

**SOCIAL SCIENCES & HUMANITIES**Journal homepage: <http://www.pertanika.upm.edu.my/>**Stock Return, Currency and General Elections****Tze San Ong^{1*}, Wei Ni Soh¹, Boon Heng Teh² and Sin Huei Ng³**¹*Department of Accounting, Faculty of Economics and Management, Universiti Putra Malaysia, 43400 UPM Serdang, Selangor, Malaysia*²*Multimedia University (Cyberjaya), Jalan Multimedia, 63000 Cyberjaya, Selangor, Malaysia*³*Inti International University, Jalan BBN 12/1, Bandar Baru Nilai, 71800 Nilai, Negeri Sembilan, Malaysia***ABSTRACT**

The association between political elections and stock market performance for Malaysia market is discussed in this paper. This study aims to investigate the impact of General Elections in Malaysia on stock market indices. To provide additional support of the impact of general elections on stock returns through other channels, currency changes were also included in this study so as to discover the mediation effect of the exchange rate on the relationship between general elections and stock returns. Since the exchange rate does, to some extent, influence stock return, the relationship between exchange rates and stock returns during different stages of a general election cannot be overlooked. The results showed that currency change is negatively related with stock returns in pre-election and post-election stages, but it is not significant during the election period. The impact of currency on stock return exists as a mediation effect during election period. In a nutshell, the currency change directly impacts stock return with a negative influence. However, the direct relationship between currency and stock return disappears during the election week. Thus, stock return is affected by currency change indirectly.

Keywords: General election, stock return, currency, mediation effect

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INTRODUCTION

Stock is the most volatile financial instrument in a financial market; it is one of the most popular investment tools, especially for those interested in grabbing short-term increases in price to obtain attractive profit. General elections somehow generate an impact on the movement of

stock prices. The confidences of investors are usually adjusted according to the increase in uncertainty. The uncertainty factor will be taken into consideration when deciding the timing of involvement in the stock market.

According to Pantzalis, Stangeland and Turtle (2000), any political event is a key control variable on financial market. This is because the market is sensitive to new information regarding political decisions that may impact a nation's fiscal and monetary policy. There are further studies that focused on the impacts of different types of elections on the stock market. For instance, Santa-Clara and Valkanov (2003) demonstrated that stock markets displayed significant abnormal returns around presidential elections, while Gemmill (1987) focused on the performance of FTSE 100 during the British General Elections in 1987.

Based on the studies above, the researchers showed that political elections might play an important role in affecting stock market performance. Similarly, this association may be reflected in a Malaysian context.

Stock market volatility usually portrays a significant increase around the time period of national elections, as mentioned by Bialkowski *et al.* (2008). Based on the historical facts during the previous General Elections, Bursa Malaysia displayed a high volatility during the General Elections held in Malaysia. Volatility of stock indices can also go up or down based on any serious incidents that happened during the course

of the year. For instance, the failure of the incumbent government to maintain super majority in the 2008 General Elections led to a much higher level of uncertainty, which was then reflected in the high volatility of the stock market.

Meanwhile, the study of Pantzalis *et al.* (2000) found a positive and significant market reaction in the two weeks leading up to the political elections. They further stated that the phenomenon was closely related to the political uncertainty that existed during that particular period. Another significant finding from the study documented that the volatility of equity prices was caused by the uncertainties that existed before an election.

According to Goodell and Vahamaa (2012), stock market volatility around US presidential elections was affected by political uncertainty. They found that the S&P 500 index increased when the probability of the eventual winner became higher. From a Malaysian perspective, there is no doubt that BN has been sustaining their win over the past 57 years. After 2008, the opposition parties such as Pakatan Rakyat have become stronger, with the number of their supporters increasing day by day. This condition has brought the political situation of Malaysia to a high level of uncertainty.

The awareness of citizens about the importance of general elections has contributed to the attention of both local and foreign investors. Consequently, the stock market will be affected, at least slightly, if there is any news or information about general elections released by the

incumbent government. According to the statement of Bursa Malaysia on 3 April 2013, the announcement of the dissolution of the parliament dragged the index to sink by more than 52 points in the morning trading session. Yet, the index had returned to its positive territory before the market closed on the same day. It is important to note that the General Elections affected the movements of the investors. Hence, the volatility of the stock market necessitates that this research be carried out.

There are numerous studies indicating the effects of elections on stock markets in US (Jones & Banning, 2009), and Germany (Dopke & Pierdzioch, 2006). Therefore, this study aimed to investigate the impacts of general elections in Malaysia on stock market performance, especially a general election where the incumbent government fails to sustain their super majority seats in the parliament.

In a nutshell, various factors can affect the political situation in Malaysia, which in turn reflects on the stock market. Thus, it can be concluded that political situation is interrelated with the stock market. In order to provide additional support of the impacts of general elections on stock returns through other channels, currency changes were also included in this study and to discover the mediation effects of the exchange rate on the relationship between general elections and stock returns. Since the exchange rate does, to some extent, influence stock return, the relationship between exchange rates and stock returns during different stages of a general election cannot be overlooked.

This study is significant in at least three ways. First of all, stock market performance around general elections in Malaysia provides useful information for investor forecasting. Second, separating the effects of currency on stock returns into three different stages of the general elections enables the provision of additional evidence in supporting the relationship between currency and stock price; it is subject to political conditions. Last but not least, the inclusion of the mediation effect of currency change on general elections correspond to stock returns, thus enhancing the understanding of factors that impact stock return.

This paper is organised as follows: A brief introduction is given in the beginning, followed by a literature review on related studies. Data collection and the methods applied are elaborated in the methodology section, after which the findings and discussions of this study are interpreted and discussed. This paper ends with a conclusion and some limitations of this study.

LITERATURE REVIEW

In past literature, numerous studies have been carried out on the issue of stock changes responding to elections in three stages. However, the outcomes of the research vary and this is possibly due to the studies being conducted in different countries.

General elections and the stock market

Huang (1985), Gartner and Wellershoff (1995), and Wong and McAleer (2009)

figured out that the presidential election cycles play an important role in the US stock market. According to periodical studies, stock prices fell during the first half of the presidency, reached a trough in the second year, rose during the second half of the presidency, and reached a peak in the third or fourth year. Santa-Clara and Valkonox (2003) indicated that stock market returns were higher during the Democratic presidencies, compared to during the Republican presidencies. Hensel and Ziemba (1995) documented that small-cap stocks had significantly higher returns during Democratic administrations as opposed to during Republican administrations.

However, Dopke and Pierdzioch (2006) did not find that German stock market returns tended to be higher during left-wing than during right-wing governments. Dopke and Pierdzioch (2006) concluded that stylised facts that are well-established in the US cannot be confirmed by using the German data. In addition, the study of Chretien and Coggins (2009) also revealed no significant changes in the financial market returns, regardless of whether it was right-leaning Conservative or left-leaning Liberal governments. The finding of Powell *et al.* (2007) and Sy and Al Zaman (2011) suggested that the ruling of Democratic and Republican Presidencies did not bring significant difference in stock returns by controlling the estimation bias and systematic risk.

General election induced market uncertainty

Mei and Guo (2002) stated that elections have important implications for future political and economic course of a country. It also presented major uncertainty to both domestic and foreign investors; uncertainty caused by political elections has provided evidence that it tends to increase the volatility of emerging markets. When Nippani and Arize (2005) and Goodell and Bodey (2012) investigated the effects of the US presidential elections on stock markets, they documented that the stock prices were affected by the uncertainty caused by the elections. Nippani and Arize (2005) focused on 2000 presidential elections and reported that stock markets had a negative relationship with election uncertainty. On the other hand, Goodell and Bodey (2012) discovered that the election uncertainties around US presidential elections were negatively associated with price earning ratios. They further indicated that the decrease in stock market valuations was caused by the decrease of uncertainty on election outcomes.

The effects of election induced uncertainty on stock returns and volatility were also examined by Li and Born (2006). Their findings suggested that stock prices and market uncertainty increased before elections, even though candidates had gained higher support from voters. In other words, the uncertainty of an election's outcome brings about a higher volatility on the stock market, especially

before the US presidential elections. According Brown *et al.* (1988), price changes tend to be positive on average, if uncertainty is reduced. Therefore, positive price changes can be predicted when an election outcome draws nearer, as some of the uncertainty is resolved.

Currency change and stock return

The relationship between currency change and stock return has been investigated in past literature; findings suggested that the outcomes vary, and are subject to industry, period and the type of economy. Aggarwal (1981) showed a positive correlation between the changes in exchange rates and abnormal stock, whereas Solnik (1987) showed a negative relationship between monthly and quarterly real stock returns and real exchange rates, with the exception of a positive relationship only in the sub-period of 1979 to 1983.

Ma and Kao (1990) concluded that currency depreciation in an export-dominant economy was negatively related to stock prices, but positively related in an import-dominant economy. Soenen and Hennigar (1988) reported no significant relationship for three of the industries in their study, and a negative relationship for the other industries. Their results showed that exchange rates have little impact on stock returns of individual industries and sectors. They also suggested that exchange rates are able to affect stock prices to an even higher extent.

Election, currency change and rational partisan theory

Foreign investors inevitably seek out stable countries with strong economic performance in which to invest their capital. A country with such positive attributes will draw investment funds away from other countries that are perceived to have more political and economic risks. Political turmoil, for example, can cause loss of confidence in a currency, and thus a movement of capital to the currencies of more stable countries. Gartner (1986) found that elections significantly affect the spot rate.

Bachman (1992) found that electoral news significantly affects the forward bias. According to the rational partisan theory, if the election outcome is not perfectly anticipated, then elections can influence economic conditions even when expectations are rational. Ellis and Thoma (1995) found that the partisan theory affects real exchange rates. This is further supported by Blomberg and Hess (1997) and Lobo and Tufte (1998) who showed that policy-makers are opportunistic and largely concerned with remaining in power. An incumbent will tend to cut taxes to appear more competent before an election or whenever his approval rating falls, thereby enhancing the value of the domestic currency.

METHODOLOGY AND RESEARCH FRAMEWORK

Data Description and Sources

This paper is an event study that is integrated with econometric technique-

panel data analysis. The daily index data in this study are abstracts from the Bursa Malaysia. The stock price used here are in Ringgit Malaysia terms. The daily index data are available since January 1995.

Meanwhile, election information for Malaysia was obtained from the official website of the Malaysian Election Commission. Election information includes date of parliament dissolution, the period of the election campaign, date of polling day, and the election outcomes. The daily exchange rate is obtained from DataStream. Two currencies were tested in this study, including the U.S Dollar and the Singapore Dollar. Singapore Dollar was selected as Singapore is the top

trading partner for Malaysia in the import and export activities. Meanwhile, U.S. Dollar was selected in this study due to the importance of the major currency in the worth currency market. Changes in these two currencies on stock returns in several election stages strengthen the findings in this study.

This study only concentrated on the general elections of 2008 and 2013. Table 1 shows a summary of the election information in Malaysia for both the 12th and 13th General Elections. In the two elections, the Barisan Nasional party failed to maintain majority seats in the Parliament, which led to greater uncertainty among both foreign and domestic investors.

TABLE 1
Information of General Elections in Malaysia

Edition	Year of General Election	Date of Parliament Dissolution	Date of Nomination Day	Period of Election Campaign(No. of Days)	Date of Polling Day
12 th	2008	13/2/2008	24/2/2008	24/2 -7/3/2008 (13)	8/3/2008
13 th	2013	3/4/2013	20/4/2013	20/4 – 4/5/2013 (15)	5/5/2013

Sources: Official Website of Suruhanjaya PilihanRaya Malaysia

Event Study of Stock Indices' Return around General Election

Dates

This study also examined an estimation window which refers to the four week pre-event period. Based on the history of General Elections in Malaysia, the dissolution of the parliament for the two observed general elections in this study happened on $t=-4$. In addition, a four-week post-event period was also under the observation of this study. The four-week post-event period is

examined to determine the magnitude of the uncertainty resolution that occurs after the announcement of the results; for instance, in the case where the vote was close and required coalition building, or if a runoff election was required.

Research Framework

This study tested the relationship between election stages and stock returns. It includes the currency change into this model as a mediation factor in influencing

the effects of the election period on stock returns. It is believed that the mediation effect of currency change will impact stock returns during the election period. Investors and traders will pay attention to any possible changes resulting from the election outcome on government's policies, especially on the currencies of the country with a higher trading volume with Malaysia and major currency traded in the world currency market.

There are three equations set in this study based on different general election periods – the pre-election, during election and post-election periods – which are labelled as *EPPre*, *EPDur* and *EPPost*, respectively. A dummy variable was applied to recognise the three stages. An interaction variable was created to determine the influence of the mediation factor (currency change in this study) on the relationship between the election period and stock returns. The panel regression is stated as follows:

$$SR_{i,t} = \beta_0 CR_{i,t} + \beta_1 EPre + \beta_2 CR_{i,t} * EPre + \varepsilon$$

(Equation 1)

$$SR_{i,t} = \alpha_0 CR_{i,t} + \alpha_1 EDur + \alpha_2 CR_{i,t} * EDur + \varepsilon$$

(Equation 2)

$$SR_{i,t} = \gamma_0 CR_{i,t} + \gamma_1 EPost + \gamma_2 CR_{i,t} * EPost + \varepsilon$$

(Equation 3)

$SR_{i,t}$: Cumulative stock return for election *i* during election period *t*,
 $CR_{i,t}$: currency change for election *i* during election period *t*,

EPPre : pre-election date set as one, and the balance set as zero,

EDur : during election date set as one, and the balance set as zero,

EPPost : post-election date set as one, and the balance set as zero.

Cumulative stock return is the aggregate amount that an investment has gained or lost over time, independent of the period of time involved. The two currency changes were computed using the exchange rate of U.S Dollar to Ringgit Malaysia, as well as Singapore Dollar to Ringgit Malaysia. The hypotheses postulated in this study are:

1st H₀: The impact of the currency on share return is varying in different stages of election.

2nd H₀: The mediation effect of election stages and currency on stock return is different.

Panel regression was carried out to perform the test on the relationship and mediation effects of currency changes on the election period corresponding to stock returns. Panel regression was applied as it combined more than 1 election period in this study. The panel regression was performed through the Breusch-Pagan LM test and the Hausman test to determine the most suitable test to be used. As a result of the diagnostic tests, fixed effect panel regression was shown to be the most applicable model for the three equations in this study.

TABLE 2
Diagnostic and robustness checking report

Model	BPL test	Hausman test	Wooldridge test	Modified Wald test	VIF
Eq. 1	5.8200 (0.0158)**	38.6410 (0.0000)***	0.8460 (0.3622)	150.0000 (0.0000)***	1.00 - 1.05
Eq. 2	9.2600 (0.0023)**	45.6460 (0.0000)***	1.5070 (0.2254)	760.4450 (0.0000)***	1.03 - 2.34
Eq. 3	3.5800 (0.0585)*	48.6860 (0.0000)***	1.9740 (0.1663)	400.4770 (0.0000)***	1.03 - 3.14

Note: The BPL test is to determine the method to be used between the OLS and random effect regression. The Hausman test is to determine the method to be used between random-effect and fixed-effect regressions. The Wooldridge test is to test the existence of an autocorrelation problem. The Modified Wald test is to identify the existence of heteroscedasticity problems, and the VIF is a collinearity diagnostic.

*** Significance at 0.01 confidence level, ** significance at 0.05 confidence level, * significance at 0.1 confidence level, p-values are in parentheses.

DESCRIPTIVE STATISTICS, RESULTS AND DISCUSSION

Descriptive Statistics of CAR (-4, +4) by Weeks

Besides that, descriptive statistics from the four-week pre-event period until the four-week post event period (-4, +4) is also

shown in Table 2. Among the investigated weeks, week zero was found to have negative CARs. Similarly, this situation also happened in week-3. Generally, the announcement of political changes would cause the volatility of the stock market.¹

TABLE 2
Descriptive Statistics of CARs by Weeks (in percentages)

Week	-4	-3	-2	-1	0	1	2	3	4
Mean	0.019	-0.020	0.004	0.015	-0.082	0.017	0.107	-0.017	0.072
Std Dev	0.012	0.017	0.008	0.019	0.047	0.012	0.048	0.025	0.035
Min	-0.005	-0.049	-0.012	-0.019	-0.171	-0.008	-0.005	-0.052	-0.002
Max	0.037	0.015	0.017	0.052	-0.003	0.038	0.169	0.022	0.112

In addition, the fluctuation of CARs within the week was found to be different among the examined weeks – the highest fluctuation of CARs happened in week zero which ranged from -17.06 % to -0.28%. According to the study of NUS Students Investment Society (2013), the

¹For instance, in the 13th General Elections, the FTSE Bursa Malaysia dropped by 52 points in the morning trading session after the Prime Minister of Malaysia, Dato' Seri Haji Mohammad Najib bin Tun Haji Abdul Razak announced the dissolution of the parliament. This incident happened exactly in week-3 and caused the CARs to be negative.

stock market tends to stay at a passive stage during the election week. This is due to the fact that corporate performance might be influenced by a potential new government's policies such as on spending and tax changes. Therefore, investors might not take investment risks during that critical period. However, the stock market tends to move in a positive direction when there is no doubt of the

election result, and the newly formed government remains in a stable political situation.

Results and Discussion

The findings of this study are listed in Table 3. They are separated into three election stages, which comprise of pre-election, during election and post-election stages. The panel regression was tested on two different currencies (USD and SGD).

TABLE 3
The effects of currency and election on stock returns in Bursa Malaysia for two elections

Dependent Variable: Stock return				
Variable/ period		Pre-election	During Election	Post-election
USD	Constant	0.0005	-0.0005	-0.0038
		(0.7990)	(0.7500)	(0.0510*)
	CR	-1.2842	-0.3986	-1.4556
		(0.0000***)	(0.3520)	(0.0000***)
	EP	-0.0027	-0.0064	0.0054
		(0.3510)	(0.1550)	(0.0630*)
	CR* EP	0.9974	-1.5104	0.7915
(0.2350)		(0.0170**)	(0.2410)	
F-stat	4.9300	6.5700	5.7800	
	(0.0034***)	(0.0005***)	(0.0012***)	
Adjusted R-square		14.34%	19.32%	17.05%
SGD	Constant	0.0008	-0.0005	-0.0035
		(0.6870)	(0.7170)	(0.0650*)
	CR	-1.0917	0.1110	-2.3147
		(0.0100***)	(0.7740)	(0.0000***)
	EP	-0.0029	-0.0101	0.0046
		(0.3420)	(0.0180**)	(0.1140)
	CR* EP	0.9768	-4.0146	2.4082
(0.3310)		(0.0000***)	(0.0010***)	
F-stat	2.5500	12.8400	6.9800	
	(0.0615*)	(0.0000***)	(0.0003***)	
Adjusted R-square		8.58%	32.68%	21.38%

The upper figure refers to coefficient, and figure in bracket is p-value.

Note: significant at 0.01(*), 0.05(**), 0.001(***) level.

The results in Table 3 show that currency change is significantly and negatively related with stock returns in pre-election and post-election stages for both the currencies. This finding tallies with the existing evidence in a study by Solnik (1987). Investors might prefer investing in other financial instruments that become more valuable when a currency depreciates. Thus, the capitals invested in stock markets are perhaps pulled back by investors, who would rather invest in alternative financial instruments. Surprisingly, the currency change is not significantly related to stock returns during the election period.

According to the study of Pantzalis *et al.* (2000) and Li and Born (2006), political uncertainty may influence the returns of financial assets. The study of Bialkowski *et al.* (2008) also pointed out that stock market volatility significantly increased around the elections due to uncertainty. Furthermore, the study of Hirshleifer (2001) stated a negative relationship between the uncertainty of political elections and financial asset valuations. However, these findings are not found in this study. Even so, the negative coefficient of the period toward stock returns is revealed, but the coefficient is not significantly proven.

For U.S. Dollar, the effect of currency changes on stock returns is through the interaction variable (CR*EP) during the election period. In other words, foreign traders and investors will consider the political condition of a country before any significant decision is made. The mediation effect only occurs during the election and

is not affected by the stock return before and after the general election. The negative coefficient of the interaction variable shows that currency change will drop during the election period and the currency change additionally decreases the stock return during the election week. In a nutshell, the currency change directly impacts stock return with a negative influence. However, the direct relationship between currency and stock return disappears during the election week. Meanwhile, stock return is affected by currency change indirectly.

The election event is positively significant with stock returns for the US Dollar currency. This is supported by Pantzalis *et al.* (2000), who stated that it is possible that only partial uncertainty is resolved after the announcement of an election's outcome. This is because the stock market needs time to assess an election's impact following the announcement of the results. Hence, a post-election positive abnormal return should be expected if there is a significant amount of uncertainty resolution following the election date. The study of Bialkowski *et al.* (2008) revealed that a strong abnormal rise started on the Election Day and continued for a number of days thereafter. The market settled down when the cumulative abnormal volatility ceased to increase, which was after around 15 trading days following the event.

The findings for USD and SGD are similar for the pre-election period, and both currencies showed that the mediation effect is supported by evidence during the election week. Currency changes in

USD impacted stock returns with a higher coefficient compared to SGD ($1.284 > 1.0917$). SGD was more sensitive to stock returns after the election week. According to Ma and Kao (1990), the impacts of currency depreciation to stock prices varied in export-dominant and import-dominant economies. Meanwhile, the volume of export and import can help in explaining the difference in coefficient for USD and SGD in influencing stock returns. The adjusted R-square for all models and currencies is in the range of 0.0858 to 0.3268. Overall, the adjusted R-square is very high and shows a high reliability of the data and models.

CONCLUSION

As stated in the previous study, stock prices tend to increase during the two weeks prior to an election as political uncertainty tends to decrease during that period. Nippani and Medlin (2002) also mentioned that the uncertainty of an election's outcome has a direct impact on the stock market. The resolution of uncertainty when the election outcome draws nearer brings volatility to the stock market. Therefore, the rational partisan theory is supported in this study. The continued political power of the incumbent government convinces investors of the continuity of major projects endorsed and steered by them. This directly secures their investments in the said projects. As a result, a bullish market might be created after the announcement of an election's results, as shown in the results of the USD.

Currency change is expected to be negatively related with stock returns for both currencies. However, the insignificant relationship between currency change and stock returns during the election week is seen to be unpredictable. The impacts of currency change on stock returns can only be explained through the interaction variable. During election week, the currency change will interactively add a supplementary effect on stock returns. Nonetheless, the supplementary effect of the currency change does not exist both before and after the election week.

The findings of this study can serve as a reference for investors of the stock market and traders involved in the movement of currency exchanges; investors will be able to have a better idea on when to get involved in the stock market. Timing is an important issue to consider in making decisions for portfolio investors, especially for foreign investors who are mostly impacted by the fluctuation in currency. As the results show that the currency is mediating the effects of election events on stock return, investors should pay attention to the political outcome and avoid making any decisions during the election event. The impacts of currency on stock returns are simply to make reasonable predictions before and after the election period. Trading companies that are involved in export and import activities are advised to closely monitor political outcomes to reduce any possibility of loss caused by any fluctuation in currency.

Limitations of the Study

One limitation of this study is the lack of available data, thus limiting the scope of the analysis. The exchange rate between Ringgit Malaysia to U.S. Dollar and Singapore Dollar is only available after the year 2005 due to the fixed currency regime set as an action to mitigate the impact of the financial crisis of 1997/98. Thus, this study only managed to include the latest two general elections. This study also attempted to increase the sample size by conducting the test using different currencies and comparing the results of the two currencies in order to avoid any bias results caused by a single currency. However, the adjusted R-square shows that the model is moderately reliable in explaining stock returns. Therefore, a high reliability level can serve as supportive evidence to cover the limitation of the short period in this study.

REFERENCES

- Aggarwal, R. (1981). Exchange Rates and Stock Prices: A Study of U.S. Capital Markets under Floating Exchange Rates. *Akron Business and Economic Review*, 12(3), 7-12.
- Bachman, D. (1992). The effect of political risk on the forward exchange bias: the case of elections. *Journal of International Money and Finance*, 11(2), 208-219.
- Bialkowski, J., Gottschalk, K., & Wisniewski, T. P. (2008). Stock market volatility around national elections. *Journal of Banking and Finance*, 32(9), 1941-1953.
- Blomberg, S. B. & Hess, G. D. (1997). Politics and exchange rate forecasts for 25 currencies. *Journal of International Economics*, 52(1-3), 5-59.
- Brown, K. C., Harlow, W. V., & Tinic, S. M. (1988). Risk aversion, uncertain information, and market efficiency. *Journal of Financial Economics*, 22(2), 355-385.
- Chretien, S., & Coggins, F. (2009). Election outcomes and financial market returns in Canada. *North American Journal of Economics and Finance*, 20(1), 1-23.
- Dopke, J., & Pierdzioch, C. (2006). Politics and the stock market: Evidence from Germany. *European Journal of Political Economy*, 22(4), 925-943.
- Ellis, C. J., & Thoma, M. A. (1995). The implications for an open economy of partisan business cycles: theory and evidence. *European Journal of Political Economy*, 11(4), 635-651.
- Gartner, M., & Wellershoff, K. W. (1995). Is there an election cycle in American stock returns? *International Review of Economics and Finance*, 4(4), 387-410.
- Gartner, M. (1986). Some political economy of flexible exchange rates. *European Journal of Political Economy*, 2(2), 153-168.
- Gemmill, G. (1987). Political risk and market efficiency: tests based in British stock and options markets in the 1987 election. *Journal of Banking and Finance*, 16(1), 211-231.
- Goodell, J. W., & Bodey, R. A. (2012). Price-earnings changes during US presidential election cycles: voter uncertainty and other determinants. *Public Choice*, 150(3-4), 633-650.
- Goodell, J. W., & Vahamaa, S. (2013). US presidential elections and implied volatility: The role of political uncertainty. *Journal of Banking and Finance*, 37(3), 1108-1117.
- Hensel, C. R., & Ziemba, W. T. (1995). United States investment returns during Democratic and Republican administrations 1928-1993. *Financial Analysts Journal*, 51(2), 61-69.

- Huang, R. D. (1985). Common stock returns and presidential elections. *Financial Analyst Journal*, 41(2), 58–61.
- Jones, S. T., & Banning, K. (2009). US elections and monthly stock market returns. *Journal of Economics and Finance*, 33(3), 273-287.
- Li, J., & Born, J. A. (2006). Presidential election uncertainty and common stock returns in the United States. *Journal of Financial Research*, 29(4), 609–622.
- Lobo, B. J., & Tufte, D. (1998). Exchange rate volatility: does politics matter? *Journal of Macroeconomics*, 20(2), 351-365.
- Ma, C. K., & Kao, G. W. (1990). On Exchange Rate Changes and Stock Price Reactions. *Journal of Business Finance and Accounting*, 17(3), 441-449.
- Mei, J., & Guo, L. (2002). Political uncertainty, financial crisis, and market volatility. *Journal of International Business*, 25, 325-345.
- Nippani, S., & Arize, A. (2005). US presidential election impact on Canadian and Mexican stock markets. *Journal of Economics and Finance*, 29(2), 271–279.
- Pantzalis, C., Stangeland, D. A., & Turtle, H. J. (2000). Political elections and the resolution of uncertainty: the international evidence. *Journal of Banking and Finance*, 24(10), 1575- 1604.
- Powell, J. G., Shi, J., Smith, T., & Whaley, R. E. (2007). The persistent presidential dummy. *Journal of Portfolio Management*, 33, 133–143.
- Santa-Clara, P., & Valkonov, R. (2003). The presidential puzzle: political cycles and the stock market. *The Journal of Finance*, 58, 1841–1872.
- Soenen, L. A., & Hennigar, E. S. (1988). An Analysis of Exchange Rates and Stock Prices i the U.S. Experience between 1980 and 1986. *Akron Business and Economic Review (ABER)*, 19(4), 7-16.
- Solnik, B. (1987). Using Financial Price to Test Exchange Rate Models: A Note. *Journal of Finance*, 42(18), 141-149.
- Wooldridge, J. M. (2006). *Introductory Econometrics*, Mason, OH: Thomson South-Western.
- Wong, W. K., & McAleer, M. (2009). Mapping the Presidential Election Cycle in US stock markets. *Mathematics and Computers in Simulation*, 79(11), 3267-3277.

