

An Analysis of Political Insider Trading Proposal

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I. Introduction

Insider trading by congressional legislators, who often use non-public information obtained through various governmental means to engage in trading activities and make a profit, has been a significant issue that many have tried to address. In 2012, President Obama signed the STOCK Act to prevent legislators from using confidential information in financial trades and require them to disclose trades within 45 days. However, the law has proven largely ineffective.

Recent research by *The Independent* (Hall 2025) found that more than 20 congressional legislators were able to beat the S&P 500's return of 24.9% in 2024, with some doubling that figure. Collectively, Democratic lawmakers saw their portfolios grow by 31%, while Republicans saw a 26% increase—far above the typical 13% average market returns. In fact, over the last decade, many U.S. legislators have consistently outperformed the market, a feat characterized by U.S. Representative Nancy Pelosi beating all major U.S. hedge funds in 2024 except for one (Volenik 2025).

This paper examines the extent to which legislators have exploited sensitive information since the enactment of the STOCK Act, identifies key traits that make certain members more likely to engage in such illicit practices, and proposes regulatory measures to curb unfair market advantages in the future.

II. Literature Review

Current research on insider trading typically falls into two categories: analyses of whether private information has been utilized by legislative members, and discussions of its ethical and legal implications.

In the formal case, research in this area has primarily focused on whether legislators have been profiting from insider trading, with Ziobrowski et. al's research in 2004 laying the foundations for future research. Through the utilization of both Capital Asset Pricing Model and Farma-French 3 Factor Model, the authors found that a portfolio that mimics the stock purchases of U.S. Senators in the mid-1990s, as weighted by trade size, outperforms the market by 85 basis points per month on average. Ziobrowski (2004) further argues that while party affiliation does not affect whether a Senator is more likely to benefit from

insider trading, seniority does matter, with senators who have less than seven years of experience more likely to trade unethically compared to those with more than 16 years of service.

More recent studies in this field have shown conflicting results regarding whether legislators' portfolios outperform the market. Studies by Belmont et al. (2022), using a similar approach to Ziobrowski, suggest that since the passage of the STOCK Act, there is no evidence indicating that legislators have achieved an abnormal performance level when using updated data. In contrast, research by Hanousek et al. (2022) finds that recent Senate trades since 2014 have been heavily influenced by information asymmetry, accounting for 3.6% of all recorded trades. Legislators' committee assignments, legislative activities, and the locations of corporate headquarters also play significant roles in increasing the misuse of information.

Our study will build on Hanousek's research; however, we will expand the number of factors identified by Hanousek, such as total mentions in Congress and government procurement. Additionally, we will use a more straightforward measurement, the Sharpe ratio, to capture an individual market activity influenced by the transfer of political and corporate information.

III. Data Source:

As we aim to study the effect of insider trading within Congress since the passage of the STOCK Act, our period of analysis is from January 2012 to December 2024. Data for our research was collected via various methodologies. The congressional trading profile, including senators' names, actions, volumes, dates of purchase, and dates of publication, was sourced from Quiver Quantitative, an online platform that tracks various aspects of the U.S. stock market. Returns of the S&P 500's market index and its corresponding individual stock returns were retrieved from Kaggle and confirmed on Bloomberg.

Using the market and individual stock data, we calculated the corresponding Sharpe ratio for the 30-day period before and after the filing date of the congressional transaction and found the difference. The calculated difference in the Sharpe ratio was then used as the dependent variable in our study to represent the abnormalities within legislators' trading activities.

Our main independent variables of interest, Congressional Party Affiliations, Congressional Committee Affiliations, and Congressional Branch Affiliations, were gathered from U.S. Congress websites, including but not limited to the *Biographical Directory* and *Committee Apportionment Notices*.

To provide a more well-rounded characterization of those who may be susceptible to using nonpublic information in trading, additional regressors were included in our dataset. Government contracts awarded in a 30-day timeframe were collected from the Federal Procurement Data System. Legislators' background information, such as the state occupations and industrial ties, was collected from databases such as the *Congressional Quarterly*. The US monthly GDP was collected from S&P Global.

IV. Main Regression:

To analyze the impact of insider trading in the U.S. government, we use the Sharpe difference as our dependent variable. This is then regressed on various characteristics of congresspeople, including age, years in office, political party, legislative chamber (House or Senate), committee affiliations, and other attributes of legislative employees as follows:

$$Sharpe\ Diff = \beta_0 + \beta_1(Seniority) + \beta_2(Age) + \beta_3(Party) + \beta_4(Chamber) + \sum_{i=5}^N \beta_i(Committee_i)$$

Our preliminary regressions indicate a significant relationship between age, party affiliation, and government contract awards with Sharpe differences. These findings suggest that older Republican legislators serving on committees that grant contracts may be privy to non-public information, raising concerns about potential insider trading.

To further our analysis, we focus on the 90th percentile of Sharpe differences for purchases and the 10th percentile for sales, labeling these as "suspicious trades." By regressing on this binary "suspicious" variable, we aim to identify common factors associated with such trades. Ultimately, our goal is to develop policy recommendations that could help reduce suspicious trades and mitigate the risk of insider trading.

V. Appendix

Descriptive Statistics (Continuous Variables)

Variable	Mean	Min	Max	Std. Dev.
Sharpe 30-days Prior	-.388	-18.138	18.748	4.093
Sharpe 30-days After	-.197	-17.941	23.497	4.042
Sharpe Differences	-.191	-28.969	24.595	5.698
Average Transaction Size	49453.239	.5	37500000	524289.4
Number of Gov Contract	316.734	0	63516	2042.958
Age	63.932	30	96	12.759
Seniority in Congress	9.84	0	46	9.568
Total Observations	24065			

Descriptive Statistics (Categorical Variables)

	Variable	Probability	Min	Max	Number of Occurrence
Branch	House	.794	0	1	19118
	Senate	.206	0	1	4947
Party	Republican	.479	0	1	11533
	Democrat	.519	0	1	12486
	Green*	0	0	0	0
	Other	.002	0	1	46
	Sale	.495	0	1	11909
Trade	Exchange	.005	0	1	129
	Purchase	.5	0	1	12027
	Suspicious Purchase	.05	0	1	1203
Suspicious	Suspicious Sale	.01	0	1	251
	Suspicious Total	.06	0	1	1454
	Total Observations	24065			

* No Green Party member has engaged in any financial trading activities since the enactment of the STOCK Act

Basic Regression Model

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OLS Regression Results
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Dep. Variable:          Sharpe_Diff    R-squared:                0.003
Model:                  OLS            Adj. R-squared:           0.003
Method:                 Least Squares   F-statistic:              19.58
Date:                   Wed, 12 Feb 2025 Prob (F-statistic):       4.21e-16
Time:                   22:41:00        Log-Likelihood:           -75984.
No. Observations:       24065          AIC:                      1.520e+05
Df Residuals:           24060          BIC:                      1.520e+05
Df Model:                4
Covariance Type:        HC3
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	coef	std err	z	P> z	[0.025	0.975]
const	0.6815	0.213	3.201	0.001	0.264	1.099
Republican	0.2186	0.078	2.794	0.005	0.065	0.372
Senate	0.4848	0.096	5.046	0.000	0.296	0.673
Age(Years)	-0.0205	0.004	-5.532	0.000	-0.028	-0.013
Years in Congress(Years)	0.0239	0.005	4.871	0.000	0.014	0.033

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Omnibus:                180.255    Durbin-Watson:            1.360
Prob(Omnibus):           0.000    Jarque-Bera (JB):         281.936
Skew:                    -0.015    Prob(JB):                 6.00e-62
Kurtosis:                 3.529    Cond. No.                  379.
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Notes:

[1] Standard Errors are heteroscedasticity robust (HC3)

VI. References

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VII. Data Sources

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