ERASMUS UNIVERSITY ROTTERDAM
Erasmus School of Economics

The “Charismatic Premium”

The effect of presidential charisma on U.S. stock prices

ABSTRACT

The Democratic premium, a market anomaly where U.S. stock markets show a premium when the current president is a member of the Democratic party, has been described in earlier literature. In order to further explain the so-called “Presidential Puzzle”, I introduce presidential charisma to show the effect on stock returns. This research used yearly S&P 500 returns from 1961 until 2020, covering 5 Democratic, 6 Republican and 6 charismatic presidents. I find the “Charismatic premium” to be persistent and being higher when accounting for certain stock predicting variables. My findings suggest that charismatic presidents account on average for 13% higher excess value weighted returns and 10% higher excess equal weighted returns. When comparing the findings of the effect of charisma with the effect of a democrat, it is difficult to draw conclusions due to the insignificance of my tests. Furthermore, there seems to be an (insignificant) increase in the effect of charisma since the introduction of the internet. Implying a possible relationship between the perceived importance of charisma and the internet.

Keywords: *Presidential Puzzle, charisma, stock market returns, behavioral finance*

Bachelor thesis: Financial economics

Name student: Job ten Haaf
Student ID number: 509234

Supervisor: dr. R. de Bliek
Second assessor: Dr. J.J.G. Lemmen

Date final version: -here-

Acknowledgements
I would like to thank Dr. Ruben de Bliek for providing guidance and continuous support throughout the writing process of this thesis.

Table of Contents

1. Introduction

According to conventional thinking, fiscally conservative Republicans are better for the economy and stock market than liberal Democrats because of their propensity for a smaller government. If one examines data going back to the conclusion of World War II, one will discover that this widely held idea is incorrect. For instance, when comparing the last two term presidents George W. Bush (R) and Barack H. Obama (D) with their cumulative stock market return (S&P 500), Obama scores significantly higher with 182 percent compared to Bush who scored –40 percent (Klebnikov, 2020). A quick response to these findings could be that Bush was unlucky with his timing, encountering two major economic recessions while Obama encountered none. Nevertheless, there seems to be a so-called "Democratic Premium" according to multiple researches. This premium implies that when the ruling US president is a Democrat, the average stock returns are higher in the US. The Democratic Premium in the US is an interesting phenomenon which will be central in this research. Why would investors not anticipate higher stock returns when a Democratic president is elected? What causes these higher stock returns while the President in office is a Democrat?

Other authors have written multiple articles about the different impacts on returns during a Democratic and Republican administration. Hensel and Ziemba (1995) for instance found that between 1928 and 1993 investing in small-cap stocks during a Democratic administration produced higher mean returns, although with higher standard deviations. Surveys done by Alesina et al. (1997) and Drazen (2000) provide evidence that political factors have effect on the macroeconomic situation. The first authors to examine the strength of the link between political cycles and the stock market, investigate cross-sectional returns, and employ macroeconomic control factors were Santa-Clara and Valkanov (2003). Santa-Clara and Valkanov found that under a Democratic presidency, the excess return in the stock market is 16 percent higher for the equal-weighted portfolio and 9 percent higher for the value-weighted portfolio. These differences in returns are not explained by business-cycle variables nor by the riskiness of stocks, implying a so-called "Presidential Puzzle" (Santa-Clara & Valkanov, 2003). Chrétien and Coggins (2009) examine in their article whether American election outcomes effect financial market returns in Canada. They found that under a Democratic president, the Canadian equity and currency market performs better. Implying an apparent spillover effect into the Canadian markets.

The article written by Santa-Clara and Valkanov (2003), in which their sample was till 1999, is relatively outdated. Three new presidents were elected until 2021, with a total of five Presidential terms which can be add to new research. These five terms might bring up new insights about the

"Democratic Premium", providing more significant outcomes which might be lower or higher. Furthermore, the "Presidential Puzzle" still remains to be solved. This means that there is a scientific relevance to this article, finding new variables which might solve the Presidential Puzzle. Also, a lot of things have changed in the world since 1999. For instance, the internet has become much more dominant in the time after 1999, causing a boom of globalization. The fluctuations of currency rates, interest rates and stock prices in various nations are closely related as a result of the globalization of the financial markets (Borcuch et al., 2012). Social media allow political leaders to immediately reach out to the public, many people's lives have become increasingly dominated by their involvement in and interest in political results and occurrences. Research on these social media used by politicians suggest that they have an influence on equity markets (Kinyua et al., 2021). Due to the increased use of internet, a president's characteristic has become more visible for everyone. In this article, results from Seyranian and Bligh (2008) about which presidents can be considered as charismatic will be tested for significance on stock returns in the US. According to Tosi et al. (2004), CEO's who are charismatic are able to influence the stock prices of their firm. This finding makes it interesting to research whether a charismatic president also influences the stock market in his country. A unique addition of this paper is the examination of the impact of charismatic US presidents on stock returns.

I will use the same financial variables as Santa-Clara and Valkanov (2003) did in their article, so that my findings can be best compared to their findings. For the value-weighted (*VWRt)* and equal-weighted (*EWRt*) portfolios the log monthly returns will be used, obtained from CRSP. The log interest rate (*TBLt*) is calculated from the three-month Treasury bill, acquired from Yahoo Finance. Furthermore, *INFt* will be the log monthly inflation and is acquired from the Federal Reserve. The statistical analysis of this paper will hence be conducted the same as Santa-Clara and Valkanov (2003), with excess and real returns. For instance, studying the equal-weighted portfolio, we calculate *EWRt – TBLt* (log equal-weighted return minus log inflation). Next, we have the following dummy variables that I will use in my regression. First, we have the presidential dummy variable which indicates if the ruling president is a Democrat (*PDt* = 1, if Democrat is in office at time *t*, *PDt* = 0 otherwise). Finally, I will use the dummy variable which determines whether a President in office is seen as charismatic (*CPt* = 1, if President in office is charismatic at time *t*, *CPt* = 0 otherwise). The sample I will be using will be from 1961 till 2020, counting 5 Democratic Presidents and 6 Republican Presidents. The sample will be split in two subsamples (1961;06 – 1990;12 and 1991;01 – 2020;06), this is done because of the first use of internet in 1991. The internet might cause different significance for certain variables. I will first

regress *PDt* and *CPt* separately on *VWR-TBL, VWR-INF, EWR-TBL, EWR-INF* and *TBL-INF*. Next, I will regress both *PDt* and *CPt* on the same variables. This is to check whether charisma influences the β of *PDt.* The conditioning variables that will be used are the dividend-price ratio, the P/E ratio, the cyclically adjusted P/E, GDP acceleration, inflation, unemployment and consumer sentiment. The first three variables will be acquired from Shiller and the last four from the Federal Reserve. According to McMillan (2016), this combination of variables from different categories can help predict future stock returns. These control variables are different from Santa-Clara and Valkanov and thus might provide new insides about the premiums some president have. Leading to the main research question:

To what extent does presidential charisma have effect on returns of the S&P500 in the U.S?

I expect that charisma has a positive effect on the stock market, especially after the introduction of the internet in 1991. Furthermore, I expect that charisma is more important in influencing stock returns than the Democratic premium. Charisma is proven to be important for CEO performance, charisma leads to more effective leaders. As earlier said, charismatic CEOs can influence the stock prices of their firm. Why would this not have any influences on the stock performance under a US presidency? Besides, I think the effect of charisma will still be positive and significant when accounting for the conditioning variables. Implying that charismatic presidents will be important for stock returns in the US.

2. Literature Review

2.1 Democratic premium

The majority of financial experts and practitioners agree that politics, at least at the federal level, have a considerable impact on stock returns. Political developments and governmental measures may, in some cases, both have an impact on market swings and the financial well-being of the populace. With the noteworthy exception of election seasons, when the two are regularly addressed in the media and in casual discussions, the interaction between them is rarely taken into account. Fortunately, more researchers have started to look into this significant interplay during the past few decades. By doing this, they have developed an area of interdisciplinary study that connects political science and finance.

Hibbs (1977) put forward the Partisan Theory where he stated that groups with lower income and occupational position frequently favour parties on the left of the political spectrum. Right-wing parties are typically supported by more prosperous and secure elements of society who are also more worried about inflation. Low unemployment and low inflation are incompatible goals because macroeconomic results in the Hibbs model travel along the Phillips curve. Instead, political parties must assess the relative relevance of these two objectives based on their own ideologies. Therefore, Hibbs (1997) notes that Socialist-Labour parties have high inflation/low unemployment results whereas Conservative parties experience the other extreme of the Philips curve. The concept of rational expectations was then integrated into the second generation of models, which is known as "Rational Partisan Theory." These models also allow for the influence of parties with various ideologies on macroeconomic results, but this is more likely to occur in the early half of their years in office (Alesina, 1987). Therefore, one might question whether stock market valuations account for partisan cycles. Already in 1970, there was a Wall Street belief concerning the market's preference for Republicans. The following claim was supported by Wall Street conventional wisdom: *The overall preference of the market for Republicans over democrats. Aggregate stock prices should rise after Republican victory and decrease after a Democrat victory*. According to Niederhoffer et al. (1970) this belief is wrong and they even find that during the third year of an administration, Democrats outperform Republican administrations. Ten years later Riley and Luksetich (1980) find that when a Republican president is elected, markets respond favourably. Meanwhile they see a negative effect on the stock markets when a Democratic president is elected, implying a commonly held belief that Republicans are better for business. Riley and Luksetich (1980) find little evidence in favour of the Republicans, which is only significant on the short run following from elections. Hensel and Ziemba (1995)

found in their paper that, from 1929 to 1992, their sample period, small capitalization stocks earned 20.54% per year under a Democratic president and just 1.94% under a Republican president. This finding was statistically significant and it was economically significant enough to enable the use of profit-making trading techniques. A few years later, this difference in earnings was verified by Johnson, Chittenden and Jensen (1999). They also noted that the partisan return difference is above 20% per year. Still, after the results of the previously mentioned articles, there is no hard proof against the folklore about higher stock returns under Republican administrations.

The first study that attracted most of the headlines about this Wall Street folklore is Santa-Clara and Valkanov (2003). Their paper is the first study to explore the link between political cycles and the stock market, assess its robustness, look into cross-sectional returns, and apply macroeconomic control variables. They find that between 1927 and 1998, the presidential premium—the additional return earned under Democratic presidents over their Republican counterparts—was, on average, 16% for the equal-weighted portfolio and 9% for the value-weighted market portfolio. This irregularity of their research still remains after accounting for certain business cycle variables The so-called "Presidential Puzzle" was coined by Santa-Clara and Valkanov because they were unable to identify any risk-based explanation for this premium. In fact, this difference in unexpected returns implies that the world of investing is persistently (positively) surprised by a Democratic administration. This theory can only be justified if investors do not take lessons from the past, which may be justified considering that there are not many presidents in contemporary times. The observed nine percent variation in returns, though it may be part of the tale, is unlikely to be explained by such an explanation. Therefore, the stock market-political cycle relationship that has been discovered has mostly remained unanswered by Santa-Clara and Valkanov. Does this imply a violation of the semi-strong form of market efficiency? The information about who is controlling the White House is common knowledge and investment choices may be simply changed to reflect this. On the other side, it is possible that investment risk is increased under left-leaning regimes, and the apparent return distribution is just the compensation of risk. This is shown by Sy and Zaman (2011), they are able to explain the "Presidential Puzzle" away by allowing their model to let risk vary over political cycles. They discover that the "Presidential Puzzle" can partially be explained by the variation in market and size risk premiums over presidential cycles, so the Democratic premium might be seen as a form of risk compensation. According to Belo et al. (2013), the presidential political cycle has a significant economic impact on the profitability of businesses through government spendings as well as the cross section of stock returns. For businesses with significant government exposure,

Democratic presidencies are typically correlated with higher predicted profitability compared to Republican presidencies. Furthermore, it appears that the stock market does not foresee predictable variance in the impact of government spending plans, based on the concentration of abnormal returns halfway through a presidency. Pàstor & Veronesi (2020) develop an equilibrium model of political cycles based on voters' varying risk aversion over time. Agent can decide to vote Republican or Democratic and work in either the private or public sector. They find that in equilibrium with high risk-aversion, agents choose Democrats, the party whichi promises further redistribution. The model clarifies partially clarifies the "Presidential Puzzle" by forecasting better average return on stocks under Democratic presidencies. Still, the "Presidential Puzzle" remains to be solved to this day.

2.2 Charismatic leadership

The first time the word "charisma" came into use was in Saint Paul's writing to the newly emerging Christian communities during the first century. In this context, it often referred to a "gift" that had supernatural origins and served as a sign of God's might among the early Church leaders. Max Weber expanded this theological idea by considering it to be something that followers assign, which allowed sociologists to utilize it in non-Christian religious, political, military, and celebrity situations (Joosse, 2014).

One of the most intriguing, but elusive, topics being researched by researchers in organizational behaviour and leadership and leadership is charismatic leadership. However, because to the ambiguity of charismatic leadership and the difficulty of measuring it, researchers have been unable to fully comprehend it. House, Spangler, and Woycke (1991) stated that "charisma refers to the ability of a leader to exercise diffuse and intense influence over the beliefs, values, behaviour, and performance of others through his own behaviour, beliefs, and personal example" (p. 366). Bass (1990) stated that charismatic leaders have the ability to inspire, thrill and convince their followers that they are capable of doing extraordinary thing with more work and effort. Strong emotional bonds and connection that charismatic leaders build with their followers enable them to trigger and inspire their people to perform (Bass, 1995). Success for charismatic leaders can increase followers' impressions of their charisma. Charismatic leaders may inspire and encourage outstanding performance by followers by successfully guiding them into the unknown while taking personal risks (Conger & Kanungo, 1988). Judge & Piccolo (2004) find in their meta-analytic study that charismatic leadership was positively correlated with leadership effectiveness and a number of significant organizational outcomes across a wide range of

organizational types, circumstances, levels of analysis, and cultural contexts, including productivity and turnover. The modern world is characterized by complexity and change. The typical face-to-face interactions, direct supervision, and rules and regulations are no longer sufficient for leading substantial organizations or nations. Organizations now require unity, motivation, and fundamental principles. These are given by effective leaders through their own principles, personal examples, excitement, and confidence in both themselves and others. Because they have charisma, they are powerful.

There has been done wide research about the impact of CEOs on organizations, these most often conclude that CEOs have strong effects on their organizations. Leadership differences do significantly contribute to performance variations withing organizations (Thomas, 1988). A powerful CEO is able to solve crucial problems confronting the organization. These problems are not only a matter of objective fact, such as financial dilemma, but also a highly perspective subjective reality, such as the failure of many car executives in the 1970s to accurately identify the shifting requirements and preferences of the American customer. It has been demonstrated that functional and institutional career specialities have an impact on these impressions (Smith & White, 1987). Taking these findings into account, Bennis and O'Toole (2000) call on boards of directors to select CEOs who are more effective by emphasizing on leaders with traits that go beyond basic managerial skills, such as "integrity, provide meaning, generate trust, and communicate values" (p. 171). This theory is based on the observations that certain successful CEOs seem to exhibit traits of charismatic leaders, such leadership leads to better corporate performance. Waldman et al. (2004) reported data from 69 U.S. and Canadian firms, looking for the effect of charismatic CEO leadership on firm performance. They found favorable evidence in support of their first hypothesis whether charismatic leadership will predict firm performance. Despite certain claims from earlier papers, Waldman et al. (2004) present data suggesting that charisma has a positive effect on net profit margins and return on equity. Their study is the first attempt to establish a direct connection between charismatic leadership and strategic or organizational changes. In that sense, they discovered data indicating a connection between charisma and strategic transformation, as measured both subjectively and objectively. According to Cannella and Monroe (1997), charismatic connections with followers may ensure that senior executives' strategic choices are carried out in an efficient manner. In other words, while predicting the performance of a firm, charisma should interact with strategic change. Furthermore, Balkundi et al. (2011) performed two studies which examined how charismatic leaders affect team performances of 56 work teams and 79 student teams. In both studies they

find significant positive evidence of charisma boosting team performance. They also state that the positive effect of a charismatic leader on team performance becomes stronger if the leader has a more central role in the team. Taking these results into account, charisma certainly has a positive impact on the performance of organizations and their teams.

In order to determine whether a charismatic president can influence the returns on the stock market in the US , the following question rises whether charismatic CEOs can influence the stock price of their firm. Tosi et al. (2004) researched in their paper the firm performance of Fortune 500 companies including 59 CEOs from the largest firms in the US over a ten year period. They find that during uncertain market conditions, equity markets valued CEOs who were regarded as being very charismatic. Even though there was no proof that these businesses were internally managed more effectively, as determined by return on assets, these CEOs were nevertheless able to increase the stock price. These findings opened the discussion about the influence of charismatic characteristics on the valuation of stocks. Fanelli et al. (2009) find that if the CEO's vision is conveyed in the letter to shareholders in a charismatic manner, this results in positive recommendations of analysts which is crucial considering the significant impact analyst recommendations and projections have on investor choices and stock prices. Thus, they offer empirical evidence for a CEO charismatic relationship that goes beyond the organization's internal personnel, pointing to one way that the CEO's charisma may impact organizational success and stock prices. Charismatic CEO vision is hence positively related to securities analysts' recommendations and forecasts. Kavadis et al. (2022) study in their article the market actors' reactions to the successions of CEOs. They find that the charisma of the new CEO's vision for the firm is necessary to take into account. A vision is considered to have charisma when it articulates a forceful critique of the existing quo, a promise of a better future, and recommendations for how the future might be achieved. If a vision is charismatic, it gives analysts and investors enthusiasm for the company's future performance. The signals given by other succession context contingencies may be modified in this way, with the positive signals being reinforced and the negative signals being attenuated. As a result, it is reasonable to assume that the new CEO's charismatic vision will influence how analysts and investors react to his or her succession as CEO (Kavadis et al., 2022).

2.3 Presidential Charisma

Taking all of earlier discussed articles and research into account, there is enough evidence implying a positive influence of the charisma of a CEO on the firm's stock price. These

scientifical findings make it interesting to research the under researched relationship between charismatic presidents and stock returns in the US. The US president can be seen as the "CEO of the federal government". It is commonly known that governments have the power to alter monetary and fiscal policy in significant ways, notably by raising or reducing interest rates, which have a profound impact on businesses. They also have the power to increase the value of the currency, which briefly increases corporate profits and stock prices. Furthermore, it can intervene the market by offering bailouts when businesses or entire sectors of the economy are collapsing or posing a danger to the stability of the entire financial system. Businesses or whole industries might be stymied by increased taxes, levies, and restrictions. The following hypotheses come forward because charismatic CEOs can influence firm performance and can signal stability and potential growth to investors and analysts. This makes it interesting to research the influence of presidential charisma on the US stock market. Leaders are more crucial than ever in the era of complexity, change, big corporations and nation governments. However, rather than merely relying on their ability to influence bureaucratic institutions, their efficacy also depends on their personality and charisma. In sum, all of the above arguments suggest that:

> **H1**: US presidents who are considered as charismatic will cause higher returns on the US stock market
>
> **H2:** The charisma of a US President explains the "Presidential Puzzle" better than the alignment of a US President

How investors, producers, and consumers perceive market trends has altered dramatically as a result of the internet's development since 1991 with its way of spreading information. The vast amount of data created across various networks on the internet has given rise to a new approach for serving this data: text analysis. Particularly, user-generated content on the internet carries viewpoints and emotions that active researchers are highly interested in extracting and capturing. Levenshus (2010) examines the use of internet by Obama's presidential campaign. This paper finds that this successful campaign showed the benefits of the internet to engage the public, have a conversation with them, and establish relationships with the public that will benefit both parties. Levenshus (2010) findings point toward the need for new relationship management theory that examines how relationship management intersects with the merging internet media landscape for political campaigns. The political organization-public relations model was put to test experimentally by Painter (2015), they found that Facebook is more effective in building trust and relationships than conventional campaigning tools. User interaction and expression during a

political campaign favorably affect connections and trust (Painter, 2015). These findings imply that the internet and social media influence the presidential perception of the public. Social media, such as Twitter, evolved into an essential tactical instrument in political campaigns, mostly due to the ease with which information can be disseminated globally. Additionally, it is a "free area", where politicians remove themselves from strictly regulated media venues with guidelines and discipline, forcing them to be circumspect in their message-sending (Pham et al., 2022). Political leaders may now instantly communicate with the public thanks to the internet, and many people's involvement in and interest in politics has taken over many aspects of their lives.. Kinyua et al. (2021) found in their research that stocks had a significant negative reaction when Donald Trump tweeted during the opening hours. Furthermore, due to the ease of spreading information about the president, the president's characteristics become increasingly visible for US citizens since the invention of the internet. This implies that the charisma of a president is more observed and might become more important. Leading to the next hypothesis:

> **H3:** Since the invention of internet in 1991, presidential charisma has a stronger effect on returns of the US stock market

3 Data

3.1 Sample

Time series data has been collected from 1961:01 till 2020:12, with a total of 60 yearly observations. This includes 5 Democratic US Presidents and 6 US Republican presidents, starting with John F. Kennedy (D) and ending at Donald J. Trump (R). The entire sample period will be divided into two subsamples. The first subsample will be 1961:01-1991:01, ending at the invention of the internet. The second subsample, from 1991:01-2020:12, will hence begin at the invention of the internet and end with Trump's last month of service. For internet, I will use the percentage of internet users in the US acquired from FRED. The entire sample will be used to test the first two hypotheses. The subsamples will be used to test the third hypothesis, whether the internet has a significant impact on the importance of charisma on the return of stocks.

3.2 Variables

The financial variables that I will use will be the same variables used by Santa-Clara and Valkanov (2003). The yearly return will be used for the value-weighted (*VWRt*) and the equal-weighted (*EWRt*) portfolios, these are obtained from CRSP. Using the three-month U.S. government treasury bill which is acquired from Yahoo Finance, the interest rate (*TBLt*) will be used. Besides, the yearly inflation (*INFt*) is obtained from the Federal Reserve. As a result, the statistical analysis for this work will be carried out using excess and real returns, similar to that of Santa-Clara and Valkanov (2003). When analyzing the value weighted portfolio, for instance, we compute *VWRt-TBLt* (value-weighted return minus inflation).

Table 1: Summary statistics of returns

This table sums up the descriptive statistics of the financial variables used in this study, being the independent variables. Values are yearly observations. The average of the sample (mean) and the standard deviation (Std.)

	1961 – 1990 (30 obs.)		1991 – 2020 (30 obs.)		1961 – 2020 (60 obs.)	
Series	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
VWR-TBL	4.69	15.93	9.94	16.97	7.32	17.14
VWR-INF	6.13	17.18	9.99	17.18	8.06	17.14
EWR-TBL	7.46	19.38	11.57	17.78	9.51	18.55
EWR-INF	8.89	20.39	11.61	17.67	10.25	18.97
TBL-INF	1.43	2.44	0.04	1.78	0.74	2.22

Charismatic Presidential (Dummy) (*CPt*) & ***Democratic President (Dummy)*** (*DPt*). To decide whether a president is perceived as "charismatic", I will use the results of Seyranian & Bligh (2008) who asked ten reputable political scientists from two private universities in the US to give a generalized rating of the presidential charisma of all presidents from Theodore Roosevelt till George W. Bush. They were asked to give a dichotomous measure, so a "Yes" or a "No", and a continuous measure to give an overall assessment of each of the 20 presidents' charisma. Unfortunately, this research was done in 2008 so it lacks information about Obama and Trump. For this reason, I will use the dichotomous measure of Seyranian & Bligh (2008) for Kennedy until Bush. For Obama, he is seen as one of the most charismatic persons in the 21st century. When Obama was inaugurated as the 44th president of the United States, two million were present at the occasion. Moreover, as the American professor Barbara Kellerman states, none of the earlier chief executives have been as authentically charismatic as Obama. "None in our lifetimes have forged with their followers a bond so tight in transcends the ordinary. He is a leader who, as Weber would have it, inspires in his followers 'complete devotion…. Arising out of enthusiasm, or of despair and hope.' " (Kellerman, 2009). For this reason, I will consider Obama as a charismatic president in my research. For Trump, there is a wide debate about whether he is considered a charismatic president. Jonah Goldberg, an American conservative author and political analyst who aligns himself with the Republican party, turned critical toward Trump and his movement. The Republican Party's support of President Trump and its abandoning of pre-Trump beliefs came under growing fire from Goldberg during the Trump Presidency. However, Goldberg (2022) states that Donald Trump does have a lot of charisma and that it implies a paradox. Goldberg does not imply that Trump is charming, though he is charmed by millions, but his style of leadership refers to that described by Max Weber. The paradox, mentioned here by Goldberg, implies the leader's lack of legitimacy, whatever in terms of law, reason, or tradition, may actually enhance their hold on followers. The distortion by Trump of this right has been driven by this dynamic. If the man is not able to lead according to the conventional, ethical, logical, or legal norms that conservatives traditionally regarded as appropriate, then it's the measure's fault for not measuring itself against the man (Goldberg, 2022). For this reason I will consider Trump as a charismatic president in my research.

Table 2: Overview of Presidents and Charisma

This table reports all the Presidents of this research. It includes whether they are seen as charismatic, their charismatic scores, their presidential alignment and their years active in office.

President	Charisma	Charisma scores	Alignment	Years active
John F. Kennedy	Yes	9/1	Dem	1961 - 1963
Lyndon B. Johnson	No	3/6	Dem	1964 - 1968
Richard M. Nixon	No	1/9	Rep	1969 - 1974
Gerald Ford	No	0/10	Rep	1975 - 1976
Jimmy Carter	No	1/9	Dem	1977 - 1980
Ronald Reagan	Yes	9/1	Rep	1981 – 1988
George Bush Sr.	No	0/10	Rep	1989 - 1992
Bill Clinton	Yes	8/2	Dem	1993 – 2000
George W. Bush	Yes	5/5	Rep	2001 – 2008
Barack H. Obama	Yes	n/a	Dem	2009 – 2016
Donald J. Trump	Yes	n/a	Rep	2017 - 2020

3.3 Control Variables

In this paper, I will use different control variables compared to Santa-Clara and Valkanov (2003) used in their work. In the years after their paper, there has been done wide research in finding variables which predict and can forecast stock market returns. I will use the specific combination of variables found by McMillan (2016) and will explain why they are so useful. Most current studies only take in to account one or a small number of variables. McMillan analyzes a number of combinations of factors, including sentiment and leverage, financial ratios, macroeconomic, labor market, and housing variables. McMillan eventually finds this combination, which is the most significant and explanatory combination of seven variables:

Dividend-Price ratio (*DPt*), ***Price-Earnings ratio*** (*PEt*) & ***Cyclically adjusted price-earnings ratio*** (*CAPEt*). Being two of the most prominent ratios in the research of variables predicting stock returns, the dividend-price ratio and the price-earnings ratio are believed to proxy for adjusting expected return changes. That in such a way that a rise in the required risk premium results in a decline in current pricing and in increase in the expected return on investment in the future to make up for the greater risk. Implying a positive relationship between the dividend-price ratio and stock returns and a negative relationship for the price-earnings ratio. McMillan also

adds *CAPEt* to his predicting variables, which also implies a negative ration with stock returns. The cyclically adjusted price-earnings ratio is a value metric typically used to describe the US S&P 500 equities market. Price divided by the moving average of ten years' worth of earning, with inflation taken into account, is how it is calculated. As a result, it is mostly used to predict anticpited future returns from stocks over periods of 10 to 20 years, with CAPE values above average predicting below average long-term annual average returns (Campbell & Shiller, 1988). The *DPt, PEt* and *CAPEt* are all obtained from Shiller, and are all annual and logged.

GDP acceleration (*GDPAt*) & ***Natural unemployment*** (*NUt*) & ***Inflation*** *(INFt*) & ***Consumer Sentiment*** *(CSt*). The GDP acceleration will be the annual rate of change in GDP growth, obtained from the Federal Rerve. The Natural unemployment will be the long-term natural rate of unemployment, also obtained from the Federal Reserve. Inflation will be the annual growth rate of the Consumer Price Index, acquired from the Federal Reserve. The Consumer Sentiment is calculated by the University of Michigan and obtained from the Federal Reserve, they survey consumer perceptions on the business conditions, the economy, personal finances and buying conditions. McMillan states that coefficients which sign higher cash flows and / or higher (anticipated) risk imply an improvement of the macroeconomy and hence expecting higher cash flows. A positive GDP acceleration coefficient is compatible with the idea of strengthening macroeconomy and higher anticipated future cash flows. Similar to this, the coefficient values which are negative that are associated with rising inflation and unemployment are thought to indicate worsening economic conditions and declining cash flows, which would then result in lower stock return (McMillan, 2016). In terms of consumer sentiment, the coefficient's sign shifts from being negative when one-month predictability is taken into account to being positive when one year predictability is taken into account. This may reflect the idea that while a rise in consumer confidence may be beneficial for the macroeconomy in the short run and reduce risk as the economy expands, it could also result in overheating, inflation, and a slump in the future (McMillan, 2016).

Table 3: Summary statistics of Control variables

This table sums up the descriptive statistics of the control variables used in this study, being the dependent variables. Values are yearly observations. The average of the sample (mean) and the standard deviation (Std.) are presented. The control variables, which are financial and macro-economic variables, are used to control for stock returns.

	1961 – 1990 (30 obs.)		1991 – 2020 (30 obs.)		1961 – 2020 (60 obs.)	
Series	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
UN	5.95	0.22	4.98	3.4	5.46	0.56
CS	85.21	11.38	87.55	11.57	86.38	11.44
DP	3.9	0.88	1.99	0.52	2.94	1.2
PE	112.52	13.9	136.57	14.54	124.55	18.6
CAPE	114.84	15.47	141.81	10.11	128.33	18.78
GDPA	3.52	2.40	2.51	1.86	3.01	2.19
INF	5.19	3.4	2.25	0.9	3.72	2.88

Table 4: Correlation matrix

This table shows the correlation between all the control variables used in this paper.

	CP	UN	CS	DP	PE	CAPE	GDPA	INF
CP	1.00							
UN	-0.16	1.00						
CS	0.37	-0.13	1.00					
DP	-0.13	0.83	-0.37	1.00				
PE	-0.01	-0.68	0.28	-0.79	1.00			
CAPE	0.09	-0.78	0.47	-0.95	0.77	1.00		
GDPA	0.16	0.24	0.60	-0.03	-0.05	0.08	1.00	
INF	-0.33	0.64	-0.55	0.73	-0.74	-0.70	-0.30	1.00

4 Methodology

This section describes the methods that I will use to test the hypotheses of this paper.

4.1 Hypothesis 1

In order to test the first hypothesis (H1): *US presidents who are considered as charismatic will cause higher returns on the US stock market*, I will measure the correlation between the excess and real returns and the charismatic variable, leading to the following regressions:

$$r_{t+1} = \alpha + \beta CP_t + u_{t+1} \quad (1)$$

Where r_{t+1} denotes next year returns and $CP_t = 1$ if a president is charismatic and $CP_t = 0$ if a president is not considered to be charismatic. Under the null hypothesis of charismatic presidents having no effects on returns, we should obtain $\beta = 0$. I will take the next year of returns, as this is also performed by Santa Clara & Valkanov (2003).

Next, I will apply the combination of control variables to my regression:

$$r_{t+1} = \alpha + \beta CP_t + \gamma' X_t + u_{t+1} \quad (2)$$

Where *Xt* is a vector which contains the combination of factors capable of predicting future stock returns: dividend-price ratio (*DPRt)*, price-earnings ratio (*PERt*), cyclically adjusted price-earnings ratio (*CAPEt*), GDP acceleration (*GDPAt*), natural unemployment (*NUt*), inflation (*INFt*) and consumer sentiment (*CSt*). The β of the charismatic variable should be equal to 0 if it solely contains information about returns that can be accounted for by changes in the economic cycle. First, I will be adding the dividend-price ratio and the price-earnings ratio. I will be leaving out the cyclically adjusted price earnings ratio, as this variable is highly correlated with the dividend-price ratio (Table 4). Leading to the next regression:

$$r_{t+1} = \alpha + \beta_1 CP_t + \gamma_1 DP_t + \gamma_2 PE_t + u_{t+1} \quad (3)$$

After adding these two variables, I will add the variable GDP acceleration as this variable indicates the status of economy of the US. At last, I will add the consumer sentiment and natural unemployment to the regression. These variables should further explain the macroeconomic state of the US. Leading to the next regressions:

$$r_{t+1} = \alpha + \beta_1 CP_t + \gamma_1 DP_t + \gamma_2 PE_t + \gamma_3 GDPA_T + u_{t+1} \quad (4)$$

$$r_{t+1} = \alpha + \beta_1 CP_t + \gamma_1 DP_t + \gamma_2 PE_t + \gamma_3 GDPA_T + \gamma_4 CS_t + \gamma_5 NU_t + u_{t+1} \quad (5)$$

4.2 Hypothesis 2

In order to test the second hypothesis (H2): *The charisma of a US President explains the "Presidential Puzzle" better than the alignment of a US President.* I will take the following steps.

First I will perform the following regressions:

$$r_{t+1} = \alpha + \beta DP_t + u_{t+1} \quad (1)$$

$$r_{t+1} = \alpha + \beta CP_t + u_{t+1} \quad (4)$$

Where DP_t = 1 if a president is a Democrat at time *t* and DP_t = 0 if the president is a Republican at time *t.* Next I will add both DP_t and CP_t to the regression to see whether the β's of both variables will change.

$$r_{t+1} = \alpha + \beta_1 CP_t + \beta_2 DP_t + u_{t+1} \quad (5)$$

I will take the same steps as for H1, adding the dividend-price ratio and price-earnings ratio first. Adding the GDP acceleration secondly and at last the Consumer sentiment and Natural unemployment rate.

$$r_{t+1} = \alpha + \beta_1 CP_t + \beta_2 DP_t + \gamma' X_t + u_{t+1} \quad (6)$$

4.3 Hypothesis 3

In order to test the second hypothesis (H3): *Since the invention of internet in 1991, presidential charisma has a stronger effect on returns of the US stock market.* I will take the following steps.

$$r_{t+1} = \alpha + \beta_1 CP_t + \beta_2 INT_t + \beta_3 CP_t INT_t + u_{t+1} \quad (7)$$

Where INT_t is the percentage of internet users in the US at time *t* and $CP_t INT_t$ shows the interaction effect of CP_t and INT_t. This shows the effect of charisma explained by internet for stock returns.

5 Results and discussion

5.1 Post-regression diagnostic tests

After I performed the regressions, I will test for linear heteroskedasticity using the Breusch-Pagan (1979) and Cook-Weisberg (1983) test which examines the relationship between the variance of the errors resulting from a regression and independent variables' values for every regression. For most of my regressions, there seems to be heteroskedasticity. For this reason, I will use robust standard errors in all of my regressions. The following post-regression diagnostic test will be the Variance Inflation Factor (VIF) test for multicollinearity where the null hypothesis states that a multiple regression model's independent, explanatory variable can be explained linearly from others. As it can raise the variance of the estimated coefficients and make them extremely sensitive to small model changes, severe multicollinearity can be a serious problem (Stine, 1995). The multiple regression's coefficient estimations may therefore be unstable and challenging to comprehend and evaluate. As recommended by Hair et al. (1995), the most pertinent models are selected in a way to guarantee that the VIF value is less than 10. The results of these tests are shown in the Appendix A Table 13 and 14.

5.2 Relationship between Charisma and stock returns

Table 5 presents the first ordinary least-squares (OLS) regression where the Charismatic Presidential dummy is regressed on the yearly return variables. When looking at the Adjusted R-squared values, one can conclude that these are relatively low coefficients, implying that these models might have a bad fit (average adjusted R-squared value of 0.052). But when comparing to Santa-Clara & Valkanov's (2003) R-squared value of 0.01 from their simplified model, the fit of the model in this research is five times higher. The R-squared values can not tell a lot about the importance of Charisma on stock returns, as there is no complete model which is able to do so. But it is significantly higher than the R-squared values of the model which only includes the Democratic dummy. Furthermore, only VWR-INF and VWR-TBL give significant coefficients for the Charismatic President dummy, which are both significant at the 5% level. The beta coefficients for Model (1) and (2) are 0.11 and 0.10 respectively. This implies that if a president, who is in office, is seen as charismatic can lead to an increase VWR-INF and VWR-TBL in the next year by respectively 11 percentage points and 10 percentage points on average compared to a "normal" president. This model shows that charisma has a significant effect on the Value Weighted Returns (VWR), but not on the Equal Weighted Returns (EWR) yet. Also, TBL-INF is

significant at the 5% level and has a beta of 0.01. This implies that the risk-free rate is on average 1% higher when a president in office is seen as charismatic.

Table 5: Average Returns under Charismatic Presidents

This table shows the results of the OLS regression with charisma on all the excess returns, without accounting for control variables. The first number shows the beta coefficient, the second number in brackets shows the standard deviation. I use robust standard errors.

	(1) VWR-INF	(2) VWR-TBL	(3) EWR-INF	(4) EWR-TBL	(5) TBL-INF
Charismatic President	0.11**	0.10**	0.07	0.06	0.01**
	(0.04)	(0.04)	(0.05)	(0.05)	(0.01)
Constant	0.02	0.02	0.06	0.06	0.00
	(0.03)	(0.03)	(0.04)	(0.04)	(0.00)
Observations	60	60	60	60	60
R^2	0.11	0.09	0.03	0.02	0.08
Adjusted R^2	0.09	0.08	0.02	0.01	0.06

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Next, in Table 6, the results of the second OLS regression are presented. This regression includes the dividend-price ratio and price-earnings ratio as control variables. These models give a higher average adjusted R-squared value of 0.108. Surprisingly, the coefficient of the Charismatic Presidential dummy becomes statistically significant at the 10% level for EWR-TBL, at the 5% level for EWR-INF and at the 1% level for VWR-INF, VWR-TBL and TBL-INF. Surprisingly, adding these control variables to the regression made the coefficient not only more statistically significant, but the beta's of all the models also increased. For instance, the beta of EWR-INF rose with 3 percentage points and EWR-TBL with 2 percentage points. Implying that the effect of charisma increases and becomes stronger with adding these stock market control variables. Table 13 (see Appendix) demonstrates that there is no severe sign of multicollinearity issues as the highest value is 2.79, with a mean VIF value of 2.18.

Table 6 : Average Returns under Charismatic Presidents accounting for DP and PE

This table shows the results of the OLS regression with charisma on all excess returns, accounting for two control variables. These two control variables are the following financial variables: The dividend-price ratio (DPt) and the price-earnings ratio (PEt). The first number shows the beta coefficient, the second number in brackets shows the standard deviation. I use robust standard errors.

	(1) VWR-INF	(2) VWR-TBL	(3) EWR-INF	(4) EWR-TBL	(5) TBL-INF
Charismatic President	0.14***	0.12***	0.11**	0.09*	0.02***
	(0.04)	(0.04)	(0.05)	(0.05)	(0.01)
Dividend price ratio	5.30**	4.42*	8.87***	7.99**	0.88*
	(2.42)	(2.61)	(2.88)	(3.11)	(0.51)
Price-earnings ratio	0.18	0.16	0.37*	0.35	0.02
	(0.17)	(0.18)	(0.20)	(0.22)	(0.04)
Constant	-0.37	-0.32	-0.68**	-0.63*	-0.05
	(0.28)	(0.30)	(0.33)	(0.36)	(0.06)
Observations	60	60	60	60	60
R^2	0.17	0.13	0.15	0.12	0.20
Adjusted R^2	0.12	0.09	0.10	0.07	0.16

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.0$

Table 7: Average Returns under Charismatic presidents accounting for DP, PE and GDPA

This table shows the results of the OLS regression with charisma on all excess returns, accounting for three control variables. These three control variables are the following two financial variables and one macro-economic variable: The dividend-price ratio (DPt), the price-earnings ratio (PEt) and GDP acceleration (GDPAt). The first number shows the beta coefficient, the second number in brackets shows the standard deviation. I use robust standard errors.

	(1) VWR-INF	(2) VWR-TBL	(3) EWR-INF	(4) EWR-TBL	(5) TBL-INF
Charismatic President	0.14***	0.12***	0.11**	0.10*	0.02***
	(0.04)	(0.04)	(0.05)	(0.05)	(0.01)
Dividend Price ratio	5.17**	4.16	8.64***	7.63***	1.01***
	(2.44)	(2.49)	(2.79)	(2.84)	(0.37)
Price-earnings ratio	0.16	0.13	0.35*	0.32	0.03
	(0.17)	(0.17)	(0.20)	(0.20)	(0.02)
GDP acceleration	-0.00	-0.01	-0.01	-0.01	0.01***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.00)
Constant	-0.34	-0.25	-0.62*	-0.54	-0.08**
	(0.30)	(0.30)	(0.34)	(0.34)	(0.04)
Observations	60	60	60	60	60
R^2	0.17	0.15	0.16	0.14	0.44
Adjusted R^2	0.11	0.09	0.10	0.08	0.39

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

In Table 7 the macro-economic control variable GDP acceleration has been added to the model. The coefficients of the charismatic presidential dummy stay statistically the same on the same

level. However, for instance, the P-value decreases in Model (4) from 0.097 to 0.052, which is just not enough for being statistically significant at the 5% level. Only the beta of Model (4) increases with one percentage point, implying a slight stronger effect of charisma on stock returns. The models have a better fit (average adjusted R-squared of 0.154) than the previous models, although this is mainly due to a higher fit for TBL-INF. Table 14 (see Appendix) demonstrates that there is no severe sign of multicollinearity issues as the highest value is 2.81, with a mean VIF value of 1.91. This model implies that for VWR-INF, a charismatic president has 14 percent points higher returns on average on the S&P500. At last, the consumer variable Consumer Sentiment and the labor market variable Natural Unemployment are added to the regression. Unfortunately, in this model, all coefficients of the charismatic presidential dummy become insignificant. For this reason, one cannot interpret the beta's of the coefficients. Therefore, due to the irrelevance of Table 15, the results can be seen in the Appendix. This means that when controlling for variables outside of finance and the macro-economy, charisma cannot explain for higher stock returns.

In short, these findings are in line with the literature discussed earlier. Mainly with the results of Tosi et al. (2004), which concluded that equity markets positively value CEOs who are regarded as charismatic. Furthermore, Fanelli et al. (2009) show further proof that charisma is indeed important for analysts when valuing company stocks. It seems that analysts also take charisma of presidents into account when valuing stocks, signaling some sort of stability and competence. It is interesting to see that US presidents, who are similar to CEOs of big companies in some way, can account for higher returns on the stock market.

5.3 Relationship between Charisma and stock returns with presidential alignment

In Table 8, the results of regression (4) are presented. For the value weighted returns, the beta coefficient for the democratic presidential dummy is 0.06. For the equal weighted returns, the beta coefficient for the democratic presidential dummy is 0.07. However, all of these coefficients are not statistically significant at any level. Hence, we cannot interpret the beta coefficients of these models. However, when comparing the beta coefficients of VWR-INF and VWR-TBL with Santa-Clara & Valkanov (2003) , there are some similarities in the output. For Santa-Clara & Valkanov's second subsample (1963-1998), which is the most similar to my data, they find that VWR-INF equals 0.0571 and for VWR-TBL 0.0685 under democratic presidents, which comes close to the outcomes of my model (0.0608 and 0.0589). For this reason, the results of the Value Weighted Returns can be used. In Table 9, the results from the OLS regression with both the

Democratic President dummy and the Charismatic President dummy are presented. The beta of the Democratic President dummy decreases from 0.06 to 0.03 for both of the Value Weighted Returns. When comparing Table 5 with Table 9, the Charismatic President dummy only decreases from 0.11 to 0.10 for VWR-INF and from 0.10 to 0.09 for VWR-TBL and they both stay statistically significant at the 5% level. These findings might imply that Charisma predicts stock returns better than presidential alignment, due to the higher and statistically significant beta coefficient of Charisma.

Table 8: Average returns under Democratic presidents

This table shows the results of the OLS regression with the Democratic Presidential dummy on all the excess returns, without accounting for control variables. The first number shows the beta coefficient, the second number in brackets shows the standard deviation. I use robust standard errors.

	(1) VWR-INF	(2) VWR-TBL	(3) EWR-INF	(4) EWR-TBL	(5) TBL-INF
Democratic President	0.06	0.06	0.07	0.07	0.00
	(0.04)	(0.04)	(0.05)	(0.05)	(0.01)
Constant	0.05	0.05	0.07*	0.06*	0.01
	(0.03)	(0.03)	(0.04)	(0.04)	(0.00)
Observations	60	60	60	60	60
R^2	0.03	0.03	0.04	0.04	0.00
Adjusted R^2	0.02	0.02	0.02	0.02	-0.02

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 9: Average Returns under Democratic Presidents controlling for Charismatic Presidents

This table shows the results of the OLS regression with the Democratic Presidential dummy on all the excess returns, controlling for Charisma. The first number shows the beta coefficient, the second number in brackets shows the standard deviation. I use robust standard errors.

	(1) VWR-INF	(2) VWR-TBL	(3) EWR-INF	(4) EWR-TBL	(5) TBL-INF
Democratic President	0.03	0.03	0.05	0.05	-0.00
	(0.04)	(0.04)	(0.05)	(0.05)	(0.01)
Charismatic President	0.10**	0.09**	0.06	0.04	0.01**
	(0.04)	(0.04)	(0.05)	(0.05)	(0.01)
Constant	0.01	0.01	0.05	0.04	0.00
	(0.03)	(0.04)	(0.05)	(0.05)	(0.00)
Observations	60	60	60	60	60
R^2	0.12	0.10	0.05	0.04	0.08
Adjusted R^2	0.08	0.07	0.02	0.01	0.05

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

On the next page the results from the OLS regression with financial and macro-economic control variables are presented in Table 10 and Table 11. The Democratic President dummy for VWR-INF slightly increases from 0.03 to 0.04 and for VWR-TBL from 0.03 to 0.05, both stay insignificant. For the Charismatic president dummy, VWR-INF increases to 0.13 and VWR-TBL to 0.11. When controlling for these variables, both Charismatic and Democratic Presidents seem to account for higher stock returns. Accounting for control variables, comparing VWR-TBL (0.11) with Santa-Clara & Valkanov's, which is 0.09, the coefficient for charisma seems to be higher. This might imply that charisma seems to account for higher returns on the stock market.

Although the coefficients for the Democratic President dummies are al insignificant, one can conclude that the results of the regressions are in line with the literature discussed earlier when comparing to Santa-Clara and Valkanov (2003). Hence, the insignificance of the democratic presidential dummy implies a small limitation to my research. Presidents have influences on monetary and fiscal laws and are always in service of their political party. In order to pass laws through congress and the senate, a president needs to have enough popularity among other politicians. This might be a reason where charisma creates value. As discussed earlier, charisma can signal some form of stability and competence, which might lead to that the charisma of a president has more influence on stock returns. Charisma is something a Democrat or a Republican can have, no matter to what political party a president is aligned. Furthermore, comparing my results with Santa-Clara & Valkanov (2003) implies another limitation. Santa-Clara & Valkanov use another dataset and control variables for their research, which implies that when comparing results one should be cautious with making conclusions.

Table 10: Average returns for democratic presidents controlling for charismatic presidents, dividend-price ratio and price-earnings ratio

This table shows the results of the OLS regression with the Democratic Presidential dummy on all the excess returns, controlling for Charisma (CPt), dividend-price ratio (DPt) and the price-earnings ratio (PEt). The first number shows the beta coefficient, the second number in brackets shows the standard deviation. I use robust standard errors.

	(1) VWR-INF	(2) VWR-TBL	(3) EWR-INF	(4) EWR-TBL	(5) TBL-INF
Democratic President	0.04	0.04	0.06	0.06	-0.00
	(0.04)	(0.04)	(0.04)	(0.04)	(0.01)
Charismatic President	0.13***	0.11***	0.10**	0.08*	0.02***
	(0.04)	(0.04)	(0.05)	(0.05)	(0.01)
Dividend-price ratio	5.32**	4.44*	8.91***	8.03***	0.88*
	(2.37)	(2.52)	(2.77)	(2.94)	(0.51)
Price-earnings ratio	0.17	0.15	0.36*	0.35*	0.02
	(0.16)	(0.17)	(0.19)	(0.20)	(0.04)
Constant	-0.37	-0.32	-0.69**	-0.64*	-0.05
	(0.27)	(0.28)	(0.31)	(0.33)	(0.06)
Observations	60	60	60	60	60
R^2	0.18	0.14	0.17	0.14	0.20
Adjusted R^2	0.12	0.08	0.11	0.08	0.14

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 11: Average returns for democratic presidents controlling for charismatic presidents, dividend-price ratio, price-earnings ratio and GDP acceleration

This table shows the results of the OLS regression with the Democratic Presidential dummy on all the excess returns, controlling for Charisma (CPt), the dividend-price ratio (DPt), the price-earnings ratio (PEt) and GDP acceleration (GDPAt). The first number shows the beta coefficient, the second number in brackets shows the standard deviation. I use robust standard errors.

	(1) VWR-INF	(2) VWR-TBL	(3) EWR-INF	(4) EWR-TBL	(5) TBL-INF
Democratic President	0.04	0.05	0.07	0.07*	-0.01
	(0.04)	(0.04)	(0.04)	(0.04)	(0.00)
Charismatic President	0.13***	0.11***	0.10**	0.08*	0.02***
	(0.04)	(0.04)	(0.05)	(0.05)	(0.01)
Dividend-price ratio	5.15**	4.13*	8.60***	7.58***	1.02***
	(2.38)	(2.37)	(2.66)	(2.65)	(0.34)
Price-earnings ratio	0.15	0.12	0.33*	0.30*	0.03
	(0.16)	(0.16)	(0.18)	(0.18)	(0.02)
GDP acceleration	-0.01	-0.01	-0.01	-0.02	0.01***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.00)
Constant	-0.33	-0.25	-0.61*	-0.53*	-0.08**
	(0.29)	(0.28)	(0.31)	(0.31)	(0.04)
Observations	60	60	60	60	60
R^2	0.18	0.17	0.19	0.18	0.45
Adjusted R^2	0.11	0.09	0.11	0.10	0.40

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

5.4 Effect internet on charisma and stock returns

In Table 12, the results from the last OLS regression are presented. One can immediately notice that the interaction variable between Charismatic President and Internet is positive for all the returns, but are also all insignificant. Without taking the significance into consideration, the effect of charisma on VWR-INF after 1991 would be 0.09 + 0.14 * 1 = 0.23. Implying on average 23% higher returns for a charismatic president after 1991 for the value weighed return minus the inflation. Unfortunately though, the beta coefficients are all insignificant which means we can not fully interpret these findings. A reason for this might be the small amount of data since the invention of the internet. Nevertheless, there seems to be an increase of the influence of charisma on stock returns with increasing internet use.

Literature discussed earlier in this paper suggested that since the invention of the internet charisma should be more important and observed among the people, including investors and analysts. Using social media, politicians avoid strict conventional media venues and have an easy access to their followers (Pham et al. 2022). Ignoring the significance of the outcome of the interaction variable, charisma seems to have a stronger impact on stock returns since 1991. Yet, interpreting these variables is tricky due to the significance. This implies a limitation of my research.

Table 12: Average returns for Charismatic presidents and internet, adding a interaction term

This table shows the results of the OLS regression with charisma on all the excess returns, including the proportion of internet users in the US (ITt) and an interaction term between Charisma and Internet (CPITt). The first number shows the beta coefficient, the second number in brackets shows the standard deviation. I use robust standard errors.

	(1) VWR-INF	(2) VWR-TBL	(3) EWR-INF	(4) EWR-TBL	(5) TBL-INF
Charismatic President	0.09*	0.06	0.04	0.01	0.03***
	(0.05)	(0.05)	(0.06)	(0.06)	(0.01)
Internet	-0.12	-0.10	-0.12	-0.11	-0.01
	(0.12)	(0.12)	(0.14)	(0.14)	(0.01)
Charismatic President * Internet	0.14	0.18	0.16	0.20	-0.04***
	(0.14)	(0.13)	(0.16)	(0.16)	(0.01)
Constant	0.04	0.03	0.08*	0.08*	0.00
	(0.04)	(0.04)	(0.05)	(0.05)	(0.00)
Observations	60	60	60	60	60
R^2	0.13	0.13	0.06	0.06	0.48
Adjusted R^2	0.08	0.08	0.01	0.01	0.45

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

6 Conclusion

6.1 Conclusion

The Democratic Premium and the so-called "Presidential Puzzle" which are discussed since the 1980s is still relevant to this day and remains to be solved. In my thesis the connection between stock returns and politics has been further uncovered, adding a unique factor to the scientific debate: charisma. This research aimed to answer the question of: *To what extent does presidential charisma have effect on returns of the S&P500 in the U.S?* The main research question described here, as well as any associated hypotheses described in the theoretical framework of this study, can be answered after obtaining and examining the statistical results. Yearly data from the S&P500 value weighted and equal weighted returns have been used. To decide whether a president is seen as charismatic, data from Seyranian and Bligh (2008) is used. In their research, they ask political scientists to give charisma scores to US presidents. Furthermore, certain financial and macro-economic control variables have been used which can predict future stock returns.

The first hypothesis of this research is: *US presidents who are considered as charismatic will cause higher returns on the US stock market*. The competence of presidents does not only depend on their capacity to influence bureaucratic organizations but also on their charisma and personality. Fundamentally, the findings indicated in the preceding section suggest that, when not accounting for control variables, if a US president is in office and is seen as charismatic that the excess return of the Value Weighted Return over the yearly inflation is on average 11 percent higher. The results for the Equal Weighted Returns where not significant. After controlling for the following financial and macro-economic variables: dividend price ratio, price-earnings ratio and GDP acceleration, the excess return for charismatic presidents on the Value Weighted Returns over the yearly inflation is on average 14 percent higher than presidents who are not seen as charismatic and is statistically significant at the 1% level. Furthermore, the excess returns for charismatic presidents become statistically significant (at the 5% level) on the Equal Weighted Returns over the yearly inflation and is 11 percent higher on average. Surprisingly, for the sample period used, the returns seem to be significantly higher for charismatic presidents. The findings of this thesis are in line with earlier discussed literature, which implies that leaders with charisma cause positive spillover effects. This presidential charisma might signal stability and competence to investors and analysts, leading to higher stock returns. For this reason, the first hypothesis can not be rejected.

The second hypothesis of this paper is: *The charisma of a US President explains the "Presidential Puzzle" better than the alignment of a US President*. Charisma is proven to be important for CEOs and is often overlooked, especially for presidents. This hypothesis comes forward because charisma can influence performance and can signal stability, which might be more important than the presidential alignment because charisma is a characteristic both a Democrat or Republican can have. In order to test the second hypothesis, an OLS regression will be used adding both charisma and presidential alignment to the regression. The Value Weighted Returns give statistical significant results for charisma (at the 5% level) but the democratic dummy is insignificant. In order to still draw a conclusion, the results from this thesis are compared with Santa-Clara and Valkanov's (2003) work. Without accounting for control variables, the VWR-INF and VWR-TBL for Santa-Clara & Valkanov are 0.06 and 0.07 respectively and 0.11 and 0.10 respectively in this thesis. When taking both charisma and alignment into one regression, the Democratic presidential dummy coefficient for VWR-INF decreases to 0.03 and charisma to 0.1. Unfortunately, the Democratic presidential dummy stays insignificant. For this reason, it is difficult to draw conclusions from these results. Nevertheless, in my thesis charisma seems to be more important for stock returns than presidential alignment.

The third and last hypothesis of this thesis is:: *Since the invention of internet in 1991, presidential charisma has a stronger effect on returns of the US stock market*. The growth of the internet since 1991 and its means of information dissemination has had a significant impact on how investors, manufacturers and consumers interpret market trends. Because of how quickly and easily information can be shared throughout the world, social media like Twitter has developed into a crucial tactical tool in political campaigns. For this reason, the charisma of presidents has become more important and observed among followers. This makes it interesting whether the internet causes charisma to have a bigger effect on stock returns. In order to test the third hypothesis, a OLS regression with an interaction term of charisma and internet users in the US has been added. The results suggest, ignoring the significance, that stock returns are higher for charismatic presidents when internet use increases. Unfortunately, due to the insignificance of the interaction variable, it is difficult to draw clear conclusions on this hypothesis. For this reason, we can not accept the hypothesis yet.

6.2 Limitations and suggestions for additional research

One can consider this paper's limitations and suggestions for additional research. Firstly, a limitation of this research is the fact that Seyraninan & Bligh's (2004) work does not cover

Obama and Trump in their research which presidents can be seen as charismatic. To solve this, I had to use other articles to determine who can be seen as charismatic. Still, this limits the reliability of the results. A suggestion for further research is to first let a fixed group of political scientists determine whether the presidents, who will be used in research, can be seen as charismatic. Then researchers have a more reliable dataset and can for instance use charisma scores for all the presidents.

Secondly, a limitation of this research is the relative small sample size especially since the invention of the internet with only having four different presidents serving at least one full term. The dataset used in this thesis could not find a significant Democratic premium, which is proven by multiple earlier papers. A suggestion for further research might be to use data with higher frequency, for instance monthly return data. Higher frequency can, however, result in noisier data. Furthermore, social media only exists for about 15 years now. This means that future research needs to wait for more presidents to finish their terms.

Thirdly, this research only looks at presidents from the US. Further studies can expand the relationship between charisma and stock returns by looking at other countries, such as Canada or France. This could strengthen the influence of charisma on stock returns. What's more, it might also be interesting to look whether a charismatic US president have spillover effects which influence stock returns from strong trading partners such as Canada.

References

Alesina, A., Roubini, N., & Cohen, G. D. (1997). *Political Cycles and the Macroeconomy*. MIT Press.

Balkundi, P., Kilduff, M., & Harrison, D. (2011). Centrality and Charisma: Comparing How Leader Networks and Attributions Affect Team Performance. The Journal of Applied Psychology, 96, 1209–1222. https://doi.org/10.1037/a0024890

Bass, B. M. (1990). From transactional to transformational leadership: Learning to share the vision. Organizational Dynamics, 18(3), 19–31. https://doi.org/10.1016/0090-2616(90)90061-S

Bass, B. M. (1995). Comment: Transformational Leadership: Looking at Other Possible Antecedents and Consequences. Journal of Management Inquiry, 4(3), 293–297. https://doi.org/10.1177/105649269543010

Belo, F., Gala, V. D., & Li, J. (2013). Government spending, political cycles, and the cross section of stock returns. Journal of Financial Economics, 107(2), 305–324. https://doi.org/10.1016/j.jfineco.2012.08.016

Bennis, W., & O'Toole, J. (2000). Don't Hire the Wrong CEO. Harvard Business Review, 78(3), 170–176.

Borcuch, A., Piłat-Borcuch, M., & Swierczynska-Kaczor, U. (2014). The Influence of the Internet on globalization process. *Journal of Economics and Business Research, 18*, 118-129.

Campbell, J. Y., & Shiller, R. J. (1988). The Dividend-Price Ratio and Expectations of Future Dividends and Discount Factors. The Review of Financial Studies, 1(3), 195–228.

Cannella Jr., A. A., & Monroe, M. J. (1997). Contrasting perspectives on strategic leaders: Toward a more realistic view of top managers. Journal of Management, 23, 213–237. https://doi.org/10.1177/014920639702300302

Chrétien, S., & Coggins, F. (2009). Election outcomes and financial market returns in Canada. *The North American Journal of Economics and Finance, 20*(1), 1–23.

Conger, J. A., & Kanungo, R. N. (1988). The empowerment process: Integrating theory and practice. The Academy of Management Review, 13, 471–482. https://doi.org/10.2307/258093

Drazen, A. (2000). *Political Economy in Microeconomics. Princeton University Press, Princeton. - References—Scientific Research Publishing*. (n.d.). Retrieved October 12, 2022, from https://www.scirp.org/(S(lz5mqp453edsnp55rrgjct55.))/reference/referencespapers.aspx?referenceid=1839064

Fanelli, A., Misangyi, V. F., & Tosi, H. L. (2009). In Charisma We Trust: The Effects of CEO Charismatic Visions on Securities Analysts. Organization Science, 20(6), 1011–1033.

Goldberg, J. (2022, August 17). The Paradox of Trump's Charisma. The Dispatch. https://thedispatch.com/article/the-paradox-of-trumps-charisma/

Hensel, C. R., & Ziemba, W. T. (1995). United States Investment Returns during Democratic and Republican Administrations, 1928–1993. *Financial Analysts Journal, 51*(2), 61–69. https://doi.org/10.2469/faj.v51.n2.1882

Hibbs, D. A. (1977). Political Parties and Macroeconomic Policy. The American Political Science Review, 71(4), 1467–1487. https://doi.org/10.2307/1961490

House, R. J., Spangler, W. D., & Woycke, J. (1991). Personality and charisma in the U.S. presidency: A psychological theory of leader effectiveness. Administrative Science Quarterly, 36, 364–396. https://doi.org/10.2307/2393201

Johnson, R., Chittenden, W., & Jensen, G. (1999). Presidential Politics, Stocks, Bonds, Bills, and Inflation. Journal of Portfolio Management - J PORTFOLIO MANAGE, 26, 27–31. https://doi.org/10.3905/jpm.1999.319771

Joosse, P. (2014). Becoming a God: Max Weber and the Social Construction of Charisma. Journal of Classical Sociology, 14, 266–283. https://doi.org/10.1177/1468795X14536652

Judge, T., & Piccolo, R. (2004). Transformational and Transactional Leadership: A Meta-Analytic Test of Their Relative Validity. The Journal of Applied Psychology, 89, 755–768. https://doi.org/10.1037/0021-9010.89.5.755

Kavadis, N., Heyden, M. L. M., & Sidhu, J. S. (2022). Fresh in the saddle: The influence of a new CEO's vision and origin, and CEO succession type on market actors' reactions. Long Range Planning, 55(2), 102050. https://doi.org/10.1016/j.lrp.2020.102050

Kellerman, B. (2009, January 22). The Nature of Obama's Charismatic Leadership. Harvard Business Review. https://hbr.org/2009/01/the-nature-of-obamas-charismat

Kinyua, J. D., Mutigwe, C., Cushing, D. J., & Poggi, M. (2021). An analysis of the impact of President Trump's tweets on the DJIA and S&P 500 using machine learning and sentiment analysis. *Journal of Behavioral and Experimental Finance, 29*, 100447. https://doi.org/10.1016/j.jbef.2020.100447

Klebnikov, S. (2021). *We Looked At How The Stock Market Performed Under Every U.S. President Since Truman—And The Results Will Surprise You*. Forbes. Retrieved October 11, 2022, from https://www.forbes.com/sites/sergeiklebnikov/2020/07/23/historical-stock-market-returns-under-every-us-president/

McMillan, D. G. (2016). *Which Variables Predict and Forecast Stock Market Returns?* (SSRN Scholarly Paper No. 2801670). https://doi.org/10.2139/ssrn.2801670

Niederhoffer, V., Gibbs, S., & Bullock, J. (1970). Presidential Elections and the Stock Market. Financial Analysts Journal, 26(2), 111–113.

Pham, D. P. T., Huynh, N. Q. A., & Duong, D. (2022). The impact of US presidents on market returns: Evidence from Trump's tweets. Research in International Business and Finance, 62, 101681. https://doi.org/10.1016/j.ribaf.2022.101681

Riley, W. B., & Luksetich, W. A. (1980). The Market Prefers Republicans: Myth or Reality. The Journal of Financial and Quantitative Analysis, 15(3), 541–560. https://doi.org/10.2307/2330399

Santa-Clara, P., & Valkanov, R. (2003). The Presidential Puzzle: Political Cycles and the Stock Market. *The Journal of Finance*, *58*(5), 1841–1872. https://doi.org/10.1111/1540-6261.00590

Seyranian, V., & Bligh, M. C. (2008). Presidential charismatic leadership: Exploring the rhetoric of social change. *The Leadership Quarterly*, *19*(1), 54–76. https://doi.org/10.1016/j.leaqua.2007.12.005

Sy, O., & Al Zaman, A. (2011). Resolving the Presidential Puzzle. Financial Management, 40(2), 331–355. https://doi.org/10.1111/j.1755-053X.2011.01144.x

Thomas, A. B. (1988). Does Leadership Make a Difference to Organizational Performance? Administrative Science Quarterly, 33(3), 388–400. https://doi.org/10.2307/2392715

Tosi, H., Misangyi, V., Fanellik, A., Waldman, D., & Yammarino, F. (2004). CEO Charisma, Compensation, and Firm Performance. *The Leadership Quarterly*, *15*, 405–420. https://doi.org/10.1016/j.leaqua.2004.02.010

Waldman, D. A., Javidan, M., & Varella, P. (2004). Charismatic leadership at the strategic level: A new application of upper echelons theory. The Leadership Quarterly, 15(3), 355–380. https://doi.org/10.1016/j.leaqua.2004.02.013

Waldman, D., & Javidan, M. (2004). CEO Transformational Leadership and Corporate Social Responsibility. Rensselaer Polytechnic Institute, Department of Economics, Rensselaer Working Papers in Economics.

Appendix

Table 13: VIF scores

This table shows the VIF scores from the OLS regression which is presented in Table 5

Variable	VIF	1/VIF
Charismatic President	1.09	0.913
Dividend price ratio	2.79	0.359
Price-earnings ratio	2.64	0.378
Mean VIF	2.18	

Table 14: VIF scores

This table shows the VIF scores from the OLS regression which is presented in Table 6

Variable	VIF	1/VIF
Charismatic President	1.1	0.910
Dividend price ratio	2.81	0.356
Price-earnings ratio	2.69	0.371
GDP acceleration	1.02	0.976
Mean VIF	1.91	

Table 15: Average returns under charismatic presidents accounting for 5 control variables

This table shows the results of the OLS regression with charisma on all excess returns, accounting for five control ,variables. These five control variables are the following two financial variables and the macro-economic variable: The dividend-price ratio (DPt), the price-earnings ratio (PEt), GDP acceleration (GDPAt), consumer sentiment (CSt) and natural unemployment (NUt) . The first number shows the beta coefficient, the second number in brackets shows the standard deviation. I use robust standard errors.

	(1) VWR-INF	(2) VWR-TBL	(3) EWR-INF	(4) EWR-TBL	(5) TBL-INF
Charismatic President	0.02	0.01	-0.01	-0.02	0.01**
	(0.04)	(0.04)	(0.05)	(0.05)	(0.01)
Dividend Price ratio	14.71***	13.96***	19.39***	18.65***	0.75
	(3.82)	(3.57)	(3.93)	(3.73)	(0.56)
Price-earnings ratio	0.02	0.00	0.20	0.19	0.02
	(0.14)	(0.14)	(0.16)	(0.16)	(0.02)
GDP acceleration	-0.01	-0.02	-0.01	-0.02	0.00
	(0.01)	(0.01)	(0.02)	(0.02)	(0.00)
Consumer sentiment	0.01***	0.01***	0.01**	0.01**	0.00***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Unemployment	-0.24***	-0.25***	-0.28***	-0.29***	0.01
	(0.09)	(0.08)	(0.09)	(0.08)	(0.01)
Constant	0.24	0.43	0.11	0.30	-0.19***
	(0.45)	(0.45)	(0.49)	(0.50)	(0.05)
Observations	60	60	60	60	60
R^2	0.37	0.35	0.35	0.33	0.54
Adjusted R^2	0.30	0.28	0.27	0.25	0.49

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$