The Relationship between Political Stability and Portfolio Investments: The Case of Turkey 2007-2020

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1. INTRODUCTION

The collapse of the gold-based monetary system in the early 1970s and the increase in oil prices due to the Arab-Israeli War designated the beginning of a new era. With the collapse of the monetary system, the rapid volatility of money values and interest rates increased the uncertainty and encouraged investors to buy commodities, especially gold, in order to protect themselves. The oil war caused commodity prices to increase more. Cost-driven inflation and recession, which means stagflation, left its mark on the era. Keynesian policies, which were seen as responsible for the case of stagflation, had been replaced by the neo-liberal approach. Financial liberalization discussions are also the result of this period. It has been argued by McKinon & Shaw that financial liberalization will stimulate the squeezed real sector and support economic growth. Government controlled interest rates, credit controls, financial sector entry barriers, state control over the banking sector, state ownership of banks and restrictions on capital flows were identified as elements of financial pressure (Williamson and Mahar, 1998). Financial liberalization had also been accepted as one of the basic reform strategies of developing economies in the globalization process.

With the adoption of neo-liberal policies, which became the dominant ideology for both developed and developing countries, the mobility of capital between countries had also started to increase. Among the capital movements, especially portfolio investments had come into prominence during this period, and many countries released capital movements. In 1989, Turkey had also released all kinds of capital movements and had come across foreign currency positions with the Decree Law No. 32.

2. Short Term Capital Inflows-Outflows and Macroeconomic Equilibrium

Undoubtedly; The portfolio investments within capital movements which are called "hot money", include short-term capital movements. Foreign investors can enter and leave countries on a short-term basis in order to evaluate the investment opportunities. Capital movements, which are also called hot money, have significant effects on the exchange rate as well as their volume-increasing effects in the stock and debt securities market.

Although capital inflows initially seem to contribute to the country's economy, rapid exits cause great damage to the country's economy, whether fixed or flexible exchange rate regime is preferred. The 1997 Asian Crisis clearly demonstrates the destructive impact of short-term capital flows.

When short-term capital movements, which are called portfolio investments, enter developing economies with flexible exchange rates, the national currency gains value and interest rates decrease. In economies with a fixed or similar exchange rate system, interest rates will be in a downward trend as capital inflows increase the money supply. In both circumstances, the decline in interest rates increases asset prices (securities and real estate). While this process supports the capital inflow it also supports the low interest loan market. Because, the collateral system is supported due to the increasing asset prices, the increasing collateral values and decreasing interest rates also increase the loan supply and demand, and as a result, the economy rapidly revives.

In this process, the income of portfolio investors are supported by two channels: The first is that declining interest rates increase the prices of financial assets; And the second channel is the appreciation of the national currency, which is also the decline in the exchange rates. In this case, the portfolio investor becomes more profitable in terms of foreign currency. However, the process causes financial asset prices to inflate in the country. On the other hand, the appreciated national currency causes the competitiveness of the country to decline and the demand for foreign currency increase due to the current account deficit. This situation can be an exit signal for foreign investors. In case of foreign investors coming out rapidly, macroeconomic balances in the country will be reversed. The efforts of the portfolio investor to exit the country by selling their portfolio, will cause the interest rates to increase, asset prices to collapse and the national currency to depreciate and the increasing interest rates will cause the loan market to deteriorate and the economy to shrink. Briefly, while portfolio investments create a revival effect on entry, they may create a collapsing effect on exit.

3. Political Stability and Portfolio Investments

The fact that political stability is closely related to economic development and economic stability has been discussed thoroughly by institutional economics schools, and these discussions still continue today. On the other hand, profound arguments exist in the literature that there is a close relationship between political stability and capital movements. In this study, not all capital flows were tested, but the relationship between portfolio investments with very high inflow and outflow rates and the Political Stability Index (PSI) was tested using econometric analysis.

Portfolio investments, especially directed towards emerging markets, appear to have certain sensitivities. These are; the monetary opportunities of the investor country, the expectation of an increase in the exchange rate of the invested country, the national currency interest rate and the investor country interest rate difference (swap point), the CDS of the invested country (Credit Default Swap), stock market returns and Political Stability Factors. Since the main purpose of the study is to introduce the Political Stability Index (PSI), econometric models are chosen from as simple as possible in order to test these data in certain models and market behavior. Our main goal is to test the PSI and its effects on the market with the most common econometric models and to reveal numerical inferences. For this reason, the data set we have selected includes variables that have been used many times in academic studies such as CDS, swap, and inflation. The authenticity of this article is not the

diversity of the econometric models used or the difference of variables in the data sets, but the fact that it has been studied with a series, PSI, that has been produced daily since 2007 and allows to quantify political stability. Econometric models serve as a means of verification in this range. In this context, the effect of political stability on Portfolio Investments (PI) in Turkey has been analyzed by using monthly data for the 2007-2020 period. Information on the series used in the study was presented in Table 1. In the study, PSI, CDS[1], Swap rate and inflation rate were added to the model as determinants of PI.

Table 1: Data Set Description

Series	Explanation of the Series	Source
PY = Portfolio Investmens	Portfolio Investments (billion dollars)	TCMB Evds
Sİİ= Political Stability İndex	Political Stability İndex	S Bilişim Consultancy
CDS= Credit Default Swap	Credit Default Swap	TCMB Evds
SWAP	Swap Rate $(\dfrac{1 + TRL \; İnterest}{1 + Libor \; (USD)}) - 1$	TCMB Evds www.global-rates.com
ENF=İnflation	İnflation Rate	TCMB Evds

According to the model outputs[2] created with LSM (Table 2); While PSI is statistically significant in explaining portfolio investments (Model 1), when it is included in the model together with CDS, CDS also becomes meaningful in explaining PI (Model 3). On the other hand, when CDS is included in the model without PSI, it becomes statistically insignificant (Model 2). According to Model 3 results; As CDS values increase, this has a negative effect on PI and each unit increase in CDS reduces net portfolio investments by USD 8.8 million; And also it is expected that each unit of index increase will create an increase of 63.7 million USD in portfolio investments with the increase of PSI in periods of political stability. When inflation and swap rates are used separately, it seems statistically insignificant in explaining portfolio investments, while the ratio of inflation to swap spreads is statistically significant even at the level of 1% and it appears to have a negative relationship with portfolio investments. According to the model, a one-unit increase in the inflation / swap ratio is expected to have a decrease of 148.5 million USD on portfolio investments. This shows that in an environment with high inflation and low swap spreads, portfolio investments will be adversely affected.

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[1] CDS is a financial instrument that eliminates the non-payment risk at the end of maturity of a person holding bonds or similar financial instruments, in exchange for a certain amount of price.
[2] The models were tested for Heteroskedasticity with the Breusch-Pagan-Godfrey test and no Heteroskedasticity was found in all three models.

Table 2: Comparative OLS Models

Model 1	Coefficient	t-Statistic	Prob.	R^2	DW
SII	0.0158	3.3047	0.0012	0.1245	2.0603
ENF/SWAP	-0.0750	-1.6474	0.1015		
PY(-1)	0.3083	4.0771	0.0001		

Model 2	Coefficient	t-Statistic	Prob.	R^2	DW
CDS	0.0009	1.1080	0.2695	0.0712	2.1117
ENF/SWAP	-0.0056	-0.1327	0.8946		
PY(-1)	0.3838	5.2062	0.0000		

Model 3	Coefficient	t-Statistic	Prob.	R^2	DW
CDS	-0.0088	-4.8431	0.0000	0.2383	1.9413
SII	**0.0637**	**5.8687**	**0.0000**		
ENF/SWAP	-0.1318	-2.9826	0.0033		
PY(-1)	0.1485	1.9017	0.0590		

CDS, apart from being an insurance tool for investments, it is also used as an indicator that explains country risks. Country risks are not only related to economic indicators, but may also vary according to the policies and political risks followed by the current political authority. There is a cost of 1% for every 100 CDS base points calculated for countries. As a matter of fact, countries with high CDS premiums and institutions within the country (public and private) have to bear higher costs to meet their borrowing requirements. Therefore, the CDS premium is an important indicator for countries. Since PSI represents a more refined political structure focused on political developments, it shows a more stable performance in long-term models compared to CDS. As we can see from Graph 1, CDS has a much more volatile structure compared to the PSI, while the PSI has a more stable and decreasing trend since the beginning of 2007. The inflation rate showed a significant increase with the reflection of the exchange rate attack on costs, in 2018.

Chart 1: CDS, PSI, INF and Swap Charts
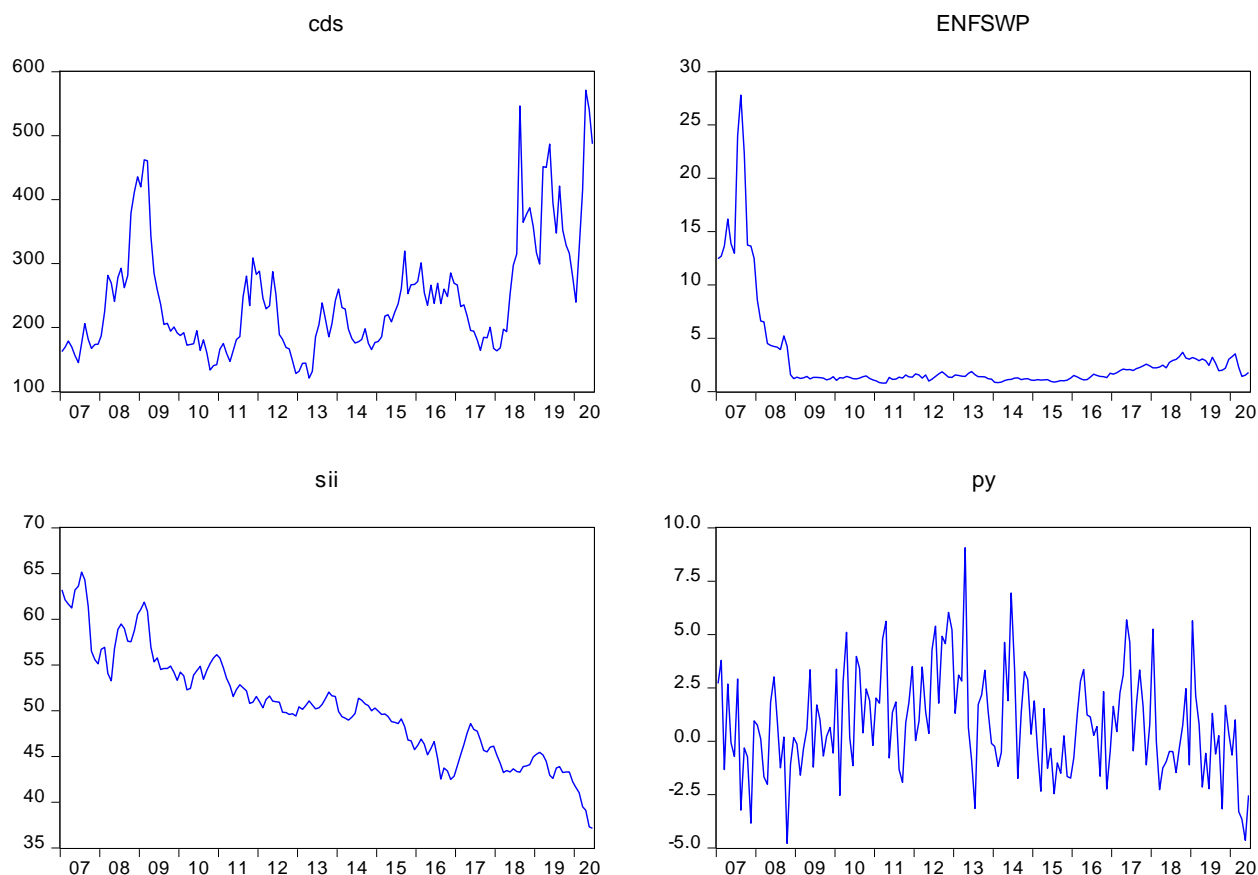
In contrast, PI focuses on short and medium term strategies. For this reason, short-term relationships have been analyzed using VAR[3] models and impulse-response analysis. It is mostly difficult to interpret VAR models economically. Therefore, most of the time when VAR analysis is performed, the model is used for impulse response function and variance research, not for its parameters. The impulse-response function measures the response of endogenous variables in the VAR model to random shocks in the error term. In the impulse response function, the error term measures the response of the endogenous variable to a given random shock unit. Chart 2 shows the response of portfolio investments against "a standard error" shock occurring in the impulse-response functions PSI, CDS, INF and Swap.

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[3] The order in which the variables enter the calculation is important in impulse-response analysis and variance decomposition. Variables should be put in order from external to internal, and one of the methods used to make this ordering is the Granger causality test. According to the result of the Granger causality test, variables are ordered from external to internal.

Chart 2: Impulse-Response Analyzes

Response to Cholesky One S.D. (d.f. adjusted) Innovations

Response of PY to PY

Response of PY to CDS

Response of PY to ENFSWP

Response of PY to SII
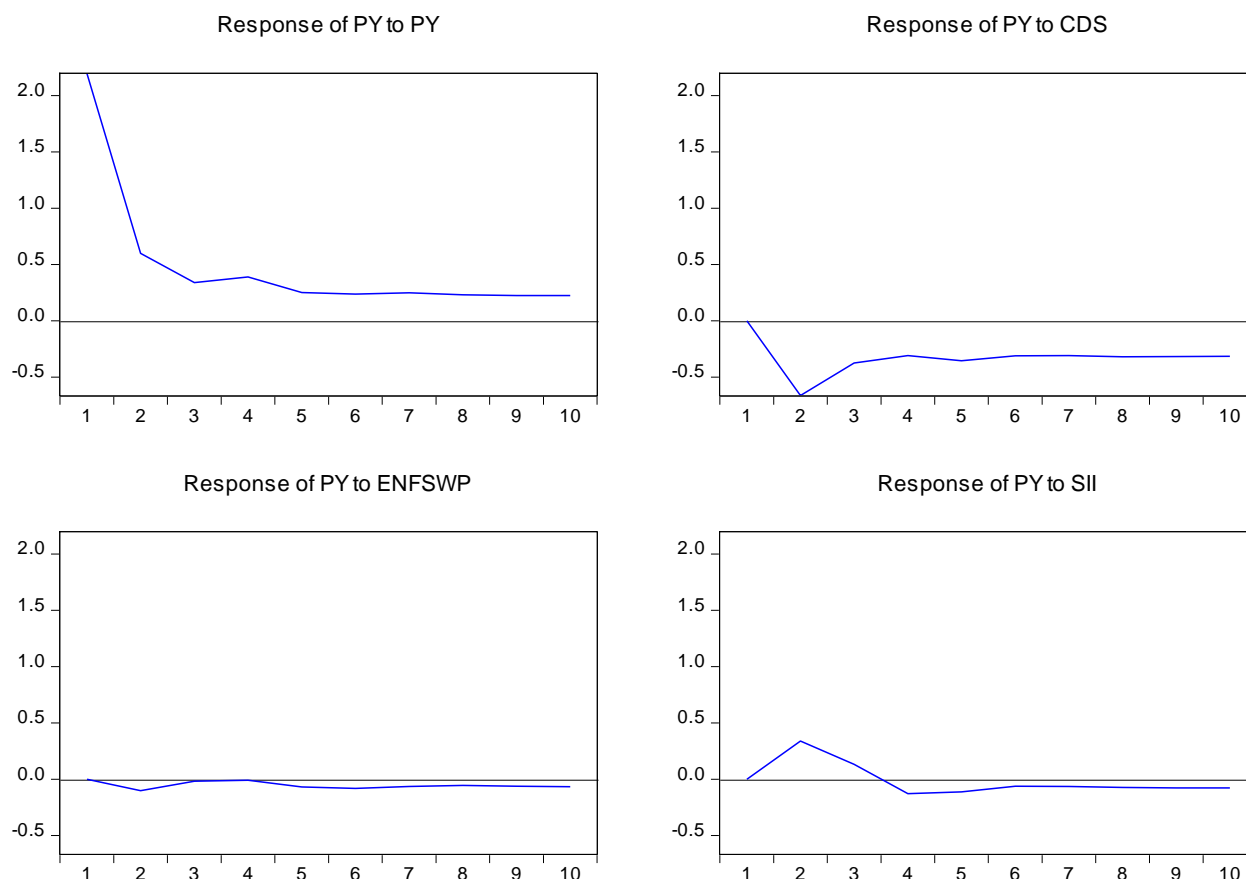
Accordingly, when a standard deviation shock is applied to the inflation / swap ratio and PSI, it does not have a significant and permanent effect on PI, whereas when a standard deviation shock is applied to the CDS, the effect on PI is negative and does not disappear in the short term, and then continues to fluctuate in negative in form. While the endogenous shocks given to the PI have a significant effect in the first three periods, this effect is permanent in the short term. When we look at the Variance Decomposition[4] graphs in Chart 3, it is seen that the variance of portfolio investments is most affected by endogenous shocks and CDS, while the effect of inflation / swap ratio and PSI is negligible.

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[4] Variance decomposition shows what percentage of a change that will occur in the variables used is caused by itself and what percentage is caused by other variables, and provides information about the degree of causality relationships between variables (Brooks, 2008: 300-301).

Chart 3: Variance Decomposition

Variance Decomposition using Cholesky (d.f. adjusted) Factors
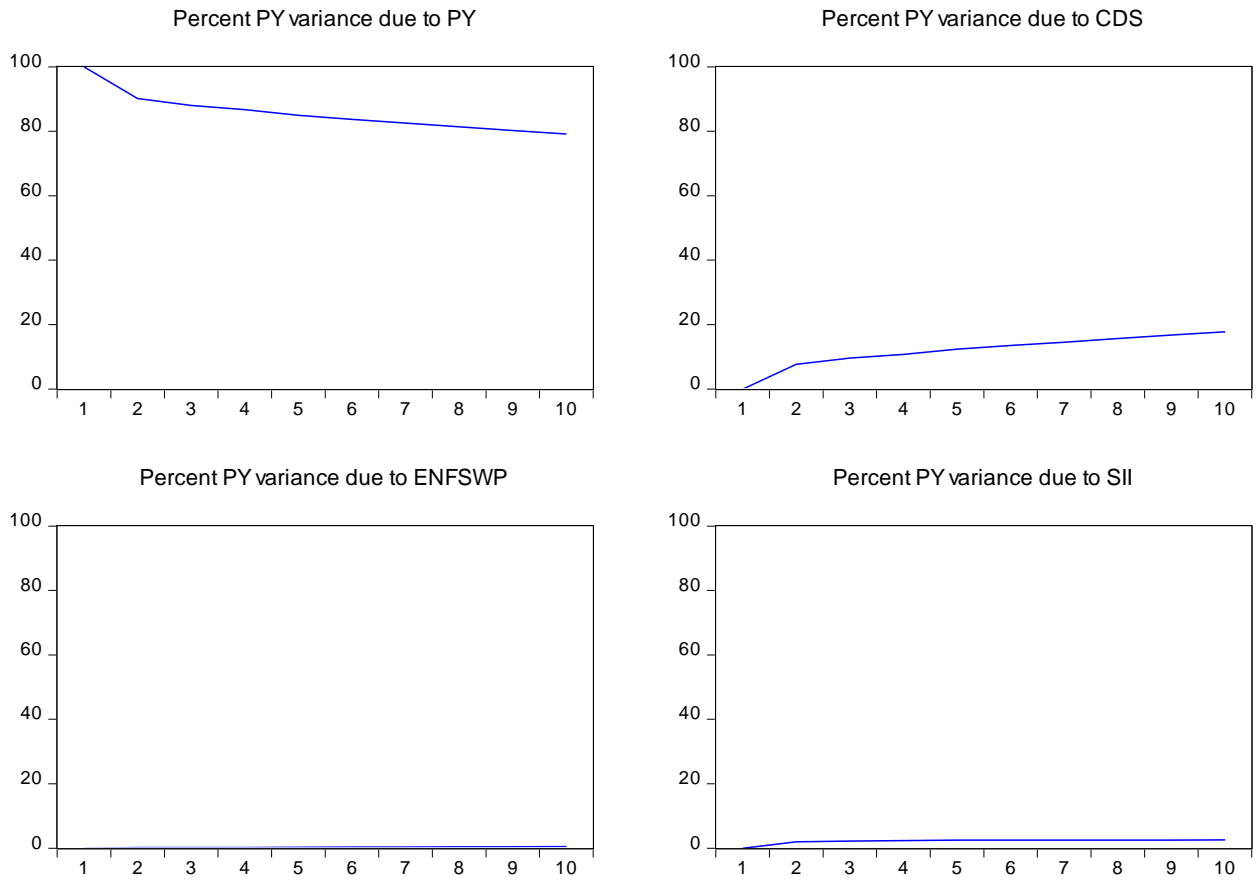
4. CONCLUSION

Since political developments can be followed on a daily basis, but portfolio investments data can be obtained on a monthly basis, the PSI, which is converted to monthly frequency and included in the models, does not affect portfolio investments in the short term, but in the long term between 2007-2020, it was seen that the relationship between PSI and net portfolio investments is statistically significant. This is understandable because portfolio investments are lagging to comprehend the political disorder within the country. In the markets, since CDS is accepted as a data representing short-term political risks in practice, it is seen that CDS has an effect on PI in the short term, while this relationship in the long term can only be observed by adding the PSI to the models (Model 3). As the CDS values increase, it creates a negative effect on PY.One unit increase in CDS is expected to decrease Net Portfolio Investments by USD 8.8 million.On the other hand, in the periods of political stability, meaning Sİİ increasing, each unit index increase is expected to create an increase of 63.7 million USD in Portfolio Investments.

When inflation and swap rates are used separately, it seems statistically insignificant in explaining portfolio investments, while the ratio of inflation to swap spreads is statistically significant even at the level of 1% and it is seen that it has a negative relationship with portfolio investments. According to the model, it has been observed that a one-unit increase in the inflation / swap ratio can create a decrease of 148.5 million USD to portfolio investments. This shows that in an environment with high inflation and low swap spreads, portfolio investments will be negatively affected.

On the other hand, PSI stands out as a data set that gives better results in the long term, with the information and evaluations provided by local experts on political developments daily. One of the points that should be underlined here is that this study is one of the preliminary studies to introduce PSI and test its behavior in econometric models. In the new researches being prepared, the effectiveness of PSI will be measured with more advanced techniques, with daily data sets and different econometric models.

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