

Does Economic Policy Uncertainty in the United States Affect Stock Market Performance in Europe?

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Abstract

This paper investigates the effect of economic policy uncertainty in the United States on stock market performance in the European Union, Croatia, Norway, Russia, Switzerland, Turkey and Ukraine. The analyses of monthly returns on the major stock market indices in these countries from 1985:2 to 2012:5 show that economic policy uncertainty in the US negatively forecasts stock market returns in the European Union, Croatia, Norway, Russia, Switzerland, Turkey and Ukraine. The coefficients are not statistically significant for Latvia, Lithuania, Malta, Poland, and Slovakia who are members of the European Union.

Keywords: Economic policy uncertainty, stock market performance, USA, Europe

JEL Classification Codes: E60, G12, G14

1. Introduction

Recent financial crisis in the United States and economic slowdown in some European countries have sent shockwaves across the world; this global transmission of financial and economic crises is just an obvious evidence of the increased linkage between the world's economies. A disruption to the economy or financial system in one country can indirectly and directly affect other countries around the world. The effect can be significantly strong when the spillovers originate from one of the world's leading economies or regions. For example, Forbes and Chinn (2004) report that the spillovers in a given region are originated from the biggest economy in that region; the authors also document that the transmitter of global spillovers. Becker, Finnerty and Friedman (1995) show that the spillovers between stock markets in the US and UK are partially transmitted by news and information related to the developments in the US. Moreover, Ehrmann and Fratzscher (2009) report a global transmission of the US monetary policy to 50 stock markets around the world. Kim (2001) also shows on foreign long-term yields and output respond to shocks in the US monetary policy. Other studies report international spillovers of bond yields among the US and other advanced economies (Awad & Goodwin, 1998; Chinn & Frankel, 2004; Ehrmann, Fratzscher, & Rigobon, 2011).

Exploration of price and return movements of financial assets has been one of the interests among macroeconomists; many have empirically examined if various macro variables can predict returns of stocks and other financial assets (Cochrane 1991b; Cooper & Priestley 2005; Lamont, 2000; Lettau & Ludvigson, 2001a; Menzly, Santos & Veronesi, 2004; Piazzesi Schneider & Tuzel, 2005) in addition to the predictability of portfolio-based models. Others have studied the predictability of uncertainty in the real economy and various economic policies on financial markets. Sum (2012a) shows that stock market excess returns are negatively explained by the increased changes in economic

policy uncertainty in the US by analyzing monthly data from 1985 to 2011. Another study by Sum (2012b) shows that the changes in economic policy uncertainty in Europe have a negative effect on all stock market returns in the European Union, Croatia, Norway, Russia, Switzerland, Turkey and Ukraine and this negative effect is statistically significant for all stock markets in these countries except Croatia and seven members of the European Union. Paster and Veronesi (2011) provide a proposition that government policy uncertainty should negatively predict stock prices. Bansal and Yaron (2004) find that the drop of asset prices is a response to shocks in economic uncertainty. Bansal, Khatchatrian and Yaron (2005) report a negative linkage between asset prices and a high level of economic uncertainty. Ozoguz (2009) shows uncertainty among investors negative explains stock prices; a similar finding is also reported by Dzielinski (2011).

Financial economists (Ammer, Vega, & Wongswan, 2008; Ehrmann & Fratzscher, 2006; Ehrmann, Fratzscher, & Rigobon, 2005; Hausmann & Wongswan, 2011; Lin, Engle, & Ito 1994; Wongswan, 2006) have studied the connection between international financial markets. For instance, King and Wadhvani (1990) argue that because rational agents observe and rationalize information from price innovations in other financial markets, there exists a correlation between financial markets. Given the size of the US economy and its well-functioned financial markets, shocks to the US economy and financial markets can transmit to other foreign markets (Bayoumi & Swiston, 2007; Ehrmann & Fratzscher, 2005; Goldberg & Leonard, 2003). Therefore, it is the problem of this paper to investigate the effect of economic policy uncertainty in the United States on stock markets in the European Union, Croatia, Norway, Russia, Switzerland, Turkey and Ukraine. This study is needed because it contributes to the further understanding how financial markets in Europe respond to the changes in the US economic policy uncertainty. The findings of this paper add important information to the cross-border financial transmission and spillovers literature. Furthermore, this study offers market participants useful implications for investment and risk management in the stock markets.

2. Method and Data

Economic policy uncertainty index in United States is obtained from Economic Policy Uncertainty Index website located at <http://www.policyuncertainty.com>; Baker, Bloom, and Davis (2012) build this index. The data span from 1985:1 -2012:5. Please refer to the detailed methodology of index located at <http://www.policyuncertainty.com/methodology.html>. Monthly return data of the stock market indices of the European Union, Croatia, Norway, Russia, Switzerland, Turkey and Ukraine from 1985:1 to 2012:5 in the countries studied in this paper are extracted from the Global Financial Data database.

Returns on each stock index are regressed on the changes of economic policy uncertainty using OLS regression. In addition, an equal-weighted portfolio including only the stock market indices of European Union countries is constructed; and the OLS regression (Equation 2) is used for analyzing the data.

$$R_t = \alpha + \beta \Delta EPU_t + \varepsilon_t \quad (1)$$

$$PR_t = \alpha + \beta \Delta EPU_t + \varepsilon_t \quad (2)$$

Where:

R_t = return on the stock market index in month t

PR_t = returns on the equal-weighted portfolio of stock market indices in the countries specified in the study in month t

ΔEPU_t = change in the index of economic policy uncertainty in the United States by taking the first difference; that is the value of economic policy uncertainty index in month t less month $t-1$

3. Results

The computation of descriptive statistics is reported in Table 1, and as shown in Table 2, all the coefficients are negative and statistically significant. However, the coefficients for Latvia, Lithuania, Malta, Poland, and Slovakia are not statistically significant at the 5% level. The regression results displayed in Table 3 reveal a statistically significant negative coefficient ($\beta = -.00107$, $t = -7.24$) for the equal-weighted portfolio including only indices of the European Union member countries. The coefficient is also negative ($\beta = -.00116$, $t = -7.48$) as shown in Table 4 for the equal-weighted portfolio all of the European countries

Table 1: Descriptive Statistics

Country	Stock Index	Mean	Standard Deviation	# of Obs
European Union				
Austria	Vienna SE ATX Total Return Index	0.008838	0.069097	328
Belgium	Belgium CBB Bel-20 Index	0.004157	0.04997	257
Bulgaria	Bulgaria SE SOFIX Index	0.012078	0.100346	139
Cyprus	Cyprus SE Main Index	0.002822	0.114497	328
Czech Republic	Prague SE PX Index	0.008037	0.089352	224
Denmark	OMX Copenhagen-20 Index	0.0068	0.054865	269
Estonia	OMX Tallinn SE Total Return Index	0.020457	0.109217	202
Finland	OMX Helsinki-25 Index	0.00619	0.074302	288
France	Paris CAC-40 Index	0.004174	0.059755	298
Germany	Germany DAX Price Index	0.00641	0.064195	328
Greece	FTSE/ATHEX-20 Index	-0.00302	0.105926	174
Hungary	Budapest Stock Exchange Index	0.014763	0.092465	256
Ireland	Dow Jones Ireland Stock Index	0.004501	0.060037	244
Italy	FTSE MIB Index	-0.00151	0.066043	173
Latvia	OMX Riga SE Total Return Index	0.012931	0.10581	193
Lithuania	OMX Vilnius VILSE Total Return Index	0.011432	0.10735	197
Luxembourg	Luxembourg SE LUXX Index	0.008046	0.059019	328
Malta	Malta SE Index	0.007095	0.055369	197
Netherlands	Amsterdam AEX Stock Index	0.005324	0.058332	328
Poland	Warsaw SE General Index	0.021698	0.12798	253
Portugal	Lisbon BVL General Return Index	0.003676	0.056456	292
Romania	OETEB Romanian Traded Index	0.002591	0.120034	89
Slovakia	Bratislava SE SAX Index	0.007366	0.110599	224
Slovenia	Slovenia Bourse Index	0.006903	0.081523	232
Spain	Madrid SE IBEX-35	0.005056	0.064426	304
Sweden	OMX Stockholm All-Share Price Index	0.009832	0.062712	328
United Kingdom	FTSE-100 Total Return Index	0.005431	0.045963	328
Other European Countries (Non-European Union Members)				
Croatia	Croatia Bourse Index	0.006242	0.04802	292
Norway	Oslo SE All-Share Index	0.031115	0.14807	173
Russia	Russia MICEX-10 Index	0.05147	0.174752	316
Switzerland	Swiss Market Index	0.009737	0.064472	328
Turkey	Turkey ISE-100 Total Return Index	0.018869	0.130919	172
Ukraine	Ukraine PFTS OTC Index	0.006242	0.04802	292
Equal-Weighted Portfolios				
EU Members Only	EU Members Only Indices	0.0084534	0.0471942	328
All Countries	All Indices	0.0115315	0.0497131	328

Table 2: Regression Results for Each Country

Country	β	Std. Err.	t	Sig.	R ²	F	# of Obs
European Union							
Austria	-.00134	.00022	-6.03	0.000	.1004	36.38	328
Belgium	-.00091	.00017	-5.31	0.000	.0994	28.15	257
Bulgaria	-.00087	.00040	-2.16	0.033	.0329	4.66	139

Table 2: Regression Results for Each Country - continued

Cyprus	-.00152	.00037	-4.01	0.000	.0470	16.09	328
Czech Republic	-.00109	.00033	-3.26	0.001	.0457	10.62	224
Denmark	-.00096	.00018	-5.13	0.000	.0896	26.28	269
Estonia	-.00119	.00041	-2.85	0.005	.0391	8.13	202
Finland	-.00108	.00025	-4.21	0.000	.0585	17.76	288
France	-.00097	.00020	-4.87	0.000	.0741	23.70	298
Germany	-.00136	.00020	-6.66	0.000	.1199	44.40	328
Greece	-.00156	.00040	-3.86	0.000	.0795	14.86	174
Hungary	-.00096	.00033	-2.88	0.004	.0316	8.30	256
Ireland	-.00085	.00021	-3.92	0.000	.0598	15.39	244
Italy	-.00130	.00024	-5.35	0.000	.1436	28.66	173
Latvia	-.00064	.00041	-1.57	0.118	.0127	2.46	193
Lithuania	-.00044	.00042	-1.06	0.289	.0058	1.13	197
Luxembourg	-.00143	.00018	-7.82	0.000	.1579	61.14	328
Malta	-.00033	.00021	-1.53	0.126	.0012	2.36	197
Netherlands	-.00127	.00018	-6.89	0.000	.1271	47.47	328
Poland	-.00078	.00004	-1.66	0.099	.0108	2.75	253
Portugal	-.00068	.00019	-3.50	0.001	.0406	12.26	292
Romania	-.00134	.00060	-2.21	0.030	.0531	4.88	89
Slovakia	-.00000	.00042	-0.01	0.990	.0000	0.00	224
Slovenia	-.00055	.00031	-1.79	0.075	.0137	3.19	232
Spain	-.00113	.00021	-5.34	0.000	.0862	28.50	304
Sweden	-.00139	.00019	-7.03	0.000	.1318	49.47	328
United Kingdom	-.00089	.00014	-6.02	0.000	.1001	36.25	328
Other European Countries (Non-European Union Members)							
Croatia	-.00068	.00034	-1.98	0.049	.0211	3.92	184
Norway	-.00135	.00020	-6.59	0.000	.1176	43.43	328
Russia	-.00200	.00057	-3.50	0.001	.0670	12.28	173
Switzerland	-.00067	.00016	-4.04	0.000	.0534	16.35	292
Turkey	-.00178	.00058	-3.02	0.003	.0283	9.15	316
Ukraine	-.00214	.00049	-4.32	0.000	.0991	18.70	172

Table 3: Regression Results for Equal-Weighted Portfolio (EU Members Only)

	Coefficient	Std. Err.	t	Sig.
Constant	.00874	.00242	3.61	0.000
ΔEPU_t	-.00107	.00014	-7.24	0.000
R-Square	0.1384			
Adj.R-Square	0.1357			
F(1, 326)	52.36			0.000

Number of Observation = 328

Table 4: Regression Results for Equal-Weighted Portfolio (All Countries)

	Coefficient	Std. Err.	t	Sig.
Constant	.01184	.00254	4.66	0.000
ΔEPU_t	-.00116	.00015	-7.48	0.000
R-Square	0.1464			
Adj.R-Square	0.1437			
F(1, 326)	55.90			0.000

Number of Observation = 328

4. Conclusion

Based on the empirical evidence reported in the international economic and financial transmission and cross-border spillovers, this paper investigates the effect of economic policy uncertainty in the United

States on stock market performance in the European Union, Croatia, Norway, Russia, Switzerland, Turkey and Ukraine. The analyses of monthly returns on the major stock market indices in these countries from 1985:2 to 2012:5 show that economic policy uncertainty in the US negatively forecasts stock market returns in the European Union, Croatia, Norway, Russia, Switzerland, Turkey and Ukraine. The coefficients are not statistically significant for Latvia, Lithuania, Malta, Poland, and Slovakia who are members of the European Union.

The findings suggest that stock market performance in the European Union, Croatia, Norway, Russia, Switzerland, Turkey and Ukraine can be predicted by the changes in the US economic policy uncertainty. The implication of this study is that market participants in most European countries do pay attention to the economic policy conditions in the US. Other implications can be drawn from this study. For instance, during the periods of high economic policy uncertainty in the US, investors can sell or take a short position in the stock market indices of the European markets. In contrast, during times with a lower degree of economic policy uncertainty in the US, investors should expect higher returns from the European markets. When it comes to risk management, the results of this study imply that it can be a hard task to diversify risk by investing in European markets when investors concurrently have their investment in the U. S. stock markets.

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