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ACSEP Basic Research Working Paper No. 3

Does Policy Uncertainty Matter for International Equity Markets?

By Swee-Sum Lam, Weina Zhang

Executive Summary

Impact investors have been growing in their presence and interests around the world. For example, some impact investors are exploring the investment opportunities in social impact bonds that help solve social issues. Some impact investors are also looking into how to invest into various social enterprises. However, what may seem to work in one country does not necessarily work in another due to differences in social, economic, and institutional frameworks influenced by policymaking in the public sector.

The usual financial considerations of investing across countries include the risk exposures to the global market risk factor, the size factor and the leverage factor. This study took a new angle by looking at the risk exposure to the public sector, i.e., the government in policy making.

Why is this consideration important? The unmet social needs in any single country have been growing in size and complexity. It is becoming more necessary for the people, the public and the private sectors to collaborate in finding contextually relevant solutions to these unmet social needs. Hence, the returns for impact investors are also critically dependent on how effective and efficient the government is.

Using the data from 49 countries, among which 26 are from the developing countries and 23 are from the developed countries, we discover that the risk exposure to the government sector is significant. The risk of investing in the country significantly increases when the government has a bad bureaucratic system or when the government is facing greater uncertainty of being elected out or thrown off.

Undoubtedly, the bureaucratic quality and the political uncertainty in a country can be interlinked. Indeed, we find that the risk exposures to the two factors are consistent in signs in 48 out of 49 countries. The only exception is China. Here, impact investors may be exposed to high risk from poor bureaucratic quality. However, they are protected given high political stability.

The results have two important takeaways for impact investors. First, they need to consider the risk attributable to government actions when they are looking for handsome financial returns from an investment that also yields social impact. Ignoring it would under-estimate the risk of the investment. Second, impact investors do better to incubate and scale a social purpose organization in a country with more political stability and stronger bureaucratic system ceteris paribus. This would reduce the unnecessary risk exposure to the public sector.

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Abstract

We test whether policy uncertainty affects international equity returns. We construct two measures of global policy uncertainty based on the ratings from international country risk guide. They capture the potential policy shock from government changes and the bureaucratic ability to reduce policy shocks. Both factors significantly affect equity returns in 49 countries from 1995 to 2006 and the bureaucratic factor carries an annual risk premium of 8 percent. The economic and institutional conditions within a country affect the return relation with the policy uncertainty. Overall, our study reveals the significance and distinct characterization of policy uncertainty in international equity markets.

JEL Classification: G15; G18

Keywords: bureaucratic quality, government stability, international asset pricing, policy uncertainty.

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1. Introduction

Policy uncertainty refers to a non-zero probability that existing policies may be changed. Since policies set the rules of the game for economic agents such as firms and investors to make investment decisions, high policy uncertainty can delay decision making and affect the economy adversely. For example, Ali (2001) documents that the volatility of economic policies is negatively correlated with GDP growth rate by using a sample of 119 countries from 1970 to 1995. In a similar spirit, Taylor (2010) and Hoshi (2011) suggest that high policy uncertainty in relation to the resolution of large bankrupt financial institutions has worsened or prolonged the recent financial crisis in the U.S. In this study, we validate the empirical link between policy uncertainty and *financial* assets such as equities in an international setting.

On the theoretical front, Pástor and Veronesi (2013) are among the first to show that the instability of government policy commands an equity risk premium in theory. This prediction implies that across different policy regimes, equity investors demand compensation as the change of existing policy can affect firm's value. However, their theoretical prediction is not immediately applicable to the international financial environment because investors can nowadays invest outside their own countries easily. As a result, they can reduce the exposure to one country's policy instability by investing in other countries with less policy instability. It is an empirical question whether investors can diversify away the risk of policy instability across different countries. Our study provides a direct answer to this question.

We propose two new constructs of global policy uncertainty in an international setting and find their explanatory power for equity returns. Specifically, we select two country ratings from *International Country Risk Guide* (ICRG) that are related to policy uncertainty. The first rating is

the "*government stability*" rating which measures a government's ability to stay in office and its ability to carry out its declared program.[3] If the government were unstable, policies would likely be unstable too.[4] A low rating represents high policy uncertainty and a high rating represents low uncertainty. The second rating is the "*bureaucracy quality*" rating that captures the institutional strength and expertise of the bureaucracy to maintain the consistency and stability in policies.[5] Countries without strong bureaucracy can be chaotic in managing policy changes. Hence, the two ratings reflect the stability of the existing policies in a country evaluated by ICRG.

After sorting all countries according to the scale of the two ratings on a monthly basis, we construct two low-minus-high (LMH) zero-investment country-level portfolios respectively to form two measures of global policy uncertainty arising from government stability and bureaucratic quality for our entire sample of 49 countries. We name them as GOVLMH and BURLMH respectively hereafter. The return difference between the countries with low ratings (LOW) and high ratings (HIGH) represent two types of equity returns compensating for the two sources of aggregate policy uncertainty in the world—government changes and incompetent bureaucracy respectively. Moreover, these measures also allow for time-varying return compensation for policy uncertainty as suggested by Pástor and Veronesi (2013).

[3] The definition is taken from the office link of ICRG at www.prsgroup.com/ICRG_Methodology.aspx.

[4] For example, Julio and Yook (2012b) use the timing of national elections to proxy for policy uncertainty in an international setting and document that foreign direct investment flows are dampened by the uncertainty.

[5] The original definition is being modified from the source at www.prsgroup.com/ICRG_Methodology.aspx. We remove the condition "when government changes". We think that this condition is not applicable to all countries in our sample as some countries have never experienced a change of ruling party for many decades, such as China and Singapore.

Our first result shows that our newly proposed policy uncertainty measures significantly affect the equity returns at the 1% significance level. On average, one-standard deviation increase in the BURLMH factor can lead to an additional excess return of 27.4% per year and the same increase in the GOVLMH factor can result in an additional excess return of 7.8% per year. The larger economic magnitude of the BURLMH factor compared to that of the GOVLMH factor is also partially due to much higher volatility in the BURLMH factor.

We also find that significant variation exists in the return exposures to the two factors across countries. In a politically stable country such as China (with negative exposure to the GOVLMH factor), the exposure to the BURLMH factor is significantly positive. When a country has high bureaucratic quality such as Belgium, France, Portugal and Switzerland (with negative exposure to the BURLMH factor), its exposure to the GOVLMH factor is significantly positive. While some countries have significantly positive exposures to both factors (e.g., Chile, Czech Republic, Hungary, Korea, Pakistan, Poland, and Sri Lanka), none of the 49 countries in our sample has significant negative exposures to both factors. The latter result implies that there exists no good hedging country for international investors to reduce their exposure to aggregate policy uncertainty. These results suggest that it is necessary and important for us to consider different dimensions of policy uncertainty.

To validate the significance of cross-country variations in the return exposures to policy uncertainty, we divide our sample countries into different subgroups based on their economic and institutional conditions. We find that in developed countries, the equity returns are more affected by the GOVLMH factor rather than the BURLMH factor. In developing countries, however, the results are the opposite. Similar contrasting results are also found in highly democratically accountable countries in contrast to those low ones. High democratic

accountability signifies a political system in which the government is highly accountable to the public and vice versa. These results suggest that in a developed or a highly democratically accountable country, the investors perceive the major source of policy uncertainty to accrue from government instability since the bureaucracy would have matured with sophistication and quality. On the other hand, in a developing country or a low democratically accountable country, apart from a government that is expected to be unstable, investors demand additional compensation if the bureaucracy were also incompetent in reducing policy shocks.

Moreover, we find that global policy uncertainty has become an important systematic risk factor in more recent years. We conduct Fama-Macbeth regressions and find that the BURLMH factor carries a significant annual risk premium of 8% per year from 1995 to 2006. Subsample analysis also shows that the BURLMH factor carries an annual risk premium of 8.2% in developing countries but not in developed countries. There is also evidence that suggests the BURLMH factor has not yet been efficiently priced in developing countries.

In robustness tests, we confirm that our two global policy uncertainty measures are better measures than several existing policy uncertainty measures. In particular, we run a horse race between our constructs with the existing policy uncertainty measure from Baker, Bloom, and Davis (2013). Moreover, we also employ three world disaster indices constructed by Berkman, Jacobsen, and Lee (2011) to proxy for policy uncertainty due to political uncertainty.

To further understand the underlying economic and institutional rationale that drives our measures, we perform principal component analysis to show that the original "*bureaucracy quality*" rating is highly correlated with the "*corruption*" and "*law & order*" ratings from ICRG and some components of national culture measures defined by Hofstede (1980). On the other

hand, the original "*government stability*" rating is a stand-alone measure that is not highly correlated with any of the economic, social or financial factors we employ.

Our study is among the first that documents the importance of global policy uncertainty in an international setting. The existing literature (such as Pástor and Veronesi, 2013) has made prediction that the policy uncertainty is priced within one economy. However, whether policy uncertainty is priced in international equity markets is not clear because empirical evidence reveals that asset pricing is not integrated across regions (e.g., Karolyi and Stulz, 2003; Fama and French, 2012). The degree of equity market integration also varies across countries and across time (e.g., Bekaert, Harvey, Lundblad, and Siegel, 2011 and 2013). One potential cause of the market segmentation can be due to different informational environments across countries as shown by Lau, Ng and Zhang (2012). Hence, our paper provides new empirical findings to this line of research.

Moreover, our paper characterizes policy uncertainty. The uncertainty can arise from government instability and/or poor bureaucratic quality. The existing literature has predominantly focused on the political instability (e.g., Belo, Gala, and Li, 2013; Berkman, Jacobsen, and Lee, 2011; and Julio and Yook, 2012a and 2012b; Chen, Lu and Yang, 2012). Our study reveals that bureaucratic strength also affects equity returns. A related paper by Brogaard and Detzel (2012) has examined how economic policy uncertainty can affect stock market returns. Our study differs from theirs as we focus on more general measures of policy uncertainty arised from government stability and bureaucratic quality instead of economic policies only.

The rest of this paper is organized as follows. Section 2 formulates our empirical hypotheses. Section 3 describes the data and presents the data and summary statistics. Section 4 tests the relation between our proposed policy uncertainty measures and international equity returns and

explores the cross-sectional variation of the relation. Section 5 tests whether the policy uncertainty factor is an omitted systematic risk factor. Section 6 conducts robustness tests and section 7 concludes.

2. Hypotheses Development

Historically, economists have focused on the economic impact of policy uncertainty. For example, Rodrik (1991) and Hassett and Metcalf (1999) study the impact of tax policy uncertainty on investments whereas Hermes and Lensink (2001) examine the impact of policy uncertainty on capital flows. A theoretical link between policy uncertainty and equity returns is only established more recently but with the focus on only one financial market. For example, Gomes, Kotlikoff, and Viceira (2008) model the effects of policy uncertainty on personal consumption, saving, labor supply and portfolio choices while Pástor and Veronesi (2012; 2013) examine how the uncertainty of government policy affects stock prices, returns and volatility. If financial assets are priced in an integrated manner across regions, the existing theories would also predict that global policy uncertainty can affect international equity returns. Since the empirical evidence shows that international equity markets are still not integrated enough (e.g., Bekaert, Harvey, Lundblad, and Siegel, 2011, 2013; Fama and French, 2012), whether the existing theories can be applied to international equity markets becomes an empirical question. This leads to our first hypothesis as follows,

Hypothesis 1: Policy uncertainty affects international equity returns.

Policy uncertainty can be caused by political uncertainty. A change of government can naturally lead to policy change. Prior studies have shown that firms' investment, cash flows, and return volatility can be affected by the (probable) change of political power (e.g., Kobrin, 1979; Diamonte, Liew, and Stevens, 1996; Erb, Harvey, and Viskanta, 1996). More recently, Julio and

Yook (2012a) show that firms reduce investment expenditure by an average of 4.8% in election years relative to non-election years and Julio and Yook (2012b) examine the election impact on foreign direct investment. Durnev (2011) demonstrates that the volatility of equity returns is affected by political uncertainty and Belo, Gala, and Li (2013) also document predictable variation in stock returns over different political cycles. Berkman, Jacobsen, and Lee (2011) find that from 1918 to 2006 hundreds of political crises have had a large impact on both the mean and volatility of the aggregate world equity return. Chen, Lu and Yang (2012) by using country-level military expenditure data find that political instability is a source of systematic risk. Using a different empirical measure of political instability from the literature, we propose the first hypothesis by focusing on the policy uncertainty arised from government instability as follows,

Hypothesis 1a: Policy uncertainty arising from political uncertainty affects international equity returns.

Policy uncertainty can also be caused by other factors such as the change of economic or institutional conditions in the country. Preliminary theoretical guidance on the relation between policy uncertainty and economic condition is provided by Pástor and Veronesi (2013). They predict that the uncertainty of government's policy choice affects equity returns more when the economy is weaker. They also test the theoretical prediction on the U.S. equity returns. We will extend their analysis to international equity markets. Furthermore, the literature has shown that the quality of government performance is highly related to institutional factors such as the characteristics of the government and exogenous historical factors across countries (e.g., La Porta, Lopez-de-Silanes, Shleifer, and Vishny, 1999). We hypothesize that the importance of policy uncertainty varies across countries depending on their economic and institutional conditions. This provides us with the second hypothesis as follows,

Hypothesis 2: Policy uncertainty affects equity returns more in those countries with poorer economic and institutional conditions than other countries.

More importantly, after validating the important relation between policy uncertainty and stock returns, we shall investigate the stability of this relation. In another words, we test whether policy uncertainty is systematically priced in the returns. The answer to this question is pivotal for international investors because their portfolio choices might be significantly affected. Pástor and Veronesi (2013) theoretically predict that policy uncertainty is priced in the cross section of equity returns. However, their setting focuses on one economy only. Their theoretical result may not be directly applicable to an international setting if asset pricing is not integrated enough. For example, Karolyi and Stulz (2003) find that both local and international influences affect asset prices. Bekaert, Harvey, Lundblad, and Siegel (2013) find that a country's political risk profile and its stock market development are two important factors in the segmentation of international equity markets. Bekaert, Harvey, Lundblad, and Siegel (2013) find that the Euro member countries do not experience the increased equity integration after the adoption of Euro. Fama and French (2012) find that even local models are not good enough to explain certain types of portfolio returns. Hence, we propose the third testable hypothesis as follows,

Hypothesis 3: Policy uncertainty is a systematic risk factor in international equity markets.

3. Data Description and Summary Statistics

3.1. Key Variables

3.1.1. Country Returns

In our empirical analysis, we assume the role of a typical US investor holding an international equity portfolio. The investor chooses to invest in the MSCI All Country World Index. The index consists of 50 developing and developed countries and 49 out of the 50 countries have return

data in Datastream. Our sample period spans from 1995 to 2006. We stop the sample by 2006 because many of our sample countries have experienced financial market turmoil and economic downturns since 2007. As a result, many governments have been actively changing economic and financial policies to contain the crisis (e.g., Taylor, 2010; Hoshi, 2011). Such change may create a structural break in our sample that leads to the significance of policy uncertainty. To avoid the upward bias due to the global financial crisis, we decide to stop our sample right before the recent crisis.

3.1.2. The Existing World Risk Factors

In order to evaluate if global policy uncertainty affects equity returns in an international setting, we need to control for the existing systematic risk factors in the returns. We start with four well-known world risk factors in the literature (e.g., Adler and Dumas, 1983; Ferson and Harvey, 1993; Harvey, Solnik and Zhou, 1994; Dumas and Solnik, 1995; Fama and French, 1998; and Liew and Vassalou, 2000, Karolyi and Stulz, 2003; Ang, Hodrick, Xing, and Zhang, 2009; Hou, Karolyi, and Kho, 2011). They include the world market factor (WORLD), the world value factor (VALUE), the world size factor (SIZE), and the exchange rate factor (FOREX). The WORLD factor is the MSCI All Country World Index excess return after subtracting the U.S. 30-day Treasury bill rate. The VALUE factor is constructed by taking the difference between monthly returns on the MSCI All Country World Value and Growth Indices.[6] The data is available from 1997 onwards. The SIZE factor is constructed from first sorting all firm-level

[6] The MSCI constructs value investment style portfolios by examining the book-to-market ratio, 12 month forward earnings to price ratio and dividend yield ratio. Growth style portfolios are constructed by looking at the long-term earnings per share growth rate, short-term earnings per share growth rate, current internal growth rate, long-term earnings per share growth trend and the long-term historical sales growth per share growth trend.

stock returns of the countries in our sample every month according to their market capitalization,[7] and then computing the difference between the average returns of small stocks and big stocks (cutoff at 50th percentile) in each country,[8] and lastly value-weighting the local size premia.[9] The FOREX factor is the returns on a broad trade-weighted index of the US dollar as a measure for global exchange rate fluctuations.[10] An increase in the index signals a general appreciation of the US dollar. This index returns series serves as a proxy mimicking returns of a strategy of taking long positions in US dollars and short positions in foreign currencies.

In this study, we employ the asset pricing model at the country-level rather than at portfolio- or firm-level as Fama and French (1998; 2012) and Hou, Karolyi, and Kho (2011). Similar aggregate approach at the country-level has also been taken by Berkman, Jacobsen, and Lee (2011) and Pástor and Veronesi (2013). Given the recent surging interests on the importance of economic policy uncertainty in Baker, Bloom and Davis (2013) and Brogaard and Detzel (2012), we believe that it is important for us to first understand whether policy uncertainty matters for country-level stock returns in the presence of other global market risk factors.

3.1.3. The Measures of Policy Uncertainty

[7] We do not include local size premia for Jordan and Russia due to a lack of company data from Datastream.

[8] Stock returns are winsorized to negate the impact of extreme values on the size premium. Companies with extreme stock returns in the 2.5 and 97.5 percentile in each country are excluded from the sample.

[9] We use the country component weights in the MSCI AC World Index as the value weights.

[10] The index is a trade-weighted average of US Dollar exchange rate values against a broad group of US trading partners. It is available from http://www.federalreserve.gov/Releases/H10/Summary/indexb_m.txt.

We propose two new empirical measures of global policy uncertainty from the "*political risk rating*" section of the ICRG.[11] These ratings are published monthly by the Political Risk Services. First, the "*government stability*" rating is defined as a government's ability to stay in office and to carry out its declared programs. Generally, governments are unstable when they are perceived to be incompetent. Poor government credibility increases the overall policy risk in the country as investors become skeptical of government commitment to its policies. In this case, investors demand higher return compensations for the perceived likelihood of changes in government policy postures. Hence, a low rating indicates high policy uncertainty and vice versa. Second, the "*bureaucracy quality*" rating defines the ability and expertise of the country's bureaucracy function to absorb policy shocks. Bureaucratic quality serves as a measure for the institutional dimension of policy uncertainty.

In Figure 1, we display the time series patterns of the two ratings from ICRG. We collect the monthly ratings for each of the 49 countries included in our sample. We then collect the GDP numbers for each country from the United Nations' website.[12] The GDP number is the annual number that is denominated in US Dollar with a constant price level at 2005. We value-weight 49 countries' ICRG ratings by the country's annual GDP and compute a global index for each of the two ratings, i.e., government stability and bureaucracy quality.

[Insert Figure 1 about here]

[11] Our study differs from Harvey (2004), which uses the overall political risk assessment scores from ICRG. We believe that the overall score of political risk is too coarse to capture the policy uncertainty at the country-level, which is our research interest here.

[12] The website is at http://unstats.un.org/unsd/snaama/dnllist.asp.

Figure 1 shows that the world government stability index has higher volatility between 5 and 10. Bureaucracy index declines the most after 1997, Asian Financial Crisis and is quite stable for most of the sample period.

Based on these ratings, we construct two policy uncertainty mimicking low-minus-high (LMH) portfolios by taking long positions in the countries' equity returns with high uncertainty (bottom 30%) and shorting the countries' equity returns with low uncertainty (top 30%) and we name them GOVLMH and BURLMH factors respectively. These two factors are the aggregate measures of policy uncertainty within our entire sample of 49 countries.

In the robustness checks, we also employ a few available measures of policy uncertainty in the literature. For example, Baker, Bloom, and Davis (2013) have constructed an index for economic policy uncertainty in the United States. We compute the monthly change of the index in percentage, PU_{US}. Since this measure only focuses on the U.S., we also employ the measures from Berkman, Jacobsen, and Lee (2011) to proxy for international policy uncertainty. Berkman, Jacobsen, and Lee (2011) have constructed three indices named CI_S, CI_D, and CI_E, which represent the number of countries in the world that start to experience political crisis, the number of countries that are in the middle of the crisis, and the number of countries that have ended the crisis respectively. Following their approach, we run a first-order autoregressive regression on the indices and use the residuals.

We are also aware of other ten sub-components in the "political risk" rating provided by ICRG besides the two components we have looked at. They include 1) Socioeconomic Conditions, 2) Law and Order, 3) Corruption, 4) Investment profile, 5) Internal Conflict, 6) External Conflict, 7) Military in Politics, 8) Religious tensions, 9) Ethnic Tensions, 10)

Democratic Accountability.[13] We explicitly compare the first three sub-components with our two selected ratings in the robustness tests because we believe that the other eight sub-components are less related to policy uncertainty which is relevant for economic development and financial markets and more related to the social aspects of the political risk profile.

3.2. Summary Statistics

We present the summary statistics and correlation coefficient matrix of the policy uncertainty measures, equity returns and the existing world risk factors in Table 1. Panel A shows that our new measures GOVLMH and BURLMH factors have mean returns of 0.3% and 0.4% per month respectively. We further divide the entire sample into two subperiods with equal time length given the fact that there is an increasing trend of policy uncertainty in the United States. Such trend can be easily observed by investors and they would require more compensation for bearing more uncertainty over time. The summary results confirm this possibility and show that our two new measures are more statistically significant and positive in the latter half-period from 2001 to 2006. In particular, the GOVLMH and BURLMH have significantly positive returns of 0.4% and 1.5% per month respectively at the 10% significance level.[14] The average return premia on the existing risk factors are positive (such as WORLD, VALUE, and FOREX), except for the SIZE factor at -2.3% per month.[15] The country-level equity returns are on average significantly positive for all 49 countries in our sample.

[13] The 10th component is only available since December 2006.

[14] We use the one-tailed t-test here because the null hypothesis is that the return compensation shall be positive.

[15] The negative SIZE portfolio returns are largely consistent with the results found in Fama and French (2012) for many countries.

We also find that the alternative policy uncertainty measures such as PU_{US} has a mean return of 1.2% per month, indicating there is a stable increase in economic policy uncertainty in the U.S. from 1995 to 2006. The policy uncertainty measures CI_S, CI_D, and CI_E have zero means because they are the residuals of the first-order autoregressive regression of the original crisis indices.

[Insert Table 1 about here]

Panel B in Table 1 presents the correlation coefficient matrix of these variables. First, we examine the correlations among all the policy uncertainty measures. The correlation coefficient of the BURLMH factor and the GOVLMH factor is only 0.19. This relatively low correlation coefficient suggests that bureaucratic institution and government are likely to be two distinct sources of international policy uncertainty. The correlation coefficient between PU_{US} and GOVLMH factor is -0.20 and between CI_S and GOVLMH factor is -0.23, indicating that the two existing policy uncertainty measures are mostly related to political uncertainty. More interestingly, the BURLMH factor is most correlated with CI_E among all existing policy uncertainty measures at 0.18. This suggests that bureaucratic quality matters more for the country after the political crisis has ended.

Next, we examine the correlation between the existing world risk factors and policy uncertainty measures. PU_{US}, CI_S and GOVLMH factor are mostly correlated with the WORLD factor, indicating that some portion of the policy uncertainty (e.g., the portion that is related to political uncertainty) has already been captured by the WORLD factor. Interestingly, the correlation between the BURLMH Factor and the WORLD factor is only at 0.02, implying that this source of policy uncertainty is distinct from others. The correlation coefficients between

other world risk factors (such as VALUE, SIZE, and FOREX) and policy uncertainty measures are generally small with less statistical significance.

4. The Relation between Policy Uncertainty and International Equity Returns

In this section, we test *Hypothesis 1* that policy uncertainty affects international equity returns.

4.1. A Preliminary Analysis

Extending the existing four factor model, we first add the new measure GOVLMH and label it as Model 1. Next, we add the new measure BURLMH alone and label it as Model 2. Lastly we add both new measures simultaneously and label it as Model 3. Table 2 reports the results.

[Insert Table 2 about here]

Model 1 and Model 2 in Table 2 show that both factors are statistically and economically important when they are examined separately. Model 3 shows that the adjusted R^2 is the highest at 28% among the three models. These results suggest that both factors are important and they carry different sources of policy uncertainty, both of which should be accounted for. As the SIZE factor is not significant in Model 3, we will drop it hereafter for parsimony.

Our final model is a five-factor model that includes the WORLD factor, the VALUE factor, the FOREX factor, and the two new factors of global policy uncertainty, GOVLMH and BURLMH. The results reported under Model 4 in Table 2 show that all the five factors are significantly related to the returns in 49 countries.[16] Specifically, the beta for the WORLD factor is 1.02. The beta for the VALUE factor is 0.07 and that for the FOREX is -0.33. More importantly, the coefficient for the GOVLMH factor is 0.22 whereas the coefficient for the

[16] The significance of WORLD and FOREX factors are also consistent with the literature (e.g., Adler and Dumas, 1983; Avramov, Chordia, Jostova, and Philipov, 2012).

BURLMH factor is about twice as large at 0.43. The positive and significant coefficients of the GOVLMH and BURLMH factors suggest that investors demand compensation for bearing policy uncertainty. The return exposure to the BURLMH factor is economically more significant. These results provide strong empirical support for *Hypothesis 1*. Since the GOVLMH factor is closely related to policy uncertainty attributable to political uncertainty, we also find empirical support for *Hypothesis 1a*. Overall, these results indicate that our two new global policy uncertainty measures are significantly related to the international equity returns. Between the two measures, the BURLMH factor has an economically stronger relation with the returns. Our study is among the first that documents the importance of bureaucratic quality for equity returns.[17]

Moreover, we run the five-factor model in nine American countries and 21 European countries separately and report the results in last two columns of Table 2. We find that both factors are always significantly related to the equity returns in these subgroups of countries even though the coefficients differ in sign and magnitude. These results suggest that different sources of policy uncertainty matter for different countries, supporting *Hypothesis 2*. In the next section, we will test *Hypothesis* 2 more directly.

4.2. The Country-level Variation of the Link between Policy Uncertainty and Returns

We employ the five-factor model (i.e., Model 4 in Table 2) and regress the equity returns of each country on the five factors such as WORLD, VALUE, FOREX, GOVLMH, and BURLMH from 1995 to 2006. This country-level analysis gives us insights into the importance of policy

[17] The literature establishes some links between bureaucratic quality and equity returns in the primary equity markets as well as the interest rate market (e.g., Lam, Wee and Tan, 2007; Lam and Zhang, 2013). Our study is among the first to examine this link in the secondary equity markets.

uncertainty in each country. Table 3 reports the results. The standard errors are Newey-West (1987) robust standard errors with lag of 3 months.

[Insert Table 3 about here]

Consistent with our prior results, the BURLMH factor is more significantly related to the equity returns than the GOVLMH factor across countries. Specifically, 36 out of 49 countries have significant exposures to the BURLMH factor at the 10% significance level. In contrast, only 20 countries have significant exposures to the GOVLMH factor at the 10% level. The country-level exposures to the BURLMH factor vary from -0.49 to 2.09 with a standard deviation of 0.59. The variations are wider than those of the GOVLMH factor, which range from -0.80 to 1.40 with a standard deviation of 0.42. Hence, the country-level equity returns are more affected by the BURLMH factor.

More interestingly, we find that China is the only country that has a significantly positive exposure to the BURLMH factor at 1.36 and a significantly negative exposure to the GOVLMH factor at -0.80 at the 10% significance level. This positive exposure at 1.36 translates to an annual return of 110% if the return on the BURLMH factor increases by one standard deviation. In the countries with high bureaucratic quality such as Belgium, France, Portugal and Switzerland, the return exposures to the BURLMH factor are negative whereas the exposures to the GOVLMH factor are significantly positive, ranging from 0.18 to 0.40 and representing an annual return of 6.2% to 14.3%. Some countries have significantly positive exposures to both factors (e.g., Chile, Czech Republic, Hungary, South Korea, Pakistan, Poland, and Sri Lanka). Countries with negative exposures may be considered as good hedging portfolios for an international investor who wishes to reduce exposures to the two types of policy uncertainty. It is interesting to note that none of the 49 countries in our sample offer such hedging benefits. We

highlight the 14 countries with non-zero and significant loadings on both GOVLMH and BURLMH factors at the 10% significance level in Figure 2.

[Insert Figure 2 about here]

4.3. Subsample Analysis

Pástor and Veronesi (2013) predict that equity returns compensating for policy uncertainty can be much more significant in a weaker economy. This theoretical prediction may imply that policy uncertainty matters differently for different countries depending on their economic conditions. Moreover, the source of policy uncertainty can be different for different countries depending on their institutional organization and strength (e.g., La-Porta et al, 1999; Bekaert, Harvey, and Lundblad, 2005). For example, in a politically unstable country, the source of policy uncertainty tends to accrue from government changes. On the other hand, in a politically stable country, bureaucratic strength may play a relatively bigger role in policymaking. These predictions lead us to test *Hypothesis 2* that policy uncertainty affects the equity returns in those countries with poorer economic conditions and weaker institutional strength.

4.3.1. Developing and Developed Countries

To proxy for different economic conditions, we use developed and developing country status. We adopt the MSCI classification for developing status. It classifies the 49 countries into 27 developing and 22 developed countries. Panel A in Table 4 reports the results.

[Insert Table 4 about here]

The results in Table 4 show that the link between equity returns and the two measures of policy uncertainty remains robust in the developed-developing countries analysis. Interestingly, the developing countries' exposure to the GOVLMH factor is much higher (0.30) than developed

countries' exposure (0.11). This suggests that international investors care more about government stability in developing countries than in developed countries. On the other hand, developing countries' exposure to the BURLMH factor is positive (0.84) while developed countries' exposure is negative (-0.08). This again implies that international investors investing in developing countries demand higher compensation for poorer bureaucratic quality whereas those investing in developed countries are willing to settle for lower compensation for better bureaucratic quality.

Overall, our results show that the policy uncertainty is more economically and statistically related to equity returns in developing countries than developed countries. This is consistent with existing theories since developing countries are more likely to have worse economic conditions.

4.3.2. Low and High Democratic Accountability Countries

To proxy for different institutional strength across countries, we use the democratic accountability score from the ICRG. Democratic accountability captures the accountability of government to the people. A high democratic accountability score signifies a political system in which institutions are likely to be sophisticated, yet at the same time, the government is subject to more voters' pressures. Callander (2011) theoretically models how the concern of being re-elected can affect policymaking. Given that this ICRG rating only became available in December 2006, we classify 35 out of the 49 countries into the High and Low groups. The "High" group consists of 22 countries with a democratic accountability score of 6 on a scale of 6. The "Low" group consists of 13 countries with a rating equal to or less than 4.5 on the same scale.

We then run the return regression for each of the two groups of countries and the results are reported in Panel B, Table 4. Interestingly, we find that only the countries with high democratic accountability scores have significantly positive exposure to the GOVLMH factor (0.30) whereas

those with the low scores have insignificant exposure. On the contrary, the countries with low democratic accountability scores have significantly positive exposures to the BURLMH factor (0.93) whereas those with the high scores have insignificant exposures. These results again reveal that the policy uncertainty affects returns differently if it is caused by different reason. In a highly democratically accountable country, investors are more worried about the imminence of policy change as a result of government change. In a low democratically accountable country where government may not respond to people to change bad policies, investors may worry more about the institutional strength of the bureaucracy in policymaking.

4.3.3. Subperiod of 1995-2000 and 2001-2006

The conventional wisdom suggests that policymakers make policies to guide growth and development in the country's economic and social sectors. However, given the increasing trend of policy changes observed in the U.S. (e.g., Baker, Bloom, and Davis, 2013; Bloom, 2013), it is expected that policy uncertainty may become more important over time. We evaluate the time-varying nature of policy uncertainty by estimating our five-factor model for two sub-periods, i.e., 1995-2000 and 2000-2006, and present the results in panel C in Table 4.

We find that policy uncertainty affects equity returns slightly more in recent years (i.e., from 2001 to 2006). In both two sub-periods, the coefficients of the GOVLMH and BURLMH factors are positive at the 1% significance level. The coefficient of the BURLMH factor is slightly higher in the later period at 0.45 whereas that for the earlier period is at 0.41. The coefficient of the GOVLMH factor is similar in both periods (0.20 in the later period and 0.21 in the earlier period). In terms of economic magnitude, a one-standard deviation increase in the return of the BURLMH factor demands a compensation of 28% whereas that of the GOVLMH factor demands a return of 7% from 2001 to 2006.

In sum, we find strong empirical support for *Hypothesis 2* as the link between the policy uncertainty and equity returns varies across countries.

5. Is Policy Uncertainty A Missing Systematic Risk Factor?

If policy uncertainty affects equity returns in a significant way, it is natural to ask if it is an important missing systematic risk factor. This is our *Hypothesis 3*. We perform Fama-Macbeth (1973) regression analysis to test this hypothesis. If it is a systematic risk factor, we also evaluate if it is being efficiently priced in the equity markets.

5.1. Fama-Macbeth Asset Pricing Tests

We perform the Fama-Macbeth (1973) regression analysis in three steps. First, we conduct a rolling regression to obtain the beta estimates of the new risk factors by using the past 36 months of returns (returns from month *t-36* to month *t-1*). Second, we perform a cross-section regression by running the expected returns on the beta loadings from the past returns. We use the monthly realized return at month *t+1* to proxy for the expected return in month *t+1*.[18] Lastly, we average the estimates over time and compute the statistical significance of the estimates by using the Newey-West (1987) standard errors with a lag of 3 months. The estimates represent the risk premia of the factors. The other advantage of using Fama-Macbeth regression is that we can partially address the usual endogeneity concerns of policy uncertainty constructs (e.g., Bloom, Baker and Davis, 2013; Brogaard and Detzel, 2012). Our right-hand explanatory variables – the

[18] We omit month *t* return to avoid the momentum effect in the return of month *t* immediately after obtaining the betas from the rolling regression (e.g., Chui, Titman, Wei, 2010). We also test the results by using the return from month *t* and the results are similar.

uncertainty measures are constructed at time *t-1* whereas the dependent variables are the returns of month *t+1*. Table 5 reports the results.

[Insert Table 5 about here]

The first column in panel A of Table 5 shows that the risk premia of all the traditional risk factors, such as WORLD, VALUE, and FOREX are not statistically significantly different from zero in all model specifications.[19] Between the two political uncertainty factors, only the BURLMH factor carries a significant annual risk premium of 8.2% at the 1% significance level.

Following previous results, we also perform the Fama-Macbeth (1973) regression analysis on the subsamples as well. Panel B in Table 5 reports the results for 27 developing and 22 developed countries respectively. The annual risk premium of the GOVLMH factor is significantly positive at 5.9% for the developed countries (i.e., 48 bps per month) whereas it is not significantly different from zero for the developing countries. On the contrary, the annual risk premium of the BURLMH factor is significantly positive at 9.8% for the developing countries (i.e., 78 bps per month). Again, these contrasting results are consistent with our earlier findings that these measures capture different dimensions of policy uncertainty. In a country where bureaucratic quality is high, investors care more about policy uncertainty arising from government stability.

[19] It is important to note that we run the regression on the country-level returns here. This is different from the literature that the Fame-Macbeth regression is performed on the portfolios of stock returns sorted on their characteristics (e.g., Fame and French, 2012). We are interested in the pricing of global policy uncertainty in the country-level stock returns. The insignificance of these systematic risk factors may be specific to our sample period.

Panel C in Table 5 shows the comparative results for 13 low and 22 high democratically accountable countries respectively. The annual risk premium of the GOVLMH factor is significantly positive at 6.3% for high democratically accountable countries. Our sub-period analysis in Panel D suggests bureaucratic quality has become more important over time. The BURLMH factor carries a statistically significant positive annual risk premium of 8%.

In sum, our subsample analyses triangulate our earlier findings that the BURLMH factor is significantly priced in the cross section of international equity returns, and especially in developing countries and in more recent years. Therefore, we conclude that policy uncertainty due to bureaucratic quality is an important systematic risk factor, supporting *Hypothesis 3*. On the other hand, the GOVLMH factor is significantly priced in high democratically accountable countries. This result further extends the finding in Julio and Yook (2012a) that real investment can be dampened during national election periods. Since country-level equity returns are affected by firms' investment activities and national elections can lead to government changes, we would expect that equity returns are affected more by government stability (or the lack of it) in those more democratic countries with more frequent national elections.

5.2. Is the Pricing of Policy Uncertainty Efficient?

Since policy uncertainty is an important systematic risk factor, we next evaluate if this is being efficiently priced in international equity markets. Specifically, we test the predictability of current policy uncertainty for future equity returns. If such predictability exists, then astute investors can take advantage of this inefficiency. We regress the future returns in month *t* on the two policy uncertainty factors constructed in month *t-1*. Results are reported in Table 6.

[Insert Table 6 about here]

The results in Panel A of Table 6 show that both the GOVLMH and BURLMH factors do not have predictive power for future equity returns. This means that both factors are efficiently priced in contemporaneous equity returns. We perform sub-sample analyses again to see if the efficiency in pricing varies across countries and over time. Panel B shows that the BURLMH factor has predictive power for future returns in developing countries at the 10% significance level. Panel C shows that neither factors predicts future returns in high or low democratic countries. Lastly, Panel D shows that both the GOVLMH and BURLMH factors can predict future returns in the earlier sample period of 1995 to 2000 but not in more recent years.

Overall, we find that the pricing of policy uncertainty is rather efficient in international equity markets especially in more recent years and in developed countries.

6. Robustness Tests

In this section, we first verify that our proposed measures outperform the existing policy uncertainty measures. Second, we conduct further analysis to show that our proposed policy uncertainty measures are different from the existing institutional measures. Specifically, we introduce more than 20 country-level variables that may be related to policy uncertainty and see how they are related to the two sources of policy uncertainty.

6.1. A Horse-Race between the Existing and New Measures of Policy Uncertainty

Baker, Bloom, and Davis (2013) construct an index for economic policy uncertainty in the United States, PU_{US}. We put it together with our proposed two factors and regress the equity

returns of the U.S., the nine South and North American countries, the 21 European countries[20] and the entire 49 countries in our sample. Like before, we cluster the standard errors by month and compute the robust standard errors.[21] We also control for country fixed effects. We also employ alternative measures by Berkman, Jacobsen, and Lee (2011). They have shown that three world crisis indices are significantly related to world stock market returns. Since policy uncertainty can arise naturally from political uncertainty, we consider them better measures of global policy uncertainty.[22]

We run a horse-race between our new measures and the existing measures of policy uncertainty. Like before, we run the pooled regression on the returns from nine North and South American countries, 21 European countries, and all 49 countries in our sample. Table 7 presents the results.

[Insert Table 7 about here]

In nine North and South American countries, the new BURLMH factor is significantly related to the equity returns at the 1% level whereas PU_{US} is not significantly related to the returns. CI_D and CI_E are significantly related to the returns at the 1% significance level. In 21

[20] Given that Baker, Bloom, and Davis (2013) have constructed an economic policy uncertainty index for the European countries, we regress the returns of the European countries on the European index. We do not find any significant results. The results can be provided upon request.

[21] We have also performed two-dimensional clustering by country and month. The results are similar.

[22] We are aware that a recent study by Brogaard and Detzel (2012) has constructed economic policy uncertainty measures for 21 countries. We choose not to employ their measures as our sample consists of 49 countries. Moreover, our policy uncertainty constructs also capture the uncertainty beyond the economic uncertainty. For example, the bureaucratic quality measure is also shown to be significantly related to "corruption" and "law & order" measures as shown in Table 8 later. Indeed, Table 8 also shows that our two uncertainty constructs are not significantly related to the economic conditions across countries.

European countries, both GOVLMH and BURLMH factors are statistically and economically significantly related to the returns whereas all the existing measures are not significant. Similarly, in the entire sample of 49 countries, our two new factors are all significantly related to the returns at the 1% significance level and the others are not. On average, the annual return exposure to the BURLMH factor is 27.4% and that of the GOVLMH factor is 7.8% given a one-standard deviation increase in the two factors.

The superior performance of our proposed two measures can be due to two reasons. First, Baker, Bloom and Davis (2013) mainly capture the economic policy uncertainty in the United States instead of global policy uncertainty. We are aware that Baker, Bloom and Davis (2013) have constructed another policy uncertainty index for European countries. We test it and do not find significant relation between this index and international equity returns neither. Policymakers of other countries (such as European countries) may not coordinate their policy shifts with the U.S. policymakers (e.g., Bekaert, Harvey, Lundblad, and Siegel, 2013). Second, Berkman, Jacobsen, and Lee (2011) rely on the realized political disasters. In order for the returns to compensate investors for bearing policy uncertainty, the uncertainty needs to be measured in a more general way and in expectation. Our proposed measures represent the expected risk.

6.2. The Economic and Institutional Origins of Our Selected Ratings

In this section, we verify the correlation between our selected "government stability" and "bureaucratic quality" with three groups of existing country-level variables. The first group of these country-level variables consists of other country risk ratings provided by ICRG, such as the commonly used ratings of "*corruption*", "*law & order*", "*economic risk*", and "*financial risk*" (e.g., Erb, Harvey and Viskanta, 1996; Wei, 2000a, 2000b; Harvey, 2004). In addition, we also include the ICRG rating of "*socio-economic conditions*", which measures the public sentiment

on government policies. Dissatisfaction on policies leads to social unrest and creates pressures on the government to address the level of discontent. Hence, poor socio-economic conditions increase the pressure on the government to flip-flop its unpopular policy decisions. This leads to a higher level of policy risk.

We also collect the "*freedom*" index from "The World Index of Economic Freedom", published yearly by the Wall Street Journal and The Heritage Foundation. It ranks 157 countries worldwide according to their level of economic freedom and measures the freedom of individuals in each country to work, produce and consume in pursuit of prosperity. Governments that have a record of not intervening unnecessarily in the country's economy, that protect and seek not to constrain this freedom are given higher scores. Therefore, the index measures the commitment and reputation of the government in allowing autonomy in the country. Such governments are less likely to intervene frequently in policy formulation. The index also measures the strength of a country's institutions in upholding economic freedom. A low index score may signal a high level of policy uncertainty in the country. We use the linear interpolation to construct the monthly ratings. [23]

Besides these country-level risk ratings, we also collect country-level economic variables because we have found that the link between policy uncertainty and equity returns is highly dependent on different countries' economic conditions earlier. They include the natural logarithm of gross domestic product (GDP) per capita in U.S. dollar, real GDP growth, and GDP deflator change (based on 1996=100) from the Economist Intelligence Unit. Since the literature

[23] The historical data on the "*World Index of Economic Freedom*" is available online from http://www.heritage.org/research/features/index/downloads.cfm.

shows that policymakers can be very active in intervening financial markets during the financial crisis (e.g., Aït-Sahalia, Andritzky, Jobst, Nowak, and Tamirisa, 2012), we also include financial market development variables, such as the ratio of bank deposits to GDP (Bank) from the International Monetary Fund, the ratio of stock market capitalization to GDP (Market Capitalization) from the S&P Emerging Market Database, the stock market turnover rate (Turnover) from the S&P Emerging Market Database, and the size of the corporate and government bond markets relative to GDP (Corporate Bond and Government Bond) from the Bank for International Settlements. Moreover, the literature has also extensively studied the economic impact of tax policy change (e.g., Rodrik, 1991; Hassett and Metcalf, 1999; and Hermes and Lensink, 2001). Hence, we include tax policy variables such as a dummy variable of tax relief for dividends (Tax Relief), a dummy variable for a dividend imputation tax system (Tax Imputation), and the top statutory corporate tax rate of a country from the KPMG Tax Survey (Tax Rate).

Lastly, given the recent literature that national culture matters for international equity markets (e.g., Guiso, Sapienza and Zingales, 2009; Chui, Titman and Wei, 2010), we also include culture measures defined by Hofstede (1980) that are modified by Taras, Steel, and Kirkman (2011). They include power distance, individualism, masculinity, and uncertainty avoidance. The modified measures vary over time whereas the original Hofstede (1980) are static.

Panel A in Table 8 reports the summary statistics of these country variables. The ICRG rating of "*government stability*" and "*socio-economic*" condition has a scale of 12 whereas that of "*bureaucracy quality*", "*corruption*", and "*law & order"* index has a scale of 6. "*Financial risk*"

and "*economic risk*" rating has a scale of 50. The "*freedom*" index has a scale of 100. The variables do not display any abnormal statistical properties.

[Insert Table 8 about here]

Next we perform principal component analysis to make sense of our measures in relation to other country variables. To minimize the number of categories, we apply the Varimax factor rotation method (Kaiser, 1958) to obtain a more efficient breakdown by keeping only those components with eigenvalues greater than one. Panel B in Table 8 shows that there exist seven dominant component variables (i.e., COMP1, COMP2, COMP3, COMP4, COMP5, COMP6, and COMP7). Among seven principal components, COMP2 reveals that bureaucratic quality is significantly related to corruption and law & order. It is intuitive to see that bureaucratic quality is positively related to corruption and law and order indices. Moreover, national culture measures such as masculinity and uncertainty avoidance are also significantly related to bureaucratic rating as well. The government stability index is significantly loaded on COMP7. This is a stand-alone factor and is not closely related to other country variables.

In sum, we conclude that the two sources of policy uncertainty are distinctively related to country-level institutional, economic, financial and social variables.

7. Conclusion

This study evaluates and finds that policy uncertainty affects international equity returns. We propose two measures of global policy uncertainty arising from either an unstable government or an incompetent bureaucracy. While the two policy uncertainty factors matter, their price impacts differ significantly. Economically, the bureaucratic factor is more important as a one-standard deviation increase in the factor can generate an additional return of 27% per year. Moreover, we

find that bureaucratic factor is an important missing systematic risk factor with an annual risk premium is 8%. This study details novel evidence that bureaucratic quality is being priced in international equity returns.

Our findings have two important implications for international investors. First, given that the strength of bureaucratic institution is systematically priced in international equity markets, and is sometimes more important than the stability of a government, international investors shall account for this risk. Second, a country's stock market can offer diversification benefit if its government commits to build strong and autonomous bureaucratic institution. Future studies can continue to explore the importance of global policy uncertainty across industries and firms.

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Table 1: Summary Statistics

This table presents the summary statistics and correlation matrix of the key variables used in this study from 1995 to 2006. All returns are measured in US Dollars. The new policy uncertainty factors are constructed from mimicking portfolios which are formed by holding an equally-weighted long position in countries with low ratings (cutoff at 30th percentile), and an equally-weighted short position in countries with high ratings (cutoff at 70th percentile). The LMH portfolio returns are constructed based on ICRG government stability ratings (GOVLMH), ICRG bureaucratic quality ratings (BURLMH). The conventional systematic risk factors include the excess return of a world market portfolio (WORLD), the world value factor (VALUE), the world size factor (SIZE), and the exchange rate factor (FOREX). Equity returns are the country-level MSCI returns from the U.S., the North and South America countries (9 of 49 countries), the European countries (21 of 49 countries), and all 49 countries in our sample. The other existing policy uncertainty measures include the uncertainty index of the United States constructed by Baker, Bloom and Davis (2013), PU_{US} and three political uncertainty measures, CI_S, CI_D, and $CI_{E,}$ that are the first order autoregressive residuals of the three world disaster indices constructed by Berkman, Jacobsen and Lee (2011). Panel A reports the summary statistics such as mean, median, standard deviation, min and max. P-values reported are the result of the right-tailed t test. Panel B reports the correlation coefficients of all the risk and policy uncertainty factors. The p-values of the correlation coefficients are reported on the row next to the correlation coefficients. The significant p-values that are below 0.1 are highlighted in italics.

Panel A: Summary Statistics

Variables	N	Mean	Median	Stdev	Min	Max	Skewness	Kurtosis	P-value
Proposed Policy Uncertainty Factors									
GOVLMH	144	0.003	0.002	0.028	-0.110	0.088	-0.065	2.361	0.135
1995-2000	72	0.001	0.003	0.032	-0.110	0.088	-0.344	5.115	0.396
2001-2006	72	0.004	0.002	0.024	-0.045	0.080	0.732	4.206	*0.081*
BURLMH	144	0.004	0.000	0.047	-0.165	0.129	-0.466	1.851	0.168
1995-2000	72	-0.007	-0.007	0.055	-0.165	0.129	-0.203	4.117	0.858
2001-2006	72	0.015	0.010	0.033	-0.062	0.090	0.183	2.562	*0.000*
Existing Risk Factors									
WORLD	144	0.008	0.012	0.039	-0.140	0.092	-0.699	1.180	*0.005*
VALUE	144	0.002	0.002	0.034	-0.119	0.131	0.344	3.131	0.192
SIZE	144	-0.023	-0.016	0.041	-0.213	0.085	-1.420	4.517	1.000
FOREX	144	0.001	0.002	0.011	-0.033	0.038	-0.038	0.997	0.138
Equity Returns									
U.S.	144	0.007	0.011	0.043	-0.143	0.102	-0.583	0.856	*0.023*
North and South America	1296	0.011	0.012	0.093	-0.421	0.603	-0.013	4.673	*0.000*
European countries	3021	0.012	0.011	0.087	-0.596	0.952	0.933	12.708	*0.000*
All countries	7051	0.010	0.009	0.093	-0.596	0.952	0.499	7.911	*0.000*
Other Policy Uncertainty Measures									
PU_{US}	144	1.153	0.100	15.960	-29.526	130.036	4.094	28.981	0.194
CI_S	144	0.000	-0.801	1.609	-0.801	6.199	2.018	5.904	0.500
CI_D	144	0.000	-0.023	1.930	-5.527	5.977	0.311	5.308	0.500
CI_E	144	0.000	-0.761	1.707	-0.877	8.239	2.349	8.199	0.500

Panel B: Correlation Matrix

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(1) GOVLMH	1.00								
	.								
(2) BURLMH	0.19	1.00							
	0.00	.							
(3) PU_{US}	-0.20	-0.04	1.00						
	0.00	*0.00*	.						
(4) CI_S	-0.23	-0.10	0.21	1.00					
	0.00	*0.00*	*0.00*	.					
(5) CI_D	-0.11	-0.08	0.12	0.05	1.00				
	0.00	0.18	*0.00*	*0.00*	.				
(6) CI_E	0.18	0.18	-0.15	0.05	-0.54	1.00			
	0.00	*0.00*	*0.00*	*0.00*	*0.00*	.			
(7) WORLD	0.24	0.02	-0.28	-0.26	-0.06	0.10	1.00		
	0.00	0.25	*0.00*	*0.00*	*0.00*	*0.00*	.		
(8) VALUE	-0.07	0.10	0.04	-0.02	-0.03	-0.03	-0.11	1.00	
	0.00	*0.00*	*0.00*	0.17	*0.04*	*0.01*	*0.00*	.	
(9) SIZE	0.01	-0.04	-0.02	0.09	-0.14	0.09	-0.05	0.09	1.00
	0.60	*0.00*	*0.11*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	.
(10) FOREX	0.02	-0.04	0.06	-0.02	0.31	-0.21	-0.19	-0.05	0.05
	0.14	*0.00*	*0.00*	0.21	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*

Table 2: International Equity Returns and Two New Policy Uncertainty Factors

This table reports the loadings of the equity returns on the newly proposed policy uncertainty factors from 1995 to 2006, which are the government stability factor (GOVLMH) and the bureaucratic quality factor (BURLMH). All returns are measured in US Dollars. The other risk factors include the excess return of the world market portfolio (WORLD), the world value factor (VALUE), the world size factor (SIZE), and the exchange rate factor (FOREX). The dependent variables are the returns from all 49 countries (All), 9 North and South American countries (America), and 21 European countries (Europe) respectively. We include the country fixed effects in the model. The standard errors in brackets are robust errors and are clustered by month. The asterisk *, ** and *** denote significance level at 10%, 5%, and 1% respectively.

	All				America	Europe
Independent Variables	Model 1	Model 2	Model 3	Model 4	Model 4	Model 4
GOVLMH	0.3605***		0.2155***	0.2157***	0.0241	0.3515***
	[4.16]		[4.09]	[4.12]	[0.19]	[3.92]
BURLMH		0.4517***	0.4262***	0.4260***	0.6532***	0.0829
		[13.55]	[13.28]	[13.14]	[8.17]	[1.46]
WORLD	1.0006***	1.0555***	1.0175***	1.0173***	1.0922***	1.0944***
	[13.78]	[24.72]	[25.38]	[25.45]	[10.57]	[18.09]
VALUE	0.1424*	0.0623	0.0738*	0.0744*	0.1956*	0.0825
	[1.70]	[1.23]	[1.67]	[1.67]	[1.88]	[1.04]
SIZE	-0.0238	0.0100	0.0053			
	[-0.53]	[0.32]	[0.17]			
FOREX	-0.4084**	-0.2892**	-0.3288***	-0.3280***	-0.0373	0.0766
	[-2.04]	[-2.16]	[-2.80]	[-2.79]	[-0.14]	[0.38]
CONSTANT	0.0036	0.0017	0.0017	0.0016	-0.0006	-0.0014
	[0.35]	[0.17]	[0.18]	[0.17]	[-0.06]	[-0.48]
Country fixed effects	YES	YES	YES	YES	YES	YES
Standard error cluster	Month	Month	Month	Month	Month	Month
N	5831	5831	5831	5831	1071	2499
Adj. R^2	0.23	0.27	0.28	0.28	0.35	0.31

Table 3: Country-Level Analysis of the Importance of Policy Uncertainty

This table presents the time-series regressions analyses with a new parsimonious five-factor equity return model for each country in the sample from 1995 to 2006. All returns are measured in US Dollars. The first five columns report the loadings of the five risk factors –the government stability factor (GOVLMH), the bureaucratic quality factor (BURLMH), the excess return of the world market portfolio (WORLD), the world value factor (VALUE), and the exchange rate factor (FOREX). The sixth and seventh column reports the intercept (CONSTANT) and the adjusted R^2 for each country (Adj. R^2). The standard errors are Newey-West (1987) errors with the lag of 3 months. The asterisk *, ** and *** denote significance level at the 10%, 5%, and 1% respectively.

Country	GOVLMH	BURLMH	WORLD	VALUE	FOREX	CONSTANT	Adj. R^2
ARGENTINA	-0.026	0.798***	1.068***	0.119	-0.728	-0.001	0.23
AUSTRALIA	0.014	0.117	0.961***	0.086	-0.756***	0.001	0.61
AUSTRIA	0.099	-0.129	0.645***	0.398**	-0.816	0.007	0.27
BELGIUM	0.259**	-0.298***	0.757***	0.245*	-0.744**	0.004	0.61
BRAZIL	0.167	1.185***	1.718***	0.255	0.718	-0.004	0.47
CANADA	-0.176*	0.035	1.188***	-0.045	-0.185	0.001	0.67
CHILE	0.384***	0.684***	0.984***	0.313**	-0.173	-0.005	0.42
CHINA	-0.798*	1.359***	1.337***	0.410	-0.458	-0.001*	0.42
COLOMBIA	0.201	0.686*	0.693***	0.511	-0.528	0.009	0.18
CZECH REP	0.697***	0.554***	0.499**	-0.202	-0.756	0.011	0.24
DENMARK	0.067	-0.171**	0.870***	0.041	-0.119	0.005*	0.50
EGYPT	-0.183	0.860**	0.827***	-0.427	-0.577	0.010	0.24
FINLAND	0.136	-0.493***	1.766***	-0.258	0.274	0.007	0.47
FRANCE	0.184**	-0.200***	1.043***	0.100	-0.228	0.001	0.74
GERMANY	0.162*	-0.137	1.196***	0.099	-0.171	-0.002	0.66
HONG KONG	-0.340	0.395***	1.120***	0.268	-1.045**	-0.006	0.44
HUNGARY	0.801***	0.471**	1.065***	-0.355**	0.709	0.007	0.40
INDIA	0.362	0.715***	0.615***	-0.491*	-0.937*	0.007	0.31
INDONESIA	0.416	1.640***	1.349***	0.493	-1.897	-0.010	0.39
IRELAND	0.247**	-0.219***	0.921***	0.310***	-0.467*	0.000	0.56
ISRAEL	0.812***	0.118	0.762***	-0.223	-0.061	0.002	0.31
ITALY	0.377***	-0.130	0.865***	-0.029	-0.349	0.004	0.49
JAPAN	-0.250*	0.098	0.928***	-0.067	-0.942***	-0.006	0.43
JORDAN	0.034	0.238*	0.169	-0.121	-0.754*	0.006	0.06
KOREA	1.145***	0.876**	1.657***	-0.303	-1.481	0.001	0.46
MALAYSIA	0.048	0.935***	0.903***	0.003	-0.881	-0.010	0.31
MEXICO	-0.154	0.701***	1.345***	0.114	0.984***	0.001	0.60
MOROCCO	-0.117	-0.147	0.251	0.061	-0.282	0.008	0.01
NETHERLANDS	0.177*	-0.164*	1.040***	0.253**	0.048	-0.002	0.72
NEW ZEALAND	0.208	0.011	0.844***	0.177	-1.002**	-0.002	0.35
NORWAY	0.302**	-0.104	1.112***	0.403***	-0.227	0.001	0.52
PAKISTAN	1.065**	1.345***	-0.147	-0.471	-0.108	0.010	0.34
PERU	0.038	0.765***	0.693***	0.357*	0.422	0.002	0.36
PHILIPPINES	0.072	0.697***	1.132***	0.512**	-1.465**	-0.016	0.36
POLAND	1.273***	0.533*	1.128***	-0.117	0.245	-0.001	0.38
PORTUGAL	0.402**	-0.291***	0.788***	0.094	-0.594	0.003	0.38
RUSSIA	0.424	2.093***	2.015***	0.454	3.379***	-0.001	0.58
SINGAPORE	-0.029	0.378***	1.075***	0.191	-1.155**	-0.006	0.45
SOUTH AFRICA	0.070	0.746***	1.185***	0.320*	-0.310	-0.004	0.54
SPAIN	0.203	-0.137*	1.086***	0.140	-0.491	0.003	0.60
SRI LANKA	1.404***	0.789***	0.115	-0.601	-0.538	0.007	0.27
SWEDEN	0.198	-0.152	1.414***	0.001	-0.149	0.001	0.57
SWITZERLAND	0.290*	-0.180**	0.811***	0.201	-0.150	0.002	0.51
TAIWAN	0.305	1.019***	0.983***	-0.315	0.286	-0.011**	0.49
THAILAND	-0.456	1.182***	1.734***	0.428*	-3.046***	-0.014*	0.49
TURKEY	0.253	0.825*	2.408***	-0.051	2.629**	0.000	0.33
UK	0.017	-0.048	0.785***	0.228***	-0.350*	-0.001	0.73
USA	-0.051	-0.034	1.025***	0.051	0.315**	-0.003**	0.85
VENEZUELA	-0.166	1.058***	1.116***	0.085	-1.160	-0.004	0.27

Table 4: Subsample Analysis

This table reports subsample analyses of policy uncertainty effects on equity returns from 1995 to 2006. All returns are measured in US Dollars. The five factors consist of the government stability factor (GOVLMH), the bureaucratic quality factor (BURLMH), the excess return of the world market portfolio (WORLD), the world value factor (VALUE), and the exchange rate factor (FOREX). Panel A reports the results for the developing and developed countries respectively. MSCI classifies the 49 countries into 27 developing (Developing) and 22 developed economies (Developed). Panel B reports the results for 13 countries with low ICRG rating of democratic accountability (less than or equal to 4.5 is Low Democratic Accountability), and for 23 countries with high rating (a score of 6 is High Democratic Accountability). The score is reported in December 2006. Panel C displays the results for the subperiods of 1995-2000 and 2001-2006 respectively. Country fixed effects are included. The standard errors in brackets are robust errors and are clustered by month. The asterisk *, ** and *** denote significance level at 10%, 5%, and 1% respectively.

	A. Economic Development		**B. Democratic Accountability**		**C. Time Periods**	
Independent Variables	Developing	Developed	Low	High	1995-2000	2001-2006
GOVLMH	0.2989***	0.1135**	0.0906	0.2991***	0.2098**	0.2019***
	[4.64]	[2.17]	[1.28]	[4.46]	[2.54]	[3.47]
BURLMH	0.8417***	-0.0842**	0.9321***	0.0412	0.4076***	0.4452***
	[19.69]	[-2.41]	[15.14]	[0.97]	[9.08]	[9.52]
WORLD	1.0223***	1.0112***	0.9251***	1.0514***	1.0248***	1.0239***
	[21.41]	[25.56]	[16.69]	[23.80]	[13.87]	[25.06]
VALUE	0.0281	0.1313***	0.0654	0.0328	0.0680	0.0891*
	[0.53]	[2.66]	[1.01]	[0.48]	[1.15]	[1.69]
FOREX	-0.2507*	-0.4229***	-0.5846***	-0.2408*	-0.0334	-0.4913***
	[-1.95]	[-3.12]	[-3.14]	[-1.91]	[-0.16]	[-3.47]
CONSTANT	-0.0010	0.0014	-0.0005	-0.0016	-0.0071	0.0057
	[-0.11]	[0.43]	[-0.05]	[-0.45]	[-0.62]	[0.40]
Country fixed effects	YES	YES	YES	YES	YES	YES
Standard error cluster	Month	Month	Month	Month	Month	Month
N	3213	2618	1547	2737	2303	3528
Adj. R^2	0.30	0.48	0.28	0.39	0.25	0.34

Table 5: The Pricing of Policy Uncertainty in the Cross-Section of Equity Returns

This table presents the Fama-Macbeth (1973) regression analyses for a five-factor international asset pricing model for 49 countries from 1995 to 2006. The five risk factors include the government stability factor (GOVLMH), the bureaucratic quality factor (BURLMH), the excess return of the world market portfolio (WORLD), the world value factor (VALUE), and the exchange rate factor (FOREX). All the risk factors are demeaned to zero. All returns are measured in US Dollars. Panel A displays the results for the entire sample period for 49 countries. Panel B reports the results for the developing and developed countries respectively. MSCI classifies the 49 countries into 27 developing (Developing) and 22 developed economies (Developed). Panel C reports the results for 13 countries with a low ICRG rating of democratic accountability (with less or equal to 4.5 in the score of Democratic Accountability), and for 23 countries with high rating (with a score of 6 in the rating of Democratic Accountability). The score is reported in December 2006. Panel D displays the results for the sub-periods of 1995-2000 and 2001-2006 respectively. The standard errors reported in brackets are Newey-West (1987) standard errors with the lag of 3 months. The asterisk *, ** and *** denote significance level at 10%, 5%, and 1% respectively.

	A. Overall	**B. Economic Development**		**C. Democratic Accountability**		**D. Sub-Periods**	
Independent Variables	1995-2006	Developing	Developed	Low	High	1995-2000	2001-2006
GOVLMH	0.0037	0.0038	0.0048*	0.0028	0.0051*	0.0061	0.0024
	[1.36]	[1.14]	[1.66]	[0.79]	[1.80]	[1.17]	[0.91]
BURLMH	0.0066*	0.0078**	0.0012	0.0060	0.0055	0.0037	0.0064**
	[1.81]	[2.06]	[0.17]	[1.60]	[1.46]	[0.41]	[2.35]
WORLD	0.0014	0.0011	0.0058	0.0019	0.0020	0.0028	0.0002
	[0.44]	[0.36]	[0.96]	[0.55]	[0.55]	[0.43]	[0.06]
VALUE	0.0016	0.0017	0.0068	0.0008	0.0021	0.0073	-0.0005
	[0.43]	[0.45]	[1.23]	[0.18]	[0.44]	[0.96]	[-0.24]
FOREX	-0.0003	0.0002	-0.0016	0.0003	0.0005	-0.0012	-0.0002
	[-0.20]	[0.12]	[-0.82]	[0.21]	[0.29]	[-0.4]	[-0.13]
CONSTANT	0.0068	0.0061	-0.0000	0.0068	0.0058	-0.0023	0.0153***
	[1.41]	[1.09]	[-0.01]	[1.41]	[1.23]	[-0.33]	[2.88]
N	5831	3213	2618	1547	2737	2303	3528
Adj. R^2	0.19	0.14	0.19	0.16	0.26	0.25	0.16

Table 6: Is Policy Uncertainty Efficiently Priced?

This table presents the out-of-sample prediction of policy uncertainty factors for returns from 1995 to 2006. Panel A, B, C and D include the government stability factor (GOVLMH), the bureaucratic quality factor (BURLMH), the excess return of the world market portfolio (WORLD), the world value factor (VALUE), and the exchange rate factor (FOREX). The dependent variables are the returns in month *t+2* whereas the right hand factors are constructed in month *t*. All the risk factors are demeaned to zero. All returns are measured in US Dollars. Panel A displays the results for the entire sample period for 49 countries. Panel B reports the results for the developing and developed countries respectively. MSCI classifies the 49 countries into 27 developing (Developing) and 22 developed economies (Developed). Panel C reports the results for 13 countries with a low ICRG rating of democratic accountability (with less or equal to 4.5 in the score of Democratic Accountability), and for 23 countries with high rating (with a score of 6 in the rating of Democratic Accountability). The score is reported in December 2006. Panel D displays the results for the sub-periods of 1995-2000 and 2001-2006 respectively. The asterisk *, ** and *** denote significance level at 10%, 5%, and 1% respectively.

	A. Overall	**B. Economic Development**		**C. Democratic Accountability**		**D. Sub-Periods**	
Independent Variables	1995-2006	Developing	Developed	Low	High	1995-2000	2001-2006
GOVLMH	-0.0808	-0.0915	-0.0676	-0.0719	-0.1201	-0.3806*	0.1398
	[-0.50]	[-0.44]	[-0.48]	[-0.34]	[-0.80]	[-1.94]	[0.72]
BURLMH	0.1919	0.3080*	0.0494	0.2525	0.1189	0.2994*	0.0395
	[1.37]	[1.80]	[0.41]	[1.52]	[0.91]	[1.74]	[0.19]
WORLD	-0.0062	-0.0277	0.0201	0.0012	0.0176	-0.0801	0.0487
	[-0.04]	[-0.18]	[0.14]	[0.01]	[0.12]	[-0.31]	[0.32]
VALUE	0.1694	0.2353	0.0885	0.2647	0.0925	0.1236	0.1640
	[1.01]	[1.13]	[0.60]	[1.48]	[0.57]	[0.64]	[0.59]
FOREX	0.0396	-0.2512	0.3966	-0.3439	0.3421	0.3688	0.1559
	[0.10]	[-0.57]	[0.94]	[-0.76]	[0.78]	[0.58]	[0.34]
CONSTANT	0.0100	0.0094	0.0075	0.0095	0.0050	-0.0005	0.0178
	[0.86]	[0.81]	[1.32]	[0.83]	[0.78]	[-0.03]	[1.10]
Country fixed effects	YES	YES	YES	YES	YES	YES	YES
Standard error cluster	Month	Month	Month	Month	Month	Month	Month
N	5733	3159	2574	1521	2691	2303	3430
Adj. R^2	0.02	0.03	0.01	0.02	0.01	0.04	0.02

Table 7: A Horse-race of Existing Policy Uncertainty Measures

This table presents the effect of policy uncertainty on international equity returns with the inclusion of two new measures of policy uncertainty from 1995 to 2006. The first measure is the government stability factor (GOVLMH) and the second is the bureaucratic quality factor (BURLMH). The two measures are constructed from mimicking portfolios which are formed by holding an equally-weighted long position in countries with low ratings belonging to the lower 30th percentile, and an equally-weighted short position in countries with high ratings belonging to the top 30th percentile. The ratings used are ICRG "*government stability*" ratings and "*bureaucracy quality*" ratings, which represent the stability of the government and the competency of the bureaucracy respectively. Model 1 employs the existing policy risk measure PU_{US} from Baker, Bloom and Davis (2013). Model 2 adds three political uncertainty measures CI_S, CI_D, and CI_E that are the first autoregressive residuals of the three world disaster indices constructed by Berkman, Jacobsen and Lee (2011). The other existing risk factors included are the excess return of the world market portfolio (WORLD), the world value factor (VALUE), the world size factor (SIZE), and the exchange rate factor (FOREX). The dependent variables are the monthly MSCI returns of 9 countries in North and South America (America), the returns of 21 European countries (Europe), and the returns of all 49 countries in our sample (All) denominated in U.S. dollars. Country fixed effects are included. The standard errors are robust and are clustered by month. The asterisk *, ** and *** denote significance level at 10%, 5%, and 1% respectively.

	America		Europe		All	
Independent Variables	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
PU_{US}	0.0000	-0.0000	-0.0001	-0.0002	-0.0001	-0.0001
	[0.20]	[-0.00]	[-1.33]	[-1.61]	[-1.26]	[-1.51]
CI_S		0.0030		0.0012		0.0002
		[1.57]		[0.69]		[0.20]
CI_D		-0.0049**		-0.0001		0.0007
		[-2.50]		[-0.10]		[0.75]
CI_E		-0.0048*		-0.0021		-0.0013
		[-1.78]		[-1.40]		[-1.23]
GOVLMH	0.0237	0.0543	0.3408***	0.3660***	0.2083***	0.2238***
	[0.18]	[0.44]	[3.76]	[4.45]	[3.97]	[4.68]
BURLMH	0.6565***	0.6773***	0.0829	0.0961*	0.4258***	0.4343***
	[8.26]	[8.68]	[1.49]	[1.74]	[13.30]	[13.70]
WORLD	1.0975***	1.1306***	1.0829***	1.0919***	1.0090***	1.0084***
	[10.03]	[10.75]	[16.96]	[16.11]	[24.59]	[23.27]
VALUE	0.1874*	0.1840*	0.0816	0.0791	0.0744*	0.0711
	[1.81]	[1.85]	[1.06]	[0.99]	[1.72]	[1.54]
SIZE	0.0673	0.0435	0.0120	0.0172	0.0040	0.0146
	[0.97]	[0.66]	[0.24]	[0.33]	[0.13]	[0.46]
FOREX	-0.0481	0.0995	0.0784	0.0312	-0.3261***	-0.4012***
	[-0.18]	[0.40]	[0.39]	[0.15]	[-2.77]	[-3.13]
CONSTANT	0.0009	-0.0003	-0.0009	-0.0009	0.0019	0.0021
	[0.09]	[-0.03]	[-0.29]	[-0.31]	[0.20]	[0.22]
Country fixed effects	YES	YES	YES	YES	YES	YES
Standard error cluster	Month	Month	Month	Month	Month	Month
N	1071	1071	2499	2499	5831	5831
Adj. R^2	0.36	0.36	0.31	0.32	0.28	0.28

Table 8: The Economic and Institutional Origins of Policy Uncertainty

This table identifies the economic sources of government stability and bureaucratic quality from January 1995 to December 2006. We use the original *government stability* and *bureaucracy quality* indices to be consistent with other country-level variables here. We also include other country-level ICRG rating indices such as *corruption*, *socio-economic*, *law and order*, *economic risk*, and *financial risk* indices. We also employ the *freedom* index published by Wall Street Journal and the Heritage Foundation. To measure economic activities, we include the natural logarithm of gross domestic product (GDP) per capita, GDP growth, and GDP deflator change from the Economist Intelligence Unit. To measure financial activities, we include the ratio of bank deposits to GDP (Bank) from the International Monetary Fund, the ratio of stock market capitalization to GDP (Market Capitalization) from the S&P Emerging Market Database, the stock market turnover rate (Turnover) from the S&P Emerging Market Database, and the size of the corporate and government bond markets relative to GDP (Corporate Bond and Government Bond) from the Bank for International Settlements. Tax policy variables include a dummy variable of tax relief for dividends (Tax Relief), a dummy variable for a dividend imputation tax system (Tax Imputation), and the top statutory corporate tax rate of a country from the KPMG Tax Survey (Tax Rate). Lastly, we also include Hofstede's (1980) national culture variables such as power distance, individualism, masculinity, and uncertainty avoidance as modified by Taras et al.'s (2011). Panel A reports the summary statistics of all the country-level variables. Panel B reports the principal component analysis of the variables. We adopt the Kaiser (1958) criterion where variables with eigenvalues greater than one are considered dominant. COMP1, COMP2, COMP3, COMP4, COMP5, COMP6, and COMP7 refer to the first seven principal components. The factor loadings that are above 0.50 or below -0.50 are highlighted in bold.

Panel A: Summary Statistics

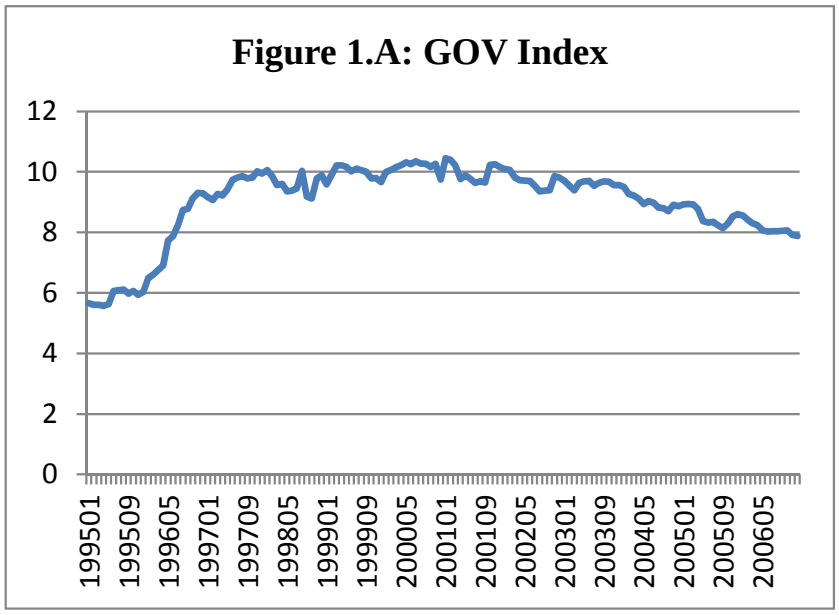
Country Factors	N	Mean	Median	Std	Min	Max	Skew	Kurt
(1) Government Stability Index	3252	9.07	9.50	1.72	3.00	12.00	-0.88	3.14
(2) Bureaucracy Quality Index	3252	3.63	4.00	1.13	2.00	6.00	0.50	2.74
(3) Corruption Index	3252	3.61	3.50	1.34	1.00	6.00	0.08	2.11
(4) Socio-Economic Index	3252	7.18	7.00	2.10	2.00	11.00	-0.31	2.56
(5) Freedom Index	3228	67.76	67.08	10.23	44.86	91.37	0.17	2.77
(6) Law & Order Index	3252	4.69	5.00	1.34	1.00	6.00	-0.77	2.54
(7) Economic Risk	3296	38.97	39.58	4.54	20.14	48.54	-0.99	4.68
(8) GDP per capita	3341	9.53	9.97	0.81	7.27	10.59	-0.82	2.38
(9) GDP growth	3341	3.68	3.63	3.43	-13.13	15.60	-0.74	6.24
(10) GDP deflator change	3341	7.43	2.81	56.17	-7.68	2240.43	33.73	1243.45
(11) Financial Risk	3296	39.94	39.92	4.97	22.25	50.00	-0.45	3.22
(12) Bank	3195	0.91	0.89	0.42	0.21	1.90	0.36	2.12
(13) Market Capitalization	3328	0.89	0.71	0.72	0.02	4.86	1.84	7.91
(14) Turnover	3339	44.25	30.32	39.80	7.94	216.61	2.27	7.90
(15) Corporate Bond	3341	0.25	0.18	0.23	0.00	1.12	1.26	4.91
(16) Government Bond	3341	0.34	0.30	0.22	0.00	1.38	1.35	5.73
(17) Tax Relief	3341	0.11	0.00	0.31	0.00	1.00	2.55	7.50
(18) Tax Imputation	3341	0.36	0.00	0.48	0.00	1.00	0.59	1.35
(19) Tax Rate	3277	33.42	33.00	7.72	16.00	59.67	0.60	4.42
(20) Power Distance	3341	-0.14	-0.16	0.47	-0.97	1.38	0.96	3.89
(21) Individualism	3341	0.02	0.03	0.63	-2.23	2.22	0.09	6.76
(22) Masculinity	3341	0.30	0.27	0.49	-0.70	1.43	0.14	2.49
(23) Uncertainty Avoidance	3341	-0.03	-0.02	0.58	-1.56	0.93	-0.26	2.28

Panel B: Principal Components Analysis

Country Factors	COMP1	COMP2	COMP3	COMP4	COMP5	COMP6	COMP7
(1) Government Stability Index	0.11	-0.01	0.16	-0.05	0.00	-0.08	**0.81**
(2) Bureaucracy Quality Index	0.38	**0.71**	-0.05	-0.01	0.08	0.14	-0.34
(3) Corruption Index	0.25	**0.76**	0.09	0.19	0.18	0.17	0.06
(4) Socio-Economic Index	0.49	0.40	0.29	0.08	0.23	0.25	0.28
(5) Freedom Index	0.38	0.44	**0.62**	-0.01	0.33	0.12	0.06
(6) Law & Order Index	0.42	**0.75**	0.10	0.10	0.10	0.08	-0.03
(7) Economic Risk	**0.79**	0.27	0.30	0.07	-0.03	0.14	0.18
(8) GDP per capita	**0.51**	0.46	0.18	0.19	0.49	0.31	0.10
(9) GDP growth	0.24	-0.01	0.03	-0.03	**-0.84**	-0.11	0.08
(10) GDP deflator change	**-0.78**	-0.06	0.02	-0.01	0.09	-0.08	-0.24
(11) Financial Risk	**0.82**	0.21	0.09	-0.16	-0.11	-0.07	-0.23
(12) Bank	**0.61**	0.10	0.41	-0.05	0.30	0.07	0.05
(13) Market Capitalization	0.36	0.21	**0.67**	0.02	0.16	-0.09	0.25
(14) Turnover	0.26	0.00	**0.79**	-0.18	-0.05	-0.11	0.02
(15) Corporate Bond	0.44	0.32	-0.20	0.15	**0.56**	-0.25	0.21
(16) Government Bond	0.28	0.14	**-0.52**	0.20	0.35	0.17	0.11
(17) Tax Relief	-0.39	0.14	0.14	**0.64**	-0.07	-0.34	-0.18
(18) Tax Imputation	0.08	0.18	-0.19	-0.04	0.08	**0.87**	-0.08
(19) Tax Rate	0.05	0.17	**-0.81**	-0.06	0.17	0.16	-0.05
(20) Power Distance	-0.11	0.07	0.17	**-0.63**	0.05	-0.34	-0.32
(21) Individualism	0.04	-0.10	-0.12	**0.82**	0.18	-0.04	-0.06
(22) Masculinity	0.00	**-0.69**	0.15	0.35	-0.04	0.14	-0.01
(23) Uncertainty Avoidance	0.10	**-0.73**	0.02	0.31	0.12	-0.07	-0.17

Figure 1: The Time Series Plots of Policy Uncertainty Indices

This figure presents two sub-figures of the time series patterns of the world government instability index and bureaucracy quality index from 1995 to 2006. The index is constructed by value-weighting 49 countries' ICRG scores by annual GDP denominated in US Dollar with a constant price level in 2005. The GDP data are downloaded the United Nation Website. The ICRG scores are the monthly scores for government stability and bureaucracy quality. Figure 1.A shows the government stability index (GOV). Figure 1.B shows the bureaucracy quality index (BUR).



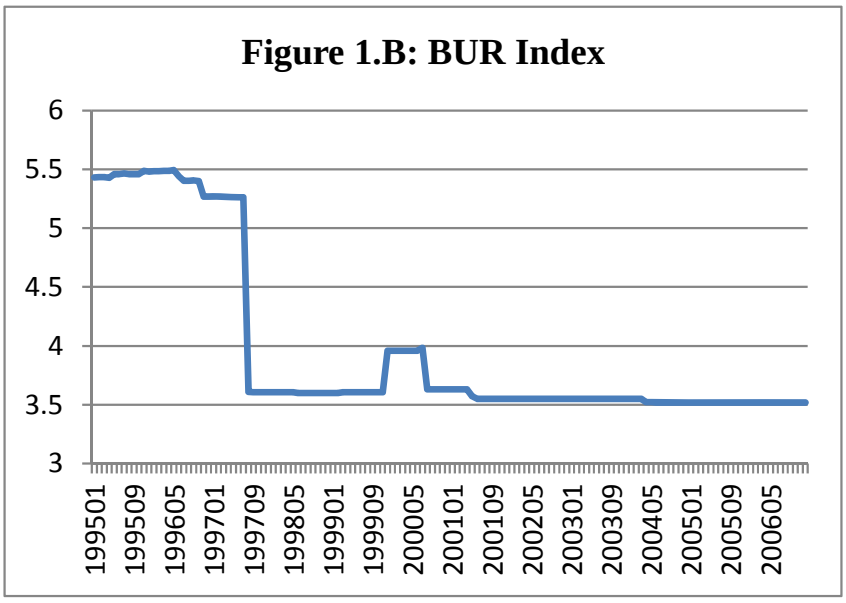


Figure 2: Loadings on GOVLMH and BURLMH Factors

This figure presents non-zero and statistically significant loadings on GOVLMH and BURLMH factors of 14 countries at the 10% significance level estimated from 1995 to 2006. The x-axis is the loadings on GOVLMH factor and the y-axis is the loadings on BURLMH factor.