

THE EFFECTS OF POLITICAL UNCERTAINTY ON THE TURKISH STOCK MARKET: AN EVENT STUDY ANALYSIS

Ibrahim Yasar Gok⁶⁸

Faruk Dayi⁶⁹

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Abstract: *Since the general elections are a source of political uncertainty, in this study, we examine the relationship between Turkish general elections and the stock market returns. By conducting an event study analysis, the effects of three general elections are investigated in the period of 01/02/2010-12/31/2017. The results of the event study analysis indicate that the general election in June 2015 has a significant negative impact on the stock market. Since the coalition talks fail after the election, a new general election is held in November 2015 and this election causes a significant positive impact on the stock market. Moreover, after applying GARCH (1,1) model, we obtain a GARCH volatility series and we detect that the June 2015 election is associated with a high volatility level. We conclude that although the effects of the elections on returns are apparent, the effects are short-lived and the political stability is an important determinant for investors.*

Key words: *political risk, stock market, event study analysis, return, volatility*

1. INTRODUCTION

The stock prices are affected by many factors. In a general view, these factors can be categorized as firm-specific news, sectoral news, national political and economic events, and international political and economic conditions. The information through these factors dynamically affects the stock prices. Though the speed of the information processing can vary, the stock prices adjust to the new information and the new equilibrium price will be reached.

The politics and economics have a two-way relationship. Though the politics sometimes changes economic conditions, the economy may also affect political dynamics. Besides, both political and economic developments have effects on stock markets. In the age of barrier-free stock markets, a nations' political and economic developments do not just matter to domestic investors but also matter to foreign investors. Since the need for international portfolio diversification is seen as crucial especially for the institutional investors, the foreign investors closely watch countries. The country monitoring includes both actively invested countries and the potential ones.

Monitoring economic conditions are mostly related to macroeconomic news. Since macroeconomic data is quantitative, we can easily use them while analyzing their effects on the stock market. On the other hand, political risk; is related with both political action and inaction, can have positive and negative effects, is triggered not only by governments but also by some actors in the political climate, have direct and indirect economic impacts, reveal macro and

⁶⁸ Suleyman Demirel University, The Faculty of Economics and Administrative Sciences, Department of Banking and Finance, Isparta/TURKEY

⁶⁹ Kastamonu University, The Faculty of Economics and Administrative Sciences, Department of Business Administration, Kastamonu/TURKEY

micro impacts on economic outputs (John and Lawton, 2017:4). Political environment (or factors) is an important determinant of systematic risk (Bechtel, 2009:664). As stated by Al Khattab et al. (2007:735) the political risk is subjective and not easy to be quantified. Nevertheless, the effects of political factors on stock prices need to be examined. In the literature, the political risk is generally analyzed by either country risk premiums or event study analysis. Many studies⁷⁰ take into account International Country Risk Guide (ICRG) data for risk premiums. ICRG is a source of country risk analysis in terms of political, financial and economic risks. Although the ICRG's economic and financial risks premiums are calculated objectively, there can be subjectivity in determining political risk premiums (Yaprakli and Gungor, 2007:207). In general, the studies based on risk premiums conclude that the increasing political risk negatively affects the stock prices (Ulusoy,2008).

Some studies instead use event study analysis to examine the impacts of the political factors on stock markets. Chiu et al. (2006) examine the effects of the South Korean political elections on financial markets and evidence that the presidential elections increase uncertainty than parliamentary elections. Bechtel (2009) examines the pre-electoral, post-electoral, and institutional factors influencing systematic risk. He reports that establishing right-leaning governments reduce systematic risk. Also, it is noted that a higher winning chance of right-leaning coalition before the elections reduces uncertainty on the financial markets. On the contrary, it is found that the periods of grand coalitions and coalition formations increase systematic risk. Nazir et al. (2014) investigate the effects of the political events on Pakistan stock market. They find that the political events affect the stock market and it takes nearly 15 days to adjust to information. Beaulieu et al. (2006) analyze the effects of Quebec referendum on the stock market and find that there is short-run positive and significant impact on stock returns. Ulusoy (2011) analyzes stock returns using Artificial Neural Network system.

Wars, revolutions, coup d'états, democratic changes in governments, changes in head of states, and political turmoils can be sources of political uncertainty, and the general elections and/or presidential elections has not been widely studied in terms of political uncertainty in the literature of political risk (Miller, 1992). This study aims to analyze the relationship between the Turkish general elections and Borsa Istanbul (BIST) 100 stock index returns. The effects of Turkey's political risk on stock prices is generally studied in the perspective of Political Risk Index and risk premiums. To our knowledge, this is the first study investigating the impacts of the elections on the stock market in the perspective of an event study analysis.

The rest of the study is organized as follows: In section 2 we describe the data and methodology, in section 3 we give and discuss the empirical findings, and in section 4 we conclude the study.

2. DATA AND METHODOLOGY

In this study, we analyze the impacts of Turkish general elections on Turkish stock market. We consider the period between 02/01/2010 and 12/31/2017. For an 8-year period, three general elections for Turkish Grand National Assembly were held. The events are listed in Table 1.

We use BIST 100 stock index daily closing prices. There were two trading sessions in Borsa Istanbul until 11/30/2015. Hence, just the second session closing prices are taken into account

⁷⁰ Some of these studies have been conducted on Turkey (For these studies, see Oral and Yilmaz, 2017; Erkokcak and Cam, 2015; Tukenmez and Kutay, 2016; Kara and Karabiyik, 2015; Kaya et al., 2014; Cam, 2014; Yaprakli and Gungor, 2007).

till 11/30/2015. The logarithmic returns, $[\ln (P_T/P_{T-1})]$, are used for the analysis, where P_T represents the event day closing price and P_{T-1} represents the closing price of the previous day.

We apply a conventional event study approach to investigate the effects of the event days on stock market. The event day abnormal return (AR), 6-day cumulative abnormal return (CAR), and 11-day CAR are calculated⁷¹. The event day AR is equal to the actual return minus estimated return. We define an estimation period between the days -11 and -30 relative to the event date and the average return of this period is taken into account as the estimated return. We then standardize the AR by dividing the event day AR by the standard deviation of the estimation period. 6-day CAR is the cumulative of ARs from $t = 0$ to $t = 5$, and 11-day CAR is the cumulative of ARs from $t = 0$ to $t = 10$. By dividing 6-day CAR by the standard deviation of 6-day AR, the t- statistic of CAR6 is calculated. Also, by dividing 11-day CAR by the standard deviation of 11-day AR, the t- statistic of CAR11 is calculated. By obtaining the t- statistics, we are able to analyze whether the event day ARs, CAR6s and CAR11s are statistically significant.

We also apply GARCH model (Bollerslev, 1986) to obtain GARCH variance series. The mean and variance equations of GARCH (1,1) model are seen below.

$$R_t = \mu + \theta_1 R_{t-1} \quad (1)$$

$$\sigma_t^2 = a_0 + a_1 u_{t-1}^2 + \beta_1 \sigma_{t-1}^2 \quad (2)$$

By obtaining GARCH variance series, we aim to determine the dates of higher variances on a timeline graph. After checking the dates in the event list, if any matches are detected, this indicates the existence of the relationship between the events and high volatility.

3. EMPIRICAL FINDINGS

The results of the event study approach are reported in Table 1. It is seen that only the general elections in 2015 have significant impacts on the stock market. The June 2015 election has a negative impact in the first trading day following the election and its impact persists in a 6-day period. Since the coalition talks fail after the election, a decision to renew the election is taken. The November 2015 election has conversely a positive impact in the first trading day following the election day and there is no significant impact in the 6-day or 11-day period. These results indicate that the political stability is an important decision factor for investors.

Ibrahim Yasar Gok, MSc, PhD

He has been working as an Assistant Professor in Banking and Finance Department of Suleyman Demirel University since 2013. He was a visiting researcher in Oklahoma University's Price College of Business in 2011 and 2012. His research interests are Capital Market Micro Structure, Futures and Options Markets, Corporate Sustainability, and Financial Literacy. He lectures on Financial Markets and Institutions, Portfolio Management, and Derivative Markets.



Our findings are in line with the findings of Lehkonen and Heimonen (2015), who find that the lower the political risks the higher the stock market returns in emerging markets including

⁷¹ This event study approach is commonly used in the literature. We think that this is a well-known approach, hence we briefly explain it. For a detailed methodology, see Chen and Siems (2004).

Turkey. Also, our findings are parallel in those of Diamonte et al. (1996), who conclude that experiencing higher political risk in emerging markets causes lower returns. Oral and Yilmaz (2017), Tukenmez and Kutay (2016), Kara and Karabiyik (2015), Kaya et al. (2014), Cam (2014), and Yaprakli and Gungor (2007) find that increasing political risk has a negative effect on the Turkish stock market prices. These studies analyze the political risk by using the risk premiums obtained from International Country Risk Guide, not by an event study analysis. Nevertheless, our findings and theirs are consistent.

	Date	Events	Event day AR	6-Day CAR	11-Day CAR
1	06/12/2011	The general election for Turkish Grand National Assembly was held.	0.00182 (0.1272)	-0.01550 (-1.3840)	0.02294 (1.3447)
2	06/07/2015	The general election for Turkish Grand National Assembly was held.	-0.05271*** (-4.5621)	-0.04258** (-2.6921)	0.00806 (0.4198)
3	11/01/2015	The general election for Turkish Grand National Assembly was reheld.	0.04855*** (4.1839)	0.00873 (0.0159)	-0.02355 (-1.012)

*** indicates significance at 1% level, ** indicates significance at 5% level, and * indicates significance at 10% level. The values in parentheses are *t*-statistics. The degree of freedoms for event day ARs, 6-day CARs, and 11-day CARs are 19, 5 and 10, respectively. Since the elections take place on Sundays, the event day is considered the first business day following these events.

Table 1: Event Study Approach Results

In Figure 1, we display the GARCH variance series timeline graph. In the figure, it is seen that the 06/07/2015 General Election causes one of highest volatilities between the period 2010-2017. This finding is consistent with the findings of Aggarwal et al. (1999), who find that political, social, and, economic events and especially the country-specific ones cause higher volatility in the emerging markets. This finding is also in line with Chan and Wei (1996), who find that political news increases the stock market volatility in Hong Kong. Our findings are also supported by Kim and Mei (2001). They find that the biggest return changes in the Hong Kong stock market are often related to major political developments.

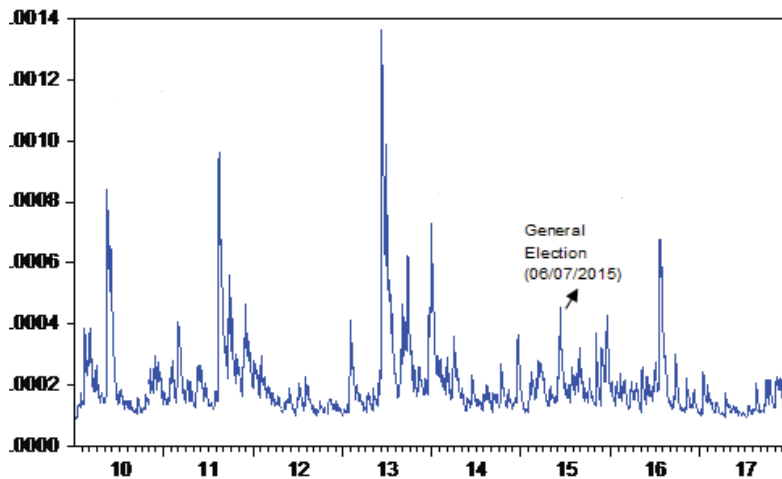


Figure 1: GARCH Variance Series

Mei and Guo (2004) find that political election cycles mostly contributes financial crises in emerging markets. Indeed, it is found that one of the causes of Turkey’s financial crises in the 1990s and early 2000s is political risk (Ural, 2003). On the other hand, Turkey has never experienced a local financial crisis since 2001. Although the 2008 global financial crisis affects Turkey, the origin of this crisis is out of the country.

4. CONCLUSION

In this study, we aim to explore the impacts of the Turkish general elections on Turkish stock market. We investigate three general elections in the period of 2010-2017. By using an event study analysis, we find that two of the three elections have significant impacts on the market. These two elections are both held in 2015. The June 2015 election is inconclusive, hence it negatively affects the stock market. After the decision to renew the election, in November 2015 the election is held and it positively affects the market in the first trading day following the election. We also obtain a GARCH variance series by applying GARCH (1,1) model for the 2010-2017 period. It is found that one of the highest volatility levels is associated with June 2015 election. This points out that political instability can destabilize the stock market.

Researchers like Mei and Guo (2004) report that election cycles in emerging markets mostly produces financial crises. However, we cannot verify these arguments in case of Turkey. First, although many developments -not just elections- take place in the 8-year period, the foreign investors' stock holdings in early 2018 is identically same as in early 2010 (CBRT, 2018). Second, the events like coup attempt affect the foreign investors in the short-term, but the Turkish stock market achieves to recover its losses. In fact, BIST 100 stock index rallied by 47,6% in 2017 and Borsa Istanbul has become the second-best performing market after Argentina (CNN, 2017). In addition, foreign investors' Turkish stock market investments have increased \$3.3 billion and Turkish bond market investments have increased \$7.2 billion in 2017 (Seker Invest, 2018). Third, it is found that Turkey's local financial crises in the 1990s and early 2000s are somewhat related with some political developments. Nevertheless, Turkey has not experienced any local financial crisis since the early 2000s and there is no indication that it will experience in the near future. Conversely, Turkey's economic growth in the third quarter of 2017 is 11% and it is the biggest in G-20 countries (Bloomberg, 2017). Consequently, the Turkish stock market quickly recovers from the turmoil, restores the prices, and overall does not reflect any increasing political risk.

REFERENCES

1. Aggarwal, R., Inclan, C., & Leal, R. (1999). Volatility in Emerging Markets, *The Journal of Financial and Quantitative Analysis*, 34(1), 33-55.
2. Al Khattab, A., Anchor, J., & Davies, E. (2007). Managerial Perceptions of Political Risk in International Projects, *International Journal of Project Management*, 25(7), 734-743.
3. Beaulieu, M-C, Cosset, J-C, & Essaddam, N. (2006). Political Uncertainty and Stock Market Returns: Evidence from the 1995 Quebec Referendum, *Canadian Journal of Economics*, 39(2), 621-642.
4. Bechtel, M. M. (2009). The Political Sources of Systematic Investment Risk: Lessons from a Consensus Democracy, *The Journal of Politics*, 71(2), 661-677.
5. Bloomberg (2017). <https://www.bloomberg.com/news/articles/2017-12-11/turkey-s-economy-grows-faster-than-expected-in-third-quarter> (Date of Access: 02/04/2018).
6. Bollerslev, T. (1986). Generalized Autoregressive Conditional Heteroskedasticity, *Journal of Econometrics*, 31(3), 282-306.
7. CBRT (2018). https://evds2.tcmb.gov.tr/index.php?/evds/serieMarket/#collapse_5 (Date of Access: 02/03/2018).
8. Chan, Y-C., & Wei, K. C. J. (1996). Political Risk and Stock Price Volatility: The Case of Hong Kong, *Pacific-Basin Finance Journal*, 4, 259-275.
9. Chen, A. H., & Siems, T. F. (2004). The Effects of Terrorism on Global Capital Markets, *European Journal of Political Economy*, 20(2), 349-366.

10. Chiu, C-L, Chen, C-D, & Tang, W-W (2006). Political Elections and Foreign Investor Trading in South Korea's Financial Markets, *Applied Economics Letters*, 12(11), 673-677.
11. CNN (2017). <http://money.cnn.com/2017/12/27/investing/best-stock-markets-2017-world/index.html> (Date of access: 02/02/2018).
12. Cam, A. V. (2014). Politik Riskin Firma Değeri ile İlişkisi: İMKB'ye Kayıtlı Firmalar Üzerinde Bir Uygulama, *Doğuş Üniversitesi Dergisi*, 15(1), 109-122.
13. Diamonte, R. L., Liew, J. M., & Stevens, R. L. (1996). Political Risk in Emerging and Developed Markets, *Financial Analysts Journal*, 52(3), 71-76.
14. Erkocak, H. E. and Cam, A.V. (2015). The Role of Country Risk on Estimating of Share Earnings: An Application on Commercial Bank Registered to Istanbul Stock Exchange (BIST). *Journal of Business & Economic Policy*, 2(3), 92-101.
15. John, A., & Lawton, T. C. (2017). International Political Risk Management: Perspectives, Approaches and Emerging Agendas, *International Journal of Management Reviews*. Doi: 10.1111/ijmr.12166
16. Kara, E., & Karabiyik, L. (2015). The Effect of Country Risk on Stock Prices: An Application in Borsa Istanbul, *Suleyman Demirel University The Journal of Faculty of Economics and Administrative Sciences*, 20(1), 225-239.
17. Kaya, A., Gungor, B., & Ozcomak, M. S. (2014). Politik Risk Yatırımcının Dikkate Alması Gereken Bir Risk Midir? Borsa İstanbul Örneği, *Gazi Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi*, 16(1), 74-87.
18. Kim, H. Y., & Mei, J. P. (2001). What Makes the Stock Market Jump? An Analysis of Political Risk on Hong Kong Stock Returns, *Journal of International Money and Finance*, 20, 1003-1016.
19. Lehkonen, H., & Heimonen, K. (2015). Democracy, Political Risks and Stock Market Performance, *Journal of International Money and Finance*, 59, 77-99.
20. Mei, J., & Guo, L. (2004). Political Uncertainty, Financial Crisis and Market Volatility, *European Financial Management*, 10(4), 10(4), 639-657.
21. Miller, K. D. (1992). A Framework for Integrated Risk Management in International Business, *Journal of International Business Studies*, 23(2), 311-331.
22. Nazir, M. S., Younus, H., Kaleem, A. & Anwar, Z. (2014). Impact of Political Events on Stock Market Returns: Empirical Evidence from Pakistan, *Journal of Economic and Administrative Sciences*, 30(1), 60-78.
23. Oral, I. O., & Yilmaz, C. (2017). Finansal ve Politik Risk Endeksinin BIST Sınai Endeksi Üzerindeki Etkisi, *Karadeniz Uluslararası Bilimsel Dergi*, 33, 192-202.
24. Seker Invest (2018). https://www.sekeryatirim.com.tr/Raporlar/ozel_raporlar/Yabanc%C4%B1%20Pay%C4%B1%2005012018.pdf (Date of Access: 02/02/2018).
25. Tukenmez, N. M., & Kutay, N. (2016). Ülke Riskinin Hisse Senetleri Getirileri Üzerine Etkisi: Türkiye ve Arjantin Piyasaları İçin Bir Karşılaştırma, *Atatürk Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 20(2), 631-645.
26. Ulusoy, T. (2008). Systematic Risk and Firm Financial Structure: Evidence on Istanbul Stock Exchange. *The Business Review, Cambridge*, 11(2), 226-231.
27. Ulusoy, T. (2010). İMKB Endeks Öngörüsü İçin İleri Beslemeli Ağ Mimarisine Sahip Yapay Sınır Ağı Modellemesi, *Uluslararası İktisadi ve İdari İncelemeler Dergisi*, 3(5), 21-40.
28. Ural, M. (2003). Finansal Krizler ve Türkiye, *Dokuz Eylül Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi*, 18(1), 11-28.
29. Yapraklı, S., & Gungor, B. (2007). Ülke Riskinin Hisse Senetleri Fiyatlarına Etkisi: İMKB 100 Endeksi Üzerine Bir Araştırma, *Ankara Üniversitesi Siyasal Bilgiler Fakültesi Dergisi*, 62(2), 199-218.