Political Uncertainty in Developed and Emerging Markets

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Abstract

Following Pástor and Veronesi (2012, 2013), we test for a relationship between political uncertainty and financial market risk. We extended Pástor and Veronesi's work by considering a panel of international markets, including emerging markets, which may face greater political uncertainty. Our results are less clear-cut than the original (USA) results, finding that while volatility is impacted by political uncertainty, the same can not be said for value-weighted average pairwise correlations. Finally, we disaggregated our panel and examine the countries individually. The results here are heterogeneous while some countries support the policy to market risk transmission hypothesis, others may do not.

Keywords: Political uncertainty, volatility, correlation, economic conditions.

1 Introduction

Political risk is generally considered to be any government action that will negatively affect domestic as well as international investments. Equity market responses to political uncertainty are well documented in the financial literature. Stock prices react to news about policies around the world. For example, Russian's invasion of Crimea on 23 March 2014 lead the Russian stock market index (RTS) to drop by almost 13%, and, in the exchange rate market the Russian ruble dropped to an all time low against both the dollar and the euro (by 2.5% and 1.5% respectively). European stocks lost about 3% of their value after the Russian parliament approved the request to deploy forces to the Ukraine. Another example of political news and stock market response is that following the announcement by European politicians to cut Greece's debt in half (on 27 October 2011), US stocks increased by 3%, and French and German by 5%.

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Traditionally, economists have focused on the economic impact of policy uncertainty (see Rodrik (1996) and Hassett & Metcalf (1999)), examining the relationship between tax policy uncertainty and investments. On the other hand Hermes & Lensink (2001) studied the influence of policy uncertainty on capital flows. More recently, a theoretical link has been proposed by researchers between the policy uncertainty and finical markets (especially on equity markets). Gomes, Kotlikoff & Viceira (2012) model the effects of policy uncertainty on personal consumption, saving, labor supply, and portfolio choices. On the other hand Pástor & Veronesi (2012) and Pástor & Veronesi (2013) examine how the uncertainty of government policy affects stock prices, returns and volatility.

The model of Pástor & Veronesi (2013) specifies that stock prices are driven by three types of shocks: capital shocks, impact shocks, and political shocks. The first two shocks are referred to as economic shocks, and they are driven by shocks to aggregate capital. The third type of shock, political shocks, are orthogonal to economic shocks, and thus command their own risk premium. Political shocks are the result of learning about political costs of prospective policies. Pástor & Veronesi (2013) refer this uncertainty as political uncertainty. The shocks reflect the flow of news about the various government policies, which in turn leads investors to modify their beliefs about the likelihood of the policies. Through simulations, the authors determine that the political risk premium is larger in a weaker economy, and directly contributes to the jump risk premium at the time of the policy change announcement. In this paper we empirical examine the theoretical model of Pástor & Veronesi (2013). In their empirical analysis, the authors only examined the US market to test their theoretical predictions. Our study differs from theirs as we use a collection of countries both from developing and emerging markets.

A change in a government normally leads to a change in future policies. Previous studies that link the financial markets and political uncertainty found that firms investment, cash flows, and return volatility can be affected by a change of political power (e.g., Kobrin (1979); Diamonte, Liew & Stevens (1996) ; Erb, Harvey & Viskanta (1996)). More recently, Julio & Yook (2012) find that during the elections year firms reduce their investment expenditure by an average of 4.8% as compared to non-election years. Durnev (2011) demonstrates that the

volatility of equity returns is affected by political uncertainty and Belo, Gala & Li (2013) also document predictable variation in stock returns over different political cycles.

Berkman, Jacobsen & Lee (2011) find that from 1918 to 2006 hundreds of political crises have each had large impacts on both the mean and volatility of the aggregate world equity return. Chen, Lu & Yang (2014), by using country-level military expenditure data, find that political instability is a source of systematic risk. Other related studies on international asset pricing and political risk include Bekaert, Harvey, Lundblad & Siegel (2014), in which the authors back-out the political risk components from sovereign credit spreads, and use these to evaluate international investment projects. Our paper is related to the streams of literature which examines the effect of political uncertainty on asset prices (Pástor & Veronesi (2012); Pástor & Veronesi (2013); Brogaard, Dai, Ngo & Zhang (2014);Kelly, Pastor & Veronesi (2014)). Our paper differs from these authors as we are including economic conditions along with the political uncertainty. Further, along with the volatility of the stock returns we also examine the correlation among stock returns during political uncertainty.

Several articles have examined the impact of the political environment on stock market volatility (see, e.g., Füss & Bechtel (2008); Leblang & Mukherjee (2005); Białkowski, Gottschalk & Wisniewski (2008); Boutchkova, Doshi, Durnev & Molchanov (2012)), our article differs in many ways. Whereas most existing studies rely on a cross section of countries and examine the economy-wide responses to specific events, we focus on both emerging and developed markets, as it is intuitive to expect some countries to be more affected by political risk than others. We develop numerous country specific stock market and economic measures to examine the relationship between political uncertainty at all points in time.

The rest of the paper is organized as follows. Section 2 discusses methodology. Data and the construction of the variables used in this paper are presented in Section 3. Empirical analysis is in section 4, and section 5 is the conclusion.

2 Data

This section provides details on the construction of the stock market, political risk and economic condition variables used in our study.

2.1 Stock Market

The data used in this paper consist of both emerging and developed markets. The emerging market data base (EMBD) classify emerging markets into two categories, major markets which consists of thirty five markets and frontier markets consist of twenty markets. However we only use the major emerging markets and the name of the countries are listed in Table 9. For comparison purpose we also include the sample of twenty two developed markets. We obtained stock market data from Datastream for the period Jan 1984 to Feb 2014. The starting period varies from country to country, depending on the availability of all the data for each country, and the starting dates for each country are presented in Table 9. Following the literature, we sourced data from the stock markets on which the majority of the stocks trade in each country. For the majority of the countries in the sample we used a single stock exchange, however for the following countries we used two stock exchanges: China (Shenzen and Shanghai stock exchanges), Germany (Frankfurt stock exchange and Xetra), Japan (Osaka and Tokyo stock exchanges), and the USA (NYSE, and Nasdaq). To construct a reliable sample, we used different screening methods. As a first cleaning procedure, we used only common stocks by excluding stocks with special features, such Depository Receipts (DRs), Real Estate Investment Trusts (REITs), and preferred stocks. The initial sample consists of more than 60,000 firms. we also include dead firms in our sample to avoid survivorship bias.

For the second cleaning procedure, we follow Griffin, Kelly & Nardari (2010) to eliminate non-equity firms from the sample.[1]. Ince & Porter (2006) highlighted that the data from Datastream must be carefully handled. According to their suggestions, a daily return is considered

[1]Griffin et al. (2010) provide a list of country-specific identifiers for excluding non-common equity from Datastream.For detail about their screening please see Appendix B of Griffin et al. (2010) which include the list of non-equity firms on country basis.

to be missing if any day return is above 100% and is reversed the next day. We consider that daily returns of r_t or r_{t-1} are equal to missing if $r_t, r_{t-1} - 1 \leq 0.5$ and at least one of them is 200% or more. As with the screening of daily returns, any monthly returns calculated from the total return index of less than -99%, as well as those that exceed 300% (and are reversed within a month) are set to missing.

We construct three measures from the stock market data, and use daily and monthly total return indices (adjusted for stock splits and dividend payments) along with market capitalization. The first measure is the realized volatility calculated from daily returns of the value weighted index within a given month. The value weighted index for each country is computed from the daily total return index returns and market capitalization for each firm in each country. The second measure is the value weighted averages of pairwise correlation for all the stocks in each country. As for the equity risk premium, we used the realized future excess returns denoted by R_{t+1}. This is constructed by calculating the cumulative return on the value weighted market portfolio over month $t + 1$ and subtracting the returns on the one month T-bill. We consider the investor as a global investor, and use French's U.S. risk-free rate.

Descriptive statistics of monthly excess returns for both emerging and developed markets are presented in Table 9. Average excess returns for all countries are positive. For the emerging markets, the highest average return is of 3.31% with a standard deviation of 10.59% for Brazil. However, the lowest average excess monthly return is for Oman of 0.90% with a standard deviation of 4.76%. The highest return for the developed markets is 2.96% (with a standard deviation of 8.70%) for Canada, whereas the lowest mean return is for Denmark, with a mean of 0.40% and standard deviation of 4.34%.

2.2 Political Risk

Political risk is a qualitative measure, and for our empirical analysis needs to be quantified. A number of institutes, such as Bank of America, Business Environment Risk Intelligence, Economist Intelligence unit, Euromoney, Institutional Investor, Standard and Poors Rating

Group, Political Risk Service Group, Coplin O'Leary Ratings system, and Moodys Investment Service offer country-by-country analysis. However, few of these agencies or institutes provide quantitative analysis, and most of them are on a semi-annual or annual basis. This study employs political risk indices developed by the International Country Risk Guide (ICRG) compiled by the PRGS Group[2]. According to ICRG researchers, the IMF, the World Bank, and other international financial institutions, the ICRG has become one of the worlds most frequently used resources for evaluating and forecasting international risk. For example, Howell & Chaddick (1994) find that ICRG indices are more reliable and are better able to predict risk than other major political risk information providers.

Hoti & McAleer (2005) examined the qualitative comparison of country risk rating systems used by seven leading agencies, and found that ICRG is best able to forecast political, financial and economic risk. Click & Weiner (2010) propose that the ICRG rating has power to differentiate political risk effects. Example of the use of ICRG data in the financial literature can be found in(see Bekaert et al. (2014); Boutchkova et al. (2012); Erb et al. (1996); Diamonte et al. (1996); Erb, Harvey & Viskanta (1995)).

Following the Pástor & Veronesi (2013), we also use the the policy uncertainty (PU) index from Economic Policy Uncertainty. This index is calculated from the average of three components. The first component which accounts for largest weight is the news related to policy uncertainty. This is constructed monthly on the basis of Google news newspaper articles related to policy uncertainty within that month. The second component is the tax code of federal tax code provisions set to expire in coming years, gathered from the congressional Joint Committee on Taxation. The third component, the extent of disagreement among forecasters of future inflation and government spending. PU index is only available for eleven countries and they used only news based uncertainty component for other than USA.

The political risk index consists of twelve variables: government stability, socioeconomic conditions, investment profile, internal conflict, external conflict, corruption, military in politics,

[2]The PRS group, Inc. in East Syracuse, New York has published its International Country Risk Guide which provides financial, political and economic risk ratings for 140 countries since 1984

religious tension, law and order, ethnic tension, democratic accountability, and bureaucracy quality. The index range is from 0 to 100, and we subtract the index of each country from 100, so that higher values represent higher political risk. Table 9 also presents the descriptive statistic from the political risk index for both emerging and developed markets. It can be concluded that the political risk is much higher in emerging markets as compared to developed markets. The highest political risk is for Pakistan and the lowest is for Portugal. As for the developed markets, the average highest political risk is for Hong Kong and the lowest is for Luxembourg.

2.3 Economic Variables

We use four measures of economic conditions for the countries in our sample. Two of the variables are macroeconomic variables: a recession dummy, which is equal to one during the recession month and zero otherwise; and the monthly growth in the industrial production (IPG). We constructed the recession dummies using the methodology of McConnell & Perez-Quiros (2000). The data for real GDP is used to construct the recession dummies, and is obtained from Datastream. The other two variables are financial market variables. The stock market measure of economic conditions is the (cyclically adjusted) price-to-earnings ratio for the aggregate stock market (P/E)[3]. The second measure of financial market performance is the monthly return on Government bonds also from the Datastream.

3 Panel Results

We first examine the relationship between political uncertainty and economic conditions. Following Pástor & Veronesi (2013), our hypothesis is that when economic conditions are worse, policies are more likely to change, and hence we should see a negative relationship between economic conditions and political risk. Table 1 contains the result of this regression. As can be seen, the evidence is overwhelmingly in favour of this link. Only interest rate spreads for

[3]We follow the procedure describe by the Robert Shiller.

Table 1: Political Uncertainty and Economic Conditions

This table addresses the question "Is there more political uncertainty when economic conditions are worse?" The table reports the estimated coefficient of **b** from the following regression: Model 1: $\boldsymbol{PU_{it} = a + bE_{it} + cPU_{it-1} + \epsilon_{it}}$ and Model 2: $\boldsymbol{PR_{it} = a + bE_{it} + cPR_{it-1}\epsilon_{it}}$ includes time and country effects. Political uncertainty $\boldsymbol{PU}$ is proxied by the policy uncertainty index of Baker, Bloom, and Davis (2012), which we scale down by 100. Political risk $\boldsymbol{PR}$ is the political risk index from the international country risk guide. We use four measure of economic conditions $\boldsymbol{E_t}$ for each country: bond is the spread between USA government bonds and country i government bonds, industrial production growth (IPG), REC is the recession dummy which is calculated from the real gross domestic product by using the McConnell-Perez-Quiros(2000) model, Shiller's price to earning ratio(PE) is calculated from all the firms in the sample for each country. The t-statistics reported in parenthesis are computed based on two way clustering (over time and country). For the emerging markets t-statistics are computed on one way clustering (over time only) due to few countries.

	PU				PR			
	Bond	IPG	REC	PE	Bond	IPG	REC	PE
Pooled	0.74077	-0.75149	0.036298	0.0018989	0.1750	-0.032097	-0.017168	-0.007784
	(2.65)	**(-2.09)**	(1.65)	(1.71)	(0.4171)	(-0.38)	(-0.73)	**(-4.06)**
N	2590	2576	2590	2590	17043	17028	17044	17043
R^2	0.9273	0.8921	0.9271	0.8921	0.9982	0.9982	0.9982	0.9982
$AdjR^2$	0.9155	0.9154	0.9153	0.9981	0.9981	0.9981	0.9981	0.9981
Developed	1.1288	1.5668	0.084831	0.0035267	0.82614	-0.12233	-0.051392	-0.006799
	(2.99)	**(2.32)**	**(3.29)**	**(2.75)**	**(1.85)**	(-0.73)	**(-1.86)**	**(-2.85)**
N	1989	1989	1989	1989	7792	7792	7792	7792
R^2	0.9418	0.9417	0.9418	0.9417	0.99721	0.99721	0.99721	0.99721
$AdjR^2$	0.92905	0.9288	0.9291	0.9288	0.99707	0.99707	0.99707	0.99707
Emerging	0.71254	-1.6826	-0.014182	0.0019045	0.15246	0.059431	-0.004453	-0.007434
	(5.61)	**(-24.39)**	(-0.13)	(0.04)	(-0.27)	(0.77)	(-0.13)	**(-2.93)**
N	599	584	599	599	9249	9234	9249	9249
R^2	0.9229	0.9242	0.9225	0.9226	0.9986	0.9986	0.9986	0.9986
$AdjR^2$	0.8709	0.8708	0.8702	0.8704	0.9986	0.9985	0.9985	0.9985

developed markets and IPG for developed and emerging markets yield positive coefficients. All other regressions yield the predicted negative relationship. In particular, the P/E ratio shows a consistent and highly significant negative relationship, robust to consideration of all countries, or separation between developed and emerging markets.

Table 2 examines the second hypothesis from Pástor & Veronesi (2013), establishing a link between political risk and financial risk. Pástor & Veronesi (2013) hypothesise that political uncertainty translates into financial uncertainty because investors are uncertain first of all whether the existing economic policies may change, but also because, if the policies *do* change, they will be trading under an unfamiliar economic environment (they have not had a chance to learn about how new policies work). Since this risk is common across all securities, not only will volatility increase, but also (because the common political shocks grow in size) correlation will increase.

Table 2 shows that the international evidence on these hypotheses is mixed. There is

Table 2: Political Uncertainty, Volatility and Correlation

This table addresses the question "Are stock more volatile and more correlated when there is more political uncertainty?" The table reports the estimated coefficient of **b** from the following regression: Model 1:$\boldsymbol{Vc_{it} = a + bPU_{it} + cVc_{it-1} + \epsilon_{it}}$ and Model 2: $\boldsymbol{Vc_{it} = a + bPR_{it} + cVc_{it-1} + \epsilon_{it}}$ includes time and country effects. Political uncertainty $\boldsymbol{PU}$ is proxied by the policy uncertainty index of Baker, Bloom, and Davis (2012), which we scale down by 100. Political risk $\boldsymbol{PR}$ is the political risk index from the international country risk guide. $\boldsymbol{Vc_t}$ stands for either volatility or correlation. The volatility is calculated from the daily returns of the stock included in each country, whereas the measure of stock correlation is the value weighted average of pairwise correlation for all the stocks in the sample of each country. Standard errors are calculated using two-way clustering (over time and country). For the emerging markets t-statistics are computed on one way clustering (over time only) due to few countries.

	PU		PR	
	Volatility	Correlation	Volatility	Correlation
Pooled	0.0011925	0.026514	0.00012984	-4.50E-05
	(3.95)	**(3.27)**	**(5.83)**	(-0.13)
N	2590	2590	17043	17043
R^2	0.8905	0.8605	0.0564	0.7978
$AdjR^2$	0.8728	0.8379	0.032559	0.7927
Developed	0.00044524	0.012599	3.32E-05	0.00041223
	(2.47)	**(1.81)**	**(2.48)**	(0.71)
N	1989	1989	7792	7792
R^2	0.95758	0.9094	0.9347	0.8458
$AdjR^2$	0.94827	0.8894	0.9313	0.8378
Emerging	0.0018419	0.042831	0.0002091	0.00026132
	(2.13)	(0.23)	**(2.19)**	(0.53)
N	599	599	9249	9249
R^2	0.8795	0.8578	0.0573	0.7811
$AdjR^2$	0.7982	0.7617	0.0150	0.7712

certainly clear evidence that volatility does increase as political risk rises. However, correlation results vary by dataset. For the policy uncertainty dataset, we obtain significant positive relationships across the whole data, as well as developed and emerging subsets. For the ICRG measures, none of the coefficients are statistically signficant. This suggests that more extreme political uncertainty (as measured by the ICRG) may, in fact, have heterogeneous effects accross different securities (increasing volatility, but not correlation). A change in policy may be good news for some industries/companies, but bad news for others.

We now consider the effect of economic shocks, via political uncertainty, on risk. Here we distinguish between political uncertainty and economic downturns (on their own) and their joint effect. Since policy changes are most likely to occur when there has been an economic downturn, these are likely to be the cases where political uncertainty become more important for

increasing risk (volatility and correlation). Further, under these circumstances (high political uncertainty *and* low economic outcomes) we would expect to see risk-premia grow.

Table 3 shows the results for volatility increases. Here we see that the coefficient interaction term has a negative coefficient in 10 of the 12 tests using the ICRG dataset, while the policy uncertainty data generates negative coefficients for all measures of economic performance except P/E ratios. In contrast, the ICRG dataset finds the coefficient on the P/E ratio (which showed the strongest link to political uncertainty in Table 1) is significantly negative for pooled and separated data. We conclude that political risk becomes more important during economic downturns. Further, our result from before is robust to inclusion of the interaction term: political risk is important in general for determining volatility (the one exception to this result is when the political uncertainty measure is combined with the P/E ratio as a measure of economic performance). We note that economic conditions are not themselves (directly) a link to volatility ($d < 0$). Hence the importance of economic conditions on determining volatility is through making political risk more important.

Table 4 contains the results for testing for an increase in correlation in response to a joint movement in political risk and economic outcomes. Given our results from Table 2, it is not surprising that these results are much less clear-cut. We find that there is still no clear link between political risk and correlation (c) when using the ICRG data, although the political uncertainty data support this. Further, when focusing on the joint effect (b), in both cases, seven of the coefficients are positive (indicating that downturns *decrease* correlation), and two are statistically significant at the 5% level. We conclude that even when conditioning on economic downturns, political risk does not increase correlation in security returns. This reinforces our earlier comment that politicy changes may not be bourne equally by all firms/industries.

Table 5 to 8 presents the results for testing for an increase in risk premium due to a joint movement in political risk and economic outcomes. We consider four different time horizon for the risk premium i.e, one, three, six, and twelve month for all, developed and emerging markets. Using the one month excess return, the coefficient of interaction term has a negative coefficient in 2 out of 4 tests using and positive coefficient for recession variable for policy uncertainty

Table 3: Political Uncertainty, Stock Market Volatility and Economic Conditions
This table addresses the question "Are stock volatilities more positively related with political uncertainty when economic conditions are worse?" The table reports the estimated coefficient of **b**, **c**, and **d** from the following regression: Model 1: $\boldsymbol{Vol_{it} = a + bPU_{it}E_{it} + cPU_{it} + dE_{it} + eVol_{it-1} + \epsilon_{it}}$ and Model 2: $\boldsymbol{Vol_{it} = a + bPR_{it}E_{it} + cPR_{it} + dE_{it} + eVol_{it-1} + \epsilon_{it}}$ includes time and country effects. The volatility ($\boldsymbol{Vol_{it}}$) is calculated from the daily returns with a month of all the stock included in each country. Political uncertainty $\boldsymbol{PU}$ is proxied by the policy uncertainty index of Baker, Bloom, and Davis (2012), which we scale down by 100. Political risk $\boldsymbol{PR}$ is the political risk index from the international country risk guide. We use four measures of economic conditions $\boldsymbol{E_{it}}$ for each country: bond is the spread between USA government bonds and country i government bonds, industrial production growth (IPG), REC is the recession dummy which is calculated from the real gross domestic product by using the McConnell-Perez-Quiros(2000) model, Shiller's price to earning ratio(PE) is calculated from all the firms in the sample for each country. The t-statistics reported in parenthesis are computed using two way clustered standard errors (over time and country). For the emerging markets t-statistics are computed on one way clustering (over time only) due to few countries.

	PU				PR			
	Bond	IPG	REC	PE	Bond	IPG	REC	PE
Pooled								
b	0.033142	-0.0021614	-0.0011577	-5.63E-06	0.0018505	1.90E-05	-4.29E-05	-3.72E-06
	(2.98)	(-0.16)	**(-1.82)**	(-0.19)	(-1.45)	(0.05)	(-0.89)	**(-2.03)**
c	0.0011299	0.0012008	0.0010344	0.0013054	0.00012871	0.00012963	0.00012305	0.00013884
	(3.83)	**(3.92)**	**(3.37)**	**(3.05)**	**(5.69)**	**(5.81)**	**(5.35)**	**(5.67)**
d	-0.038265	0.0013406	0.0015435	-6.58E-05	0.071192	-0.009752	0.0016419	-2.71E-06
	(-2.29)	(0.07604)	**(2.09)**	**(-1.83)**	(1.42)	(-0.62)	(0.65)	(-0.04)
N	2590	2575	2590	2590	17043	17028	17043	17043
R^2	0.8929	0.89045	0.8907	0.8912	0.0564	0.0564	0.0563	0.0564
$AdjR^2$	0.8754	0.87247	0.8729	0.8734	0.0325	0.0324	0.0324	0.0325
Developed								
b	0.017219	-0.0085952	-0.0011268	6.30E-06	-0.0007234	1.26E-05	-2.22E-05	-3.92E-06
	(3.46))	(-0.66)	**(-2.69)**	(0.38)	**(-2.39)**	(0.071)	(-1.19)	**(-2.56)**
c	0.00038487	0.00047225	0.00038118	0.0004023	3.34E-05	3.32E-05	2.75E-05	8.50E-05
	(2.23)	**(2.65)**	**(2.07)**	(1.68)	**(2.49)**	**(2.48)**	**(1.89)**	**(3.53)**
d	-0.016026	-0.01869	0.00073741	-9.76E-06	0.017108	-0.001553	0.00028864	9.53E-05
	(-2.33)	(-0.94)	(1.35)	(-0.45)	**(3.18)**	(-0.60)	(0.88)	**(3.17)**
N	1989	1989	1989	1989	7792	7792	7792	7792
R^2	0.9579	0.9580	0.9579	0.9576	0.9348	0.9346	0.9347	0.9349
$AdjR^2$	0.9486	0.9487	0.9486	0.9482	0.9314	0.9312	0.9313	0.9315
Emerging								
b	0.048721	-0.010668	-0.0021499	0.00025823	-0.0095904	0.00020437	-9.55E-05	4.30E-06
	(6.01)	(-0.46)	(-0.69)	**(6.53)**	(-1.11)	(0.26)	(-0.88)	(0.68)
c	0.0017944	0.0019972	0.0013548	-0.0010759	0.00019772	0.00020839	0.0001906	0.00012968
	(2.29)	**(1.96)**	(0.11)	(-0.42)	**(2.24)**	**(2.27)**	**(2.36)**	**(2.81)**
d	-0.058554	0.024473	0.0046312	-0.0002952	0.36401	-0.015806	0.0037902	-0.000355
	(-5.95)	(0.97)	(0.86)	**(-14.07)**	(1.09)	(-0.51)	(0.73)	(-0.92)
N	599	584	599	599	9249	9234	9249	9249
R^2	0.8849	0.8818	0.8814	0.8842	0.0579	0.0573	0.0573	0.0574
$AdjR^2$	0.8061	0.7973	0.8003	0.8049	0.0155	0.0148	0.0148	0.0149

data. We find no clear link between political uncertainty and risk premium (b) when using the policy uncertainty ICRG data for developed markets. However, for the emerging markets the coefficient of interaction term is significantly negative (for bond and ipg) when using policy uncertainty data. For the emerging markets only Shiller PE with significantly negative sign. We find no clear link between political uncertainty, economic conditions and risk premium using three, six, and twelve month excess returns for the full sample.

4 Individual country results

To better understand the mixed findings of our test for the joint effect of recessions and political uncertainty on volatility and correlation, we next examine individual country behaviour for these tests. To maintain a wide pool of countries, we focus our attention on the ICRG measure of political uncertainty.

Figures 1 to 4 plot results for the interaction term between political uncertainty and economic outcomes for volatility (x-axis) and correlation (y-axis). Recall that our hypotheses are that these coefficients should both be negative (so that recessions heighten sensitivity to political uncertainty).

Figure 1 uses the bond measure of economic outcomes. Here the results seem weak, across the board. No countries have significantly negative coefficients for both regressions. Canada, however, has both coefficients significantly *positive*. Indeed, of the G7 countries (Canada, USA, Britain, France, Germany, Italy, and Japan), four are found in the positive orthant of the graph (Canada, France, USA, and Japan), with only the UK being found in the negative orthant.

The Industrial Production Growth results (Figure 2) are more supportive of the hypothesis. Here, USA, UK, Italy, and France are found in the negative orthant, with Japan having both coefficients significantly negative. In this regard, Japan is joined by Peru, Argentina, and Switzerland. In contrast, Australia, Korea, Hong Kong, Saudia Arabia and Germany can be found with large coefficients in the positive orthant, while Canada has a negative relationship for volatility but a positive relationship for correlation.

Table 4: Political Uncertainty, Stock Market Correlation and Economic Conditions
This table addresses the question "Are stock correlation more positively related with political uncertainty when economic conditions are worse?" The table reports the estimated coefficient of **b** from the following regression: Model 1: $\boldsymbol{Pwc_{it} = a + bPU_{it}E_{it} + cPU_{it} + dE_{it} + ePwc_{it-1} + \epsilon_{it}}$ and Model 2: $\boldsymbol{Pwc_{it} = a + bPR_{it}E_{it} + cPR_{it} + dE_{it} + ePwc_{it-1} + \epsilon_{it}}$ includes time and country effects. The Correlation ($\boldsymbol{Pwc}$) is the value weighted average of pairwise correlation for all the stocks in the sample of each country. Political uncertainty $\boldsymbol{PU}$ is proxied by the policy uncertainty index of Baker, Bloom, and Davis (2012), which we scale down by 100. Political risk $\boldsymbol{PR}$ is the political risk index from the international country risk guide. We use four measure of economic conditions $\boldsymbol{E_t}$ for each country: bond is the spread between USA government bonds and country i government bonds, industrial production growth (IPG), REC is the recession dummy which is calculated from the real gross domestic product by using the McConnell-Perez-Quiros(2000) model, Shiller's price to earning ratio(PE) is calculated from all the firms in the sample for each country. The t-statistics reported in parentheses are computed based on two way clustering standard errors (over time and country). For the emerging markets t-statistics are computed on one way clustering (over time only) due to few countries.

	PU				PR			
	Bond	IPG	REC	PE	Bond	IPG	REC	PE
Pooled								
b	0.35889	0.34806	-0.019814	0.00080551	0.007961	-0.000542	-0.000109	3.63E-05
	(2.52)	(1.31)	(-1.32)	(1.22)	**(1.75)**	(-0.26)	(-0.33)	(1.63)
c	0.02609	0.027094	0.024163	0.020747	-2.90E-05	-4.31E-05	-8.73E-05	-0.000319
	(3.20)	**(3.35)**	**(2.86)**	**(1.94)**	(-0.08)	(-0.12)	(-0.25)	(-0.78)
d	-0.49175	-0.5478	0.018726	-0.0020709	-0.2193	0.019361	-0.005961	-0.001045
	(-2.51)	**(-1.74)**	(0.97)	**(-2.63)**	(-1.58)	(0.32)	(-0.62)	(-1.67)
N	2590	2574	259	2590	17043	17028	17043	17043
R^2	0.8611	0.8607	0.8606	0.8609	0.7978	0.7977	0.7978	0.7978
$AdjR^2$	0.8384	0.8378	0.8379	0.8383	0.7927	0.7926	0.7927	0.7927
Developed								
b	0.85244	-0.15674	-0.023527	0.00082431	0.00656	0.010008	-0.001344	1.47E-05
	(4.82)	(-0.39)	(-1.48)	(1.31)	(0.49)	(1.27)	**(-1.64)**	(0.27)
c	0.010127	0.01274	0.011608	0.0070256	0.00041165	0.00038496	2.59E-05	0.00026983
	(1.47)	**(1.82)**	(1.63)	(0.95)	(0.71)	(0.66)	(0.04)	(0.29)
d	-1.0205	-0.040618	0.010094	-0.0013282	-0.10936	-0.16338	0.01272	-6.54E-06
	(-4.06)	(-0.08)	(0.45)	(-1.62)	(-0.45)	(-1.39)	(0.83)	(-0.01)
N	1989	1989	1989	1989	7793	7792	7792	7792
R^2	0.9104	0.9094	0.9096	0.9095	0.8458	0.8459	0.8459	0.8458
$AdjR^2$	0.8906	0.8894	0.8897	0.8895	0.8378	0.8378	0.8379	0.8378
Emerging								
b	0.07127	0.4178	-0.049093	0.0045796	0.010458	-0.003718	-0.000375	-6.93E-07
	(0.51)	**(4.63)**	(-0.45)	(0.76)	(1.41)	(-1.21)	(-0.68)	(-0.02)
c	0.044455	0.046179	0.031996	-0.0085497	0.00029221	0.00028221	0.00018262	0.00034697
	(0.18)	(1.52)	(1.07)	(-0.15)	(0.59)	(0.57)	(0.36)	(0.57)
d	-0.29071	-0.41719	0.079021	-0.0059346	-0.31186	0.14519	0.0053663	0.00045269
	(-1.45)	(-1.62)	(1.06)	(-1.12)	(-1.14)	(1.49)	(0.27)	(0.39)
N	599	584	599	599	9249	9234	9249	9249
R^2	0.8582	0.8567	0.8589	0.8622	0.7811	0.7810	0.7811	0.7811
$AdjR^2$	0.7612	0.7542	0.7623	0.7679	0.7713	0.7711	0.7712	0.7712

Table 5: Political uncertainty and equity risk premium

The table address the question "Does political uncertainty command the risk premium that is higher in weaker economic conditions?" correlation more positively related with political uncertainty when economic conditions are worse?" Table reports the estimated coefficient of **b** from the following regression: Model 1: $\boldsymbol{ER_{it} = a + bPR_{it}E_{it} + cPR_{it} + dE_{it} + eER_{it-1} + \epsilon_t}$ and Model 2: $\boldsymbol{ER_{it} = a + bPR_{it}E_{it} + cPR_{it} + dE_{it} + eER_{it-1} + \epsilon_t}$ includes time and country effects. ER_t is the excess returns are calculated on the returns of the value weighted market portfolio and subtracting the returns from one month T-bill. Political uncertainty $\boldsymbol{PU}$ is proxied by the policy uncertainty index of Baker, Bloom, and Davis (2012), which we scale down by 100. Political risk $\boldsymbol{PR}$ is the political risk index from the international country risk guide. We use four measure of economic conditions E_t for each country: bond is the spread between USA government bonds and country i government bonds, industrial production growth (IPG), REC is the recession dummy which is calculated from the real gross domestic product by using the McConnell-Perez-Quiros(2000) model, Shiller's price to earning ratio(PE) is calculated from all the firms in the sample for each country. The t-statistics reported in parenthesis are computed based of two way clustering standard errors (over time and country). For the emerging markets t-statistics are computed on one way clustering (over time only) due to few countries.

	PU				PR			
	Bond	IPG	REC	PE	Bond	IPG	REC	PE
Poolled								
b	-0.24714	-0.26704	0.013141	-0.0001219	0.0093089	0.0020843	-4.88E-05	-1.46E-05
	(-2.19)	**(-1.98)**	**(2.26)**	(-0.45)	**(4.59)**	**(2.08)**	(-0.37)	**(-1.86)**
c	0.0012431	-0.0020368	0.00025002	-0.0009185	0.00035863	0.00037172	0.00037658	0.00066947
	(0.40)	(-0.64)	(0.08)	(-0.22)	**(2.29)**	**(2.37)**	**(2.35)**	**(3.93)**
d	-0.28961	0.3148	-0.01562	0.00075765	-0.55925	-0.054108	0.0041752	0.0014512
	(-1.92)	**(1.83)**	**(-2.05)**	**(2.12)**	**(-9.97)**	**(-2.24)**	(1.23)	**(5.89)**
N	2590	2575	2590	2590	17043	17028	17043	17043
R^2	0.5327	0.4977	0.4957	0.49662	0.3239	0.3149	0.3146	0.3201
$AdjR^2$	0.4565	0.4152	0.4134	0.41453	0.3068	0.2976	0.2972	0.3028
Developed								
b	-0.066933	-0.15729	-9.41E-05	0.00044234	-0.005909	0.00028729	-4.88E-05	-3.69E-06
	(-0.71)	(-1.09)	(-0.01)	**(2.10)**	(-1.62)	(0.13)	(-0.20)	(-0.19)
c	-0.002204	-0.0045541	-0.0043905	-0.0085102	0.00034541	0.00035028	0.0003774	0.0005438
	(-1.05)	**(-1.87)**	**(-1.89)**	**(-2.79)**	**(2.09)**	**(2.05)**	**(2.12)**	**(1.82)**
d	-0.67919	0.25063	0.0005892	0.00025329	-0.40038	-0.035501	0.0056591	0.001086
	(-5.09)	(1.55)	(0.06)	(0.86)	**(-5.89)**	(-1.17)	(1.31)	**(3.13)**
N	1989	1989	1989	1989	7792	7792	7792	7792
R^2	0.6839	0.6428	0.6425	0.6446	0.5758	0.5549	0.5550	0.5592
$AdjR^2$	0.6140	0.5638	0.5634	0.5661	0.5537	0.5317	0.5318	0.5362
Emerging								
b	-0.21063	-0.24999	0.0114	-0.0003415	-0.0019983	0.0019941	2.69E-05	-2.85E-05
	(-3.17)	**(-3.09)**	(0.75)	(-0.32)	(-0.52)	(1.32)	(0.12)	**(-2.09)**
c	0.0021035	-0.0037713	-0.0009399	0.00088687	0.0002495	0.00027565	0.00029409	0.00073616
	(0.28)	(-0.38)	(-0.04)	(0.05)	(1.03)	(1.144)	(1.19)	**(2.67)**
d	-0.31084	0.29874	0.0049658	0.00044858	-0.091875	-0.052182	0.00050034	0.0019214
	(-21.58)	**(2.75)**	(0.19)	(0.15)	(-0.66)	(-1.19)	(0.06)	**(3.69)**
N	599	584	699	599	9249	9234	9249	9249
R^2	0.6326	0.6108	0.6094	0.6069	0.2671	0.2649	0.2645	0.2692
$AdjR^2$	0.3812	0.3326	0.3421	0.3378	0.2340	0.2318	0.2313	0.2363

Table 6: Political uncertainty and equity risk premium (3 month)

The table address the question "Does political uncertainty command the risk premium that is higher in weaker economic conditions?" correlation more positively related with political uncertainty when economic conditions are worse?" Table reports the estimated coefficient of **b** from the following regression: Model 1: $\boldsymbol{ER_{it} = a + bPR_{it}E_{it} + cPR_{it} + dE_{it} + eER_{it-1} + \epsilon_t}$ and Model 2: $\boldsymbol{ER_{it} = a + bPR_{it}E_{it} + cPR_{it} + dE_{it} + eER_{it-1} + \epsilon_t}$ includes time and country effects. ER_t is the excess returns are calculated on the returns of the value weighted market portfolio and subtracting the returns from one month T-bill. Political uncertainty $\boldsymbol{PU}$ is proxied by the policy uncertainty index of Baker, Bloom, and Davis (2012), which we scale down by 100. Political risk $\boldsymbol{PR}$ is the political risk index from the international country risk guide. We use four measure of economic conditions E_t for each country: bond is the spread between USA government bonds and country i government bonds, industrial production growth (IPG), REC is the recession dummy which is calculated from the real gross domestic product by using the McConnell-Perez-Quiros(2000) model, Shiller's price to earning ratio(PE) is calculated from all the firms in the sample for each country. The t-statistics reported in parenthesis are computed based of two way clustering standard errors (over time and country). For the emerging markets t-statistics are computed on one way clustering (over time only) due to few countries.

	PU				PR			
	Bond	IPG	REC	PE	Bond	IPG	REC	PE
Poolled								
b	0.12806	-0.20613	0.012282	-0.0002584	0.0054179	-0.000487	5.25E-05	-9.11E-05
	(1.22)	(-1.45)	(1.69)	(-0.76)	**(2.18)**	(-0.39)	(0.32)	(-0.49)
c	-0.0016602	-0.0020074	-0.0003973	-7.84E-06	0.00033119	0.00032219	0.00033671	0.00045527
	(-0.43)	(-0.52)	(-0.11)	(-0.01)	(1.59)	**(1.54)**	(1.59)	**(2.05)**
d	-0.24383	0.16162	-0.0096017	0.00081132	-0.13892	0.023283	0.0017991	0.0027756
	(-2.13)	(1.04)	(-0.97)	(1.71)	**(-2.11)**	(0.78)	(0.42)	(0.59)
N	2590	2575	2590	2590	17043	17028	17043	17043
R^2	0.7974	0.7975	0.7969	0.7970	0.6951	0.6949	0.6950	0.8571
$AdjR^2$	0.7643	0.7642	0.7638	0.7639	0.6874	0.6872	0.6872	0.8535
Developed								
b	-0.17902	-0.21219	0.0047147	0.00057691	0.0079318	-0.002861	-2.43E-05	-3.65E-06
	(-1.51)	(-1.17)	(0.56)	**(2.01)**	(1.74)	(-1.07)	(-0.08)	(-0.15)
c	-0.0064445	-0.0073214	-0.0069996	-0.012341	0.00034592	0.0003546	0.00038794	0.00055195
	(-2.11)	**(-2.33)**	**(-2.27)**	**(-2.90)**	(1.58)	(1.61)	(1.68)	(1.43)
d	0.13035	0.25252	-0.0014676	0.00011424	-0.22144	0.055385	0.0060869	0.001172
	(0.84)	(1.18)	(-0.13)	(0.29)	**(-2.70)**	(1.50)	(1.12)	(2.49)
N	1990	1990	1990	1990	7792	7792	7792	7792
R^2	0.8421	0.8417	0.8416	0.8422	0.8012	0.8010	0.8011	0.8024
$AdjR^2$	0.8071	0.8067	0.8066	0.8074	0.7908	0.7906	0.7908	0.7921
Emerging								
b	0.30128	-0.26843	0.0080947	-0.0005414	0.0044124	-0.000728	0.00025054	-2.79E-05
	(6.22)	**(-3.83)**	(0.96)	(-0.32)	(1.02)	(-0.39)	(0.85)	(-1.59)
c	0.0030582	0.0025326	0.0044023	0.0097422	0.00021692	0.00020153	0.0002468	0.00065922
	(0.19)	(0.12)	(0.24)	(0.97)	(0.66)	(0.61)	(0.73)	(1.73)
d	-0.37461	0.15861	0.023655	0.00051596	-0.095998	0.034091	-0.007004	0.0020334
	(-13.90)	(6.64)	(1.57)	(0.13)	(-0.65)	(0.64)	(-0.66)	**(2.97)**
N	599	584	599	599	9249	9234	9249	9249
R^2	0.8614	0.8619	0.8618	0.8601	0.6723	0.6720	0.6722	0.6737
$AdjR^2$	0.7665	0.7633	0.7673	0.7643	0.6575	0.6572	0.6574	0.6591

Table 7: Political uncertainty and equity risk premium (6 month)

The table address the question "Does political uncertainty command the risk premium that is higher in weaker economic conditions?" correlation more positively related with political uncertainty when economic conditions are worse?" Table reports the estimated coefficient of **b** from the following regression: Model 1: $\boldsymbol{ER_{it} = a + bPR_{it}E_{it} + cPR_{it} + dE_{it} + eER_{it-1} + \epsilon_t}$ and Model 2: $\boldsymbol{ER_{it} = a + bPR_{it}E_{it} + cPR_{it} + dE_{it} + eER_{it-1} + \epsilon_t}$ includes time and country effects. ER_t is the excess returns are calculated on the returns of the value weighted market portfolio and subtracting the returns from one month T-bill. Political uncertainty $\boldsymbol{PU}$ is proxied by the policy uncertainty index of Baker, Bloom, and Davis (2012), which we scale down by 100. Political risk $\boldsymbol{PR}$ is the political risk index from the international country risk guide. We use four measure of economic conditions E_t for each country: bond is the spread between USA government bonds and country i government bonds, industrial production growth (IPG), REC is the recession dummy which is calculated from the real gross domestic product by using the McConnell-Perez-Quiros(2000) model, Shiller's price to earning ratio(PE) is calculated from all the firms in the sample for each country. The t-statistics reported in parenthesis are computed based of two way clustering standard errors (over time and country). For the emerging markets t-statistics are computed on one way clustering (over time only) due to few countries.

	PU				PR			
	Bond	IPG	REC	PE	Bond	IPG	REC	PE
Poolled								
b	-0.13425	0.002958	0.0107	-0.0006663	0.0048566	3.44E-05	-9.11E-05	-1.60E-05
	(-1.62)	(0.02)	(1.28)	(-1.72)	**(1.86)**	(0.03)	(-0.49)	(-1.5)
c	-0.0035569	-0.0042215	-0.0030502	0.0010678	0.00048541	0.00047353	0.00045527	0.00077918
	(-0.77)	(-0.91)	(-0.65)	(0.17)	**(2.22)**	**(2.16)**	**(2.05)**	**(3.31)**
d	0.081022	-0.063438	-0.0056584	0.0012449	-0.10111	0.0060697	0.0027756	0.0015589
	(0.72)	(-0.28)	(-0.48)	**(2.39)**	(-1.43)	(0.19)	(0.59)	**(4.71)**
N	2590	2575	2590	2590	17043	17028	17043	17043
R^2	0.9033	0.9037	0.9032	0.9034	0.8572	0.8572	0.8571	0.8578
$AdjR^2$	0.8875	0.8879	0.8875	0.8877	0.8536	0.8535	0.8534	0.8542
Developed								
b	-0.17754	-0.16658	0.014226	0.00050029	0.0032196	-0.001462	-0.000324	-9.94E-06
	(-2.06)	(-0.89)	(1.51)	(1.75)	(0.68)	(-0.51)	(-1.01)	(-0.38)
c	-0.0082724	-0.0090665	-0.0077367	-0.013486	0.0004861	0.00049135	0.00043599	0.00076682
	(-2.46)	**(-2.69)**	**(-2.39)**	**(-3.16)**	**(2.09)**	**(2.11)**	(1.78)	**(1.84)**
d	0.16398	0.21401	-0.013138	0.00015425	-0.12494	0.022337	0.0082333	0.0013065
	(1.22)	(0.93)	(-1.08)	(0.37)	(-1.45)	(0.56)	(1.44)	**(2.62)**
N	1989	1989	1989	1989	7792	7792	7792	7792
R^2	0.9269	0.9268	0.9269	0.9270	0.9089	0.9089	0.9089	0.9095
$AdjR^2$	0.9108	0.9106	0.9108	0.9108	0.9042	0.9042	0.9042	0.9048
Emerging								
b	-0.092783	-0.072166	-0.0007565	-0.0014382	0.0026684	0.00013853	7.75E-05	-3.02E-05
	(-2.92)	**(-2.13)**	(-0.11)	**(-7.87)**	(0.58)	(0.07)	(0.24)	(-1.71)
c	-0.0018341	-0.0046948	-0.0043102	0.013524	0.00038594	0.00037015	0.00038287	0.00083689
	(-0.05)	(-0.24)	(-0.54)	(2.47)	(1.12)	(1.08)	(1.09)	**(2.15)**
d	-0.055793	0.023347	0.034161	0.001227	-0.033566	0.0043774	-0.003645	0.0020556
	(-1.36)	(0.39)	(1.69)	(0.17)	(-0.21)	(0.07)	(-0.32)	**(3.07)**
N	599	584	599	599	9249	9249	9249	9249
R^2	0.9301	0.9307	0.9307	0.9302	0.84503	0.8450	0.84498	0.8456
$AdjR^2$	0.882	0.8811	0.8832	0.8824	0.8380	0.8380	0.83799	0.8386

Table 8: Political uncertainty and equity risk premium (12 month)

The table address the question "Does political uncertainty command the risk premium that is higher in weaker economic conditions?" correlation more positively related with political uncertainty when economic conditions are worse?" Table reports the estimated coefficient of **b** from the following regression: Model 1: $\boldsymbol{ER_{it} = a + bPR_{it}E_{it} + cPR_{it} + dE_{it} + eER_{it-1} + \epsilon_t}$ and Model 2: $\boldsymbol{ER_{it} = a + bPR_{it}E_{it} + cPR_{it} + dE_{it} + eER_{it-1} + \epsilon_t}$ includes time and country effects. ER_t is the excess returns are calculated on the returns of the value weighted market portfolio and subtracting the returns from one month T-bill. Political uncertainty $\boldsymbol{PU}$ is proxied by the policy uncertainty index of Baker, Bloom, and Davis (2012), which we scale down by 100. Political risk $\boldsymbol{PR}$ is the political risk index from the international country risk guide. We use four measure of economic conditions E_t for each country: bond is the spread between USA government bonds and country i government bonds, industrial production growth (IPG), REC is the recession dummy which is calculated from the real gross domestic product by using the McConnell-Perez-Quiros(2000) model, Shiller's price to earning ratio(PE) is calculated from all the firms in the sample for each country. The t-statistics reported in parenthesis are computed based of two way clustering standard errors (over time and country). For the emerging markets t-statistics are computed on one way clustering (over time only) due to few countries.

	PU				PR			
	Bond	IPG	REC	PE	Bond	IPG	REC	PE
Poolled								
b	-0.014499	-0.14226	0.020936	9.40E-05	0.0024177	-0.000669	-0.000102	-1.85E-05
	(-0.14)	(-0.99)	**(2.68)**	(0.22)	(0.89)	(-0.59)	(-0.54)	(-1.69)
c	0.0013236	0.0007217	0.003475	-0.0004560	0.00045213	0.00045028	0.00043102	0.00083727
	(0.29)	(0.16)	(0.74)	(-0.07)	(1.63)	(1.63)	(1.53)	**(2.98)**
d	-0.12227	0.16217	-0.024578	0.00049637	-0.07831	0.026931	0.003305	0.002084
	(-0.80)	(0.76)	**(-2.26)**	(0.82)	(-1.13)	(0.92)	(0.67)	**(6.07)**
N	2590	2575	2590	2590	17043	17028	17043	17043
R^2	0.9612	0.9611	0.9612	0.9612	0.9342	0.9342	0.9342	0.9347
$AdjR^2$	0.9549	0.9547	0.9549	0.9548	0.9325	0.9325	0.9325	0.9331
Developed								
b	-0.23221	-0.34348	0.021977	0.0008571	0.0076705	0.0017724	4.56E-05	1.21E-05
	(-1.87)	**(-1.88)**	**(2.27)**	**(2.59)**	(1.58)	(0.55)	(0.12)	(0.51)
c	-0.0069896	-0.0082565	-0.006356	-0.015302	0.0004102	0.00040705	0.00044608	0.00047236
	(-2.09)	**(-2.39)**	**(-1.92)**	**(-3.15)**	(1.65)	(1.64)	(1.74)	(1.19)
d	0.14929	0.37543	-0.017952	-0.0001033	-0.21373	-0.017072	0.0021132	0.0014453
	(0.93)	(1.79)	(-1.43)	(-0.24)	**(-2.39)**	(-0.39)	(0.32)	**(3.09)**
N	1989	1989	1989	1989	7792	7792	7792	7792
R^2	0.9712	0.9711	0.9712	0.9712	0.9599	0.9598	0.9598	0.9603
$AdjR^2$	0.9648	0.9647	0.965	0.9649	0.9578	0.9578	0.9577	0.9583
Emerging								
b	0.19812	-0.11552	0.021051	-0.0006612	0.002145	-0.001399	-0.000182	-3.20E-05
	(13.89)	(-0.89)	(1.20)	(-0.06)	(0.48)	(-0.79)	(-0.54)	(-1.74)
c	0.013965	0.016345	0.01759	0.02098	0.00030379	0.00030351	0.00026231	0.00084223
	(0.72)	(0.63)	(1.01)	(0.27)	(0.65)	(0.65)	(0.55)	(1.73)
d	-0.35702	0.19091	-0.013623	0.00069192	-0.06845	0.056477	0.0059558	0.002523
	(-39.86)	**(1.85)**	**(-1.92)**	(0.04)	(-0.44)	(1.02)	(0.51)	**(3.58)**
N	599	584	599	599	9249	9234	9249	9249
R^2	0.9737	0.9736	0.9736	0.9736	0.9279	0.9278	0.9279	0.9283
$AdjR^2$	0.9558	0.9548	0.9556	0.9555	0.9246	0.9246	0.9246	0.9251

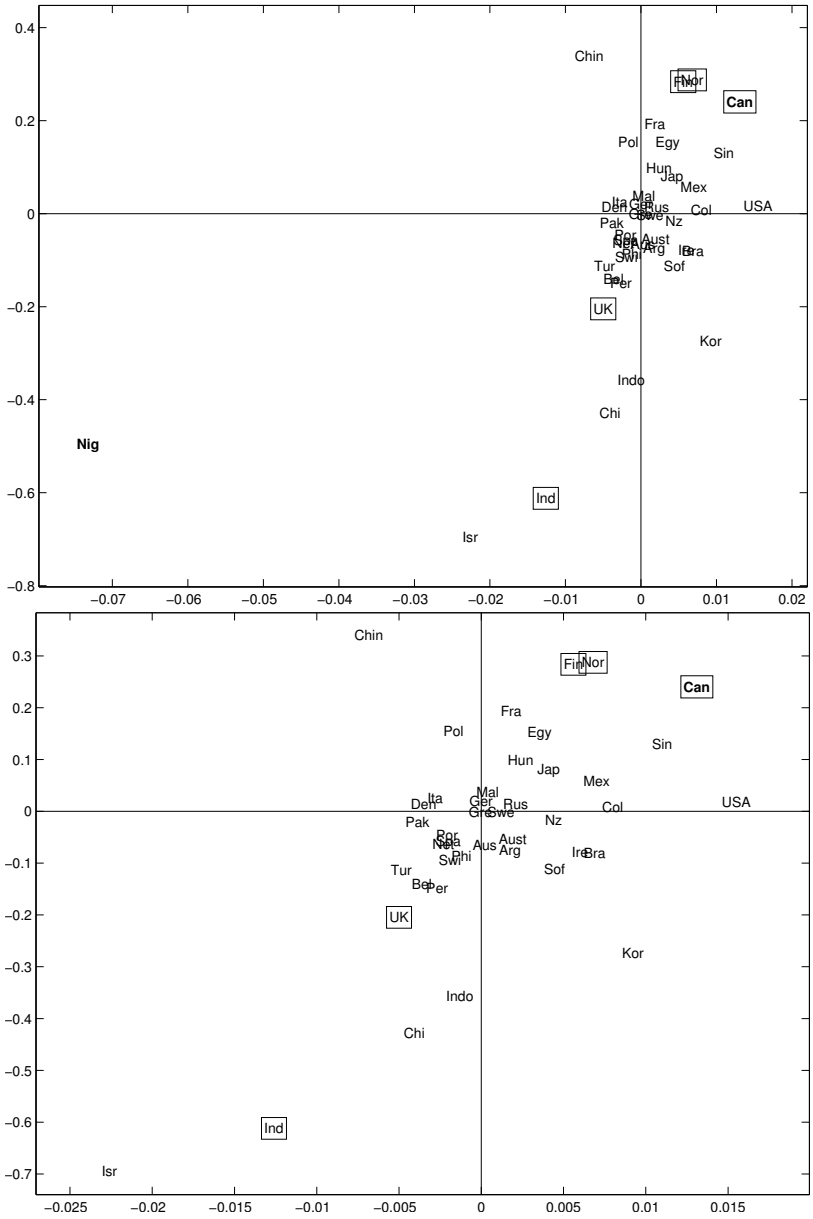

Figure 1: Political uncertainty/economic condition (bond) effects on volatility and correlation. On the x-axis, we plot the coefficient $\boldsymbol{b_{vol}}$ for the regression $\boldsymbol{Vol_{it} = a_{vol} + b_{vol} PR_{it} E_{it} + c_{vol} PR_{it} + d_{vol} E_{it} + \epsilon_{it}}$, while on the y-axis, we plot $\boldsymbol{b_{pwc}}$ for the regression $\boldsymbol{Pwc_{it} = a_{pwc} + b_{pwc} PR_{it} E_{it} + c_{pwc} PR_{it} + d_{pwc} E_{it} + \epsilon_{it}}$. Cases where $\boldsymbol{b_{vol}}$ has a t-stat greater than two are bolded, while cases where $\boldsymbol{b_{pwc}}$ are boxed. The economic measure in this case is the *bonds* measure. In the top graph, we show the numbers for all countries, while in the lower graph, we focus on the more clustered observations for improved readability. Raw numbers are available in Tables 12 and 13 of Appendix A.

Figure 3 plots the results using the recession probability variable. Here, Canada, Russia, and Columbia present the strongest evidence in favour of both coefficients being negative, with

German results supporting the volatility effect (albeit not the correlation effect). However, France, Italy, and UK lie in the positive orthant, and Japan and US results are close to zero.

Lastly, Figure 4 shows the results using the P/E ratio as the measure for economic performance. Here, we find supportive results from Russia, France, Italy, China, and USA. The UK is a substantial outlier, having a very high positive effect on correlation, and a small negative effect on correlation, both effects being significant. In contrast, results for other G7 nations (Canada, Germany, and Japan) are relatively non-existant.

5 Conclusion

Using the large data set of fifty seven countries, we empirically test the Pástor and Veronesi (2013) model. We conclude thats there is a link between political uncertainty and economic conditions using both policy uncertainty and ICRG data. However results are more significant for developed markets as compare to emerging. Equity volatilities increases as political uncertainty increase, whereas no evidence for the correlation. As for volatility, political uncertainty, and economic conditions no strong link established during recession but mixed for other three economic variables. No significant results supports the test , that worse economic conditions during political uncertainty increase correlation among stocks. There is evidence of bigger risk premium when political uncertainty is high but does not during recession.

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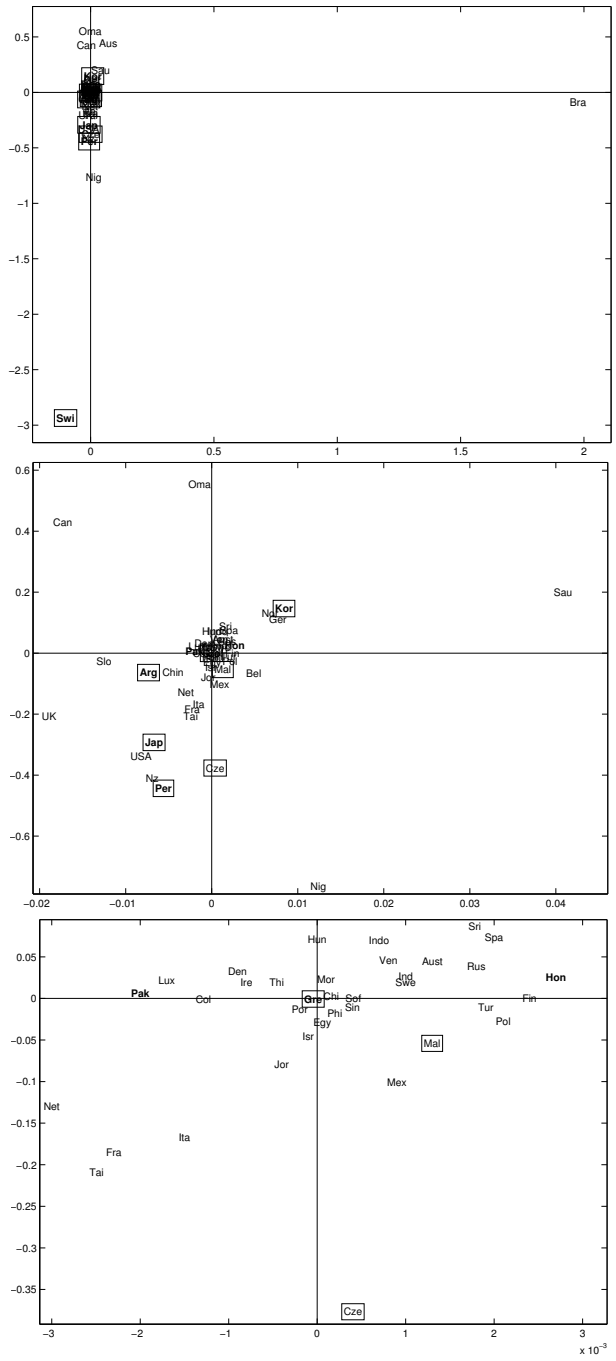

Figure 2: Political uncertainty/economic condition (IPG) effects on volatility and correlation. On the x-axis, we plot the coefficient $\boldsymbol{b_{vol}}$ for the regression $\boldsymbol{Vol_{it} = a_{vol} + b_{vol} PR_{it} E_{it} + c_{vol} PR_{it} + d_{vol} E_{it} + \epsilon_{it}}$, while on the y-axis, we plot $\boldsymbol{b_{pwc}}$ for the regression $\boldsymbol{Pwc_{it} = a_{pwc} + b_{pwc} PR_{it} E_{it} + c_{pwc} PR_{it} + d_{pwc} E_{it} + \epsilon_{it}}$. Cases where $\boldsymbol{b_{vol}}$ has a t-stat greater than two are bolded, while cases where $\boldsymbol{b_{pwc}}$ are boxed. The economic measure in this case is the *IPG* measure. In the top graph, we show the numbers for all countries, while in the lower two graphs, we focus on the more clustered observations for improved readability. Raw numbers are available in Tables 12 and 13 of Appendix A.

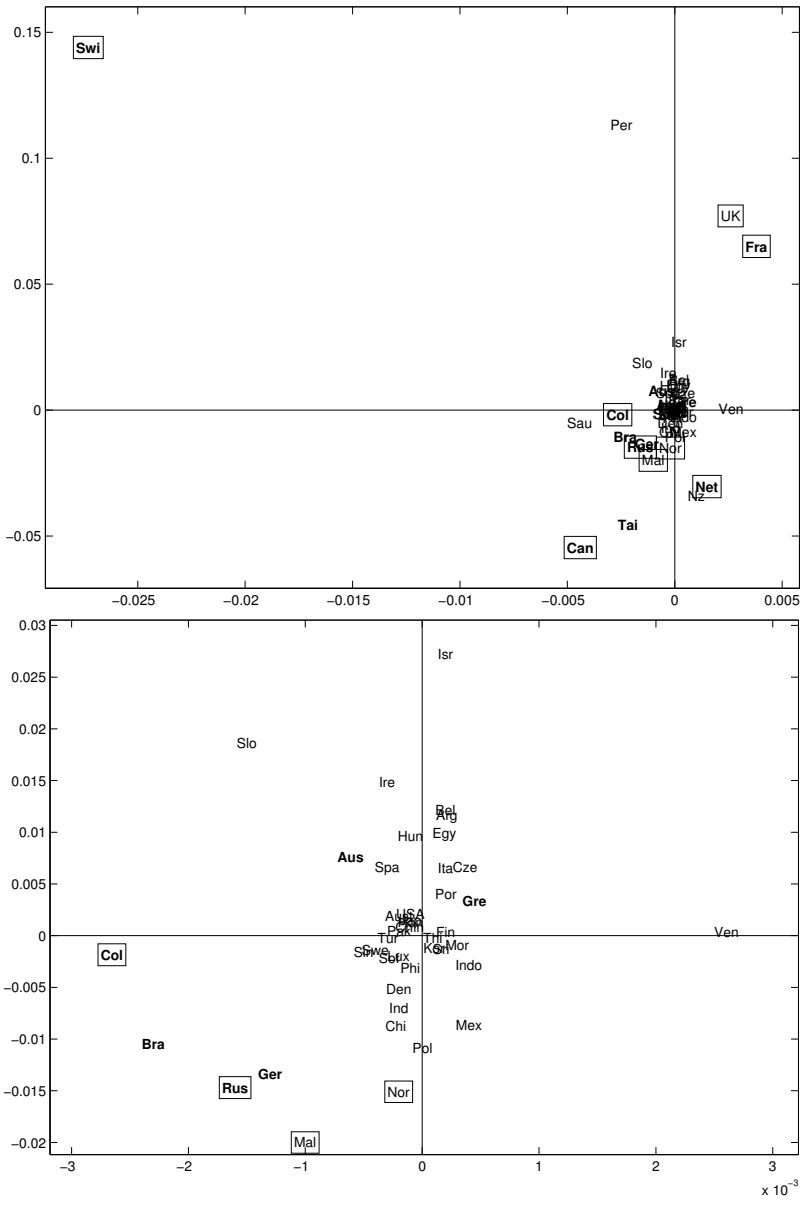

Figure 3: Political uncertainty/economic condition (REC) effects on volatility and correlation. On the x-axis, we plot the coefficient $\boldsymbol{b_{vol}}$ for the regression $\boldsymbol{Vol_{it} = a_{vol} + b_{vol}PR_{it}E_{it} + c_{vol}PR_{it} + d_{vol}E_{it} + \epsilon_{it}}$, while on the y-axis, we plot $\boldsymbol{b_{pwc}}$ for the regression $\boldsymbol{Pwc_{it} = a_{pwc} + b_{pwc}PR_{it}E_{it} + c_{pwc}PR_{it} + d_{pwc}E_{it} + \epsilon_{it}}$. Cases where $\boldsymbol{b_{vol}}$ has a t-stat greater than two are bolded, while cases where $\boldsymbol{b_{pwc}}$ are boxed. The economic measure in this case is the *Recessions* measure. In the top graph, we show the numbers for all countries, while in the lower graph, we focus on the more clustered observations for improved readability. Raw numbers are available in Tables 12 and 13 of Appendix A.

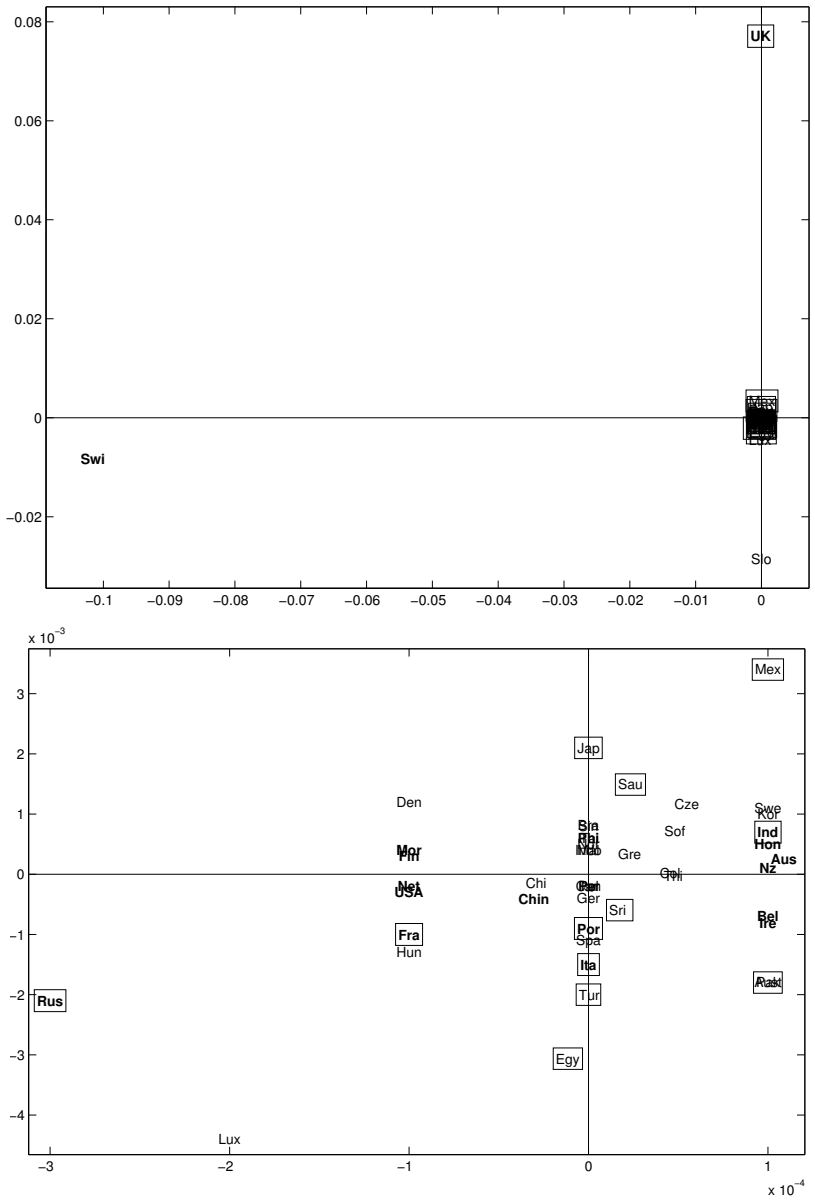

Figure 4: Political uncertainty/economic condition (PE) effects on volatility and correlation. On the x-axis, we plot the coefficient $\boldsymbol{b_{vol}}$ for the regression $\boldsymbol{Vol_{it} = a_{vol} + b_{vol} PR_{it} E_{it} + c_{vol} PR_{it} + d_{vol} E_{it} + \epsilon_{it}}$, while on the y-axis, we plot $\boldsymbol{b_{pwc}}$ for the regression $\boldsymbol{Pwc_{it} = a_{pwc} + b_{pwc} PR_{it} E_{it} + c_{pwc} PR_{it} + d_{pwc} E_{it} + \epsilon_{it}}$. Cases where $\boldsymbol{b_{vol}}$ has a t-stat greater than two are bolded, while cases where $\boldsymbol{b_{pwc}}$ are boxed. The economic measure in this case is the *P/E Ratio* measure. In the top graph, we show the numbers for all countries, while in the lower graph, we focus on the more clustered observations for improved readability. Raw numbers are available in Tables 12 and 13 of Appendix A.

A Results of Individual Countries

Table 9: Descriptive Statistics of Monthly Returns and Political Risk

The table presents the summary statistics of excess returns and political risk index of 57 emerging and developed equity markets. Excess returns are calculated on the returns of the value weighted market portfolio and subtracting the returns from one month T-bill. The first two columns report start date and number of firms in each country. The third and fourth column reports the monthly mean and standard deviation in percentage terms. The last two columns presents the statistics from the political risk index from the International Country Risk Guide.The Index is between 0 and 100, where higher value of index represents a higher political risk in the country.

			Stock Returns		Political Risk	
	Start date	Firms	Mean(%)	SD(%)	Mean	SD(%)
Emerging						
Argentina	1988:01	85	1.92	12.98	32.11	6.12
Bahrain	2004:01	43	1.03	4.02	28.61	3.81
Brazil	1994:07	428	3.31	10.59	33.58	2.31
Chile	1989:07	344	1.80	7.72	24.75	5.34
China	1991:01	2453	1.71	9.96	33.89	4.04
Colombia	1992:01	130	1.78	7.68	40.43	4.65
Czech	1993:07	276	1.57	8.72	21.33	3.02
Egypt	1994:10	392	1.86	8.19	39.59	5.48
Greece	1988:01	408	1.69	10.58	27.54	6.53
Hungary	1991:01	105	1.36	9.67	22.30	4.26
India	1984:01	1570	1.93	9.58	43.97	8.14
Indonesia	1990:04	571	1.70	9.62	44.12	9.62
Israel	1984:01	823	1.27	6.54	40.13	9.63
Jordan	2005:10	231	0.36	5.64	31.77	4.52
Korea	1984:07	1184	2.05	10.15	26.94	6.26
Malaysia	1984:01	1082	1.25	8.24	28.48	4.96
Mexico	1988:01	287	1.96	8.28	29.86	2.84
Morocco	1993:07	114	1.16	4.90	30.34	2.55
Nigeria	2009:03	207	1.89	5.81	54.84	0.77
Oman	2004:05	129	0.90	4.76	25.64	2.60
Pakistan	1988:12	474	1.94	8.93	53.34	7.55
Peru	1991:01	329	1.21	7.54	40.58	7.16
Philippines	1984:01	293	2.02	9.29	42.19	10.88
Poland	1991:04	907	1.48	10.12	22.95	4.94
Portugal	1988:01	225	0.92	6.55	19.65	6.89
Russia	1994:06	447	4.09	12.46	38.75	5.84
Saudi Arabia	1999:11	163	1.76	7.67	31.89	1.56
Slovakia	1997:12	162	1.38	10.55	22.75	2.59
South Africa	1984:01	963	1.45	7.67	34.91	6.88
Sri Lanka	1987:01	344	2.23	8.97	48.78	10.03
Taiwan	1987:09	1012	1.35	10.29	22.35	2.46
Thailand	1987:01	812	2.06	9.82	36.54	6.63
Turkey	1988:01	480	2.62	14.08	38.79	5.02
Venezuela	1990:01	74	3.20	13.93	43.11	8.91
Zambia	2009:02	69	2.51	11.52	37.06	0.48
Developed						
Australia	1984:01	2909	1.25	10.28	16.14	4.07
Austria	1984:01	238	1.46	6.83	13.46	2.90
Belgium	1984:01	365	1.29	5.64	18.69	2.99
Canada	1984:01	3990	2.95	8.70	15.03	2.91
Denmark	1984:01	391	0.41	4.34	13.78	3.79
Finland	1987:01	249	1.52	8.30	10.27	4.19
France	1984:01	2136	1.49	5.98	21.73	3.01
Germany	1984:01	2107	1.28	6.07	15.93	3.28
Hong Kong	1984:01	1567	1.87	7.85	26.09	7.38
Ireland	1984:01	128	1.51	8.11	16.37	5.31
Italy	1984:01	617	1.16	7.14	23.08	4.41
Japan	1984:01	3598	1.08	6.37	16.92	4.22
Luxembourg	1991:03	74	1.25	5.61	8.07	1.81
Netherlands	1984:01	392	1.24	5.28	12.52	4.07
New Zealand	1986:01	324	1.41	6.52	13.64	3.55
Norway	1984:01	576	1.64	7.15	12.87	3.25
Singapore	1984:01	800	1.17	6.59	17.14	4.08
Spain	1986:01	217	1.45	7.16	24.60	4.69
Sweden	1984:01	1144	1.61	8.22	13.03	3.60
Switzerland	1984:01	437	1.18	4.88	10.51	3.45
United Kingdom	1984:01	5559	1.29	5.15	17.83	4.63
United States	1984:01	12400	0.44	7.80	17.69	3.94

Table 10: Political Uncertainty and Economic Conditions

The table address the question "Is there more political uncertainty when economic conditions are worse?". Table reports the estimated coefficient of **b** from the following regression: Model 1: $\boldsymbol{PR_t = a + bE_t + \epsilon_t}$ and Model 2: $\boldsymbol{PR_t = a + bE_t + cPR_{t-1} + \epsilon_t}$. Political risk PR_t is the political risk index from the international country risk guide. We use four measure of economic conditions E_t for each country: bond is the spread between USA government bonds and country i government bonds, industrial production growth (IPG), REC is the recession dummy which is calculated from the real gross domestic product by using the McConnell-Perez-Quiros(2000) model, Shiller's price to earning ratio(PE) is calculated from all the firms in the sample for each country. The statistical significant is based on Newey-West standard errors with five lags.* denotes significant at 10% level,** denotes significant at 5% level and *** denotes significant at 1% level.

	Model 1				Model 2			
	Bond	IPG	REC	PE	Bond	IPG	REC	PE
Emerging								
Argentina	3.5032	-12.5768***	-0.2037	—	-0.6241	-0.6338	0.0150	—
Bahrain	—	—	—	—	—	—	—	—
Brazil	0.7222	-5.8530*	0.1285	-0.1517***	-1.6206	-2.0563*	-0.1524	-0.0292**
Chile	12.696*	1.0042	0.9433	-0.6569***	-1.6475	0.5608	-0.2899**	-0.0064
China	8.2748	-2.6662	-0.0815	-0.0102	-5.9651	-0.4443	-0.0005	0.0000
Colombia	1.7684	-2.6306**	7.2627***	-0.4785***	5.8591*	0.3657	0.0564	-0.0562**
Czech	—	-2.8707	0.5923**	0.0213	—	0.9617	-0.0054	-0.0027
Egypt	1.738	-6.0862	-1.9115**	-0.1186*	-1.173	-2.5791*	-0.0122	-0.0107*
Greece	-0.4392***	0.0571	-0.4561	0.1921*∗	0.0051	0.0013	-0.0375	0.0067
Hungary	23.1457	-2.4047	0.2270	-0.4977***	0.0754	0.4460	0.1127	-0.0192
India	-5.2678	-2.9610	0.5442	-0.0158	0.6817	3.6056	0.1832	-0.0135
Indonesia	-8.344	6.062	2.959*	-0.619***	-1.928*	0.904	0.508*	-0.016
Israel	25.79	-5.93	-3.233*	-0.2737**	-5.203	-1.319	-0.0513	-0.0140
Jordan	—	-0.2736	—	—	—	-0.3708	—	—
Korea	2.435	26.80*	-0.3663*	0.6101***	0.8464	-0.0670	-0.1437	-0.0085
Malaysia	2.6332	5.0846	-0.1014	0.0920	0.2230	0.6551	0.4203*	-0.0222**
Mexico	9.9502	2.0146	0.1021	-0.0576	-2.1650	0.0248	0.0573	-0.0030
Morocco	—	-0.1349	-0.6096	-0.0765	—	0.0419	0.1292	0.0022
Nigeria	-0.4585	-0.0976	—	—	0.6786	0.9328	—	—
Oman	—	-0.3728	—	—	—	0.9691	—	—
Pakistan	1.9206	1.6117	-0.2571	-0.4717**	-0.6939	1.6027*	-0.2236	-0.0433*
Peru	0.9914	-2.8369	-3.5288***	0.1163***	1.4004	0.5414	0.0937	-0.0001
Philippines	8.1462	6.6163	-0.3369**	-0.6170**	0.0433	0.5827	-0.2823**	-0.0322*
Poland	-10.8171	0.5103	-0.5364	0.1824***	-2.8977	1.1305	0.2311*	0.9535
Portugal	10.5308	-0.0560	1.3864	-0.6379***	-0.1915	-0.1760	0.1370	-0.0042
Russia	17.3351*	-0.2316	-3.3030**	-0.5298***	-1.7667	0.0142	0.2054	-0.0382*
Saudi Arabia	—	8.1038**	-1.2527**	0.03059***	—	3.4324*	-0.40481**	0.0009
Slovakia	—	4.9090	0.2261	-0.0113	—	-0.0361	0.1807	-0.0028
South Africa	9.955	-9.3356	5.2932**	-0.7099*	-0.0819	0.6447	0.1929	-0.0714**
Sri Lanka	—	-0.3083	0.4388	0.1629	—	0.4268	-0.0515	-0.0105
Taiwan	—	-0.6159	-0.1049	0.0285**	—	-0.2279	0.0560	0.0028
Thailand	—	-2.1998	1.6179**	0.4461**	—	0.4237	0.0042	-0.0365**
Turkey	-10.431*	0.4211	0.3006	-0.3473**	-7.5339**	-0.7842	-0.1202	-0.0348*
Venezuela	-3.1557	1.9301	—	-0.4783***	-0.0382	-0.0807	—	-0.0116
Zambia	—	—	—	—	—	—	—	—
Developed								
Australia	10.093*	34.337	0.5118	-0.1047	-1.5775	1.3617	0.2024	-0.0017
Austria	-7.0097	0.1988	0.0184	-0.0415	-2.9491	-0.1923	-0.0471	-0.0004
Belgium	-4.9311	-3.5078	0.1324	-0.0337	1.9287	1.8647	-0.0031	-0.0028
Canada	6.6396	4.2628	1.8219*	0.0982***	-0.1336	-11.8124**	0.4327	-0.0040*
Denmark	2.2663	-1.2315	0.3139**	0.0808	0.4917	-0.6503	-0.0006	-0.0112
Finland	1.4692	2.9103	0.8068**	-0.2214***	1.1938	1.0836	0.0099	-0.0102**
France	-1.1497	2.8618	-1.3448*	-0.0980*	0.8888	-2.4257	0.3895	-0.0080
Germany	-0.0877	-4.3898	0.3134	-0.0353	-1.1845	0.0670	0.2522	-0.0089
Hong Kong	—	10.0554*	-0.4796	-0.2814	—	-1.3639	0.0275	-0.0432**
Ireland	-3.3699	-1.4836	4.0374**	-0.0543	-1.9068	-0.9987	0.4146	-0.0380**
Italy	-6.3375	3.1394	0.4048	-0.1355***	0.1344	0.4739	0.0094	-0.0107*
Japan	-0.7014	-27.3132**	3.1524**	-0.4584***	-0.2288	-4.9856**	0.3682*	-0.0281**
Luxembourg	—	-0.0163	0.2358	0.1283**	—	-0.1062	0.0522	-0.0012
Netherlands	-1.2423	-2.358	2.4806*	-0.4631***	-0.7400	0.4988	-0.2544	-0.0234***
New Zealand	-0.0103	-32.1797	-0.0506	-0.2976**	0.1415	2.2135	-0.0481	-0.0209**
Norway	-1.7593	2.7682	0.3542*	0.3727**	0.6452	0.3644	0.0422	-0.0179
Singapore	1.1228	0.7448	1.8081*	0.2331***	0.7683	0.0039	0.0278	-0.0065
Spain	-1.9706	1.0258	4.5928**	-0.3222***	-1.5104	-0.9290	0.2981**	-0.0189**
Sweden	-1.6285	0.1480	-0.0477	0.0425	2.3311**	0.4103	-0.0200	-0.0068
Switzerland	-6.6009	57.7243	1.2687*	-0.6035**	1.4750*	4.9267	0.1642	0.0113
United Kingdom	-2.8575	-3.9930	3.8049***	-0.9343***	0.2891	-0.4520	0.6391**	-0.0883***
United States	3.7462	-0.6904	0.0970	-0.2503**	5.3153	8.7710	0.0902	-0.0224*

Table 11: Political Uncertainty, Volatility and Correlation

The table address the question "Are stock more volatile and more correlated when there is more political uncertainty?" Table reports the estimated coefficient of **b** from the following regression: Model 1:$\boldsymbol{Vc_t = a + bPR_t + \epsilon_t}$ and Model 2: $\boldsymbol{Vc_t = a + bPR_t + cVc_{t-1} + \epsilon_t}$. Political risk PR_t is the political risk index from the international country risk guide. VC_t stands for either volatility or correlation. The volatility (Vol) is calculated from the daily returns within a month of the stock included in each country. Where as the measure of stock correlation is the value weighted average of pairwise correlation for all the stocks in the sample of each country. The statistical significant is based on Newey-West standard errors with five lags.* denotes significant at 10% level,** denotes significant at 5% level and *** denotes significant at 1% level.

	Model 1		Model 2	
	Volatility	Correlation	Volatility	Correlation
Emerging				
Argentina	0.0016**	0.0040	0.0005*	0.0026
Bahrain	-0.0002**	-0.0078**	-0.0002**	-0.0076**
Brazil	-0.0001	0.0026	-0.0000	0.0021
Chile	0.0006***	-0.0074**	0.0004***	-0.0063**
China	-0.0009**	-0.0109**	-0.00049**	-0.0076**
Colombia	-0.0004**	-0.0083**	-0.0002*	-0.0069**
Czech	0.0006**	0.0155**	0.0003*	0.0115**
Egypt	0.0001	0.0063**	0.0000	0.0037*
Greece	-0.0002*	-0.0001	-0.0001	-0.0013
Hungary	-0.0001	-0.0008	-0.0000	-0.0005
India	0.0003***	-0.0025	0.0002**	-0.0021
Indonesia	0.0009***	0.0075***	0.0005**	0.0054***
Israel	0.0002***	-0.0003	0.0001***	-0.0002
Jordan	-0.0008***	-0.0129***	-0.0003**	-0.0100***
Korea	-0.0002*	0.0035	-0.0001	0.0023
Malaysia	0.0000	0.0033	-0.0000	0.0022
Mexico	0.0001	-0.0033	-0.0001	-0.0034
Morocco	-0.0002*	-0.0121*	-0.0001	-0.0087
Nigeria	-0.0010*	0.0094	-0.0011*	0.0121
Oman	-0.0006**	-0.0088	-0.0003**	-0.0070
Pakistan	-0.0001	0.0176***	-0.0001	0.0076***
Peru	0.0005***	0.0230***	0.0004***	0.0173***
Philippines	0.0002**	0.0013	0.0001*	0.0012
Poland	0.0004*	0.0093*	0.0001	0.0066*
Portugal	0.0000	0.0007	0.0000	0.0005
Russia	0.0004*	-0.0014	0.0002	-0.0010
Saudi Arabia	-0.0007	0.0000	-0.0004	0.0008
Slovakia	-0.0021***	0.0241**	-0.0016**	0.0211**
South Africa	0.0002**	0.0053**	0.0000	0.0028*
Sri Lanka	0.0002***	0.0011	0.0001***	0.0009
Taiwan	0.0010**	0.0206***	0.0002	0.0135**
Thailand	-0.0002*	0.0010	0.0000	0.0008
Turkey	-0.0002	-0.0037	-0.0001	-0.0029
Venezuela	-0.0004**	-0.0096**	-0.0003**	-0.0059**
Zambia	-0.0087*	-0.0402	0.0008	-0.0413
Developed				
Australia	-0.0002	-0.0000	-0.0000	-0.0000
Austria	-0.0002	-0.0118*	-0.0000	-0.0087*
Belgium	-0.0001	-0.0053	-0.0000	-0.0049
Canada	-0.0000	-0.0062*	-0.0000	-0.0045*
Denmark	-0.0000	0.0107**	-0.0000	0.0079**
Finland	-0.0006**	0.0020	-0.0002**	-0.0016
France	0.0002*	0.0209***	0.0001	0.0132***
Germany	-0.0003*	0.0062*	-0.0001*	0.0037
Hong Kong	0.0000	0.0041**	-0.0000	0.0033**
Ireland	0.0002	0.0005	0.0000	0.0005
Italy	0.0000	0.0055**	0.0000	0.0038*
Japan	0.0002**	0.0022	0.0001*	0.0014
Luxembourg	-0.0004*	-0.0159*	-0.0002	-0.0146
Netherlands	-0.0002	0.0104**	-0.0001	0.0076**
New Zealand	0.0000	-0.0085*	0.0000	-0.0072*
Norway	-0.0003**	-0.0111**	-0.0001*	-0.0083**
Singapore	-0.0002*	0.0026	-0.0001	0.0024
Spain	0.0001	0.0063*	0.0000	0.0042*
Sweden	-0.0002	-0.0045	-0.0001	-0.0031
Switzerland	-0.0000	-0.0060	-0.0000	-0.0049
United Kingdom	0.0001	0.0124***	0.0000	0.0083***
United States	-0.0001	0.0019	-0.0000	0.0012

Table 12: Political Uncertainty, Stock Market Volatility and Economic Conditions

The table address the question "Are stock volatilities more positively related with political uncertainty when economic conditions are worse?" Table reports the estimated coefficient of **b** from the following regression: Model 1: $\boldsymbol{Vol_t = a + bPR_tE_t + cPR_t + dE_t + \epsilon_t}$ and Model 2: $\boldsymbol{Vol_t = a + bPR_tE_t + cPR_t + dE_t + eVol_{t-1} + \epsilon_t}$. The volatility (Vol) is calculated from the daily returns within a month of all the stock included in each country. Political risk PR_t is the political risk index from the international country risk guide. We use four measure of economic conditions E_t for each country: bond is the spread between USA government bonds and country i government bonds, industrial production growth (IPG), REC is the recession dummy which is calculated from the real gross domestic product by using the McConnell-Perez-Quiros(2000) model, Shiller's price to earning ratio(PE) is calculated from all the firms in the sample for each country. The statistical significant is based on Newey-West standard errors with five lags.* denotes significant at 10% level,** denotes significant at 5% level and *** denotes significant at 1% level.

	Model 1				Model 2			
	Bond	IPG	REC	PE	Bond	IPG	REC	PE
Emerging								
Argentina	0.0017	-0.0073***	0.0002	—	0.0019	-0.0015	0.0002	—
Bahrain	—	—	—	—	—	—	—	—
Brazil	0.0069*	-0.0013	-0.0023***	0.0000	0.0096**	-0.0037	-0.0016**	0.0000
Chile	-0.0041	0.0002	-0.0003	-0.0000	0.0031	0.0002	-0.0000	-0.0000
China	-0.0068	-0.0045	-0.0001	-0.0000**	-0.0007	-0.0056*	-0.0000	-0.0000*
Colombia	0.0079	-0.0013	-0.0026***	0.0000	0.0086*	-0.0011*	-0.0018**	0.0000
Czech	—	0.0004	0.0003	0.0000	—	-0.0015	0.0002	0.0000
Egypt	0.0035*	0.0000	0.0002	-0.0000	0.0024	0.0000	0.0001	-0.0000
Greece	-0.0000	-0.0000***	0.0004**	0.0000	-0.0000	-0.0000**	0.0002	0.0000
Hungary	0.0024	-0.0000	-0.0001	-0.0001*	0.0049	0.0010	-0.0000	-0.0000
India	-0.0126	0.0010	-0.0002	0.0001*	-0.0160	0.0015	-0.0002	0.0000
Indonesia	-0.0013	-0.8073	0.0004	0.0000	0.0005	0.0010	0.0002	0.0000
Israel	-0.0226*	-0.0001	0.0002	-0.0000	-0.0188*	0.0006	0.0001	-0.0000
Jordan	—	-0.0004	—	—	—	-0.0016	—	—
Korea	0.0092	0.0084*	0.0001	0.0001*	0.0056	0.0002	0.0000	
Malaysia	0.0004	0.0013	-0.0010	0.0000	0.0005	0.0010	-0.0004	0.0000
Mexico	0.0070	0.0009	0.0004	0.0001	0.0145*	0.0024	0.0002	0.0001
Morocco	—	0.0001	0.0003	-0.0001**	—	0.0001	0.0002	-0.0000**
Nigeria	-0.0732*	0.0124	—	—	-0.0718*	0.0125	—	—
Oman	—	-0.0014	—	—	—	0.0080	—	—
Pakistan	-0.0039	-0.0020**	-0.0002	0.0001	-0.0021	-0.0020**	-0.0002	0.0000
Peru	-0.0027	-0.0056***	-0.0025	-0.0000	-0.0038*	-0.0064**	-0.0022	-0.4714
Philippines	-0.0012	0.0002	-0.0001	0.0000**	-0.0023	0.0003	-0.0001	0.0000**
Poland	-0.0017	0.0021	0.0000	0.0000	0.0025	0.0033***	0.0002	0.0000
Portugal	-0.0021	-0.0002	0.0002	-0.0000**	-0.0010	-0.0003	0.0001	-0.0000*
Russia	0.0021	0.0018	-0.0016***	-0.0003***	0.0007	0.0028**	-0.0007**	-0.0001**
Saudi Arabia	—	0.0408	-0.0044	0.0000	—	0.0178	-0.0020	0.0000
Slovakia	—	-0.0125	-0.0015*	0.0000	—	-0.0179	-0.0011*	0.0000
South Africa	0.0044	0.0004	-0.0003*	0.0000*	-0.0037	-0.0017	-0.0001	0.0000
Sri Lanka	—	0.0017	0.0002	0.0000	—	0.0000	0.0003	0.0000
Taiwan	—	-0.0025	-0.0022**	0.0000	—	0.0040	-0.0008*	0.0000
Thailand	—	-0.0004	0.0000	0.0000	—	0.0005	0.0000	0.0000
Turkey	-0.0049	0.0019	-0.0003	-0.0000	-0.0017	0.0008	-0.0002	-0.0000
Venezuela	0.0008	0.0026*	—	0.0000	0.0013	0.0022	—	0.0000
Zambia	—	—	—	—	—	—	—	—
Developed								
Australia	0.0002	0.0711*	-0.0006**	0.0001*	-0.0011	0.0278	-0.0004**	0.0000*
Austria	0.0019	0.0013	-0.0002	0.0001	0.0026	0.0009	-0.0000	0.0000
Belgium	-0.0036	0.0049	0.0002	0.0001*	-0.0023	0.0067*	0.0000	0.0000*
Canada	0.0131**	-0.0173	-0.0044**	0.0000	0.0114**	-0.0201	-0.0027**	0.0000
Denmark	-0.0035	-0.0009	-0.0002*	-0.0001	-0.0031	-0.0005	-0.0002*	-0.0000
Finland	0.0056*	-0.3847	0.0002	-0.0001***	0.0036*	-0.0036	0.0001	-0.0000**
France	0.0018	-0.0023	0.0038**	-0.0001***	0.0022	0.0028	0.0016**	-0.0000
Germany	0.0000	0.0077	-0.0013**	-0.0000	0.0017	0.0047	-0.0006*	-0.0000
Hong Kong	—	0.0027*	-0.0001	0.0001**	—	0.0013	-0.0000	0.0000*
Ireland	0.0060	-0.0008	-0.0003	0.0001**	0.0047	-0.0002	-0.0000	0.0001**
Italy	-0.0028	-0.0015	0.0002	-0.0000**	-0.0012	-0.0023	0.0001	-0.0000
Japan	0.0041*	-0.0067*	-0.0001	-0.0000	0.0037*	-0.0064*	-0.0001	-0.0000
Luxembourg	—	-0.0017	-0.0002	-0.0003	—	-0.0014	-0.0004	-0.0000
Netherlands	-0.0023	-0.0030	0.0015*	-0.0001**	-0.0035	-0.0002	0.0002	-0.0000*
New Zealand	0.0044	-0.0069	0.0010	0.0001**	0.0038	-0.0029	0.0013*	0.0000*
Norway	0.0068	0.0068	-0.0002	-0.0000	0.0063*	0.0033*	-0.0001	0.0000
Singapore	0.0110	0.0004	-0.0005*	0.0000*	0.0034	0.0006	-0.0002	0.0000*
Spain	-0.0020	0.0020	-0.0003	-0.0000	-0.0017	-0.0013	-0.0002	-0.0000
Sweden	0.0012	0.0010	-0.0004*	0.0001	0.0044	0.0024*	-0.0001	0.0000
Switzerland	-0.0019	-0.1016*	-0.0273***	-0.1016*	-0.0016	-0.0555*	-0.0412***	-0.0001
United Kingdom	-0.0050*	-0.0189*	0.0026	-0.0001***	-0.0039*	-0.0094*	0.0013	-0.0002**
United States	0.0155*	-0.0082	-0.0001	-0.0001**	0.0076	-0.0082	0.0000	-0.0002*

Table 13: Political Uncertainty, Stock Market Correlation and Economic Conditions

The table address the question "Are stock correlation more positively related with political uncertainty when economic conditions are worse?" Table reports the estimated coefficient of **b** from the following regression: Model 1: $\boldsymbol{Pwc_t = a + bPR_tE_t + cPR_t + dE_t + \epsilon_t}$ and Model 2: $\boldsymbol{Pwc_t = a + bPR_tE_t + cPR_t + dE_t + ePwc_{t-1} + \epsilon_t}$. The Correlation (Pwc) is the value weighted average of pairwise correlation for all the stocks in the sample of each country. Political risk PR_t is the political risk index from the international country risk guide. We use four measure of economic conditions E_t for each country: bond is the spread between USA government bonds and country i government bonds, industrial production growth (IPG), REC is the recession dummy which is calculated from the real gross domestic product by using the McConnell-Perez-Quiros(2000) model, Shiller's price to earning ratio(PE) is calculated from all the firms in the sample for each country. The statistical significant is based on Newey-West standard errors with five lags.* denotes significant at 10% level,** denotes significant at 5% level and *** denotes significant at 1% level.

	Model 1				Model 2			
	Bond	IPG	REC	PE	Bond	IPG	REC	PE
Emerging								
Argentina	-0.0747	-0.0637**	0.0116*	—	-0.0801*	-0.0561**	0.0081	—
Bahrain	—	—	—	—	—	—	—	—
Brazil	-0.0804	-0.0862	-0.0105	0.0008	-0.0739	-0.0772	-0.0118	0.0007
Chile	-0.4281	0.0021	-0.0087	-0.0002	-0.2174	-0.0004	-0.0079	-0.0002
China	0.3399	-0.0619	0.0008	-0.0004*	0.3455	-0.0436	-0.0000	-0.0003
Colombia	0.0344	0.0004	-0.0667***	0.00126*	0.0372	0.0086	-0.0592***	0.0011*
Czech	—	-0.3767**	0.0066	0.0012	—	-0.3999**	0.0029	0.0004
Egypt	0.1533	-0.0293	0.0099*	-0.0031**	0.1342	-0.0283	0.0078	-0.0024**
Greece	-0.0009*	-0.0007**	0.0034	0.0004	-0.0008*	-0.0007**	0.0027	0.0003
Hungary	0.0988	0.0713*	0.0096	-0.0013	0.1048	0.0725*	0.0106	-0.0009
India	-0.6120**	0.0264	-0.0070	0.0007**	-0.6442**	0.0293	-0.0067	0.0006**
Indonesia	-0.3569*	0.0702	-0.0029	0.0004	-0.3535*	0.0591	-0.0029	0.0003
Israel	-0.6944*	-0.0455*	0.0272	-0.0002	-0.5689	-0.0480*	0.0175	-0.0003
Jordan	—	-0.0788*	—	—	—	-0.0863*	—	—
Korea	-0.2740	0.1464**	-0.0012	0.0010*	-0.1628	0.1478**	-0.0005	0.0007*
Malaysia	0.0381	-0.0540**	-0.0200**	0.0004	0.0229	-0.0621**	-0.0147*	0.0004
Mexico	0.0577	-0.1015	-0.0087	0.0034*	0.1082	-0.1039	-0.0090	0.0029*
Morocco	—	0.0224	-0.0009	0.0004	—	0.0155	-0.0016	0.0004
Nigeria	-0.4953	-0.7661	—	—	-0.6547	-0.8817	—	—
Oman	—	0.5535	—	—	—	0.5867	—	—
Pakistan	-0.0207	0.0069	0.0004	-0.0018**	0.0444	0.0003	0.0010	-0.0014**
Peru	-0.1485	-0.4434***	0.1130	-0.0002	-0.1579	-0.3586*	0.1427	-0.0002
Philippines	-0.0869	-0.0175	-0.0031	0.0006*	-0.0979	-0.0166	-0.0028	0.0006
Poland	0.1542	-0.0275	-0.0109	-0.0002	0.3071**	-0.0200	-0.0060	0.0000
Portugal	-0.0453	-0.0126	0.0040	-0.0009**	-0.0519	-0.0135	0.0033	-0.0008**
Russia	0.0147	0.0382	-0.0147**	-0.0021**	0.0195	0.0451*	-0.0101**	-0.0014**
Saudi Arabia	—	0.2007	-0.0053	0.0014***	—	-0.0148	-0.0065	0.0011**
Slovakia	—	-0.0285	0.0186	-0.0285	—	-0.0015	0.0084	-0.0117
South Africa	-0.1115	0.0005	-0.0022	0.0007	-0.1997	-0.0047	-0.0021	0.0004
Sri Lanka	—	0.0863	-0.0013	-0.0006**	—	0.0777	-0.0003	-0.0005*
Taiwan	—	-0.2087	-0.0455*	0.0006	—	-0.1362	-0.0251	0.0004
Thailand	—	0.0196	-0.0003	0.0000	—	0.0313	-0.0001	0.0000
Turkey	-0.1126	-0.0107	-0.0002	-0.0020**	-0.1101	-0.0025	0.0007	-0.0016*
Venezuela	0.0203	0.0461	—	0.0003	0.0480	0.0302	—	0.0002
Zambia	—	—	—	—	—	—	—	—
Developed								
Australia	-0.0657	0.4412	0.0075*	0.0003	-0.0706	0.2854	0.0050	0.0002
Austria	-0.0535	0.0449	0.0019	-0.0018*	-0.1196	0.0353	0.0006	-0.0016*
Belgium	-0.1413	-0.0662	0.0121	-0.0007	-0.1489	-0.0500	0.0112	-0.0007
Canada	0.2404**	0.4285*	-0.0546***	-0.0002	0.2503**	0.3275*	-0.0381**	-0.0002
Denmark	0.0150	0.0328	-0.0052	0.0012*	0.0242	0.0216	-0.0074	0.0010
Finland	0.2839**	0.0006	0.0003	0.0003	0.2411**	-0.0310	-0.0006	0.0002
France	0.1930	-0.1851	0.0650*	-0.0013*	0.2251	-0.1947	0.0336	-0.0009
Germany	0.0201	0.1095	-0.0134	-0.0004	0.0305	0.0933	-0.0114	-0.0002
Hong Kong	—	0.0260	0.0013	0.0005	—	0.0208	0.0006	0.0005
Ireland	-0.0789	0.0191	0.0148*	-0.0008	-0.0748	0.0171	0.0138	-0.0006
Italy	0.0251	-0.1669	0.0065	-0.0015**	0.0053	-0.1875	0.0049	-0.0011**
Japan	0.0812	-0.2928**	0.0015	0.0021**	0.0737	-0.2900**	0.0005	0.0016*
Luxembourg	—	0.0220	-0.0020	-0.0044*	—	0.0220	-0.0008	-0.0036*
Netherlands	-0.0636	-0.1295	-0.0304*	-0.0002	-0.0822	-0.0978	-0.0292*	-0.0001
New Zealand	-0.0160	-0.4110	-0.0342*	0.0001	-0.0419	-0.3201	-0.0293	0.0000
Norway	0.2876*	0.1307	-0.0151**	0.0005	0.1287	0.1502	-0.0154**	0.0004
Singapore	0.1307	-0.0109	-0.0016	0.0008	0.1482	-0.0121	-0.0015	0.0008
Spain	-0.0564	0.0740	0.0066	-0.0011*	-0.0620	0.1120	0.0056	-0.0008
Sweden	-0.0022	0.0196	-0.0014	0.0011	0.0523	0.0413	0.0413	0.0009
Switzerland	-0.0931	2.9361*	0.1440**	-0.0083*	-0.0950	-2.5622*	0.0396	0.0396
United Kingdom	-0.2046**	-0.2081	0.0771**	0.0771**	-0.2135**	-0.0946	0.0634**	-0.0002
United States	0.0175	-0.3372	0.0021	-0.0003	-0.0501	-0.0148	0.0002	-0.0002

Table 14: Political uncertainty and equity risk premium

The table address the question "Does political uncertainty command the risk premium that is higher in weaker economic conditions?" correlation more positively related with political uncertainty when economic conditions are worse?" Table reports the estimated coefficient of **b** from the following regression: Model 1: $\boldsymbol{ER_t = a + bPR_tE_t + cPR_t + dE_t + \epsilon_t}$ and Model 2: $\boldsymbol{ER_t = a + bPR_tE_t + cPR_t + dE_t + eER_{t-1} + \epsilon_t}$. ER_t is the excess returns are calculated on the returns of the value weighted market portfolio and subtracting the returns from one month T-bill. Political risk PR_t is the political risk index from the international country risk guide. We use four measure of economic conditions E_t for each country: bond is the spread between USA government bonds and country i government bonds, industrial production growth (IPG), REC is the recession dummy which is calculated from the real gross domestic product by using the McConnell-Perez-Quiros(2000) model, Shiller's price to earning ratio(PE) is calculated from all the firms in the sample for each country. The statistical significant is based on Newey-West standard errors with five lags. * denotes significant at 10% level, ** denotes significant at 5% level and *** denotes significant at 1% level.

	Model 1				Model 2			
	Bond	IPG	REC	PE	Bond	IPG	REC	PE
Emerging								
Argentina	-0.0189	0.0211*	-0.0002	—	-0.0201	0.0209*	-0.0004	—
Bahrain	—	—	—	—	—	—	—	—
Brazil	0.0296	-0.1321**	0.0061	0.0010**	0.0348	-0.1122***	0.0061	0.0010**
Chile	-0.0781	0.0037	0.0108*	-0.0005*	-0.0366	0.0071	0.0088	-0.0005*
China	-0.1115	-0.0183	-0.0043	-0.0001	-0.0926	-0.0155	-0.0039	-0.0001
Colombia	-0.1576***	0.0046	0.0056	0.0003	-0.1553***	0.0057	0.0042	0.0002**
Czech	—	0.0730	0.0034	-0.0005	—	0.0704	0.0014	-0.0005
Egypt	-0.0114	-0.0136	-0.0004	0.0001	-0.0117	-0.0146	-0.0012	-0.0000
Greece	0.0000	0.0005**	-0.0020	-0.0002	0.0000	0.0005**	-0.0020	-0.0002
Hungary	0.2316	0.0020	-0.0018	-0.0002	0.2404	-0.0013	-0.0015	-0.0002
India	-0.1129**	-0.0081	0.0023	0.0001	-0.1148**	-0.0074	0.0020	0.0001
Indonesia	-0.0830*	-0.0055	0.0050*	0.0004	-0.0799*	-0.0042	0.0047	0.0004
Israel	0.4022*	-0.0157*	-0.0051	0.0003	0.3775*	-0.0177*	-0.0048	0.0003
Jordan	—	0.0395**	—	—	—	0.0441**	—	—
Korea	0.0666	-0.0225	0.0006	-0.0000	0.0681	-0.0210	0.0006	-0.0000
Malaysia	0.0589*	-0.0037	0.0021	-0.0003	0.0531	-0.0037	0.0021	-0.0003
Mexico	-0.0375	-0.0747	-0.0005	-0.0011*	-0.0315	-0.0735	-0.0005	-0.0010*
Morocco	—	-0.0045	0.0025	0.0001	—	-0.0046	0.0027	0.0001
Nigeria	0.0996	0.0518	—	—	0.1677	0.0534	—	—
Oman	—	-0.0056	—	—	—	0.0390	—	—
Pakistan	0.0314	0.0001	0.0011	0.0001	0.0179	-0.0002	0.0010	0.0001
Peru	-0.0228	-0.0135*	-0.0472	-0.0225	-0.0265	-0.0441	-0.0000	
Philippines	-0.0215	0.0091	0.0004	0.0003*	-0.0066	0.0089	0.0003	0.0002
Poland	-0.1087*	0.0176	0.0034	-0.0001	-0.1172*	0.0231	0.0024	-0.0002
Portugal	0.0126	-0.0018	0.0005	0.0001	0.0052	-0.0027	0.0004	0.0001
Russia	-0.0263*	0.0244	-0.0084**	-0.0003*	-0.0290*	0.0293	-0.0066**	-0.0003*
Saudi Arabia	—	-0.1266	-0.0027	-0.0001	—	-0.0543	-0.0042	-0.0000
Slovakia	—	-0.1043	-0.0094*	-0.0014	—	-0.1763	-0.0129**	-0.0013
South Africa	-0.0163	-0.0262	0.0028*	-0.0000	0.0243	-0.0273	0.0027	-0.0000
Sri Lanka	—	0.0398	-0.0065	-0.0001	—	0.0410	-0.0064	-0.0000
Taiwan	—	-0.0186	0.0011	-0.0002	—	-0.0703	0.0007	-0.0002
Thailand	—	-0.0091	-0.0009	-0.0002	—	-0.0101	-0.0010	-0.0002
Turkey	0.0735	-0.0247	-0.0012	-0.0001	0.0700	-0.0239	-0.0012	-0.0000
Venezuela	-0.0482***	-0.0099	—	0.0001	-0.0481***	-0.0100	—	0.0001
Zambia	—	—	—	—	—	—	—	—
Developed								
Australia	0.0216	-0.1866	0.0037*	-0.0001	0.0224	-0.1820	0.0037*	-0.0001
Austria	-0.0474	-0.0111	0.0009	0.0001	-0.0477	-0.0098	0.0008	0.0001
Belgium	0.0306	-0.0521	-0.0023	-0.0004*	0.0395	-0.0667	-0.0019	-0.0003
Canada	-0.2836***	-0.1862	0.0133	0.0001	-0.2960***	-0.0794	0.0060	0.0001
Denmark	0.0350*	-0.0023	0.0017*	0.0004**	0.0360**	-0.0014	0.0018*	0.0003*
Finland	0.0900*	0.0481	-0.0013	0.0005*	0.0771*	0.0438	-0.0011	0.0004*
France	0.0917*	0.0641	-0.0125	0.0004	0.1003*	0.0639	-0.0117	0.0003
Germany	0.0150	0.0442	0.0046*	0.0002	0.0135	0.0443	0.0046*	0.0003
Hong Kong	—	-0.0019	0.0027**	-0.0001	—	-0.0024	0.0025**	-0.0001
Ireland	0.0554**	-0.0122	0.0059	-0.0004	0.0570**	-0.0108	0.0051	-0.0004
Italy	0.0463*	-0.0044	0.0003	0.0000	0.0481*	-0.0049	0.0002	0.0000
Japan	-0.0585*	0.0581	-0.0016	-0.0003	-0.0550*	0.0571	-0.0016	-0.0003
Luxembourg	—	0.0417*	0.0088*	-0.0002	—	0.0430*	0.0085*	-0.0002
Netherlands	0.0532**	-0.0012	0.0001	0.0006*	0.0540**	-0.0015	0.0001	0.0006*
New Zealand	-0.0179	0.2831*	-0.0282***	-0.0002	-0.0237	0.2850*	-0.0280***	-0.0002
Norway	-0.0332	-0.0198	0.0014	-0.0003	-0.0234	-0.0179	0.0012	-0.0003
Singapore	0.0943	-0.0082	0.0011	0.0001	0.0928	-0.0082	0.0010	0.0001
Spain	0.0728**	-0.0927*	0.0035	0.0002	0.0769**	-0.0959*	0.0033	0.0002
Sweden	-0.0022	0.0196	-0.0014	0.0011	0.0523	0.0413	-0.0003	0.0009
Switzerland	0.0198	0.9228**	0.2555*	0.0001	0.0209	0.8894**	0.2560	0.0001
United Kingdom	0.0754**	-0.0225	-0.0144***	0.0001	0.0746**	-0.0273	-0.0147***	0.0001
United States	-0.0602	-0.0573	-0.0037	-0.0001	-0.0519	-0.0799	-0.0043*	-0.0001