/growth factor, HML, are negative and significantly different from zero indicating that Representatives also tilt toward growth stocks with low book-value to market-value ratios. The momentum factor is positive and significant indicating that Representatives favor common stocks that have developed positive price momentum prior to purchase.

Abnormal returns for the sell portfolio are similar to the results obtained for the buy portfolio. The equal-weighted CAPM alpha is negative and barely significant at the 10% level, but the CAPM alpha becomes positive but insignificant when trade-weighted. When equal-weighted the sell portfolio Fama-French alpha is insignificant but becomes positive and statistically significant at the 5% level when trade-weighted. Coefficients associated with market risk, size, value/growth and momentum are consistent with the buy portfolio as we would expect. Overall, these results could be interpreted as suggesting that Representatives knew when to buy their common stocks, but didn't know when to sell, typically leaving the market before their investments had run their course and peaked.[15]

[15] Results for the sell portfolio are only presented for the full sample because of the difficulty in drawing any meaningful inferences. However the results are available from the authors upon request.

**Table 2**

**Calendar-Time CAPM and Fama and French Three-Factor with Momentum Portfolio Regressions of the House Common Stock Buy Sample and Sell Sample for Odd-numbered Years 1985-2001 (12-month Holding Period).**

| | Buys | | Sells | |
|---|---|---|---|---|
| | Equal-weighted | Trade-weighted | Equal-weighted | Trade-weighted |
| Mean Return | 1.238 | 1.580 | 1.023 | 1.475 |
| Standard Deviation | 5.904 | 5.930 | 5.834 | 6.013 |
| Market-Adjusted Return | 0.204 | 0.546 | -0.011 | 0.441 |
| Coefficient estimates on: | | | | |
| CAPM alpha (CAPM) | -0.025 | 0.433** | -0.204* | 0.312 |
| Fama-French Alpha | 0.103 | 0.448** | -0.066 | 0.431** |
| Rm-Rf | 1.109**** | 1.014**** | 1.089**** | 1.011**** |
| SMB | 0.228**** | 0.133** | 0.227**** | 0.090 |
| HML | -0.148**** | -0.154** | -0.065 | -0.158** |
| UMD | -0.002 | 0.082* | -0.051** | -0.012 |
| Adj. R-sqr. | 0.944 | 0.763 | 0.929 | 0.770 |

**** Significant at the 0.5% level

*** Significant at the 2.5% level

** Significant at the 5.0% level

* Significant at the 10% level

Dependent variables are event portfolio returns, $R_p$, in excess of the 1-month Treasury-bill rate, $R_f$, observed at the beginning of the month. Each month, we form equal- and trade-weight portfolios of all sample firms that have completed the event within the previous year. The event portfolio is rebalanced monthly to drop all companies that reach the end of their 1-year period and add all companies that have just executed a transaction. For the CAPM regression we use $R_{pt}$, to estimate the regression parameters $\alpha_i$ and $\beta_i$ in the expression $R_{pt} - R_{ft} = \alpha_i + \beta_i (R_{mt} - R_{ft}) + \varepsilon_{it}$. The intercept, $\alpha$ , measures the average monthly abnormal return, given the model. For the Fama and French four-factor model we use $R_{pt}$, to estimate the regression parameters $\alpha_i$ , $\beta_i$ , $s_p$, ,$h_p$ and $m_p$ in the expression $R_{p,t} - R_{f,t} = \alpha_i + \beta_i (R_{m,t} - R_{f,t}) + s_p SMB_t + h_p HML_t + m_p UMD + \varepsilon_{p,t}$ . The four factors are zero-investment portfolios representing the excess return of the market, $R_m - R_f$; the difference between a portfolio of small stocks and big stocks, SMB; the difference between a portfolio of high book-to-market stocks and low book-to market stocks, *HML*; and the difference between two high prior return portfolios and two low prior return portfolios, *UMD*. See Fama and French (1993) for details on the construction of the factors. The intercept, $\alpha$ , again measures the average monthly abnormal return, given the model.

As indicated in Table 1, although most Representatives who invest in common stocks trade infrequently (three or four acquisitions per year), a relatively small number of individuals make a disproportionately large number of trades. For example, in 1993, one Representative accounted for over 38% of all purchase transactions in the sample for that year. Thus, it was necessary to address concerns that a few high volume traders might seriously bias our results.

To test the sample for this bias we calculate a calendar-time portfolio for each Representative separately and then average the returns across Representatives on each calendar day. Thus, whether a Representative made eight trades or 80, each


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Member receives equal weighting in the sample. Logically, if only a very few high volume House traders produce positive abnormal returns, then the null hypothesis should not be rejected. However, rejection of the null hypothesis would suggest that the positive abnormal returns are widely distributed throughout the House of Representatives.

**Table 3**

**Calendar-Time CAPM and Fama and French Three-Factor plus Momentum Portfolio Regressions of the House Common Stock Buy Sample and Sell Sample for Odd-numbered Years 1985-2001, Analyzed as Portfolios of Stocks Held by Individual Representatives (12-month Holding Period).**

| | Buys | |
|---|---|---|
| | Equal-weighted | Trade-weighted |
| Mean Return | 1.119 | 1.473 |
| Standard Deviation | 6.011 | 6.466 |
| Market-Adjusted Return | 0.085 | 0.439 |
| Coefficient estimates on: | | |
| CAPM alpha (CAPM) | -0.020 | 0.402** |
| Fama-French Alpha | 0.113 | 0.454** |
| Rm-Rf | 1.131**** | 1.042**** |
| SMB | 0.192**** | 0.143**** |
| HML | -0.159**** | -0.169** |
| UMD | -0.002 | 0.099* |
| Adj. R-sqr. | 0.9246 | 0.7921 |

**** Significant at the 0.5% level
*** Significant at the 2.5% level
** Significant at the 5.0% level
* Significant at the 10% level

Dependent variables are event portfolio returns, $R_p$, in excess of the 1-month Treasury-bill rate, $R_f$, observed at the beginning of the month. Each month, we form equal- and trade-weight portfolios of all sample firms that have completed the event within the previous year. The event portfolio is rebalanced monthly to drop all companies that reach the end of their 1-year period and add all companies that have just executed a transaction. For the CAPM regression we use $R_{pt}$, to estimate the regression parameters $\alpha_i$ and $\beta_i$ in the expression $R_{pt} - R_{ft} = \alpha_i + \beta_i (R_{mt} - R_{ft}) + \varepsilon_{it.}$ The intercept, $\alpha$ , measures the average monthly abnormal return, given the model. For the Fama and French four-factor model we use $R_{pt}$, to estimate the regression parameters $\alpha_i$ , $\beta_i$ , $s_p$, ,$h_p$ and $m_p$ in the expression $R_{p,t} - R_{f,t} = \alpha_i + \beta_i (R_{m,t} - R_{f,t}) + s_p SMB_t + h_p HML_t + m_p UMD + \varepsilon_{p,t}$ . The four factors are zero-investment portfolios representing the excess return of the market, $R_m - R_f$; the difference between a portfolio of small stocks and big stocks, SMB; the difference between a portfolio of high book-to-market stocks and low book-to market stocks, *HML*; and the difference between two high prior return portfolios and two low prior return portfolios, *UMD*. See Fama and French (1993) for details on the construction of the factors. The intercept, $\alpha$ , again measures the average monthly abnormal return, given the model.

Table 3 presents the results when we analyze the abnormal returns for dependence on individual Representatives. When we adjust for high-volume traders,

we find very little change in the abnormal returns. The trade-weighted abnormal returns remain reliably positive. This result suggests that the positive excess returns cannot be attributed to a small group of Representatives who trade heavily although the market-adjusted return does fall from 55 basis points to 44 basis points (a reduction of approximately 1.25% annually).

**Political Party**

The calendar-time portfolio analyses of Members of the two political parties are shown in Table 4. When stock purchases are equal-weighted we find no significant abnormal returns for either Democrats or Republicans. When the portfolios are trade-weighted, the samples of both Democrats and Republicans produce positive, statistically significant CAPM alphas. Only the Democratic, trade-weighted portfolio yields a significant positive Fama-French alpha. Furthermore, the nested test for significance of party affiliation indicates that the Democratic sample significantly outperformed the Republican sample. The Democratic sample beat the market by 73 basis points per month (nearly 9% annually) versus only 18 basis points per month (approximately 2% annually) for the Republican sample.

Given the almost folkloric belief that Wall Street invariably favors Republicans, the superior performance of trades made by Democratic Representatives may seem surprising. However, it should be noted that Democrats controlled the House for 10 of the 17 years covered by this study. Furthermore, Democrats were deeply entrenched in the leadership of the House for decades prior to the study. Thus when Republicans finally took control in 1995, they arguably had far less experience at handling the reins of power and may therefore have been unable to immediately enjoy all its perquisites.

**Seniority**

To examine the issue of seniority, we divide the House of Representatives into three approximately equal groups: those Members who have served three terms or less (up to six years service), those who have served four to eight terms (seven to 16 years) and those who have served more than eight terms (over 16 years). The results suggest that seniority has a substantial impact on portfolio returns. Stocks purchased by House Members with the most seniority show no indication of information advantage. In fact, on both an equal-weighted and trade-weighted basis, the calendar-time portfolios of the most senior Representatives actually underperformed the market. Portfolios of those Representatives serving between four and eight terms (the middle group) marginally outperformed the market, however not by enough to be statistically significant. By far, the most successful traders were those Representatives with the least seniority. Both the equal-weighted and trade-weighted


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portfolios for the least senior group indicate statistically significant positive abnormal returns. The nested test for the impact of seniority confirms this observation showing that the stocks of the most junior Representatives significantly outperform the stocks of the most senior House Members.[16]

Again we find this result counterintuitive. In theory, Representatives with the most seniority possess the most power and thus should have the greatest opportunity to trade with an informational advantage. However, although the most senior Members may have the most opportunity, they may lack the strongest motive. It is no secret that money is the lifeblood of politics. Whereas Representatives with the longest seniority (in this case more than 16 years), have no trouble raising funds for campaigns, junkets and whatever other causes they may deem desirable owed to the power they wield, the financial condition of a freshman Congressman is far more precarious. His or her position is by no means secure, financially or otherwise. House Members with the least seniority may have fewer opportunities to trade on privileged information, but they may be the most highly motivated to do so when the opportunities arise.

## The House of Representatives versus the Senate

In comparison to members of the U.S. Senate,[17] a much lower proportion of Representatives trade common stocks. When direct comparisons are possible (1993, 1995 and 1997) on average only 16% of the House membership purchased common stock compared to 27% of the Senators. Furthermore, Representatives who trade common stocks do so far less frequently than Senators. In 1993, 1995 and 1997 House Members that bought stock averaged 14 transactions during the year. During the same years, the average "trading" senator had 21 transactions. Consistent with the findings of Ziobrowski and McAlum (2002), these differences are most likely attributable to the fact that the average Senator is far wealthier than the average Representative.

[16] This result may seem to be counter-intuitive. One expects that more senior representative would have access to superior information resulting from committee chairmanships, broader political networking, etc. We suspect that younger Representatives may simply be more aggressive due to investment life-cycle considerations (younger investors have more time to ride out down-cycles) and a higher level of sophistication with respect to more recent technologies and methods.

[17] Ziobrowski *et al*2004.

## Table 4

## Calendar-Time CAPM and Fama and French Three-Factor Portfolio Regressions of the House Common Stock Buy Sample for the Odd-numbered Years 1985-2001 (12-month Holding Period), Grouped by Political Party and a Nested Test for Significance of Party

| **Democratic Party** | Equal-weighted | Trade-weighted |
|---|---|---|
| Mean Return | 1.357 | 1.760 |
| Standard Deviation | 6.279 | 6.512 |
| Market-Adjusted Mean Return | 0.323 | 0.726 |
| Coefficient estimates on: | | |
| CAPM alpha (CAPM) | 0.058 | 0.592** |
| Fama-French Alpha | 0.172 | 0.620*** |
| Rm-Rf | 1.116**** | 1.028**** |
| SMB | 0.276**** | 0.188*** |
| HML | -0.191**** | -0.213** |
| UMD | 0.039 | 0.109* |
| Adj. R-sqr. | 0.915 | 0.689 |
| **Republican Party** | Equal- weighted | Trade-weighted |
| Mean Return | 1.103 | 1.213 |
| Standard Deviation | 5.846 | 5.365 |
| Market-Adjusted Mean Return | 0.069 | 0.179 |
| Coefficient estimates on: | | |
| CAPM alpha (CAPM) | -0.023 | 0.433 ** |
| Fama-French Alpha | 0.106 | 0.166 |
| Rm-Rf | 1.124 **** | 1.062 **** |
| SMB | 0.175 **** | 0.184 **** |
| HML | -0.048 **** | 0.097 |
| UMD | -0.060 * | 0.006 |
| Adj. R-sqr. | 0.875 | 0.837 |
| **Nested Test for Significance of Party Affiliation** | Equal- weighted | Trade-weighted |
| Fama-French Alpha | 0.291 * | 0.629 *** |
| Rm-Rf | 1.125 **** | 1.049 **** |
| SMB | 0.237 **** | 0.189 **** |
| HML | -0.101 *** | -0.031 |
| UMD | 0.002 | 0.089 *** |
| Party Affiliation | -0.212 | -0.502 * |

**** Significant at the 0.5% level
*** Significant at the 2.5% level
** Significant at the 5.0% level
* Significant at the 10% level

Dependent variables are event portfolio returns, $R_p$, in excess of the 1-month Treasury-bill rate, $R_f$, observed at the beginning of the month. Each month, we form equal- and trade-weight portfolios of all sample firms that have completed the event within the previous year. The event portfolio is rebalanced monthly to drop all companies that reach the end of their 1-year period and add all companies that have just executed a transaction. For the CAPM regression we use $R_{pt}$, to estimate the regression parameters $\alpha_i$ and $\beta_i$ in the expression $R_{pt} - R_{ft} = \alpha_i + \beta_i (R_{mt} - R_{ft}) + \varepsilon_{it.}$ The intercept, $\alpha$, measures the average monthly abnormal return, given the model. For the Fama and French four-factor model we use $R_{pt}$, to estimate the regression parameters $\alpha_i$, $\beta_i$, $s_p$, $h_p$ and $m_p$ in the expression $R_{p,t} - R_{f,t} = \alpha_i + \beta_i (R_{m,t} - R_{f,t}) + s_p SMB_t + h_p HML_t + m_p UMD + \varepsilon_{p,t}$. The four factors are zero-investment portfolios representing the excess return of the market, $R_m - R_f$; the difference between a portfolio of small stocks and big stocks, SMB; the difference between a portfolio of high book-to-market stocks and low book-to market stocks, *HML*; and the difference between two high prior return portfolios and two low prior return portfolios, *UMD*. See Fama and French (1993) for details on the construction of the factors. The intercept, $\alpha$, again measures the average monthly abnormal return, given the model. Party affiliation is a dummy variable to distinguish Democrats from Republicans.


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**TABLE 5**

**Calendar-Time CAPM and Fama and French Three-Factor Portfolio Regressions of the House Common Stock Buy Sample for the Odd-numbered Years 1985-2001 (12-month Holding Period), Grouped by Seniority, and a Nested Test for Significance of Seniority.**

| **Seniority less than 7 years** | | |
|---|---|---|
| | Equal-weighted | Trade-weighted |
| Mean Return | 1.303 | 1.588 |
| Standard Deviation | 5.806 | 6.196 |
| Market-Adjusted Mean Return | 0.269 | 0.554 |
| Coefficient estimates on: | | |
| CAPM alpha (CAPM) | 0.174 | 0.589 *** |
| Fama-French Alpha | 0.287 ** | 0.607 *** |
| Rm-Rf | 1.148 **** | 1.073 **** |
| SMB | 0.121 **** | 0.035 |
| HML | -0.044 | -0.116 |
| UMD | -0.056 * | 0.045 |
| Adj. R-sqr. | 0.903 | 0.701 |

| **Seniority between 7 to 16 years** | | |
|---|---|---|
| | Equal- weighted | Trade-weighted |
| Mean Return | 1.114 | 1.309 |
| Standard Deviation | 6.390 | 5.900 |
| Market-Adjusted Mean Return | 0.080 | 0.275 |
| Coefficient estimates on: | | |
| CAPM alpha (CAPM) | -0.019 | 0.268 |
| Fama-French Alpha | 0.053 | 0.228 |
| Rm-Rf | 1.086 **** | 0.996 **** |
| SMB | 0.307 **** | 0.240 **** |
| HML | -0.245 **** | -0.093 |
| UMD | 0.105 *** | 0.118 *** |
| Adj. R-sqr. | 0.875 | 0.758 |

| **Seniority more than 16 years** | | |
|---|---|---|
| | Equal- weighted | Trade-weighted |
| Mean Return | 0.788 | 0.837 |
| Standard Deviation | 7.364 | 6.905 |
| Market-Adjusted Mean Return | -0.245 | -0.197 |
| Coefficient estimates on: | | |
| CAPM alpha (CAPM) | -0.473 | -0.286 |
| Fama-French Alpha | -0.217 | -0.102 |
| Rm-Rf | 1.185 **** | 1.137 **** |
| SMB | 0.418 **** | 0.426 **** |
| HML | -0.052 | -0.005 |
| UMD | -0.128 *** | -0.087 |
| Adj. R-sqr. | 0.790 | 0.713 |

**TABLE 5 (Continued)**

| **Nested Test for Significance of Seniority** | | |
|---|---|---|
| | Equal-weighted | Trade-weighted |
| Fama-French Alpha | 0.284 | 0.519 ** |
| Rm-Rf | 1.141 **** | 1.079 **** |
| SMB | 0.282 **** | 0.229 **** |
| HML | -0.109 *** | -0.050 |
| UMD | -0.023 | 0.041 |
| D1 | -0.066 | -0.167 |
| D2 | 0.586 ** | -0.718 ** |

**** Significant at the 0.5% level
*** Significant at the 2.5% level
** Significant at the 5.0% level
* Significant at the 10% level

Dependent variables are event portfolio returns, $R_p$, in excess of the 1-month Treasury-bill rate, $R_f$, observed at the beginning of the month. Each month, we form equal- and trade-weight portfolios of all sample firms that have completed the event within the previous year. The event portfolio is rebalanced monthly to drop all companies that reach the end of their 1-year period and add all companies that have just executed a transaction. For the CAPM regression we use $R_{pt}$, to estimate the regression parameters $\alpha_i$ and $\beta_i$ in the expression $R_{pt} - R_{ft} = \alpha_i + \beta_i (R_{mt} - R_{ft}) + \varepsilon_{it.}$ The intercept, $\alpha$ , measures the average monthly abnormal return, given the model. For the Fama and French four-factor model we use $R_{pt}$, to estimate the regression parameters $\alpha_i$ , $\beta_i$ , $s_p$, ,$h_p$ and $m_p$ in the expression $R_{p,t} - R_{f,t} = \alpha_i + \beta_i (R_{m,t} - R_{f,t}) + s_p SMB_t + h_p HML_t + m_p UMD + \varepsilon_{p,t}$ . The four factors are zero-investment portfolios representing the excess return of the market, $R_m - R_f$; the difference between a portfolio of small stocks and big stocks, SMB; the difference between a portfolio of high book-to-market stocks and low book-to market stocks, *HML*; and the difference between two high prior return portfolios and two low prior return portfolios, *UMD*. See Fama and French (1993) for details on the construction of the factors. The intercept, $\alpha$ , again measures the average monthly abnormal return, given the model. D1 and D2 are dummy variables representing the differences in the three seniority groups.

Consistent with Senate results, the trade-weighted House sample exhibits significant positive abnormal returns suggesting a substantial information advantage over ordinary investors. However, as hypothesized, the market-adjusted mean return earned by the House buy sample (55 basis points per month) is substantially smaller than that earned by the Senate sample (85 basis points per month). We would also observe that, although House common stock investments tended to continue earning significant positive abnormal returns after being sold, investments made by Senators did not. This could suggest that Senators had better information on when to sell.

Democrats outperform Republicans in both samples. However, party affiliation is statistically significant only in the House of Representatives. Seniority of the traders is also significant in the samples of both the House and Senate. The most junior Members of the House and Senate reliably outperform their more senior colleagues in both chambers of Congress.


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## Summary and Conclusions

Earlier research suggests U.S. Senators possess a significant information advantage over other market participants. It is suspected that Senators use their prominent position in the government and important social contacts to gather valuable information and trade common stock based on that information. Our goal in this study is to determine if common stock investments by Members of the other chamber of Congress, the U.S. House of Representatives, also tend to outperform the overall market in similar fashion. We hypothesize that power is more diluted in the House of Representatives which is likely to reduce the informational advantages of House Members and result in lower excess returns. We test whether common stocks purchased by Members of the House between 1985 and 2001 (odd-numbered years) exhibit abnormal returns.

When we regress the calendar-time portfolio returns of the entire sample of stocks on the Fama-French three-factor model (augmented by momentum), we find that stocks purchased by Members of the U.S. House of Representatives earn statistically significant positive abnormal returns. The returns outperform the market by 55 basis points per month (over 6% annually). As additional evidence of information advantage, the trade-weighted portfolio of purchased stocks significantly outperforms the equal-weighted portfolio indicating that Representatives invested much larger amounts in those stocks that performed best. The regression coefficients also suggest that House Members favor the common stocks of smaller growth companies with slightly above-average risk.

In addition, stocks purchased by Democratic Representatives significantly outperform stocks purchased by Republican Representatives. Stocks purchased by Representatives with the least seniority significantly outperformed stocks purchased by Representatives with the most seniority.

In sum, the findings from this study of the U.S. House of Representatives' common stock transactions are generally supportive of the previous study of the U.S. Senate. We find strong evidence that Members of the House have some type of non-public information which they use for personal gain. That having been said, abnormal returns earned by Members of the House are substantially smaller than those earned by Senators during approximately the same time period. These smaller returns are due presumably to less influence and power held by the individual Members. The nature and source or sources of information is unknown, but clearly further research is warranted. We recommend that congressional committees should be studied for abnormal returns and indications that members of those committees may favor stocks in industries their committees oversee. Abnormal returns associated with the common stocks of specific industries or companies should be investigated for patterns of potential misconduct. We suggest the examination of the relationships between campaign contributions, common stock acquisitions, and abnormal returns.

We also recommend that similar studies be performed on the Federal Executive and Judicial branches of government.

Finally, we suggest that a policy requiring more timely and complete reporting of congressional security transactions may be in the public interest. Reporting requirements similar to those imposed on corporate insiders could be appropriate for helping voters evaluate the behavior of their Representatives in terms of the pursuit of personal profit versus obligations to the public interest. Such prompt reporting could also help level the playing field for all investors.

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