



Your network is your net worth: Politicians' personality, private information and trading profitability

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Abstract

We examine whether the US Senators' personality traits influence the profitability of their stock trades, under the scrutiny of the STOCK Act, which aimed to disincentivize exploitation of privileged information. Using linguistic analysis of congressional speeches, we infer the Big Five personality and narcissism dimensions and link them to calendar-time abnormal stock returns, generated by Senators' transactions between 2012 and 2020. We find that conscientiousness, indicative of higher moral standards, self discipline and ethical restraint, underperform the market over long-term holding periods. Extraversion, reflective of broader social networks and access to information, is associated with monthly outperformance over long-term holding periods. These patterns suggest that moral discipline constrains the exploitation of privileged information, whereas extraversion facilitates it. The findings highlight personality as a critical, yet overlooked, driver of financial outcomes in political markets, informing the evaluation of the STOCK Act's regulatory effectiveness. Moreover, the study identifies personality as a key behavioral determinant of abnormal trading performance, reframing the question from *who has* privileged access to *who chooses* to exploit it.

1. Introduction

Although the passage of the STOCK Act (2012) aimed to disincentivize politicians from using privileged information on their trading, evidence remains mixed regarding the Senators' ability to earn abnormal returns from insider trading (Hanousek et al., 2023; Karadas, 2019). In this paper we propose that such outcomes may be explained by personality traits of individual Senators, particularly those associated with ethical flexibility and enhanced access to private networks. While previous studies have examined institutional factors such as party affiliation and committee power (Karadas, 2019; Hanousek et al., 2023), the role of personality in political insider trading remains largely unexplored. This gap suggests that an individual's propensity to exploit informational advantages may be shaped not only by institutional position, but also by personal characteristics, offering new insight to the behavioral limitations of regulatory mechanisms like the STOCK Act.

Karadas (2019), tracking the trading performance of US politicians after the STOCK Act, finds that abnormal returns were effectively eliminated in the post-2012 period. However, existing work so far has not examined the cross-sectional variation among Senators in the post-STOCK Act, which could explain why some individuals might still achieve superior outcomes. We address this gap by examining how the Big Five and narcissistic personality dimensions shape trading profitability in the post-STOCK Act period, thereby offering new evidence on the political insider trading¹.

The study focuses on the post-STOCK Act period and proposes that the persistence of abnormal trading returns among some Senators may reflect variation in moral standards rooted in their personality. Specifically, we hypothesize that members of Congress with certain personality traits, such as low conscientiousness and high extraversion, are more inclined to exploit their power and position to access and act upon privileged information. To test this hypothesis, we draw on the Big Five personality model (Goldberg, 1992; Costa & McCrae, 2008), widely applied to both political elites and corporate leaders (Green et al., 2019; Hrazdil et al., 2020; Lartey et al., 2020; **Adebambo et al., 2024**). The model classifies personality across five dimensions: *openness*, *conscientiousness*, *extraversion*, *agreeableness* and *neuroticism*. These traits are particularly relevant for understanding political behavior, as they are linked to ethical decision making, risk tolerance and strategic choice.

¹ Hanousek et al. (2023) also document abnormal returns for politicians, though their evidence is based on short-horizon buy-and-hold abnormal returns (up to three months) rather than a calendar-time methodology.

Extraversion is associated with assertiveness, social interaction and ambition; traits which may facilitate a Senator's ability to build networks and access privileged information. High extraversion has been linked to opportunistic behavior and risk tolerance, traits which were shown to influence corporate and financial decision making (Green et al., 2019; Lartney et al., 2020). Conscientiousness, on the other hand, captures the degree of discipline, rule compliance and reliability and is associated with individuals who are highly organized and cautious, making individuals less prone to engage in ethically incorrect activities. Highly conscientious individuals tend to be risk averse and focused on long term outcomes, which may deter short term opportunistic trading. Agreeableness captures tendencies toward cooperation, empathy and altruism. Individuals high in agreeableness are generally less competitive and more ethically minded, making them less likely to exploit confidential information for personal gain. In contrast, those scoring low on agreeableness and conscientiousness have been associated with self-serving behavior, disregard for rules and a prioritization of personal over collective benefit (Judge and Bono, 2002). Neuroticism, reflecting emotional instability, anxiety and impulsivity, may increase susceptibility to erratic or reactive decisions under pressure, especially in volatile market conditions. Finally, openness to experience reflects curiosity, cognitive flexibility and willingness to explore unconventional opportunity. While openness can foster innovation and adaptability, it may also heighten the likelihood of crossing ethical boundaries in pursuit of novel gains especially in ambiguous regulatory environments. Overall, personality traits influence not only how individuals respond to opportunities, but also their internal ethical standards. In the context of the US Senators, traits such as high extraversion and low conscientiousness may increase the likelihood of exploiting informational advantage, even under the post-STOCK Act regime.

The paper makes several contributions to the literature. First, we contribute to the evaluation of STOCK Act's regulatory effectiveness by suggesting that ethical compliance may not only depend on institutional rules but also on individual-level personality. This suggests important limitation on legal deterrents: while legislative reforms are necessary, they may be insufficient to curb unethical behavior unless they also account for behavioral and personality differences among decision makers. This insight is particularly relevant for policy makers and regulatory authorities, as it underscores the need to complement institutional rules with behavioral accountability

Second, we extend the literature on political insider trading by identifying personality as a significant behavioral determinant of abnormal trading performance. While past research has documented persistent excess returns among US politicians, (Ziobrowski et al., 2004; Eggers & Hainmueller, 2014), little has been done to explain the heterogeneity in who chooses to exploit informational advantage. By reframing the question 'who has privileged access' to 'who uses

privileged access', we emphasize the role of personal disposition in shaping ethical conduct under institutional opportunity. This contribution has broader implications for understanding behavior in the public office. If personality systematically influences the use of informational privilege, then promoting fairness and integrity in financial markets requires not only robust institutional safeguards but also enhanced oversight of individuals in positions of power. This reinforces the importance of individual screening and monitoring, transparency mechanisms and behavioral interventions, beyond institutional design, in efforts to prevent unethical conduct among political elite.

The remainder of the paper is structured as follows. Section 2 reviews the relevant literature and develops the study's hypotheses. Section 3 outlines the empirical methodology, while Section 4 describes the data. Section 5 presents the main findings on the relationship between politicians' personality traits and their abnormal trading returns. Section 6 concludes with implications for policy, future research and limitations.

2. Theoretical framework and hypotheses development

Prior research documents mixed evidence regarding the general ability of the US Senate members to earn abnormal returns from their trading activities. Prior to the enforcement of the STOCK Act, Ziobrowski et al. (2004), found that members of the Senate significantly outperformed the market, raising concerns about political access to material non-public information. However, these findings have been contested. Eggers and Hainmueller (2013), revisited this claim, finding no evidence that congressional trades generated abnormal returns. Moreover, they showed that trading outcomes were not systematically related to committee membership or corporate ties, thereby questioning the robustness of the informational advantage. The regulatory landscape shifted with the enactment of the STOCK Act in 2012, which was intended to mitigate insider trading risks, by increasing transparency and disclosure. Yet, post-STOCK act evidence remains inconclusive. Karadas (2019) reports that congressional trading ceased to yield abnormal returns after the Act's passage, using long-term calendar-time portfolio approach. By contrast, Hanousek et al. (2023) documented that certain Senators continue to realize abnormal returns, particularly in the short run and using buy-and-hold portfolios, implying that informational advantages may persist, linked to privileged information.

Taken together, the literature suggests persistent ambiguity regarding whether and how Senators profit from their financial activity. One possible explanation for this mixed evidence is

that prior literature has treated legislators as a homogeneous group, overlooking heterogeneity in personal characteristics. Given that personality shapes both ethical decision making and risk taking behavior, it is plausible that individual differences help explain who among Senators exploits privileged access to information. Thus, a focus on personality provides a new lens for examining the cross-sectional variation in trading profitability under the STOCK Act regime.

Personality traits, as defined by the Big Five model (Goldberg, 1992; Costa & McCrae, 2008)², have been tied to financial decision making, shaping both risk-taking and long-term financial expectations. Recent evidence by Jiang et al. (2024), is particularly relevant: they show that personality explains cross-sectional variation in beliefs about financial markets, with certain traits systematically associated with optimism or pessimism in return expectations. For example, more optimistic individuals expect persistently higher returns and are more likely to take positions that reflect these beliefs. This suggests that personality does not merely influence isolated decisions but shapes persistent patterns in financial behavior, helping to explain why some investors consistently outperform others. These insights directly motivate the examination of Senators' personality in their trading profitability, where personality may similarly drive differences in their willingness and ability to exploit privileged information. Consistent with this, prior work has demonstrated that conscientiousness is linked to rule-following and risk aversion, while extraversion reflects greater social influence and risk tolerance, both of which could affect the pursuit of abnormal returns (Becker et al., 2012; Judge et al., 2009). The growing literature linking Big Five traits to financial behavior, including investment choices, risk management and adherence to ethical norms, thus provides a robust framework for examining how Senators' personalities may shape their trading behavior under the ethical constraints of the STOCK Act.

Despite the growing literature on both political insider trading and personality associated with financial outcomes, the association of politicians' personality to their stock trading activity remains unexplored. Historically, politicians often have had access to privileged firm-specific information, which they could exploit for private gain. Tahoun (2014) documents how *quid pro quo* relationships between politicians and firms facilitate such access, especially for high-status roles, thereby incentivizing rule-breaking behavior. Similarly, Ziobrowski et al. (2004) underscore the lack of ethical adherence in the political sphere, showing that Senators substantially outperformed the market prior to regulatory reforms. Eggers and Hainmuseller (2013), in contrast, attribute trading performance not to personal disposition but to institutional and contextual factors such as

² Goldberg (1992) introduced the Big Five structure through lexical analysis of trait descriptors, while Costa and McCrae (2008) operationalized the model psychometrically in the Revised NEO Personality Inventory (NEO-PI-R), establishing it as one of the most widely used measures of personality.

geography, campaign contributions or legislative insight. Yet, what remains missing is to account of individual level variation in how Senators use privileged information once opportunities exist.

Conscientiousness, in particular, provides a theoretically robust aspect to address this gap. It has been consistently linked to ethical conduct, moral reflectiveness and an aversion to rule breaking behavior. Conscientiousness individuals are typically reliable, organized and disciplined, displaying a strong sense of duty and alignment with social and institutional norms (Costa & McCrae, 2008). Such qualities suggest that highly conscientious Senators are less likely to exploit informational privileges for personal financial gain. Empirical research reinforces this view. Babalola et al. (2019) find that conscientious leaders tend to exhibit greater ethical leadership, driven by moral reflectiveness, self discipline and thorough decision making. In contrast, low-conscientious leaders display carelessness, unreliability and ethical laxity. Herrman and Nadkarni (2014) emphasize that conscientious individuals are more rule-oriented and have greater salience for loss outcomes, enhancing compliance with norms. Similarly, Kalshoven et al. (2011) show that conscientiousness predicts ethical leadership through fairness and integrity. Their findings suggest that conscientious individuals think carefully before acting and adhere closely to their moral obligations and perceived responsibilities. This reflective and duty-driven orientation is crucial for leaders to behave ethically, as they set clear guidelines for appropriate behavior, and are likely to be seen as role models.

Taken together, these findings suggest that conscientious politicians, due to their heightened rule adherence, long term orientation and internalized ethical standards, may be less inclined to capitalize on informational privilege under the STOCK Act regulatory scrutiny. This leads to our first hypothesis:

H1: Politicians with high (low) levels of conscientiousness exhibit lower (higher) abnormal returns on their trading activity.

Politicians with a stronger social presence and social networking activity are more likely to gain access to privileged information, as social engagement provides a key channel through which such information is shared. This tendency is well captured by the trait of extraversion, which reflects the degree to which individuals seek out social interactions. Extraversion encompasses assertiveness, sociability and enthusiasm (Costa & McCrae, 2008), qualities which are highly salient in political environments where visibility persuasion and coalition-building are central to success. In leadership settings, extraverted individuals are more proactive in initiating interactions, engaging in dialogue, and exerting influence on others (Judge et al., 2009). Their capacity to dominate social

exchanges and mobilize networks provides access not only to public information but also to informal knowledge flows, making them more likely to encounter privileged or early information. Herrmann and Nadkarni (2014) demonstrate that extraverted CEOs are dominant in social settings, which enhances their exposure to privileged information and increases their ability to capitalize on external opportunities. Similarly, Hrazdil et al. (2020) find that extraverted executives engage in higher levels of communication and information dissemination, which raises their visibility and influence within corporate and market networks. Translated into a political context, these traits suggest that extraverted Senators, through their networking are well positioned to access and interpret privileged market related information.

Beyond access, extraversion is also associated with risk-taking behavior. Extraverted individuals display greater tolerance for uncertainty and a stronger drive for achievement and ambition (Costa & McCrae, 2008). Babalola et al. (2019) find that extraverted individuals, in pursuit of assertiveness and personal ambition, may be more willing to compromise ethical standards, especially in high power settings where accountability is diffuse. Furthermore, Lartey et al. (2020) show that extraverted CEOs are inclined to adopt aggressive capital structure decisions, reflecting opportunism and higher financial risk tolerance. Given these traits, it is reasonable to expect that extraverted Senators may be more inclined to act on privileged information, through their social dominance and are more willing to exploit it due to their greater risk appetite. Importantly, these tendencies may persist even under strong regulatory frameworks such as the STOCK Act. While disclosure rules and heightened scrutiny mitigate insider trading, extraverted politicians may still benefit from informal conversations and interactions, which remain outside formal monitoring. Their higher propensity for networking and risk taking suggests that extraverted Senators are more likely to leverage social capital into financial advantage. This leads to our second hypothesis:

H2: Politicians with high (low) levels of extraversion exhibit higher (lower) abnormal returns on their trading activity.

Agreeableness, reflects cooperativeness, compassion, and concern for others, which generally promote prosocial behavior and ethical decision making. Individuals high in agreeableness are motivated to maintain positive interpersonal relationships, are more sensitive to others' needs, and tend to avoid actions that could harm trust-based exchanges. In contrast, individuals low in agreeableness are more competitive, self-focused and willing to prioritize personal gains even at the expense of ethical considerations (Costa & McCrae, 2008).

Empirical evidence supports this pattern. Van Scotter and Roglio (2020) find that CEOs with low agreeableness are more likely to engage in ethical misconduct, suggesting that lack of empathy and cooperativeness can facilitate opportunistic behavior. Similarly, Simha and Parboteeah (2020), show that individuals low in agreeableness are more willing to justify unethical decisions, reflecting a weaker internalization of moral norms. Mayer et al. (2012) further demonstrate that agreeableness correlates positively with ethical behavior, largely through mechanisms of empathy and the desire to preserve positive social relationships.

In the political sphere, these dynamics are particularly relevant. Senators with high agreeableness may be reluctant to misuse privileged information, as such behavior could undermine trust with constituents, colleagues and institutions, damaging the rational capital that underpins their political careers. Conversely, Senators low in agreeableness may face fewer moral barriers to exploit confidential information for personal gain. Their lower concern for fairness and reduced sensitivity to the ethical implications may increase the likelihood of trading on privileged information. This leads to our third hypothesis.

H3: Politicians who score low on agreeableness exhibit higher abnormal returns on their trading activity

We do not make formal predictions to the remaining two personality traits, openness and neuroticism, given the inconsistent and often contradictory findings in the literature. Openness to experience is associated with imagination, intellectual curiosity and receptiveness to new ideas. Herrmann and Nadkarni (2010) demonstrate that openness facilitates strategic flexibility and dynamic capabilities in leadership contexts, supporting innovative policy perspectives and unconventional thinking. However, its implications for ethical conduct remain ambiguous. While openness may encourage creativity and adaptability, some studies suggest that it may also foster ethical flexibility or opportunistic decision making when privileged information is available (Jiang et al., 2024). As such, the evidence does not provide directional basis to expect systematic effects of openness on financial misconduct.

Neuroticism, reflects emotional instability, anxiety and vulnerability to stress. Individuals high in neuroticism may be prone to impulsivity or emotionally reactive behavior, particularly under pressure. The empirical evidence on its relationship to financial outcomes or ethical violations is weak. Durand et al. (2008), studying individual investors, report only weak and inconsistent associations with investment behavior, while Colquitt et al. (2006) find that neuroticism has limited explanatory power for fairness perceptions or ethical responses.

Compared to traits more directly tied to moral reasoning, discipline or risk taking, neuroticism appears to play a minor role.

Empirical findings suggest that while openness and neuroticism may shape broader aspects of personality and leadership style, their predictive relevance for Senators' trading performance under the STOCK Act remains limited.

3. Data

To examine the behavior of US Senators following the passage of the STOCK Act, we hand-collected data on the stock transactions and personality traits for the period 2013 to 2020. The dependent variable in our analysis is the abnormal return earned by each politician on their trades. Transaction data is obtained from the Centre for Responsive Politics (CRP) database which provides raw datasets derived from the politicians' annual *Financial Disclosures Report* (FDRs). These reports include annual records of stock purchases, sales and end of year holdings. Transaction amounts are disclosed in interval ranges rather than precise dollar values. The ranges are: \$1-\$1000, \$1001-\$15000, \$15001-\$50000, \$50,000-\$100000, \$100001-\$250000, \$250001-\$500000, \$500001-\$1000000, \$1000001-\$5000000, \$5000001-\$25000000, \$25000001-\$50000000, and over \$50000000. CRP does not provide the exact number of shares in the transactions, nor the share price at which the transaction was exercised. For this reason, and following prior literature (Ziobrowski et al., 2004), we use the midpoint of each interval to estimate transaction values. For example, the range \$500,001-\$1,000,000, is recorded as \$750000.

To prepare the transactions for return calculations, we manually matched each traded company to its stock ticker in CRSP. Using these tickers, we extracted daily return data for individual stocks, as well as benchmarks from the S&P500 index. Fama-French factors and the risk free rate was obtained from Kenneth French data library³.

Our main independent variables are the Big Five personality and narcissism dimensions. We constructed personality profiles using textual analysis on their floor debate speeches, hand-collected from the *Congressional Record Proceedings*. To ensure reliability in measuring stable personality traits, we restrict our sample to Senators serving at least two consecutive terms (i.e. four years) and focus on speeches delivered in the third year of office, when members are more established and active.

³ https://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html

We analyze only floor debates, which capture authentic and unscripted linguistic expression. *Floor debates* typically involve discussions on specific topics of social and political importance after the reporting of a bill, where politicians formally express their opinion for or against that matter. Unlike other statements and committee hearings, which can be scripted, floor debates capture the interactions among politicians, showing a more authentic representation of individual personalities. Debate time typically lasts up to forty minutes, equally divided between the opposing sides of a bill, with members self-selecting to speak. When there are resolutions or amendments proposed at the end, they are debated and voted. Following the literature (Gentzkow et al., 2019), we remove the *Extensions of Remarks*, as they include unspoken extracts by members that are not discussed in the debates. We select a representative sample of debate topics concerning key national issues: healthcare reforms and Obamacare, national defence, women's rights and national budget allocations. Speech transcripts were analyzed using the Linguistic Inquiry and Word Count (LIWC) dictionary with word categories mapped onto the Big Five traits and narcissism.

We control for party, committee power, gender and age, as these factors may influence trading behavior or access to information. Age is included to account for differences in risk preferences and experience across politicians. Committee power, is linked to privileged access to policy-relevant information and is linked to earning significantly abnormal returns. Following the literature⁴, to account for this channel, we account whether politicians serve in the powerful finance committees: Finance and Budget. These variables were obtained from the Open Secrets database, which provides their demographic and political information.

4. Methodology:

4.1. Regression Model

To empirically test our first hypothesis, we estimate the following model:

⁴ Stewart (2012) applies the Grosewart method, a statistical approach that infers the relative value of committees based on revealed preferences of members. For instance, if a senator gives up a seat on a less prestigious committee to join a more influential one (e.g., moving from Foreign Affairs to Rules), the latter is considered to yield higher benefits. These benefits encompass both legislative influence and private-sector career prospects, and are used to produce a ranking of congressional committees.

$$1. \textit{ Politician Returns}_i = \alpha + \beta_{i1} \textit{ Extraversion} + \beta_{i2} \textit{ Openness} + \beta_{i3} \textit{ Conscientiousness} + \beta_{i4} \textit{ Neuroticism} + \beta_{i5} \textit{ Agreeableness} + \textit{ Controls}$$

The variables of interest are β_{i1} , β_{i3} and β_{i5} . In model 1, we test hypotheses 1, 2 and 3. Since higher conscientiousness is associated with greater self-discipline, rule-following and ethical behavior (McCrae & John, 1992), we hypothesize a negative relationship between conscientiousness and abnormal returns, indicating that less conscientious individuals are more likely to exploit insider information for financial gain. Extraversion proxies for increased social interaction and broader access to privileged information. For this reason, we expect that the interaction term β_{i1} will be positive, supporting our H2, suggesting that extraverted politicians are more likely to exploit inside information. We also expect that β_{i5} will be positive, supporting the hypothesis that extraverted politicians who are also low in agreeableness, are more likely to exploit their access to privileged information for personal gain, as low agreeableness may reduce concern for fairness, cooperation and ethical norms. This combination may increase the likelihood of opportunistic behavior.

4.2. Big Five traits scoring

In the relevant literature on politicians' personality, there have been two main approaches employed to estimate the Big Five traits. The first relied on survey based on self-assessments, in which legislators complete standardized personality questionnaires (Klingler et al., 2019; Hanania, 2017). While this approach can yield rich data, it is vulnerable to several limitations, including social desirability bias, self enhancement tendency, and the possibility that responses may be completed by staff rather than the politicians themselves.

The second approach, which we adopt in this study, uses textual analysis of political speech to infer personality traits based on linguistic patterns. This method limits the biases of self-report surveys and offers a scalable behavioral tool for personality estimation. We specifically use LIWC, a widely used dictionary based text analysis software, to assess the Big Five personality dimensions of US Senators based on their Congress floor speeches. LIWC identifies linguistic markers in natural language, associating word usage with underlying personality traits. Our implementation follows established methods in personality research (Ramey et al., 2016). We draw upon mappings between LIWC categories and the Big Five

traits, grounded in the NEO-FFI⁵ taxonomy (John & Srivastava, 1999; Goldberg; 1992) to derive personality scores for each dimension. The mapping items we used is found in the Appendix.

Extraversion was inferred from word categories reflecting social engagement, enthusiasm and positive emotions. Agreeableness was captured through cooperative and compassionate language. Conscientiousness was indicated by word categories of organization, reliability and ethical responsibility. Neuroticism was approximated through anxiety, emotional instability, as well as emotional sensitivity. Openness to experiences was associated with references to innovative thinking, creativity and curiosity.

For each politician, we computed the average frequency of words in each LIWC category linked to the respective trait. These aggregate frequencies were standardized and used to generate the Big Five personality trait scores. The resulting scores were then used as independent variables in our regression analyses.

4.3. Politicians' abnormal returns

To estimate the trading performance of US Senators, we adopt the transaction-based calendar-time portfolio approach, following Ziobrowski et al. (2004) and Karadas (2019). This method directly imitates politicians' trades by constructing buy-side and sell-side portfolios. For each reported transaction, the position enters the relevant portfolio on the first trading day following the transaction day and remains active until the end of the holding period, of three, six and twelve months. Because of the uncertainty on the timing of the politicians holding periods, we measure abnormal returns under several holding periods in order to examine the time sensitivity of information usage in trading. If politicians trade immediately on time sensitive information, then their abnormal return on the buy-minus-sell should be higher for shorter holding periods. On the contrary, if politicians trade on time insensitive information, then there should be higher abnormal returns in the longer holding periods.

Daily portfolio returns are computed as the value-weighted averages of the returns on all active transactions. Specifically, the weight assigned to each transaction corresponds to the compounded dollar value of the position at the beginning of day t . The daily portfolio return on day t is thus calculated as:

⁵ John & Srivastava (1999) provide a handbook of 44 items 'NEO-FFI', which was used to map each trait from the Big Five Personality

$$R_{pt} = \frac{\sum_{j=1}^N V_{i,t-1} * r_{jt}}{\sum_{j=1}^N V_{i,t-1}}$$

where $V_{i,t-1}$ is the compounded value of transaction j at the start of day t , and r_{jt} is the return of stock j on day t . This ensures that the portfolio return reflects the performance of all active trades on the particular day, weighted by their importance.

For example, suppose a senator buys \$2,000 of stock X and \$3,000 of stock Y. On the first trading day (day 0), X rises by 5% (to \$2,100) and Y falls by 10% (to \$2,700), leaving the portfolio worth \$4,800. On day 1, X gains another 10% and Y rises 5%, producing gains of \$210 and \$135, or \$345 in total. The daily portfolio return is therefore $\$345 \div \$4,800 = 7.19\%$.

Daily returns are then aggregated into monthly returns. At the second stage, we compute abnormal returns by taking a long position in the buy portfolio and a short position in the sell portfolio. To isolate abnormal return performance, we adjust for market risk using the Fama-French five-factor model.

5. Empirical Results

5.1. Descriptive Statistics

Our sample consists of daily-politician trading data, aggregated into portfolio returns from 2013 to 2020, assuming holding periods of three, six and twelve months. Table 1, Panel A presents the mean and median values of value-weighted average buy-minus-sell portfolio returns in columns 1-3, and the abnormal returns estimated using the Fama-French five-factor model (alphas) in columns 4-6, across the three holding periods.

The average raw returns, expressed in basis points, are negative and statistically significant over the medium and long term. Specifically, the three-month return is -0.81bp and not statistically significant ($p=0.434$). The six-month return is -9.22bp and statistically significant at the 1% level, and the twelve-month return is -5/71bp, also significant at the 1% level. These results suggest that on average, Senators' trades result in modest losses in the medium and long run, while short-term trades are not systematically profitable or unprofitable.

Similarly, the abnormal returns (alphas) indicate underperformance relative to market benchmarks in the short run. The mean Fama-French alpha is -0.133 for the three-month holding period and -0.143 for six months, both statistically significant at the 1% level. The

twelve-month alpha is 0.04 and significant at the 1% level, suggesting modest positive abnormal performance over the long horizon. Overall, these results suggest that when controlling for risk-adjusted market factors, Senators' trades tend to underperform in the short and medium run but may capture slight gains over longer holding periods on average.

Panel B of Table 1 summarizes the descriptives of Big Five personality traits across Senators, as well as their demographic characteristics. The average extraversion and conscientiousness scores are 0.377 and 0.429 respectively, while agreeableness, neuroticism and openness average 0.429, 0.398 and 0.292. The trading sample is composed predominantly of Republicans (75.8%) compared to Democrats (24.2%), which indicates that almost 76% of the daily returns were performed by Republican Senators. Gender is heavily skewed, with 92% of the daily-return sample being achieved by male and only 8% by female.

Table 2 presents the Pearson correlation coefficients among the main study variables. We report both the correlation values and their statistical significance. As expected, the three, six and twelve-month raw returns and abnormal returns (FFalpha63, FFalpha126, FFalpha252) are positively correlated, particularly between shorter horizons ($r=0.721$, $p<0.01$ between FFalpha63 and FFalpha126).

Extraversion is significantly associated with other personality traits, especially Openness ($r=0.824$, $p<0.01$) and Agreeableness ($r=0.595$, $p<0.01$). In addition, extraversion shows a small negative but not statistically significant correlation with raw returns ($r=-0.033$) and FFalpha63 ($r=0.131$), suggesting a limited impact on short-run trading performance.

Conscientiousness, often linked with diligence and rule-following behavior, shows small positive correlations with the FFalpha63 ($r=0.131$, $p<0.01$), and weak negative correlations with FFalpha252 ($r=-0.119$, $p<0.01$), consistent with disciplined but modestly performing trades over longer horizons. Alternatively, it may reflect a preference for safer, less information-driven trades which do not capture long-term alpha. Conscientiousness is also positively correlated with Neuroticism ($r=0.526$, $p<0.01$) and Openness ($r=0.460$, $p<0.01$). Neuroticism is positively correlated with medium and long-term raw returns and FFalphas, suggesting that emotionally reactive politicians may paradoxically achieve better risk-adjusted performance. This could reflect a heightened sensitivity to risk, which may lead to more cautious trades, despite the trait's association with emotional volatility.

Agreeableness and Openness exhibit weaker correlations with return variables. Openness shows small negative correlations with FFalpha63 ($r=-0.012$, $p<0.01$). Agreeableness has weak correlations with short-term returns, with minimal economic relevance.

Political party affiliation is significantly correlated with several personality traits. It is negatively correlated particularly with Openness ($r=-0.244$), reflecting the ideological personality misalignments with Republican Senators. This suggests that Republican Senators tend to exhibit less Openness personality characteristics. Its correlation with trading returns is limited and mostly short term ($r=0.078$ with `averageretu63`), suggesting that political ideology may play a limited direct role in trading performance.

In addition to personality traits, demographic characteristics also show meaningful associations with trading returns. Age is positively correlated with medium term abnormal returns ($r = 0.055$ with `FFalpha126`, $p < 0.05$), suggesting that more senior Senators may achieve slightly better risk-adjusted performance, potentially due to experience, access to information, or more cautious trading strategies. The correlations with raw returns are weaker and not statistically significant, implying that age mainly affects risk-adjusted rather than raw performance.

Finance Committee membership shows mixed relationships. Membership is positively correlated with some raw and abnormal returns ($r = 0.057$ with `averageret126`, $p < 0.05$). In addition, it is negatively correlated with extraversion ($r = -0.313$, $p < 0.01$). This indicates that while committee members in general might sometimes achieve higher medium-term returns, their personality profiles differ from the average Senator specifically, they tend to be less extraverted and less agreeable, which could reflect the selective nature of committee appointments and their more strategic, cautious approach to trading.

5.2. Main findings

5.2.1. Politicians' conscientiousness and trading performance

We begin our analysis by examining whether Senators who score low on conscientiousness, indicating lower moral standards and less rule following, tend to perform better in their trading activity. Table 3 presents our findings. Our dependent variable is the 'FFalpha' obtained from the five factor Fama French asset pricing model, computed as the monthly aggregated daily stock returns in each Senator's portfolio. Columns 1, 2 and 3 present the results for the three-month, six-month and twelve-month holding period respectively. We control for politician political party affiliation, gender, age and Finance Committee membership. The key variable of interest is

‘Conscientiousness’, which captures the tendency to be organized, responsible, reliable and disciplined, reflecting higher moral standards.

At the three-month holding period, Conscientiousness is statistically insignificant (-0.001 , $p > 0.1$), suggesting that in the immediate short term, conscientious politicians do not earn significant abnormal returns in their trading activity. Since stock market tends to reward patient, longer term positions, the outcomes of more rule-following may not be yet reflected in shorter time horizons.

The coefficient on *Conscientiousness* at the six-month holding period (FF_{α}), is negative and statistically significant (-0.023 , $p < 0.01$), providing evidence that conscientious Senators are less likely to trade on privileged information, due to their rule-following nature and higher moral reflectiveness thoughtless (Babalola et al., 2019). In longer holding periods, which may better reflect trading patterns, conscientious individuals who are more sensitive to rules and reputational concerns, especially under the regulatory scrutiny of the STOCK Act, may refrain from exploiting private information, supporting our first hypothesis. The results further suggest a growing opportunity cost to their risk aversion and adherence to moral norms, as their adherence to rules and higher moral standards may discourage opportunistic trades.

The coefficient on *Conscientiousness* at the twelve-month holding period (FF_{α}) remains negative and statistically significant (-0.023 , $p < 0.01$), reflecting persistent underperformance over longer periods by highly conscientious politicians. This strengthens the interpretation that conscientious individuals, who score higher on duty following, self-disciplining and moral responsibility, are less inclined to act on privileged information. Over extended periods, where strategic decisions have time to unfold, their cautious and compliance-oriented approach appears to hinder the ability to capitalize on market beating opportunities. Their lower abnormal returns may thus reflect their internalized moral standards reliability and rule adherence (Kalshoven, 2011), supporting our first hypothesis that conscientious individuals are disincentivized from trading on informational advantages.

5.2.2. Politicians’ extraversion and trading performance

We next examine whether extraversion is positively correlated with the Senators’ abnormal returns, reflecting that a more outgoing and sociable personality may leverage privileged information networks to trade advantageously. Extraverted individuals are typically assertive, dominant and sociable, traits which may increase their access to information and willingness to act on it in the financial markets, potentially generating higher abnormal returns.

Table 3 reports the regression results. In the three-month holding period (Column 1), *Extraversion* is positive but statistically insignificant (0.004, $p > 0.1$), indicating that in the short term, there is no immediate effect of extraversion trait on the Senators' abnormal returns. This further indicates that the stock market does not always immediately reflect informational advantages associated with social networking.

The *Extraversion* coefficient under the six-month holding period (Column 2), is positive and statistically significant (0.047, $p < 0.1$). This result supports that socially outgoing Senators outperform the market returns, by potentially trading on exclusive, non-public information or industry intelligence gathered through their interactions with other insiders.

The effect becomes even stronger in the twelve-month holding period (Column 3), where *Extraversion* is positively and significantly associated to abnormal returns *alpha* (0.087, $p < 0.01$). This further suggests extraverted politicians' access to private networks yields substantial long-term benefit, supporting our second hypothesis that extraverted politicians have greater access to market knowledge and are more ambitious and thus willing to use it in their trading (Judge et al., 2009; Babalola et al., 2019). This further supports that extraverted Senators are more willing to leverage non-public information, potentially surpassing ethical boundaries.

Overall, the findings highlight that extraversion is a key personality trait associated with higher abnormal returns, consistent with greater social connections, information gathering and potentially risk-taking in trading behavior. In the political context, extraverted Senators may leverage networks and privileged information more effectively than their less outgoing peers, producing significant gains over medium and long-term horizons.

5.2.3. Other personality traits and trading performance

We extend our analysis beyond conscientiousness and extraversion, to examine the role of the remaining personality variables: *agreeableness*, *neuroticism*, *openness* and politician-specific variables: *gender*, *party*, *age* and *finance committee membership*, in explaining abnormal returns from stock trading. Table 3 presents the regression results.

Agreeableness, reflecting cooperativeness, trust and sensitivity to social norms (Costa & McCrae, 2008), shows an inconsistent relationship with abnormal returns across holding periods. While the coefficient is positive and insignificant in the three-month holding period (0.002, $p > 0.1$), it becomes negative and statistically significant over the six month (-0.011,

$p < 0.01$) and twelve month (-0.030 , $p < 0.01$) holding periods. This pattern suggests that agreeable Senators, who tend to adhere to ethical norms and avoid assertive actions, do not exploit private information over longer periods, aligning with prior literature on ethical restraint (Mayer et al., 2012). Their disposition may make them less inclined to exploit non-public information due to concern for ethical boundaries.

Neuroticism, often associated with emotional instability, anxiety and worry (Judge and Bono, 2002) exhibits a positive and significant association with abnormal returns in the six (0.033 , $p < 0.01$) and twelve (0.056 , $p < 0.01$) month holding periods. Contrary to expectations of risk aversion, this suggests that emotionally sensitive, neurotic individuals, respond more decisively to private information or act more opportunistically under uncertainty, which enhances long-term performance. Their heightened sensitivity to potential losses may prompt strategic and timely trading, resulting in abnormal returns.

Openness, linked to curiosity, creativity, and unconventional thinking, shows a significant negative relationship with abnormal returns over the six (-0.045 , $p < 0.01$) and twelve (-0.71 , $p < 0.01$) month holding periods. This indicates that more open Senators may overanalyze or engage in complex reasoning that undermines trading effectiveness, leading to poorer financial decisions. Their exploratory nature may also reduce reliance on insider information, limiting potential gains.

In addition, female Senators significantly outperform males' trading performance across the three (0.084 , $p < 0.01$) and six (0.183 , $P < 0.01$) and twelve (0.099 , $p < 0.01$) month holding periods. This finding may reflect that women may have greater risk awareness and strategic decision making.

Furthermore, party affiliation illustrates that Republican Senators exhibit significant positive abnormal returns over Democrats only in the three-month holding period (0.065 , $p < 0.1$), with the effect turning negative and significant for longer holding periods. While this may imply partisan differences in investment ideology, risk tolerance and information channels, the lack of consistent significance suggests that these differences are not robust over time horizons.

Age and Finance Committee membership also influence trading outcomes. Age exhibits a positive and significant correlation with abnormal returns in the three-month horizon (0.069 , $p < 0.01$), but the effect becomes insignificant over six and twelve months. This suggests that more experienced Senators may realize short-term trading advantages, potentially due to greater familiarity with financial markets or legislative knowledge, but these advantages do not persist over longer horizons. Finance Committee membership is associated with negative

abnormal returns in the six-month (-8.716%, $p < 0.01$) and twelve-month (-16.282%, $p < 0.01$) horizons, but not in the three-month period. Senators with privileged access to financial legislation may face reputational constraints or heightened scrutiny that limits their ability to capitalize on non-public information, leading to underperformance in longer-term trades.

These findings highlight the nuanced role of personality in shaping trading outcomes. Our results reaffirm that *conscientiousness* is consistently associated with lower abnormal returns, supporting the idea that highly conscientious individuals are more rule-following and morally reflective (Babalola et al., 2019), and thus are less inclined to use privileged information. In contrast, *extraversion* is linked to higher returns, consistent with the trait's association with assertiveness, social dominance and risk taking, which may enable better access to information networks. Beyond these core traits, the findings for *agreeableness* and *openness* suggest a similar restraint, likely rooted in prosocial and ethical values. Meanwhile, the positive association of *neuroticism* to abnormal returns may reflect heightened sensitivity to threat or loss which fuels opportunistic behavior.

6. Robustness

6.1.1. Narcissistic personality

To further validate our findings, we perform additional personality tests. We additionally introduce an additional personality variable, capturing narcissistic personality trait. Narcissistic personality traits are widely studied in financial contexts due to their link to decision making, risk taking and social behavior. Narcissistic individuals are characterized by heightened self-focus, a sense of entitlement, and strong desire for status and recognition (Raskin & Hall, 1979; Chatterjee & Hambrick, 2007). In political and corporate environments, these traits can manifest in both communication and behavioral patterns, including aggressive decision making, opportunistic strategies, and the exploitation of information. For legislators, such tendencies may translate into a greater willingness to act on private information, potentially yielding abnormal returns from stock trading, as the drive for personal gain and status can override ethical or reputational considerations.

Following the established relevant literature, the variable *Narcissism* is proxied by variations of the use of relative first person singular pronouns (Raskin and Shaw, 1988; Chatterjee and Hambrick, 2007). A higher use of first person pronouns reflects greater self-focus patterns, and a politician's greater orientation toward self-interest and risk-seeking trading behavior,

potentially leading them to leverage private information more aggressively. We construct two measures of narcissism: the I/we ratio (Chatterjee & Hambrick, 2007) and the I/words per sentence (I/WPS) measure. A higher I/we or I/WPS ratio indicates a greater focus on self versus collective considerations, which may manifest as a higher propensity to act on non-public information. Narcissistic politicians may overestimate their ability to interpret market signals, leverage private informational networks, or take more aggressive positions in stocks they perceive as advantageous, potentially yielding abnormal returns.

Table 4 presents the results. Using the I/we measure (Columns 1-3), higher narcissism is positively associated with short-term abnormal returns (FFalpha) over the three-month holding period (0.041, $p < 0.01$), but the effect becomes negative and significant in the twelve-month holding period (-0.074, $p < 0.01$). This suggests that narcissistic Senators may act more aggressively or opportunistically in the short term, potentially exploiting informational advantage, but over the long term, their overconfidence or impulsiveness may reduce performance.

Using the I/WPS measure (Columns 4-6), we observe a positive and significant relationship for the three (0.257, $p < 0.01$) and six (0.222, $p < 0.1$) month holding periods. These patterns are consistent with the notion that narcissistic behavior enhances short-term trading performance, possibly through overconfidence, rapid action on privileged information, or leveraging social networks, but again, it does not translate into sustained long term gains.

Republican Senators earn marginally higher abnormal returns in the short term, while female Senators consistently outperform males over the short and medium term horizons. Age has a weak but negative effect in the short-term when using the I/WPS measure, and membership in the Finance Committee shows a mixed pattern, suggesting nuanced institutional and demographic effects on trading outcomes. Overall, these results provide robustness for our prior findings linking personality traits to trading behavior, highlighting narcissism as a trait that promotes opportunistic, short-term performance gains.

The link between narcissism and trading performance can operate through several channels. Narcissistic individuals are characterized by their overconfidence, a strong need for recognition, and heightened sensitivity to status (Chatterjee & Hambrick, 2007; Raskin, 1980). In the context of Senators' trading, such traits may prompt more aggressive and opportunistic trading behavior, enabling them to act quickly on privileged information or leverage social networks to gain market insights. This self focused orientation may also reduce aversion to regulatory scrutiny, as narcissistic individuals tend to overestimate their abilities and underestimate risks. However, the negative or attenuated effects observed over longer holding

periods suggest that impulsivity, overestimation of skill, or riskier trading strategies can undermine sustained performance. Overall, narcissism appears to enhance short-term abnormal returns by motivating assertive and information-driven trading, but the trait's volatility and overconfidence may limit long-term gains.

6.1.2. Buy-Hold Abnormal Returns (BHAR)

We next examine whether Senators' personality traits are associated with buy-and-hold abnormal returns (BHAR), over over three, six and twelve month rolling windows following each trade. The BHAR measure considers only purchased positions and captures total realized return relative to the market index, providing a complementary perspective to the buy-minus-sell approach used in the main analysis. The BHAR captures the cumulative impact of Senators' trades over the holding periods, relative to a benchmark.

Following the relevant literature (Hanousek et al., 2023), for each Senator, we compute the cumulative product of daily stock returns over three, six and twelve month periods following the trade:

$$BHAR_{i,T} = \prod_{t=1}^T (1 + R_{i,t}) - 1$$

Where $R_{i,t}$ is the daily return of stock i on day t and T denotes the holding period in trading days. This approach allows us to aggregate daily returns into a single measure of performance for each trade, reflecting compounded returns over time.

To estimate the abnormal BHAR, we subtract the return of the S&P500 index, used as a benchmark from the raw BHAR.

We present our findings in Table 5. Conscientiousness shows no significant effect across all horizons. Extraversion is positively associated with BHAR at the three-month period (0.014, $p < 0.05$) and six-month period (0.006, $p < 0.05$), but becomes marginally negative at

twelve-month holding period (-0.01 , $p < 0.1$). This suggests that extraverted Senators may leverage their social networks to capture short term and medium term informational advantages, but the effect diminishes or reverses in the long term.

Neuroticism, is positively linked to the three month (0.012 , $p < 0.01$) and six month (0.005 , $p < 0.01$) BHAR, similar to the Fama-French alpha results, suggesting that emotionally sensitive Senators can opportunistically respond to privileged information. Openness exhibits a positive effect at the twelve-month horizon (0.015 , $p < 0.05$), suggesting that more creative or exploratory individuals may benefit from long-term strategic positions, even if short-term gains are not significant. Agreeableness has no consistent effect across holding periods.

While the BHAR analysis provides an intuitive measure of the long-run performance of individual trades, it is subject to several limitations that may explain the differences relative to the Fama French calendar-time portfolio returns used in the main analysis. First, BHARs are constructed at the transaction level and track buy-and-hold returns only on purchase trades, without incorporating offsetting sales. As a result, they do not fully reflect a politician's net portfolio position or the timing of exit decisions. This omission can bias abnormal returns upward or downward depending on subsequent selling activity. Second, BHARs compound returns on each security independently and then aggregate across trades, which increases cross-sectional variation and makes inference sensitive to skewed outliers. In contrast, the Fama French approach aggregates daily portfolio returns and controls for systematic risk factors, providing a cleaner estimate of abnormal performance at the portfolio level. These methodological differences explain why some personality traits show stronger or weaker associations in the BHAR regressions and underscore the need to interpret these findings as complementary rather than directly comparable to the calendar-time results.

7. Conclusion

The study provides novel evidence that the US Senators' personality traits, as inferred from their congressional speech, are associated to their trading profitability. Specifically, supporting our first hypothesis, conscientiousness is consistently associated with lower abnormal returns, while extraversion is linked to higher abnormal returns, even after controlling for demographic characteristics. These findings highlight how moral standards can prevent the exploitation of privileged information, and how extraversion can enhance it. These findings further emphasize that personality emerges as a critical behavioral factor shaping how political insiders process and

act upon this privileged information, adding a new behavioral dimension to the literature of political finance.

By associating personality with insider trading in politics, this study enriches behavioral finance by emphasizing that the ethical and regulatory challenges surrounding political trades cannot be understood solely through ideology or institutional rules. Instead, individual differences play a crucial role in shaping trading behavior. At the same time, however, the study faces natural limitations. Personality traits are only inferred indirectly from text, while transaction data is estimated over assumed holding periods, which may limit the strength of our findings. In addition, the BHAR method, while intuitive, track only purchase trades and do not incorporate subsequent sales, which can bias abnormal returns and partly explain the differences relative to factor-adjusted calendar-time results. Moreover, the setting is specific to the US Senate under the STOCK Act, and external validity to other contexts requires caution.

In light of the above, future research could expand on these limitations. A promising avenue is to combine textual analysis with more advanced methodologies to map and quantify personality traits, such as experimental approaches, providing richer insights into how cognitive and emotional processes drive financial decision making among political elites. Another is to examine whether personality-performance links in other political professional domains, such as corporate executives. Finally, comparative studies across countries could clarify how institutional environments moderate the influence of personality on financial behavior.

Overall, our results suggest that personality is a fundamental, yet underexplored, driver of financial outcomes in political markets, with implications for both academic inquiry and public policy.

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Variable Definitions

Big Five Factors:

Extraversion:	A continuous measure capturing the degree of assertiveness, sociability and energy orientation of the Senator, derived from linguistic markers in floor speeches
Conscientiousness:	A continuous measure capturing self-discipline, moral standards, organization and rule-adherence, extracted from linguistic markers in floor speeches
Openness:	A continuous measure capturing intellectual curiosity, creativity and novelty, extracted from linguistic markers in floor speeches
Neuroticism:	A continuous measure capturing emotional instability, anxiety and mood volatility, extracted from linguistic markers in floor speeches
Agreeableness:	A continuous measure capturing cooperativeness, trust and prosocial orientation, extracted from linguistic markers in floor speeches

Politician specific characteristics

Narcissism	Captures self-focus and self-focus and self-admiration, proxied by the I/we pronoun ratio in speech
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Politician specific characteristics

Gender:	A dummy variable equal to 1 if the Senator is a female, 0 if male
Age:	A continuous variable indicating the Senator's age
Party:	A dummy variable equal to 1 if the Senator is Republican, and 0 if Democrat
FinanceCommittee:	A dummy variable indicating whether the Senator sits in the Finance Committee

Asset Pricing Variables

FFalpha	The abnormal return (alpha) estimated from the Fama-French Five Factor asset pricing model
Market Risk	Excess return of market portfolio over risk free rate ($R_m - R_f$)
RF	The risk free rate, proxied by the yield on US Treasury bills
Size (SMB)	The difference in returns between small cap and large cap portfolios, capturing the size effect
Value (HML)	The difference in returns between high book-to-market and low book-to-market portfolios
Profitability (RMW)	The difference in returns between portfolios of companies with robust profitability and weak operating profitability
Investment (CMA)	The difference between companies that invest conservatively and those that invest aggressively
BHAR	Buy-and-hold abnormal returns; cumulative abnormal return from holding a stock over a given horizon, relative to the market benchmark

Table 1: Descriptive Statistics - Panel A and B

Panel A reports mean and median values of both average portfolio daily returns and Fama-French five-factor abnormal returns (alphas) across three holding periods: three, six and twelve months. The analysis is based on politician-daily returns, constructed using value-weighted across Senators. Mean values are tested against zero using one-sample t-tests. Statistical significance at the 10%, 5% and 1% levels is denoted by *, **, and ***, respectively.

Panel B presents the descriptive statistics for the Senators' personality traits, political affiliation, committee power, age and gender. Personality traits are measured using scores from 0 to 1 based on Big Five and narcissism dimensions. Party affiliation is binary coded (1=Republican, 0=Democrat) and gender is binary coded (1=Male, 0=Female). Age is a continuous variable indicating the Senators' age and Committee is a binary variable indicating whether the Senator sits on the Finance Committee.

Panel A: Summary statistics on average return and abnormal return

Holding periods	Average Return			FFalpha		
	(3)	(6)	(12)	(3)	(6)	(12)
mean	-0.008	-0.092***	-0.057***	-0.133***	-0.143***	0.04***
Median	0	0	0	0	0	0.013
N	102,270	102,270	102,270	102,270	102,270	102,270

Panel B: Summary statistics on Senator personality, political affiliation and gender

	Mean	Median	SD
Personality Dimensions			
Extraversion	.377	.398	0.222
Agreeableness	.429	.317	0.234
Neuroticism	.398	.482	0.236
Oppenness	.292	.256	0.271
Conscientiousness	.544	.516	0.200
Demographic Characteristics			
Party %			
<i>Republicans</i>	75.8		
<i>Democrats</i>	24.2		
Gender %			
<i>Male</i>	92		
<i>Female</i>	8		
Age	69		
FinanceCommittee	0.74		

Table 2: Pairwise Correlations

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
(1) FFalpha63	1.000														
(2) FFalpha126	0.721* (0.000)	1.000													
(3) FFalpha252	0.608* (0.000)	-0.068* (0.000)	1.000												
(4) Averageret63	0.042* (0.000)	0.389* (0.000)	-0.423* (0.000)	1.000											
(5) Averageret126	0.760* (0.000)	0.662* (0.000)	0.344* (0.000)	0.003 (0.288)	1.000										
(6) Averageret252	0.649* (0.000)	0.429* (0.000)	0.468* (0.000)	-0.346* (0.000)	0.906* (0.000)	1.000									
(7) Conscientiousness	0.015 (0.506)	0.131* (0.000)	-0.119* (0.000)	-0.005 (0.835)	-0.009 (0.700)	-0.012 (0.616)	1.000								
(8) Extraversion	-0.004 (0.850)	-0.019 (0.404)	-0.011 (0.644)	-0.033 (0.152)	-0.018 (0.445)	-0.006 (0.790)	0.495* (0.000)	1.000							
(9) Agreeableness	0.002 (0.919)	0.072* (0.002)	-0.077* (0.001)	0.034 (0.145)	-0.013 (0.561)	-0.027 (0.235)	0.653* (0.000)	0.595* (0.000)	1.000						
(10) Neuroticism	0.082* (0.000)	0.137* (0.000)	0.021 (0.353)	0.010 (0.662)	0.059* (0.010)	0.054* (0.020)	0.526* (0.000)	0.053* (0.022)	0.545* (0.000)	1.000					
(11) Openness	-0.001 (0.972)	-0.028 (0.229)	-0.029 (0.209)	-0.012 (0.602)	-0.010 (0.679)	-0.001 (0.978)	0.469* (0.000)	0.824* (0.000)	0.517* (0.000)	0.309* (0.000)	1.000				
(12) Age	0.055* (0.018)	0.094* (0.000)	-0.025 (0.270)	-0.043 (0.065)	0.016 (0.480)	0.025 (0.279)	0.704* (0.000)	0.356* (0.000)	0.497* (0.000)	0.501* (0.000)	0.348* (0.000)	1.000			
(13) FinCommittee	0.030 (0.198)	0.108* (0.000)	-0.081* (0.000)	0.034 (0.137)	0.057* (0.013)	0.031 (0.181)	0.051* (0.028)	-0.313* (0.000)	-0.198* (0.000)	0.412* (0.000)	-0.136* (0.000)	0.110* (0.000)	1.000		
(14) Party	0.033 (0.153)	0.207* (0.000)	-0.024 (0.306)	0.078* (0.001)	0.032 (0.164)	0.010 (0.666)	0.346* (0.000)	-0.045 (0.050)	0.377* (0.000)	0.408* (0.000)	-0.260* (0.000)	0.318* (0.000)	0.003 (0.898)	1.000	
(15) Gender	0.139* (0.000)	0.195* (0.000)	-0.034 (0.136)	0.046* (0.044)	0.126* (0.000)	0.089* (0.000)	0.154* (0.000)	-0.174* (0.000)	-0.179* (0.000)	0.136* (0.000)	-0.001 (0.958)	0.224* (0.000)	0.487* (0.000)	-0.049* (0.032)	1.000

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table 3: Linear regression of Senators' personality traits on trading abnormal returns

The dependent variable *FFalpha* is the abnormal return (alphas) obtained from the Fama French five factor asset pricing model, monthly aggregated across total daily stock return for each Senator. The independent variables *Conscientiousness*, *Extraversion*, *Agreeableness*, *Neuroticism* and *Openness* capture the Big Five model personality dimensions. Column 1 presents the results for the three-month holding period, Column 2 for the six-month holding period and Column 3 for the twelve-month holding period. We control for year-fixed effects, party affiliation, gender, age and finance committee membership.

	(1) (3 months)	(2) (6 months)	(3) (12 months)
	FFalpha	FFalpha	FFalpha
Conscientiousness	.001 (.002)	-.012*** (.003)	-.023*** (.003)
Extraversion	.004 (.003)	.047*** (.007)	.078*** (.006)
Agreeableness	.002 (.002)	-.011*** (.004)	-.03*** (.004)
Neuroticism	.002 (.002)	.033*** (.004)	.056*** (.004)
Openness	-.003 (.004)	-.045*** (.007)	-.071*** (.007)
Republican	0.056*** (1.012)	-0.062*** (1.941)	-0.131*** (1.875)
Female	0.084*** (1.128)	0.183*** (2.165)	0.099*** (2.091)
Age	-.114** (.046)	-.048 (.087)	.059 (.084)
FinCommittee	.954 (.923)	-0.0871*** (1.771)	-0.163*** (1.711)
Intercept	-7.407** (3.482)	-1.74 (6.682)	19.653*** (6.454)
Year Fixed Effects	Yes	Yes	Yes
Observations	1881	1881	1881
R-squared	.096	.064	.133

Standard errors are in parentheses

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 4: Linear regression of Senators' narcissistic personality on trading abnormal returns

The dependent variable *FFalpha* is the abnormal return (alphas) obtained from the Fama French five factor asset pricing model, monthly aggregated across total daily stock return for each Senator. The key independent variable, *Narcissism*, captures the degree of narcissistic behavior. Narcissism in the models in Columns 1-3, is defined as I/we. Narcissism in the models in Columns 4-6, is defined as I/WPS. Column 1 and 4 presents the results for the three-month holding period, Column 2 and 5 for the six-month holding period and Column 3 and 6 for the twelve-month holding period. We control for year-fixed effects, party affiliation, gender, age and finance committee membership.

	(1) (3 months) FFalpha	(2) (6 months) FFalpha	(3) (12 months) FFalpha	(4) (3 months) FFalpha	(5) (6 months) FFalpha	(6) (12 months) FFalpha
Narcissism1	.041*** (.739)	-0.017 (1.454)	-0.074*** (1.459)			
Narcissism2				0.257 *** (5.808)	0.222* (11.383)	-0.11 (11.5)
Republican	0.082*** (.717)	0.019 (1.412)	-0.039*** (1.417)	0.068*** (.66)	0.028** (1.293)	-0.012 (1.306)
Female	0.096*** (1.088)	0.116*** (2.141)	-0.026 (2.149)	0.074*** (1.047)	0.117*** (2.051)	.643 (2.072)
Age	-.072** (.034)	.031 (.066)	.052 (.067)	-.137*** (.04)	-.061 (.078)	.043 (.079)
FinCommittee	0.019*** (.674)	-0.023* (1.327)	-0.051*** (1.332)	0.013** (.655)	-1.3 (1.284)	-0.032** (1.297)
Intercept	-17.917***	-16.091***	16.199***	-10.919***	-15.605***	6.988
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1879	1879	1879	1881	1881	1881
R-squared	.109	.029	.029	.101	.029	.016

Standard errors are in parentheses

*** $p < .01$, ** $p < .05$, * $p < .1$

Table 5: Buy and Hold Portfolio Sensitivity Analysis

The dependent variable *BHAR* is the return obtained from the buy-and-hold portfolios over the rolling windows of three, six and twelve months. Column 1 presents the results for the three-month holding period, Column 2 for the six-month holding period and Column 3 for the twelve-month holding period. The independent variables *Conscientiousness*, *Extraversion*, *Agreeableness*, *Neuroticism* and *Openness* capture the Big Five model personality dimensions. The dependent variable *FFalpha* is the abnormal return (alphas) obtained from the Fama French five factor asset pricing model, monthly aggregated across total daily stock return for each Senator.

	(1) (3 months)	(2) (6 months)	(3) (12 months)
	FFalpha	FFalpha	FFalpha
Conscientiousness	-.005 (.004)	-.001 (.001)	.001 (.003)
Extraversion	.014** (.007)	.006** (.003)	-.01* (.006)
Agreeableness	-.002 (.004)	-.001 (.002)	-.006 (.004)
Neuroticism	.012*** (.004)	.005*** (.002)	-.004 (.004)
Openness	-.01 (.007)	-.004 (.003)	.015** (.006)
Republican	.02* (.012)	.005 (.005)	.022** (.01)
Female	.078*** (.013)	.028*** (.005)	-.056*** (.011)
Age	-.001** (.001)	0** (0)	0 (0)
FinCommittee	-.021** (.011)	-.01** (.004)	.004 (.009)
Intercept	-.006 (.042)	-.008 (.016)	.046 (.036)
Year Fixed Effects			
Observations	1881	1881	1881
R-squared	.046	.043	.024

Standard errors are in parentheses

*** $p < .01$, ** $p < .05$, * $p < .1$

Appendix

Appendix 1: Example of politician's Periodic Transaction Report (*Joe Manchin, 2018*)

Joe Manchin
See Data About Their: Personal Finances

Summary Assets Liabilities Transactions Reports Other Data

Select a year: **2018**

Periodic Transaction Reports (PTR) > 2018 Annual Report >

Transactions

Transactions include purchases, sales and exchanges of assets that amount to more than \$1,000 in the calendar year and are reported along with the date and the amount transacted

Recent Periodic Transaction Reports (PTR)* 2018 [Download .csv file](#)

Filter Results

Organization	Action	Date	Minimum Value	Maximum Value
Care 24/7 LLC	Purchased	May 12 2015	\$1,000	\$15,000
PECA Labs	Purchased	Apr 14 2015	\$1,000	\$15,000
VCalc LLC	Purchased	Apr 14 2015	\$1,000	\$15,000
Nchannel Inc	Purchased	Nov 24 2014	\$1,000	\$15,000
West Virginia Growth Investment	Purchased	Nov 24 2014	\$15,001	\$50,000

Showing 1 to 5 of 5 entries

Source: Open Secrets <https://www.opensecrets.org/personal-finances/joe-manchin/transactions?cid=N00032838&year=2018#ptr>
<https://www.youtube.com/watch?v=FLZvOKSCkxY>

Table 2: Big Five Factors Lexicon facets (John & Srivastava, 1999)

<u>Big Five dimension</u>	<u>Facet (correlated trait adjective)</u>	<u>LIWC mapping</u>
<i>Extraversion vs. introversion</i>	<i>Gregariousness (sociable)</i> <i>Assertiveness (forceful)</i> <i>Activity (energetic)</i> <i>Excitement-seeking (adventurous)</i> <i>Positive emotions (enthusiastic)</i> <i>Warmth (outgoing)</i>	- Social Behavior - Affiliation - Positive Emotion - Positive Tone - Number of words
<i>Agreeableness vs. antagonism</i>	<i>Trust (forgiving)</i> <i>Straightforwardness (not demanding)</i> <i>Altruism (warm)</i> <i>Compliance (not stubborn)</i> <i>Modesty (not show-off)</i> <i>Tender-mindedness (sympathetic)</i>	- Assent - (Negation) - (Differentiation)
<i>Conscientiousness vs. lack of direction</i>	<i>Competence (efficient)</i> <i>Order (organized)</i> <i>Dutifulness (not careless)</i> <i>Achievement striving (thorough)</i> <i>Self-discipline (not lazy)</i> <i>Deliberation (not impulsive)</i>	- Moralisation - Future Focus - Insight - Family
<i>Neuroticism vs. emotional stability</i>	<i>Anxiety (tense)</i> <i>Angry hostility (irritable)</i> <i>Depression (not contented)</i> <i>Self-consciousness (shy)</i> <i>Impulsiveness (moody)</i> <i>Vulnerability (not self-confident)</i>	- Anxiety - Anger - Negative Emotion - Negative Tone - Swear - Negate
<i>Openness vs. closedness to experience</i>	<i>Ideas (curious)</i> <i>Fantasy (imaginative)</i> <i>Aesthetics (artistic)</i> <i>Actions (wide interests)</i> <i>Feelings (excitable)</i> <i>Values (unconventional)</i>	- Positive Emotions - Risk - Curiosity