sciendo

Proceedings of the 6th International Conference on Economics and Social Sciences (2023), ISSN 2704-6524, pp. 720-733

The 6th International Conference on Economics and Social Sciences
Geopolitical Perspectives and Technological Challenges for Sustainable Growth in the 21st Century
June 15-16, 2023
Bucharest University of Economic Studies, Romania

What do Capital Markets Prefer: Left or Right?

Razvan UIFALEAN[1]

DOI: 10.24789788367405546-067

Abstract

The aim of this paper is to examine the impact of government political orientation on capital market performance on the European Union stock markets. We investigate whether capital markets have a preference for the left-wing parties over the right-wing or vice versa. Within the study, two data panel models with fixed and random effects have been implemented (one multivariate and one single variate) with an additional dynamic panel model using the Arellano-Bover estimator on an annual dataset. We used three different data panels, in order to highlight any significance or correlation that might have otherwise been lost in case the model would have been run only on one group of countries. The data spanned from 1995 to 2020 and the panels are: the European Union, the Central and Eastern Europe countries, and the Advanced Economies in Europe. Several regressions have been employed using political, financial, and economic variables to test the main hypothesis, namely, if the financial markets react to the orientation of the government in place. We found an overall significant influence of government's political partisanship on market returns in the case of the European Union and in the case of countries included in the CEE classification, for most of the performed models. The markets in these countries do have a preference for left-wing regimes with a difference in the market performance which varies in between 4.6 % and 8.4 %, depending on the econometric model of reference. However, for Advanced Economies there was no robust evidence to sustain the hypothesis. Furthermore, other variables such as GDP per capita, Market Capitalisation, and Financial Crisis turned out to be statistically relevant. The contribution of this paper to the academic literature consists of a longer, scrutinised time period as well as new divisions of countries that had not been analysed, in tandem before.

Keywords: Stock Market Returns, Political Partisanship, Multivariate and Dynamic Econometric models, European Union.

JEL Classification: E44, G1, G4, C23.

[1] Bucharest University of Economic Studies, Bucharest, Romania, uifaleanrazvan17@stud.ase.ro.

1. Introduction

The influence of politics on financial markets is multi-faceted (Brooks, Mosley, 2008). Politics affects financial institutions, legislation, tax rates, corruption, and monetary policy. Political risk, which refers to unfavourable changes in public policy impacting investments, is a crucial factor linking investor behaviour and politics. Elections provide an opportunity to examine the relationship between politics and finance as political news intensifies during this period. The academic literature explores various aspects of this link, including election periods, political cycles, and government composition.

Investors closely monitor political developments, and the effects of elections on stock markets have been extensively studied (Frot and Santiso, 2010). Research suggests that left-wing political victories often lead to decreases in stock valuation, while right-wing regimes tend to increase stock values. This pattern has been observed in historical events. Stock prices reflect market participants' expectations about a company's future performance, which is influenced by government policies such as taxation and labour regulations. The public's perception and expectations of political parties play a role in shaping market reactions. Right-wing parties are associated with consistency and limited policy variation, appealing to the business community seeking steady and predictable economic policies (Bechtel, 2009). In contrast, left-wing governments can reverse market-friendly policies for political gain. However, studies have also found no statistically significant difference in market performance between left-wing and right-wing executives across various global markets Bialkowski, Gottschalk and Wisniewski (2006).

Another dimension of the politico-economic link is the concept of political cycles. Studies have shown that stock returns in the United States follow a four-year cycle, with values declining during the first half of a presidency and rising during the second half (Gärtner, Wellershoff, 1995). These patterns have persisted regardless of the political affiliation of the administration. The composition of the governance body itself can also impact financial markets (Bawn and Rosenbluth, 2006). The policy pursued by a coalition government can vary based on whether a legislative majority is formed before or after elections. Multi-coalition governments may be perceived as less efficient in policy-making, potentially leading to negative market reactions.

Overall, there is a clear need for further academic research to fully understand the complex relationship between politics and financial markets. The paper aims to contribute to this understanding by employing econometric models and analysing datasets from European Union countries, specifically focusing on the Central and Eastern European (CEE) countries and Advanced European Economies. The study's objectives include developing a comprehensive framework, incorporating multiple independent variables that have shown statistical significance in previous studies, and examining the correlation between governments' political orientation and market returns within the specified data framework.

2. Literature Review

The effects of government partisanship on capital market returns have been extensively studied by various researchers such as Bialkowski, Gottschalk and Wisniewski (2006); Gärtner and Wellershoff (1995), Riley and Luksetich (1980), Watson and Blinder (2015), etc. However, there is still no consensus on the impact of political orientation on stock market performance. Several studies suggest that stock returns are higher under Republican regimes, supporting the traditional belief on Wall Street that right-wing governments tend to increase market returns (Riley and Luksetich, 1980). This view is based on the idea that Republicans pursue policies aimed at achieving long-term economic objectives, as highlighted by MacRae (1977). However, other studies indicate that stock market returns are higher during Democratic mandates, suggesting that left-wing parties have a better capacity to stimulate the economy in ways that benefit stock returns and income growth. These conflicting findings reflect the complexity of the issue and the different perspectives from which it can be analysed.

Studies such as Leblang and Mukherjee (2005) find partisan patterns in the US and the UK economies, with dividend yields and personal income from stock returns growing during election years when the market anticipates right-wing parties winning elections. This implies that right-wing parties have a better ability to prime the economy in ways that benefit stock returns and income growth. However, the same studies also suggest that stock market participants are concerned that left-wing parties might prioritise redistribution and welfare programs, which could negatively affect stock values.

Contrary to these findings, other studies, such as Santa-Clara and Valkanov (2003), Cahan and Potrafke (2021), found that financial market returns are higher during Democratic mandates. They observed that real market returns are higher under Democrats by more than 5 %, indicating a significant performance gap between Democratic and Republican administrations.

There are also studies that do not find statistically significant differences in stock market performance between Democratic and Republican presidential regimes. Johnson, Chittenden, and Jensen (1999) found mixed evidence, with large-capitalisation stock indexes performing better under Democratic governments and small capitalisation equities outperforming during Democratic governments but with insignificant differences. They also found that the debt market performs better during Republican governments. Similar findings have been reported for European markets, with Stoian and Tatu-Cornea (2015) finding that financial markets' performance is higher under right-wing administrations in advanced EU countries but not in Central and Eastern European countries.

Moreover, studies examining the correlation between stock market returns and the political orientation of the administration in place have yielded inconsistent results. Some studies, such as those by Bialkowski, Gottschalk, and Wisniewski (2006), found no statistically significant variations in stock market performance between left-wing and right-wing governments in OECD countries. Similarly, Pardo

and Furió (2010) found no systematic differences in excess returns during right-wing or non-right-wing governments in the Spanish stock market.

The lack of consensus in these studies can be attributed to various factors, including the complexity of the relationship between government policies and stock market performance, the specific context of each country and market, the different methodologies employed, and potential endogeneity issues.

While many studies have attempted to establish a clear relationship between government partisanship and stock market returns, it is evident that there is no uniform agreement across markets and countries. However, it is worth noting that several studies (Beyer, Jensen, Johnson, 2008; Johnson, Chittenden, Jensen, 1999; etc.) indicate that right-wing administrations are generally perceived better by investors and businesses, and they are correlated with superior market performance. This preference for right-wing governments may stem from their perceived encouragement of policies favouring investors and financial markets.

Different perspectives and approaches have been taken in studying this topic. For instance, Pastor and Veronesi (2017) found a direct relationship between voter preferences and risk aversion, showing that less risk-averse individuals tend to vote for Republicans, while more risk-averse individuals lean towards Democrats. Kaustia and Torstila (2010) explored the idea that investors' preferences for assets align with their preferences for consumption goods, which could explain various phenomena related to the relationship between government partisanship and stock market returns. Their study suggested that investors with preferences for luxury consumption goods tend to favor Republican administrations, which could contribute to the observed market performance during Republican regimes.

It is important to note that the relationship between government partisanship and stock market returns is complex and multifaceted (Brooks, Mosley, 2008). Stock market performance is influenced by a wide range of factors, including macroeconomic conditions, monetary policies, corporate earnings, geopolitical events, and investor sentiment. Although government policies can have an impact on these factors, they are not the sole determinant of stock market performance.

Furthermore, the stock market is a forward-looking mechanism that incorporates a multitude of information and expectations about future economic conditions. It reacts to a variety of factors beyond political orientations, such as technological advancements, industry trends, global economic developments, and market dynamics.

Therefore, it is challenging to establish a definitive causal relationship between government partisanship and stock market returns. The available studies provide insights into potential correlations and patterns, but do not offer conclusive evidence. Investors and analysts should consider a broader range of economic and market indicators when assessing stock market performance and making investment decisions.

In summary, while some studies suggest that stock market returns may exhibit variations based on the political orientation of the government in power, the relationship is not consistent across all studies and markets. The impact of

government partisanship on stock market performance is influenced by numerous factors, and the stock market is driven by a multitude of complex forces. It is important for investors to consider a comprehensive range of factors when evaluating market trends and making investment choices.

3. Methodology and Dataset

As a starting point, the ground for this research has been established based on the aforementioned existing research. Specifically, after reviewing the work of previous authors, we have composed a methodological setup that includes different types of variables that had already been used in experiments and that turned out to be statistically significant. Furthermore, two econometric models will be run on the collected data, the first one consisting of a linear regression model with fixed and random effects (controlling for pseudoreplication) and the second one being a dynamic panel regression with one lag. Further down below follows a descriptive section in relation with the data and data sources, time interval, and number of observations, categories and subdivisions that make up the 3 analysed panels, variables included in the model, as well as details about how the final observations were obtained (or computed, if it is the case). Then, an in-depth explanatory part will ensue as background for the developed econometric models and for the accuracy and robustness tests that have been performed.

The data was collected from a number of trustworthy sources such as World Bank Database, Bloomberg, etc. For each specific variable comprising the model, the origins of the data will be mentioned within the variable's description (further below in this chapter). All observations have an annual frequency. The studied time interval spans from the start of 1995 until the end of 2020 for a total number of years of 26.

As for the grouping process of countries, there will be 3 subdivisions on which the experiment will be conducted. The first of them consists of 24 countries from the European Union. The second category comprises the countries of the Central and Eastern Europe (CEE) group, as defined by the OECD and the scholarly literature. *"Central and Eastern European Countries (CEECs) is an OECD term for the group of countries that includes Albania, Bulgaria, Croatia, the Czech Republic, Hungary, Poland, Romania, the Slovak Republic, Slovenia, and the three Baltic States: Estonia, Latvia, and Lithuania,"* according to the Directorate of the Organisation for Economic Cooperation and Development. However, because Albania is not a part of the European Union, it will be excluded from the dataset. In addition, Estonia, Latvia, and Lithuania have also been excluded from the dataset due to lack of reporting on the required variables (no data reported for multiple variables from 2010-2012 until 2020). The last subdivision of countries only includes the Advanced European Economies. This sub-panel is formed by subtracting the second category from the first, the final composition being the following 16 countries: Germany, France, Italy, Spain, Portugal, The Netherlands, Malta, Greece, Denmark, Finland, Luxembourg, Sweden, Ireland, Austria, Belgium, Cyprus. Summing up, after the aforementioned exceptions, the first category will include 24 countries, the second will contain 8 and the third will comprise 16 countries.

The variables (along with the method of computation and other relevant details) that have been used in the econometric models are described below:

1. The Market Return, denoted in the dataset with *"return"* is the dependent variable of this study and is measured annually as the percentage change of the end-year price. Main market indices of the analysed countries were used as a proxy for this variable. Data was collected from Bloomberg.
2. Political Orientation, denoted in the dataset with *"party"* is the explanatory variable of interest and is a dummy variable representing the political orientation of the government in place. To establish the political orientation, the government of each country within the analysed dataset, throughout the entirety of the 26-year period, was carefully assigned a value as follows: 1 means a centre-right to far right government, whereas 0 signifies a centre-left to far left administration, representing the political affiliation of the government in office. The data was collected from Wikipedia. Moving from election to election, for every country within the analysed period, each year was assigned the political orientation of the winning administration with the binary method described above. It is important to notice is the fact that, when the elections were organised in the middle of a year, the orientation of the government that has spent the most time in office was assigned for that entire year.
3. Logarithm of the Gross Domestic Product per capita, denoted in the dataset with *"lngdp"* is an independent control variable with the purpose of giving context to the overall model and it represents the gross domestic product per inhabitant for each year within the time interval and of each country. Specifically, it captures the average standard of living in one's country. Furthermore, for data consistency reasons, the logarithm function was applied to the raw GDP data, as it was the only variable which was not expressed in percentage points, but rather in US dollars per capita. Data was collected from Bloomberg. Raw data was collected from the World Bank data library.
4. Market Capitalisation as percentage of GDP, denoted in the dataset with "cap" is an independent control variable with the purpose of giving context to the overall model that measures the total value of the capital market within one's country, signifying the level of development of these markets. For listed domestic corporations, market capitalisation (also known as market value) represents the share price multiplied by the number of outstanding shares (including their various classes). Investment funds, unit trusts, and businesses whose sole purpose is to hold shares of other publicly traded firms are not included. End-of-year values have been converted to US dollars using year-end foreign exchange rates, and the overall sum was then reported to the yearly GDP. Data was collected from The Global Economy.
5. Interest-Rate Spread, denoted in the dataset with *"irspread"* is an independent control variable which measures the business cycle within the economy. It is computed by subtracting the short term interest rate from the long term one. According to authors such as Estrella and Mishkin (1996) and Rudebusch and Williams (2008), this indicator can accurately predict recessions, as well as other

macroeconomic periods. According to their findings, the term spread is clearly lower in the years leading up to an economic crisis, both in the general sample and in the case of the United States. Thus, this variable should provide validity to the overall model. Raw data was collected from AMECO.

6. Financial Crisis, denoted in the dataset with *"fincrisis"* is an independent dummy control variable whose only purpose is to give context to the econometric model. It signifies the presence of a major financial crisis. Being a binary variable, each year within the time interval was assigned a value as follows: 1 for the existence of a major financial crisis and 0 for the absence of a major financial crisis. Excluding the European Sovereign Debt Crisis because it had limited effects and only affected some of the analysed states (and thus it could create outliers), during the interval period of interest, the only 2 major recessions that are captured by this variable are the 2007-2008 global financial crisis and the start of the pandemic in 2020,

Moving further, we will now start the experiment itself with 2 univariate regression models with the purpose of analysing the direct effect of the government's political orientation onto the market return. The dependent variable is the market return, denoted in the data set by "return" while the independent variable is the political orientation, under the notation "party". Eq. 1 describes this model:

$$return = \alpha + \beta \times party + c \text{ (equation 1)}$$

After the first univariate equations were run on all 3 panels and the results were obtained, we continued with another set of regressions. This time, 4 additional control variables were included in the model with the purpose of giving context and relevance to it. The extra variables (that had already been defined in this section) are: Gross Domestic Product per capita, Market Capitalisation, Interest-Rate Spread, and Financial Crisis. The model is described by eq. 2:

$$return = \alpha + \beta \times party + \chi \times lngdp + \delta \times cap + \varepsilon \times irspread + \varphi \times fincrisis + c \text{ (equation 2)}$$

Much like in the case of the univariate models, the multivariate ones will also be estimated using both fixed and random effects. The reasoning for using both type of estimators throughout the entirety of the study is based on the work of Clarke, Crawford, Steele and Vignoles (2010). In their paper, not only do they prove the importance of using at least one of these indicators while running econometric models, but they also highlight the gravity of choosing the right method for the right situation. The authors of the 2010 study concluded their paper with the following guiding affirmation: *"if rich data are available, then random effects models have qualities very close to those of fixed effects models, and allow researchers to address a wider range of research questions".* However, because "rich data" is a vague term and not wanting to compromise a thing or let anything to chance, the final judgment

when it comes to the methodology regarding those effects was to run all econometric models with both random and fixed indicators and present the results in parallel.

Lastly, a dynamic model will be employed, based on Equation 2. This will help the experiment by incorporating into the model the econometric consideration of time and the variable "return" with 1 lag. The scope of this is to find out whether or not past returns influence future price performance.

These 5 final econometric models (2 single variate, 2 multivariate and a dynamic one) have been run for each panel of countries mentioned above (EU, CEE and AE). Testing the same models on multiple subdivisions, as highlighted by researchers such as Jeffrey M. Wooldridge (2001) in his very comprehensive econometrics book, has various advantages: First, within the whole population (the entire dataset), for the variable of interest – the market return or "return" – there can be outliers or abnormalities (which are especially hard to exclude from the dataset, in this case, because one can hardly define what an outlier looks like). Specifically, in this case there are countries that during the entirety of the analysed time interval have only been governed by a single party or by parties belonging to only one political side (see Belgium, Luxembourg, Finland, etc.). Thus, a problem arises: there can be no comparison as one of the 2 sides are not well represented in the dataset, rendering the variable "party" (and thus, the whole experiment) useless. Using multiple subdivisions of the global category could reduce the unwanted impact of these abnormalities. Secondly, in the case of the parties that follow a big tent ideology or in the case of a large coalition struck by making big compromises (a minority left party obtaining majority by offering in exchange some important cabinet seats to a right party), how should one categorise these governments? Either way, even if most of the cabinets are led by the right or the left, there is no unanimity, thus market return (or prosperity, in more general terms) cannot be 100 % attributed to neither left-wing nor right-wing political making. The detrimental effects of this problem can also be diminished by running the same equations on multiple subsets and seeing if there are any differences in results.

4. Results and Discussion

For the European Union Category, in both univariate models, the explanatory variable ("party") is holding statistical significance to the 10 % significance level. An economic interpretation is that, if the government has a right-wing orientation, the market return will be approx. 4.45 % lower (as there is an inverse proportion relationship) in the case of the random effects model and -4.71 % lower for the fixed effects model. These results are robust. Moreover, the constant is also statistically relevant at the 1 % significance level. A possible economic interpretation, in this particular case, might be: when all other variables are 0, the market yields 9.78 % (and 9.94 %, respectively). This value seems plausible as the 10 % per annum (not adjusted for inflation) is a generally accepted comparison benchmark within the literature, according to the article published by Dana Anspach (2022), which analyses the average historical market returns from 1980 to 2021. However, as The Analysis Factor (2020) broadly explained, unless all factors from a regressions can

be equal to 0, there can be no economic interpretation of the constant. "lngdp" and "cap" cannot be equal to 0, otherwise there would be no point in performing the experiment anymore. Tables containing the results, as well as the database, can be viewed upon request.

In the case of multivariate models, the explanatory variable fails to keep its significance, resulting in no correlation between government's orientation and market returns. However, other independent variables became relevant. "lngdp", in the case of the multivariate model with random effects, is statistically accurate – resulting in the following interpretation: for each 1 % increase in GDP per capita, the market return drops by 5.45 %. Counterintuitive as it might appear at first glance, it is not always the case. As MSCI Barra (2010) very well highlighted, this assumption does not always hold in practice and does vary greatly depending on the starting and ending point of the analysed period (even if the difference is only 1 year). The study finds a negative correlation between GDP and equity returns on data from 1958 to 2008 for eight developed markets, much like in my case. The authors also pointed out that in the literature, this assumption has been debunked over and over again. Moreover, these findings have also been replicated independently, this time on the European markets, by Stoian and Tatu-Cornea (2015). Similarly to findings within this study, the authors found a strong inverse relationship (statistically relevant to the 1 % significance level) between GDP per capita and market returns in the case of global samples (20 European countries) as well as in the case of CEE countries.

Moving onto the variables "cap" and "fincrisis", both hold significance in the multivariate models at the significance level of 1 %. In the case of market capitalisation, for every 1 % increase in total valuation, the market return will also increase by 0.13 %, in the case of the model including random effects (and 0.25 % for the one with fixed effects). "fincrisis" which represents a dummy variable signifying the occurrence of a crisis, the interpretation is the following: during the financial crisis, the annual market return will be 23 % lower (23.15 % respectively) than how it would normally be, if a crisis does not exist. The constant also kept its relevance at 1 % significance level. "irspread" is the only variable which did not hold any statistical significance for any of the models performed.

The results for the dynamic Arellano-Bover model with 1 lag were obtained. All variables turned out to be statistically relevant, except for the "irspread", which measures the business cycles. The explanatory variable of interest "party" became relevant at 5 % significance level (compared to only 10 % for the first 2 single variate models and to no relevance for the multivariate ones). It seems that, in this particular case, constructing a dynamic model might be better fit for the study's purposes. The direction of the relationship (negative) stayed the same but the coefficient doubled. Now, if the government is of right-win, the annual market return will lower by approx. 8.47 % (compared to a situation where the government is left-wing). GDP per capita ("lngdp") is again relevant at the 5 % significance level but now for a 1 % increase in GDP per capita, the market decreases by 8.2 %. Market capitalisation ("cap") and the dummy variable representing financial crisis ("fincrisis") also stay

statistically significant at 1 % level and have a slight increase in numerical values (0.33 % from 0.25 % and from -23 % to -22 % respectively) when compared to the multivariate regression models. The variable with 1 lag ("return L1") also holds statistical relevance to the 1 % significance level, meaning that, if in the past year, the market return has been up (down) with 1 %, then the predicted return for the current year will also increase (decrease) by 0.28 %. These results stay consistent throughtout the the analysis of the CEE countries data panel. However, for the Advanced Economies data panel, only one out of 5 econometric models keeps it statistical significance (univariate model with fixed effects).

Finally, as all regressions have been performed for every dataset, we aggregate the results into a brief chapter-ending summary:

1. Throughout the whole experiment, the explanatory variable of interest "party" has fluctuated in significance – its influence is more pronounced in the sample data for the EU panel (remaining significant at 10 % for the single variate models and at 5 % for the dynamic model). Moreover, the direction of the relationship is the same for all examined samples: negative. We will conclude that there is sufficient evidence to support the existence of the capital market's preferences for left-wing regimes across the European Union as well as for the CEE countries.
2. GDP per capita has had a negative relationship with the dependent variable (market return) in all data panels. However unusual this might be, there is a rich body of literature that has had the same results. MSCI Barra (2010), Stoian and Tatu-Cornea (2015), Pastor and Veronesi (2017) are just some of the authors who obtained the similar results.
3. For all analysed datasets, the constant stayed statistically significant at 1 % confidence level (with minor exceptions), although no economic interpretation can be attributed to it with 100 % certainty, as the model is not properly defined so as the constant can convey proper economic justification, according to the guidelines put in place by The Analysis Factor (2020).
4. The independent variables with the highest relevance – at 1 % confidence interval over the entirety of the experiment across all datasets – are the "cap" and "fincrisis". Conclusively, these 2 variables influence the market return the most. As rough estimates, in case of a major crisis, one should expect the market to take a hit of 20-30 % in the years while the crisis lasts, whereas, in the case of market capitalisation, if it rises by 1%, one should expect the market return to also rise with 0.1 % - 1 %.
5. The number of observations were 624 for the European Union category, 208 in the case of CEE countries and 416 for the Advanced Countries. According to Hun Myoung Park (2011) and to The Analysis Factor (2020), a benchmark for a reliable number regarding the observation within one dataset is around 200. This criterion is well accomplished in this study, thus the data experimented upon should have been reliable and sufficient to capture any correlation.
6. "lrspread" – the variable measuring the business cycle had no statistical relevance whatsoever. Although studies such as Stoian and Tatu-Cornea (2015) have found it to be relevant, differentiation of raw data sources can be the reason for this.

7. "return L1" – measuring the influence of past returns on current performance stays statistically relevance throughout the whole experiment at 1% significance level. We can conclude that, in this case, past performance was a reliable indicator of future returns, on average.

5. Concluding Remarks and Recommendations

The purpose of this study was to find out whether or not there is a statistically significant correlation between the orientation of the government in charge and the equity market returns. The results for the EU and CEE panels are indicating a strong to mild correlation between the dependent and the independent variables, whereas the results for the AE panel are inconclusive. Capital markets have a preference for left-wing regimes, with a difference of returns of around 4-5 % for the single variate models to around 8-9 % for the dynamic one, in the case of the first panel (the EU). This implies that if there is a ruling left-wing government in power, markets will perform better by about 4-5 % annualised return (~8-9 % respectively) when compared to a right-oriented government. In the case of the CEE countries, the differences are even bigger: ~6 % for the multivariate model with random effects and approx. 12 % in the case of the dynamic panel model. These conclusions reinforce the work of Camyar and Ulupinar (2013), Mark Watson and Alan Blinder (2015), Santa-Clara and Valkanov (2003), and others, which arrived at similar findings across samples from Europe and US.

A possible justification of such results might consist of the fact that, unlike in the USA or other countries/regions of the globe), especially in the case of the European Union, there are different layers of agreements within the EU. To name a few, there is the monetary union (the euro-zone) - formed by countries only using the Euro, then there is the Schengen Area which facilitates free individual movement, etc. Taking on a more nationalist/conservative approach (which is what right-wing governments usually do) could impeach the free movement of capital or scare away the inflow of capital from the union, having a detrimental effect on the overall economy and resulting in lower market returns. It is commonly known that European integration and Far-Right parties do not work well together, and although there is no specific study that studied this hypothesis (none that we could find), the issue is still up in the air. For example: the recent cases of Poland and especially Hungary, which led them to lose European funding, as reported by the BBC (16 February, 2022). Further research is needed on this topic to discover whether or not European cointegration has indeed an impact on financial markets and GDP of one's country.

Our experiment also uncovered a strong negative correlation between GDP per capita and market returns across all samples, which translates into economic terms as follows: if GDP per capita (often represented as the living conditions) rises by 1 %, one can expect a drop in market returns by about 4 to 12 %, depending on the dataset and model used as reference. Although unusual, there is a rich body of literature which has had the same results. MSCI Barra (2010) using data from global samples (across multiple markets and continents), Stoian and Tatu-Cornea (2015)

with data from European markets, Pastor and Veronesi (2017) with data from the US markets, are just some of the authors whom I've reviewed and that got indistinguishable results. Further research is required to draw a definitive conclusion on this issue.

Lastly, independent variables of great statistical relevance turned out to be the market capitalisation and the financial crisis. As a reasonable estimate, in the event of a significant crisis, one should anticipate the market to lose 20-30 % of its value during the years the crisis lasts. Moreover, if market capitalisation grows by 1 %, one should expect the market return to climb by 0.1 % to 1 %. These results were consistent across all datasets and for all practiced models, at the 1 % significance threshold.

Recommendations for future researchers: first of all, when collecting data using a binary method (as it was executed within this paper), the complexity of politics (consisting of coalition governments, governments of compromise or any other special situation that may occur, which in politics is actually very common, especially when the study is executed on a large data set as time interval and number of observations) is drastically reduced to only 2 variables which cannot fully encompass the reality as it is. As further research will be done on the topic, our recommendations are, regarding the methodology, that the authors will use a 4-point metric system, instead of a binary one. From 1 to 4: 1 signifying far-left, 2 for centre-left, 3 for centre-right and 4 for far-right, thus managing to gather more of the subtle tones that politics often imply. However, even with a more enveloping system as the one that we mentioned, our educated belief is that there will still be a lot of relevancy left out of the study as there are some situations that are very hard to fit into preset categories. What if there exist political parties which are very hard to categorise as left or right. One good example to illustrate this point is Luxembourg's Christian Social People's Party, which possesses left-leaning views on topics such as ethics, welfare, culture, traditions, etc., but seldom acts as a left party when talking about economic issues, acting in such cases more as a right-wing party.

Secondly, a larger time interval should be used by researchers that approach this topic in order for the experiment to have both sides of the political spectrum well represented. As mentioned earlier, should either left or right govern throughout the entirety of the analysed period, the experiment will become less relevant. To avoid these, opting for the enlargement of the studied time interval, if data is available for all variables, could be a solution.

Finally, future studies should take into account the existence of political cycles in order to design an experiment with one variable that accounts for such a hypothesis. The academic literature also points towards a strong correlation between market returns and political cycles: Using the Bartels' Test on 624 monthly stock prices observations (from January 1926 to December 1977), divided into cycles of 24 and 48 months, Herbst and Slinkman (1984) found *"strong support for a four-year political-economic cycle, but no support for a two-year stock market cycle that is politically induced"*.

Regarding recommendations for the methodology of this study, we strongly advise future researchers to consider using dynamic models with one or two lags, as the results within this study confirm that that type of model is better suited for this kind of topic, as the nature of returns imply computation based on past results, and this significance might be lost or not well captured by a stationary model.

Acknowledgements

Special thanks to Univ. Prof. Dr. Habil. Andreea Stoian for the useful input and guidance throughout the development of this paper.

References

[1] Anspach, D. (2022). "Annual Stock Market Returns by Year - Historical Returns for the S&P 500, 1980 to 2021", TheBalance.com.

[2] Beyer, S.B., Jensen, G.R., Johnson, R.R. (2008). "The Presidential Term: Is the Third Year the Charm?".

[3] Bawn, K., Rosenbluth, F. (2006). "Short versus Long Coalitions: Electoral Accountability and the Size of the Public Sector", *American Journal of Political Science*, 50(2), 251-265.

[4] Bialkowski, J., Gottschalk, K., Wisniewski, T.P. (2006). "Political Orientation of Government and Stock Market Returns", *Working Paper Series*, No. 9, European University Viadrina.

[5] Brooks, S., Mosley, L. (2008). "Risk, Uncertainty and Autonomy: Financial Market Constraints in Developing Nations".

[6] Cahan, D., Potrafke, N. (2021). "The Democratic-Republican Presidential Growth Gap and the Partisan Balance of the State Governments", *Economic Growth eJournal*.

[7] Camyar, I., Ulupinar, B. (2013). "The partisan policy cycle and firm valuation, European *Journal of Political Economy*", vol. 30, 92-111.

[8] Clarke, P., Crawford, C., Steele, F., Vignoles, A. (October 2010). "The Choice Between Fixed and Random Effects Models: Some Considerations for Educational Research", IZA DP No. 5287.

[9] Estrella, A., Mishkin, F.S. (1996). "The yield curve as a predictor of US recessions." Current issues in economics and finance 2.7.

[10] Frot, E., Santiso, J. (2010). "Portfolio Managers and Elections in Emerging Economies: How investors dislike political uncertainty", *SITE Working Paper*, No. 9, Stockholm School of Economics, Stockholm Institute of Transition Economics (SITE).

[11] Füss, R., Bechtel, M.M. (2009). "The Political Sources of Systematic Investment Risk: Lessons from a Consensus Democracy", *The Journal of Politics*, 71, 661-677, 10.1017.

[12] Füss, R., Bechtel, M.M. (2008). Partisan politics and stock market performance: The effect of expected government partisanship on stock returns in the 2002 German federal election, *Public Choice*, 135, 131-150.

[13] Gärtner, M., Wellershoff, K.W. (1995). Is there an election cycle in American stock returns?, *International Review of Economics & Finance*, 4(4), 387-410.

[14] Herbst, A.F., Slinkman, C.W. (April 1984). Political-Economic Cycles in the U.S. Stock Market, *Financial Analysts Journal*, Vol. 40.

[15] Johnson, R., Chittenden, W., Jensen, G. (1999). Presidential Politics, Stocks, Bonds, Bills, and Inflation, *Journal of Portfolio Management - J Portfolio Manage*, 26, 27-31.

[16] Kaustia, M., Torstila, S. (2010). Stock market aversion? Political preferences and stock market participation, *Journal of Financial Economics*, 100 (2011), 98-112.

[17] Leblang, D., Mukherjee, B. (2005). Government Partisanship, Elections, and the Stock Market: Examining American and British Stock Returns, 1930-2000, *American Journal of Political Science*, 49, 780-802.

[18] MacRae, C.D. (1977). A Political Model of the Business Cycle, *Political Economy*, 85(2).

[19] Park, H.M. (2011). Practical Guides To Panel Data Modeling: A Step by Step, *Public Management and Policy Analysis Program*, Graduate School of International Relations, International University of Japan.

[20] Pastor, L., Veronesi, P. (February 2017). Political Cycles and Stock Returns, *NBER Working Paper* No. 23184.

[21] Riley, W., Luksetich, W. (1980), The Market Prefers Republicans: Myth or Reality, *Journal of Financial and Quantitative Analysis*, 15(3), 541-560.

[22] Rudebusch, G.D., Williams, J.C. (2008). Revealing the secrets of the temple: The value of publishing central bank interest rate projections, *Asset Prices and Monetary Policy*, University of Chicago Press, 247-289.

[23] Stoian, A., Tatu-Cornea, D. (2015). What do European stock markets prefer? Left or right governments?, *Managerial Finance*, 41(10), 1096-1111.

[24] Wooldridge, J.M. (2010). Econometric Analysis of Cross Section and Panel Data, Cambridge, MA, MIT Press.

[25] Wooldridge, J.M. (2001). Econometric Analysis of Cross Section and Panel Data, The MIT Press Cambridge, Massachusetts London, England.

[26] MSCI Barra (2010). Is There a Link Between GDP Growth and Equity Returns?, *Research Bulletin*.

[27] The Analysis Factor (2020). A guide to linear regressions, www.theanalysisfactor.com.

[28] BBC News (16 February, 2022). Hungary and Poland lose EU funding fight over laws.