THREE ESSAYS ON PARTISAN POLITICS AND STOCK RETURNS

Three Essays on Partisan Politics and Stock Returns

By

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Abstract

This dissertation contains three essays on partisan politics and its effect on the time series and cross section of stock returns. The first essay investigates the presidential puzzle (Santa-Clara and Valkanov, 2003) -- the fact that the equity premium is 10% higher in years with Democratic governments than in years with Republican governments. I find the existence of a negative price reaction after Democratic victories in presidential elections. I also establish that the difference in the equity premium is significant only in the first year of the presidential cycle and that there is a negative equity premium in the fourth year of the cycle when the incumbent Republican loses the election. Moreover, the market reaction to changes in the likelihood of a candidate winning the election is significantly different for Republican and Democratic candidates. The evidence is consistent with a risk explanation and policy uncertainty. Finally, I explore several specifications for a presidential factor (P-factor) that improves on the CAPM and Fama-French 3-factor model for different test assets.

The second essay considers the effect of different measures of corporate taxes on stock returns. The results support the partisan politics cycle effect on equity returns. A high minus low (Hi-Lo) portfolio sorted by (Total Corporate Taxes/Total Assets) has an annual return of +3.8% during Republican presidential terms and -6.3% for Democratic terms. Similarly, a high minus low portfolio sorted by (Marginal Tax Rate) has an annual return of +12.7% during Republican presidential terms and -6.4% for Democratic terms. Investors partially anticipate

these results during the election period, i.e., increases in the probability of the Democratic candidate being elected are associated with negative returns for the (Hi-Lo) portfolio, which are significant for the 2016 election. The evidence is consistent with a cash-flow based explanation, in contrast with a risk-based explanation.

The third essay studies the effect of partisan politics on stock returns in Latin America. The results are partially consistent with previous literature. There is a negative market reaction when left-wing parties win presidential elections. In contrast, the observed democratic premium in the U.S. is not observed in the sample of Latin American countries. Firms have higher returns during periods when the president is from a Centrist party. Moreover, the Christian-Secular dimension is analyzed, firms have significantly higher returns during periods when the president is from a Christian party and the market reaction is higher the day after the candidate from the Christian party wins. Results are consistent with Christian party led governments providing a low-risk and high profitability environment and stock market underreaction.

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I dedicate this work to my mom.

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Chapter One: Introduction

This dissertation discusses the effect of partisan politics on stock returns by analyzing both, the time series and cross-section of stock returns[1]. The first and second essay examines the impact of the party in office in the U.S. and its effect on the stock market. The third essay explores the issue internationally.

The purpose of the first essay is to investigate the Presidential puzzle (Santa-Clara and Valkanov, 2003) and analyze if the differential in returns between periods when the President of the U.S. is a democrat or a republican is still significant and if that differential is consistent with a risk-based explanation. It also investigates whether investors incorporate the changes in the probability of a presidential candidate winning the next election, and if based on these results, a presidential factor can be added to CAPM and the Fama-French three-factor model.

The first essay complements the Santa-Clara and Valkanov (2003) by researching the differences between challenging and incumbent parties, winning and losing presidents, and, more notable, showing that the differential effect is only significant in the first year of the presidential period. The latter is partially explained for the transitions from a Democratic to a Republican president and vice versa, because of the negative (positive) market reaction in the last year when the

[1] The question about the effect of the party of the president in office on bond returns will be left for future research. However, related research can be found, for example, in Johnson, Chittenden, and Jensen (1999), Grant and Traham (2006), and Freixa (2009).

Republican (Democratic) president ends up losing the election to a Democratic (Republican) candidate. Second, the price reactions after elections are consistent with higher risk after left-wing governments win the election. Moreover, market reaction with changes in the probability of a candidate winning the election exploiting the Iowa Electronic Market (IEM). Finally, using the mimicking portfolio method to construct a factor model that incorporates exposure to the presidential factor finds some improvement on the CAPM and Fama-French models when a presidential factor is included.

The purpose of the second essay is to examine the relationship of one of the key variables that differentiate the platform of the Republican and the Democratic party, corporate taxes. By exploring the corporate tax rate level and how it changes when the president of the U.S. is from different parties, it is possible to conclude that returns during the government of the Democratic and Republican party are a proxy for the likelihood of shifts in the corporate taxes rate. This approach is similar to Belo, Gala, and Li (2013) that finds differences in government spending between democratic and republican governments, without differences in the budget deficit. Thus, the tax rate is a natural candidate to explain the effect of partisan politics on stock returns.

The results of the second essay support the partisan view of the political cycle on equity returns. For example, the corporate tax rate helps to explain the cross-section of stock returns conditional on the party of the president in office. Firms with low corporate tax rates have higher returns than firms with low

corporate tax rates during Republican presidential terms, the opposite is true during Democratic presidential terms. The cash flow and risk explanation are explored. The cash flow explanation is explored by looking at the return on equity and the risk-based explanation by exploiting the variance of the return on equity.

The purpose of the third essay is to investigate if the left-wing premium is exceptional and confined to the U.S. Also, this research looks into the effect of the partisan politics on the stock markets through the religious-secular dimension.

This third paper confirms the previous results in the sense that the left-wing premium is exceptional. The different market reaction after a left-wing candidate is elected compared to a right-wing elected presidential candidate is significant, a 4.95% one-day return difference, being positive for the case when the right-wing candidate gets elected. Moreover, the returns are higher, and the risk is lower during periods with a president is from a Christian party. It also provides a better understanding of the effect of religiosity on the stock price crash risk, different from Callen and Fang (2015) which explores the religiosity of the firm's members.

The main contribution of this dissertation is to show that partisan politics, as measured by the party of the president in office, help to explain stock returns. This explanatory power is also applicable to find investment strategies that provide positive abnormal returns. The dissertation also confirms the partisan view of political cycles (Hibbs, 1997; and Alesina, 1987). The result from the U.S. in the first essay is consistent with a risk-based explanation of the presidential puzzle. On

the theoretical aspect of this research, the results from the first essay are consistent with Pastor and Veronesi (2017); however, the results from the third essay are partially inconsistent with their model. The third essay also shows that the religious dimension of partisan politics is relevant for the returns and risk of the stock market.

The rest of the thesis proceeds as follows. Chapter 2 contains the first essay "A risk-based perspective on the Presidential Puzzle". Chapter 3 contains the second essay "Corporate Taxes, Partisan Politics and Stock Returns". Chapter 4 contains the third essay "Partisan Politics and Stock Returns under Strong Presidential Regimes". Finally, Chapter 5 concludes.

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Chapter Two: A risk-based perspective on the Presidential Puzzle.

1. Introduction and literature review

I investigate the presidential puzzle further, finding that the results are still significant. The difference in equity premium between the Republican and the Democratic term is 10.27%, higher for the democrats. I also find that the difference in the equity premium is statistically significant only in the first year of the presidential cycle (18.66% higher for Democratic periods) and a negative equity premium in the fourth year of the cycle when the incumbent Republican loses the election (-11.65%). Noteworthy, the difference in the equity premium for transitions from Republican to Democratic compared to transitions from Democratic to Republican presidencies is 38.47% during the first year of the new party in office.

This paper also shows the existence of a negative price reaction after Democratic victories in presidential elections, with a difference in market reaction between Democratic and Republican triumphs in the day after the election of -1.54%. Similarly, a negative market reaction is observed when the probability of a Democratic candidate winning the election increases; this contrasts with a positive reaction to increases in the probability of a Republican candidate winning the balloting. For example, an increase of 10% in the probability of the Democratic candidate getting elected is associated with a negative weekly excess return equal to 0.86%. Also, the Economic Policy Uncertainty index from Baker et al. (2016) is

significantly greater during Democratic governments; however, its inclusion does not eliminate the partisan differential. All these results are consistent with a risk explanation of the presidential puzzle.

Furthermore, this research explores several candidates with regards to a presidential factor (P-factor) in asset prices by using Fama-French's portfolio returns, finding some improvement on the CAPM and Fama-French 3-factor models for different test assets. For example, the inclusion of the P-factor in the original CAPM model increases the adjusted R-square for the mean returns in the second pass of Fama and MacBeth (1973) regressions from 0.0846 to 0.235, for the case of the Fama-French 25 book-to-market and size sorted portfolios.

It is widely held that stock markets prefer Republican governments; however, the evidence seems to be mixed. Santa-Clara and Valkanov (2003) show that excess returns are higher under Democratic presidencies than under Republican ones. These authors perform a series of robustness tests, most of them successfully passed. Although the differential in returns may be explained by a risk factor, these authors find a type of "Peso risk" to be the only possible explanation; however, they claim that it is impossible to test if it just happens to be that there is no bad realization in the sample. In apparent contrast, Riley and Luksetich (1980) describe positive stock market reactions after Republicans are chosen in presidential elections.

This research uses Santa-Clara and Valkanov (2003) as its starting point and is related in a broader sense to the literature on the relationship between the president in office and economic output, and in a narrower sense with stock returns differences.

There is an extensive literature linking the incumbent president or party in office with economic output. For example, Hibbs (1977) explores differences in inflation and unemployment rates for a group of western countries under left and right wing governments, including the U.S. Alesina (1987) creates a two-party model, suggesting that in the U.S., there is higher inflation under the Democrats. Alesina et al. (1997) comprehensively study the political cycle and its effect in the economy. Additionally, Drazen (2001) surveys the empirical and theoretical literature on the political business cycle. Recently, Blinder and Watson (2016) show that the performance of the economy in the U.S. is better when Democrats are in office according to several indicators such as GDP growth, Industrial Production growth, and the Unemployment rate.

The term presidential puzzle was coined by Santa-Clara and Valkanov (2003), hereafter SV (2003); however, the topic has been researched previously. Herbst and Slinkman (1984) explore political-economic cycles in the stock market and find that the four-year cycle peaks in November after the election but they do not distinguish between decreasing uncertainty regarding the election outcome and positive prospects. They also do not focus on the presidential puzzle itself. In

addition to the four-year cycle, Huang (1985) explores explicitly the differences in returns under Democratic and Republican administrations and finds them to be significant. Hensel and Ziemba (1995) find the difference in returns to be remarkably higher for small cap stocks than for large cap ones. They also create a simple portfolio strategy by holding small-cap stocks under Democratic governments and large-cap stocks under Republican administrations, producing higher returns in comparison with large-cap or small-cap only strategies.

However, SV (2003) complement Huang (1985) with a full analysis and robustness test that allows them to describe this difference as a "puzzle." Cheng (2005) analyzes the 2004 presidential election and detects a price reaction for politically sensitive portfolios to changes in the probability of Bush winning as measured by the Iowa Electronic Market (IEM). Previously, Brander (1991) explored the reaction of the Toronto Exchange Market (TSE) to polling results in the 1988 Canadian national election and found that increases in the Conservative Party likelihood of winning the election led to increases in the Canadian stock market (TSE). Similarly, Bonilla et al. (2014) find a positive reaction in the Chilean market when polls reflected a greater likelihood of the center-right coalition winning the 2009 presidential election.

Various solutions to the presidential puzzle have been proposed. For example, Stangl and Jacobsen (2007), after applying the Fama-French three-factor model, conclude that there is no evidence of underperformance under Republican

administrations or of a clear pattern for different industries. Additionally, by allowing betas in the 3-factor Fama-French model to vary between Democratic and Republican administrations, Sy and Al Zaman (2011) claim the presidential puzzle can be explained by differences in risk. In an international context, Bohl and Gottschalk (2006) conclude that the left-wing premium is exceptional because in a sample of 15 developed European and North American countries, only Denmark, Germany and the U.S present it. However, most countries in the Bohl and Gottschalk sample do not have a strong presidential system, and most heads of government are Prime Ministers (in contrast to the U.S.). Belo et al. (2013) reveal that firms from industries with high exposure to government spending have higher stock returns during Democratic presidential terms and the opposite for Republican periods. Recently, in closely related research, Addoum and Kumar (2016) find that changes in the political party of the president in office lead to predictable returns for industry portfolios, and generate a political sentiment factor.

The present research diverges from the previous literature in the following ways: While Belo et al. (2013) focus on a cash flow explanation for divergences in return between different governments that is stronger during years 2 and 3 of the presidential term, the present research finds that the differential has a risk-based explanation and that the differential is mostly explained by shifts in the party in office, especially for year 1 of the presidential term. Moreover, Addoum and Kumar (2016) is sentiment motivated while this study is risk motivated. The Economic Policy Uncertainty measure of Baker et al. (2016) is significantly higher during

Democratic presidential terms, and thus, consistent with Pastor and Veronesi (2013), leads to a risk premium[2]. In a similar vein, Pastor and Veronesi (2012) propose a model consistent with stock price declines resulting from policy change. If we proxy a more conservative, time invariant policy, with a Republican regime, the results are consistent. Further, the present research emphasizes the aggregate and portfolio specific differences between Republicans and Democrats (by size and industry), whereas, Belo et al. (2013) and Addoum and Kumar (2016) center their work at the industry level. In a recent work, Pastor and Veronesi (2017) develop a model that explains the presidential puzzle based on time-varying risk aversion, the results in this article are consistent with their model and provide additional empirical evidence that supports their model. The Pastor and Veronesi (2017) model provides the following predictions with respect to stock returns and the political cycle: in periods of high risk aversion, democrats are more likely to get elected; during democratic presidencies returns are higher and a positive reaction is expected when a republican candidate wins the presidential election. The results in this article are broadly consistent with their model. Stock returns are higher during democratic terms (10%); there is a positive reaction when the republican candidate is elected and when it is more likely to get elected. Moreover, incumbent Republicans fail to win the elections that follow a presidential period with negative returns (Hoover, Nixon-Ford and G.W. Bush)

[2] Pastor and Veronesi (2013) develop a model that implies that political uncertainty lead to a risk premium. However, they find only weak empirical evidence using the Economic Policy Uncertainty measure of Baker et al. (2016) for the 1985-2010 period.

Therefore, I propose expanding the SV study and the previous literature in four ways. Firstly, I complement the SV (2003) study by researching the differences between challenging and incumbent parties, winning and losing presidents, and, more notable, showing that the differential effect is only significant in the first year of the presidential period. The latter is partially explained for the transitions from a Democratic to a Republican president and vice versa, because of the negative (positive) market reaction in the last year when the Republican (Democratic) president ends up losing the election to a Democratic (Republican) candidate. Also, I confirm the size relation with the presidential puzzle, and I add mixed results for industry level portfolios. Lastly, I expand the sample until the end of 2016.

Secondly, as SV (2003) claim, the peso problem has to do with difficult-to-predict events. Sill (2000, p5.) states that "Wars, nationalizations of industries, and severe political turmoil are examples of unusual events that are extremely difficult to predict." Along these lines, price reactions after elections consistent with the peso problem should show negative variation after Democratic (left-wing) governments are elected. Additionally, if the presidential puzzle is associated with a risk factor, negative price reactions should also be expected after a Democrat is elected. Therefore, a true puzzle would be positive reactions or insignificant reactions when a Democrat is elected in contrast with reactions when a Republican is elected. Similarly, I use market reaction with changes in the likelihood of a candidate winning the election exploiting the Iowa Electronic Market (IEM),

specifically the Winner-Take-All contracts (WTA) for seven presidential elections between 1992 and 2016.

Thirdly, I use the mimicking portfolio method to construct a factor model that incorporates exposure to the presidential factor. The base assets to obtain the presidential factor are Fama-French portfolios that allow construction of several candidates with regards to the presidential factor in asset prices, finding some improvement on the CAPM and Fama-French models in different test assets. A novel approach includes the use of a maximum correlation portfolio with respect to the Winner-Take-All contracts (WTA) from the IEM.

Finally, I add a set of robustness tests for the main results that differ from previous studies and explore alternative explanations for the results from the previous sections. Among the robustness tests are quantile regressions for the main results, subsamples, changes in the presidential period definition, and the incorporation of GDP as a control variable, according to Blinder and Watson (2016).[3]

The remainder of this study is divided in six sections. Section 2 describes the data used in the paper. Section 3 replicates, updates and expands the main results from SV (2003). Section 4 discusses and tests whether market reactions in

[3] I do not include the party in control of the Congress according to previous results from Santa Clara and Valkanov (2003) and Blinder and Watson (2016) who do not find that the party in control of the Congress is correlated with stock returns and GDP growth respectively. For the same reason, I do not explore midterm congressional elections as they are unlikely to have any effect.

the U.S. are consistent with the risk hypothesis. Section 5 develops a factor mimicking approach to take into account the presidential effect. Section 6 shows a comprehensive robustness analysis of the results. Finally, section 7 concludes the study and presents some potential future research.

2. Data

In this section, I describe the data and definitions of the main variables used in this research. As described in SV (2003), the sample consists of monthly returns on value-weighted (VWR_t) and equal-weighted (EWR_t) portfolios from CRSP. The interest rate (TBL_t) refers to the three-month Treasury bill from the St. Louis Fed. The returns from the 10 size portfolios ($DECj_t$, for $j = 1 \dots 10$) are from Kenneth French's website. Inflation (INF_t) is the U.S. Bureau of Labor Statistics Consumer Price Index growth rate. All definitions above refer to log monthly returns. The sample runs from January 1927 to December 2016. Additionally, as per SV (2003), the business cycle should be controlled for to assure that results are not driven by this factor. The control variables are those used in SV (2003), and commonly cited in the literature (e.g., Chen et al. (1986), Campbell and Shiller (1988), Campbell and Vuolteenaho (2004), and Alkhudairy (2008) for a literature review). Along these lines, I have included the annualized log dividend to price ratio (DP_t), the term spread (TSP_t) – that is, the difference between the yield to maturity of the 10-year Treasury note and the 3-month Treasury bill; the default spread (DSP_t) – that is, the difference between BAA and AAA bond yields; and the relative interest rate (RIR_t) – that is, the deviation of the 3-month Treasury bill rate from its one-year

moving average. Finally, as per SV (2003), the presidential dummy is $RR_t = 1$ if a Republican is in office and $RR_t = 0$ if otherwise, and $DD_t = 1$ if a Democrat is in office at time and $DD_t = 0$ if otherwise.

Moreover, real GDP growth data are obtained from the U.S. Bureau of Economic Analysis (BEA) and covers 1930 to 2016 at the annual frequency and 1947 Q2 to 2016 Q4 at the quarterly frequency. The Economic Policy Uncertainty Index (Baker et al. 2016) for the U.S. is obtained from the political uncertainty project's website[4].

In addition, the following data are from Kenneth French's website: the returns from the industry portfolios; the returns of the 25 portfolios formed on size and book to market, and the market factor, the SMB factor and the HML factor. The market and risk-free returns are also from this source.

Furthermore, I use data from the Iowa Electronic Markets (IEM), which is an online futures market exchange where the payoffs of the contracts depend on the outcome of elections. Specifically, the Democratic Winner-Take-All (WTA)[5] price is used as a proxy for the probability of the Democratic candidate winning the presidential election. This data covers seven elections from 1992 to 2016. Payoffs in the Presidential Winner-Take-All Market (WTA contracts) are determined by

[4] http://www.policyuncertainty.com
[5] The Republican contract price is also used in some cases for robustness.

which party obtains more popular votes in the U.S. Presidential Election; therefore, it is not identical to the Electoral College outcome.

Table I from SV (2003) is updated and expanded, including a summary of the U.S. financial and economic variables. In table I, the mean is the sample average, Std. Dev refers to standard deviation, and A.R. is the autoregressive coefficient.

Insert table I here

3. Replication and extension of the Presidential Puzzle

The Presidential Puzzle refers to the fact that the excess return in the U.S stock market is higher under Democratic presidencies. In this section, I replicate the main results from SV (2003) and also expand the period of analysis. Coverage is expanded from 1927-1998 to 1927-2016, thus adding the governments of G.W. Bush (Republican) and Obama (Democratic). The average excess value-weighted annual return (VWR-TBL) is presented in figure I; the red bars represent Republican periods, and blue bars characterize Democratic periods. The dotted line is the average for the 1927-2016 period. Remarkably, no Democratic administration has a below average excess return, and three Republican administrations (Hoover, Nixon and G.W. Bush) have a negative excess return.

Insert figure I here

Furthermore, I replicate and extend the results from tables II and IV in SV (2003) and present them here in tables II a. and II b[6]. The outcomes in table II a. refer to the mean annual excess return VWR-TBL and EWR-TBL of the value-weighted and equal-weighted portfolios; the real returns VWR-INF and EWR-INF of the value-weighted and equal-weighted portfolios and the real interest rate TBL-INF for the Democratic and Republican administrations. % of Rep. Obs. is the number of observations under a Republican administration divided by the total number of observations. The statistics before the coefficients refer to the p-value of the test using Newey-West (1987) robust t-statistics, according to the AR values in table I. RR indicates a Republican period, DD a Democratic term and Diff. is the difference in returns between the two parties when governing.

The results in table II b. refer to the same output as table II a. but controlling for the following business cycle variables, as per SV (2003): the log dividend-price ratio (DP), default spread (DSP), term spread (TSP), inflation rate (INF), and relative interest rate (RIR). The generic regression that is run is given in equation 1. R_t refers to excess returns in period t, RR_{t-1} is the dummy variable for Republican with a one month lag; DD_{t-1} accordingly is the dummy for Democrats for t-1; and X_{t-1} is the set of control variables for the regressions that include them, also with a one month lag. Moreover, the results could be potentially explained by higher levels of Policy Uncertainty when the Democratic Party is in office. Thus, I

[6] The presidential period is defined as the time in office. The results are practically identical when using the period from one presidential election to the next one (See robustness analysis section for more details).

include $D.EPU_t = EPU_t - EPU_{t-1}$, the first difference for the Economic Policy Uncertainty Index, as an additional control variable. SV (2003) also use a one month lag, whereas Blinder and Watson (2016) use a one quarter lag, which is the smallest unit of time for their available data[7].

$$R_t = \alpha_1 RR_{t-1} + \alpha_2 DD_{t-1} + \alpha_3 X_{t-1} + \alpha_4 D.EPU_t + \in_t \quad (1)$$

Insert table IIa and IIb here

Tables II c. and d. are equivalent to tables II a. and b. but here the sample has been split into two halves. Similar, economically significant, results are obtained; however, not surprisingly, the power decreases. All the results in table II are consistent with stocks having higher excess returns during Democratic administrations.

Insert tables IIc and IId here

3.1 The Presidential Cycle in the U.S.

The presidential cycle lasts four years in the U.S., this is there are presidential elections every four years and the president can be reelected for only one additional period of four years[8]. The system includes indirect voting; however in the 20th and 21st centuries only two elected presidents lost the popular vote (G.W. Bush in the 2000 election and D. Trump in 2016); the main two political parties,

[7] The use of lags supposes that there is causality from politics to returns and as this is arguable, I also check the regressions without lags for the main results, leading to identical conclusions.
[8] This limitation in the re-election was incorporated in 1947 in the twenty-second Amendment to the United States Constitution.

the Democratic Party and the Republican Party, have won every presidential election since 1852.

In order to explore further the presidential puzzle in the U.S., I subdivide the whole sample in particularly convenient ways[9]. Firstly, I divide the sample into a Challenging party and an Incumbent party. The Challenging party is defined as the one for which the president's party is in its first period. For example, the predicate 'Challenging' applies to the first period of Obama that started in 2009, but not the first period of G.H.W Bush that started in 1989, since the latter followed the Reagan, Republican, period. 'Incumbent' party refers to the party already in the government in the previous term (e.g., G.H.W Bush's term, from 1989 to 1993). Table III shows that Incumbents have lower returns on average; however, the differences between Republicans and Democrats are similar for Incumbents and Challengers; thus, the results are not exclusive neither for Incumbents nor Challengers.

Insert table III

Similar to the previous case, I split the sample in Winning party and Losing party. The former is the one which is going to win the next presidential election and the latter is the one which is going to lose the next election. For example, the first

[9] The cataloging of the presidential periods in the following sections is based on the party in office. For example, for the unfinished presidential periods under Roosevelt, Kennedy, and Nixon, the president that follow them, for what is left of the presidential period, Truman, Johnson, and Ford, keep the classification from their predecessor.

period of Clinton (1993-1997) is classified as a Winning party but his second period in office is classified as Losing party (1997-2001), since the Democratic candidate in the 2000 election (Gore) lost that balloting. Table IV displays that Republican Winners have higher returns than Republican Losers. The difference between Republicans and Democrats is significant, statistically and economically, for losers.

Insert table IV

Another important issue is whether the difference in returns between different party presidencies is observed during the whole period or just in a specific period. SV (2003, p.1843) referring to the difference in prices claims "The difference grows gradually and almost homogeneously throughout the entire presidential cycle." In order to formally analyze the difference, the presidential period is divided in four: 1, 2, 3 and 4 years in office. In Contrast to SV (2003), the difference in returns is statistically significant only for the first year, with a noticeable annual difference of 18.66% for the Value Weighted Portfolio and 32.47% for the Equally Weighted Portfolio (table V). Nevertheless, the returns for the other sub periods are still higher for the periods when Democrats are in office.

Insert table V

A potential cause of the fact that there is no statistically significant difference for years 2 to 4 is the lack of power due to the reduction in the sample size. However, even adding the periods that should not be affected by presidential elections, years 2 and 3, there is no significant dissimilarity in the returns. For the

extreme case, adding year 2 to 4 of the presidential cycle, there is no statistically significant difference in returns between Republican and Democratic terms. (Table VI).

Insert table VI

The risk explanation of the presidential difference in returns implies a decrease in the price when a Democratic candidate becomes more likely to be elected and finally elected but a continuously increased return during the Democratic presidential period. A fact mostly ignored[10] in the previous literature is that these effects cannot be independent of the previous state, in other words, the returns should not be independent of the transition states from a Democratic president to a Republican one or vice-versa. In table VII the transition periods are reviewed. Panel A covers year 4 and panel B covers year 1 of the presidential term. Some remarkable results from panel A are that in year 4 of a Republican president when this party will end up losing the election (the RR to DD column) the returns are negative (-11.65% for VWR-TBL and -5.43% for EWR-TBL) but positive for when a Democratic is in office and will end up losing the election to a Republican (+7.82% for VWR-TBL and +15.16% for EWR-TBL). The difference is economically but not statistically significant, most likely because of the small size of the sample. Along the same lines, panel B shows that when a Democratic president is in office during the first year following a Republican president (the RR

[10] Pastor and Veronesi (2017) is an exception.

to DD column) the excess return is 25.8% for VWR-TBL and 48.39% for EWR-TBL. For the case of DD to RR the excess returns are -12.67% and -12.9% respectively, and therefore the difference is a significant, economically and statistically, an impressive 38.47% for the Value Weighted Return and (not a typo) 61.28% for the Equally Weighted Return.

Insert table VII

3.2 Size variation

Hensel and Ziemba (1995) find that the difference in returns was larger for small-cap stocks than for large-cap ones. Along the same lines, SV (2003) later find that the "size effect" is related to the presidential effect. In table VIII a. it can be seen that the effect is larger for the smallest firms but still significant in the biggest decile. Similarly, for $(DECj_t - VWR_t)$ in panel B, all deciles but the biggest have higher returns when democrats are in office, and the difference is significant for the five smallest deciles. However, in contrast with SV (2003), the effect almost completely disappears after controlling $DECj_t - TBL_t$ for the market premium, while only decile 2 still presents a significant difference between Democrats and Republicans at 10%, and totally disappears after controlling for the three Fama-French risk factors. In fact, Sy and Al Zaman (2011) claim that they have solved the presidential puzzle by taking the Fama-French risk factors into account by allowing betas to change in accordance with the governing party. I claim that time-varying betas, as in Sy and Al Zaman paper, are not necessary because the three

Fama-French factors already eliminate the significance of the difference. These results are shown in tables VIII c. and VIII d., respectively, and do not imply that there is no presidential puzzle.

Insert table VIII here

3.3 Industry variation

There is some folklore that relates industries with political parties in the U.S. Moreover; previous research has shown that some industries have an association with political parties (Republican or Democratic) See table IX for a summary of previous research.

Insert table IX here

In the current section, I let the data tell us what industries are more likely to be classified as either republican or democratic. The first results look at excess returns $(R_{it} - VWR_t)$, where R_{it} are log yearly returns of industry i from the Fama-French 30 industries (FF30) and VWR_t are log yearly returns on value-weighted portfolio. For FF30 the sample goes from 1927 to 2016.

Insert table X here

From table X, it is possible to observe that only seven industries of the FF30 in the period expanded from 1927 to 2016 are categorized as Republican industries: food, smoke (tobacco), util. (utilities), telcm. (communication), paper (business supplies and shipping containers). While whlsl. (wholesale) and other (everything

else not included in the other 29 industries) are categorized as Democratic. Then, in table XI, the sample is split into two halves. During the first half, the sign and difference are significant for all but the utilities industry; however, for the second half, only the differences for food and utilities are significant. Nevertheless, the sign is correct for all industries.

Insert table XI here

In a previous section, it was shown that the presidential puzzle is concentrated in year one of the presidential period. In the same vein (see table XII), most of the differences in returns for these industries occur during the first year. The differences in returns are significant for all industries but the "paper" industry during the first year and have the "correct" signs. For the food and smoke industries, the results are significant for years 1, 2 and 3. For the food, utilities, paper and wholesale industries the sign is the expected one for every year of the presidential cycle. For the communication and "other" industries, the expected sign is observed for 3 out of 4 periods. However, for the smoke industry, the negative difference in year four has a plausible economic explanation, the result is influenced by a remarkable excess to market return of 21.99% per year when the Democratic party in government loses the election against the Republican party, and therefore, is explained by the expectation of a better outcome given the fact that a Republican will be in office (see table XIII).

Insert table XII here

Insert table XIII here

In table XIII, for year 1, it is clear that there is a significant difference when the party in office shifts from Republican to Democratic versus from Democratic to Republican. For the Republican industries the change from DD to RR is good news, and therefore the negative difference of (RRtoDD – DDtoRR) is economically significant, the same applies to the positive difference for the Democratic industries.

The results can be interpreted as follows: some industries are more likely to benefit from a specific party being in office. The results in table XIII, panel B show that transitions from a Republican president to a Democratic president are followed by positive (negative) excess to market returns for all the industries categorized as Democratic (Republican) industries, and transitions from a Democratic government to a Republican government are followed by negative (positive) excess to market returns for all the industries categorized as Democratic (Republican) industries. However, it is clear and consistent with previous evidence (e.g. Roberts (1990), Stangl and Jacobsen (2007), Shon (2010)), that while a limited number of industries can be categorized as Republican or Democratic, most of the industries are neutral.

4. Election and post-election period and market reaction in the U.S.

For the presidential puzzle to be explainable by a risk factor implies that the market reaction after Democrats winning the presidential election is negative or at least comparatively small when Democrats win the election compared to when

Republican win the election. Moreover, we should observe that increases in the probability of Democrats winning the presidential election should be associated with a negative market reaction. These two facts are indeed observed in the U.S data.

4.1 Post-election market reaction

The most natural approach is to observe the market reaction the day after the election. The post-election market reaction is measured for one day because the event is well known and easily interpreted.[11] I analyze the market reaction using the following regression:

$$After\_Election\_Return_{(1\_day)} = \beta_1 Democratic + \beta_2 Republican + \in_t \quad (2)$$

The sample period runs from January 1927 to December 2016, covering 23 presidential elections, including 12 where the Democratic candidate wins and 11 where the Republican wins. The results are presented in table XIV, including the OLS and bootstrap approach to address the small sample issue.

Insert table XIV here

Coef. refers to the price impact coefficient the day after the election and diff. refers to OLS and bootstrap p-values for the test to detect whether returns after

[11] In fact, results are not significant for other periods (e.g. three days and one week).

a Democrat win are lower than after a Republican win. Even though the sample size is only 23, both are statistically significant at the 5% level. Additionally, the difference between the coefficients is economically significant and equal to 1.54% in one day.

In order to put that 1.54% in perspective with the 4-year presidential period, a novel approach is used that considers the price of contracts traded on the Iowa Electronic Markets (IEM), the Winner-Takes-All contract (WTA) for seven elections between 1992 and 2016. While the unconditional probability of any party winning the election is 50%[12], the price of this contract delivers a proxy of the conditional probability just before the Election Day. Remarkable, the likelihood of Clinton winning the popular vote in the 2016 election was 79.5% at the end of the day previous to the election. Accordingly, the market reaction given the information delivered on Election Day can be made comparable to the differential in excess return during the presidential period as follows:

Insert table XV here

From the information delivered on election day[13]: $\left(\frac{50\%}{100\%-95.9\%}\right) \times 1.54\% = 18.8\%$. The excess return for the 4-year presidential period: $(1 + 10.16\%)^4 - 1 = 47.26\%$ which is larger but at least of a comparable magnitude.

[12] Historically, the Democratic Party has won 52% of the elections between 1927 and 2016, and 44% of the elections between 1853 and 2016. All other elections were won by the Republican Party.
[13] The 1.54% corresponds to the 23 elections analyzed, if we consider only these 7 elections from 1992 to 2016, the differential in returns is 1.73%, and thus the total effect would be 21.1%. These

4.2 Election period market reaction

In order to explore the election period and the market reaction, the Iowa Electronic Market is used once more, specifically the Winner-Take-All (WTA) contracts for the seven elections periods between 1992 and 2016 for which the data is available. The advantage of this contract is that it naturally proxies for the probability of the party candidate winning the election. A potential drawback of this tactic is the lack of synchronicity in the closing price data[14] which is partially solved by using weekly data; a strategy usually applied when working with international trading data.

As expected for a risk explanation, and consistent with the previously shown results in table VII, an increase in the probability of winning the election by a Democratic candidate is associated with a decrease in stock prices. Conversely, there is a positive price reaction when the likelihood of the Republican candidate being elected increases. In table XVI, it is possible to observe that an increase in the probability of the Republican candidate winning the election equal to 10% is associated with a positive weekly excess return of 0.5% in that period. On the other hand, an increase of the same magnitude for a Democratic candidate is associated with a negative excess return equal to 0.86%. Last, under rational markets, it would

results are consistent with Brander (1991), Cheng (2005) and Bonilla et al. (2014), where small changes in the probability of winning an election produce significant changes in the market return. The main difference is that the previous articles explored only one election.

[14] The Iowa Electronic Market (IEM) is a continuously open market during the election period; however, the historical price is only available at the end of the day.

be expected that the market reactions are symmetric; that is increases and decreases should have similar impact on the prices, for example, if a 2% increase in the probability of a Republican winning the election has a price reaction of +1%, a decrease of 2% in the probability should be followed by a price reaction of approximately -1%. The results at the bottom of table XVI potentially reflect some irrationality, given the fact that an increase in the probability of the Democratic candidate winning the election equal to 10% is associated with a negative weekly excess return of 2.37% in that period, whereas an increase of the same magnitude is accompanied by a positive excess return equal to 0.66%. Similarly for a Republican candidate, there is a negative excess return of 2.5% for decreases in probabilitiy and a negative 0.02% for increases in their probability to become president. Only the negative market reactions are statistically significant.

Insert table XVI here

5. Factor-mimicking approach

The presidential puzzle has been continuously studied, especially after SV (2003); however, some important issues have been ignored. A natural question would be whether it is possible to construct a factor that is priced and mimics the exposure to the presidential cycle. In the following, I explore and compare the use of two different mimicking portfolio methods to construct a factor model that takes into consideration the exposure to the political cycle.

The two proposed models tested using the one-pass time series approach, obtaining the GRS F-statistics (Gibbons et al. 1989), and the two-pass approach (Fama and MacBeth, 1973). Moreover, in line with the Lewellen, Nagel and Shanken (2010) critique, I expand the set of test portfolios to the following Fama-French portfolios: i. 25 book to market (B/M) and size sorted portfolios, ii. 30 industry portfolios, iii. 25 B/M and size sorted portfolios + 30 industry portfolios (FF55), and iv. 49 industry portfolios[15].

5.1 Approach I: entire period – portfolio approach

This factor-mimicking portfolio that mimics the risk factor associated with Democratic or Republican presidencies follows Fama and French's approach (1993, 1996) for constructing returns based on zero-investment portfolios. Zero-investment portfolios are created using the 49 industry portfolios from Kenneth French's website, which differs from Fama-French using individual stocks, but which is used to reflect the popular belief and some previous research[16] that certain industries are more Republican or more Democratic. The 49 portfolios are split into three groups based on performance differences between Democratic and Republican governments, and according to Fama-French's approach, 16

[15] An additional risk factor might be unable to significantly improve the pricing of all groups of test assets. As highlighted from the mostly politically neutral industry portfolios, it is likely that typical test portfolios have low factor loading for the presidential factor. While Harvey, Liu, and Zhu (2015) claim that the hurdle for accepting new risk factors should be increased due to the data snooping issue, there are plausible arguments that support a presidential factor (e.g. empirically, SV (2003), and Addoum and Kumar (2016), and theoretically, Pastor and Veronesi (2017))

[16] For example, see table IX.

"Democratic" industries are held long and 16 "Republican" industries are shorted. The classification of the industries is showed in table XVII[17].

Insert table XVII here

5.2 Approach II: Maximum correlation portfolios approach

Following Breeden et al. (1989) and Lamont (2001), a factor that follows the news from the Iowa Electronic Market (IEM) futures prices is estimated.

$$\Delta WTA_t = c + b'X_t + \mu_t \quad (3)$$

Where: X_t is a vector of excess returns of the base assets. b' is a vector of weights in a zero investment portfolio. Thus the return given by $b'X_t$ will represent the factor that mimics the presidential factor. Note that in this case the base assets are the 25 B/M and size sorted portfolios plus the 30 industry portfolios from French's website.

5.3 Is the P-factor relevant in pricing the test assets?

In order to assess the relevance of the presidential factor (P-factor) it is necessary to examine the time series approach and the cross sectional approach. In particular, the following criteria are used: i. The time series mean absolute alpha should be

[17] A potential critique to this approach is the look-ahead bias due to the use of data that is not available to investors when creating the portfolios to construct the P-factor. In a different independent research, Addoum and Kumar (2016) solve this issue by using rolling windows of previous industry returns.

close to zero, and formally, ii. The F-GRS statistic should reject the hypothesis that the alphas differ from zero, iii. The estimated second pass intercept should be equal to zero, iv. The inclusion of the presidential factor should improve the adjusted R-square for the mean returns in the second pass, v. the presidential factor should be significant economically and statistically, and finally, vi. The magnitudes of the estimated risk premium should be similar across test assets, as a correct pricing model should be able to price any set of test assets[18].

Insert table XVIII here

As observed in table XVIII, the CAPM + P-factor (whole period) is the only model that passes the GRS-F criterion for at least one group of test assets. In the time series, the absolute value of the alphas has irregular results. The intercept for the cross section regression is significant with the exception of the CAPM + P-factor (whole period) for the FF49 industry portfolios, the CAPM + P-factor (maximum correlation portfolio) for the FF25 value and size sorted portfolios, and the standard CAPM for FF25 value and size sorted portfolios.

The inclusion of the presidential factor improves the adjusted R-square for the mean returns in the second pass relative to the CAPM for 3 out of 4 test asset groups for the CAPM + P-factor (whole period). In a similar vein, there is a noteworthy increase in the adjusted R-square for the FF25 test assets from 0.0846

[18] However, as mentioned in a previous footnote (13), it is hard to show if the P-factor betas slightly differ across test assets.

to 0.2143 (153%) and for the FF55 test assets from 0.1234 to 0.1745 (41%). Finally, the presidential factor is significant in approaches 1 and 2 for the FF25 and for approach 1 for the FF55 test assets.

6. Robustness Analysis

6.1 Quantile regression for the main results:

The main results of this paper may be suspected of being sensitive to outliers (e.g., the Hoover republican term). SV (2003) check the robustness of their results with a quantile regression[19] approach that I update for the difference in return between democratic and republican presidential periods, and expand for the market reaction with changes in the probability of a specific candidate winning the election[20].

6.1.1 Difference in returns between democratic and republican periods (as in SV 2003)

As previously reported in SV (2003), the results of the difference in returns between Democratic and Republican periods are robust. The results are not driven by extreme values in the distribution. The result remains significant, statistically and economically, for the central quantiles. For the Value Weighted Excess Return ($VWR - TBL$), quantiles 5 to 30 and 40 to 60 are significant, for the Value Weighted Real Return ($VWR - INF$), quantiles 40 to 60 are significant, for Equally

[19] For an introductory reference to quantile regressions see Koenker and Hallock (2001)
[20] Quantile analysis for market reaction after the election date is not meaningful given the only 23 observations in the sample.

Weighted Excess Return ($EWR - TBL$), quantiles 20 to 80 are significant, and finally, for Equally Weighted Real Return ($EWR - INF$), quantile 30 and quantiles 50 to 80 are significant. Therefore, the results are mostly driven by the central quantiles and not produced by extreme observations, as can be seen in figure II.

Insert figure II here

6.1.2 Market reaction to changes in the probability of a specific candidate winning the election

The result of the market reaction to changes in the probability of a specific candidate winning the election is robust even against the naïve hypothesis that the political effect on the direction of the market reaction exists but is unknown[21]. The result remains significant for the central quantiles 40 and 70, with the market reaction about -7% and significant at the 10% level for increases in the probability of the Democratic presidential candidate winning the election using WTA Democratic contracts. Therefore, the conclusions are not driven by extreme values. The quantile regression results are shown in figure III.

Insert figure III here

6.1.3 Quantile regression with persistent explanatory variable – Spurious regression

[21] It is known that the increase of the likelihood of Democratic candidates winning the presidential election has a negative effect in the stock market.

A potential issue with the main regression is that the results suffer from the spurious regression bias as the political dummies are highly persistent as highlighted by Powell et al. (2007). In order to answer this possible matter, I use Lee (2016) that provides a quantile regression results when the regressor is persistent with the IVX-QR estimation method. The p-values for the quantile regressions are shown in the Appendix A, and support the previous outcomes, that the main results are robust.

6.2 Additional control variables and changes in the presidential term definition

6.2.1 Adding GDP growth as control variable:

According to Blinder and Watson (2016) the performance of the economy in the U.S. is better according to GDP growth and Industrial Production growth when a Democratic president is in office. Consequently, it could be the case that the presidential effect is just a proxy for GDP affecting the stock returns. Table XIX shows the result for different specifications including demeaned GDP. Panel A covers the period between 1930 and 2016, and the results are economically and statistically significant (e.g., VWR-TBL 9.81%, significant at 1%). In panels B and C, the sample covers the period 1947 to 2016, for monthly and quarterly data. Results are still significant at the 5% and 10% levels of significance. Moreover, the GDP effect itself is only significant, at the 10% level, for the real interest rate case using monthly data.

Insert table XIX here

6.2.2 Change in the presidential term definition:

The presidential term was the classification used for the previous results. Note that if the uncertainty is solved after election and investors can forecast the policy of the winning party that would affect the stock markets, then it is possible to find similar effects by using the period between presidential elections, instead of the period when the president is in office. After this new definition is used, the results are still statistically and economically significant, indeed, they are nearly invariant, as shown in table XX.

Insert table XX here

6.3 Transition period: from election day to inauguration day

In this section, I analyze the behavior of the stock market during the period between the election and the time the president elected becomes the president in office for the period between 1927 and 2017. This period covers 23 elections. Overall, the excess returns are higher for the period when the Republican candidate wins the election (+2.5%) in comparison with when the Democratic contestant wins the balloting (+0.4%).

Moreover, the results indicate negative (positive) returns for transitions from a Republican (Democratic) president to a Democratic (Republican) government [-3.3% vs +1.1%]. The highest returns for the transition to a Republican are for the 1952 election with +7.2% for the period, when Eisenhower

(Republican) defeated Stevenson (Democrat) and in the 2016 election with +7.6% for the period, when Trump (Republican) defeated Clinton (Democrat). In contrast, the lowest return for the transition to a Democratic is in the 2008 election with a negative 18.7%, when Obama (Democrat) overcame McCain (Republican). Nonetheless, none of the differences are statistically significant.

6.4 Data mining.

As data mining can be a concern, I explore the period that comes after the sample of SV (2003), that is between 1999 and 2016. Results mostly holds, the expected sign is observed in all the regressions, the magnitude for the period is like the whole sample, however, some regressions lack of power due to the short sample. The results are included in the Appendix B.

6.5 Is there an endogeneity problem?

A topic that has been mentioned several times as a potential issue but has not been exhaustively addressed[22] is the conceivable endogeneity due to reverse causality and/or simultaneity. So far, the literature in this area has assumed that the party affiliation of the president in office causes through some unspecific policy the differential in returns. Nevertheless, it could be the case that bad performance of markets causes a specific outcome in the election, explaining the differences in the returns for republican/democratic presidential terms.

[22] A remarkable exception is Snowberg et al. (2007).

An unsophisticated approach to mitigate this concern is to estimate a simple bivariate VAR model for the probability of a party winning the election, using WTA contracts and market returns. As for the number of lags, one lag is selected according to the Akaike Information Criterion (AIC). The results are as follow: for the market excess return Granger-causing changes in the probability of the democratic candidate being elected the $\chi^2 = 0.083 \ \ (p - value = 0.773)$, and for the probability of the democratic candidate winning the election Granger-causing the market excess return the $\chi^2 = 2.379 (\ p - value = 0.123)$. The evidence is weak; however, it favors the most common specification to assume that the political variable is the one that affect the market returns.

6.6 What is the source of risk?

A question that remains partially unanswered is the source of the identified risk premium. A potential response is that political uncertainty is the underlying foundation of this risk premium (e.g., Pastor and Veronesi, 2013 and Kelly et al., 2016) and the political party in office is correlated with it. In order to measure political uncertainty, the Economic Policy Uncertainty (EPU) from Baker et al. (2016) is used. There are several particularly attractive features of this index: first, it has been cleared of potential partisan bias; second, there is a historical index that allows covering the whole period investigated in this article; and lastly, it also has been extensively used by practitioners and researchers, including the work of Brogaard and Detzel (2015) that shows that the index forecasts excess returns.

The first outcome is that inclusion of this index, even though the variable itself is significant, does not change the main results, and as shown in table II panels B and D, the risk premium differential is still about 10%. In addition, the results in table XXI, panel A shows that the EPU is higher during Democratic terms, when defined as the period when the president is in office (EPU_a), and for the period between elections (EPU_b). Moreover, the differential is negative, that is higher during the Democratic terms, for all the years of the presidential cycle (years 1 to 4). However, it is statistically significant for year 2 and 3 only. In panel B observe that, consistent with the risk premium explanation, the transition in year 4 from a Republican to a Democratic president is associated with a higher EPU than transitions from a Democratic to a Republican president. On the other hand, in the first year of the presidential cycle, the differences in EPU are only significant when there is no transition; however, the sign of the coefficient is always as expected based on the risk explanation. Summarizing, these results are consistent with the risk explanation, but not very strong.

Insert table XXI here

7. Discussion, Conclusion and Further Research

The strong evidence of higher excess returns under Democratic governments in the U.S. compared with Republican governments is robustly confirmed. The present study adds to the evidence that this differential is consistent with a risk factor explanation. The differences in returns are remarkable during the first year and

turnover between parties in office shows impressive differences in returns; for example, a more than 60% difference in the Equally Weighted Return (EWR) for a transition from Republican to Democratic.

Along the same lines, pre- and post-election market reactions seem to support the risk explanation, though they do not provide guidance about the source of the risk. The size link with the presidential puzzle is confirmed and the industry relation seems partial, confined to only a few industries.

The presidential factors presented show some improvement relative to the familiar CAPM and Fama-French 3-factor models. The main drawback is that the added factor does not improve the original base model in every scenario, but for many of the cases enhancement is observed.

Finally, even though there has been increasing research related to the political effect in asset returns, many issues are still unexplored or lack strong empirical evidence. One issue still partially unexplored is the international evidence; some research has shown that the presidential puzzle is not universal, but only focuses on OECD countries, mostly with a parliamentary system. It seems that developing countries with strong presidential systems are a perfect place to test a left/right wing effect. Another issue that has been incompletely addressed is the endogeneity, as it is not fully clear that the president affects stock returns or if there is some reverse causality or simultaneity. In this vein, Pastor and Veronesi (2017) bring some insight by developing a model that explains election outcomes and stock

returns by individuals' time-varying risk aversion. Last, the factor mimicking approach used can be improved and alternative specifications can provide robustness as more/better data become available. The same opportunities for improvement apply for measures of political uncertainty.

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Tables Table I Summary Statistics of Financial and Control Variables

This table reports average (Mean), standard deviation (Std. Dev.) and autoregressive coefficient (A.R.) of a selected group of financial and economic variables. Returns are calculated in logarithmic form and expressed in annualized percentages. VWR and EWR are Value Weighted Return and Equally Weighted Return from CRSP. TBL is the 3-month Treasury Bill interest rate. INF is the Consumer Price Index variation. $DECj_t$, for $j = 1 \ldots 10$ refers to the Fama-French Size portfolios. The control variables are: the annualized log dividend to price ratio (DP), Default Spread (DSP), Term Spread (TSP), Inflation (INF), Relative Interest Rate (RIR), Economic Policy Uncertainty Index (EPU), and GDP growth (GDP). (*) GDP growth is annual from 1930 and quarterly from 1947.

	1927:01-2016:12 (1,080 obs)			1927:01-1971:12 (540 obs)			1972:01-2016:12 (540 obs)		
Series	Mean	Std.Dev.	A.R.	Mean	Std.Dev.	A.R.	Mean	Std.Dev.	A.R.
VWR-TBL	5.90	18.67	0.11	6.78	21.25	0.12	5.03	15.68	0.08
VWR-INF	6.36	18.70	0.10	6.96	21.23	0.12	5.76	15.78	0.08
EWR-TBL	8.55	25.12	0.19	10.10	29.81	0.17	7.00	19.32	0.22
EWR-INF	9.00	25.10	0.19	10.28	29.77	0.17	7.72	19.33	0.21
TBL-INF	0.45	1.83	0.47	0.18	2.27	0.45	0.73	1.23	0.55
DEC1-TBL	8.48	34.68	0.20	10.95	44.13	0.18	6.02	21.36	0.23
DEC2-TBL	7.61	29.05	0.16	9.08	35.36	0.16	6.13	20.93	0.14
DEC3-TBL	8.12	25.66	0.18	9.17	30.74	0.20	7.07	19.32	0.13
DEC4-TBL	7.99	25.85	0.16	9.61	30.56	0.18	6.36	20.09	0.12
DEC5-TBL	7.72	23.09	0.14	8.35	26.99	0.14	7.09	18.42	0.12
DEC6-TBL	8.06	21.60	0.14	9.34	25.54	0.15	6.77	16.79	0.12
DEC7-TBL	7.45	22.35	0.13	8.00	25.94	0.13	6.90	18.09	0.12
DEC8-TBL	7.20	19.12	0.11	8.04	21.61	0.12	6.37	16.28	0.10
DEC9-TBL	6.68	18.03	0.11	7.18	20.82	0.11	6.17	14.73	0.11
DEC10-TBL	5.56	15.70	0.08	6.38	17.47	0.11	4.74	13.71	0.03

DP	-3.50	0.21	0.08	-3.31	0.24	-0.20	-3.68	0.15	0.30
DSP	1.06	0.20	0.98	1.11	0.25	0.98	1.01	0.13	0.96
TSP	1.50	0.33	0.96	1.33	0.27	0.98	1.67	0.37	0.96
INF	2.88	1.85	0.49	1.85	2.21	0.42	3.92	1.32	0.61
RIR	-0.02	0.25	0.91	0.01	0.17	0.90	-0.05	0.32	0.91
EPU	121.25	50.83	0.82	101.84	53.75	0.86	140.67	39.08	0.66
GDP_A (*)	3.34	4.94	0.57						
GDP_Q (*)	3.22	7.81	0.37						

Table II Panels A to D Average Returns under Republican and Democratic Presidents

Panel A shows average mean excess and real returns of Value Weighted (VWR-TBL, VWR-INF) and Equally Weighted portfolios (EWR-TBL, EWR-INF), and the real interest rate (TBL-INF), during Republican (RR) and Democratic (DD) presidential periods. Returns are annualized. The first row represents the coefficients; the second row reports the p-value using Newey-West (1987) heteroscedasticity and serial-correlation robust t-statistics. The Diff column shows the difference in returns between Republican and Democratic terms. % of Rep. Obs. denotes the percentage of the total observations that occurs during a Republican presidential term. Panel B shows the same variables but also control for business cycle variables: the annualized log dividend to price ratio (DP), Default Spread (DSP), Term Spread (TSP), Inflation (INF), Relative Interest Rate (RIR) and the first difference for Economic Policy Uncertainty (D.EPU) Index. Control variables are demeaned. Panels C and D subdivide into two subsamples the results from panel A and B respectively.

A. Average Returns under Republican and Democratic Presidents

	1927:01-2016:12 (1,080 obs)		
	RR	DD	Diff
VWR-TBL	0.51	10.68	-10.16
	0.88	0.00	0.01
VWR-INF	2.67	9.60	-6.93
	0.43	0.00	0.10
EWR-TBL	0.60	15.56	-14.96
	0.89	0.00	0.01
EWR-INF	2.75	14.48	-11.73
	0.51	0.00	0.03
TBL-INF	2.15	-1.08	3.23
	0.00	0.00	0.00
% of Rep. Obs		47%	

B. Average Returns under Republican and Democratic Presidents Controlling for: log(D/P), Default spread, Term spread, inflation, relative interest rate and D.EPU			
	1927:01-2016:12 (1,080 obs)		
	RR	DD	Diff
VWR-TBL	-0.19	11.38	-11.57
	0.95	0.00	0.00
VWR-INF	1.56	10.66	-9.10
	0.59	0.00	0.02
EWR-TBL	-1.31	17.35	-18.66
	0.72	0.00	0.00
EWR-INF	0.44	16.63	-16.19
	0.90	0.00	0.00
TBL-INF	1.75	-0.72	2.48
	0.00	0.01	0.00
% of Rep. Obs		47%	

C. Average Returns under Republican and Democratic Presidents

	1927:01-1971:12 (540 obs)			1972:01-2016:12 (540 obs)		
	RR	DD	Diff	RR	DD	Diff
VWR-TBL	0.75	10.47	-9.72	0.25	10.97	-10.71
	0.91	0.00	0.19	0.94	0.00	0.03
VWR-INF	4.13	8.65	-4.52	1.57	10.94	-9.37
	0.52	0.02	0.54	0.66	0.00	0.05
EWR-TBL	-1.14	16.93	-18.07	1.40	13.63	-12.23
	0.89	0.00	0.06	0.76	0.00	0.05
EWR-INF	2.24	15.11	-12.87	2.71	13.60	-10.88
	0.78	0.01	0.18	0.56	0.00	0.08
TBL-INF	3.38	-1.82	5.20	1.32	-0.03	1.35
	0.00	0.00	0.00	0.00	0.92	0.00
% of Rep. Obs		38%		54%		

D. Average Returns under Republican and Democratic Presidents Controlling for: log(D/P), Default spread, Term spread, inflation, relative interest rate and D.EPU

	1927:01-1971:12 (540 obs)			1972:01-2016:12 (540 obs)		
	RR	DD	Diff	RR	DD	Diff
VWR-TBL	-1.12	11.62	-12.75	-1.24	13.02	-14.26
	0.84	0.01	0.08	0.70	0.00	0.00
VWR-INF	0.30	11.00	-10.70	0.04	13.04	-13.00
	0.96	0.01	0.14	0.99	0.00	0.00
EWR-TBL	-5.47	19.58	-25.05	-1.73	17.79	-19.52
	0.44	0.00	0.01	0.68	0.00	0.00
EWR-INF	-4.05	18.96	-23.01	-0.44	17.81	-18.25
	0.57	0.00	0.02	0.91	0.00	0.00
TBL-INF	1.42	-0.63	2.04	1.28	0.02	1.26
	0.00	0.08	0.00	0.00	0.94	0.00
% of Rep. Obs		38%		54%		

Table III Average Returns under Republican and Democratic Presidents: Challenging and Incumbent Party

This table reports average mean excess and real returns of Value Weighted (VWR-TBL, VWR-INF) and Equally Weighted portfolios (EWR-TBL, EWR-INF), and the real interest rate (TBL-INF), during Republican (RR) and Democratic (DD) presidential periods. Returns are annualized. Challenging party refers to when the president party is in the first period after another party term. Incumbent party refers to when the party was already in the government in the previous term. The first row represents the coefficients; the second row reports the p-value using Newey-West (1987) heteroscedasticity and serial-correlation robust t-statistics. The Diff column shows the difference in returns between Republican and Democratic terms. % of Rep. Obs. denotes the percentage of the total observations that occurs during a Republican presidential term.

Average Returns under Republican and Democratic Presidents

	Challenging party			Incumbent party		
	RR	DD	Diff	RR	DD	Diff
VWR-TBL	4.46	14.73	-10.27	-1.92	7.78	-9.70
	0.25	0.00	0.07	0.69	0.01	0.09
VWR-INF	6.02	14.26	-8.24	0.60	6.27	-5.67
	0.13	0.00	0.15	0.90	0.05	0.32
EWR-TBL	6.40	21.67	-15.27	-2.98	11.18	-14.16
	0.22	0.00	0.06	0.62	0.01	0.06
EWR-INF	7.96	21.20	-13.24	-0.46	9.67	-10.13
	0.13	0.00	0.10	0.94	0.03	0.17
TBL-INF	1.56	-0.47	2.03	2.52	-1.51	4.03
	0.00	0.17	0.00	0.00	0.00	0.00
% of Rep. Obs		45%		52%		

Table IV Average Returns under Republican and Democratic Presidents: Winning and Losing Party

This table reports average mean excess and real returns of Value Weighted (VWR-TBL, VWR-INF) and Equally Weighted portfolios (EWR-TBL, EWR-INF), and the real interest rate (TBL-INF), during Republican (RR) and Democratic (DD) presidential periods. Returns are annualized. Winning party refers to the one which is going to win the next presidential election. Losing party refers to the one which is going to lose the next presidential election. The first row represents the coefficients; the second row reports the p-value using Newey-West (1987) heteroscedasticity and serial-correlation robust t-statistics. The Diff column shows the difference in returns between Republican and Democratic terms. % of Rep. Obs. denotes the percentage of the total observations that occurs during a Republican presidential term.

Average Returns under Republican and Democratic Presidents

	Winning party			Losing party		
	RR	DD	Diff	RR	DD	Diff
VWR-TBL	7.50	11.39	-3.90	-7.17	9.67	-16.83
	0.03	0.00	0.44	0.22	0.00	0.01
VWR-INF	9.62	9.53	0.10	-4.98	9.71	-14.69
	0.01	0.01	0.99	0.38	0.00	0.02
EWR-TBL	7.65	15.95	-8.29	-7.16	15.01	-22.17
	0.09	0.00	0.24	0.33	0.00	0.01
EWR-INF	9.78	14.08	-4.30	-4.97	15.05	-20.02
	0.03	0.01	0.54	0.49	0.00	0.02
TBL-INF	2.12	-1.87	3.99	2.19	0.04	2.15
	0.00	0.00	0.00	0.00	0.90	0.00
% of Rep. Obs		44%		50%		

Table V Average Returns under Republican and Democratic Presidents along the Presidential Term

The table reports average mean excess and real returns of Value Weighted (VWR-TBL, VWR-INF) and Equally Weighted portfolios (EWR-TBL, EWR-INF), and the real interest rate (TBL-INF), during Republican (RR) and Democratic (DD) presidential periods. Returns are annualized. Year 1 to year 4 refers to the year in the presidential term. The first row represents the coefficients; the second row reports the p-value using Newey-West (1987) heteroscedasticity and serial-correlation robust t-statistics. The Diff column shows the difference in returns between Republican and Democratic terms. % of Rep. Obs. denotes the percentage of the total observations that occurs during a Republican presidential term.

	Year 1			Year 2			Year 3			Year 4		
	RR	DD	Diff	RR	DD	Diff	RR	DD	Diff	RR	DD	Diff
VWR-TBL	-6.63	12.03	-18.66	3.90	8.35	-4.45	3.55	11.81	-8.26	0.92	10.52	-9.60
	0.24	0.05	0.03	0.55	0.14	0.61	0.57	0.00	0.26	0.91	0.01	0.28
VWR-INF	-5.12	11.12	-16.25	6.23	6.06	0.17	6.14	10.72	-4.58	3.06	10.52	-7.46
	0.37	0.07	0.05	0.35	0.29	0.98	0.32	0.01	0.53	0.69	0.01	0.40
EWR-TBL	-10.11	22.36	-32.47	3.18	7.59	-4.41	7.69	16.97	-9.28	0.95	15.35	-14.40
	0.15	0.02	0.01	0.70	0.30	0.69	0.33	0.00	0.34	0.92	0.01	0.21
EWR-INF	-8.59	21.46	-30.05	5.51	5.30	0.21	10.28	15.88	-5.59	3.09	15.35	-12.26
	0.22	0.02	0.01	0.51	0.48	0.99	0.18	0.01	0.56	0.75	0.01	0.28
TBL-INF	1.51	-0.91	2.42	2.33	-2.29	4.62	2.59	-1.10	3.69	2.15	0.00	2.14
	0.00	0.16	0.00	0.00	0.01	0.00	0.00	0.05	0.00	0.00	0.99	0.00
% of Rep. Obs.	45%			46%			48%			48%		

Table VI Average Returns under Republican and Democratic Presidents along the Presidential Term per grouped years

The table reports average mean excess and real returns of Value Weighted (VWR-TBL, VWR-INF) and Equally Weighted portfolios (EWR-TBL, EWR-INF), and real the interest rate (TBL-INF), during Republican (RR) and Democratic (DD) presidential periods. Returns are annualized. Years refer to one of the four year during a presidential term. The first row represents the coefficients; the second row reports the p-value using Newey-West (1987) heteroscedasticity and serial-correlation robust t-statistics. The Diff column shows the difference in returns between Republican and Democratic terms. % of Rep. Obs. denotes the percentage of the total observations that occurs during a Republican presidential term.

Average Returns under Republican and Democratic Presidents

	Years 1, 2 & 3			Years 2, 3 & 4			Year 2 & 3		
	RR	DD	Diff	RR	DD	Diff	RR	DD	Diff
VWR-TBL	0.37	10.73	-10.36	2.76	10.23	-7.47	3.72	10.08	-6.37
	0.92	0.00	0.03	0.49	0.00	0.12	0.41	0.00	0.26
VWR-INF	2.53	9.30	-6.77	5.11	9.09	-3.98	6.19	8.39	-2.21
	0.48	0.00	0.15	0.20	0.00	0.41	0.17	0.02	0.70
EWR-TBL	0.47	15.63	-15.15	3.96	13.30	-9.33	5.53	12.28	-6.75
	0.92	0.00	0.02	0.44	0.00	0.14	0.34	0.01	0.36
EWR-INF	2.63	14.20	-11.56	6.32	12.16	-5.85	8.00	10.59	-2.59
	0.56	0.00	0.07	0.21	0.00	0.35	0.16	0.03	0.73
TBL-INF	2.16	-1.43	3.59	2.36	-1.13	3.49	2.47	-1.69	4.16
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
% of Rep. Obs	47%			46%			47%		

Table VII Average Returns under Republican and Democratic Presidents: Transition Years

The table reports average mean excess and real returns of Value Weighted (VWR-TBL, VWR-INF) and Equally Weighted portfolios (EWR-TBL, EWR-INF), and the real interest rate (TBL-INF), during Republican (RR) and Democratic (DD) presidential periods. Returns are annualized. (1), (2), (3), (4) are column identifiers, and in the next columns, differences between these columns are reported. The first row represents the coefficients; the second row reports the p-value using Newey-West (1987) heteroscedasticity and serial-correlation robust t-statistics. # of Obs. denotes the number of observations. Panel A. reports year 4 and panel B reports year 1 of the presidential term.

A. Average Returns for Year 4

	(1)	(2)	(3)	(4)	Differences					
	RR to DD	DD to RR	RR to RR	DD to DD	(1)-(2)	(1)-(3)	(1)-(4)	(2)-(3)	(2)-(4)	(3)-(4)
VWR-TBL	-11.65	7.82	11.39	12.38	-19.46	-23.04	-24.03	-3.57	-4.57	-1.00
	0.47	0.25	0.02	0.02	0.27	0.17	0.16	0.67	0.60	0.89
VWR-INF	-9.05	8.18	13.15	12.14	-17.23	-22.20	-21.18	-4.97	-3.95	1.01
	0.57	0.23	0.01	0.02	0.31	0.18	0.20	0.56	0.65	0.89
EWR-TBL	-5.43	15.16	6.26	15.48	-20.59	-11.69	-20.91	8.90	-0.32	-9.22
	0.79	0.14	0.29	0.03	0.37	0.58	0.34	0.45	0.98	0.32
EWR-INF	-2.83	15.53	8.02	15.23	-18.35	-10.85	-18.06	7.50	0.29	-7.21
	0.89	0.13	0.18	0.03	0.42	0.61	0.40	0.52	0.98	0.43
TBL-INF	2.60	0.37	1.76	-0.25	2.23	0.84	2.85	-1.40	0.61	2.01
	0.02	0.46	0.00	0.71	0.07	0.51	0.03	0.06	0.45	0.02
# of Obs.	60	58	72	84						

B. Average Returns for Year 1

	(1)	(2)	(3)	(4)	Differences					
	RR to DD	DD to RR	RR to RR	DD to DD	(1)-(2)	(1)-(3)	(1)-(4)	(2)-(3)	(2)-(4)	(3)-(4)
VWR-TBL	25.80	-12.67	-3.46	5.99	38.47	29.26	19.81	-9.21	-18.66	-9.45
	0.04	0.12	0.66	0.34	0.01	0.04	0.15	0.42	0.07	0.35
VWR-INF	24.59	-10.60	-2.17	5.15	35.19	26.75	19.43	-8.44	-15.76	-7.32
	0.04	0.20	0.78	0.43	0.02	0.07	0.16	0.46	0.13	0.47
EWR-TBL	48.39	-12.90	-10.86	8.89	61.28	59.25	39.50	-2.03	-21.79	-19.75
	0.02	0.23	0.24	0.30	0.01	0.01	0.07	0.89	0.11	0.12
EWR-INF	47.17	-10.83	-9.57	8.06	58.00	56.74	39.12	-1.26	-18.88	-17.62
	0.02	0.32	0.30	0.36	0.01	0.01	0.07	0.93	0.18	0.17
TBL-INF	-1.21	2.07	1.29	-0.83	-3.28	-2.51	-0.38	0.77	2.90	2.13
	0.18	0.00	0.06	0.36	0.00	0.03	0.77	0.39	0.01	0.06
# of Obs.	60	47	72	84						

Table VIII Average Returns of Portfolios Formed on Size under Republican and Democratic Presidents

This table reports average mean excess returns of 10 size portfolios ($DECj_t$, for $j = 1 \ldots 10$) from Kenneth French's website during Republican (RR) and Democratic (DD) presidential periods. Panels A, C and D refer to returns in excess of TBL, and panel B refers to returns in excess of VWR. Returns are annualized. The first row represents the coefficients; the second row reports the p-value using Newey-West (1987) heteroscedasticity and serial-correlation robust t-statistics. The Diff column shows the difference in returns between Republican and Democratic terms. Panel A reports the baseline regression without any control variable for $DECj_t, -TBL_t$, panel C reports results controlling for market excess returns and panel D controls for the three Fama-French factors.

A. Average Returns of Size-Decile under Republican and Democratic Presidents (Without Controlling for Market Returns)

	1927:01-2016:12 (1,080 obs)		
	RR	DD	Diff
DEC1-TBL	-1.67	17.43	-19.10
(small)	0.74	0.00	0.01
DEC2-TBL	-2.44	16.47	-18.90
	0.60	0.00	0.00
DEC3-TBL	-0.54	15.77	-16.31
	0.91	0.00	0.01
DEC4-TBL	0.17	14.85	-14.67
	0.97	0.00	0.01
DEC5-TBL	0.17	14.41	-14.24
	0.97	0.00	0.01
DEC6-TBL	1.57	13.75	-12.18
	0.69	0.00	0.02
DEC7-TBL	1.17	12.97	-11.80
	0.76	0.00	0.02
DEC8-TBL	1.34	12.38	-11.04
	0.72	0.00	0.02
DEC9-TBL	0.96	11.73	-10.76
	0.79	0.00	0.02
DEC10-TBL	0.70	9.87	-9.17
(big)	0.82	0.00	0.02

B. Average Returns of Size-Decile under Republican and Democratic Presidents

	1927:01-2016:12 (1,080 obs)		
	RR	DD	Diff
DEC1-VWR	-2.18	6.76	-8.93
(small)	0.40	0.04	0.04
DEC2-VWR	-2.95	5.79	-8.74
	0.16	0.03	0.01
DEC3-VWR	-1.05	5.09	-6.15
	0.56	0.01	0.02
DEC4-VWR	-0.34	4.17	-4.51
	0.83	0.02	0.05
DEC5-VWR	-0.34	3.74	-4.08
	0.78	0.01	0.03
DEC6-VWR	1.06	3.08	-2.01
	0.36	0.01	0.24
DEC7-VWR	0.66	2.29	-1.63
	0.49	0.03	0.24
DEC8-VWR	0.83	1.71	-0.88
	0.33	0.02	0.43
DEC9-VWR	0.45	1.05	-0.60
	0.48	0.04	0.46
DEC10-VWR	0.19	-0.81	0.99
(big)	0.73	0.10	0.17

C. Average Returns of Size-Decile under Republican and Democratic Presidents (Controlling for Market Returns)

	1927:01-2016:12 (1,080 obs)		
	RR	DD	Diff
DEC1-TBL	-2.35	3.26	-5.60
(small)	0.33	0.27	0.15
DEC2-TBL	-3.12	2.17	-5.30
	0.11	0.31	0.07
DEC3-TBL	-1.20	1.97	-3.17
	0.45	0.25	0.17
DEC4-TBL	-0.46	1.77	-2.22
	0.76	0.22	0.28
DEC5-TBL	-0.45	1.45	-1.90
	0.68	0.23	0.25
DEC6-TBL	0.97	1.14	-0.17
	0.36	0.27	0.91
DEC7-TBL	0.59	0.80	-0.21
	0.53	0.38	0.87
DEC8-TBL	0.78	0.62	0.15
	0.33	0.37	0.88
DEC9-TBL	0.42	0.44	-0.02
	0.49	0.39	0.98
DEC10-TBL	0.23	-0.05	0.28
(big)	0.64	0.91	0.67

D. Average Returns of Size-Decile under Republican and Democratic Presidents (Controlling for 3 Fama-French factors)

	1927:01-2016:12 (1,080 obs)		
	RR	DD	Diff
DEC1-TBL	-4.54	-3.11	-1.42
(small)	0.00	0.02	0.43
DEC2-TBL	-4.42	-2.79	-1.62
	0.00	0.00	0.16
DEC3-TBL	-2.18	-2.02	-0.16
	0.00	0.00	0.86
DEC4-TBL	-1.25	-1.72	0.47
	0.06	0.00	0.58
DEC5-TBL	-0.88	-1.28	0.40
	0.11	0.02	0.60
DEC6-TBL	0.30	-0.99	1.29
	0.66	0.11	0.15
DEC7-TBL	0.23	-0.83	1.06
	0.74	0.19	0.24
DEC8-TBL	0.44	-0.42	0.85
	0.50	0.45	0.31
DEC9-TBL	-0.06	-0.09	0.03
	0.91	0.83	0.96
DEC10-TBL	0.28	0.76	-0.48
(big)	0.37	0.00	0.23

Table IX: Industry and party association in previous literature

This table shows some previous research and the classification of industries, either hypothesized or concluded, as favored by the Republican or Democratic Party.

	Republican Industries	**Democratic Industries**
Belo, Gala and Li (2013)	Low exposure to government spending (e.g. Bowling centers, Tobacco product manufacturing, Breweries)	High exposure to government spending (e.g. Guided missile and space vehicle manufacturing, Shipbuilding and repairing, Oil and gas extraction)
Di Giuli and Kostovetsky (2014)	Petroleum, Natural Gas	Software
Hong and Kostovetsky (2012)	Tobacco, Guns and Defense Firms, Natural Resources.	Alcohol and Gaming (hypothesized)
Roberts (1990)	Defense	-
Shon (2010)	Real estate, Investment, Oil & Gas. Livestock, Forestry, Tobacco.	TV, Music, Movies
Stangl and Jacobsen (2007)	Examples: Tobacco, food products.	Examples: Healthcare, Aircrafts.

Table X: Excess to market returns for 30FF industry portfolios and party association

This table reports the excess relative to market return of the 30 Fama-French industry portfolios during Republican (RR) and Democratic (DD) presidential periods. Returns are annualized. The first row represents the coefficients; the second row reports the p-value using Newey-West (1987) heteroscedasticity and serial-correlation robust t-statistics. The Diff column shows the difference in returns between Republican and Democratic terms.

Average Returns of 30FF industries under Republican and Democratic Presidents				**Average Returns of 30FF industries under Republican and Democratic Presidents**				**Average Returns of 30FF industries under Republican and Democratic Presidents**			
	1927:01-2016:12 (1,080 obs)				1927:01-2016:12 (1,080 obs)				1927:01-2016:12 (1,080 obs)		
	RR	DD	Diff		RR	DD	Diff		RR	DD	Diff
food-VWR	5.48	-2.71	8.19	cnstr-VWR	-1.34	-0.44	-0.90	telcm-VWR	2.91	-2.99	5.91
	0.00	0.08	0.00		0.39	0.78	0.68		0.13	0.08	0.02
beer-VWR	2.65	1.55	1.11	steel-VWR	-2.89	-2.05	-0.84	servs-VWR	-1.09	2.51	-3.60
	0.28	0.55	0.75		0.29	0.34	0.81		0.74	0.50	0.47
smoke-VWR	8.57	-2.55	11.12	fabpr-VWR	-1.52	1.44	-2.96	buseq-VWR	0.06	2.23	-2.17
	0.00	0.35	0.00		0.38	0.35	0.20		0.98	0.21	0.40
games-VWR	-3.56	1.83	-5.39	elceq-VWR	0.89	1.82	-0.93	paper-VWR	3.29	-0.63	3.91
	0.28	0.50	0.21		0.68	0.24	0.72		0.03	0.68	0.07
books-VWR	-2.12	-1.07	-1.04	autos-VWR	-2.80	2.10	-4.89	trans-VWR	-2.31	-0.12	-2.19
	0.34	0.59	0.72		0.27	0.33	0.14		0.29	0.95	0.43
hshld-VWR	0.86	-1.05	1.92	carry-VWR	-1.64	2.87	-4.51	whlsl-VWR	-7.11	2.69	-9.81
	0.64	0.52	0.44		0.45	0.20	0.15		0.01	0.18	0.00
clths-VWR	-0.46	-0.40	-0.06	mines-VWR	-1.46	-1.95	0.49	rtail-VWR	2.15	-0.19	2.34
	0.87	0.84	0.99		0.64	0.43	0.90		0.23	0.90	0.32
hlth-VWR	3.14	0.38	2.77	coal-VWR	-2.34	-3.59	1.25	meals-VWR	1.36	0.35	1.01
	0.10	0.83	0.28		0.60	0.38	0.84		0.54	0.87	0.75
chems-VWR	1.77	0.01	1.76	oil-VWR	0.71	1.07	-0.36	fin-VWR	-1.63	1.90	-3.52
	0.28	1.00	0.42		0.77	0.55	0.91		0.36	0.16	0.11
txtls-VWR	-3.24	1.26	-4.51	util-VWR	3.09	-3.80	6.89	other-VWR	-5.15	0.26	-5.42
	0.23	0.59	0.21		0.12	0.06	0.01		0.01	0.88	0.05

Table XI: Excess relative to market returns for selected industries from the 30FF industry portfolios and party association for two sub-sample periods

This table reports the excess relative to market return of a selected group of industries from the 30 Fama-French industry portfolios during Republican (RR) and Democratic (DD) presidential periods for the whole sample and two subsamples. Returns are annualized. The first row represents the coefficients; the second row reports the p-values using Newey-West (1987) heteroscedasticity and serial-correlation robust t-statistics. The Diff column shows the difference in returns between Republican and Democratic terms.

Average Returns of 30FF industries under Republican and Democratic Presidents			
	1927:01-2016:12 (1.080 obs)		
	RR	DD	Diff
food-VWR	5.48	-2.71	8.19
	0.00	0.08	0.00
smoke-VWR	8.57	-2.55	11.12
	0.00	0.35	0.00
util-VWR	3.09	-3.80	6.89
	0.12	0.06	0.01
telcm-VWR	2.91	-2.99	5.91
	0.13	0.08	0.02
paper-VWR	3.29	-0.63	3.91
	0.03	0.68	0.07
whlsl-VWR	-7.11	2.69	-9.81
	0.01	0.18	0.00
other-VWR	-5.15	0.26	-5.42
	0.01	0.88	0.05

Average Returns of 30FF industries under Republican and Democratic Presidents			
	1927:01-1971:12 (540 obs)		
	RR	DD	Diff
food-VWR	4.12	-2.50	6.63
	0.09	0.11	0.02
smoke-VWR	8.20	-4.91	13.11
	0.07	0.07	0.01
util-VWR	2.21	-3.79	6.00
	0.47	0.13	0.12
telcm-VWR	3.80	-4.50	8.30
	0.24	0.04	0.03
paper-VWR	6.15	-0.52	6.67
	0.02	0.78	0.04
whlsl-VWR	-18.25	4.25	-22.50
	0.00	0.17	0.00
other-VWR	-6.49	1.19	-7.67
	0.10	0.62	0.10

Average Returns of 30FF industries under Republican and Democratic Presidents			
	1972:01-2016:12 (540 obs)		
	RR	DD	Diff
food-VWR	6.52	-3.01	9.53
	0.00	0.33	0.01
smoke-VWR	8.73	0.77	7.96
	0.02	0.88	0.22
util-VWR	3.83	-3.81	7.64
	0.14	0.27	0.07
telcm-VWR	2.40	-0.87	3.27
	0.31	0.74	0.35
paper-VWR	1.52	-0.78	2.30
	0.38	0.76	0.46
whlsl-VWR	0.25	0.50	-0.25
	0.90	0.82	0.93
other-VWR	-4.56	-1.04	-3.52
	0.03	0.70	0.31

Table XII: Excess relative to market returns for selected industries from the 30FF industry portfolios and party association over the presidential cycle

The table reports the excess relative to market return of a selected group of industries from the 30 Fama-French industry portfolios during the Republican (RR) and Democratic (DD) presidential periods over the presidential cycle. Returns are annualized. Year 1 to year 4 refers to the year in the presidential term. The first row represents the coefficients; the second row reports the p-values using Newey-West (1987) heteroscedasticity and serial-correlation robust t-statistics. The Diff column shows the difference in returns between Republican and Democratic terms. % of Rep. Obs. denotes the percentage of the total observations that occurs during a Republican presidential term for a given year.

	Year 1			Year 2			Year 3			Year 4		
	RR	DD	Diff	RR	DD	Diff	RR	DD	Diff	RR	DD	Diff
food-VWR	7.70	-2.61	10.31	5.86	-1.83	7.70	3.31	-5.38	8.69	5.26	-1.01	6.27
	0.03	0.37	0.03	0.07	0.50	0.07	0.18	0.09	0.03	0.13	0.79	0.22
smoke-VWR	9.62	-4.44	14.06	13.83	-3.43	17.26	8.71	-8.89	17.61	2.64	6.67	-4.04
	0.09	0.35	0.06	0.02	0.50	0.06	0.12	0.11	0.03	0.63	0.27	0.62
util-VWR	6.23	-7.53	13.76	1.32	-4.61	5.94	-1.40	-2.23	0.82	6.35	-0.81	7.15
	0.17	0.07	0.02	0.74	0.27	0.30	0.72	0.58	0.88	0.05	0.85	0.18
telcm-VWR	6.21	-3.11	9.33	3.27	0.14	3.13	-2.73	-1.44	-1.29	5.21	-7.62	12.83
	0.11	0.42	0.08	0.42	0.96	0.53	0.42	0.65	0.78	0.18	0.03	0.01
paper-VWR	6.09	1.92	4.17	3.64	2.76	0.88	4.01	-6.11	10.12	-0.33	-1.06	0.73
	0.03	0.56	0.33	0.17	0.33	0.82	0.19	0.03	0.02	0.93	0.74	0.88
whlsl-VWR	-11.24	7.96	-19.21	-4.35	0.00	-4.35	-9.40	0.80	-10.20	-3.58	2.04	-5.62
	0.01	0.12	0.00	0.32	1.00	0.41	0.06	0.84	0.11	0.56	0.57	0.43
other-VWR	-11.22	5.08	-16.31	-2.12	0.21	-2.33	1.62	-5.15	6.77	-9.14	0.95	-10.10
	0.01	0.18	0.01	0.58	0.95	0.65	0.64	0.18	0.19	0.02	0.78	0.06
% of Rep. Obs.	45%			46%			48%			48%		

Table XIII: Excess to market returns for selected industries from FF30 for transition years

The table reports the excess relative to market returns during the Republican (RR) and Democratic (DD) presidential periods. Returns are annualized. (1), (2), (3), (4) are column identifiers, and in the next columns differences between these columns are reported. The first row represents the coefficients; the second row reports the p-values using Newey-West (1987) heteroscedasticity and serial-correlation robust t-statistics. # of Obs. denotes the number of observations. Panel A. reports year 4 and panel B reports year 1 of the presidential term.

A. Average Returns for Year 4

	(1)	(2)	(3)	(4)	Differences					
	RR to DD	DD to RR	RR to RR	DD to DD	(1)-(2)	(1)-(3)	(1)-(4)	(2)-(3)	(2)-(4)	(3)-(4)
food-VWR	9.24	3.33	1.95	-4.01	5.90	7.29	13.25	1.39	7.35	5.96
	0.10	0.68	0.66	0.12	0.55	0.30	0.03	0.88	0.39	0.24
smoke-VWR	7.43	21.99	-1.36	-3.91	-14.56	8.79	11.34	23.35	25.90	2.55
	0.39	0.05	0.84	0.51	0.31	0.42	0.28	0.08	0.04	0.78
util-VWR	9.38	4.63	3.82	-4.56	4.74	5.55	13.94	0.81	9.19	8.38
	0.06	0.59	0.35	0.26	0.64	0.39	0.03	0.93	0.34	0.15
telcm-VWR	11.51	-8.46	-0.04	-7.05	19.97	11.55	18.56	-8.42	-1.41	7.01
	0.09	0.20	0.99	0.06	0.04	0.15	0.02	0.29	0.85	0.22
paper-VWR	-2.15	3.51	1.19	-4.22	-5.66	-3.34	2.07	2.32	7.73	5.41
	0.72	0.60	0.78	0.15	0.52	0.64	0.75	0.77	0.28	0.29
whlsl-VWR	-6.09	4.78	-1.49	0.15	-10.87	-4.60	-6.24	6.26	4.63	-1.63
	0.61	0.45	0.78	0.97	0.42	0.72	0.62	0.45	0.54	0.81
other-VWR	-5.73	3.73	-11.99	-0.96	-9.45	6.26	-4.77	15.72	4.69	-11.03
	0.34	0.53	0.03	0.81	0.26	0.44	0.51	0.05	0.52	0.10
# of Obs.	60	58	72	84						

B. Average Returns for Year 1

	(1)	(2)	(3)	(4)	Differences					
	RR to DD	DD to RR	RR to RR	DD to DD	(1)-(2)	(1)-(3)	(1)-(4)	(2)-(3)	(2)-(4)	(3)-(4)
food-VWR	-12.12	13.11	3.86	1.65	-25.23	-15.98	-13.78	9.25	11.46	2.20
	0.02	0.05	0.36	0.56	0.00	0.02	0.02	0.24	0.11	0.67
smoke-VWR	-6.91	8.50	10.71	-6.23	-15.41	-17.62	-0.68	-2.21	14.74	16.94
	0.40	0.37	0.16	0.23	0.22	0.12	0.94	0.86	0.18	0.07
util-VWR	-12.96	3.38	11.48	-6.39	-16.34	-24.44	-6.57	-8.11	9.77	17.87
	0.07	0.58	0.05	0.18	0.08	0.01	0.44	0.33	0.20	0.02
telcm-VWR	-7.17	4.09	8.77	-0.95	-11.26	-15.95	-6.23	-4.69	5.03	9.72
	0.28	0.55	0.06	0.85	0.24	0.05	0.45	0.57	0.55	0.15
paper-VWR	-0.61	8.37	4.26	0.59	-8.98	-4.87	-1.20	4.11	7.78	3.67
	0.91	0.04	0.26	0.88	0.19	0.47	0.86	0.46	0.16	0.49
whlsl-VWR	12.92	-9.66	-12.59	6.16	22.58	25.51	6.75	2.93	-15.82	-18.76
	0.26	0.22	0.02	0.16	0.10	0.04	0.58	0.76	0.08	0.01
other-VWR	15.56	-6.47	-12.35	-2.32	22.03	27.92	17.88	5.88	-4.15	-10.03
	0.02	0.22	0.06	0.57	0.01	0.00	0.02	0.48	0.53	0.19
# of Obs.	60	47	72	84						

Table XIV: Market reaction following the presidential election 1927-2016

The table reports the market reaction the day after the presidential election for the 23 presidential elections between 1927 and 2016. Coef. refers to the coefficients of the regression: $After\_Election\_Return_{(1\_day)} = \beta_1 Democratic + \beta_2 Republican$. Diff. refers to the p-values for the difference in the 1-day market reaction for when the Democratic or Republican candidate wins the election, using OLS and bootstrapped t-statistics.

				Diff.
		Coef.	**OLS**	**Bootstrap**
1_day	Democratic	-1.372	0.026	0.016
	Republican	0.1686		

Table XV: Market reaction, changes in conditional and unconditional probability after election, and equivalent expected excess return for a 4-year presidential period

This table shows market reaction after election and relates it with the excess return along the presidential term. The sample includes the 7 elections from 1992 to 2016, reporting the winning party in the presidential balloting. Market reaction refers to the return of the value-weighted portfolio from CRSP the day after the presidential election. Change in probability from T-1 to the election date refers to the difference in probability of the party winning the election the day before the election to certainty (probability equal to one) after the election. Market reaction (if unconditional probability) shows how large the one day after election market reaction would have been if the probability had been unconditional[23], that is equal to 0.5. [24] Excess return for the presidential period is the 4-year excess return (VWR-TBL). Average is the arithmetic mean, but for market reaction it is the difference of the average between the Democratic and Republican candidate winning the election.

Election	Winning party	Market reaction	Change in prob. T-1 to elec. Day	Market reaction (if unconditional probability)	Excess return for presidential period
1992	Democratic	-0.47%	14.80%	-2%	46%
1996	Democratic	1.37%	7.50%	9%	36%
2000	Republican	-1.89%	-29.10%	-3%	-8%
2004	Republican	1.17%	-48.50%	1%	-38%
2008	Democratic	-5.07%	9.70%	-26%	70%
2012	Democratic	-2.11%	21.00%	-5%	42%
2016	Republican	1.20%	-79.50%	1%	NA
Average 1992-2012		1.21%	-4.10%	-15%	25%

[23] For 1992, the calculation is (50%/14.8%)x-0.47%=-2%.

[24] In 1992 and 1996 Ross Perot was an independent candidate with considerable popularity, however the probability of Perot winning the election was lower than 1% in the days just before the election and he obtained no electoral votes.

Table XVI: Market reaction associated with changes in the probability of a candidate winning the presidential election

This table shows the market reaction associated with changes in Winner-take-all (WTA) contracts from the Iowa Electronic Market (IEM), the proxy for the probability of a candidate winning the presidential election. MKT-RF refers to the weekly excess return, where MKT (market return) and RF (risk-free return) are from Kenneth French's website, D_RR_WTA refers to the change in the probability of the Republican candidate winning the election and D_DD_WTA refers to the change in the probability of the Democratic candidate winning the election. The suffix POS and NEG refers to positive and negative changes in the probabilities. In panel A, the first row refers to the coefficient for the regressions: $(MKT - Rf) = \beta_0 + \beta_1 D\_RR\_WTA$ and $(MKT - Rf) = \beta_0 + \beta_1 D\_DD\_WTA$ respectively. The second row reports the 1-sided OLS p-value. In panel B, the first row refers to the coefficient for the regressions: $(MKT - Rf) = \beta_0 + \beta_1 D\_DD\_WTA\_POS + \beta_2 D\_DD_{WTA_{NEG}}$ and $(MKT - Rf) = \beta_0 + \beta_1 D\_RR\_WTA\_POS + \beta_2 D\_RR\_WTA\_NEG$ respectively. The second rows report the 1-sided OLS p-value.

Panel A.	WTA contracts from IEM	
	D_RR_WTA	D_DD_WTA
MKT-RF	4.95	-8.60
	0.08	0.01

Panel B.	WTA contracts from IEM	
	D_DD_WTA_POS	D_DD_WTA_NEG
MKT-RF	-23.66	6.61
	0.00	0.88
	D_RR_WTA_POS	D_RR_WTA_NEG
MKT-RF	0.23	24.98
	0.48	0.00

Table XVII: Industry classification used in the construction of the presidential factor

The table shows the classification of the 49 Fama-French industries between Democratic and Republican. The list of industries is sorted from the most Democratic industry (with the highest return difference between democratic and republican periods) to the most Republican industry (with the highest return difference between republican and democratic periods). Industries which are not showed in the table are neither Democratic nor Republican based on the return difference between Democratic and Republican periods.

Industry	**Classification**
Softw	Democratic (most Democratic)
RlEst	Democratic
Cnstr	Democratic
Whlsl	Democratic
Chips	Democratic
Paper	Democratic
Hlth	Democratic
Other	Democratic
Fun	Democratic
Fin	Democratic
Ships	Democratic
Autos	Democratic
BusSv	Democratic
Mach	Democratic
Txtls	Democratic
Rubbr	Democratic
Mines	Republican
Agric	Republican
Coal	Republican
Meals	Republican
Rtail	Republican
Chems	Republican
Hshld	Republican
MedEq	Republican
Guns	Republican
Gold	Republican
Drugs	Republican
Telcm	Republican
Util	Republican
Food	Republican
Boxes	Republican
Smoke	Republican (most Republican)

Table XVIII: Model Comparison for the presidential factor

The table reports the time series and cross sectional approach to test an asset pricing model. The table reports the results for the CAPM, FF3, and two versions of the augmented CAPM + presidential factor models: the P-factor using the whole period approach and the maximum correlation portfolio approach. The test assets are the FF30 and FF49 industry portfolios, the FF25 value and size sorted portfolios and the FF55 portfolios (the sum of the FF30 and FF25 portfolios). The sample period covers from 1927 to 2016. The betas are estimated for the full sample.

FF25	CAPM	FF3	CAPM+ p-factor (whole period)	CAPM+ p-factor (Max. correl. port.)
Time Series				
Mean abs-Alpha	0.1879	0.1235	0.2512	0.1883
Average R-Square	0.7729	0.9080	0.8082	0.7745
F-GRS	3.5583	3.3473	4.0747	3.5968
p-value (F-GRS)	0.0000	0.0000	0.0000	0.0000
Cross Sectional				
R-Square for Average	0.0846	0.6797	0.2143	0.2350
Const	0.3131	1.7875	0.8774	-0.0203
t-stat	0.9477	4.4349	2.2943	-0.0681
Market	0.4752	-1.0684	-0.1291	0.7746
t-stat	1.3248	-2.5508	-0.3174	2.3064
SMB	-	0.1285	-	-
t-stat	-	1.2302	-	-
HML	-	0.4177	-	-
t-stat	-	3.7862	-	-
POL	-	-	0.3045	0.0242
t-stat	-	-	1.9406	2.6842

FF30 industries	CAPM	FF3	CAPM+ p-factor (whole period)	CAPM+ p-factor (Max. correl. port.)
Time Series				
Mean abs-Alpha	0.1383	0.1854	0.1234	0.1372
Average R-Square	0.6471	0.6725	0.6629	0.6590
F-GRS	1.8436	3.0153	1.5723	1.8724
p-value (F-GRS)	0.0039	0.0000	0.0263	0.0032
Cross Sectional				
R-Square for Average	-0.0274	0.0387	-0.0307	-0.0621
Const	0.6864	0.5694	0.6230	0.6730
t-stat	*4.0767*	3.3338	2.7195	4.1301
Market	0.0466	0.1893	0.1167	0.0612
t-stat	*0.1963*	0.7992	0.4064	0.2626
SMB	-	-0.0756	-	-
t-stat	-	-0.5130	-	-
HML	-	-0.1222	-	-
t-stat	-	-0.7009	-	-
POL	-	-	-0.0294	-0.0006
t-stat	-	-	-0.2487	-0.1687

FF55	CAPM	FF3	CAPM + p-factor (whole period)	CAPM + p-factor (Max. correl. port.)
Time Series				
Mean abs-Alpha	0.1608	0.1573	0.1815	0.1604
Average R-Square	0.7043	0.7796	0.7289	0.7115
F-GRS	2.9346	2.8715	2.8963	2.7868
p-value (F-GRS)	0.0000	0.0000	0.0000	0.0000
Cross Sectional				
R-Square for Average	0.1234	0.3454	0.1745	0.1117
Const	0.4384	0.8529	0.6571	0.4344
t-stat	2.3027	5.2313	3.0415	2.2521
Market	0.3303	-0.1414	0.0887	0.3349
t-stat	1.2838	-0.6188	0.3233	1.2903
SMB	-	0.1100	-	-
t-stat	-	1.0560	-	-
HML	-	0.2743	-	-
t-stat	-	2.3771	-	-
POL	-	-	0.2085	-0.0010
t-stat	-	-	1.6692	-0.2754

FF49 industries	CAPM	FF3	CAPM + p-factor (whole period)	CAPM + p-factor (Max. correl. port.)
Time Series				
Mean abs-Alpha	0.1368	0.1804	0.1339	0.1370
Average R-Square	0.5471	0.5802	0.5696	0.5549
F-GRS	1.4634	2.2069	1.3349	1.5253
p-value (F-GRS)	0.0221	0.0000	0.0642	0.0126
Cross Sectional				
R-Square for Average	0.4462	0.5740	0.5328	0.4445
Const	0.2647	0.2448	0.1491	0.2778
t-stat	1.9376	1.8663	1.0213	2.0604
Market	0.4430	0.5247	0.5927	0.4250
t-stat	2.0719	2.5168	2.7358	2.0070
SMB	-	-0.1690	-	-
t-stat	-	-1.1902	-	-
HML	-	0.1130	-	-
t-stat	-	0.6906	-	-
POL	-	-	0.0714	0.0035
t-stat	-	-	0.6375	0.9390

Table XIX A to C Average Returns under Republican and Democratic Presidents controlling for GDP growth

Table XIX shows average mean excess and real returns of Value Weighted (VWR-TBL, VWR-INF) and Equally Weighted portfolios (EWR-TBL, EWR-INF), and the real interest rate (TBL-INF), during Republican (RR) and Democratic (DD) presidential periods. Returns are annualized. The first row represents the coefficients; the second row reports the p-values using Newey-West (1987) heteroscedasticity and serial-correlation robust t-statistics. The Diff column shows the difference in returns between Republican and Democratic terms. % of Rep. Obs. denotes the percentage of the total observations that occurs during a Republican presidential term. Panels A and B include monthly observations, while panel C includes quarterly observations. Panel A results are controlled for annual GDP growth, panel B results are controlled for quarterly GDP growth and panel C results are controlled for quarterly GDP growth. GDP growth is demeaned. The unreported GDP effect is only significant, at the 10% level, for the real interest rate case in Panel A and B.

A. Average Returns under Republican and Democratic Presidents Controlling for: Real GDP growth				B. Average Returns under Republican and Democratic Presidents Controlling for: Real GDP growth				C. Average Returns under Republican and Democratic Presidents Controlling for: Real GDP growth			
	1930:01-2016:12 (1,044 obs)				1947:04-2016:12 (836 obs)				1947:Q2-2016:Q4 (278 obs)		
	RR	DD	Diff		RR	DD	Diff		RR	DD	Diff
VWR-TBL	0.26	10.06	-9.81	VWR-TBL	3.05	10.02	-6.97	VWR-TBL	3.31	9.67	-6.36
	0.93	0.00	0.01		0.26	0.00	0.05		0.29	0.00	0.10
	0.00	0.00	0.00		0.00	0.00	0.00		0.00	0.00	0.00
VWR-INF	2.00	9.19	-7.19	VWR-INF	4.22	10.02	-5.79	VWR-INF	4.48	9.68	-5.20
	0.51	0.00	0.08		0.13	0.00	0.11		0.16	0.00	0.19
	0.00	0.00	0.00		0.00	0.00	0.00		0.00	0.00	0.00
EWR-TBL	0.72	15.03	-14.31	EWR-TBL	3.41	13.27	-9.86	EWR-TBL	3.53	13.16	-9.62
	0.85	0.00	0.01		0.34	0.00	0.04		0.39	0.00	0.06
	0.00	0.00	0.00		0.00	0.00	0.00		0.00	0.00	0.00
EWR-INF	2.46	14.15	-11.69	EWR-INF	4.58	13.26	-8.68	EWR-INF	4.70	13.17	-8.47
	0.53	0.00	0.04		0.20	0.00	0.07		0.25	0.00	0.10
	0.00	0.00	0.00		0.00	0.00	0.00		0.00	0.00	0.00
TBL-INF	1.74	-0.88	2.62	TBL-INF	1.17	0.01	1.16	TBL-INF	1.17	0.01	1.16
	0.00	0.03	0.00		0.00	0.91	0.00		0.00	0.98	0.01
% of Rep. Obs		45%		% of Rep. Obs		52%		% of Rep. Obs		52%	

Table XX Average Returns under Republican and Democratic Electoral Periods

Table XX is equivalent to table II with the only difference that the presidential term period is replaced by the electoral period, which is from one presidential election to the next one. Panel A shows average mean excess and real returns of Value Weighted (VWR-TBL, VWR-INF) and Equally Weighted portfolios (EWR-TBL, EWR-INF), and the real interest rate (TBL-INF), during Republican (RR) and Democratic (DD) electoral periods. Returns are annualized. The first row represents the coefficients; the second row reports the p-value using Newey-West (1987) heteroscedasticity and serial-correlation robust t-statistics. The Diff column shows the difference in returns between Republican and Democratic terms. % of Rep. Obs. denotes the percentage of the total observations that occurs during a Republican electoral term. Panel B shows the same variables but also controlling for business cycle variables: annualized log dividend to price ratio (DP), Default Spread (DSP), Term Spread (TSP), Inflation (INF), Relative Interest Rate (RIR) and the first difference for Economic Policy Uncertainty (D.EPU) Index. Control variables are demeaned. Panel C and D subdivide panel A and B into two subsamples respectively.

A. Average Returns under Republican and Democratic Presidents

	1927:01-2016:12 (1,080 obs)		
	RR	DD	Diff
VWR-TBL	0.18	10.92	-10.74
	0.96	0.00	0.01
VWR-INF	2.29	9.89	-7.60
	0.49	0.00	0.07
EWR-TBL	0.14	15.88	-15.73
	0.97	0.00	0.00
EWR-INF	2.26	14.85	-12.59
	0.59	0.00	0.02
TBL-INF	2.11	-1.02	3.14
	0.00	0.00	0.00
% of Rep. Obs		47%	

B. Average Returns under Republican and Democratic Presidents Controlling for: log(D/P), Default spread, Term spread, inflation, relative interest rate and D.EPU

	1927:01-2016:12 (1,080 obs)		
	RR	DD	Diff
VWR-TBL	-0.25	11.37	-11.62
	0.93	0.00	0.00
VWR-INF	1.51	10.66	-9.15
	0.61	0.00	0.02
EWR-TBL	-1.10	17.07	-18.17
	0.77	0.00	0.00
EWR-INF	0.66	16.36	-15.70
	0.86	0.00	0.00
TBL-INF	1.76	-0.71	2.47
	0.00	0.01	0.00
% of Rep. Obs		47%	

C. Average Returns under Republican and Democratic Presidents

	1927:01-1971:12 (540 obs)			1972:01-2016:12 (540 obs)		
	RR	DD	Diff	RR	DD	Diff
VWR-TBL	-0.11	10.96	-11.08	0.27	10.85	-10.58
	0.99	0.00	0.13	0.94	0.00	0.03
VWR-INF	3.06	9.29	-6.23	1.67	10.73	-9.07
	0.63	0.01	0.40	0.64	0.00	0.06
EWR-TBL	-0.95	17.37	-18.32	1.18	13.79	-12.60
	0.81	0.00	0.05	0.80	0.00	0.04
EWR-INF	1.21	15.69	-14.48	2.58	13.67	-11.09
	0.88	0.00	0.13	0.58	0.00	0.08
TBL-INF	3.17	-1.67	4.84	1.39	-0.11	1.51
	0.00	0.00	0.00	0.00	0.69	0.00
% of Rep. Obs		38%			56%	

D. Average Returns under Republican and Democratic Presidents
Controlling for: log(D/P), Default spread,
Term spread, inflation, relative interest rate and D.EPU

	1927:01-1971:12 (540 obs)			1972:01-2016:12 (540 obs)		
	RR	DD	Diff	RR	DD	Diff
VWR-TBL	-2.04	12.14	-14.18	-0.81	12.37	-13.18
	0.73	0.00	0.06	0.80	0.00	0.01
VWR-INF	-0.77	11.61	-12.38	0.58	12.26	-11.67
	0.90	0.01	0.10	0.86	0.00	0.02
EWR-TBL	-5.59	19.58	-25.17	-1.25	17.03	-18.28
	0.46	0.00	0.01	0.77	0.00	0.00
EWR-INF	-4.33	19.05	-23.38	0.15	16.92	-16.78
	0.56	0.00	0.02	0.97	0.00	0.01
TBL-INF	1.27	-0.53	1.79	1.40	-0.11	1.51
	0.00	0.15	0.00	0.00	0.70	0.00
% of Rep. Obs		38%			56%	

Table XXI Economic Policy Uncertainty index (EPU) under Republican and Democratic Presidents

Table XXI reports the Economic Policy Uncertainty (EPU) index across Republican and Democratic terms. Panel A shows the EPU index during Republican (RR) and Democratic (DD) periods. EPU_a refers to the EPU index during the presidential term (i.e., when the president is in office), EPU_b refers to the EPU index during the period between presidential elections; EPU_Year1…4 refers to the EPU index during each of the 4-year presidential cycles. The first row represents the coefficients; the second row reports the p-value using Newey-West (1987) heteroscedasticity and serial-correlation robust t-statistics. Panel B shows the EPU index for transition years 1 and 4. (1), (2), (3), (4) are column identifiers, and in the next columns, differences between these columns are reported.

A. EPU (Economic Policy Uncertainty) under Republican and Democratic Presidents

	1927:01-2016:12 (1,080 obs)		
	RR	DD	Diff
EPU_a	112.23	129.20	-16.97
	0.00	0.00	0.00
EPU_b	111.92	129.42	-17.50
	0.00	0.00	0.00
EPU_Year1	111.92	123.86	-11.94
	0.00	0.00	0.12
EPU_Year2	114.19	132.54	-18.36
	0.00	0.00	0.02
EPU_Year3	109.21	133.64	-24.43
	0.00	0.00	0.00
EPU_Year4	114.88	125.99	-11.11
	0.00	0.00	0.18

B. EPU index for transition periods

Average EPU for Year 4

	(1)	(2)	(3)	(4)	Differences					
	RR to DD	DD to RR	RR to RR	DD to DD	(1)-(2)	(1)-(3)	(1)-(4)	(2)-(3)	(2)-(4)	(3)-(4)
EPU	130.26	119.40	102.06	130.54	10.86	28.20	-0.28	17.35	-11.14	-28.48
	0.00	0.00	0.00	0.00	0.43	0.02	0.98	0.09	0.35	0.00
# of Obs.	60	58	72	84						

Average EPU for Year 1

	(1)	(2)	(3)	(4)	Differences					
	RR to DD	DD to RR	RR to RR	DD to DD	(1)-(2)	(1)-(3)	(1)-(4)	(2)-(3)	(2)-(4)	(3)-(4)
EPU	121.45	117.38	107.68	126.34	4.07	13.77	-4.90	9.69	-8.97	-18.66
	0.00	0.00	0.00	0.00	0.78	0.16	0.66	0.46	0.52	0.04
# of Obs.	60	47	72	84						

Figures Figure I: Excess Value Weighted Returns (1927-2016)

The figure shows the average excess value-weighted annual return. Red bars represent Republican periods, and blue bars characterize Democratic terms. Every presidential period return is assigned to one bar. The dotted line is the average for the 1927-2016 period.

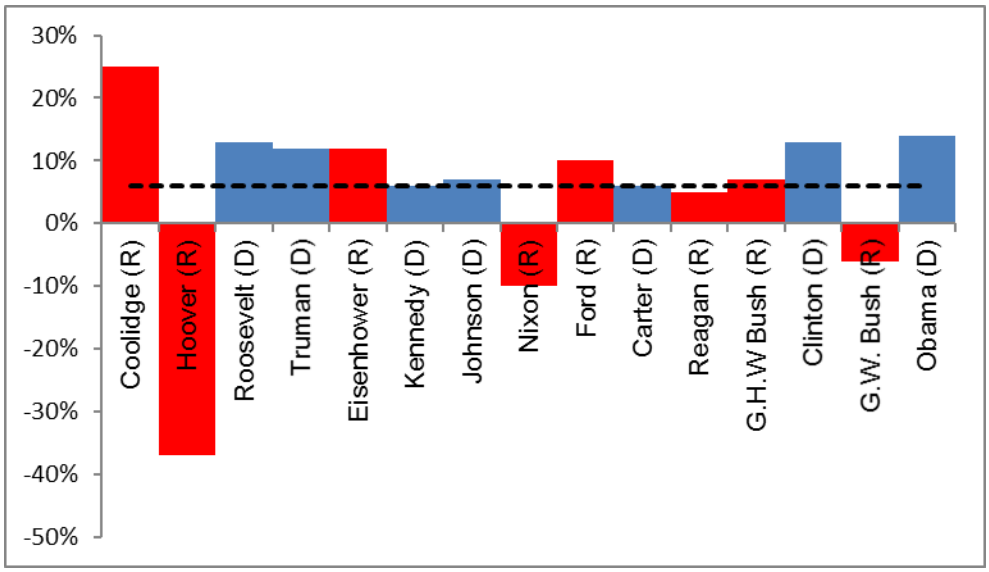


Figure II: Quantile Regressions for Excess Returns under Republican and Democratic Presidents

The figure shows the variation in excess returns $(VWR - TBL)$, $(VWR - INF)$, $(EWR - TBL)$, $(EWR - INF)$ for different quantiles given that the president is democratic or republican. The figure reports quantile estimates from quantiles 0.05 to 0.95, the confidence interval (CI) of the quantile regression, the OLS estimate and OLS confidence interval (CI). The CI's are 2-sided and at a 90% confidence level.

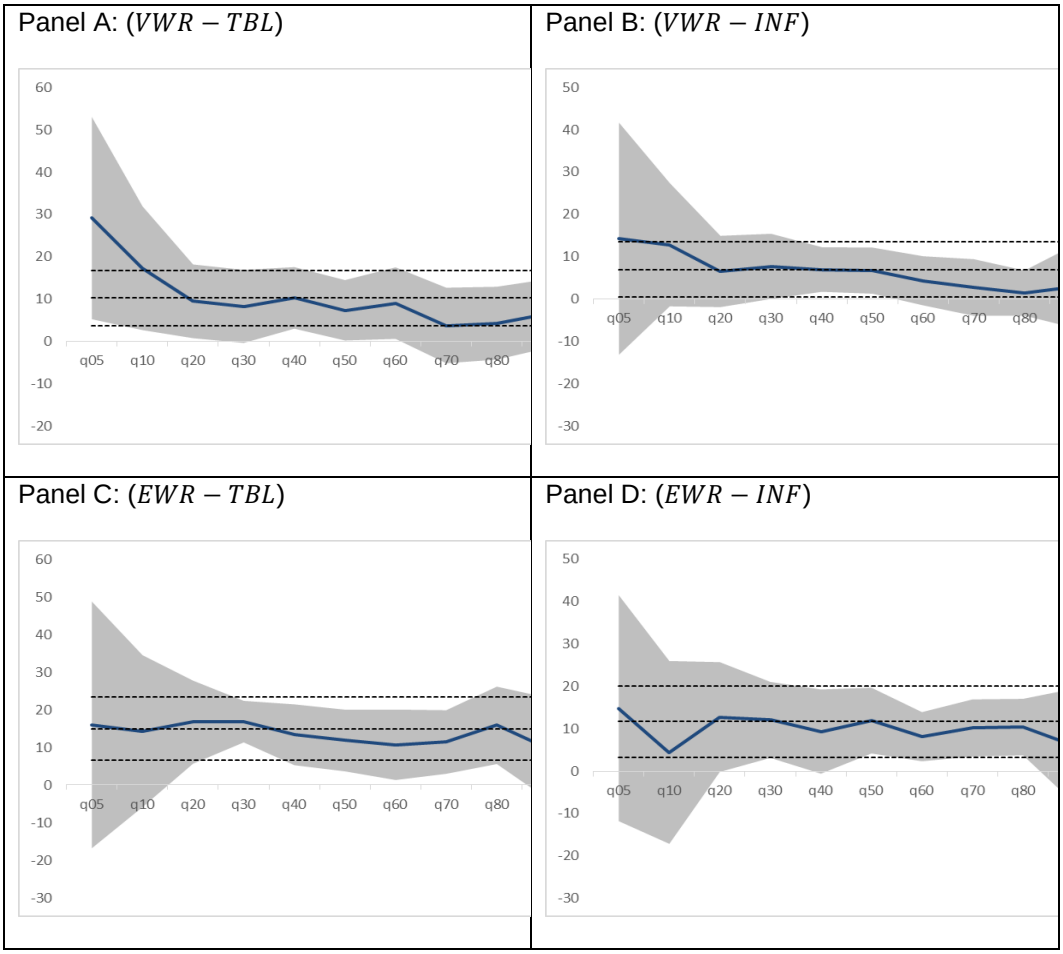
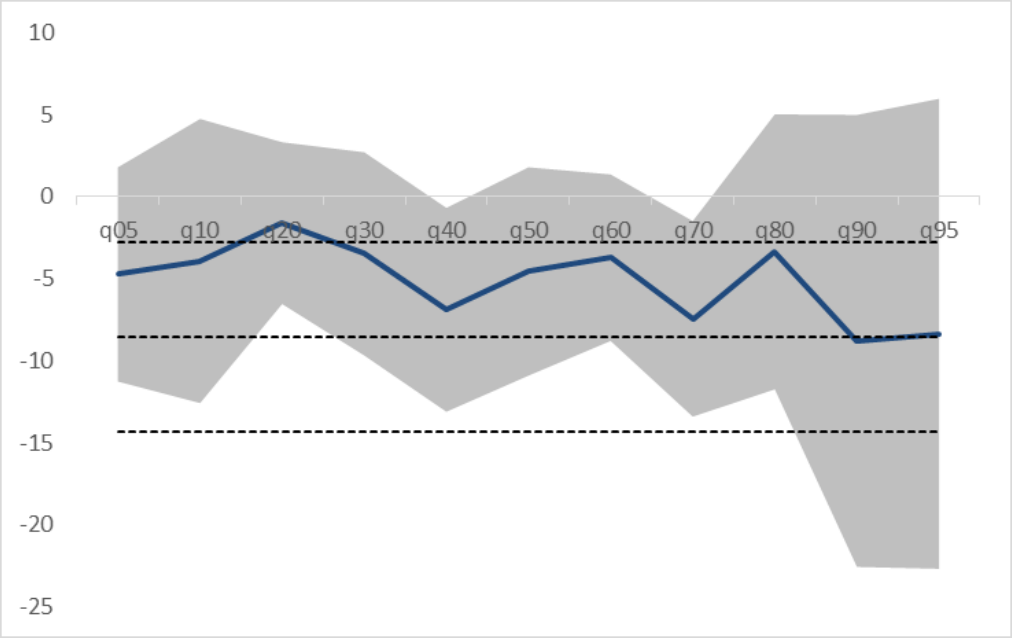


Figure III: Quantile Regressions for Democratic WTA contracts and market effect (1992-2016)

The figure shows the variation of weekly excess return ($MKT - R_f$) for different quantiles given changes in the probability of the Democratic candidate winning the election (D_DD_WTA). The figure reports quantile estimates from quantiles 0.05 to 0.95, the confidence interval (CI) of the quantile regressions, the OLS estimate and OLS confidence interval (CI). The CI's are 2-sided and at a 90% confidence level.



Appendix

Appendix A

Quantile Regression using the IVX-QR approach from Lee (2016)

P-values(%) of the univariate quantile prediction tests. Similar to figure 2, this shows the variation for excess returns, real interest rate, and includes percentiles 0.05 to 0.95. The results are for Value Weighted (VWR-TBL, VWR-INF), Equally Weighted portfolios (EWR-TBL, EWR-INF), and the real interest rate (TBL-INF),

	0.05	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	0.95
VWR-TBL	0.67 ***	1.01 **	2.99 **	1.97 **	7.22 *	0.89 ***	8.50 *	57.04	52.83	34.73	99.99
VWR-INF	2.57 **	2.68 **	7.83 *	4.66 **	14.30	19.30	40.33	81.49	92.84	82.06	50.29
EWR-TBL	6.08 *	3.35 **	0.08 ***	0.22 ***	1.02 **	0.76 ***	0.78 ***	1.84 **	4.16 **	51.18	82.79
EWR-INF	7.51 *	7.55 *	0.35 ***	0.21 ***	0.45 ***	5.78 *	7.10 *	5.98 *	11.81	58.84	23.88
TBL-INF	0.00 ***	0.00 ***	0.00 ***	0.07 ***	0.01 ***	0.00 ***	0.00 ***	0.00 ***	0.00 ***	0.00 ***	0.00 ***

Appendix B

Panels A to B Average Returns under Republican and Democratic Presidents Subsample (1999-2016)

Panel A shows average mean excess and real returns of Value Weighted (VWR-TBL, VWR-INF) and Equally Weighted portfolios (EWR-TBL, EWR-INF), and the real interest rate (TBL-INF), during Republican (RR) and Democratic (DD) presidential periods. Returns are annualized. The first row represents the coefficients; the second row reports the p-value using Newey-West (1987) heteroscedasticity and serial-correlation robust t-statistics. The Diff column shows the difference in returns between Republican and Democratic terms. % of Rep. Obs. denotes the percentage of the total observations that occurs during a Republican presidential term. Panel B shows the same variables but also control for business cycle variables: the annualized log dividend to price ratio (DP), Default Spread (DSP), Term Spread (TSP), Inflation (INF), Relative Interest Rate (RIR) and the first difference for Economic Policy Uncertainty (D.EPU) Index. Control variables are demeaned.

Panel A

A. Average Returns under Republican and Democratic Presidents

	1999:01-2016:12 (216 obs)		
	RR	DD	Diff
VWR-TBL	-5.68	11.23	-16.91
	0.38	0.02	0.03
VWR-INF	-5.53	10.41	-15.94
	0.39	0.02	0.04
EWR-TBL	-0.09	14.28	-14.37
	0.99	0.02	0.16
EWR-INF	0.05	13.46	-13.41
	0.99	0.03	0.19
TBL-INF	0.14	-0.82	0.96
	0.84	0.06	0.25
% of Rep. Obs		44%	

Panel B

B. Average Returns under Republican and Democratic Presidents Controlling for: log(D/P), Default spread, Term spread, inflation, relative interest rate and D.EPU

	1999:01-2016:12 (216 obs)		
	RR	DD	Diff
VWR-TBL	9.89	20.82	-10.93
	0.17	0.00	0.12
VWR-INF	8.80	18.92	-10.12
	0.22	0.00	0.15
EWR-TBL	13.57	22.50	-8.93
	0.14	0.01	0.36
EWR-INF	12.48	20.59	-8.11
	0.17	0.02	0.40
TBL-INF	-1.09	-1.90	0.81
	0.13	0.00	0.23
% of Rep. Obs		44%	

Chapter Three: Corporate Taxes, Partisan Politics and Stock Returns

1. Introduction, literature review and motivation

This paper evaluates the effect of partisan politics on the cross section of the U.S. stock returns through corporate taxes. The results support the partisan politics view (Alesina, 1987) of political cycles effect on equity returns. Empirically, I show that the corporate tax rate helps to explain the cross section of stock returns conditional on the president in office. Firms with a high corporate tax rates have higher returns than firms with a low corporate tax rates during Republican presidential terms, the opposite is true during Democratic presidential terms. The cash flow and risk explanation are explored.

Portfolios sorted by various measures of corporate taxes show dissimilar returns during the periods different parties are in office. A high minus low (Hi-Lo) portfolio sorted by (Marginal Tax Rate) has an annual return of +12.7% during Republican presidential terms and -6.4% for Democratic terms. Along the same lines, a high minus low portfolio sorted by the ratio Total Corporate Taxes/Total Assets has an annual return of +3.8% during Republican presidential terms and -6.3% for Democratic terms. Moreover, from Fama-MacBeth (1973) cross-sectional regressions I observe that two measures of the effective corporate tax rate provides information that helps to predict returns conditional on the presidential regime and that this information is different from other commonly used firm characteristics

(e.g., size, beta, value, momentum, and profitability); although the results are not present unconditionally.

These previous results are anticipated by investors during the election period for a sample of presidential elections between 1992 and 2016. An increase in the probability of a Democratic candidate winning the election is correlated with a lower return for a portfolio of high tax-paying firms, and the opposite for a portfolio of low tax-paying firms. Remarkably, for the 2016 election, a 10% increase in the probability of the Democratic candidate winning the election is associated with a negative weekly return of 0.76%, on a high-minus-low portfolio sorted by the ratio Total Corporate Taxes/Total Assets.

A strategy consisting of a zero-investment portfolio that goes long (short) in the highest corporate tax rate quintile and short (long) in the lowest corporate tax rate quintile when the president is from the Republican (Democratic) party provides abnormal positive returns. For the Equally-weighted portfolio (EWR), alpha for this strategy varies from 3.46% according to the Carhart (1997) model to 6.32% using the Fama and French (2015) five-factor model. The annual Sharpe ratio is 0.39. A similar strategy that goes long in the highest corporate tax rate quintile and short in the lowest corporate tax rate quintile when the president is Republican but goes long on the market portfolio and short on the risk-free asset during Democratic terms yields even higher returns and Sharpe ratios.

As an explanation for the results, the evidence is consistent with a cash-flow based explanation, in contrast with a risk-based explanation. In Fama-MacBeth cross-sectional regressions for the Return on Equity (ROE), the corporate tax rate effect on ROE is higher during Republican terms.

The economics and finance literature has shown theoretically and empirically that there are differences in policies and results for economic variables that support the partisan view of political cycles. For example, for the U.S., differences in inflation have been reported by Hibbs (1977) and explained theoretically by Alesina (1987). Among the extensive literature concerning the U.S., Alesina, Roubini, and Cohen (1997), Drazen (2001) and, Blinder and Watson (2016) provide a comprehensive review of differences between the parties. Recently, Pastor and Veronesi (2017) develop a model that explains the "presidential puzzle", the pattern that excess returns are higher under Democratic presidencies than under Republican ones (Santa-Clara and Valkanov, 2003).

Regarding the link between fiscal policy and partisan politics, Belo, Gala, and Li (2013) find differences in government spending between democratic and republican governments, without dissimilarities in the level of the budget deficit. They also find that firms in industries with high exposure to government spending have higher (lower) returns during Democratic (Republican) presidential terms. For the links between the level of corporate taxes and partisan politics, the literature is less extensive. Inclan, Quinn, and Shapiro (2001) discover that corporate taxation

in the U.S. is consistent with partisan politics: while Democratic governments increase corporate taxes, Republicans decrease them. In Europe, Osterloh and Debus (2012) find evidence that left-wing governments set higher corporate taxes than right-wing ones.

Separate from the political variable, previous research has analyzed the relationship between corporate taxes and returns. For example, Bowman (1979) shows that the corporate tax rate reduces the risk for leveraged firms; McGrattan and Prescott (2005) analyze changes in tax levels and regulations, and their effect on stock markets. More recently, Sialm (2009) establishes that changes in taxes on equity securities affect stock prices in the U.S.

The purpose of this project is to link equity returns and corporate taxes to partisan differences in the U.S. context. As different parties have different views of the desired size of government, they favor dissimilar levels of taxes. By exploring the corporate tax rate level and how it changes when different parties are in government, it is possible to conclude that returns during the government of different parties are a proxy for the changing likelihood of shifts in the corporate taxes rate. Marginal tax and average tax levels will be exploited to find differences during presidential terms and election periods.

This research sheds light on several issues regarding the specific economic policies that would lead to different stock returns during Republican and Democratic governments. Firstly, the existence of different tax policies between

Republicans and Democrats. There are reductions in corporate taxes during Republican presidential periods. Secondly, this research brings additional evidence regarding the effect of changes in corporate taxes on asset prices. Different levels of effective corporate taxes conditional on the party in office in the U.S. help to explain the cross-sectional variation in stock returns. In periods when a reduction in corporate taxes is expected, the positive effect of a corporate tax decrease on stock returns is more significant. Importantly, the effect is observed even when there are fluctuations in the likelihood of changes in corporate taxes, that is, even when there is no actual rise or fall in the taxation of corporations. An investment strategy that yields abnormal positive returns trading on changes in party governments is described.

This paper also contributes to the political economy literature. In particular, it supports the "partisan" motivation of politicians (Alesina, 1987), in contrast with the "opportunistic" motivation (Nordhaus, 1975 and Lindbeck, 1976). It shows that the differences in corporate taxes and stock returns are consistent with the partisan models. Finally, this research is related to the asset pricing literature that studies the effect of firm characteristics in the cross-section of stock returns (e.g., Basu, 1977 and Bhandari, 1988, and more recently, Novy-Marx, 2013, and Eisfeldt and Papanikolaou, 2013).[25]

[25] See Harvey, Liu, and Zhu (2016) and Hou, Xue, and Zhang (2018) for a list of anomalies that includes characteristics.

A common approach to valuing stocks is to determine the present value of cash flows that, that is dividends, that stockholders expect to receive. However, the cash flows available that go to stockholders would depend on the effective corporate tax rate. An increase in the corporate tax rate decreases the cash flow available to stockholders, and holding everything else constant, reducing the stock price. However, an increase in the tax rate decreases the risk of the stock by lowering the variance of the after-tax earnings of the firm for different levels of earnings before taxes (EBT).

This reduction in price due to the decrease in the cash flow will be a one-time effect. On the other hand, the reduced level of risk lowers the required return and increases the price. In the "steady state," with a high corporate tax rate, the required returns and hence the average returns will be lower than in a state with a low corporate tax rate. The intuition is that taxes lower the available earnings as well as the variance of earnings, at the extreme; a 100% tax rate will drop the variance of these earnings to zero. A formal explanation is included in section 2.

This research diverges from the previous literature in the following ways: While Belo et al. (2013) focus on differences in returns for government-spending-sensitive portfolios during different governments in the U.S., the present article finds a differential for portfolios sorted by effective corporate tax rate and marginal tax rate. Moreover, while their paper shows that the government-spending-sensitive portfolios provide higher returns during Democratic terms, this paper shows that

portfolios sensitive to changes in tax rates have higher returns during Republican terms.

The two papers most closely related are Schiller (2016) and Favilukis, Giammarino, and Pizarro (2016). On the one hand, Schiller (2016) predicts that firms with high average tax rates, as a proxy for tax shields size, will have higher expected stock returns than firms with lower ones because of higher risk. His statement is based on viewing corporate taxes as a call option for the government. On the other hand, Favilukis et al. (2016) claim that tax payments reduce risk and show that firms with high Tax-Loss-Carry-Forwards have higher returns than firms with low Tax-Loss-Carry-Forwards. However, firms with Investment Tax credits show opposite results. Those results are hardly consistent. I show that partisan politics lead to time series variation in the tax rate, and this leads high-corporate-tax firms to have higher returns during Republican presidential terms and the opposite during Democratic terms. Unconditional on the party in office, I do not find any significant result for different measures of the corporate tax rate influencing stock returns.

The remainder of this study is divided into eight sections. Section 2 discusses potential explanations for the relationship between corporate tax rates, the party in office, and stock returns, and develops testable hypotheses. Section 3 describes the data used in the paper. Section 4 shows the standard portfolio analysis using different measures of corporate taxes. Section 5 analyzes the effect of

corporate taxes, the party in office and the cross-section of stock returns. Section 6 shows the performance of portfolios sorted by corporate tax rates along the business cycle. Section 7 develops an investment strategy based on the previous results that generates abnormal positive returns. Section 8 discusses different mechanisms to explain how the level of corporate taxes explains the cross-section of stock returns conditional on the party of the president of the U.S. Finally, section 9 concludes the study.

2. Hypothesis development

In this section, I propose a relationship between the effective corporate tax rate, the party in office, and the firm's stock returns. In addition, I propose and describe several potential explanations for the relationship. Then, these explanations are formalized in hypotheses that can be tested.

First, for illustrative purposes, I introduce a simple model of earnings. The Earnings after taxes (EAT) is described as a function of the effective corporate tax rate (k) and the earnings before taxes (EBT): $EAT_i = (1 - k_i) \times EBT_i$. There are two states, the state when a Democratic president is in office (DD) and the state when a Republican president is in office (RR). In particular, each firm i has for each state s, the following earnings before taxes: $EBT_{i,s} \sim N\left(\overline{EBT}_{i,s}, \bar{\sigma}^2\right)$. The effective corporate tax rate (k) is given by $k_{i,s} = k_{LT\,i} \times PM_s$. $k_{LT\,i}$ is a constant and PM is a political multiplier. $PM_{s=dd} > PM_{s=rr} > 0$, that is, the political multiplier is higher during Democratic terms, and thus the effective tax rate (k) is higher during

Democratic terms than during Republican terms. Thus, from the previous assumptions, predictions can be made for the risk-based and cash flow based explanation of the effect of corporate taxes and the president in office on the stock returns.

2.1 Risk-based explanation

The risk-based explanation is tied to the capacity of taxes to lower the variability of cash flows. In absence of taxes, changes in earnings would be highly correlated with changes firm's cash flows. From $EBT_{i,s} \sim N(\overline{EBT}_{i,s}, \bar{\sigma}^2)$, the $VAR(EAT_{i,s}) = (1 - k_i)^2 \times \bar{\sigma}^2$. Thus, the higher k_{LT}, the lower the level of risk. Also, $PM_{s=dd} > PM_{s=rr} > 0$, thus, it is easy to see that there will be a larger increase in risk for firms with high k_{LT} during Republican terms. More formally, an increase in the long term tax rate of the firm is associated with lower earnings variance, that is, $\frac{\partial VAR}{\partial k_{LT}} = -2(1 - k_{i,s})PM \times \bar{\sigma}^2 < 0$; also, a change from a party that includes higher corporate taxes in its platform is associated with lower earnings variance, $\frac{\partial VAR}{\partial PM} = -2k_{LT}(1 - k_{i,s})\bar{\sigma}^2 < 0$, and finally, the reduction of the earnings variance due to an increase in the long term tax rate of the firm is decreasing on PM for observed values of tax rates, that is, $\frac{\partial}{\partial PM}\left(\frac{\partial VAR}{\partial k_{LT}}\right) = -2(1 - 2k_{i,s})\bar{\sigma}^2 < 0$, for any $k_{i,s} < 0.5$.

2.2 Cash flow explanation

The cash flow explanation is based on the difficulty of forecasting the result of the elections. Even though, investors may have some ability to forecast elections, there are two sources of uncertainty about the final outcome. On the one hand, there is always a probability of some unforeseen news. For example, a scandal from the past may appear or a terrorist act may affect the result of an election (E.g. the September 11th, Atocha Station terrorist attack in Spain is believed to have changed the outcome of the Spanish presidential election in 2004). On the other hand, even if the candidate winning the election is easy to forecast, there is some probability that the candidate's platform cannot be implemented given lack of popular or Congressional support, or just the fact that there is no obligation to pursue one's platform after being elected.

Then, from $k = k_{LT} \times PM$, it can be seen that firms with high k_{LT} will be more affected by changes in PM. So, I expect that these firms will have a higher increase in their prices than firms with low k_{LT} during Republican terms and vice-versa during Democratic periods. Note that this is a one-time effect and requires underreaction.

2.3 Testable hypotheses

As discussed in the previous sections, there are different potential explanations that can be tested. I do not intend to cover every potential explanation but rather focus on the two potential explanations discussed above. Also, these hypotheses are not

mutually exclusive as the cash flow can be higher and more volatile or proxy for another factor during Republican terms for high corporate tax firms.

H1. The relationship between corporate tax rates, the party in office, and stock returns: Republicans and Democrats differ in their platforms, this leads to different corporate tax rates, and consequently, differences in returns for firms with different levels of corporate taxes conditional on the party in office. Higher returns for firms that pay high corporate taxes during Republican terms compared to firms that pay lower corporate taxes, and vice versa during Democratic terms.

H2. Risk-based explanation: During Republican terms, firms that pay high corporate taxes have higher stock returns because the reduced level of taxes increases the volatility of the cash flows of these firms.

H3. Cash flow explanation: During Republican terms, firms that pay high corporate taxes have higher stock returns because of the increased level of their cash flows.

3. Data

In this section, I describe the data and definitions of the main variables that will be used in this research. Firm returns, monthly and weekly, are from CRSP. Firm-level accounting data are from Compustat. The marginal tax rate (MTR) data covers the period from 1980 to 2012 limited by availability and is from Compustat based on Blouin, Core, and Guay (2010). The average tax rate is calculated using two definitions, total taxes divided by total assets and total taxes divided by equity

market value. The results are obtained using total corporate taxes. In unreported results, I also use only national (federal) level corporate taxes; however, the results, while qualitatively similar, are not as strong given the shorter period available and the fact that state-level taxes are deductible for federal corporate taxes. Accounting variables are winsorized at 1% and 99%. Moreover, firms in the bottom 20% of the distribution of market cap are dropped, so the results are not led by microcaps. The results are practically invariant compared to those for the whole sample. Detailed definitions of pertinent variables are given in Appendix A.

The macroeconomic variables are the following: the annualized log dividend to price ratio (DP_t) is from CRSP, the term spread (TSP_t) the difference between the yield to maturity of the 10-year Treasury note and the 3-month Treasury bill; the default spread (DSP_t) the difference between BAA and AAA bond yields; and the relative interest rate (RIR_t) the deviation of the 3-month Treasury bill rate from its one-year moving average, are from the St. Louis Fed. Also, inflation (INF_t) is the U.S. Bureau of Labor Statistics Consumer Price Index growth rate, and the Economic Policy Uncertainty (EPU_t) Index (Baker, Bloom, and Davis, 2016) for the U.S. is obtained from the political uncertainty project website[26].

The data for the three Fama and French (1993) factors (MKT, SMB, and HML), the Carhart (1997) momentum factor (WML), the five Fama and French

[26] http://www.policyuncertainty.com

(2015) factors (MKT, SMB, HML, RMW and CMA), and the risk-free rate are from K. French's webpage.

Moreover, I use data from the Iowa Electronic Markets (IEM), which is an online futures market exchange where the payoffs of the contracts depend on the outcome of elections. Specifically, the Democratic Winner-Take-All (DD_WTA) price is used as a proxy for the probability of the Democratic candidate winning the presidential election, and the Republican Winner-Take-All (RR_WTA) price is used as a proxy for the probability of the Republican candidate winning the presidential election. This data is available for seven elections from 1992 (DD-Clinton) to 2016 (RR-Trump). Payoffs in the Presidential Winner-Take-All Market (WTA contracts) are determined by which party obtains more popular votes in the U.S. Presidential Election.

----- Insert table I about here -----

The ratio of corporate taxes to GDP for the period of analysis is shown in Figure I, and it is from the Office of Management and Budget[27]. In addition to a negative trend, the average (Corporate Taxes/GDP) ratio is 2.40% for Democratic periods and 1.84% for Republican terms. Noticeably, the growth rate of the ratio of corporate taxes to GDP per year is -0.007% during Democratic terms and -0.077% for Republican periods. This difference of 0.56% in the corporate tax to GDP, is

[27] Office of Management and Budget, Budget of the US Government FY 2019, Historical Tables, Table 2.3.

similar to the ratio of total taxes to GDP shown in Pastor and Veronesi (2017). Likewise, they require a 2% different in the income tax rate in the economy for their model to explain the results from Santa Clara and Valkanov (2003). The descriptive statistics in this article are consistent in magnitude, the 0.56% difference in the ratio of Corporate Tax to GDP between Democratic and Republican periods is enough to explain differences in returns according to Pastor and Veronesi (2017).

4. Portfolios sorted by marginal tax rate (MTR) and effective corporate tax rate (TAX)

Panel A in Table II shows the results for portfolios sorted by the marginal tax rate (MTR) following Blouin et al. (2010). Low Portfolio refers to the quintile of firms with the lowest level of MTR, and High Portfolio refers to the quintile of companies with the highest level of MTR. These results cover the period from 1980 to 2012 due to the availability of the MTR values. The unconditional return difference is 5.2% for the high minus low MTR portfolio; a result that is likely explained by the positive impact of profitability on stock returns[28], according to the empirical results of Novy-Marx (2013) and confirmed empirically and theoretically by Balvers, Gu, and Huang (2017). Nevertheless, conditional on the party in office, the difference is 12.7% for a Republican presidency and -6.4% for the Democratic government. Consequently, a zero-investment strategy that goes long in the Hi-Lo portfolio

[28] Profitability and corporate tax rates are positively correlated.

would have a remarkable difference in its annual return of 19.1% between Republican and Democratic presidential terms.

Similarly, Panel B in Table II, for the period 1963-2017, shows that a Hi-Lo portfolio sorted by (Total Corporate Taxes/Total Assets) has an annual return of +3.8% during Republican presidential terms and -6.3% for Democratic terms. Thus, this is a difference for this strategy of 10.1% in annual returns between different presidential governments. Unconditional on the party in office, for this sample period the strategy has an annual return close to zero, (-0.6%). The results support the first hypothesis, H1.

----- Insert table II about here -----

5. Corporate taxes, politics, firm characteristics and the cross-section of stock returns

While the results in the previous section are suggestive, more formal analysis and an extended period are needed. As firm characteristics known to explain the cross-section of stock returns are potentially correlated with corporate taxes, it is necessary to control for them. This suggests the following control variables. Size is the natural logarithm of the market value; Value is the natural logarithm of the book to market ratio; Firm Momentum is the return between periods -2 to -12. Market Beta is calculated using monthly data with a minimum of 24 observations during the previous five years, and Gross profitability is calculated according to Novy-

Marx (2013). Thus, the Fama-MacBeth (1973) cross-sectional regressions are as follow:

$$R_{i,t} = \theta + \pi' X_{i,t-1} + \gamma RR \times Tax_{i,t-1} + \delta DD \times Tax_{i,t-1} + \epsilon_{i,t} \qquad \forall\, t \qquad (4)$$

R_i refers to the firm i monthly excess returns, RR and DD are the dummy variables for Republican and Democratic presidential terms respectively, Tax_i refers to the corporate tax rate for firm i, and X_i is the vector of firm characteristics described. The results are described in Table III. The marginal tax measure is not used here due to its limited availability, however, the results for the limited sample, from 1980 to 2012, show that the effect of the marginal tax rate is significant, positive, and higher during Republican terms[29].

----- Insert table III about here -----

When the corporate tax rate is added unconditionally, in regression 2, the coefficient is not significant. However, when the corporate tax rate is added conditionally on the party of the president in office, the coefficient becomes significant. In particular, in regression 3, the coefficient is positive for Republican presidential terms and negative for Democratic presidential terms. The positive sign of the coefficient for the corporate tax rate during Republican terms and the

[29] See Appendix B. Table I for more details.

negative sign during Democratic terms are consistent with the expected sign according to the first hypothesis, H1.

A firm with Total Corporate Taxes to Total Book Value of Assets one standard deviation higher than another, during Democratic terms is associated with lower annual returns of 0.66%, however, during Republican terms is associated with a higher annual return of 0.86%. Similarly, the effect of a one standard deviation increase in Total Corporate Taxes to Market Value of Equity is lower annual returns of 1.12% during Democratic presidencies and higher yearly returns of 0.70% during Republican terms[30].

6. Portfolios sorted by corporate tax rates and business cycle variables

Politics and business cycle are suspected to be associated. For instance, inflation is higher on average during Democratic presidential terms (e.g., Hibbs, 1977; Blinder and Watson, 2016). Accordingly, as previous literature suggests (e.g., Chen, Roll, and Ross, 1986; Campbell and Shiller, 1988; and Campbell and Vuolteenaho, 2004), the following variables are included in the analysis: the annualized log dividend to price ratio(DP_t), the term spread(TSP_t), the default spread(DSP_t), the relative interest rate(RIR_t), the inflation rate (INF_t), and the ratio of Government

[30] I also divided the sample into two subsamples. The results are almost invariant compared to the results for the whole sample. See Appendix B. Table II for more details. In unreported results, I also allow for other firm characteristics to vary between Republican and Democratic periods, the results for the tax variable do not change, and suggest that there is no change in the premia of the other firm characteristics included.

Spending to GDP (GOV). Moreover, the results could be potentially explained by higher levels of Policy Uncertainty when the Democratic Party is in office.

As discussed above, equation 4 explores the cross-section of stock returns using well-known firm characteristics that predict stock returns as explanatory variables. Additionally, the tax variable is included conditional and unconditionally on the political variable. In this section, equation 5 explores if the time series differential in returns for high and low tax rate stocks can be explained by the business cycle. Thus, equation 5 instead of the standard characteristics variables includes variables to control for the business cycle.

The following time series regression is used to control for the business cycle effect:

$$(Hi - Lo)_{t+1} = \pi' X_t + \gamma RR_t + \delta DD_t + \epsilon_{t+1} \qquad (5)$$

$(Hi - Lo)_{t+1}$ refers to an equally-weighted (EWR) or value-weighted (VWR) zero-investment portfolio that goes long in the highest corporate tax rate quintile firms and short in the lowest corporate tax rate quintile firms. RR and DD are the dummy variables for Republican and Democratic presidential terms respectively, and X_t is the vector of business cycle variables described above.

----- Insert table IV about here -----

The results, shown in Table IV, are consistent with the political cycle. The returns of the Hi-Lo portfolio are significantly different between Republican and

Democratic terms, even after controlling for the business cycle variables and the economic policy index. Indeed, the difference in return is slightly higher after controlling for them. According to the different regressions shown in table IV, the average difference in annual returns for the EWR and VWR cases is 8.3% and 5.9% respectively; with firms facing higher corporate tax rate consistently having higher returns than firms exposed lower corporate tax rate during Republican terms and the opposite during Democratic presidential terms.

The inclusion of the Government Spending to GDP variable without altering the results is compatible with the results from this research being different from those of industry exposure to Government Spending from Belo et al. (2013). Unreported regressions, including the Fiscal Deficit to GDP instead of the Governments Spending, provides almost invariant results.

7. Investment strategy and abnormal returns analysis

A simple strategy is suggested in order to determine whether the variation of returns between different governments is due to a risk premium or abnormal returns. This strategy consists of a zero-investment portfolio that goes long (short) in the highest corporate tax rate quintile and short (long) in the lowest corporate tax rate quintile when the president is from the Republican (Democratic) Party. The following time series regressions are used:

$$I \times (Hi - Lo)_t = \alpha + \sum_i \beta_i F_{i,t} + \epsilon_t \qquad (6)$$

I_t is equal to 1 if there is a Republican president and I is equal to -1 if the president is a Democrat. $(Hi - Lo)$ represents the zero-investment portfolio return. $F_{i,t}$ is the factor from different asset pricing models i at time t including: the CAPM model, which includes the market factor, the Fama and French (1993) three-factor model that adds the size and the value factors, the Carhart (1997) model that adds a momentum factor, and finally, the Fama and French (2015) five-factor model that incorporates profitability and investment factors to their previous 3-factor model. β_i is the factor loading for the different asset pricing models i. Different from equation 4 and 5, in equation 6, I use different asset pricing models to identify abnormal returns. The emphasis here is on the performance of an investable strategy, and not on the explanation of the time series of the portfolio sorted by the corporate tax rate.

The annualized Sharpe ratio and alpha are calculated for the strategy. For the Equally-weighted portfolio (EWR), alpha goes from 3.46% according to the Carhart model to 6.32% using the Fama and French five-factor model. The annual Sharpe ratio is 0.39 for the Equally-weighted portfolio (EWR) and 0.11 for the Value-weighted portfolio (VWR). The difference between EWR and VWR is consistent with the results from Scholes, Wilson, and Wolfson (1992) and Guenther (1994) that show that large firms are able to manage their taxable income during the 1986 tax reform act that reduced the maximum corporate tax rate. In contrast, small firms display reduced opportunistic tax planning and therefore, they are expected to be more sensitive to changes in corporate taxation.

A similar alternative investment strategy, based on the results of Santa-Clara and Valkanov (2003), is used. A zero-investment portfolio that goes long in the highest corporate tax rate quintile and short in the lowest corporate tax rate quintile when the president is from the Republican Party, but long in the market and short in the risk free asset during Democratic presidential terms, provides an annual return of 7.6% and a Sharpe ratio of 0.63 when using the Equally-weighted portfolio. This can be compared with the annual Sharpe ratio for the SP500 of 0.22 during the same period or 0.43 for the value-weighted portfolio from CRSP.

----- Insert table V about here -----

8. Understanding the conditional tax rate effect in stock returns

The analysis in the previous sections sheds light on the impact of the corporate tax rate, dependent on the party in office, on stock returns. After taking into consideration firm characteristics, business cycle variables, and standard asset pricing models, the results remain strong and significant. In the following analysis, I further explore this phenomenon by focusing on some specific economic mechanisms.

8.1 Do markets (partially) anticipate these results?

From Scholes, Wilson, and Wolfson (1992) it is known that firms anticipate changes in tax rates, even before these changes are approved in the Senate. If the higher returns for the high corporate tax rate portfolio during the Republican presidential periods have a risk-based explanation, the market price for these firms

should react negatively to an increase in the probability of the Republican candidate winning the presidential election. Conversely, under a cash-flow based explanation, an increase in the price of these high corporate tax rate firms would likely be explained by higher expected cash flows due to a reduction in the rate during Republican presidential terms, and the results detected in the previous sections would suggest underreaction from investors to a predictable effect. The underreaction to can be explained along the lines of the theory from Daniel, Hirshleifer, and Subrahmanyam (1998) and Hong and Stein (1999).

To explore this possibility, the Winner-Take-All (WTA) contracts from the Iowa Electronic Market (IEM) are used. The analysis covers the seven elections between 1992 and 2016 for which the data is available. These contracts are a proxy for the probability of one of the candidates winning the presidential election. In particular, the following regression will be used, including OLS and bootstrap approaches to address the small sample size, 233 observations for the seven elections and only 42 weekly observations for the 2016 presidential election.

$$(Hi - Lo)_t = \theta_1 + \gamma_1 \times D\_RR\_WTA_t \qquad (7)$$

$(Hi - Lo)$ consists of an equally-weighted zero-investment portfolio that goes long in the highest corporate tax rate quintile firms and short in the lowest corporate tax rate quintile firms. D_RR_WTA measures the variation in the price of a Republican WTA contract, that is, it represents variations in the likelihood of the

Republican candidate being elected[31]. In order to be consistent with the profitability explanation, the results would need a significantly positive value of regression coefficient in equation 7, (γ_1), and in order to be consistent with the risk-based explanation would need a significantly negative coefficient (γ_1).

----- Insert table VI about here -----

The results shown in Table VI are consistent with the cash flow based explanation (i.e., Hypothesis, H3). The returns are consistently positive with increases in the probability of a Republican candidate winning the election, and negative for increases in the likelihood of a Democratic presidential candidate winning the ballot. Notably, the results are stronger for the 2016 presidential election, when the Republican candidate, D. Trump, included in his proposal a reduction in the corporate tax rate. Note that while the actual tax reform, effective in 2018, dropped the corporate rate from 35% to 21%, the proposal included a reduction to 15%. These results are relevant because they allow a more direct connection of the returns of portfolios sensitive to corporate tax rates and the partisan political cycle.

8.2 Profitability across presidential terms

[31] For robustness, the variation of the Democratic contract (D_DD_WTA) is also used. In this case, the regression is given by $(Hi - Lo)_t = \theta_2 + \gamma_2 \times D\_DD\_WTA_t$ and to be consistent with the profitability explanation, the results would need a negative value of regression coefficient in (γ_2).

It is possible that high corporate tax rate firms have higher returns during Republican terms because of increased profitability, measured after corporate taxes, due to reduced corporate tax expenses. To investigate this potential explanation further, and based on Belo et al. (2013), the following Fama-MacBeth cross-sectional regressions are used:

$$ROE_{i,t+1} = \theta + \pi' X_{i,t} + \gamma RR \times Tax_{i,t-11} + \delta DD \times Tax_{i,t-11} + \varphi ROE_{i,t} + \epsilon_{i,t+1} \qquad \forall\, t \qquad (8.1)$$

$$\varepsilon_{i,t+1}{}^{2} = \theta + \gamma RR_t \times Tax_{i,t-11} + \delta DD_t \times Tax_{i,t-11} + \epsilon_{i,t+1} \qquad \forall\, t \qquad (8.2)$$

ROE_i refers to the firm i return on equity measured as net income divided by book equity value, RR and DD are the dummy variables for Republican and Democratic presidential terms respectively, Tax_i refers to the corporate tax rate for firm i, and X_i is the vector of control variables. The tax rate is lagged by one year due to potential endogeneity between ROE and Tax. The control variables are: the market-value-of-assets to book-value-of-assets ratio (MB), the dividend-payments to book-equity value ratio (DB) and a dummy for dividend-paying firms (DIV). The selection of control variables follows Fama and French (2000).

If the profitability, cash-flow explanation fails, then it is possible to expect that corporate taxes act in a way that lowers variability of cash flows analogously to lower financial leverage[32]. That is, the higher the corporate tax rate, the lower

[32] "Leverage effect" refers to the fact that high-leverage firms have outperformed low-leveraged firms. (Bhandari, 1988).

the variation on the after-tax profits. If it is plausible that there is greater risk during Republican presidential terms, then high tax rate firms will benefit from this protection. In this alternative explanation, the higher return would be consistent with a risk premium. The results, shown in Table VII, are consistent with the cash flow explanation for regression 1. For regression 3, the results are not significant. Moreover, regressions 2 and 4 confirm empirically that the tax rate reduces risk, given the significant negative coefficient. This reduction in the variability is significantly higher during Republican periods, as can be seen in the difference in the regression coefficient during Democratic and Republican terms, indeed a result contrary to the risk-based explanation. Overall, the results of this section support the hypothesis, H3, cash flow explanation, in contrast with the hypothesis, H2, risk-based explanation.

----- Insert table VII about here -----

8.3 Does control of Congress affect the tax rate effect in stock returns?

The Congress in the U.S. plays an important role in the tax code. The determination of the details is part of the legislative process. However, more important is the interaction between the president in office and the party that controls Congress. To illustrate this fact, in 1992, the Democratic-controlled Congress approved a tax reform that was then vetoed by the Republican President Bush. Similarly, in 1999 the U.S. Congress approved a tax reform that was subsequently vetoed by the Democratic President Clinton.

Thus, similar to equation (4), several regressions are included to study the possible effect Congress has on the cross-section of stock returns due to the determination of corporate tax rates. Equation 9.1 explores the effect of the control of Congress in isolation. In different regressions, I include the party that controls the House of Representatives, the Senate, and Congress (both houses). Equation 9.2 explores the more interesting question about the interaction of Congress and the President in office. It is expected that a President with a friendly Congress will be more likely to implement their platform. On the other hand, a President with a strong opposition will be unlikely to implement big reforms, and will probably compromise their plan for reform, or will abort any reform that needs to go through the Congress.

Several dummy variables are included: NC_k refers to periods when neither Democrats nor Republican control Congress, RR_k refers to the periods when Congress, the House of Representatives, or the Senate is controlled by the Republican Party; DD_k refers to the periods when the Congress, the House of Representatives, or the Senate is controlled by the Democratic Party. Similarly, RR_j refers to the periods when the President in office is a Republican and DD_j refers to the periods when the President is a Democrat.

$$R_{i,t} = \theta + \pi' X_{i,t-1} + \gamma RR_k \times Tax_{i,t-1} + \delta DD_k \times Tax_{i,t-1} + \varphi NC_k \times Tax_{i,t-1} + \epsilon_{i,t} \qquad \forall\, t \qquad (9.1)$$

$$R_{i,t} = \theta + \pi' X_{i,t-1} + \gamma_1 RR_j \times RR_k \times Tax_{i,t-1} + \gamma_2 RR_j \times DD_k \times Tax_{i,t-1} + \gamma_3 RR_j \times NC_k \times Tax_{i,t-1} + \delta_1 DD_j \times DD_k \times Tax_{i,t-1} + \delta_2 DD_j \times RR_k \times Tax_{i,t-1} + \delta_3 DD_j \times NC_k \times Tax_{i,t-1} + \epsilon_{i,t} \qquad \forall\, t \qquad (9.2)$$

----- Insert table VIII about here -----

The main conclusion from these regressions is the fact that Congress in isolation, or any of the houses by themselves, seem unable to explain the cross-section of stock returns. When the interaction with the president in office is included, it seems that most of the results are concentrated in periods when the Democratic Party is in office, and they also control the Congress. Periods when the Republican Party is in office, and they also control the Congress are far less common. These results support the idea that the President in office is a necessary condition to reform such important policies as the tax code and that the President in office needs a friendly Congress to implement tax code reforms.

8.4 Are the results explained by the Tax Reform during Trump's presidency?

One plausible concern is that the results are only explained by the very significant reduction of the Corporate Tax rate included in the 2017 tax reform (Wagner, Zeckhauser, and Ziegler, 2018). After excluding the year 2017 or years 2016-2017

from the sample, the results are practically the same. The main regressions results for these periods are included in Appendix B. Table III.

9. Conclusion

There is a long list of literature examining the effect of taxes on financial variables. However, the list for the impact of corporate taxes on stock returns is more compact. Based on the extensive evidence that supports differences in economic output for different parties in office for the U.S., and particularly the higher level of taxes of left-wing governments, I incorporate different measures of the corporate tax rate conditional on the party in office, and I find that this variable helps to explain the cross-section of stock returns.

The results from this paper differs from previous literature. The contrasting results from Schiller (2016) and Favilukis et al. (2016) can be reconciled by considering the political variable. While Schiller (2016) predicts and finds that firms with lower tax shields (i.e., firms with high corporate taxes) have higher expected returns than firms with higher tax shields; Favilukis et al. (2016) find that different tax shields have different (i.e., positive and negative) relationship with stock returns. The outcome of this paper shows no relationship between corporate taxes and stock returns when the presidential variable is excluded.

Along the same lines, investment strategies based on this previous result yield abnormal positive returns. These abnormal returns are robust to the use of different asset pricing models. Moreover, results are economically significant, and

turnover and transaction costs based on this strategy are low given the persistence in the level of corporate taxes.

Investors seem to only partially foresee the effect of lower or higher tax levels associated with different political regimes. Changes in the probability of a presidential candidate winning the elections affect the returns of portfolios sorted by corporate tax rates. As expected, a High minus Low portfolio sorted by tax rates, has higher returns when the likelihood of the Republican candidate winning the elections increases.

After analyzing potential mechanisms for the results discussed above, underreaction to expected changes in cash flow appears to be a plausible explanation, in contrast with a risk-based explanation.

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Figure I Ratio of Corporate Taxes to GDP (1962-2023)

This figure reports the time series variation of the ratio of total corporate income taxes to GDP in the U.S. for the fiscal period from 1962 to 2023. It includes estimates for the fiscal period from 2018 to 2023.

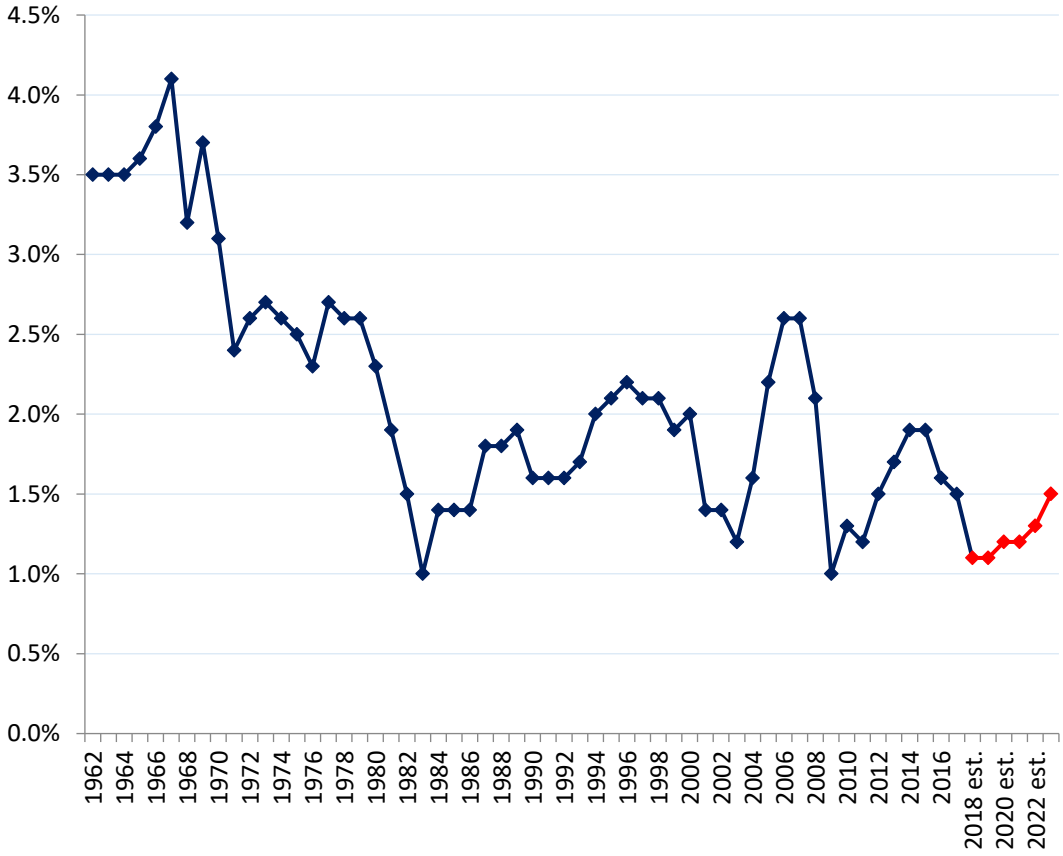

Table I Summary Statistics

This table reports average (Mean), standard deviation (Std. Dev.), 10th percentile (P10) and 90th percentile values (P90), and the first autoregressive coefficient (AR1) of a selected group of financial variables. Gross Profitability is calculated according to Novy-Marx (2013), Size is the natural logarithm of the market value, Value is the natural logarithm of the book to market ratio, Firm Momentum is the return between periods -2 and -12, Corp. Taxes/ TA is total corporate taxes to total assets ratio, Corp. Taxes/MVE is total corporate taxes to market value of equity ratio, and MTR is the marginal tax rate. D. Corp. Taxes/TA and D. Corp. Taxes/MVE, and D.MTR are the first differences of the tax variables. The sample covers the period from July 1963 to December 2017 for all variables, except for MTR that covers the period from 1980 to 2012.

Panel A: All terms Variable	Mean	Std. Dev	P10	P90	AR1
Profitability	0.389	0.267	0.110	0.733	0.993
Size	5.234	1.949	2.827	7.872	0.997
Value (Ln BM)	-0.655	0.870	-1.780	0.402	0.981
Momentum	0.203	0.760	-0.392	0.817	0.872
Corp. Taxes/TA	0.0346	0.0409	-0.000579	0.0877	0.975
Corp. Taxes/MVE	0.0394	0.0619	-0.000511	0.108	0.958
MTR	0.2903	0.115	0.0968	0.437	0.988
D. Corp. Taxes/TA	-1.5×10^{-4}	0.00836	0	0	-0.001
D. Corp. Taxes/MVE	-1.3×10^{-4}	0.02251	0	0	0.110
D. MTR	-0.0004	0.01769	0	0	0.078

Panel B: Democratic terms Variable	Mean	Std. Dev	P10	P90	AR1
Profitability	0.382	0.274	0.103	0.732	0.994
Size	5.604	1.904	3.362	8.181	0.997
Value (Ln BM)	-0.726	0.860	-1.850	0.595	0.987
Momentum	0.236	0.822	-0.361	0.848	0.858
Corp. Taxes/TA	0.0322	0.0393	-0.00108	0.0830	0.974
Corp. Taxes/MVE	0.0350	0.0565	-0.00104	0.1021	0.957
MTR	0.2792	0.1051	0.0994	0.3500	0.990
D. Corp. Taxes/TA	-6.2×10^{-5}	0.0081	0	0	0.101
D. Corp. Taxes/MVE	-1.0×10^{-4}	0.0219	0	0	0.085
D. MTR	0.0002	0.0150	0	0	0.064

Panel C: Republican terms Variable	Mean	Std. Dev	P10	P90	AR1
Profitability	0.394	0.260	0.116	0.733	0.993
Size	4.927	1.932	2.589	7.5438	0.997
Value (Ln BM)	-0.595	0.874	-1.722	0.458	0.985
Momentum	0. 174	0.793	-0.413	0.703	0.887
Corp. Taxes/TA	0.0367	0.0420	-0.0000	0.0913	0.975
Corp. Taxes/MVE	0.0431	0.0659	-0.0000	0.1117	0.959
MTR	0.2982	0.1204	0.0949	0.4508	0.986
D. Corp. Taxes/TA	-2.2×10^{-4}	0.0086	0	0	0.090
D. Corp. Taxes/MVE	-1.5×10^{-4}	0.0230	0	0	0.127
D. MTR	-0.0008	0.0194	0	0	0.088

Table II Returns of portfolios sorted by the marginal tax rate (MTR) and the effective corporate tax rate (TAX)

This table reports average of the annualized excess returns of portfolios sorted by the corporate tax rate. The five portfolios are sorted by the tax rate, from Low Tax Rate to High Tax Rate. Their annualized excess returns are reported for "All years" for which data is available, Republican presidential terms (RR years) and Democratic presidential periods (DD years). The Dif. column shows the difference in returns between Republican and Democratic terms for each portfolio. Hi-Lo represents the return of the high (Hi) minus low (Lo) corporate tax rate portfolio. Panel A. reports the results for Marginal Tax Rate (MTR) and Panel B. for (Total Corporate Taxes/Total Assets)

Panel A.

Portfolio	All years (1980-2012)	RR years	DD years	Dif.
Low	0.061	-0.078	0.275	-0.353
2	0.111	-0.087	0.415	-0.502
3	0.109	0.010	0.262	-0.252
4	0.134	0.060	0.258	-0.197
High	0.112	0.049	0.210	-0.161
Hi-Lo	0.052	0.127	-0.064	0.191

Panel B.

Portfolio	All years (1963-2017)	RR years	DD years	Dif.
Low	0.114	0.016	0.235	-0.219
2	0.107	0.033	0.196	-0.164
3	0.103	0.041	0.177	-0.136
4	0.102	0.048	0.167	-0.119
High	0.108	0.054	0.172	-0.119
Hi-Lo	-0.006	0.038	-0.063	0.101

Table III Fama-MacBeth Cross-sectional regressions and the party of the President in office

This table reports the results of the following Fama-MacBeth cross-sectional regressions. $R_{i,t} = \theta + \pi' X_{i,t-1} + \gamma RR \times Tax_{i,t-1} + \delta DD \times Tax_{i,t-1} + \epsilon_i$. The sample covers firms' returns during the period from July 1963 to December 2017. The control variables include: Size is the natural logarithm of the market value; Value is the natural logarithm of the book to market ratio, Firm Momentum is the return between periods -2 and -12. Market Beta is calculated using monthly data with a minimum of 24 observations, and Gross Profitability is calculated according to Novy-Marx (2013). The first row represents the coefficients; the second row reports the t-statistics using Newey-West (1987) heteroscedasticity and serial-correlation robust standard errors. Panel A. reports the results for (Total Corporate Taxes/Total Assets) and Panel B. for (Total Corporate Taxes/Market Value of Equity). ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

Panel A.

VARIABLES	Regression 1	Regression 2	Regression 3	Regression 4
Profitability	0.00327**	0.00279**	0.00279**	
	(2.364)	(2.113)	(2.113)	
Beta	-1.96e-05	2.36e-06	2.36e-06	
	(-0.0193)	(0.00237)	(0.00237)	
Size (ln Mkt. Cap)	-0.00179***	-0.00182***	-0.00182***	
	(-5.245)	(-5.514)	(-5.514)	
Value	0.00134**	0.00136**	0.00136**	
	(2.344)	(2.227)	(2.227)	
Momentum	5.21e-05***	5.14e-05***	5.14e-05***	
	(3.752)	(3.699)	(3.699)	
RR×Corp. Tax			**0.0175*** **	**0.0106**
			(3.388)	**(1.541)**
DD×Corp. Tax			**-0.0135****	**-0.0167****
			(-2.386)	**(-2.106)**
Corp. Tax		0.00408		
		(0.529)		

Panel B.

VARIABLES	Regression 1	Regression 2	Regression 3	Regression 4
Profitability	0.00327**	0.00328**	0.00328**	
	(2.364)	(2.457)	(2.457)	
Beta	-1.96e-05	-3.22e-05	-3.22e-05	
	(-0.0193)	(-0.0321)	(-0.0321)	
Size (ln Mkt. Cap)	-0.00179***	-0.00181***	-0.00181***	
	(-5.245)	(-5.349)	(-5.349)	
Value	0.00134**	0.00148***	0.00148***	
	(2.344)	(2.668)	(2.668)	
Momentum	5.21e-05***	5.17e-05***	5.17e-05***	
	(3.752)	(3.724)	(3.724)	
RR×Corp. Tax			**0.00945****	**0.0243*****
			(1.986)	**(3.571)**
DD×Corp. Tax			**-0.0151*****	**-0.00897**
			(-2.693)	**(-1.048)**
Corp. Tax		-0.00561		
		(-0.761)		

Table IV Time-series regression. Party of the president in office explains the return of the Hi-Lo portfolio

This table reports the results of the following time-series regression. $(Hi - Lo)_{t+1} = \pi' X_t + \gamma RR_t + \delta DD_t + \epsilon_{t+1}$. The sample covers the period from July 1963 to December 2017. Republican (RR) and Democratic (DD) refer to presidential periods over the presidential cycle. The control variables includes: Annualized log dividend to price ratio (DP), Term spread (TSP), Default spread (DSP), Relative interest rate (RIR), Inflation (INF), the Economic Policy Uncertainty Index (EPU), and the Government Spending to GDP (GOV). EWR is the equally weighted portfolio and VWR is the value weighted portfolio. The first row represents the coefficients; the second row reports the t-statistics using Newey-West (1987) heteroscedasticity and serial-correlation robust standard errors. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

VARIABLES	EWR Regression 1	VWR Regression 2	EWR Regression 3	VWR Regression 4	EWR Regression 5	VWR Regression 6	EWR Regression 7	VWR Regression 8
RR	**0.00264**	**-0.00352**	**-0.000382**	**0.0111**	**0.000777**	**0.0148**	**-0.0280**	**-0.0260**
	(1.536)	**(-1.586)**	**(-0.0281)**	**(0.752)**	**(0.0567)**	**(0.982)**	**(-1.061)**	**(-0.844)**
DD	**-0.00416***	**-0.00588****	**-0.00742**	**0.00469**	**-0.00610**	**0.00885**	**-0.0355**	**-0.0328**
	(-1.757)	**(-2.241)**	**(-0.580)**	**(0.325)**	**(-0.470)**	**(0.599)**	**(-1.339)**	**(-1.064)**
DP			-0.000616	-0.000109	-0.000941	-0.00113	-0.00184	-0.00240
			(-0.186)	(-0.0307)	(-0.283)	(-0.317)	(-0.601)	(-0.710)
DSP			-0.341	-1.463***	-0.225	-1.097**	-0.507	-1.497**
			(-0.788)	(-2.873)	(-0.480)	(-2.039)	(-0.885)	(-2.273)
INF			0.0555*	0.00247	0.0534	-0.00388	0.0484	-0.0110
			(1.696)	(0.0636)	(1.641)	(-0.0993)	(1.505)	(-0.284)
RIR			0.00581	0.0617	0.0159	0.0933	-0.0432	0.00961
			(0.0393)	(0.298)	(0.107)	(0.459)	(-0.257)	(0.0442)
TSP			0.134	0.0475	0.165	0.147	0.0613	-7.23e-05
			(0.990)	(0.283)	(1.158)	(0.862)	(0.373)	(-0.0004)
EPU					-3.01e-05	-9.46e-05**	-4.40e-05	-0.0001**
					(-0.814)	(-2.016)	(-1.065)	(-2.169)
GOV							0.159	0.225
							(1.015)	(1.254)
RR-DD	**0.006802****	**0.002355**	**0.007040****	**0.006422***	**0.006876****	**0.005907***	**0.007500****	**0.006800****
Observations	654	654	654	654	654	654	654	654

Table V Realized and abnormal returns investment strategy

This table reports the realized and abnormal annual returns of the investment strategy based on the corporate tax rate and the presidential cycle. The abnormal return (α) are obtained using standard asset pricing models, the Capital Asset Pricing Model (CAPM), the Fama-French (1993) three-factor model (FF3), the Carhart (1997) four-factor model (FFC4), and the Fama-French (2015) five-factor model (FF5). The sample covers the period from July 1963 to December 2017. EWR is the equally weighted portfolio and VWR is the value weighted portfolio. The first row represents the coefficients; the second row reports the t-statistics using Newey-West (1987) heteroscedasticity and serial-correlation robust standard errors. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

Portfolio	Returns	Sharpe Ratio	$\alpha - CAPM$	$\alpha - FF3$	$\alpha - FFC4$	$\alpha - FF5$
EWR	4.64***	0.39	4.29**	5.29***	3.46*	6.32***
	(2.834)		(2.33)	(2.91)	(1.76)	(3.20)
VWR	1.58	0.11	1.81	2.78	1.25	4.00*
	(0.809)		(0.86)	(1.31)	(0.53)	(1.73)

Table VI Markets anticipate the performance of tax-politically sensitive portfolios

This table shows the market reaction associated with changes in Winner-take-all (WTA) contracts from the Iowa Electronic Market (IEM), the proxy for the probability of a candidate winning the presidential election. The sample covers the seven presidential elections between 1992 and 2016. D_RR_WTA refers to the change in the probability of the Republican candidate winning the election and D_DD_WTA refers to the change in the probability of the Democratic candidate winning the election. The first row refers to the coefficient for the regressions: $(Hi - Lo)_t = \theta_1 + \gamma_1 \times D\_RR\_WTA_t$, and $(Hi - Lo)_t = \theta_2 + \gamma_2 \times D\_DD\_WTA_t$ The second and third rows report the 1-sided OLS and Bootstrap p-values respectively. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

	1992-2016		2016 Election Only	
VARIABLES	Regression 1	Regression 2	Regression 3	Regression 4
D_RR_WTA	**1.510**		**6.603**	
OLS p-value	**(0.254)**		**(0.102)**	
Bootstrap p-value	**(0.277)**		**(0.126)**	
D_DD_WTA		**-2.579**		**-7.592***
OLS p-value		**(0.132)**		**(0.085)**
Bootstrap p-value		**(0.150)**		**(0.065)**
Constant	0.0670	0.0725	0.0596	0.0659
OLS p-value	(0.535)	(0.502)	(0.844)	(0.828)
Bootstrap p-value	(0.524)	(0.494)	(0.837)	(0.819)
Observations	233	233	42	42

Table VII Corporate Taxes, Cash Flow, and Risk (Volatility)

This table reports the results of the following Fama-MacBeth cross-sectional regressions. $ROE_{i,t+1} = \theta + \pi' X_{i,t} + \gamma RR \times Tax_{i,t-11} + \delta DD \times Tax_{i,t-11} + ROE_{i,t} + \epsilon_{i,t+1}$ and $\varepsilon_{i,t+1}{}^{2} = \theta + \gamma RR_t \times Tax_{i,t-11} + \delta DD_t \times Tax_{i,t-11} + \epsilon_{i,t+1}$. The sample covers the period from July 1963 to December 2017. Regressions 1 and 2 report the results for: Corp. Tax = Total Corporate Taxes/Total Assets and regressions 3 and 4 report the results for Corp. Tax = Total Corporate Taxes/Market Value of Equity. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

	Corp. Tax/ Total Assets		Corp. Tax/ Market Value of Equity	
VARIABLES	Regression 1 ROE	Regression 2 ε^2	Regression 3 ROE	Regression 4 ε^2
Dividend	0.0740***		0.0774***	
	(22.54)		(21.79)	
Dividend Yield	0.604***		0.743***	
	(23.22)		(25.38)	
Book to Market	0.0588***		0.0279***	
	(10.56)		(6.131)	
ROE	0.224***		0.226***	
	(16.15)		(16.25)	
RR×Corp. Tax	**0.843*** **	**-4,974** **	**0.383*** **	**-3,078** **
	(12.07)	**(-2.438)**	**(10.76)**	**(-2.393)**
DD×Corp. Tax	**0.698*** **	**-4.286**	**0.401*** **	**-9.695*** **
	(11.33)	**(-0.785)**	**(10.47)**	**(-3.772)**
Intercept	Yes	Yes	Yes	Yes
RR-DD	**0.145***	**-4,969.6** **	**-0.0178**	**-3,068.3** **

Table VIII Fama-MacBeth Cross-sectional regressions and the control of Congress

This table reports the results of the following Fama-MacBeth cross-sectional regressions. $R_{i,t} = \theta + \pi' X_{i,t-1} + \gamma RR_k \times Tax_{i,t-1} + \delta DD_k \times Tax_{i,t-1} + \varphi NC_k \times Tax_{i,t-1} + \epsilon_{i,t}$, and $R_{i,t} = \theta + \pi' X_{i,t-1} + \gamma_1 RR_j \times RR_k \times Tax_{i,t-1} + \gamma_2 RR_j \times DD_k \times Tax_{i,t-1} + \gamma_3 RR_j \times NC_k \times Tax_{i,t-1} + \delta_1 DD_j \times DD_k \times Tax_{i,t-1} + \delta_2 DD_j \times RR_k \times Tax_{i,t-1} + \delta_3 DD_j \times NC_k \times Tax_{i,t-1} + \epsilon_{i,t}$. The sample covers the period from July 1963 to December 2017. The control variables include: Size is the natural logarithm of the market value; Value is the natural logarithm of the book to market ratio, Firm Momentum is the return between periods -2 to -12. Market Beta is calculated using monthly data with a minimum of 24 observations, and Gross profitability is calculated according to Novy-Marx (2013). The first row represents the coefficients; the second row reports the t-statistics using Newey-West (1987) heteroscedasticity and serial-correlation robust standard errors. Subscripts j and k refer to the Party of the President and the party that control the Congress, the House of Representatives or the Senate. NC refers to no party in control of both chambers of Congress. Regressions 1 to 3 in Panel A and regression 1 in Panel B report the results for (Total Corporate Taxes/Total Assets). Regressions 4 to 6 in Panel A and regression 2 in Panel B report the results for (Total Corporate Taxes/Market Value of Equity). Panel A shows the results for the Congress in isolation and Panel B shows the results for the interaction between the Congress and the President in office. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

Panel A.

	Corp. Tax/ Total Assets			Corp. Tax/ Market Value of Equity		
VARIABLES	k = Congress Regression 1	k = House Regression 2	k = Senate Regression 3	k = Congress Regression 4	k = House Regression 5	k = Senate Regression 6
Profitability	0.00279**	0.00279**	0.00279**	0.00328**	0.00328**	0.00328**
	(2.113)	(2.113)	(2.113)	(2.457)	(2.457)	(2.457)
Beta	2.36e-06	2.36e-06	2.36e-06	-3.22e-05	-3.22e-05	-3.22e-05
	(0.00237)	(0.00237)	(0.00237)	(-0.0321)	(-0.0321)	(-0.0321)
Size (ln Mkt. Cap)	-0.00182***	-0.00182***	-0.00182***	-0.00181***	-0.00181***	-0.00181***
	(-5.514)	(-5.514)	(-5.514)	(-5.349)	(-5.349)	(-5.349)
Value	0.00136**	0.00136**	0.00136**	0.00148***	0.00148***	0.00148***
	(2.227)	(2.227)	(2.227)	(2.668)	(2.668)	(2.668)
Momentum	5.14e-05***	5.14e-05***	5.14e-05***	5.17e-05***	5.17e-05***	5.17e-05***
	(3.699)	(3.699)	(3.699)	(3.724)	(3.724)	(3.724)
RRk×Corp. Tax	**-0.000731**	**-0.000306**	**0.00443**	**-0.00238**	**-0.000666**	**0.00265**
	(-0.173)	**(-0.0654)**	**(0.978)**	**(-0.591)**	**(-0.155)**	**(0.626)**
DDk×Corp. Tax	**-0.000783**	**0.00438**	**-0.000358**	**-0.00997***	**-0.00494**	**-0.00826**
	(-0.133)	**(0.715)**	**(-0.0575)**	**(-1.706)**	**(-0.825)**	**(-1.368)**
NCk×Corp. Tax	**0.00559****	**-**	**-**	**0.00673*****	**-**	
	(2.138)	**-**	**-**	**(3.426)**	**-**	

Panel B.

	Corp. Tax/ Total Assets	Corp. Tax/ Market Value of Equity
VARIABLES	j, k =(President, Congress) Regression 1	j, k =(President, Congress) Regression 2
Profitability	0.00279**	0.00328**
	(2.113)	(2.457)
Beta	2.36e-06	-3.22e-05
	(0.00237)	(-0.0321)
Size (ln Mkt. Cap)	-0.00182***	-0.00181***
	(-5.514)	(-5.349)
Value	0.00136**	0.00148***
	(2.227)	(2.668)
Momentum	5.14e-05***	5.17e-05***
	(3.699)	(3.724)
RRj×RRk×Corp. Tax	**0.00185**	**0.00185**
	(1.051)	**(1.019)**
RRj×DDk×Corp. Tax	**0.00890****	**0.00138**
	(2.057)	**(0.333)**
RRj×NCk×Corp. Tax	**0.00679*****	**0.00622*****
	(2.959)	**(4.095)**
DDj×DDk×Corp. Tax	**-0.00968****	**-0.0113*****
	(-2.437)	**(-2.755)**
DDj×RRk×Corp. Tax	**-0.00258**	**-0.00423**
	(-0.675)	**(-1.178)**
DDj×NCk×Corp. Tax	**-0.00120**	**0.000512**
	(-0.970)	**(0.409)**

Appendix A

Variable	Description	Definition
Beta (CAPM)	Monthly market beta over 5 years with a minimum of 24 observations	WRDS
Dividend dummy	1 if firm pay dividends (dvc>0). 0 otherwise	dvc: common dividends. (Compustat)
Dividend Yield	Common dividends divided by previous year equity book value	dvc: common dividends. (Compustat)
Momentum	Firm's return between periods -2 and -12	(CRSP)
Profitability	Gross profit divided by total assets. As is Novy-Marx (2013)	gross_profit1 = gp/at (Compustat). gp: gross profit. at: assets (total) (book value).
ROE	Net income divided by previous year book value of equity	ROE=ni/be (Compustat)
Size	Natural logarithm of equity market value	Ln(mkt_cap)=ln[(altprc*shrout)/1000] (CRSP). altprc: stock price. shrout: shares outstanding.
tax_rate	Total taxes divided by earnings before interests, taxes, and depreciation	tax_rate=txt/oibdp (Compustat). txt: Income taxes (total). oibdp: Earnings before interests, taxes, and depreciation.

tax_rate2	Total taxes divided by total assets (book value)	tax_rate2=txt/at (Compustat). txt: Income taxes (total). at: assets (total) (book value)
tax_rate3	Total taxes divided by market value of equity	tax_rate3=txt/me. txt: Income taxes (total) (Compustat). me: market value of equity (CRSP)
tax1d	tax_rate * dd	tax_rate x Democratic dummy
tax1r	tax_rate * rr	tax_rate x Republican dummy
tax2d	tax_rate2 * dd	tax_rate2 x Democratic dummy
tax2r	tax_rate2 * rr	tax_rate2 x Republican dummy
tax3d	tax_rate3 * dd	tax_rate3 x Democratic dummy
tax3r	tax_rate3 * rr	tax_rate3 x Republican dummy
Value	Natural logarithm of book to market ratio.	Ln(value)=ln(be/me). be: book value of equity (Compustat). me: market value of equity (CRSP) be = seq + txdb + itcb – bvps seq: book value of stockholder equity. txdb: deferred taxes. itcb: investment tax credit. bvps: book value of preferred stock

Appendix B

Table B. I. Fama-MacBeth Cross-sectional regressions and the party of the President in office. 1980 to 2012.

This table reports the results of the following Fama-MacBeth cross-sectional regressions. $R_{i,t} = \theta + \pi' X_{i,t-1} + \gamma RR \times Tax_{i,t-1} + \delta DD \times Tax_{i,t-1} + \epsilon_i$. The sample covers firms' returns during the period from 1980 to 2012. The control variables include: Size is the natural logarithm of the market value; Value is the natural logarithm of the book to market ratio, Firm Momentum is the return between periods -2 and -12. Market Beta is calculated using monthly data with a minimum of 24 observations, and Gross profitability is calculated according to Novy-Marx (2013). The first row represents the coefficients; the second row reports the t-statistics using Newey-West (1987) heteroscedasticity and serial-correlation robust standard errors. The tax variable (MTR) refers to the Marginal Tax Rate from Blouin et al. (2010). ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

VARIABLES	Regression 1	Regression 2	Regression 3	Regression 4
Profitability	0.00600***	0.00133	0.00133	
	(3.397)	(0.865)	(0.865)	
Beta	0.000740	0.00153	0.00153	
	(0.542)	(1.152)	(1.152)	
Size (ln Mkt. Cap)	-0.00167***	-0.00272***	-0.00272***	
	(-3.795)	(-7.917)	(-7.917)	
Value	0.00206***	0.000853	0.000853	
	(2.833)	(1.351)	(1.351)	
Momentum	3.65e-05**	3.04e-05**	3.04e-05**	
	(2.477)	(2.074)	(2.074)	
RR×MTR			**0.0332*** **	**0.0238*** **
			(9.329)	**(4.056)**
DD×MTR			**0.0135** **	**0.00463**
			(2.313)	**(0.550)**
MTR		0.0466***		
		(7.010)		

Table B. II. Fama-MacBeth Cross-sectional regressions and the party of the President in office. Subsamples: July 1963 to September 1990 and October 1990 to December 2017.

This table reports the results of the following Fama-MacBeth cross-sectional regressions. $R_{i,t} = \theta + \pi' X_{i,t-1} + \gamma RR \times Tax_{i,t-1} + \delta DD \times Tax_{i,t-1} + \epsilon_i$. The sample covers firms' returns during the period from July 1963 to September 1990 for Panel A and B, and from October 1990 to December 2017 for Panel C and D. The control variables include: Size is the natural logarithm of the market value; Value is the natural logarithm of the book to market ratio, Firm Momentum is the return between periods -2 and -12. Market Beta is calculated using monthly data with a minimum of 24 observations, and Gross profitability is calculated according to Novy-Marx (2013). The first row represents the coefficients; the second row reports the t-statistics using Newey-West (1987) heteroscedasticity and serial-correlation robust standard errors. Panel A. and C. report the results for (Total Corporate Taxes/Total Assets). Panel B. and D. report the results for (Total Corporate Taxes/Market Value of Equity). ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

Panel A.

VARIABLES	Regression 1	Regression 2	Regression 3	Regression 4
Profitability	0.00275	0.00151	0.00151	
	(1.519)	(0.883)	(0.883)	
Beta	-0.00156	-0.00147	-0.00147	
	(-1.111)	(-1.065)	(-1.065)	
Size (ln Mkt. Cap)	-0.00162***	-0.00168***	-0.00168***	
	(-3.394)	(-3.623)	(-3.623)	
Value	0.00155**	0.00168*	0.00168*	
	(1.990)	(1.948)	(1.948)	
Momentum	9.93e-05***	9.82e-05***	9.82e-05***	
	(4.661)	(4.600)	(4.600)	
RR×Corp. Tax			**0.0238*** **	**0.0183** **
			(3.071)	**(2.216)**
DD×Corp. Tax			**-0.00965**	**-0.0137** **
			(-1.375)	**(-2.221)**
Corp. Tax		0.0142		
		(1.346)		

Panel B.

VARIABLES	Regression 1	Regression 2	Regression 3	Regression 4
Profitability	0.00275	0.00255	0.00255	
	(1.519)	(1.501)	(1.501)	
Beta	-0.00156	-0.00156	-0.00156	
	(-1.111)	(-1.129)	(-1.129)	
Size (ln Mkt. Cap)	-0.00162***	-0.00168***	-0.00168***	
	(-3.394)	(-3.513)	(-3.513)	
Value	0.00155**	0.00176**	0.00176**	
	(1.990)	(2.309)	(2.309)	
Momentum	9.93e-05***	9.84e-05***	9.84e-05***	
	(4.661)	(4.621)	(4.621)	
RR×Corp. Tax			**0.0101**	**0.0347*** **
			(1.463)	**(3.652)**
DD×Corp. Tax			**-0.0132***	**-0.00744**
			(-1.747)	**(-1.020)**
Corp. Tax		-0.00312		
		(-0.302)		

Panel C.

VARIABLES	Regression 1	Regression 2	Regression 3	Regression 4
Profitability	0.00375*	0.00406**	0.00406**	
	(1.810)	(2.022)	(2.022)	
Beta	0.00152	0.00148	0.00148	
	(1.041)	(1.031)	(1.031)	
Size (ln Mkt. Cap)	-0.00196***	-0.00195***	-0.00195***	
	(-4.012)	(-4.168)	(-4.168)	
Value	0.00113	0.00104	0.00104	
	(1.349)	(1.201)	(1.201)	
Momentum	4.90e-06	4.60e-06	4.60e-06	
	(0.281)	(0.264)	(0.264)	
RR×Corp. Tax			0.0113	0.00287
			(1.644)	(0.261)
DD×Corp. Tax			-0.0173*	-0.0196
			(-1.954)	(-1.347)
Corp. Tax		-0.00601		
		(-0.534)		

Panel D.

VARIABLES	Regression 1	Regression 2	Regression 3	Regression 4
Profitability	0.00380*	0.00401*	0.00401*	
	(1.810)	(1.945)	(1.945)	
Beta	0.00152	0.00150	0.00150	
	(1.041)	(1.038)	(1.038)	
Size (ln Mkt. Cap)	-0.00196***	-0.00195***	-0.00195***	
	(-4.012)	(-4.044)	(-4.044)	
Value	0.00113	0.00120	0.00120	
	(1.349)	(1.488)	(1.488)	
Momentum	4.90e-06	4.94e-06	4.94e-06	
	(0.281)	(0.283)	(0.283)	
RR×Corp. Tax			0.00877	0.0140
			(1.341)	(1.432)
DD×Corp. Tax			-0.0169**	-0.0105
			(-2.050)	(-0.677)
Corp. Tax		-0.00810		
		(-0.767)		

Table B. III. Fama-MacBeth Cross-sectional regressions and the party of the President in office without the 2016 presidential election period and the Trump government period

This table reports the results of the following Fama-MacBeth cross-sectional regressions. $R_{i,t} = \theta + \pi' X_{i,t-1} + \gamma RR \times Tax_{i,t-1} + \delta DD \times Tax_{i,t-1} + \epsilon_i$. The sample covers firms' returns during the period from July 1963 to December 2015 for Panel A and B, and from July 1963 to December 2016 for Panel C and D. The control variables include: Size is the natural logarithm of the market value; Value is the natural logarithm of the book to market ratio, Firm Momentum is the return between periods -2 and -12. Market Beta is calculated using monthly data with a minimum of 24 observations, and Gross profitability is calculated according to Novy-Marx (2013). The first row represents the coefficients; the second row reports the t-statistics using Newey-West (1987) heteroscedasticity and serial-correlation robust standard errors. Panel A. and C. report the results for (Total Corporate Taxes/Total Assets). Panel B. and D. report the results for (Total Corporate Taxes/Market Value of Equity). ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

Panel A.

VARIABLES	Regression 1	Regression 2	Regression 3	Regression 4
Profitability	0.00325**	0.00286**	0.00286**	
	(2.333)	(2.157)	(2.157)	
Beta	-2.94e-05	-1.81e-05	-1.81e-05	
	(-0.0280)	(-0.0176)	(-0.0176)	
Size (ln Mkt. Cap)	-0.00183***	-0.00186***	-0.00186***	
	(-5.214)	(-5.465)	(-5.465)	
Value	0.00130**	0.00130**	0.00130**	
	(2.218)	(2.085)	(2.085)	
Momentum	5.77e-05***	5.70e-05***	5.70e-05***	
	(4.093)	(4.039)	(4.039)	
RR×Corp. Tax			**0.0162*** **	**0.0094**
			(3.073)	**(1.332)**
DD×Corp. Tax			**-0.0143****	**-0.0176****
			(-2.482)	**(-2.233)**
Corp. Tax		0.00195		
		(0.247)		

Panel B.

VARIABLES	Regression 1	Regression 2	Regression 3	Regression 4
Profitability	0.00325**	0.00330**	0.00330**	
	(2.333)	(2.466)	(2.466)	
Beta	-2.94e-05	-5.69e-05	-5.69e-05	
	(-0.0280)	(-0.0550)	(-0.0550)	
Size (ln Mkt. Cap)	-0.00183***	-0.00185***	-0.00185***	
	(-5.214)	(-5.312)	(-5.312)	
Value	0.00130**	0.00144**	0.00144**	
	(2.218)	(2.546)	(2.546)	
Momentum	5.77e-05***	5.72e-05***	5.72e-05***	
	(4.093)	(4.061)	(4.061)	
RR×Corp. Tax			**0.00891***	**0.0244****
			(1.861)	**(3.504)**
DD×Corp. Tax			**-0.0160*****	**-0.0113**
			(-2.843)	**(-1.302)**
Corp. Tax		-0.00709		
		(-0.956)		

Panel C.

VARIABLES	Regression 1	Regression 2	Regression 3	Regression 4
Profitability	0.00349**	0.00310**	0.00310**	
	(2.492)	(2.329)	(2.329)	
Beta	-3.20e-05	-2.11e-05	-2.11e-05	
	(-0.0310)	(-0.0208)	(-0.0208)	
Size (ln Mkt. Cap)	-0.00181***	-0.00183***	-0.00183***	
	(-5.228)	(-5.481)	(-5.481)	
Value	0.00147**	0.00147**	0.00147**	
	(2.527)	(2.377)	(2.377)	
Momentum	5.23e-05***	5.16e-05***	5.16e-05***	
	(3.714)	(3.660)	(3.660)	
RR×Corp. Tax			**0.0159*****	**0.00921**
			(3.073)	**(1.331)**
DD×Corp. Tax			**-0.0139****	**-0.0171****
			(-2.423)	**(-2.132)**
Corp. Tax		0.00204		
		(0.262)		

Panel D.

VARIABLES	Regression 1	Regression 2	Regression 3	Regression 4
Profitability	0.00349**	0.00355***	0.00355***	
	(2.492)	(2.627)	(2.627)	
Beta	-3.20e-05	-5.99e-05	-5.99e-05	
	(-0.0310)	(-0.0588)	(-0.0588)	
Size (ln Mkt. Cap)	-0.00181***	-0.00183***	-0.00183***	
	(-5.228)	(-5.325)	(-5.325)	
Value	0.00147**	0.00161***	0.00161***	
	(2.527)	(2.863)	(2.863)	
Momentum	5.23e-05***	5.18e-05***	5.18e-05***	
	(3.714)	(3.678)	(3.678)	
RR×Corp. Tax			**0.00875***	**0.0239****
			(1.861)	**(3.503)**
DD×Corp. Tax			**-0.0158*****	**-0.00950**
			(-2.784)	**(-1.091)**
Corp. Tax		-0.00707		
		(-0.956)		

Chapter Four: Partisan Politics and Stock Returns under Strong Presidential Regimes

1. Introduction

This paper explores the effect of partisan politics on stock returns. This analysis examines a sample of countries with a high degree of disagreement on the main economic policies and a strong presidential system. The discrepancy in the policies is helpful to allow for enough variation among left-wing and right-wing parties or coalitions in office, and the strong presidential systems enable the premier to change the economic policies according to the party's view. Moreover, this research also studies the potential effect of partisan politics in the religious spectrum.

The results show that firm-level stock returns are higher during Centrist party government terms compared to periods under a left or right-wing government in a sample of Latin American countries. This is 1.90% for the periods under a Centrist president, compared to 1.59% (1.42%) for periods under right-wing (left-wing) governments. Moreover, for a government under a president from a Christian party, the firm-level stock returns have an average of 1.70%, compared to 1.50% for the periods during secular party governments. On average, the one-day market reaction after an election when a leftist candidate wins the ballotage is negative and significantly lower than when a rightist candidate wins the election - a difference of 3.62% in daily returns. Similarly, the market reaction differential between a

Christian and a Secular party candidate winning the election is 4.95%, with the market returns being higher when the former wins the ballotage.

Further exploration of the previous results from a risk-based or cash flow-based explanation provides inconsistent results for the left-right wing dimension. For example, Economic Policy Uncertainty is lower during a left-wing government in Brazil but higher in Chile. For the panel data, Economic Policy Uncertainty is higher during right-wing governments. Regarding the cash flow-based explanation, profitability is used as a proxy, and it is found to be lower under centrist presidencies.

For the Christian-Secular dimension, the performance is consistently better under Christian party governments. Lower Economic Policy Uncertainty for Chile, lower stock price crash risk and higher profitability are observed during periods when the president is from a Christian party. These results are consistent with cash flow-based explanation and underreaction.

This is the first paper that explicitly analyzes this religious dimension. Differently, Bhattacharya et al. (2017) study the effects of policy and policy uncertainty on innovation, specifically the left-right dimension, while only tangentially mentioning that the religious dimension could potentially play a role.

However, many studies have studied the relationship between the religious belief of members of a firm, corporate decisions, and stock return performance. For example, Hilary and Hui (2009) find that level of religiosity in a firm's US county

affects corporate choices; Kumar, Page, and Spalt (2011) explore the ratio of Catholics relative to Protestants and the gambling-like investment. Later, Callen and Fang (2015) show that future stock price crash risk is negatively correlated with religiosity.

In this study, a particular sample of Latin American countries is chosen due to the extensive literature that supports that a strong presidential regime characterizes these nations (E.g., Mainwaring, 1990; Mainwaring and Shugart, 1997, and Chaisty, Cheeseman, and Power, 2014).

While there is extensive evidence of the effect of partisan politics on stock returns in the U.S. (e.g., Huang, 1985; Santa-Clara and Valkanov, 2003; Sy and Al Zaman, 2011; Belo, Gala, and Li, 2013, and Pastor and Veronesi, 2017), the international evidence is less conclusive. Bohl and Gottschalk (2006) posit that the left-wing premium is exceptional and show that from a sample of 15 member countries in the Organisation for Economic Co-operation and Development (OECD), only Denmark, Germany and the U.S displayed this premium.

For Latin America, the literature is limited. Bonilla, Contreras, and Sepulveda (2014) find evidence of a positive market reaction in Chile when the right-wing presidential candidate increases his popularity in the political pools for the 2009 election. Önder and Şimga-Muğan (2006) show that political news affects volatility and trading volume in Argentina. However, they do not explore the asset returns in the Argentinian market.

Firm-level data from Compustat Global for Brazil, Chile, Colombia, Mexico, and Peru is used. Moreover, the party's classification mostly follow Coppedge (1997). The empirical approach raises some concerns. First, it is never true in the sample that there are only two parties or groups of parties, one left-wing and one right-wing, that are relevant for the political system of the country. Alesina, Roubini, and Cohen (1997) postulate that the macroeconomic effects of party policy are more evident in a two-party system than in a multi-party system. Second, only a few shifts occur between parties. For instance, the same center-left coalition governed in Chile from 1990 to 2010. Third, a party can be challenging to classify on the left-right spectrum. For example, the electorally successful Peronism/Justicialism movement in Argentina has displayed both left and right-wing policies and has elected presidents from both subgroups[33]. Last, the number of observations is limited as Pérez Artica, Delbianco, and Brufman (2017) argue.

This research sheds light on several issues. Firstly, this paper shows that the left-wing premium is exceptional and it is not observed in this sample. However, this paper confirms in a different setting the importance of the effect of partisan politics on the stock markets. For example, the significantly different market reaction after a left-wing candidate is elected compared to a right-wing elected presidential candidate (4.95% one-day return difference). Besides, this research contributes to the partisan politics effect on the stock markets, in this case, through

[33] See Goebel (2007) for a reference about the origins of this movement.

the religious-secular dimension. That is, the returns are higher, and the risk is lower during periods with a president from a Christian party.

This paper also contributes to the understanding of the effect of religiosity on the stock price crash risk. Different from Callen and Fang (2015) which explores the religiosity of the firm's members, this research shows that the religiosity of the party in office is correlated with the stock price crash risk at the firm level.

The remainder of this study is divided into five sections. Section 2 develops testable hypotheses. Section 3 describes the financial and political data used in the paper. Section 4 shows the main empirical results. Section 5 explores alternative explanations for the main empirical results. Section 6 discusses the implications of the empirical results. Finally, section 7 concludes the study.

2. Hypotheses Development

In this section, I describe the potential explanations of how partisan politics affects stock returns for two different dimensions: the left-right wing dimension, and the secular-Christian dimension. Once the hypotheses are outlined, they would be tested on a sample of Latin American countries.

2.1. A left-wing premium

The empirical literature has shown that there is a Democratic premium for the U.S. The international evidence is somehow feeble for a left-wing premium according to Bohl and Gottschalk (2006).

On the theoretical side, Pastor and Veronesi (2017) argue that in periods of high risk-aversion, the Democrats (I.e., left-wing party candidates) are more likely to be elected and the stocks returns tend to be higher than when Republicans (I.e., right-wing party candidates) are elected. Their model also implies that a positive reaction is expected when a right-wing candidate wins the presidential election.

Based on the previous discussion, the following hypotheses are proposed:

H1: There is a left-wing premium in the sample of Latin-American countries.

H2: There is a negative reaction when a leftist presidential candidate ends up winning the election.

2.2. A religious effect

The empirical results have supported the view that higher religiosity is correlated with lower exposure to risk as measured by volatility of stock returns (Hilary and Hui, 2009) and more ethical behavior from managers as measured by stock price crash risk (Callen and Fang, 2015). The underlying assumption is that governments under the presidency of a religious (i.e., Christian) party would lead to lower risk behavior from managers, and therefore, a lower risk premium. Then, the immediate reaction after a Christian party candidate gets elected, there would be a one-time positive reaction given the lower risk level.

Thus, the following hypotheses are proposed:

H3: There is a lower risk premium during the periods when the president in office is from a Christian party.

H4: There is a positive reaction when a Christian party presidential candidate ends up winning the election.

3. Data

3.1 Financial Data

Firm-level financial data is from Compustat Global. Market-level financial data comes from Bloomberg. Macroeconomic variables comes from the International Monetary Fund database.

To ensure the quality of the data, a screening procedure is proposed. For a country to be included in the sample, it needs to have the MSCI stock index for at least ten years and be included in the Global Compustat database. Moreover, it has to have at least five presidential elections during that period and at least 50% of the years included in the sample classified in the left-right spectrum. Accordingly, the final sample includes Brazil, Chile, Colombia, Mexico, and Peru.

Also, the data does not include ADR's, GDR's, and stocks traded in denominations different from the local currency or US dollar. Due to the high inflation in part of the period, several countries changed their legal currency during the period for which data is available. Then, I exclude discontinued local currencies, for example, the Brazilian Cruzeiro.

The firm-level data covers the period from July 1994 to December 2017 for Brazil, January 1989 to December 2017 for Chile, August 1992 to December 2017 for Colombia and Peru, and April 1993 to December 2017 for Mexico. The sample is restricted by the availability in Compustat Global and the screening process previously described. The sample also includes MSCI stock indices representatives of the same countries based on their availability. Exchange rates are from Bloomberg and the risk-free return in US dollars is from Kenneth French's website. Table I summarizes the data.

----- Insert table I about here -----

3.2 Political Data

The classification of a president in the political space can be hard in a two-party system (E.g., the U.S., the U.K, and Australia). However, the task is harder for a multi-party system that is common in the sample of countries used in this research. To complicate this situation more, some parties can have volatile political platforms. Thus, the approach of this paper is to rely on previous research done on Latin American politics. I update the classification of Latin American political parties introduced by Coppedge (1997). This is a very comprehensive classification of the political parties using a different panel of experts for every country. The main drawback is that it has not been updated since its publication.

3.2.1 Political ideology index: presidential index

Coppedge (1997) categorizes political parties from a group of Latin American countries based on the opinion of a panel of experts. Every party is classified according to two dimensions: Christian or Secular and Left, Center, or Right. The combination of these two dimensions leads to six blocks.[34] Parties that do not fit into these six groups are classified as Other Bloc, Personalist, or Unknown. The updated classification based on Coppedge (1997) is included in the appendix, Table A1. The updated classification is based on the following criteria: i. Keep the party in the classification from Coppedge (1997), ii. If the party is new, follow the party of origin of their founders/leaders, and finally, if needed, iii. Additional web sources.

4. Empirical results

4.1 Is there a Left-wing premium?

Santa-Clara and Valkanov (2003) propose a regression including a stock index return, political dummies for the Democratic and Republican party. Based on their work, I modify their regression by using a firm-level regression for a set of countries. Moreover, a Center party classification is added to the Left and Right-wing parties. Then, the following regression to analyze the effect of the party in office on the stock returns is used.

[34] The original work of Coppedge (1997) has ten blocks due to the inclusion of the Center-Left and Center-Right categories that I have included in the Left and Right category respectively.

$$R_{i,t} = \gamma_1 LL_{t-1} + \gamma_2 CC_{t-1} + \gamma_3 RR_{t-1} + \epsilon_i \qquad \forall\, t \qquad (1)$$

R_i refers to the firm i monthly returns for firm i, and LL, CC, and RR are the dummy variables for Left-wing, Center, and Right-wing parties respectively with a one-month lag[35]. The selection of one-month lag follows Santa-Clara and Valkanov (2003). The results are described in Table II.

----- Insert table II about here -----

The results from Table II show that excess returns in US dollars are higher for the centrist parties when compared to left-wing and right-wing parties. The difference between centrist and left-wing governments is 0.48% per month, and the difference between centrist and right-wing parties is 0.31% per month. Also, monthly returns are significantly higher for right-wing terms (1.59%) when compared to left-wing ones (1.42%)[36]. Overall, these results do not support hypothesis one (H1).

Moreover, the Secular-Christian dimension is explored. To the best of my knowledge, this is the first paper that explicitly examines the effect of partisan

[35] Equation 1 and 2 including a set of control variables also with a one-month lag is included in the Appendix A2. The availability of the control variables is limited to the sample included, so the regression in the appendix does not include Peru and the sample is shorter than the one in the main results. The control variables include business cycle variables: Industrial Production and Inflation, and different sources of risk, the Economic Policy Uncertainty index described in section 5.1 and the volatility described in section 5.3.2. The difference in the main results is due to a long period of Centrist party government that was characterized by high stock returns.

[36] In unreported results, the differences are practically invariable for returns in local currency.

politics in the religious dimension. The following regression is used to analyze this political aspect.

$$R_{i,t} = \delta_1 SS_{t-1} + \delta_2 XX_{t-1} + \epsilon_i \qquad \forall\, t \qquad (2)$$

R_i refers to the firm i monthly returns for firm i, and SS and XX are the dummy variables for the Secular and Christian parties respectively with a one-month lag. The results are described in Table III.

----- Insert table III about here -----

Table III reports the novel results for excess returns for governments under Secular and Christian parties. The firm-level excess returns are on average 1.7% per month during periods when a Christian party is in office, while the returns are 1.5% during periods with a Secular party president. The difference is a significant 0.2% per month[37]. Consequently, these results offer support for the rejection of hypothesis three (H3).

4.2 Is the market reaction after elections consistent with a risk-based explanation?

In this section, I analyze the stock market reaction after elections for the countries in our sample. According to the previous evidence for the U.S. (e.g., Santa-Clara

[37] In unreported results, the differences are even more significant for returns in local currency, the difference is 0.41% and significant at the 1% level.

and Valkanov, 2003), it is expected that there would be a negative reaction after a left-wing candidate is elected.

There are 33 elections in the sample, and the right-wing coalition won 17 elections. Where the two main coalitions/parties originated from different versions of left or right-wing parties, I classified them in relative terms. For example, in Brazil, the Workers' party is considered to be left-wing while the Social-Democratic party is classified as right-wing, although it is center-left in absolute terms. This classification differs from the previous section, while in the previous section the parties are classified in absolute terms; in this section, the parties are classified in relative terms between the two most competitive candidates. However, the party classification is still based on Coppedge (1997).

The stock price reaction after the election is analyze in relative terms because, in several elections the two most competitive candidates are from the same political spectrum, however, more or less to the extremes, and it is expected that if there is a left-wing premium, the market reaction would be more pronounced the more to one of the extreme the platform of the winner candidate is. In other words, based on previous results, a more extreme platform would be associated to a more extreme stock price reaction. Besides, if the outcome of the election is to be analyzed in absolute terms, many elections would have to be excluded from the sample, in particular, in Brazil and Colombia.

The market reaction is measured the day after the election using MSCI stock indices in local currency and U.S dollars.

$$After\_Election\_Return_{(1\_day)} = \gamma_1 LL + \gamma_2 RR + \epsilon_t \qquad (3)$$

The results are presented in table IV, including the OLS and Bootstrap approach to address the small sample size.

----- Insert table IV about here -----

The result in table IV is consistent with the market reaction observed in the U.S. when a Democratic presidential candidate wins the election. The difference in the market reaction the day after the election goes from 2.88% for returns in local currency to 3.62% for returns in U.S. dollars. All four different measures observe significant differences in the market reaction, and in all cases, the reaction is negative when a left-wing candidate wins the election and positive when the right-wing candidate triumphs. Also, when the abnormal return is calculated using the CAPM model and the US market return as a proxy for the market, the results are practically the same, a difference of 3.63%. These results support hypothesis two (H2).

Similarly, the Secular-Christian dimension is explored for the day after the election. However, it is observed that in only four elections, the candidate of the Christian party ended up winning the ballot.

$$After\_Election\_Return_{(1\_day)} = \delta_1 SS + \delta_2 XX + \epsilon_t \qquad (4)$$

----- Insert table V about here -----

The results in Table V are significant for the Secular-Christian dimension. The election of the Christian-party candidate is seen as good news, and the one-day market reaction is significantly higher when the outcome of the election favors a presidential candidate from a Christian party. The one-day return difference goes from 3.37% to 4.95%, always having higher returns when the non-secular candidate wins. The results are consistent with an expected improved performance during terms led by a Christian party member. Also, when the abnormal return is calculated using the CAPM model and the US market return as a proxy for the market, the results are practically invariant, a difference of returns equal to 4.39%. Overall, these results are consistent with hypothesis four (H4)

5. Risk-based and Cash-flow-based explanations

The results in this section show potential explanations for the differences in returns for periods with different parties in office. The risk-based explanation and the cash-flow-based explanation are analyzed. The potential sources of risk that are discussed in this paper are the Economic Policy Uncertainty Risk, the Stock Price Crash Risk and volatility risk. On the other hand, the cash-flow based explanation

is discussed by contrasting the return on equity (ROE) during the different presidential terms.

5.1 Economic Policy Uncertainty Risk

One of the potential explanations for the Democratic (left-wing) premium in the U.S. is a risk premium given a higher level of economic policy uncertainty (EPU). This possible explanation is explored for the left-right dimension, but also the Christian-secular dimension in a sample of Latin American countries. To analyze this idea, Economic Policy Uncertainty indices based on Baker, Bloom, and Davis (2016) for Mexico, Brazil, Chile, and Colombia[38] are used. All these indices are obtained from the policy uncertainty project's website[39]. For the case of an Economic Policy Uncertainty Risk, and according to the previous empirical results, a higher level should be expected for center-wing and Christian party presidencies; thus, that premise is explored.

The results in Table VI, panel A, show that for Brazil, the EPU is significantly higher during Centrist party presidencies compared to left-wing presidencies. For Chile, left-wing governments show higher EPU compared to center and right-wing presidencies. For Colombia, the EPU is higher during right-wing presidencies compared to Centrist party governments. When all the data is combined in a panel, the EPU is significantly higher under right-wing parties

[38] For the Chilean and Colombian indices, details can be found at Cerda, Silva, and Valente (2016) and Perico Ortiz (2018) respectively.
[39] http://www.policyuncertainty.com

compared to center and left-wing parties. The results are mostly inconsistent across countries, so it is not possible to find support for a risk premium.

The results in Table VI, panel B, show that for Chile, the Christian party governments have lower EPU compared to secular governments. For Mexico, there are no significant differences between Secular and Christian presidencies. When all the data is combined in a panel, the EPU is significantly higher when a secular party is in office compared to when a Christian party is in office. Altogether, the results do not show a Christian risk premium, and therefore they are not consistent with the risk-based explanation for the Christian party presidencies.

----- Insert table VI about here -----

5.2 Stock Price Crash Risk

Another potential explanation for the differences in the returns among different parties in office is differences in the level of crash risk. There is evidence that shows a negative correlation between religiosity and stock price crash risk at the firm level (Callen and Fang, 2015). While Callen and Fang hypothesize that religion makes the withholding of bad news by the firm's executives less likely, I speculate that a government under a Christian party will act similarly. In turn, this make it more likely for firms to follow the social norms encouraged by the government, and consequently, lowering the stock price risk at the firm level.

In order to calculate the two measures of firm-specific stock price crash risk, the following regression is estimated:

$$r_{j,t} = \alpha_j + \beta_j r_{m,t-1} + \gamma_j r_{m,t} + \delta_j r_{m,t+1} + \epsilon_{j,t} \qquad (5)$$

$r_{j,t}$ refers to the return on stock j on day t, and $r_{m,t}$ refers to the return on the stock market in the specific country according to the MSCI index in US dollars. The regression is calculated separately for the Chilean and Mexican market. 1-day lead and lag terms are added in case of any non-synchronous issue. From equation 5, the residual is obtained, and then the firm-specific daily return is calculated as $R_{j,t} = (1 + residual)$, which the natural logarithm of one plus the residual.

Two measures of crash risk used commonly at the firm level (see, for example, Callen and Fang, 2015) are modified for this research. The measures are the negative coefficient of skewness of firm-specific daily returns (NCSKEW) and the down-to-up volatility (DUVOL). The NCSKEW is calculated as follows:

$$NCSKEW_{j,T} = \frac{-\left(n(n-1)^{3/2} \sum R_{j,t}^3\right)}{\left((n-1)(n-2)(\sum R_{j,t}^2)^{3/2}\right)} \qquad (6)$$

$NCSKEW_{j,T}$ refers to the negative coefficient of skewness of firm-specific daily returns for firm j and year T. n refers to the number of observations per firm and year. The DUVOL measure is calculated as follows:

$$DUVOL_{j,T} = log\left[\frac{(n_u - 1)\sum_{down} R_{j,t}^2}{(n_d - 1)\sum_{up} R_{j,t}^2}\right] \qquad (7)$$

$DUVOL_{j,T}$ refers to the down-to-up volatility for firm j and year T. n_u refers to the number of observations with returns higher than the mean per firm and year. n_d refers to the number of observations with returns lower than the mean per firm and year. Equation 8 shows the relationship between the measures of crash risk and the party of the president in office in the Secular (SS) and Christian (XX) dimension. As the regression is annual, the convention regarding the political variable is to use the president that was in office at the beginning of the year, this is after 15 trading days.

$$Crash\_Risk_{j,T} = \delta_1 SS_T + \delta_2 XX_T + \epsilon_j \qquad (8)$$

----- Insert table VII about here -----

Table VII shows the results from equation 8, using NCSKEW and DUVOL for Chile and Mexico. The impact of the party in office on the Crash Risk is significantly different for Christian and Secular periods. The differences in the coefficients for the period when the president is from a Christian party (XX) compared to the coefficients for the period when the president is from a Secular party (SS) are mostly negative and significant at the 1% level. Similarly, all measures of crash risk except DUVOL in Mexico are lower during periods under a president from a Christian party. The value of DUVOL in Mexico shows no difference between different political regimes. Thus, the higher returns during periods of a Christian ruling party cannot be explained by a premium due to Stock

Price Crash Risk. Once again, the risk is lower during periods where the president is a member of a Christian party.

5.3 Volatility

In this section, a test is included to examine the hypothesis of higher returns due to compensation for risk. The higher returns during periods when Christian parties are in office might be explained by these different policies between Christian and Secular parties. Similarly, the same hypothesis is tested in order to explore a left-wing premium. GARCH and EGARCH models are used with daily returns and partisan variables. Also, the daily volatility computed from within-month daily returns is used.

5.3.1 GARCH and EGARCH models

The results in Table VIII panel A from the GARCH model show that periods under left-wing presidents are related to higher returns for Chile and Peru when compared to right-wing presidential periods. For Colombia, the returns are higher for periods under right-wing presidents than for periods with a centrist president. Similarly, volatility tends to be lower for left-wing presidential periods for Brazil, Chile, Colombia, and Peru. Therefore, there is no left-wing risk premium due to volatility. The results in Table VIII panel B from the EGARCH model show that periods under a leftist president are related to higher returns for Brazil when compared to right-wing presidential periods. In all cases, under left-wing or centrist presidents,

the markets tend to be less volatile. Therefore, no left-wing risk premium explained by volatility is observed.

----- Insert table VIII about here -----

The results in Table IX panel A from the GARCH model show no differences in the mean equation and volatility equations between Christian and Secular presidencies. For the EGARCH model in panel B, there are no differences observed in Chile; however, in Mexico, there is lower volatility in the stock market for periods under a president from a Christian party. Thus, there is no evidence for a risk-premium obtained during Christian party presidencies in Latin America.

----- Insert table IX about here -----

5.3.2 Volatility – Standard deviation of within-month daily returns

The volatility computed from within-month daily returns of the MSCI stock index in US dollars for each country in the sample is used. To test if the higher returns under a specific party is due to compensation for risk, we examine the volatility of returns under different presidencies. Table X panel A shows the results from the regression:

$$VOL_t = \gamma_1 LL_t + \gamma_2 CC_t + \gamma_3 RR_t + \epsilon_t \qquad (9)$$

The volatility is higher during periods when the president is from a left-wing party. The volatility of daily returns is 1.86% during left-wing governments, compared to 1.46% and 1.40% during right-wing and center parties respectively.

Table X panel B shows the results from the regression:

$$VOL_t = \delta_1 SS_t + \delta_2 XX_t + \epsilon_t \qquad (10)$$

The volatility is higher during periods when the president is from a secular party. The volatility of daily returns is 1.74% during periods when the government is from a secular party, compared to 1.41% during periods when the president is from a Christian party. These results are coincident with other sources of risk, that is the Economic Policy Uncertainty index and the Crash Risk, that are higher during periods when the president is from a secular party, compared to periods when the president ruling the country is from a Christian party.

5.4 Profitability

It is possible that the disparity in returns is due to differences in cash flows during presidential terms with presidents from different parties. For this explanation to be plausible, an underreaction is needed to the good news of a president being elected from a party that would encourage an increase in the profitability of the firms in the economy. To investigate this potential explanation, we can see the results from the following panel regression with firm fixed effects:

$$ROE_{i,t+1} = \theta + \sum \rho_k P_k + \pi' X_{i,t} + + \varphi ROE_{i,t-11} + \epsilon_{i,t+1} \qquad \forall\, t \qquad (11)$$

ROE_i refers to the firm i return on equity measured as net income divided by book equity value, P_k is the dummy variable for the political party in office k, and X_i is the vector of control variables. The selection of these control variables

follows Fama and French (2000) and includes the market-value-of-assets to book-value-of-assets ratio (MB), the dividend-payments to book-equity value ratio (DB) and a dummy for dividend-paying firms (DIV). The results in table XI, panel A, show that ROE is significantly lower in periods when the president is from a Centrist party compared to periods under a left-wing president. In contrast, there is no difference in profitability between left- and right-wing presidential terms. Then, it is not possible to explain the higher returns during centrist parties' terms due to higher cash flows within those terms, using the ROE, accounting measure as a proxy for the cash flows.

The results in Table XI, panel B, show that ROE is significantly higher during periods under a president from a Christian party in comparison with periods under a president from a Secular party. In contrast, the higher returns during periods under a president from a Christian party seems to be explained by underreaction to higher levels of cash-flows.

----- Insert table XI about here -----

6. Discussion of the empirical results

Finally, a discussion regarding the drawbacks of the examined analysis and proposed further research is needed. First, the short period of the analysis, the high inflation during part of the sample, and the low variability in the political variable make further research needed. As time goes by and more data become available, the tests will become more powerful.

The results are consistent with Bohl and Gottschalk (2006) in that the left-wing premium is exceptional as they show that from a sample of 15 member countries in the Organisation for Economic Co-operation and Development (OECD), only Denmark, Germany and the U.S displayed this premium. As the political system is very different from most of the OECD countries, this is a pertinent outcome.

An interesting outcome comes from the fact that stock returns have lower volatility and higher returns during governments under a centrist party when compared to periods when the president is from a right-wing party. Thus, if the Democratic party of the U.S. is thought as a centrist party, as in Cameron (1978), the results of this paper are consistent with the ones in Santa-Clara and Valkanov (2003). On the other hand, the results are inconsistent with the theoretical model of Pastor and Veronesi (2017), as there is no higher risk-premium during periods where the president is from a left-wing party. Also, the fact that the same party is in office for long periods, as in Mexico, is inconsistent with the political cycles observed in the model. Only the negative market reaction after the election of a left-wing presidential candidate is consistent with their model.

Some potential extensions of this research are the analysis of the main macro variables under different governments, in particular, in the Christian-Secular dimension. Moreover, the presence of Christian parties outside Latin America would justify a study of those cases (e.g., Germany). The extension of the analysis

in the religious dimension is of particular importance as the regimes under Christian parties are not as common as under Secular parties, and they remain more the exception than the norm in the sample.

Another possible extension can be found in the analysis of potentially unforeseen relationships with variables that are not politically motivated. For example, as regulated industries are more likely to be a target of different political platforms, it is expected that these industries would be more affected by the changes of the president in office.

7. Conclusion

This paper studies the impact of the president in office on stock returns in a sample of countries under a strong presidential system. There is extensive literature that shows a very distinct difference in the performance of the stock markets under Republican and Democratic presidents in the U.S. However, the results are not found in the international context. In this paper, I select a sample that is unique, as it includes countries that have democratic systems with strong presidentialism and noticeable differences in their economic policies. This is in remarkable contrast with previous international studies that have focused on developed countries with parliamentary regimes.

In this study, I show that the party of the president helps to explain the time series of stock returns. Market returns are higher when the president is from a Centrist party, compared to left and right-wing governments. There is no significant

difference in the market returns during left-wing and right-wing presidencies. The market reaction the day after the election is consistent with previous results and significantly lower for elections when the president elected is to the left of the candidate ending up in second place. Several measures of risk are used with inconsistent results to explain the differences in market returns.

Second, the religious dimension of the party in office is explored. Governments with a Christian party in power have a consistently superior performance than when secular parties are in charge. The stock returns are higher, the ROE is higher, and the risk is lower during the presidential terms under a leader from a Christian party. These results are consistent with the cash flow-based explanation.

Collectively, these results suggest that the party of the president in office is economically relevant for the performance of the stock markets, not only in the more studied right-left wing dimension but also in the religious dimension. Moreover, the higher returns for the terms when the president is from a Christian party are not explained by any measure of risk, and these results appear to support an underreaction to the political variable.

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Tables **Table I Summary Statistics**

Panel A reports the summary statistics for firm-level data, and it covers the period from July 1994 to December 2017 for Brazil, January 1989 to December 2017 for Chile, August 1992 to December 2017 for Colombia and Peru, and April 1993 to December 2017 for Mexico. Panel B reports the summary statistics for country-level data, and it covers the elections from 1988 to 2018 for Brazil, Chile, and Mexico, and from 1994 to 2018 for Colombia and Peru. Returns in local currency and U.S. dollars are gross returns per month.

Panel A.

Country	Start date	End date	Firm-year observations	% of total firm-year observations	Returns in local currency	Returns in U.S. dollars
Brazil	07-1994	12-2017	55,196	53%	0.0125	0.0159
Chile	01-1989	12-2017	17,686	17%	0.0130	0.0153
Colombia	08-1992	12-2017	4,675	4%	0.0136	0.0159
Mexico	04-1993	12-2017	19,563	19%	0.0134	0.0182
Peru	08-1992	12-2017	7,377	7%	0.0202	0.0209
Total			104,497	100%		

Panel B.

Country	First Election	Last Election	# of elections	% of total elections	Returns in local currency	Returns in U.S. dollars
Brazil	12-1989	10-2014	7	21%	-0.0073	-0.0128
Chile	12-1989	12-2017	7	21%	0.0226	0.0285
Colombia	06-1994	06-2018	7	21%	0.0170	0.0206
Mexico	07-1988	07-2018	6	18%	0.0164	0.0212
Peru	04-1995	06-2016	6	18%	-0.0056	-0.0033
Total				100%		

Table II Pooled-OLS regressions and the party of the President in office. Left to Right dimension.

This table reports the results of the following pooled-OLS regressions. $R_{i,t} = \gamma_1 LL_{t-1} + \gamma_2 CC_{t-1} + \gamma_3 RR_{t-1} + \epsilon_i$. R_i refers to the firm i monthly excess returns in US dollars, and LL, CC, and RR are the dummy variables for Left-wing, Center, and Right-wing parties respectively. The sample covers the period from July 1994 to December 2017 for Brazil, January 1989 to December 2017 for Chile, August 1992 to December 2017 for Colombia and Peru, and April 1993 to December 2017 for Mexico, according to data availability. The first row represents the coefficients; the second row reports the t-statistics. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

VARIABLES	Ri-Rf US dollars
LL	0.0142***
	(30.17)
RR	0.0159***
	(21.91)
CC	0.0190***
	(16.70)
LL-RR	-0.0017*
LL-CC	-0.0048***
RR-CC	-0.0031**
Control Variables	No

Table III Pooled-OLS regressions and the party of the President in office. Secular and Christian dimension

This table reports the results of the following pooled-OLS regressions. $R_{i,t} = \delta_1 SS_{t-1} + \delta_2 XX_{t-1} + \epsilon_i$. R_i refers to the firm i monthly excess returns in US dollars, and SS and XX are the dummy variables for Secular and Christian parties respectively. The sample covers the period from July 1994 to December 2017 for Brazil, January 1989 to December 2017 for Chile, August 1992 to December 2017 for Colombia and Peru, and April 1993 to December 2017 for Mexico, according to data availability. The first row represents the coefficients; the second row reports the t-statistics. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

VARIABLES	Ri-Rf US dollars
SS	0.0150***
	(37.64)
XX	0.0170***
	(15.47)
SS-XX	-0.0020*
Control Variables	No

Table IV Market reaction following the presidential election in Latin America.

The table reports the market reaction the day after the presidential election for the 33 presidential elections in the sample. The regression is: $After\_Election\_Return_{(1\_day)} = \gamma_1 LL + \gamma_2 RR + \in_t$. LL and RR are the dummy variables for Left-wing and Right-wing parties respectively. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

VARIABLES	Ri Local Currency	Ri US dollars	Ri-Rf US dollars	Ri-Rmk US dollars	Abnormal Return (CAPM)
LL	-0.00602	-0.00770	-0.00780	-0.00550	-0.00626
	(-0.54)	(-0.54)	(-0.64)	(-0.49)	(-0.54)
RR	0.0228**	0.0285**	0.02837**	0.02995***	0.03000**
	(2.11)	(2.39)	(2.38)	(2.76)	(2.66)
LL-RR	-0.0288	-0.0362	-0.0362	-0.0355	-0.0363
p-value OLS	0.0729*	0.0423**	0.0425**	0.0300**	0.0324**
p-value Bootstrapped	0.0583*	0.0309**	0.0310**	0.0208**	0.0226**

Table V Market reaction following the presidential election in Latin America.

The table reports the market reaction the day after the presidential election for the 33 presidential elections in the sample. The regression is $After\_Election\_Return_{(1\_day)} = \delta_1 SS + \delta_2 XX + \in_t . SS$ and XX are the dummy variables for Secular and Christian parties respectively. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

VARIABLES	Ri Local Currency	Ri US dollars	Ri-Rf US dollars	Ri-Rmk US dollars	Abnormal Return (CAPM)
SS	0.00429	0.00495	0.00484	0.00753	0.00710
	(0.51)	(0.54)	(0.52)	(0.88)	(0.80)
XX	0.0417*	0.0545**	0.05427**	0.05070**	0.05098**
	(1.84)	(2.19)	(2.18)	(2.20)	(2.13)
SS-XX	-0.0374	-0.0495	-0.0494	-0.0432	-0.0439
p-value OLS	0.131	0.0718*	0.0721*	0.0891*	0.0958*
p-value Bootstrapped	0.0008***	0.0003***	0.0004***	0.0005***	0.0005***

Table VI Economic Policy Uncertainty index (EPU) across Latin America.

Table VI reports the Economic Policy Uncertainty (EPU) index across Latin America, including: Brazil, Chile, Colombia, and Mexico. LL, CC, and RR are the dummy variables for Left-wing, Center, and Right-wing parties respectively. SS and XX are the dummy variables for Secular and Christian parties correspondingly. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

VARIABLES	Brazil 1991-2017 with gaps	Chile 1993-2017	Colombia 1994-2016	Mexico 1996-2017	Panel 1991-2017 country F.E with gaps-unbalanced
Panel A: Left-Right dimension					
LL	119.90***	112.26***	-	-	131.80***
	(24.97)	(30.87)	-	-	(30.97)
RR	-	87.29***	122.53***	98.39***	162.19***
	-	(12.91)	(23.60)	(22.70)	(16.88)
CC	334.10***	87.02***	75.42***	-	140.69***
	(17.26)	(17.22)	(13.91)	-	(16.71)
LL-RR	**-**	**24.97*** **	**-**	**-**	**-30.39*** **
LL-CC	**-214.20*** **	**25.24*** **	**-**	**-**	**-8.89**
RR-CC	**-**	**0.27**	**47.11*** **	**-**	**-21.50*** **
Panel B: Secular-Christian dimension					
SS	132.32***	106.66***	100.00***	98.63***	100.00***
	(23.86)	(32.77)	(24.98)	(15.31)	(23.52)
XX	-	87.02***	-	98.20***	90.27***
	-	(16.95)	-	(16.70)	(11.91)
SS-XX	**-**	**19.64*** **	**-**	**0.43**	**9.73**
# of Observations	276	300	276	264	1,116

Table VII Stock price crash risk: the case of Chile and Mexico

Table VII reports the Stock Price Crash Risk across in Chile and Mexico. The NCSKEW refers to the negative coefficient of skewness of firm-specific daily returns and is calculated as $NCSKEW_{j,T} = \frac{-\left(n(n-1)^{3/2}\sum R_{j,t}^3\right)}{\left((n-1)(n-2)(\sum R_{j,t}^2)^{3/2}\right)}$ and the DUVOL refers to the down-to-up volatility (DUVOL) and is calculated as $DUVOL_{j,T} = log\left[\frac{(n_u-1)\sum_{down} R_{j,t}^2}{(n_d-1)\sum_{up} R_{j,t}^2}\right]$. SS and XX are the dummy variables for Secular and Christian parties respectively. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

	Chile		Mexico	
	NCSKEW	DUVOL	NCSKEW	DUVOL
XX	-1.47***	-0.23***	-0.74***	-0.10***
SS	-1.10***	-0.09***	-0.68***	-0.14***
XX-SS	-0.37***	-0.14***	-0.06	0.04

Table VIII Stock Price Volatility risk and the left-right wing political dimension across Latin America.

Table VIII Panel A reports the Stock Price Volatility across Latin America, including Brazil, Chile, Colombia, and Peru. The results are obtained using a GARCH (1,1) model with the with the party in office classification in the Right-Left wing dimension as an independent variable respectively. In all the cases, the Centrist Party variable is dropped because of collinearity. Panel B reports identical variables using an EGARCH (1,1) model. NA refers to not applicable; that is, there is no president of that party for the sample period.

Panel A

	Country 2 **Brazil – GARCH (1,1)**	**Country 3** **Chile – GARCH (1,1)**	**Country 4** **Colombia – GARCH (1,1)**	**Country 6** **Peru – GARCH (1,1)**
***Constant* - (β_0)**	0.0015***	0.0003**	0.0002	0.0011***
LL	-0.0005	0.0004*	NA	-0.0005
CC	-	-	-	-
RR	NA	-0.0001	0.0010***	-0.0008*
ARCH - α_1	0.0923***	0.1346***	0.2126***	0.0761***
GARCH - γ_1	0.8943***	0.8250***	0.7368***	0.9052***
Constant	-11.0703***	-11.8492***	-11.435***	-12.4781***
LL	-0.7635***	-0.0018	NA	0.4619***
CC	-	-	-	-
RR	NA	0.0921	0.4831***	0.5335***

Panel B

	Country 2 **Brazil – EGARCH (1,1)**	**Country 3** **Chile – EGARCH (1,1)**	**Country 4** **Colombia – EGARCH (1,1)**	**Country 6** **Peru – EGARCH (1,1)**
$\boldsymbol{Constant}$ - $(\boldsymbol{\beta_0})$	0.0012**	0.0004***	0.0002	0.0009***
$\boldsymbol{LL}$	-0.0007	0.0003	NA	-0.0004
$\boldsymbol{CC}$	-	-	-	-
$\boldsymbol{RR}$	NA	0.0001	0.0008***	-0.0004
EARCH - $\boldsymbol{\alpha_1}$	-0.0608***	-0.0232***	-0.0532***	-0.0235***
EARCH-A $\boldsymbol{\alpha_2}$	0.1766***	0.2503***	0.3778***	0.1578***
GARCH - $\boldsymbol{\gamma_1}$	0.9748***	0.9537 ***	0.9136***	0.9795***
$\boldsymbol{Constant}$	-0.1691***	- 0.3972***	-0.7453***	-0.1667***
$\boldsymbol{LL}$	-0.0237***	-0.0074**	NA	0.0062**
$\boldsymbol{CC}$	-	-	-	-
$\boldsymbol{RR}$	NA	0.0063*	0.0411***	0.0095***

Table IX Stock Price Volatility risk and the secular political dimension across Latin America.

Table IX Panel A reports the Stock Price Volatility across Latin America, including Chile and Mexico. The results are obtained using a GARCH (1,1) model with the with the party in office classification in the Secular-Christian dimension as an independent variable respectively. In all the cases, the Secular variable is dropped because of collinearity. Panel B reports identical variables using an EGARCH (1,1) model.

Panel A

	Country 3 **Chile – GARCH (1,1)**	**Country 5** **Mexico – GARCH (1,1)**
$\boldsymbol{Constant}$ **-** $\boldsymbol{(\beta_0)}$	0.0006***	0.0010***
$\boldsymbol{XX}$	-0.0003	0.0002
ARCH - $\boldsymbol{\alpha_1}$	0.1351***	0.1244***
GARCH - $\boldsymbol{\gamma_1}$	0.8242***	0.8431***
$\boldsymbol{Constant}$	-11.8135***	-11.4759***
$\boldsymbol{XX}$	-0.0288	-0.0965

Panel B

	Country 3 **Chile – EGARCH (1,1)**	**Country 5** **Mexico – EGARCH (1,1)**
$\boldsymbol{Constant}$ **-** $\boldsymbol{(\beta_0)}$	0.0007***	0.0007***
$\boldsymbol{XX}$	-0.0002	0.00002
EARCH - $\boldsymbol{\alpha_1}$	-0.0225***	-0.0791***
EARCH-A $\boldsymbol{\alpha_2}$	0.2544***	0.2000***
GARCH - $\boldsymbol{\gamma_1}$	0.9528***	0.9681***
$\boldsymbol{Constant}$	-0.4081***	-0.2546***
$\boldsymbol{XX}$	0.0030	-0.0072***

Table X Volatility risk and the political dimensions across Latin America.

Table X reports the volatility across Latin America, including: Brazil, Chile, Colombia, and Mexico. Panel A shows the results for the left-right wing dimension. LL, CC, and RR are the dummy variables for Left-wing, Center, and Right-wing parties respectively. Panel B shows the results for the religious dimension. SS and XX are the dummy variables for Secular and Christian parties correspondingly. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

Panel A

VARIABLES	Volatility
LL	0.0186***
	(486.42)
RR	0.0146***
	(248.50)
CC	0.0140***
	(151.92)
LL-RR	0.0040***
LL-CC	0.0046***
RR-CC	0.0006***

Panel B

VARIABLES	Volatility
SS	0.0174***
	(533.91)
XX	0.0141***
	(155.91)
SS-XX	0.0033***

Table XI Profitability across different political parties in office

This table reports the results of the following panel regressions with firm fixed effects. $ROE_{i,t+1} = \theta + \sum \rho_k P_k + \varphi ROE_{i,t-11} + \epsilon_{i,t+1}$. The sample covers the period from July 1994 to December 2017 for Brazil, January 1989 to December 2017 for Chile, August 1992 to December 2017 for Colombia and Peru, and April 1993 to December 2017 for Mexico. The dependent variable is the ROE, the explanatory variables includes the party of the president in office, twelve-month lag of the ROE, market-value-of-assets to book-value-of-assets ratio (MB), the dividend-payments to book-equity value ratio (DB) and a dummy for dividend-paying firms (DIV). Panel A shows the results for the left (LL), center (CC) and right (RR) political party. Panel B shows the results for the Christian (XX) and Secular (SS) political dimension. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

Panel A

VARIABLES	Coefficient
ROE	0.0077***
	(7.99)
DB	0.8250***
	(58.14)
DIV	-0.0871***
	(-3.26)
MB	-2.62
	(-1.14)
LL	0.1345***
	(3.61)
RR	0.1347***
	(3.62)
CC	0.1275***
	(3.41)
LL-RR	**-0.0002**
CC-LL	**-0.0070****
CC-RR	**-0.0072**

Panel B

VARIABLES	Coefficient
ROE	0.0077***
	(8.02)
DB	0.8258***
	(58.26)
DIV	-0.0881***
	(-3.30)
MB	-2.54
	(-1.10)
XX	0.1719***
	(4.55)
SS	0.1356***
	(3.69)
XX-SS	**0.0363*** **

Appendix

Table A1

This table shows the classification of Latin American parties that is used in this study and updated from Coppedge (1997).

Country	**Party**	**Right/Left**	**Christian/Secular**
Argentina	Union Cívica Radical	Center	Secular
Argentina	Partido Justicialista	Other	Other
Argentina	Propuesta Republicana (*)	Center-Right	Secular
Brazil	Partido do Movimento Democrático Brasileiro	Center	Secular
Brazil	Partido de Reconstrução Nacional	Personalist	Personalist
Brazil	Partido da Social Democracia Brasileira	Center-Left	Secular
Brazil	Partido dos Trabalhadores	Left	Secular
Chile	Dictadura Militar (**)	Right	Secular
Chile	Partido Demócrata Cristiano	Center	Christian
Chile	Partido por la Democracia	Center-Left	Secular
Chile	Partido Socialista	Center-Left	Secular
Chile	Renovación Nacional	Right	Secular
Colombia	Partido Conservador Colombiano	Center-Right	Secular

Colombia	Partido Liberal Colombiano	Center	Secular
Colombia	Primero Colombia (*)	Center-Right	Secular
Colombia	Partido Social de Unidad Nacional (*)	Center	Secular
Mexico	Partido Revolucionario Institucional	Center-Right	Secular
Mexico	Partido Acción Nacional	Center-Right	Christian
Peru	Partido Aprista Peruano	Center-Left	Secular
Peru	Cambio 90, Perú 2000	Personalist	Personalist
Peru	Acción Popular (*)	Center	Secular
Peru	Perú Posible (*)	Center	Secular
Peru	Partido Nacionalista Peruano (*)	Center-Left	Secular
Peru	Peruanos Por el Kambio (*)	Center-Right	Secular
Venezuela	Acción Democrática	Center-Left	Secular
Venezuela	Coalition (Velásquez): COPEI & Acción Democrática (***)	Center	Christian - Secular
Venezuela	Convergencia Nacional	Personalist	Personalist - Christian
Venezuela	Movimiento Quinta República/ Partido Socialista Unificado de Venezuela (*)	Left	Secular

(*) A party that did not exist before 1997

(**) Military dictatorship between September 1973 and March 1990. This government was supported mostly by the right-wing. Parties were suppressed until 1988. After 1988, the right-wing parties officially supported a democratic election of the dictatorship president Augusto Pinochet.

(***) President Velásquez was independent but supported by the COPEI (Center-Righ – Christian) and Acción Democrática (Center-Left – Secular)

Table A2 Pooled-OLS regressions and the party of the President in office. Left to Right dimension.

This table reports the results of the following pooled-OLS regressions. $R_{i,t} = \gamma_1 LL_{t-1} + \gamma_2 CC_{t-1} + \gamma_3 RR_{t-1} + \gamma_4 CV_{t-1} + \epsilon_i$. R_i refers to the firm i monthly excess returns in US dollars, and LL, CC, and RR are the dummy variables for Left-wing, Center, and Right-wing parties respectively. CV is the set of control variables for Brazil, Chile, Colombia, and Mexico including Industrial Production, Inflation, the Economic Policy Index as in section 5.1, and the daily volatility as calculated in section 5.3.2. The sample covers the period from July 1994 to December 2017 for Brazil, January 1997 to December 2017 for Chile, January 2000 to December 2016 for Colombia, and April 1996 to December 2017 for Mexico, according to data availability. The first row represents the coefficients; the second row reports the t-statistics. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

VARIABLES	Ri-Rf US dollars
LL	0.0313***
	(30.05)
RR	0.0249***
	(22.77)
CC	0.0282***
	(17.81)
LL-RR	0.0064***
LL-CC	0.0031**
RR-CC	-0.0033**
Control Variables	Yes

Table A3 Pooled-OLS regressions and the party of the President in office. Secular and Christian dimension

This table reports the results of the following pooled-OLS regressions. $R_{i,t} = \delta_1 SS_{t-1} + \delta_2 XX_{t-1} + \delta_3 CV_{t-1} \epsilon_i$. R_i refers to the firm i monthly excess returns in US dollars, and SS and XX are the dummy variables for Secular and Christian parties respectively. CV is the set of control variables for Brazil, Chile, Colombia, and Mexico including Industrial Production, Inflation, the Economic Policy Index as in section 5.1, and the daily volatility as calculated in section 5.3.2. The sample covers the period from July 1994 to December 2017 for Brazil, January 1997 to December 2017 for Chile, January 2000 to December 2016 for Colombia, and April 1996 to December 2017 for Mexico, according to data availability. The first row represents the coefficients; the second row reports the t-statistics. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

VARIABLES	Ri-Rf US dollars
SS	0.0284***
	(29.67)
XX	0.0279***
	(20.42)
SS-XX	0.0005
Control Variables	Yes

Chapter 5. Conclusions

This thesis investigates the influence of partisan politics on stock returns. The first essay researches the stock returns during Democratic and Republican terms in the U.S. The second essay studies the partisan effect on the stock returns through the corporate tax rate. The third essays explores the left-right wing and Christian dimension of the political variable in the international context.

The first essay examines the presidential puzzle further (Santa-Clara and Valkanov, 2003) -- the fact that the equity premium is 10% higher in years with Democratic governments than in years with Republican governments. The evidence of higher excess returns under Democratic governments in the U.S. compared with Republican governments is confirmed and robust. This research adds to the evidence that the previous results are consistent with a risk based explanation. The differences in returns are remarkable during the first year and turnover between parties in office shows impressive differences in returns. Similarly, pre- and post-election market reactions support the risk based explanation. The size effect connection to presidential variable is confirmed, however relationship between specific industries and the presidential variable is limited to a small number of industries. The presidential factors introduced display some improvement relative to the CAPM and Fama-French 3-factor models.

The second essay investigates the impact of corporate taxes on stock returns conditional of the political party of the president in office in the U.S. The

results from this research are novel. This research helps to reconcile the conflicting results from Schiller (2016) and Favilukis et al. (2016) through the political variable. While Schiller (2016) predicts and finds that firms with lower tax shields (i.e., firms with high corporate taxes) have higher expected returns than firms with higher tax shields; Favilukis et al. (2016) find that different tax shields have a different (i.e., positive and negative) relationship with stock returns. The outcome of this paper shows no link between corporate taxes and stock returns when the presidential variable is excluded. Moreover, two investment strategies based on this previous result yield abnormal positive returns. These abnormal returns are robust to the use of different standard asset pricing models. Also, results are economically significant, and turnover and transaction costs based on this strategy are low given the persistence in the level of corporate taxes. Investors seem to only partially forecast the effect of lower or higher tax levels associated with different political regimes, likely due to the low frequency of these modifications. Changes in the probability of a presidential candidate winning the elections affect the returns of portfolios sorted by corporate tax rates. As expected, a High minus Low portfolio sorted by tax rates, has higher returns when the likelihood of the Republican candidate winning the elections increases. After analyzing two potential mechanisms for the results discussed above, underreaction to expected changes in cash flow appears to be a plausible explanation, in contrast with a risk-based explanation.

Finally, the third essay looks into the effect of partisan politics in the international context, specifically in a group of countries with more disagreement in the main policies and with a strong presidential system in place. This study shows that the party of the president in office helps to explain the time series variation of stock returns. Market returns are higher when the president is from a Centrist party, compared to both, left and right-wing governments. There is no significant difference in the market returns during left-wing and right-wing presidencies. The market reaction the day after the election is consistent with previous results and significantly lower for elections (negative) when the president elected is to the left of the candidate ending up in second place. Several measures of risk are used with inconsistent results to explain the differences in market returns. The results are not consistent with a higher level of risk aversion during left-wing governments, as in Pastor and Veronesi (2017). Also, the religious dimension of the party in office is explored. The stock markets during governments with a Christian party in office have consistently superior performance than when Secular parties are in charge. The stock returns are higher, the ROE is higher, and the risk is lower during the presidential terms under a leader from a Christian party. These results are consistent with the cash flow-based explanation. Collectively, these results suggest that the party of the president in office is economically relevant for the performance of the stock markets, not only in the more studied right-left wing dimension but also in the religious dimension. Moreover, the higher returns for the terms when the president is from a Christian party are not explained by any of the measures of risk

used in this study, and these results appear to support an underreaction to the political variable.

The timely results of this thesis confirm the importance of the political dimension on the stock markets. In particular, this research confirm previous results but also extent into the different precise dimension that are relevant in the interaction between stock returns and the partisan variable. The results would be of great interest to academics, professionals, and the general public interested in finance, economics, and political science.