International Conditional Policy Uncertainty

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Abstract

Using an international dataset, we test for a conditional relationship between policy uncertainty and equity market risk. Specifically, following Pástor and Veronesi (2013), we test whether policy uncertainty becomes more important as a driver of financial risk when economic conditions are poor. We show that this is true for democratic economies, but not for autocracies. Further, pricing responses (i.e. rises in risk premia) are strongest in emerging economies. We consider a range of extensions of the model. In particular, we show that, within democracies, those with weak governments face much stronger conditional policy uncertainty.

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

1. Introduction

> *"A parliamentary vote to elect a president in Greece failed on Monday, roiling stock markets in Europe's most precarious countries and setting off worries that a new Greek political upheaval could reignite a long-simmering debt crisis. The vote means Greece will hold national elections in late January – possibly opening the door to Syriza, a left-wing coalition that leads most polls and is a potent opponent of the austerity-led policies ordered by Greece's international rescuers and carried out by Prime Minister Antonis Samaras ... Yields on Greece's 10-year bond shot up Monday more than a percentage point, to 9.4% ... The Greek stock market fell 4%."*
> Granitsas et al. (2014)

This paper examines conditional policy uncertainty; specifically, the hypothesis that policy uncertainty becomes more important for financial risk during poor economic conditions. To test this hypothesis, we assemble a large panel of international data, spanning developed and emerging markets. Our data also includes both democratic and autocratic regimes.

In the academic literature, policy uncertainty has been linked to return and volatility in financial markets (see, for example, Füss and Bechtel (2008); Leblang and Mukherjee (2005); Bialkowski et al. (2008); Boutchkova et al. (2012); Belo et al. (2013) and Liu et al. (2017)).[1] More recently, however, a theoretical link has been proposed by researchers between policy uncertainty and financial markets (especially equity markets). Gomes et al. (2012) model the effects of policy uncertainty on personal consumption, saving, labor supply, and portfolio choices, while Pástor and Veronesi (2012, 2013) examine how uncertain government policy affects stock prices, returns and volatility.

Pástor and Veronesi (2013), henceforth PV13, postulate that stock prices are driven by three types of shocks: capital shocks, impact shocks, and policy shocks. In the PV13 model, a quasi-

[1]The potential cause of this volatility is the sensitivity of firm investment and cash flows to changes in political power or policy. This has been documented in a number of papers, for example Kobrin (1979), Diamonte et al. (1996), and Erb et al. (1996). More recently, Julio and Yook (2012) find that during an election year, firms reduce their investment expenditure by an average of 4.8% (as compared to non-election years). More specifically, links have been shown between tax policy uncertainty and investments (Rodrik (1996) and Hassett and Metcalf (1999)) or policy uncertainty and capital flows (Hermes and Lensink (2001)).

benevolent government has an opportunity to change policies to improve firms' performance. This change in policy has two important features. First, since policy effectiveness is not known ex-ante, the need to learn about the new policy will increase uncertainty surrounding security cash flows if a new policy is adopted. Secondly, the government's choice of policy may include political costs. When the policy is likely to change (situations when the economy is doing poorly, and therefore current policies are presumably less effective) information concerning these costs becomes more important in determining security prices. The key empirical prediction of this theory is that policy risk should be more important in a weaker economy and (because it systematically affects all securities) it should directly contribute to risk premia.

In this paper, we empirically test these conclusions, using a large international dataset.[2] Our analysis of international markets (as opposed to focusing on the US market) is particularly interesting for three reasons. First, it allows us to explore the relevance of the PV13 model for a continuum of degrees of benevolence. Specifically, we can examine how effective the PV13 model is for autocratic governments versus democratic governments. Perhaps not surprisingly, given the motivation of the model with a quasi-benevolent government, the evidence for the model is weak for autocracies. We further extend this point by examining the strength of elected governments. We show that countries governed by weak coalitions (characterised by a wide spread of economic views by coalition members) behave more like the PV13 model. On the other hand, countries with strong governments (those where coalition members have similar economic views) behave more like autocracies, in that the PV13 conditional policy uncertainty effect is weak or non-existant. Second, it allows us to compare the model across developed versus emerging markets. Here, we find compelling evidence that policy uncertainty has a strong effect on risk premia in emerging markets. In contrast, while developed markets see a rise in systemic risk, their risk premia do not rise. Through our extension work, we show that there *is* a conditional policy uncertainty effect on risk premia for our pooled sample (and, indeed, a conditional policy uncertainty effect in autocracies) but these only manifest themselves during extreme economic downturns. Finally, we show that for democracies and

[2]PV13 presents empirical results for the U.S. market, which support their theoretical model.

developed countries, US policy shocks can also have an important effect on stock returns, and exhibit conditional policy risk when using local (non-US) economic performance.

Our paper contributes to a growing literature on policy risk in equity markets. In particular, we note several papers that are close to our work. Berkman et al. (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 et al. (2017), by using country-level military expenditure data, find that political instability is a source of systematic risk. Bekaert et al. (2014), back out the political risk components from sovereign credit spreads, and use these to evaluate international investment projects. Brogaard et al. (2017) find that US policy uncertainty positively influences the cost of equity of non-US firms. Kelly et al. (2016) empirically examine the relationship between political uncertainty and option markets. Using data on elections and options contracts, they find that options whose lives span political events tend to be more expensive as these can be used as a hedge against political risk.

Although this body of research is similar to our work, in that it covers a broad range of countries, and discusses the impact of policy uncertainty on asset prices, our work distinguishes itself by its basis in the theoretical/empirical work of PV13. Specifically, we test for a *conditional* policy risk effect. As well as providing a potential corroboration of policy risk theory, this conditionality is important. The presence of policy risk during economic downturns makes this a potentially important contributor to tail risk, itself critically important for risk-management.

Lastly, in examining autocracies versus democracies, and relative strengths of governments, we draw on (and contribute to) the political science literature examining the effect of spreads on policy (see, for example Tsebelis (2002) or Strom (1984)) and the proclivity for different government types to change economic policy (see Milner and Kubota (2005)).

The remainder of the paper is organised as follows. Section 2 discusses the construction of the variables used in this paper. Empirical analysis is in Section 3, while extensions are considered in Section 4. Lastly, Section 5 concludes.

2. Data

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

2.1. Stock market

The data used in this paper consist of 21 developed and 22 emerging equity markets. We obtain stock market data from Datastream for the period January 1985 to February 2014. The start and end dates vary from country to country, depending on the availability of data; these are reported in Table 1. Following the literature, we source 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 use a single stock exchange. However, for the following countries, we use 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).[3] We include dead firms in our sample to avoid survivorship bias. All returns are calculated in US dollars.

[Table 1 about here.]

To construct a reliable sample, we screen the data. The initial sample consists of more than 60,000 firms. As a first cleaning procedure, we use only common stocks (by excluding stocks with special features, such as Depository Receipts, Real Estate Investment Trusts, and preferred stocks). Our second cleaning procedure follows Griffin et al. (2010) in eliminating non-equity securities from the sample. Griffin et al. (2010) provide a list of country-specific identifiers for excluding non-common equity from Datastream.[4]

Ince and Porter (2006) highlight that the data from Datastream must be carefully handled. Following their suggestions, a daily return should be removed if any day return is above 100%

[3]We follow Lee (2011) and Hou et al. (2011) in using multiple stock exchanges for these countries.

[4]For more details of this screening, please see Appendix B of Griffin et al. (2010), which includes the list of non-equity identifiers on a country basis.

and is reversed the next day. Specifically, we remove daily returns r_t and r_{t-1} if $(1 + r_t)(1 + r_{t-1}) \leq 1.5$ and either $r_t > 2$ or $r_{t-1} > 2$. As with the screening of daily returns, any monthly returns calculated from a total return index of less than -99%, as well as those that exceed 300% (and are reversed within a month) are also removed.

Our study makes use of three variables when measuring stock market risk: realised volatility, pairwise correlations, and realised equity risk premia. The first measure is the realised volatility calculated from daily returns of the value weighted index within a given month. The second measure is the equally weighted average of pairwise correlations for all the stocks in each country. For the third measure, the equity risk premium, we use realised excess returns (denoted by r_{t+1}). These are constructed by calculating the cumulative return on the value weighted market portfolio over month $t + 1$ and subtracting the returns on the one month U.S. T-bill (proxied by the Fama-French risk-free rate). In doing this, we consider the position of a U.S. investor in our analysis.

Descriptive statistics of monthly excess returns for both emerging and developed markets are presented in Table 1. Average excess returns for all countries are positive. For the emerging markets, the highest mean excess return is 4.33% with a standard deviation of 12.75% for Russia. The highest mean excess return for the developed markets is 3.44% (with a standard deviation of 9.08%) for Canada. The lowest mean excess return amongst the emerging markets is Oman at 0.96% (standard deviation 5.28%). The lowest average excess monthly return among developed markets is for Japan (0.78% with a standard deviation of 6.21%).

2.2. Policy uncertainty

Following PV13, our measure of policy uncertainty is the Economic Policy Uncertainty (EPU) index. This is constructed monthly on the basis of newspaper articles (from selected sources) related to policy uncertainty within that month. The EPU index is produced by Baker et al. (2015) for 14 countries.[5] We supplement this with comparable data produced by Brogaard et al.

[5]Details of the construction of the Baker et al. (2015) data can be found at http://www.policyuncertainty.com/.

(2017), covering 29 countries.[6] The Brogaard et al. (2017) data combines newspaper articles, similar to the Baker et al. (2015) data. Current drafts of the Brogaard et al. (2017) paper do not contain a description of the EPU dataset's construction, so, for completeness, we include such a description in Appendix A. We scale both series down by 100.

As with the stock returns, there is some dispersion among countries regarding their policy uncertainty. Among developed markets, the highest mean policy uncertainty is Hong Kong (3.2572), while the most volatile country is Spain (1.0000). Conversely, the lowest mean policy uncertainty is Australia (1.9324), and the least volatile is Finland (0.1457). Emerging markets show a similar dispersion in means, with the highest mean policy uncertainty being Indonesia (3.1845) and the lowest mean being India (1.9446). However, there is less variability in the standard deviations for emerging markets. The most volatile emerging market is the Philippines (0.5290), while the least volatile is Greece (0.1210).

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 -1 during a recession month and zero otherwise; and monthly growth in industrial production (IPG). We construct a recession dummy using the Markov switching methodology of McConnell and Perez-Quiros (2000). In this model, real GDP growth is assumed to evolve according to

$$\frac{\Delta GDP_t}{GDP_t} = \mu_{G_t,V_t} + \phi\left(\frac{\Delta GDP_{t-1}}{GDP_{t-1}} - \mu_{G_{t-1},V_{t-1}}\right) + \epsilon_t \quad \epsilon_t \sim N(0, \sigma_{V_t}).$$

Here $\Delta GDP_t/GDP_t$ is real GDP growth, G_t is a state variable for growth, and V_t is a state variable for volatility, each of which can take two values. ϕ is a constant that captures autocorrelation in growth. μ can take on four possible values, depending on which growth state and

[6] The countries covered by Baker et al. (2015) are Australia, Canada, China, France, Germany, India, Italy, Japan, Korea, Netherlands, Russia, Spain, UK, and USA. Countries covered by Brogaard et al. (2017) are Argentina, Austria, Belgium, Brazil, Chile, Czech Republic, Denmark, Finland, Greece, Hong Kong, Hungary, Indonesia, Ireland, Israel, Malaysia, Mexico, New Zealand, Norway, Oman, Philippines, Poland, Portugal, Saudi Arabia, Singapore, South Africa, Sweden, Switzerland, Thailand, and Turkey.

which volatility state the economy is currently in. Transitions between growth and volatility states evolve according to a two state Markov switching model so that

$$P(G_t = 1|G_{t-1} = 1) = p^{\mu}_{11} \qquad P(G_t = 2|G_{t-1} = 2) = p^{\mu}_{22}$$
$$P(V_t = 1|V_{t-1} = 1) = p^{\sigma^2}_{11} \qquad P(V_t = 2|V_{t-1} = 2) = p^{\sigma^2}_{22},$$

where p^{μ}_{11}, p^{μ}_{22}, $p^{\sigma^2}_{11}$, and $p^{\sigma^2}_{22}$ are constants. The appeal of this model over more conventional two state models is that it distinguishes between high volatility recessions and low volatility recessions, the latter of which may otherwise be mistakenly identified as growth periods.

We fit this model for each country in our sample and then identify the set of recession states $\mathcal{R} = \{G_t, V_t : \mu_{G_t,V_t} < 0\}$. We then identify recession periods as being observations where $P(G_t, V_t \in \mathcal{R}) > 0.5$. Hence a recession is a period where we identify at least a fifty percent probability of the economy being in a negative growth state.

The other two variables used to measure the state of the economy 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).[7] The second measure of financial market performance is the US monthly return on government bonds, less the monthly return on government bonds for the country in question. Both measures are taken from Datastream. For the bonds, a positive value indicates low interest rates (relative to the US), while a negative value indicates high interest rates (again relative to the US). For all our economic variables, higher values represent better economic conditions.

2.4. Descriptive statistics

Table 2 presents descriptive statistics for our whole sample, as well as breaking the sample into developed and emerging markets. It is interesting to note that there is not much difference between the mean and standard deviation of policy uncertainty for developed and emerging markets; developed markets can face the same levels of policy uncertainty as emerging markets.

[7]We follow the procedure describe by Shiller (2000) to calculate the P/E ratio.

However, the average stock return correlation, volatility and excess returns are higher, on average, in emerging markets. Further, these variables exhibit considerably higher variation in emerging markets than their developed counterparts.

[Table 2 about here.]

2.5. *Heteroskedasticity*

Given the inter-country heteroskedasticity across all of our variables, in our subsequent regressions, we studentise each variable on a country-by-country basis. This has the added advantage of making our regression coefficients comparable: a value of one indicates that a one standard deviation change in the explanatory variable leads to a one standard deviation change in the dependent variable.[8]

2.6. *Autocracies and democracies*

We separate autocracies from democracies using the Polity IV country reports (created by the Centre for Systemic Peace). Each country is given an annual score between -10 (complete autocracy) and 10 (complete democracy). We use a cutoff of 0, so that country-years with zero or negative values are autocracies, and country-years with positive values are democracies.

Our data has a mix of government types. All developed markets are democracies, except for Singapore, which is an autocracy. Hong Kong is missing from the Polity IV country reports, and we therefore exclude it from this breakdown. The emerging markets are mostly democratic. However, China, Oman, and Saudi Arabia are autocracies. Some emerging markets have also been autocracies at some points in our timeframe. Indonesia is an autocracy until 1998. Mexico is an autocracy until 1993. Thailand is an autocracy in 1991, as well as from 2006 to 2007.

[8] We studentise conditionally when working with subsamples. For example, when examining autocracies, a country is studentised based on means and standard deviations calculated using only those months when it was an autocracy.

3. Main Results

3.1. Policy uncertainty and economic conditions

We first examine the relationship between policy uncertainty and economic conditions. Following PV13, 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 policy uncertainty. The following model is used to analyse this relationship:

$$\textbf{Model 1}: P_{it} = a_t + bE_{it} + cP_{it-1} + \epsilon_{it}. \tag{1}$$

Policy uncertainty (P_{it}) is measured by the policy uncertainty index of Baker et al. (2015) and Brogaard et al. (2017). As discussed in Section 2, we use four measures of economic conditions (E_{it}) for each country: *Bond* is the difference in returns between US government bonds and country i government bonds, *IPG* is industrial production growth, *REC* is the recession dummy calculated from real gross domestic product following McConnell and Perez-Quiros (2000), and *PE* is the Shiller (2000) price to earnings ratio. Here our null hypothesis is that $b = 0$, with alternative hypothesis $b < 0$ supporting the PV13 model.[9]

[Table 3 about here.]

Table 3 contains the results from this regression. We find the strongest effects when using the REC and PE measures of economic performance. IPG, in particular, has completely statistically insignificant results. This suggests that it is protracted recessions that drive policy change, rather than individual monthly economic growth. The strength of the PE findings also suggests that financial market driven recessions are likely to be catalysts for policy change. The results for autocracies are very weak, suggesting that policy uncertainty is linked to economic performance for democratic governments, but not autocracies.

[9]In this, and our subsequent regressions, we include time fixed effects. Our studentisation of country level data renders country fixed effects unnecessary. We further cluster our standard errors across countries and time, following Cameron et al. (2011).

Since we studentise our data, the coefficients can be directly compared in order to gauge the economic significance of our findings. We note that the PE coefficients are considerably larger than the REC coefficients. Hence we conclude that, while both recession types are linked to policy uncertainty, financial (PE) recessions cause greater increases in uncertainty than real economy (REC) recessions.

3.2. Policy uncertainty increases risk

The second stage of our analysis investigates the link between policy uncertainty and stock volatility. Here we are testing three hypotheses. The first is that volatility increases as policy uncertainty increases. A change in economic policy will introduce uncertainty into the market, since a known policy is potentially being replaced with an unfamiliar policy. Increased policy uncertainty increases the dispersion in terms of possible future policies, and hence leads to increased stock volatility, since firm performance will depend on the success of the chosen policy.

The second hypothesis is that this policy uncertainty will be felt simultaneously across many stocks. As such, we would expect policy uncertainty to increase *correlation* in the market. This hypothesis establishes whether policy uncertainty causes systemic risk.

The third hypothesis, following from the second hypothesis, is that if systemic risk increases in the market, then the market price of risk should increase, since diversification will be less effective, and therefore financial assets will be more risky to hold. To test these hypotheses, we estimate the following model:

$$\textbf{Model 2}: VCR_{it} = a_t + bP_{it} + cVCR_{it-1} + \epsilon_{it}. \tag{2}$$

Here, VCR stands for either volatility, correlation, or the risk-premium (as described in Section 2.1). All three hypotheses are tested as a null hypothesis of $b = 0$ versus $b > 0$: the PV13 model suggests that increases in policy uncertainty should raise each of the risk measures.

[Table 4 about here.]

Table 4 shows that the international evidence on these three hypotheses is fairly strong. Developed markets and democracies have universal support for all three hypotheses: volatility, correlation, and risk-premia all rise in response to policy uncertainty. In autocracies, volatility increases, but there is evidence for neither correlation increases, nor risk premium increases. Lastly, emerging markets see systemic risk increase, but risk-premia do not increase, on average. In Section 3.3, however, we show that emerging markets are strongly affected by *conditional* policy uncertainty.

Examining coefficients, we find that the biggest effect on volatility and correlations is for the democratic subsample, while the biggest effect for risk premia is from the developed subsample.

3.3. Joint effects of policy uncertainty and economic conditions

We now consider our main result: the joint effect of economic shocks *and* policy uncertainty, on risk. Since policy changes are most likely to occur when there has been an economic downturn, these are likely to be the cases where policy uncertainty becomes more important for its role in increasing risk (volatility and correlation). If it is the case that *systemic* risk is also heightened by the combination of policy uncertainty and economic downturns, then we would expect to see *risk premia* rise in these circumstances. We thus test the following model:

$$\textbf{Model 3}: VCR_{it} = a_t + bP_{it}E_{it} + cP_{it} + dE_{it} + eVCR_{it-1} + \epsilon_{it} \tag{3}$$

In (3), VCR_{it} (as in Section 3.2) represents either volatility, correlation, or the k-month realised risk premium at time t. In particular, in each equation, we look for $b < 0$ as support for PV13: that the variable of interest is more sensitive to policy uncertainty during economic downturns.

[Table 5 about here.]

Table 5 shows the results for Model 3 for volatility increases. We note that when using REC as our economic measure, b is significantly negative for all subsamples, with the exception of autocracies. As was the case in Model 1 (Table 3), the results for *Bond* and IPG are generally insignificant. For the PE model, b is significant for the full sample, democracies, and emerging markets. Overall, we find 14 of the 20 b coefficients are negative, and of these, 8 are statistically significant. We note particularly strong effects for emerging markets, where all of our formulations except *Bond* have significant b coefficients. For developed markets, the results are less consistent, with only the REC formulation having a statistically significant b coefficient. The *Bond* model performs poorly across the board, with a positive coefficient for b for all subsamples.

We conclude that volatility is strongly affected by the combined effects of policy uncertainty and economic performance for non-autocratic countries, if economic performance is measured using recessions. If financial downturns (PE) are considered, these results are most prevalent in emerging markets and democracies.

[Table 6 about here.]

Table 6 contains the results for testing for an increase in correlation in response to a joint movement in political risk and economic outcomes. Here we obtain statistically significant b variables for the PE and REC models for the pooled sample, as well as if the sample is split into developed and emerging markets. However, breaking the sample into autocracies and democracies, b is only significant for democracies using PE (financial) downturns. On the strength of this table, *examining democracies*, we conclude that that the evidence of systemic risk rising in response to combined policy uncertainty and poor economic conditions is a fairly specialised phenomenon. It appears that only those recessions with strong financial drivers will result in increased systemic risk (as described in Schularick and Taylor (2012)). In Section 4.1, however, we show that weak democratic governments have significant b coefficients for both PE and REC measures, suggesting that the conditional policy risk effect is more universal for countries that have a tenuous government in power.

As mentioned earlier, if systemic risk grows in a market when policy uncertainty rises and economic conditions decline, then we would expect market participants to demand a higher risk premium. Our next test seeks to ascertain whether the market's expected excess return increases during these times. To do this, we regress realised market excess returns for 1 month, 3 month, 6 month, and 12 month horizons on our set of explanatory variables.

Table 7 presents the results of our risk-premium estimation. We focus on the b coefficient, since this is the critical parameter in the PV13 model. Most of the coefficients are insignificant. Indeed the only subsample with multiple significant coefficients are the emerging markets, using the IPG or PE measure of risk. Contrasting this to Table 4, we note that, in general, rises in policy uncertainty do not result in rises in risk-premia in emerging markets. However, when these are coupled with negative economic shocks, there are significiant changes in risk premia. This highlights the importance of the PV13 model in analysing the effects of policy uncertainty on financial markets.

Taking Table 7 and Table 6 together, we note that many cases exhibit heightened correlation in response to combined economic and policy shocks ($b < 0$ in Table 6). In particular, REC recessions see correlations rise for either developed or emerging subsamples. However, REC recessions combined with policy uncertainty do *not* see statistically significant increases in risk-premia (except for the three month horizon for developed markets). The results suggest that the only case where correlation risk is priced are emerging markets subject to PE or IPG risk (where in the latter case, the effects on correlation are not statistically significant).

[Table 7 about here.]

Our conclusion, based upon this coarse disection of countries, is that there is strong support for the PV13 hypothesis that volatility rises more when policy risk combines with economic downturns, strong support that systemic risk increases (except in autocracies), and little support for the hypothesis that risk-premia rise in these circumstances. One practical conclusion of this analysis is that investors may be subject to higher (systemic) risk when policy uncertainty coincides with economic downturns, and that this risk may *not* be compensated for with a higher risk premium.

In the following section, we first divide democracies into those with strong and those with weak governments, showing that the PV13 model holds very strongly for weak governments. We then consider alternative formulations of the data and models.

4. Robustness and extensions

4.1. Strong and weak governments

Our findings that autocratic governments do not conform with the PV13 model would come as no surprise given that they are unlikely to be "quasi-benevolent". Indeed the Political Science literature notes a reluctance of autocracies to engage in economic policy that will benefit their citizens (see Milner and Kubota (2005) or Rudra and Haggard (2005)). We turn our attention now to whether this finding (the failure of the PV13 model for autocracies) can be generalised by dividing democracies into those where there is a "strong" government or a "weak" government.

To define strong and weak governments, we follow Tsebelis (2002), and calculate a government's "spread". The spread measures the difference between the most right-leaning member of a coalition government's member parties and the most left-leaning member party. Given our interest in economic policy, we are concerned with left-right *economic* stance, and ignore other policy dimensions. This proxies for the extent to which government policy is subject to veto votes. We assume that governments who exist by compromise among disparate parties are likely to be more quasi-benevolent because (a) they must govern by compromise, and (b) they are in more danger of not being re-elected.

To measure the spread, we make use of two data sources. First, Döring and Manow (2015) provides information on electoral results for a large set of parliamentary governments. While they provide left-right statistics for the political parties in each of their states, they do not allow these to vary over time. As a result, we derive our left-right statistics for political parties from Polk et al. (2017), using their economic left-right statistic. Polk et al. (2017) survey a collection of political experts in each country to gauge the views of each political party. These surveys evaluated political parties in 1999, 2002, 2006, 2010, and 2014. Given that these opinions reflect the behaviour of the parties through to the end of the year examined, we treat the party statistics as updating at the end of each of the survey years. As noted above, we then calculate a spread for each government. Since our data is monthly, we exclude any month in which governments change, a caretaker government is in power, or the survey is updated (December). This leaves us with spreads for governments who were in power for the entire month, and therefore were unambiguously responsible for any policy changes that month.

We calculate the median spread over all country-months, and use this to divide the sample into strong governments (spread less than median) or weak governments (spread greater than median). By definition, a government by a single party is strong (spread 0).

Polk et al. (2017) cover the following countries: Austria, Belgium, Czech Republic, Germany, Denmark, Spain, Finland, France, UK, Greece, Hungary, Ireland, Italy, Netherlands, Poland, Portugal, and Sweden. Hence, in this section, as well as being constrained to cover the period post-1999, our data are also limited to this set of countries.

The results of the analysis are contained in Table 8. We focus our attention on the REC and PE measures of economic performance, since these are the most successful in our prior analyses.[10]

The regressions provide a very clear picture of the model's validity depending on government strength. First, we consider the case for strong governments. Model 1 produces insignificant results (economic downturns are not associated with policy uncertainty). Model 2 is only significant for the volatility term (policy uncertainty is not associated with systemic financial risk). Lastly, for Model 3, the conditional effect term b is insignificant for volatility, correlation and for all maturities of risk premium. In summary, the PV13 model does not hold in any form for strong governments.

In contrast, for weak governments, the results are overwhelmingly positive. Policy uncertainty rises during economic downturns (Model 1). Correlation, volatility and risk premia all rise when policy uncertainty rises (Model 2). Volatility and correlation both become more sensitive to policy uncertainty during economic downturns (Model 3). All these results hold

[10]Full results are available in our Online Appendix B.

for both REC and PE measures of economic performance. Lastly, with regard to risk premia, all maturity conditional effects are significant when using the PE measure (although none are significant using the REC measure).

We conclude that the PV13 model holds for weak (as measured by economic left-right spread of coalition members) democratic governments, but not for strong democratic governments or autocracies (see Section 3).

[Table 8 about here.]

4.2. Extending the sample

In addition to the EPU measure of policy uncertainty, 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 Moody's Investment Service offer country-by-country analysis of political risk. However, few of these agencies or institutes provide quantitative analysis, and most of are only updated semi-annually or annually. One series that *does* have monthly coverage, along with a wide degree of countries covered, is the International Country Risk Guide (ICRG), compiled by the PRS Group. According to ICRG researchers, the IMF, the World Bank, and other international financial institutions, the ICRG has become one of the world's most frequently used resources for evaluating and forecasting international risk. For example, Howell and Chaddick (1994) find that ICRG indices are more reliable and are better able to predict risk than other major political risk information providers.[11]

The political risk index consists of twelve variables: government stability, socioeconomic conditions, investment profile, internal conflict, external conflict, corruption, military in politics, religious tension, law and order, ethnic tension, democratic accountability, and bureaucracy

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

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.

From a theoretical perspective, the EPU measure more ideally fits the story told by the PV13 model. However, the broader coverage of the ICRG measure is appealing to enlarge the cross-section of countries that can be covered. In addition, we are able to cover a longer time-series with this measure, since it has been running for many countries since before the EPU index was calculated, and has been updated more recently.[12]

For robustness purposes, we therefore repeat our analysis from Section 3 to show that it is qualitatively similar when using the ICRG data. For brevity, we focus on only two measures of economic performance: REC and PE, since these proved the most successful when using the EPU policy uncertainty index.

Table 9 reprises the results of Models 1 and 2. Model 1 (estimating whether poor economic conditions are correlated with policy uncertainty) has a similar pattern of statistical significance to our results in Table 3. The only change here is that autocracies now register as having a significant relationship when using the PE ratio. However, while the significance is similar, coefficient estimates are smaller, reflecting a weaker link between the two variables. Given that ICRG's political risk index is a less accurate measure of the policy uncertainty we seek to model, this decline in economic significance should not be surprising.

Model 2 (linking volatility, correlation, and risk premia to policy uncertainty) fares somewhat worse. We note that there is no longer a significant coefficient for developed economies for risk premia, autocracies for volatility, or democracies for correlation. In general, however, our results remain reasonably robust, albeit with (as noted for Model 1) lower coefficients.

[Table 9 about here.]

[12]For the majority of countries, the ICRG data starts from January 1984, and ends for all countries in February 2014. For developed markets, we are able to add one more country (Luxembourg). Our sample increases from 22 to 35 for emerging markets, by allowing us to add the following countries: Bahrain, Colombia, Egypt, Jordan, Morocco, Nigeria, Pakistan, Peru, Slovakia, Sri Lanka, Taiwan, Venezuela, and Zambia. In total, the ICRG analysis uses 57 countries (as compared to 43 using the EPU measure). Of these extra countries, Bahrain, Egypt, Jordan, and Morocco are autocracies throughout the sample. Pakistan is an autocracy from 1999-2006, Peru from 1992-2000, Taiwan from 1987-1991, and Venezuela from 2009-2012.

The more complex relationships (Model 3, in its various forms) are reported in Table 10. Again, we abridge the results, to focus on the *REC* and *PE* measures of economic performance. For the conditional relationship between volatility and policy uncertainty/economic performance, we lose a considerable number of significant relationships. In particular, the *REC* model no longer has the correct sign for the interaction term (b) for the entire sample, emerging markets, or democracies. The *PE* model fares rather better, with significant parameter estimates for all subsamples except autocracies.

The correlations relationship (second block block of numbers in Table 10) sees a similar pattern of result changes. The *PE* form of the model is significant for developed markets, but not for emerging markets (contrary to the EPU results in Table 6), nor if the sample is split into democracies and autocracies. The *REC* results are only found to be significant for developed markets (whereas Table 6 found them to be significant for developed and emerging markets).

Finally, the risk premium results (last block of numbers in Table 10) finds consistent coefficients for the *REC* model for the pooled sample, mostly stemming from the emerging market subsample. Coefficient estimates are all negative for the *REC* measure, but often positive for the *PE* measure. Our results here seem strongest for the *REC* measure applied to emerging markets. This echoes our findings in Section 3, where pricing (risk premium) effects are concentrated in emerging markets.

We conclude that the PV13 model is best implemented using EPU as a measure of policy risk. However, the ICRG results are broadly supportive of our EPU findings.

[Table 10 about here.]

4.3. U.S. policy risk for all countries

One consideration in our analysis is that many countries may be substantially affected by United States economic policy, as discussed in Brogaard et al. (2017). To test whether this is the case, we re-estimate our model, replacing each country's individual Policy Uncertainty with that of the United States.

Our results, when making this substitution, are roughly comparable for Models 1 and 2.[13] For Model 1, the REC results are insignificant except for democracies, but PE results are significant (except, as in Table 3, for autocracies). For Model 2, the risk-premium model is insignificant for all subsamples. In contrast, in Table 4, when we used domestic policy uncertainty, the pooled sample, developed subsample, and democratic subsample all had significant b coefficients.

The results, however, for Model 3, are stronger in some circumstances. Using the PE and REC measures of economic performance, we obtain the results in Table 11. Results are notably stronger (as compared to Tables 5-7) for volatility in developed markets and democracies, although weaker for emerging markets. A similar trend carries over to correlation, where results are stronger for democracies and weaker for emerging markets. The most striking difference is to be found in the risk premia, however. Here there are consistent negative coefficients for the pooled sample, developed markets using REC, emerging markets using PE, and democracies using REC or PE. We conclude that the use of US policy risk may lead to more empirical support for the model when working with developed markets and democracies. In particular, conditional pricing (risk premium) effects of US policy risk are stronger than effects of domestic policy risk. This finding is consistent with the observation of Brogaard et al. (2017) that developed markets are generally more integrated internationally than emerging markets. Hence US policy shocks are likely to affect developed markets more strongly than emerging markets.

[Table 11 about here.]

4.4. Return moments

4.4.1. Idiosyncratic versus systemic volatility

We next decompose volatility into systemic and idiosyncratic components. We perform the decomposition by first forming a world-wide equally weighted portfolio return. For each country's

[13] These results are available in our Online Appendix C.

stock return index, for each month, we regress

$$r_{it} = \alpha_i + \beta_i r_t + \epsilon_{it},$$

where r_{it} is country i's daily return and r_t is the world-wide index daily return. We then calculate the idiosyncratic volatility for that country-month as the standard deviation of ϵ_{it} and the systemic volatility as $\beta_i \sigma_r$, where $\sigma_r = \text{Std}(r_t)$.

This decomposition allows us to check whether volatility generated as a result of policy risk increases the risk of diversified portfolios or not. We report our results in our Online Appendix D. Neither sets of results provide compelling evidence for one type of volatility shock over the other. In Model 2, both measures respond significantly to policy uncertainty shocks, with stronger responses from idiosyncratic volatility. For systemic volatility, in Model 3, we find significant b coefficients only for the use of IPG shocks (i.e. we do not find results for the REC and PE shocks as in our total volatility results), and then only for the pooled, emerging, and democratic subsamples. For idiosyncratic volatility, we find significant results for emerging markets using PE, and for developed markets and democracies using REC (both measures are significant for the pooled sample). We conclude that separating volatility into systemic and idiosyncratic components does not contribute much to the development of this model.

4.4.2. Value-weighted correlations

Our basic results use equally-weighted correlations to measure the degree of correlation in the markets. We repeat our regressions using value-weighted correlations. Table 12 reports Model 3 using value weighted correlations. Here we see comparable results with our main findings. There is slightly stronger support for the REC measure, but conversely, weaker results for the PE measure. For the pooled sample, using the REC measure, coefficients are considerably larger when using value weighted correlations. This suggests that there could be a slightly more economically significant relationship between policy uncertainty and value weighted correlations than is the case for equally weighted correlations. This in turn suggests that risk responses may be more concentrated in larger firms.

[Table 12 about here.]

4.5. Lags on economic variables

It is conceivable that economic events could take time to translate into policy responses. In this case, we might expect a longer lag length to be relevant in our estimation.

For most of our results, increasing the lag length on the economic shock variable results in insignificant coefficients; market responses are contemporaneous with policy shocks.[14] One notable exception to this, however, is the emerging markets subsample. The results for this subsample with Model 3 are reported in Table 13. The results (while generally weaker than those reported for emerging markets in Section 3) suggest that there may be a delayed effect between economic events and policy responses in emerging markets. It is interesting to note that, similar to our main results for other markets, while correlation and volatility effects are strong, there is little evidence of a risk-premium response.

We conclude that contemporaneous effects are more supportive of the PV13 model than lagged effects.

[Table 13 about here.]

4.6. Leverage effects on volatility

The leverage effect posits that if a firm suffers a negative return, the value of equity relative to debt declines, resulting in a higher level of volatility for the firm. If this is the case, then some of our results for rising volatility could be caused by declines in equity values. To check for this effect, we rerun our regressions for volatility, including a variable for lagged equity returns.

We find that the additional coefficient is not significant, except for using Model 3 with the *Bond* measure for autocracies. Our significant results from Table 5 (Model 3 with volatility as

[14] See Online Appendix E.

the dependent variable) remain significant, with the exception of IPG for emerging markets, where the b coefficient becomes insignificant. All b coefficients for Model 2 remain significant. We conclude that our results are not caused by leverage effects: volatility rises in response to declining economic conditions, over and above any effects due to declines in equity values.[15]

4.7. Extreme economic events

It is possible that only more extreme economic events would have a joint effect with policy risk, since these might be the most likely to promote a policy response. To check for this, we define an additional variable X_{it} such that $X_{it} = 1$ if E_{it} is three or more standard deviations below its mean, and $X_{it} = 0$ otherwise. We make this comparison using country i's data in the subsample, so this is a bad outcome relative to the country in question's performance (conditional on government type when splitting between democracies and autocracies). We then interact this term with E_{it} and $E_{it}P_{it}$ to produce the following regression:

$$VCR_{it} = a_t + bP_{it}E_{it} + cP_{it} + dE_{it} + eP_{it}E_{it}X_{it} + fP_{it}X_{it} + gVCR_{it-1} + \epsilon_{it}.$$

By examining the e and f terms, we can see if more extreme economic events are more likely to cause policy risk to either be important (f) or be important in conjunction with downturns (e).[16]

The most striking set of results with this formulation of the model is for the PE variable. In Table 14, we report the findings for this reformulation of Model 3. We note strong positive e coefficients for emerging markets and autocracies. In these two subsamples, large economic shocks have a smaller (proportional) effect when combined with a rise in policy uncertainty. In contrast, the f coefficient is significantly negative for the pooled sample when considering correlation and the 1 month, 3 month, and 12 month risk premia. Here we conclude that there is some evidence of a conditional policy uncertainty risk premium response (for the full sample),

[15]Full results are available in our Online Appendix F.

[16]For consistency with our earlier work, we studentise all variables on a country-by-country basis, including those interacted with X_{it}.

but this is only seen during extreme economic events. For autocracies, f is negative for volatility and positive for correlations, suggesting that in autocracies, there may be a conditional policy effect on volatility, but it does not increase systemic risk, and it only occurs during extreme economic shocks.

We conclude that policy uncertainty may have a bigger impact on risk during extreme economic conditions ($f < 0$), but that the PV13 story does not grow proportionally for major crises in emerging markets and autocracies ($e > 0$).

[Table 14 about here.]

5. Conclusion

Using a large dataset of 21 developed and 22 emerging markets, we test the Pástor and Veronesi (2013) hypothesis that policy risk becomes more important when economic conditions worsen. Our results allow us to make some comments regarding which economies are likely to behave in a consistent fashion with the PV13 model, and which implementations (in terms of measuring economic risk) fare well.

Unlike for the US results, we find less support for a model using a bond-based or IPG based measure of economic performance. Our strongest results follow from the use of either McConnell and Perez-Quiros (2000) measure of recessions or a Price/Earnings ratio measure.

We find evidence of conditional volatility and correlation responses, for both developed and emerging markets. However, when splitting the data into democracies versus autocracies, we find little to no conditional responses for autocracies. Given the PV13 assumption of a quasi-benevolent government, this may not be surprising. We further explore this issue by splitting democracies into strong and weak governments (with weakness characterised by the spread between coalition partners' economic views). We show that the PV13 model only works for weak democratic governments, but then it works very well.

In terms of pricing of this risk, we find our strongest risk premium effects occur in emerging markets (as well as weak democracies). For other cases, there is limited evidence of a risk premium response (in spite of heightened systemic risk from conditional policy risk). The notable exception is responses to US policy uncertainty. These are priced in developed markets and democracies. There is also some evidence of a heightened risk-premium when the economic shocks are extreme.

We consider several other extensions/alternative formulations of the model. For the most part, these are consistent with our main findings. In particular, our results are robust to extending the sample using the ICRG political risk dataset in place of the Economic Policy Uncertainty index, although results using ICRG measues of political risk are weaker, and we recommend use of EPU for the implementation of the PV13 model.

Our findings in this paper are important for the policy/financial community. Policy makers who are concerned about market volatility should be aware that clear policy announcements are important during times of economic crisis. On the other hand, investors and risk managers should be cautious of policy risk during crises, particularly in developed markets, where there may be a rise in risk, with little compensatory rise in risk premia.

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Appendix A. Description of the Brogaard et al. Policy Uncertainty data

The following is adapted from earlier drafts of Brogaard et al. (2017):

Access World News, a large database of archived news stories from around the globe, is used to create the policy uncertainty measure. For each month and each country, the frequency of articles describing economic policy uncertainty is collected. For an article to be an EPU article, it must meet two criteria. First, to capture uncertainty, the article must contain at least one of the following terms or its derivation: *ambiguous, indecision, indefinite, indeterminate, questionable, speculative, uncertain, unclear, unconfirmed, undecided, unresolved, unsure, vague*, or *variable*. Second, the article must discuss economic policy. In particular, one of the following key terms must be used in an article to count as an article related to economic policy uncertainty: *budget, central bank, deficit, Federal Reserve, policy, regulation, spend*, or *tax*.

For each word, its various deviations are also allowed, such as "regulate" or "regulatory," to satisfy the policy discussion requirement. The Access World News database is mined for key terms in the texts of the archives. Possible news sources are restricted to magazines or newspapers and the search is performed for every month from January 1990 to December 2012. To control for the increased volume of news and digitised news over time, the raw economic policy uncertainty article count is scaled by the total number of news articles in a given month captured by Access World News. Finally, the ratio is multiplied by 100 and annualised by taking the logarithm of the average monthly ratio in a given year.

List of Tables

Table 1: Descriptive Statistics of Monthly Returns and Policy Uncertainty

Summary statistics for excess returns and policy uncertainty index, for 21 developed and 22 emerging equity markets. Excess returns are calculated by subtracting the US one month T-bill rate from the country's value weighted equity market returns (in $US). The first two columns report date range (start and end) and the average number of firms in each country. The third and fourth column reports the monthly mean and standard deviation. The last two columns presents the statistics from the policy uncertainty index from Baker et al. (2015) and Brogaard et al. (2017). We scale both indices down by 100.

			Stock Returns		Policy Uncertainty	
	Date Range	Firms	Mean	SD	Mean	SD
Developed						
Australia	98:01 to 14:02	1372	0.0136	0.0662	1.9324	0.2514
Austria	90:01 to 12:03	103	0.0110	0.0668	2.4203	0.3081
Belgium	90:01 to 12:03	164	0.0103	0.0547	2.5617	0.3324
Canada	85:01 to 14:02	1412	0.0344	0.0908	1.9951	0.2124
Denmark	90:01 to 12:03	211	0.0137	0.0546	2.5265	0.3055
Finland	90:01 to 12:03	119	0.0157	0.0157	2.0965	0.1457
France	87:01 to 14:02	809	0.0140	0.1029	1.9964	0.2615
Germany	93:01 to 14:02	1041	0.0146	0.0594	2.0010	0.8481
Hong Kong	90:01 to 12:03	719	0.0191	0.0778	3.2572	0.2639
Ireland	90:01 to 12:03	52	0.0119	0.0804	2.4659	0.2064
Italy	97:01 to 14:02	279	0.0120	0.0703	2.0074	0.9778
Japan	88:06 to 14:02	2429	0.0078	0.0621	1.9753	0.1490
Netherlands	03:03 to 14:02	131	0.0143	0.0597	1.9600	0.1924
New Zealand	90:01 to 12:03	116	0.0146	0.0588	2.3782	0.2068
Norway	90:01 to 12:03	175	0.0167	0.0727	2.4723	0.2104
Singapore	90:01 to 12:03	371	0.0136	0.0666	3.1567	0.2777
Spain	01:01 to 14:02	134	0.0119	0.0724	1.9746	1.0000
Sweden	90:01 to 12:03	345	0.0168	0.0818	2.3680	0.3042
Switzerland	90:01 to 12:03	251	0.0121	0.0473	2.6646	0.2573
United Kingdom	97:01 to 14:02	1625	0.0123	0.0477	2.0194	0.9990
United States	85:01 to 14:02	4383	0.0107	0.0796	2.0097	0.1462
Emerging						
Argentina	90:01 to 12:12	59	0.0202	0.1116	2.4433	0.3188
Brazil	94:08 to 12:03	215	0.0284	0.1109	2.6286	0.3536
Chile	90:01 to 12:03	209	0.0210	0.0782	2.7711	0.2975
China	95:01 to 14:02	1266	0.0197	0.0881	1.9594	0.2646
Czech Republic	93:07 to 12:03	95	0.0198	0.0944	2.3040	0.3288
Greece	90:01 to 12:12	224	0.0145	0.1034	2.4775	0.1210
Hungary	91:10 to 12:12	38	0.0168	0.1019	2.5558	0.2980
India	03:01 to 14:02	1281	0.0288	0.0993	1.9446	0.2468
Indonesia	90:05 to 12:12	194	0.0235	0.1150	3.1845	0.3753
Israel	90:01 to 12:12	485	0.0125	0.0611	2.7678	0.1782
Korea	90:01 to 14:02	712	0.0200	0.1080	2.5898	0.2588
Malaysia	90:01 to 12:03	652	0.0158	0.0887	2.9477	0.3670
Mexico	90:02 to 12:03	127	0.0211	0.0845	2.6718	0.1696
Oman	04:06 to 12:03	93	0.0096	0.0528	2.8062	0.4139
Philippines	90:01 to 12:03	187	0.0184	0.0817	2.6544	0.5290
Poland	91:05 to 12:03	129	0.0180	0.1118	2.4631	0.2788
Portugal	90:01 to 12:12	98	0.0102	0.0640	2.5923	0.4266
Russia	94:06 to 14:02	128	0.0433	0.1275	1.9522	0.2911
Saudi Arabia	99:11 to 12:12	75	0.0197	0.0826	3.1591	0.3578
South Africa	90:01 to 12:03	408	0.0172	0.0733	2.6802	0.1997
Thailand	90:01 to 12:12	406	0.0191	0.1041	2.8385	0.2935
Turkey	90:01 to 12:12	247	0.0323	0.1520	2.5515	0.2409

Table 2: Descriptive Statistics

Policy uncertainty is proxied by the policy uncertainty index of Baker et al. (2015) and Brogaard et al. (2017), which we scale down by 100. The four measures of economic conditions are as follows: Bond spread is the difference in returns between US government bonds and country i government bonds, Industrial production is Industrial Production Growth (IPG), Recession dummy is the 0/-1 indicator for being in a recession generated using the McConnell and Perez-Quiros (2000) model, Price to earnings is Shiller's price to earning ratio, calculated from all the firms in the sample for each country. Volatility is calculated from the daily returns of the stock included in each country, whereas the measure of stock correlation is the equally weighted average of pairwise correlation for all the stocks in the sample of each country. Excess returns are calculated using the returns of the value weighted market portfolio and subtracting the return from holding a one month US T-bill.

	Pooled		Developed		Emerging	
Variables	Mean	SD	Mean	SD	Mean	SD
Policy Uncertainty	2.6342	0.3555	2.5859	0.3401	2.6853	0.3642
Bond spread	-0.0001	0.0379	0.0000	0.0294	-0.0015	0.0492
Industrial production	0.0032	0.0567	0.0025	0.0479	0.0042	0.0654
Recession dummy (-)	-0.2532	0.4349	-0.2289	0.4202	-0.2817	0.4498
Price to earnings	13.7016	7.3753	13.7398	6.9094	13.6567	7.8889
Equally weighted correlation	0.2535	0.1787	0.2164	0.1504	0.2927	0.1969
Volatility	0.0150	0.1016	0.0121	0.0070	0.0181	0.1454
Excess returns	0.0170	0.0841	0.0142	0.0669	0.0199	0.0989

Table 3: Policy Uncertainty and Economic Conditions

This table reports the estimated coefficient of $\boldsymbol{b}$ from Model 1: $\boldsymbol{P_{it} = a_t + bE_{it} + cP_{it-1} + \epsilon_{it}}$ ($\boldsymbol{a_t}$ incorporates time fixed effects). Policy uncertainty $\boldsymbol{P_{it}}$ is proxied by the policy uncertainty index of Baker et al. (2015) and Brogaard et al. (2017). We use four measures of economic conditions $\boldsymbol{E_{it}}$ for each country: *Bond* is the difference in returns between US government bonds and country i government bonds, *IPG* is industrial production growth, *REC* is the recession dummy, which is calculated from the real gross domestic product by using the McConnell and Perez-Quiros (2000) model, and *PE* is the Shiller (2000) price to earning ratio, calculated from all the firms in the sample for each country. The t-statistics reported in parentheses are computed using two way clustering (over time and country).

	Bond	IPG	REC	PE
Pooled				
b	0.0149	0.0059	-0.0151	-0.0508
	(1.12)	(0.67)	**(-2.67)**	**(-5.19)**
N	8064	10276	10146	10341
R^2	0.4235	0.3881	0.3892	0.3978
$Adj R^2$	0.4009	0.3692	0.3701	0.3793
Developed				
b	-0.0231	0.0183	-0.0261	-0.0541
	(-1.95)	(1.56)	**(-1.99)**	**(-3.49)**
N	5071	5502	5477	5586
R^2	0.4527	0.4421	0.4497	0.4471
$Adj R^2$	0.4199	0.4114	0.4193	0.4171
Emerging				
b	0.0117	0.0082	-0.0503	-0.0639
	(0.57)	(0.65)	**(-2.04)**	**(-4.69)**
N	2993	4774	4669	4755
R^2	0.4360	0.3859	0.3842	0.4074
$Adj R^2$	0.3841	0.3465	0.3439	0.3693
Autocracy				
b	0.0314	0.0235	0.0188	-0.0187
	(0.83)	(1.07)	(0.87)	(-0.88)
N	1079	2032	1884	1944
R^2	0.4613	0.3611	0.3682	0.4049
$Adj R^2$	0.3287	0.2589	0.2583	0.3051
Democracy				
b	-0.0119	-0.0075	-0.0125	-0.0533
	(-1.87)	(-0.08)	**(-1.98)**	**(-4.73)**
N	6981	7967	7985	8120
R^2	0.4360	0.4164	0.4171	0.4177
$Adj R^2$	0.4107	0.3934	0.3941	0.3953

Table 4: Policy Uncertainty, Volatility and Correlation

Estimated coefficient $\boldsymbol{b}$ from Model 2: $\boldsymbol{VCR_{it} = a_t + bP_{it} + cVCR_{it-1} + \epsilon_{it}}$ ($\boldsymbol{a_t}$ incorporates time fixed effects). $\boldsymbol{VCR_{it}}$ stands for volatility, correlation, or risk-premium. The volatility is calculated from the value weighted daily returns of each country's stocks, whereas the measure of stock correlation is the equally weighted average of pairwise correlation for all the stocks in the sample of each country. The risk-premium is proxied by the realised value weighted stock return. Policy uncertainty ($\boldsymbol{P_{it}}$) is measured as in Table 3. Standard errors are calculated using two-way clustering (over time and country).

	Volatility	Correlation	Risk Premia
Pooled			
b	0.0772	0.0366	0.0293
	(7.04)	**(2.74)**	**(2.86)**
N	10876	10872	10873
R^2	0.5845	0.3322	0.4524
$AdjR^2$	0.5723	0.3126	0.4364
Developed			
b	0.0560	0.0376	0.0416
	(5.47)	**(2.19)**	**(3.75)**
N	5586	5586	5586
R^2	0.7809	0.4581	0.6281
$AdjR^2$	0.7691	0.4287	0.6079
Emerging			
b	0.0906	0.0336	-0.0071
	(5.64)	**(2.11)**	(-0.46)
N	5290	5286	5287
R^2	0.4448	0.2839	0.3587
$AdjR^2$	0.4129	0.2426	0.3218
Autocracy			
b	0.0952	0.0164	-0.0165
	(4.32)	(1.22)	(-0.80)
N	2159	2155	2157
R^2	0.4992	0.3022	0.3694
$AdjR^2$	0.4245	0.1979	0.2752
Democracy			
b	0.1685	0.0823	0.0322
	(6.12)	**(3.31)**	**(2.82)**
N	8440	8440	8439
R^2	0.6617	0.3899	0.5155
$AdjR^2$	0.6491	0.3673	0.4975

Table 5: Policy Uncertainty, Stock Market Volatility and Economic Conditions
Estimated coefficients $\boldsymbol{b}$, $\boldsymbol{c}$, and $\boldsymbol{d}$ from Model 3: $\boldsymbol{Vol_{it} = a_t + bP_{it}E_{it} + cP_{it} + dE_{it} + eVol_{it-1} + \epsilon_{it}}$ ($\boldsymbol{a_t}$ incorporates time fixed effects). Volatility ($\boldsymbol{Vol_{it}}$) is as described in Table 4. Policy uncertainty $\boldsymbol{P_{it}}$, along with our four measures of economic conditions $\boldsymbol{E_{it}}$ for each country, are as described in Table 3. The t-statistics reported in parenthesis are computed using two way clustered standard errors (over time and country).

	Bond	IPG	REC	PE	Bond	IPG	REC	PE
	Pooled							
b	0.0841	-0.1522	-0.3188	-0.1192				
	(0.77)	(-1.28)	**(-2.53)**	**(-2.48)**				
c	0.0641	0.0698	0.0689	0.1009				
	(6.60)	**(6.79)**	**(6.17)**	**(6.07)**				
d	-0.0576	0.1253	-0.3013	-0.0945				
	(-0.56)	(1.08)	**(-2.51)**	**(-1.97)**				
N	8064	10275	10146	10341				
R^2	0.6707	0.5989	0.5998	0.5991				
$AdjR^2$	0.6577	0.5864	0.5872	0.5868				
	Developed				**Emerging**			
b	0.0845	-0.1457	-0.2647	0.0082	0.0258	-0.0529	-0.3657	-0.2227
	(0.59)	(-1.37)	**(-3.28)**	(0.17)	(0.13)	**(-2.27)**	**(-2.01)**	**(-2.49)**
c	0.0517	0.0581	0.0418	0.0558	0.0918	0.0801	0.0928	0.1362
	(5.02)	**(5.66)**	**(3.69)**	**(3.74)**	**(4.83)**	**(4.76)**	**(5.45)**	**(4.99)**
d	-0.0421	0.1203	-0.2598	0.0131	-0.0155	0.0381	-0.3529	-0.1747
	(-0.31)	(1.19)	**(-3.31)**	(0.27)	(-0.08)	(0.19)	**(-1.99)**	**(-1.98)**
N	5071	5502	5477	5586	2993	4773	4669	4755
R^2	0.7970	0.7854	0.7824	0.7812	0.5202	0.4499	0.4575	0.4536
$AdjR^2$	0.7848	0.7735	0.7702	0.7693	0.4756	0.4143	0.4217	0.4182
	Autocracy				**Democracy**			
b	0.3789	-0.0769	-0.0654	-0.1557	0.0031	-0.1322	-0.2979	-0.0680
	(0.94)	(-0.29)	(-0.24)	(-0.99)	(0.03)	(-0.98)	**(-3.11)**	**(-1.95)**
c	0.0814	0.0849	0.0901	0.1164	0.0599	0.0602	0.0639	0.0830
	(2.52)	**(3.60)**	**(3.42)**	**(2.87)**	**(6.14)**	**(5.85)**	**(5.56)**	**(5.40)**
d	-0.3394	0.0925	0.0347	0.0580	0.0172	0.1021	-0.2859	0.0581
	(-0.87)	(0.36)	(0.13)	(0.37)	(0.16)	(0.77)	**(-3.12)**	(1.24)
N	1079	2031	1884	1944	6981	7967	7985	8120
R^2	0.5486	0.5035	0.5102	0.5212	0.7215	0.6810	0.6794	0.6775
$AdjR^2$	0.4361	0.4234	0.4242	0.4402	0.7089	0.6684	0.6667	0.6649

Table 6: Policy Uncertainty, Stock Market Correlation and Economic Conditions
Estimated coefficients $\boldsymbol{b}$, $\boldsymbol{c}$, and $\boldsymbol{d}$ from Model 3: $\boldsymbol{Pwc_{it} = a_t + bP_{it}E_{it} + cP_{it} + dE_{it} + ePwc_{it-1} + \epsilon_{it}}$ ($\boldsymbol{a_t}$ incorporates time fixed effects). Correlation ($\boldsymbol{Pwc_{it}}$) is as described in Table 4. Policy uncertainty $\boldsymbol{P_{it}}$, along with our four measures of economic conditions $\boldsymbol{E_{it}}$ for each country, are as described in Table 3. The t-statistics reported in parenthesis are computed using two way clustered standard errors (over time and country).

	Bond	IPG	REC	PE	Bond	IPG	REC	PE
	Pooled							
b	0.0085	-0.0903	-0.1091	-0.1398				
	(0.05)	(-0.78)	**(-2.04)**	**(-2.59)**				
c	0.0293	0.0449	0.0374	0.0643				
	(2.19)	**(3.46)**	**(2.84)**	**(3.42)**				
d	0.0259	0.0689	0.0882	-0.1156				
	(0.14)	(0.59)	(0.86)	**(-2.19)**				
N	8064	10271	10146	10341				
R^2	0.3832	0.3377	0.3407	0.3490				
$Adj R^2$	0.3588	0.3170	0.3199	0.3289				
	Developed				**Emerging**			
b	0.1081	-0.0682	-0.1345	-0.0792	-0.0925	-0.0943	-0.0505	-0.1161
	(0.51)	(-0.42)	**(-2.97)**	**(-2.21)**	(-0.40)	(-0.57)	**(-1.88)**	**(-2.23)**
c	0.0364	0.0407	0.0302	0.0570	0.0309	0.0499	0.0440	0.0540
	(2.43)	**(2.39)**	**(1.92)**	**(2.46)**	(1.27)	**(2.99)**	**(2.43)**	**(1.95)**
d	-0.0523	0.0542	0.1081	0.0912	0.1128	0.0658	0.0438	0.1038
	(-0.25)	(0.34)	(0.79)	(1.38)	(0.49)	(0.40)	(0.33)	(1.13)
N	5071	5502	5477	5586	2993	4769	4669	4755
R^2	0.4834	0.4599	0.4584	0.4583	0.3059	0.2784	0.2908	0.3076
$Adj R^2$	0.4523	0.4299	0.4282	0.4288	0.2415	0.2317	0.2440	0.2628
	Autocracy				**Democracy**			
b	0.0690	-0.0368	0.2477	-0.1955	-0.0253	-0.1529	-0.0327	-0.1185
	(0.15)	(-0.14)	(0.95)	(-1.14)	(-0.14)	(-1.20)	(-0.30)	**(-2.11)**
c	0.0371	0.0678	0.0953	0.1083	0.0303	0.0301	0.0231	0.0414
	(0.93)	**(2.63)**	**(3.20)**	**(2.48)**	**(2.13)**	**(2.26)**	**(1.72)**	**(2.16)**
d	-0.0270	0.0211	-0.2789	0.1254	0.0586	0.1349	0.0269	-0.1048
	(-0.06)	(0.08)	(-1.07)	(0.76)	(0.32)	(1.06)	(0.26)	**(-1.84)**
N	1079	2027	1884	1944	6981	7967	7985	8120
R^2	0.3467	0.3024	0.3262	0.3299	0.4237	0.3969	0.3975	0.4068
$Adj R^2$	0.1839	0.1896	0.2081	0.2166	0.3977	0.3730	0.3737	0.3838

Table 7: Policy Uncertainty and Equity Risk Premia

Estimated coefficients $\boldsymbol{b}$ from Model 3: $\boldsymbol{ER_{it} = a_t + bP_{it}E_{it} + cP_{it} + dE_{it} + eER_{it-1} + \epsilon_{it}}$ ($\boldsymbol{a_t}$ incorporates time fixed effects). The equity risk premium ($\boldsymbol{ER_{it}}$) is as described in Table 4. Policy uncertainty $\boldsymbol{P_{it}}$, along with our four measures of economic conditions $\boldsymbol{E_{it}}$ for each country, are as described in Table 3. The t-statistics reported in parenthesis are computed using two way clustered standard errors (over time and country).

	Bond	IPG	REC	PE	Bond	IPG	REC	PE
	Pooled							
1 month	-0.0436	-0.1572	0.0032	0.0263				
	(-0.36)	(-1.42)	(0.03)	(0.48)				
3 months	-0.0510	-0.0981	0.0272	-0.0061				
	(-0.68)	**(-1.89)**	(0.48)	(-0.16)				
6 months	0.0267	-0.0756	0.0696	0.0100				
	(0.51)	**(-1.93)**	(1.24)	(0.36)				
12 months	0.0192	-0.0419	-0.0204	-0.0077				
	(0.48)	**(-2.20)**	(-0.68)	(-0.36)				
	Developed				**Emerging**			
1 month	-0.0274	-0.0550	0.1447	-0.0238	-0.1318	-0.2955	-0.2252	-0.2267
	(-0.21)	(-0.47)	(1.36)	(-0.42)	(-0.55)	**(-1.78)**	(-1.16)	**(-2.33)**
3 months	-0.0110	0.0697	-0.1975	-0.0334	0.0450	-0.2629	-0.1538	-0.1296
	(-0.14)	(0.93)	**(-3.32)**	(-0.81)	(0.29)	**(-2.85)**	(-1.33)	**(-2.19)**
6 months	0.0531	-0.0771	0.0812	-0.0163	-0.0007	-0.1041	0.0479	-0.0875
	0.90	(-1.35)	(1.59)	(-0.58)	(-0.01)	(-1.58)	(0.50)	**(-2.03)**
12 months	0.0382	-0.0016	-0.0252	-0.0119	-0.0110	-0.1172	-0.0405	-0.0121
	(0.80)	(-0.04)	(-0.73)	(-0.56)	(-0.15)	**(-2.17)**	(-0.90)	(-0.29)
	Autocracy				**Democracy**			
1 month	-0.1495	-0.0152	-0.1944	0.1407	-0.1134	-0.0757	-0.0194	0.0151
	(-0.39)	(-0.06)	(-0.70)	(0.87)	(-0.86)	(-0.60)	(-0.18)	(0.28)
3 months	0.1639	-0.0497	-0.0405	-0.0207	-0.0761	-0.0501	0.0061	-0.0025
	(0.59)	(-0.29)	(-0.22)	(-0.18)	(-0.92)	(-0.73)	(0.09)	(-0.07)
6 months	0.0504	0.0049	-0.0289	-0.0186	0.0239	-0.0355	0.0793	0.0006
	(0.23)	(0.04)	(-0.21)	(-0.21)	(0.38)	(-0.68)	(1.22)	(0.02)
12 months	0.1375	-0.0329	-0.0616	-0.0146	-0.0055	-0.0393	-0.0384	-0.0265
	(0.91)	(-0.38)	(-0.57)	(-0.17)	(-0.13)	(-1.00)	(-1.22)	(-1.32)

Table 8: Strong and Weak Governments

The upper part of this table reports the estimated coefficient of $\boldsymbol{b}$ from Model 1: $\boldsymbol{P_{it} = a_t + bE_{it} + cP_{it-1} + \epsilon_{it}}$. The second part reports the estimated coefficients of $\boldsymbol{b}$ from Model 2: $\boldsymbol{VCR_{it} = a_t + bP_{it} + cVC_{it-1} + \epsilon_{it}}$. The last part reports the estimated coefficients $\boldsymbol{b}$, $\boldsymbol{c}$, and $\boldsymbol{d}$ from Model 3: $\boldsymbol{VCR_{it} = a_t + bP_{it}E_{it} + cP_{it} + dE_{it} + eVCR_{it-1} + \epsilon_{it}}$, except for risk premia, where only $\boldsymbol{b}$ is reported. Variables are as described in Table 3 (Model 1), Table 4 (Model 2), and Tables 5-7 (Model 3). In all cases $\boldsymbol{a_t}$ incorporates time fixed effects, and the standard errors are computed using two way clustering (over time and country).

	Model 1			
	Strong		Weak	
	REC	PE	REC	PE
b	-0.0075	-0.0621	-0.0039	-0.1967
	(-0.28)	(-1.60)	**(-2.12)**	**(-5.90)**
N	1073	1087	1049	1049
R^2	0.5324	0.5581	0.3973	0.3996
$AdjR^2$	0.4633	0.4828	0.3996	0.2914

	Model 2: Volatility		**Model 2: Correlation**		**Model 2: Risk premia**	
	Strong	Weak	Strong	Weak	Strong	Weak
b	0.0685	0.0914	0.0709	0.0480	0.0701	0.0851
	(2.98)	**(2.46)**	(1.08)	**(2.20)**	(1.61)	**(2.34)**
N	1087	1049	1087	1049	1087	1049
R^2	0.8119	0.6790	0.5348	0.4838	0.6949	0.4996
$AdjR^2$	0.7799	0.6212	0.4556	0.3907	0.6429	0.4095

	Model 3: Volatility				**Model 3: Correlation**			
	Strong		Weak		Strong		Weak	
	REC	PE	REC	PE	REC	PE	REC	PE
b	0.1587	-0.1492	-0.7598	-0.1543	0.2018	-0.1178	-0.8928	-0.3302
	(0.85)	(-1.56)	**(-2.14)**	**(-2.74)**	(0.85)	(-1.10)	**(-2.37)**	**(-1.84)**
c	0.0830	0.0990	0.0565	0.1270	0.0967	0.0789	0.0071	0.1258
	(3.08)	**(3.14)**	**(1.73)**	**(1.77)**	**(2.16)**	(1.52)	(0.20)	**(1.69)**
d	-0.1716	0.0320	-0.7015	-0.0615	-0.2301	-0.0470	0.8500	0.1899
	(-0.93)	(0.32)	**(-2.08)**	(-0.30)	(-0.94)	(-0.41)	**(2.28)**	(1.16)
N	1073	1087	1049	1049	1073	1087	1049	1049
R^2	0.8190	0.8175	0.6844	0.6840	0.5493	0.5449	0.4896	0.4963
$AdjR^2$	0.7872	0.7859	0.6267	0.6262	0.4703	0.4662	0.3963	0.4042

	Model 3: Risk premia			
	Strong		Weak	
	REC	PE	REC	PE
1 mth.	-0.2578	0.0134	0.2761	-0.2507
	(-1.06)	(0.17)	(0.85)	**(-1.67)**
3 mth.	-0.2115	0.0008	0.2792	-0.1322
	(-1.52)	(0.01)	(1.35)	**(-2.19)**
6 mth.	-0.0336	-0.0885	-0.1656	-0.0677
	(-0.27)	(-1.62)	(-0.97)	**(-1.79)**
12 mth.	-0.1704	-0.0567	-0.1111	-0.0704
	(-1.78)	(-0.55)	(-0.88)	**(-1.88)**

Table 9: ICRG Results: Models 1 and 2

First column reports the estimated coefficient of $\boldsymbol{b}$ from Model 1: $\boldsymbol{P_{it} = a_t + bE_{it} + cP_{it-1} + \epsilon_{it}}$. Second column reports the estimated coefficient of $\boldsymbol{b}$ from Model 2: $\boldsymbol{VCR_{it} = a_t + bP_{it} + cVC_{it-1} + \epsilon_{it}}$. Variables are as described in Table 3 (Model 1) and 4 (Model 2), except that $\boldsymbol{P_{it}}$ is measured as the political risk index from the international country risk guide. In both cases $\boldsymbol{a_t}$ incorporates time fixed effects, and the standard errors are computed using two way clustering (over time and country).

	Model 1		**Model 2**		
	REC	PE	Volatility	Correlation	Risk Premium
Pooled					
b	-0.0041	-0.0129	0.0154	0.0175	0.0203
	(-2.17)	**(-5.08)**	**(1.89)**	**(1.76)**	**(2.15)**
N	14877	15260	16977	16898	16958
R^2	0.95245	0.95067	0.4933	0.2895	0.3490
$Adj\,R^2$	0.9511	0.9493	0.4806	0.2715	0.3325
Developed					
b	-0.0074	-0.0113	0.0176	0.0223	0.0136
	(-2.7)	**(-3.38)**	**(2.01)**	**(1.71)**	(1.24)
N	7441	7469	7772	7758	7768
R^2	0.9562	0.9541	0.7299	0.4069	0.5564
$Adj\,R^2$	0.9538	0.9517	0.7159	0.3762	0.5334
Emerging					
b	-0.0161	-0.0132	0.0187	0.0361	0.01936
	(-2.22)	**(-3.81)**	**(1.72)**	**(2.55)**	(1.45)
N	7436	7791	9205	9140	9190
R^2	0.9517	0.9502	0.3725	0.2594	0.2588
$Adj\,R^2$	0.9490	0.9476	0.3443	0.2259	0.2255
Autocracy					
b	0.0027	-0.0175	0.0185	0.0202	0.0320
	(0.52)	**(-2.97)**	(1.09)	(1.01)	(1.09)
N	2972	3241	4000	3962	3993
R^2	0.9465	0.9401	0.4069	0.2541	0.2798
$Adj\,R^2$	0.9386	0.9323	0.3436	0.1737	0.2027
Democracy					
b	-0.0045	-0.0159	0.0068	0.0098	0.0223
	(-1.98)	**(-4.46)**	**(1.83)**	(0.92)	**(2.31)**
N	11888	12002	12958	12919	12947
R^2	0.9402	0.9405	0.5728	0.3303	0.4205
$Adj\,R^2$	0.9381	0.9385	0.5589	0.3084	0.4016

Table 10: ICRG Results: Model 3

Estimated coefficients $\boldsymbol{b}$, $\boldsymbol{c}$, and $\boldsymbol{d}$ from Model 3: $\boldsymbol{VCR_{it} = a_t + bP_{it}E_{it} + cP_{it} + dE_{it} + eVCR_{it-1} + \epsilon_{it}}$ ($\boldsymbol{a_t}$ incorporates time fixed effects). Variables are as described in Tables 5-7, except that $\boldsymbol{P_{it}}$ is the political risk index from the international country risk guide. The t-statistics reported in parentheses are computed using two way clustered standard errors (over time and country).

	Pooled		**Developed**		**Emerging**		**Autocracy**		**Democracy**	
	REC	PE	REC	PE	REC	PE	REC	PE	REC	PE
					Model 3: Volatility					
b	0.0532	-0.0361	-0.0985	-0.0675	-0.0298	-0.0167	0.0709	0.1352	-0.0121	-0.0264
	(1.49)	**(-1.71)**	**(-2.15)**	**(-2.72)**	(-0.52)	**(-2.45)**	(0.45)	(0.92)	(-0.41)	**(-1.89)**
c	0.0274	0.0102	0.0098	0.0505	0.0412	0.0039	-0.0066	-0.0031	0.0053	-0.0122
	(2.58)	**(2.76)**	(0.68)	**(2.46)**	**(2.67)**	(0.24)	(-0.28)	(-0.11)	(0.61)	(-1.09)
d	-0.0739	-0.0509	-0.1314	-0.0697	0.0183	-0.0164	-0.1029	-0.1514	-0.0033	-0.0209
	(-2.12)	**(-2.27)**	**(-2.95)**	**(-2.81)**	(0.32)	(-0.45)	(-0.66)	**(-2.08)**	(-0.11)	(-1.11)
N	14819	15246	7427	7464	7392	7782	2972	3241	11888	12002
R^2	0.3134	0.3120	0.4115	0.4174	0.2898	0.2864	0.4473	0.4038	0.6017	0.6013
$AdjR^2$	0.2936	0.2933	0.3793	0.3865	0.2502	0.2494	0.3659	0.3260	0.5875	0.5875
					Model 3: Correlation					
b	0.0531	-0.0361	-0.0985	0.0675	-0.0298	0.0167	0.0354	0.0239	0.0452	0.0229
	(1.49)	**(-1.71)**	**(-2.16)**	**(-2.72)**	(-0.52)	(0.45)	(0.31)	(0.33)	(1.19)	(1.04)
c	0.0274	-0.0102	-0.0097	0.0505	0.0412	0.0039	-0.0119	0.0014	0.0199	-0.0141
	(2.58)	(-0.76)	-0.68393	**(2.46)**	**(2.67)**	(0.24)	(-0.48)	(0.05)	**(1.78)**	(-0.94)
d	-0.0739	-0.0509	-0.1314	-0.0697	0.0183	-0.0164	-0.0643	0.0155	-0.0610	-0.0622
	(-2.12)	**(-2.27)**	**(-2.95)**	**(-2.81)**	(0.32)	(-0.45)	(-0.55)	(0.22)	**(-1.92)**	**(-2.79)**
N	14819	15246	7427	7464	7392	7782	2939	3241	11865	11988
R^2	0.3134	0.3120	0.4115	0.4174	0.2898	0.2864	0.3077	0.2822	0.3437	0.3524
$AdjR^2$	0.2936	0.2933	0.3793	0.3865	0.2502	0.2494	0.2048	0.1886	0.3203	0.3300
					Model 3: Risk Premia					
1 mth.	-0.0533	0.0245	-0.0242	0.0178	-0.0895	0.0317	-0.4655	0.0894	-0.0451	0.0298
	(-1.45)	(1.05)	(-0.68)	(0.69)	(-1.13)	(0.69)	(-0.02)	(1.18)	(-1.21)	(1.31)
3 mth.	-0.0375	0.0166	-0.0167	0.0170	-0.0529	0.0252	-0.0921	0.0695	-0.0340	0.0219
	(-2.51)	(1.04)	(-0.71)	(1.01)	(-0.95)	(0.01)	(-0.86)	(1.30)	(-1.35)	(1.41)
6 mth.	-0.0416	0.0165	-0.0200	0.0175	-0.0717	0.0142	-0.0550	0.0272	-0.0330	-0.0244
	(-2.51)	(1.36)	**(-1.72)**	(1.28)	**(-2.13)**	(0.62)	(-0.80)	(0.65)	**(-1.85)**	**(-2.09)**
12 mth.	-0.0125	0.0074	-0.0033	0.0098	-0.0316	0.0255	-0.0155	0.0507	-0.0168	-0.0210
	(-2.94)	(0.68)	(-0.25)	(0.97)	**(-2.24)**	(1.43)	(-0.33)	**(1.84)**	(-1.31)	**(-2.16)**

Table 11: Results using US Policy Uncertainty

Estimated coefficients $\boldsymbol{b}$, $\boldsymbol{c}$, and $\boldsymbol{d}$ from Model 3: $\boldsymbol{VCR_{it} = a_t + bP_{it}E_{it} + cP_{it} + dE_{it} + eVCR_{it-1} + \epsilon_{it}}$ ($\boldsymbol{a_t}$ incorporates time fixed effects). Variables are as described in Tables 5-7, except that $\boldsymbol{P_{it}}$ is the policy uncertainty variable for the USA. The t-statistics reported in parentheses are computed using two way clustered standard errors (over time and country).

	Pooled		**Developed**		**Emerging**		**Autocracy**		**Democracy**	
	REC	PE	REC	PE	REC	PE	REC	PE	REC	PE
					Model 3: Volatility					
b	-1.4936	-0.9538	-2.6193	-1.4422	-0.1169	-0.5195	-0.5271	-0.4566	-2.0930	-0.9896
	(-1.88)	**(-1.69)**	**(-2.17)**	**(-2.08)**	(-0.31)	(-1.12)	(-0.95)	(-1.10)	**(-1.94)**	**(-1.75)**
c	0.1073	0.2382	0.1239	0.3510	0.0862	0.1274	0.0351	0.0782	0.1078	0.2487
	(2.76)	**(2.20)**	**(3.11)**	**(2.70)**	**(1.88)**	(1.52)	(0.93)	(1.24)	**(2.98)**	**(2.34)**
d	-1.4277	0.9016	-2.5350	-1.4183	0.0758	0.4491	0.4671	0.3902	-2.0277	0.8378
	(-1.84)	(1.57)	**(-2.14)**	**(-2.06)**	(0.20)	(0.99)	(0.83)	(0.94)	**(-1.91)**	(1.52)
N	10146	10341	5477	5586	4669	4755	1884	1944	7985	8120
R^2	0.3747	0.3733	0.4737	0.4667	0.2746	0.2779	0.3111	0.3112	0.4092	0.4044
$Adj R^2$	0.3720	0.3707	0.4714	0.4645	0.2710	0.2744	0.3058	0.3041	0.4066	0.4018
					Model 3: Correlation					
b	-1.2618	-0.6687	-1.6579	-1.0334	-0.8314	-0.2382	-0.4409	-0.4168	-1.6983	-0.7442
	(-2.23)	**(-1.87)**	**(-2.07)**	**(-2.32)**	**(-2.46)**	(-0.56)	(-0.78)	(-0.92)	**(-2.59)**	**(-1.82)**
c	0.1136	0.2021	0.1347	0.2762	0.0906	0.1239	0.0051	0.0452	0.1251	0.2253
	(3.37)	**(2.81)**	**(3.57)**	**(3.36)**	**(2.50)**	**(1.77)**	(0.13)	(0.80)	**(3.72)**	**(3.40)**
d	-1.2084	0.6000	-1.5829	0.9553	-0.8015	0.1857	0.3575	0.3628	-1.6534	-0.5668
	(-2.18)	(1.52)	**(-2.02)**	**(2.15)**	**(-2.38)**	(0.44)	(0.64)	(0.89	**(-2.57)**	(-1.63)
N	10146	10341	5477	5586	4669	4755	1884	1944	7985	8120
R^2	0.1236	0.1279	0.1255	0.1290	0.1269	0.1331	0.0974	0.0942	0.1399	0.1416
$Adj R^2$	0.1198	0.1242	0.1218	0.1254	0.1226	0.1289	0.0904	0.0872	0.1361	0.1378
					Model 3: Risk Premia					
1 mth.	-1.6052	-1.1146	-2.2225	-1.2018	0.8988	-1.1712	1.1290	0.5935	-1.7632	-1.1435
	(-2.29)	**(-2.09)**	**(-2.65)**	**(-2.06)**	(1.53)	**(-2.17)**	(1.59)	(1.30)	**(-2.09)**	**(-2.15)**
3 mth.	-1.1827	-0.5491	-1.6483	0.5521	0.6428	0.6962	0.7242	-0.5650	-1.3187	-0.5977
	(-3.19)	**(-1.78)**	**(-3.88)**	(1.59)	**(-1.91)**	**(-1.91)**	(1.60)	(-1.58)	**(-2.94)**	**(-1.75)**
6 mth.	-0.8561	-0.5175	-1.0068	-0.5883	0.6891	0.5185	0.4890	0.2164	-0.9753	-0.5896
	(-3.06)	**(-2.49)**	**(-2.83)**	**(-2.49)**	**(-2.81)**	**(-2.51)**	(1.57)	(0.92)	**(-2.86)**	**(-2.52)**
12 mth.	-0.2999	-0.2683	0.4773	-0.3239	0.0881	0.2478	0.1977	0.0631	-0.3953	-0.2692
	(-1.70)	**(-2.04)**	**(-2.31)**	**(-2.11)**	(0.53)	**(-1.66)**	(0.84)	(0.31)	**(-1.89)**	**(-2.16)**

Table 12: Value Weighted Correlations

Estimated coefficients $\boldsymbol{b}$, $\boldsymbol{c}$, and $\boldsymbol{d}$ from Model 3: $\boldsymbol{PWC_{it} = a_t + bP_{it}E_{it} + cP_{it} + dE_{it} + ePWC_{it-1} + \epsilon_{it}}$ ($\boldsymbol{a_t}$ incorporates time fixed effects). Variables are as described in Tables 6, except that $\boldsymbol{PWC_{it}}$ is the value weighted correlation between stocks in country i. The t-statistics (reported in parentheses) are computed using two way clustered standard errors (over time and country).

	Pooled		**Developed**		**Emerging**		**Autocracy**		**Democracy**	
	REC	PE	REC	PE	REC	PE	REC	PE	REC	PE
b	-0.3633	-0.0666	-0.2230	0.0556	-0.4825	-0.1878	-0.0196	-0.0314	-0.1087	-0.4336
	(-3.27)	**(-1.98)**	**(-2.38)**	(1.01)	**(-3.29)**	**(-2.09)**	(-0.08)	(-0.53)	**(-1.94)**	**(-2.49)**
c	0.0660	0.0982	0.0532	0.0555	0.0866	0.1390	0.0448	0.1373	0.0087	0.0134
	(5.61)	**(5.94)**	**(4.09)**	**(3.40)**	**(5.15)**	**(5.74)**	(1.51)	**(3.06)**	(0.63)	(0.69)
d	-0.3591	-0.0663	-0.2220	-0.0134	-0.4850	-0.1435	-0.0124	0.3281	-0.0990	0.0065
	(-3.36)	(-1.25)	**(-2.43)**	(-0.24)	**(-3.38)**	**(-1.81)**	(-0.05)	**(-1.93)**	(-0.96)	(0.11)
N	10610	10610	5319	5319	5024	5024	1884	1944	7985	8120
R^2	0.5109	0.5099	0.6719	0.6725	0.3995	0.3995	0.2912	0.3143	0.3439	0.3545
$AdjR^2$	0.4962	0.4951	0.6531	0.6538	0.3628	0.3629	0.1668	0.1984	0.3180	0.3294

Table 13: Lagged Economic Shocks: Emerging Markets

Estimated coefficients $\boldsymbol{b}$, $\boldsymbol{c}$, and $\boldsymbol{d}$ from Model 3: $\boldsymbol{VCR_{it} = a_t + bP_{it}E_{it-1} + cP_{it} + dE_{it-1} + eVCR_{it-1} + \epsilon_{it}}$ ($\boldsymbol{a_t}$ incorporates time fixed effects). Variables are as described in Tables 5-7. The t-statistics (reported in parentheses) are computed using two way clustered standard errors (over time and country).

	Volatility		**Correlation**			**Risk Premia**	
	REC	*PE*	*REC*	*PE*		*REC*	*PE*
b	-0.0896	-0.1788	-0.2074	-0.1500	1 mth.	0.2018	-0.0627
	(-0.74)	**(-1.98)**	(-1.54)	**(-1.73)**		(1.52)	(-0.78)
c	0.0580	0.0969	0.0357	0.0748	3 mth.	0.1579	-0.0666
	(3.77)	**(3.65)**	**(2.32)**	**(2.96)**		(1.48)	(-1.17)
d	0.0743	-0.1530	0.1971	-0.1825	6 mth.	-0.1203	0.0388
	(0.63)	**(-1.75)**	(1.49)	**(-2.19)**		**(-2.18)**	(1.01)
N	4640	4725	4640	4725	12 mth.	0.0157	0.0334
R^2	0.4500	0.4498	0.2911	0.3093		(0.33)	(1.02)
$AdjR^2$	0.4138	0.4143	0.2444	0.2646			

Table 14: Model 3: Extreme PE Shocks

Estimated coefficients $\boldsymbol{b}$, $\boldsymbol{c}$, $\boldsymbol{d}$, $\boldsymbol{e}$, and $\boldsymbol{f}$ in $\boldsymbol{VCR_{it} = a_t + bP_{it}E_{it} + cP_{it} + dE_{it} + eP_{it}E_{it}X_{it} + fP_{it}X_{it} + gVCR_{it-1} + \epsilon_{it}}$ ($\boldsymbol{a_t}$ incorporates time fixed effects). Variables are as described in Tables 5-7, with $\boldsymbol{E_{it}}$ measured as PE. The t-statistics reported in parentheses are computed using two way clustered standard errors (over time and country).

	Volatility					**Correlation**				
	Pool	Dev.	Emg.	Auto.	Demo.	Pool	Dev.	Emg.	Auto.	Demo.
b	-0.1222	0.0037	-0.2227	-0.1924	-0.0715	-0.3416	-0.4308	-0.2690	-0.2058	-0.1192
	(-2.51)	(0.08)	**(-2.49)**	(-1.25)	(-0.02)	**(-3.26)**	**(-3.15)**	**(-2.31)**	(-1.20)	(-0.04)
c	0.1019	0.0572	0.1362	0.1208	0.0842	0.1532	0.1844	0.1232	0.1091	0.0416
	(6.15)	**(3.81)**	**(4.99)**	**(2.99)**	(0.31)	**(3.71)**	**(3.51)**	**(3.24)**	**(2.49)**	(0.21)
d	0.0979	0.0184	-0.1747	0.0992	0.0619	-0.2530	-0.3116	-0.2117	0.1376	-0.1056
	(2.04)	(0.38)	**(-1.98)**	(0.65)	(1.32)	**(-2.64)**	**(-2.44)**	**(-1.93)**	(0.84)	**(-1.85)**
e	0.3109	-0.2803	0.4257	0.5908	0.1451	0.1325	0.0064	0.3318	0.2464	0.1324
	(6.09)	(-0.09)	**(9.47)**	**(17.39)**	(0.00)	**(3.16)**	(0.00)	**(17.84)**	**(3.93)**	(0.00)
f	-0.1090	0.3420	0.0180	-0.1081	-0.0803	-0.1028	0.0391	0.0000	0.0244	-0.1188
	(0.12)	(0.00)	(0.00)	**(-35.25)**	(0.00)	**(-2.60)**	(0.00)	(0.00)	**(4.45)**	(0.00)
N	10341	5586	4755	1944	8120	10341	5586	4755	1944	8120
R^2	0.5994	0.7816	0.4536	0.5311	0.6777	0.1188	0.1152	0.1286	0.3307	0.4068
$AdjR^2$	0.5870	0.7696	0.4182	0.4512	0.6652	0.1150	0.1113	0.1243	0.2166	0.3837
	1 month premium					**3 month premium**				
	Pool	Dev.	Emg.	Auto.	Demo.	Pool	Dev.	Emg.	Auto.	Demo.
b	-0.0597	-0.2584	-0.3540	0.0252	0.0082	-0.5462	0.1046	-0.1895	0.1457	-0.1474
	(-0.45)	**(-1.80)**	**(-2.71)**	(0.96)	(0.46)	**(-5.21)**	(1.15)	**(-2.47)**	(0.16)	**(-2.01)**
c	-0.0049	-0.0950	0.0862	-0.0371	-0.0184	0.1335	-0.0383	-0.0387	-0.0297	-0.0412
	(-0.09)	(-1.61)	**(2.01)**	(-1.27)	(-0.61)	**(4.00)**	(-1.10)	(-1.56)	(-1.26)	(-1.38)
d	0.1946	-0.1338	-0.2061	0.1340	0.1296	-0.4772	-0.0465	-0.1112	-0.0800	-0.0789
	(1.51)	(-0.97)	**(-1.72)**	**(4.50)**	**(3.70)**	**(-4.27)**	(-0.50)	(-1.56)	(-1.19)	(-1.11)
e	0.2827	-0.1926	0.0940	0.2172	0.0090	0.3156	-0.0606	0.6968	0.0382	-0.0836
	(7.58)	**(-14.56)**	**(3.02)**	**(11.47)**	(0.90)	**(5.95)**	(-0.00)	**(31.84)**	**(1.89)**	(0.00)
f	-0.1284	0.1166	0.0000	-0.1054	-0.0656	-0.1374	0.0134	0.0000	-0.1618	0.0374
	(-5.00)	**(4.29)**	(0.00)	**(-2.88)**	**(-4.60)**	**(-7.14)**	(0.00)	(0.00)	(-0.98)	(0.00)
N	10341	5586	4755	1944	8120	10341	5586	4755	1944	8120
R^2	0.2848	0.0315	0.0386	0.0386	0.0319	0.1239	0.5230	0.5255	0.5319	0.5254
$AdjR^2$	0.2904	0.0272	0.0339	0.0306	0.0274	0.1201	0.5208	0.5232	0.5278	0.5231
	6 month premium					**12 month premium**				
	Pool	Dev.	Emg.	Auto.	Demo.	Pool	Dev.	Emg.	Auto.	Demo.
b	-0.2430	-0.1139	-0.1676	0.0667	0.1381	-0.0819	-0.0999	0.0596	0.0632	-0.0837
	(-2.68)	**(-1.68)**	**(-3.01)**	(1.19)	(0.00)	**(-2.31)**	**(-2.01)**	(1.27)	(0.11)	**(-2.14)**
c	0.0437	0.0473	-0.0471	-0.0280	-0.0503	0.0305	0.0346	0.0254	-0.0232	-0.0330
	(1.53)	**(1.78)**	**(-2.75)**	(-0.15)	(0.00)	**(2.32)**	**(1.88)**	**(2.19)**	(-1.29)	**(-2.17)**
d	-0.2893	-0.0718	-0.1081	-0.0260	-0.0875	-0.0184	-0.0385	0.0065	0.0083	-0.0192
	(-2.94)	(-1.00)	**(-2.05)**	(-0.27)	(-1.61)	(-0.54)	(-0.79)	(0.14)	(0.05)	(-0.51)
e	0.3079	-0.2723	0.8382	-0.0587	-0.0314	0.1196	-0.1502	0.8908	-0.0132	0.0787
	(8.19)	(-0.00)	**(46.03)**	(-1.56)	(0.00)	**(34.50)**	(-0.00)	**(57.43)**	(-0.00)	(0.00)
f	0.0319	0.2302	0.0000	-0.0179	-0.0101	-0.1382	0.1314	0.0000	-0.0487	-0.0970
	(6.58)	(0.00)	(0.00)	(-1.31)	(0.00)	**(-10.45)**	(0.00)	(0.00)	(0.00)	(0.00)
N	10341	5586	4755	1944	8120	10330	5586	4744	1941	8112
R^2	0.3611	0.7424	0.7482	0.7651	0.7431	0.8568	0.8602	0.8528	0.8405	0.8594
$AdjR^2$	0.3583	0.7412	0.7470	0.7630	0.7419	0.8562	0.8596	0.8521	0.8391	0.8587