Economic Policy Uncertainty and Cost of Capital: The Mediating Effects of Foreign Equity Portfolio Flow

Abstract We investigate whether economic policy uncertainty and the interaction of foreign equity portfolio flow and economic policy uncertainty impact the cost of capital. Using panel data of 20 countries from 2001 to 2018, we find economic policy uncertainty to exert a positive effect on the cost of capital. However, the interaction between foreign equity portfolio flow and economic policy uncertainty has a negative effect on the cost of capital, demonstrating that, the combined effect of foreign equity portfolio flow and economic policy uncertainty has the opposite effect (i.e., reduces the cost of capital). Our results are robust to alternative specifications and endogeneity.

Keywords: Cost of capital · Economic policy uncertainty · Foreign equity portfolio flow · Cross country evidence

JEL classification A11 · D24 · D81

1 Introduction

International portfolio diversification has been widely documented as an important vehicle of enhancing average returns and gains to firms (Markowitz, 1952; Driessen and Laeven, 2007). However, the potential gains from international diversification are predicated on the assumption that the required inputs to the mean-variance analysis are known with certainty (Jorion, 1985; Eun and Resnick, 1994). The assumption of certainty under neoclassical models of investment (see Modigliani and Miller, 1958) appears inconsistent with what happens in the real world where market imperfections such as information asymmetry, weak institutions, and uncertainties abound. Indeed, finance theory suggests that an increase in equity risk premium is caused by rising uncertainties, which in turn impact the overall cost of capital (Greenwald and Stiglitz, 1990; Pastor and Veronesi, 2013; Xu, 2020). Grounded in the above theoretical argument, investors make international portfolio allocation decisions by considering the level of risk exposure *pari passu* the economic environment in which they operate. While research evidence suggests that economic policy uncertainty can lead to high cash flow volatility and a higher risk of default (Pastor and Veronesi, 2013), no attention has been devoted to how economic policy uncertainty can affect the cost of capital across countries, as far we are aware. This omission appears surprising given that the cost of capital is not only the main source of external financing but also an important determinant of cross-border investment decisions and performance (Francis, Hasan, and Zhu, 2014; Waisman, Ye and Zhu, 2015; Xu, 2020).

In this study, we attempt to rectify this omission by examining the effects of economic policy uncertainty on the cost of capital. We focus on whether foreign equity portfolio flow[1] interacts with economic policy uncertainty to have a combined effect on the market-based cost of capital at the country level. Even though the literature has documented that foreign equity portfolio is driven by economic factors. We postulate that during a period of economic policy

[1] Foreign equity portfolio flow is the inflow of foreign equity investment into the destination or host country.

uncertainty, other factors such as transparency, legal institutions, good governance, and investors' protection standards (Henry, 2000; Dixit, 2011) could influence the attractiveness of a country to foreign equity investors to mitigate the negative effects of economic policy uncertainty on the cost of capital[2].

We theorise that economic policy uncertainty impacts on cost of capital of the country in three important ways. First, due to costly investment reversibility, economic policy uncertainty can change the optimal timing of international portfolio allocation decisions by virtue of the real-option feature of investment. According to Bernanke (1983), McDonald and Siegel (1986), and Bloom et al. (2007), economic policy uncertainty may lead to postponement of investment until significant economic uncertainty is dissolved. However, the option to wait or the adoption of a wait-and-see strategy in investment decision-making increases costs and may turn a positive net present value project into a negative one. Second, economic policy uncertainty could affect equity prices and premiums (Brogaard and Detzel, 2015; Da, Engelberg, and Gao, 2015). More specifically, the volatility of cash flows associated with changes in investment arising from economic policy uncertainty is expected to affect the risk of default and consequently equity premium (Pastor and Veronesi, 2012, 2013). Investors accordingly adjust their expectations regarding the investment based on the extent to which the uncertainty may affect cash flows, and demand extra compensation for bearing additional economic risk (Pastor and Veronesi, 2013). Lastly, previous studies show that uncertainty increases portfolio risk (see Pastor & Veronesi, 2012) and further magnifies return volatility in the host country, which in turn discourages investors from constructing internationally diversified equity portfolios. As a result, risk-sharing between domestic and foreign investors is curtailed, thereby increasing the cost of capital. The domestic stock market becomes

[2] We limit this study to the role of foreign equity portfolio flow on cost of capital. We do not examine factors that attract foreign equity portfolio flow on the cost of capital.

segmented and the expected return is determined by the variance of the firm with the covariance of the domestic stock market, which is higher. Hence, investors will demand higher equity risk premiums (Pastor and Veronesi, 2013; Brogaar and Detzel, 2015; Da, Engelberg, and Gao, 2015).

It is pertinent to point out that investigating the effects of uncertainty is not without operationalization difficulties. Existing research points to the challenges of identifying policy uncertainty proxies. Prior literature has used several variables to proxy for uncertainties faced by firms, which include: input and output prices, dispersion in analyst forecasts, firm fundamentals, stock returns volatility, and total factor productivity (see Leahy & Whited, 1996; Ghosal and Loungani, 1996; Minton and Schrand, 1999; Bond and Cummins, 2004; Bloom, Jaimovich, Saporta-Eksten, and Terry, 2012; Stein and Stone, 2012). These studies highlight the daunting task of partitioning uncertainty into the regulatory system and political. Even though few studies have focused on policy uncertainty caused by fiscal, monetary, and social security, substantial work is yet to be carried out on the overall level of economic policy uncertainty on the cost of equity capital. Baker, Bloom, and Davis (2016) provide aggregate economic policy uncertainty data which is constructed as a weighted average of three different components and this study uses this data.

Using panel data of 20 countries from 2001 to 2018, we find economic policy uncertainty to exert a positive effect on the cost of capital. However, the interaction between foreign equity portfolio flow and economic policy uncertainty has a negative effect on the cost of capital. Taken together, we demonstrate that, while economic policy uncertainty increases the cost of capital, the interaction between foreign equity portfolio flow and economic policy uncertainty has the opposite effect (i.e., reduces the cost of capital). These findings are robust to endogeneity using differences-in-differences through the 2011 Eurozone debt crisis. The results are also robust to major financial centres, which thus suggests that our results are not

driven by financial centres like Japan, the UK, or the US that have substantial depository receipts.

Our study makes the following contributions. First and more importantly, we offer evidence that foreign equity portfolio flow interacts with economic policy uncertainty to reduce the cost of capital via risk-sharing. The international capital asset pricing model (ICAPM) suggests that investors should construct internationally diversified equity portfolios to reduce risk. One of the earliest arguments in favour of equity portfolio diversification arises from the notion that countries that attract foreign equity portfolios experience a lower cost of capital due to an increased risk-sharing between domestic and foreign investors (Lau, Ng, & Zhang, 2010). We, therefore, extend the existing studies by showing that the relationship between economic policy uncertainty and cost of capital is sensitive to international equity portfolio diversification.

Second, we contribute to the literature examining determinants of cross-country differences in cost of capital (see Bhattacharya and Daouk, 2002; Sharfman and Fernando, 2008; Lau et al., 2010; Hann et al. 2013). Earlier work by Pettway and Jordan (1983) investigated the effects of diversification and double leverage on the cost of capital, whilst Easley and O'Hara (2004) find that differences between private and public information impact the cost of capital. Chan et al. (2021) provide evidence through seasoned equity offerings that economic policy uncertainty impacts the cost of raising equity capital. We extend these studies by demonstrating that investors demand a high premium for holding equity during a period of economic policy uncertainty, thereby amplifying the cost of capital.

Finally, we make an incremental contribution to the literature by showing that foreign equity portfolio flow reduces the negative impact of economic policy uncertainty on the cost of capital. This is consistent with the view that countries that can attract foreign investors during a period of economic policy uncertainty experiences greater risk-sharing between domestic and

foreign investors which reduces the cost of capital. This line of research makes our study differs from previous studies. For instance, related studies have examined how government economic policy uncertainty increases the cost of capital and therefore negative impact on corporate innovations in the US (Xu, 2020), economic policy uncertainty reduces the relationship between investment and cost of capital for firms operating in industries that rely on government subsidies (Drobetz et al. 2018). Bloom examined fluctuations in uncertainty. Other studies on uncertainty have investigated the impact of political uncertainty on corporate financing cost (Waisman et al. 2015), the effects of political uncertainty on IPO activities during US Gubernatorial elections (Colak et al. 2017).

The rest of the paper is organized as follows. Section 2 reviews the relevant literature and develops the hypotheses of the study. Section 3 describes the data and estimation strategy. Section 4 reports and discusses the empirical results, and section 5 presents some concluding remarks.

2 Related literature review and hypothesis development

A firm's cost of capital is the discount rate that is used in investment appraisal to calculate the net present value (NPV). It is also the expected return demanded by investors for investing in the firm. A higher expected return will make it expensive for firms to finance investment projects. Firms that have a lower cost of capital will experience higher valuations and will attract more equity investors. It is conceivable that economic policy uncertainty will increase the riskiness of the country and will make the recipient country less attractive to foreign equity portfolio investors. This is consistent with the argument that investors evaluate the riskiness of a firm's cash flow relative to other available investment opportunities when making investment decisions (see Du and Hu, 2015; Jiao and Yan, 2015). At the firm level, board characteristics impact the speed of capital structure adjustment (Ezeani et al. 2021).

Prevalence of economic policy uncertainty should be considered for risk and should have implications for the cost of capital for a number of reasons. The fundamental argument is that economic policy uncertainty segments a country's stock market from the rest of the world. This is in relation to the view that foreign investors will reduce their international equity portfolio diversification. In a segmented country, the expected return will be determined by the covariance of the firm's expected return with the return of the market and variance of the stock market return (see Lau et al., 2010). Further, economic policy uncertainty will reduce the firm's future cash flow and will compel it to adopt a wait-and-see attitude towards corporate investment.

Earlier arguments suggest that uncertainty increases the default risk of firms (see Miller and Bromiley, 1990; Orlitzky and Benjamin, 2001). Subsequently, debt financing will be expensive and, in turn, cause equity finance to increase because equity investors will bear the firm's residual risk (Stulz, 1996). If economic policy uncertainty reduces a firm's financial performance, it will impact investor participation in the stock market. More specifically, this is because the country's stock market will be dominated by a few institutional investors and corporate insiders with less dispersed equity ownership.

Other studies document that economic policy uncertainty increases information risk. For instance, theoretical studies argue that information is a non-diversifiable risk and will increase the equity risk premium demanded by investors (see Easely and O'Hara, 2004). Lambert et al. (2007) postulate that investors require precise information on the expected cash flows of the firms. However, economic policy uncertainty reduces the quality of information and would be priced by the capital market. It is recognized that economic policy uncertainty will play a contrasting role to the important one that information precision plays in reducing the cost of capital. Drawing from the above, we hypothesize that investors' price economic policy uncertainty. This leads us to our first prediction:

H_1: Economic policy uncertainty increases the cost of capital.

Our second research question is whether foreign equity portfolio flow interacts with economic policy uncertainty to reduce the cost of capital. It is equally important to investigate the valuation effects of the interaction between foreign equity portfolio flow and economic policy uncertainty on the cost of capital. Several theoretical researchers highlight the importance of jointly examining the effects of financial integration and risk on the cost of capital (see Errunza, 2001). Economic factors determine international equity portfolio flow. However, during periods of economic difficulties, studies show that countries with better institutional quality such as rule of law, investor protection standards, political stability, and transparency will attract foreign equity investors (see Henry, 2000; Dixit, 2011). The literature indicates that international equity portfolio diversification enhances risk-sharing between domestic and foreign investors (Kwabi et al. 2016; Lau et al., 2010). Consequently, we expect the increased risk-sharing to reduce the risk premium demanded by investors. We postulate that countries that attract foreign equity portfolio flow will mitigate the adverse effects of economic policy uncertainty on the cost of capital. This is in line with existing studies that have examined the valuation effects of cross-border equity investment. For example, a recent study by Col and Errunza (2015) documents that cross-border investment leads to the transfer of good governance and better investor protection to the recipient country and has valuation effects.

We provide a theoretical argument consistent with Lewis (1999) and Lau et al. (2010) and predict that foreign equity portfolio flow will mitigate the adverse impact of economic policy uncertainty on the cost of capital. This is consistent with the view that, when a country attracts foreign equity investors, the financial market will be integrated with the rest of the world. Accordingly, the expected return of the domestic stock market will be determined by

the covariance of the domestic equity return with the return on the world market portfolio, which is proportional to a lower risk premium. Consistent with the economic and finance literature (see Boutchkova et al., 2009; Beaulieu, Cosset, and Essaddam, 2005), we argue that foreign equity portfolio flow improves legal institutions, political institutions, and good governance, and therefore interacts with economic policy uncertainty to have valuation effects. This discussion leads to our next hypothesis:

H_2: The interaction between economic policy uncertainty and foreign equity portfolio flow reduces the cost of capital.

3 Data and estimation strategy

The study employs panel data of 20 countries from 2001 to 2018 to examine the impact of economic policy uncertainty on the cost of capital. We describe the variables used in the empirical analysis below.

3.1 Cost of capital measures

We employed four measures of the cost of capital to ensure that economic policy uncertainty is not sensitive to a particular measure of the cost of capital. Following existing literature (see Damodaran, 2012; Reeb, Sattar, and Alle, 2001; Bekaert and Harvey, 2005), we used historical realized return of the market ($HRRm$), country equity risk premium ($CERP$), dividend yield (DY) and country credit-risk rating ($RCred$). We provide advantages of these market base costs of capital measures and how they are constructed.

3.1.1 Historical realized market risk premium

Consistent with Lau et al. (2010), we use historical realized return of the market to proxy for the cost of capital. *HRRM* is the past average of excess country equity market return over the

risk-free rate. The advantage of using *HRRM* is that the long-term average premium is mean-reverting. Moreover, *HRRM* is an appropriate measure for the cost of capital for developed countries that have long availability of historical data. We calculated the average stock market returns by employing the monthly US dollar country stock market indices obtained from Morgan Stanley Capital International (MSCI). Due to the fact that all returns are denominated in US dollars, we subsequently employ the annual average of the monthly return on US Treasury bills as a proxy for the risk-free rate for all countries.

3.1.2 Sovereign credit-risk rating measures of the cost of capital

Next, as in Jewel and Livingston (1998), we use sovereign credit-risk rating denominated in foreign currency, more specifically in US dollars as an alternative cost of capital measure. This is consistent with the fact that sovereign country credit rating does not suffer from the noise of past growth opportunities shocks of a country. Further, the *RCred* displays fundamental forward-looking information on a country's risk. Existing studies, for instance, Hail and Leuz (2006) and Bhattacharya and Daouk (2002) document that country credit-risk rating correlates highly with implied cost of capital. Hail and Leuz (2006) find the sovereign credit rating measure has an average correlation coefficient of 0.64 with the implied cost of capital. We use country credit-risk rating of 10-year local currency-denominated sovereign bonds maintained by Damodaran (2012). Subsequently, as in Reeb et al. (2001), we convert the qualitative credit ratings into numerical values (*AAA=1, AA+=2, AA=3…. D=22*). We subtract the index values from 22 so that larger numbers correspond to the higher credit rating and take their natural log into our regressions.

3.1.3 Country equity risk premium

Next, we use the country equity risk premium constructed and maintained by Damodaran (2012) as another measure of the cost of capital. The $CERP$ proxy is derived from the concept

of demanding incremental *CERP* for investing in a particular market relative to a mature market as a base country. Damodaran (2012) uses the United States as the base country and S&P 500 as the representative stock market. Damodaran calculates *CERP* for each sample country by incorporating the incremental premium for each country relative to the base country, which reflects the extra country risk premium. Subsequently, it is then computed by taking the default spread (over the base country) using Moody's risk ratings of sovereign bonds in local currency. The ensuing premium is subsequently scaled by the ratio of the country's equity market volatility to bond market volatility.

3.1.4 Dividend yield

Existing literature shows that dividend yield is a good proxy for the cost of capital (see Bekaert & Harvey, 2000; Bekaert & Harvey, 2005; Lau et al., 2010). For instance, Bekaert and Harvey (2005) postulate that relative to historical realized returns, *DY* is a reasonable proxy for the cost of capital, particularly for emerging markets where returns are relatively more volatile than those of their developed market counterparts. We sourced *DY* data for all countries from Thompson Reuters and the World Federation of Exchanges.

3.2 Independent variables

3.2.1 Economic policy uncertainty

We employ the economic policy uncertainty index (*EPU*) developed and maintained by Baker Bloom, and Davis (2016). The *EPU* index is constructed as the weighted average of newspaper information about policy uncertainty using three components: inflation forecast disagreement, expiration of tax, and government purchase disagreement. The newspaper-based economic policy uncertainty is a normalized monthly count of the 10 largest newspapers that contain

articles on economic policy uncertainty. We use the *EPU* data that contains information on the uncertainty that relates to economic policies and macroeconomic conditions. Economic policy uncertainty indices are mainly monthly data. However, we use annual level *EPU* indices provided by Baker Bloom, and Davis (2016). The *EPU* index has been used in existing studies (see Xu, 2020; Gulen and Ion, 2016).

3.2.2 Foreign equity portfolio flow

We used the yearly bilateral Coordinated Portfolio Investment Survey (CPIS) of the International Monetary Fund (IMF) dataset for the period from 2001-2018 to calculate a foreign portfolio allocation for each country. The CPIS provides data on bilateral equity cross-border holdings for 76 participating countries. The IMF requires all the partaking countries to provide a detailed breakdown of equity portfolio allocations. Due unavailability of economic policy uncertainty for several countries, we restrict our size to 20 countries. In line with Cooper and Kaplanis (1986), we model foreign equity portfolio flows as one of our key independent variables of interest to interact with economic policy uncertainty. Following the existing literature (Thapa and Poshakwale, 2010; Chan et al. 2005), we construct foreign equity portfolio flow of country i into country j is defined as:

$$w_{ijt} = log\left(\frac{FEPF_{ijt}}{\sum_{j=1}^{20} FEPF_{ijt}}\right) \quad (1)$$

Where w_{ijt} is the weight of foreign equity portfolio flow from country i into country j for the year t. This is consistent with the view that our sample has a finite number of countries. Therefore, a greater portfolio weight in one country suggests a smaller weight in other recipient countries in attracting fewer international equity portfolio investors. $FEPF_{ijt}$ is foreign investors' actual portfolio allocation in USD millions provided by CPIS.

3.3 Control variables

Following existing literature, we control the effects of several variables shown to impact the cost of capital. Brandt and Wang (2003) show that equity risk premium relates positively to inflation. We, therefore, control the effects of inflation (*Infl*) on the cost of capital. We sourced annual inflation data for our sample countries from world development indicators (WDI). Next, as in Kwabi et al. (2018), we control the impacts of interest rate (*Int*) and exchange rate volatility (*Exch*) on the cost of capital. We construct exchange rate volatility as a three-year moving average. We obtained data from Thompson Reuters.

We also include legal origin (*Legal_O*) to control the effects of investor protection on the cost of capital. Existing literature suggests that common law countries provide better protection for investors and the country will therefore experience a lower risk premium. We construct *Legal_ O* as a dummy variable that takes a value of 1 if common law country and 0 if otherwise. We expect countries that have high transaction costs to experience a high cost of capital. We use fees to capture the effects of transaction costs incurred by investors on the cost of capital. This is consistent with the fact that high fees paid by investors will make equity portfolio recipient countries less attractive to investors, which will reduce international equity portfolio diversification and risk-sharing between domestic and foreign investors. We obtained fees from Standard and Poor's Global Factbook, which is maintained by Elkins/McSherry.

Next, we control the effects of economic growth on the cost of capital using real gross domestic product growth (*RGDPG*). We sourced data from world development indicators. It is conceivable that stock markets that are globally integrated with the rest of the world will experience a lower cost of capital. This is consistent with the fact that there will be greater risk-sharing between domestic and foreign investors (see Lau et al., 2010). We employ the natural logarithm of stock market integration (*LSMI*) to capture the effects of trade openness on the

cost of capital. We calculate *LSMI* as the log average of a country's annual exports and imports scaled by *GDP*.

Finally, we control for country-specific risk factors on the cost of capital using financial risk (*FinRisk*), political risk (*PolRisk*), and economic risk (*EconRisk*). Erb, Harvey, and Viskanta (1996) document that differences in country risk ratings may influence equity returns. We expect these risks to have a positive association with the cost of capital.

Financial risk is computed using the following components; foreign debt as a percentage of GDP, foreign debt service as a percentage of exports of goods and services, current account as a percentage of exports of goods and services, net international liquidity as months of import cover, exchange rate stability. A financial risk rating of 0.0% to 24.5% indicated a very high risk; 25.0% to 29.9% high risk; 30.0% to 34.9% moderate risk; 35.0% to 39.9% low risk; and 40.0% or more very low risk.

Political risk measures consist of 12 components including; government stability, socioeconomic conditions, investment profile, internal conflict, external conflict, corruption, military in politics, religious tensions, law and order, ethnic tensions, democratic accountability, and bureaucracy quality. Political risk rating of 0.0% to 49.9% indicates a very high risk; 50.0% to 59.9% high risk; 60.0% to 69.9% moderate risk; 70.0% to 79.9% low risk; and 80.0% or more very low risk.

Economic risk is constructed using GDP per head, real GDP growth, annual inflation rate, budget balance, and current account as a percentage of GDP. An economic risk rating of 0.0% to 24.9% indicates a very high risk; 25.0% to 29.9% high risk; 30.0% to 34.9% moderate risk; 35.0% to 39.9% low risk; and 40.0% or more very low risk. We obtained the data from the Political Risk Services of International Country Risk Group (*ICRG*).[3]

[3] Please see Political Risk Services of International Country Risk Group (*ICRG*) for computation of financial risk, political risk, and economic risk measures.

4 Empirical Analysis

We start our empirical analysis with the averages of all the dependent, key independent, and control variables. We then proceed to multivariate analysis.

4.1 Summary statistics

Table 1 reports the averages for all the dependent and key independent variables we employed in our analysis. Columns 2 to 5 present the averages of the four cost of capital measures (*HRRM*, *RCred*, *CERP,* and *DY*). In terms of *HRRM*, Brazil has the highest cost of capital whilst the US has the lowest. Across the sample countries, Japan has the lowest *DY* and the highest is observed in Brazil. There are cross-country variations in *EPU* in column 6. Mexico has the lowest *EPU* (996.76) whilst the UK has the highest (2122.02). Table 2 reports the averages of all the control variables.

[Insert Table 1 Here]

[Insert Table 2 Here]

4.2 Correlation analysis

Table 3 provides the cross-correlation matrix of all the variables employed in our empirical analysis. Consistent with theoretical expectations, economic policy uncertainty measure, *EPU*, is positively correlated with all the four proxies of cost of capital, *HRRM*, *RCred*, *CERP,* and *DY*. Interestingly, all the four measures of the cost of capital are positively correlated with each other; the weakest correlation is between *HRRM* and *DY* whereas the strongest correlation is between *CERP* and *RCred*. *EPU* is positively correlated with *FEPF*. This indicates that during periods of economic uncertainty other factors such as institutional quality, rule of law, investor protection standards can enhance the attractiveness of a country to foreign equity investors. The correlations amongst the control variables are low, which suggests no presence of

multicollinearity issues. Even though *EPU* positively correlates with *EconRisk* and *PolRisk*, the correlation is not high enough to raise the concern of multicollinearity.

[Insert Table 3 Here]

4.3 Multivariate regression analysis

4.3.1 Impact of economic policy uncertainty on the cost of capital

In this section, we examine whether economic policy uncertainty impacts the cost of capital. More specifically, we use panel data to test whether economic policy uncertainty explains cross-country variations in the cost of capital. Table 4 reports panel regression results, including the robust t-statistics in parentheses. All standard errors for the pooled regressions are clustered at the country level to account for the likelihood of correlations across the same country in different years. We also add year-fixed effects to control for unobserved factors. We estimate the result using Equation (2).

$$CoC_{jt} = \alpha + \beta_1 . EPU_{jt} + \beta_2 . Ctls_{jt} + \beta_3 . TFE_t + \epsilon_{jt} \qquad (2)$$

Where CoC_{jt} represents one of the four costs of capital measures (i.e. *HRRM*, *RCred*, *CERP,* and *DY*), one at a time, of country j at time t. EPU_{jt} is economic policy uncertainty regressed on the cost of capital. $Ctls_{jt}$ is a vector of control variables. *TFE* is time (year) and fixed effects.

As seen in Model 1 of Table 4, *HRRM* is positively associated with economic policy uncertainty. The estimated coefficient on *EPU* is statistically significant at the 5% level. The coefficient on *EPU* is 0.170 (t-statistics=2.36). In Model 2, the coefficient on *EPU* is positive and statistically significant at the 1% level when *RCred* is used to proxy for the cost of capital. However, in Model 3, while *EPU* is still positive, it loses statistical significance when *CERP*

is used as a measure of the cost of capital. The coefficient is statistically significant at the 10% level. This suggests that *EPU* is sensitive to a particular proxy of the cost of capital.

The results of Model 4 indicate that economic policy uncertainty is positively associated with dividend yield and it is statistically significant at the 1% level. The results of Model 1 to Model 4 of Table 4 shows that EPU is sensitive to a particular proxy of cost of capital. This is consistent with the view that even though they are market-based measures, they are constructed differently and have their advantages and disadvantages. For instance, the historical realized market risk premium is mean-reverting. *DY* is a reasonable proxy for the cost of capital, particularly for emerging markets where returns are relatively more volatile than those of their developed market counterparts. Lau et al. (2010) find that equity home bias is sensitive to a particular measure of the cost of capital.

We infer from the results that, other things being equal, the reduction in economic policy uncertainty will lead to a fall in the cross-country cost of capital. We can implicitly assume that the cross-sectional explanatory power of the economic policy uncertainty measure may capture cross-country variations in macroeconomic conditions, political risk, information asymmetry, and regulatory environment. The results support hypothesis 1 that economic policy uncertainty increases the cost of capital. To sum up, evidence from Table 4 suggests that investors' concerns about a country's economic policy uncertainty will lead to a higher cost of capital. The results are in line with Li et al. (2020) who find that economic policy uncertainty in the host country reduces cross-country mergers and acquisitions and will indirectly impact equity portfolio risk.

Several control variables display the expected signs. As predicted, the cross-country cost of capital can be explained by inflation, exchange rate volatility, fees, and political risk. The coefficients on *Exch*, *Fees,* and *PolRisk* are positive and statistically significant at the 1% level. It can be observed that there is a systematic and stable relationship between *LSMI* and

Legal_O and they have a negative association with the cost of capital. The estimated coefficients are statistically significant at the 5% level. However, *RGDPG*, *FinRisk,* and *EconRisk* play no role in explaining the cross-sectional variations in the cost of capital. We infer from the results that economic policy uncertainty is priced across the world.

[Insert Table 4 Here]

4.3.2 Interaction between economic policy uncertainty and foreign equity portfolio flow

Our main empirical result provides an incremental contribution to Lau et al. (2010), who model the cost of capital as a function of equity home bias, and Frank and Shen (2016), who investigate investment as a function of cash flow and cost of capital. A more recent work, by Drobetz, Ghoul, Guedhami, and Janzen (2018), examines how economic policy uncertainty impacts the relationship between investment and the cost of capital.

Even though Jiao and Yan (2015) document that firms use convertibles to attract investors with varying beliefs about a firm's future cash flows, we are interested in how foreign equity portfolio flows as a risk-sharing mechanism moderate the relation between economic policy uncertainty and cost of capital. We, therefore, examine whether foreign equity portfolio interacts with economic policy uncertainty to have a joint effect on the cost of capital. As in Edmans, Jayaraman, and Schneemeier (2017), we control for the base level of foreign equity portfolio flow by including country and year fixed effects. This is consistent with time trends in foreign equity portfolio flow. Following Drobetz et al. (2018), we further include the interactions between foreign equity portfolio flow and year (*FEPF×Year*) and country (*FEPF×Country*) to control for variations in the sensitivity of the cost of capital to foreign equity portfolio flow over time and across countries. We estimate our regression result using Equation (3).

$$CoC_{jt} = \alpha + \beta_1.EPU_{jt} + \beta_2.FEPF_{jt} + \beta_3 Country_j + \beta_4 Year + \beta_5.EPU_{jt} \times FEPF_j + \beta_6 FEPF \times Country + \beta_7 FEPF \times Year + \beta_8.Ctls_{jt} + \epsilon_{jt} \quad (3)$$

Table 5 Panel A presents the result for Equation (3) with the set of control variables. The coefficients of interest are those on *EPU*, *FEPF,* and the interaction term *EPU*×*FEPF*. Consistent with our hypothesis 2, the coefficients on the interactive term between *FEPF* and *EPU* in models 1 to 4 are negative and statistically significant at the 5% level. The coefficients on the interaction term are -0.648(t-statistics=-2.57) in Model 1, -0.874(t-statistics=-2.24) in Model 2, -0.634(t-statistics=-2.01) in Model 3, and -0.138(t-statistics=-2.22) in Model 4. The results show that countries that can attract foreign equity portfolio flow are able to mitigate high costs associated with economic policy uncertainty. This is consistent with the view that international equity portfolio diversification reduces the cost of capital through increased risk-sharing between domestic and foreign investors (see Lau et al., 2010). Greater foreign equity portfolio flow will make a country's stock market integrated with the rest of the world. Adler and Dumas (1983) document that a country that has a globally integrated expected return is determined by using the covariance of its return with the world market portfolio return, which is lower. The results show that the foreign equity portfolio provides the channel through which the negative effects of economic policy uncertainty on the cost of capital can be mitigated. The interactive effect of the channel is similar to Drobetz et al. (2018) who show that economic policy uncertainty reduces the relationship between investment and cost of capital for firms operating in industries that rely on government subsidies.

In panel B of Table 5, we interact economic policy uncertainty with an alternative measure of financial integration to examine its moderating effect on the cost of capital. In line with the existing literature (see Kwabi et al. 2020), we use stock market integration (*SMI*) as an alternative measure of financial integration. We construct *SMI* as the natural logarithm average of a country's annual imports plus exports scale by GDP. *SMI* captures trade openness

and Chan et al. (2005) document and open and integrated attract foreign equity investors. We estimate the results using Equation (4).

$$CoC_{jt} = \alpha + \beta_1.EPU_{jt} + \beta_2.SMI_{jt} + \beta_3.EPU_{jt} \times SMI_{jt} + \beta_4.Ctls_{jt} + \beta_5.TFE_t + \beta_6.CFE_j + \epsilon_{jt} \quad (4)$$

We present the results in Panel B of Table 5. The coefficients on stock market integration are negative and mainly statistically significant. Further, the coefficients on the interaction between financial integration and economic policy uncertainty are negative and statistically significant. The coefficients on *SMI*×*EPU* are -0.482 (t-statistics=-1.84) in model 1, -0.121 (t-statistics=-2.98) in model 2, -0.162 (t-statistics=-2.09) in model 3, and -0.820 (t-statistics=-1.75) in model 4. These results provide robust evidence that financial integration mediates the negative effects of economic policy uncertainty on the cost of capital.

[Insert Table 5 Panel A Here]

[Insert Table 5 Panel B Here]

4.4 Robustness tests

In this section, we undertake several extensive analyses to assess the robustness of our main results that economic policy uncertainty increases the cost of capital. First, we use a fixed-effects model to address the concern of unobserved country-specific characteristics which are time invariants that may correlate with all regressors. Second, we performed a quasi-natural experiment using differences-in-differences. Finally, we ensure that our primary result is not driven by major economic centres.

4.4.1 Fixed effects

In this section, we use the fixed effects model to address concerns of each country in our sample having individual characteristics via the time-invariant variables and time-invariant pair

characteristics, such as being in the same economic union (e.g. Eurozone), favourite partner nation status and special bilateral treaty. There is the likelihood that our regression coefficients may be suspected of bias due to the fact that unobserved time-invariant variables may correlate with the regressors. We thereby employ the fixed effects model to address the concerns. Even though the fixed effects model is not as efficient as the random effects model, it takes into consideration all country-specific time-invariant effects[4].

We use two costs of capital measures: *RCred*, which is a forward-looking cost of capital measure (see Bhattacharya & Daouk, 2002), and *DY*, which existing studies document as being closely linked to cost of capital in asset pricing models (see Bekaert & Harvey, 2000; Bhattacharya & Daouk, 2002; Hail & Leuz, 2006) and also stable. Table 6 presents the results. The estimated coefficients on *EPU* remain statistically significant at the conventional 5% level.

[Insert Table 6 Here]

4.4.2 Differences-in-differences

In this section, we address potential endogeneity. We use the 2011 Eurozone debt crisis to perform differences-in-differences to isolate the exogenous shock to economic policy uncertainty on the cost of capital. This is consistent with the fact that the Eurozone debt crisis was a shock that impacted economic policies. De Grauwe and Ji (2013) show that the Eurozone sovereign debt crisis severely affected countries such as Greece, Italy, Ireland, Portugal, and Spain (*GIIS*) relative to the rest of the Eurozone countries. Following existing literature, we use *GIIS* as the treatment group and the rest of the countries as the controlled group. We, therefore, perform a quasi-natural experiment using Equation (5).

$$CoC_{jt} = \alpha + \beta_1 . EPU_{jt} + \beta_2 . POST2011 + \beta_3 GIIS + \beta_4 . POST2011 \times GIIS + \beta_5 . Ctls_{jt} + \epsilon_{jt} \quad (5)$$

[4] Unreported Haussmann test shows that the fixed effects is more suitable than the random effects estimation model.

Where *POST2011* represents a post-Eurozone crisis dummy variable, which takes a value of 1 if the year is beyond 2011 and or 0 if otherwise, and *GIIS* represents the treatment group (Greece, Italy, Ireland, and Spain), which takes a value of 1 if otherwise 0. *POST2011×GIIS* is the interactive term between the Eurozone post-debt crisis year and the treatment group. Table 7 presents the results. The coefficients on the interactive term *POST2011×GIIS* are positive and statistically significant at the 1% level in models 1 to 4. Interestingly, the coefficients are higher compared to the coefficients on *POST2011* and *GIIS*. The positive coefficients on *POST2011×GIIS* suggest that those severely affected countries have a higher cost of capital in the post debt crisis period than those less affected countries as a result of an exogenous shock to economic policy uncertainty.

[Insert Table 7 Here]

4.4.3 Major financial centres

In this section, we address the possibility of our main results being driven by countries that attract significant depository receipts. We, therefore, exclude major financial centres such as Japan, Hong Kong, the UK, and the US from our sample. We estimate our regression result using Equation (2). Table 8 presents the results. The coefficients remain positive and statistically significant at the 5% level. The findings suggest that economic policy uncertainty matters for the cross-country cost of capital.

[Insert Table 8 Here]

5 Conclusion

In this study, we investigate whether economic policy uncertainty and the interaction of foreign equity portfolio flow and economic policy uncertainty impact the cost of capital. We hypothesize that economic policy uncertainty and the interaction between foreign equity portfolio flow and economic policy uncertainty may impact the cost of capital through the

adoption of a wait-and-see strategy to investment decisions streaming from policy uncertainty, thereby leading capital markets to demand an extra premium to compensate for higher risk.

Using a panel of 20 countries from 2001 to 2018, we find that economic policy uncertainty increases the cost of capital. Further analysis indicates that foreign equity portfolio flow interacts with economic policy uncertainty to reduce the cost of capital. We carried out several tests to ensure the robustness of the results. First, we address potential endogeneity concerns. Second, we perform a battery of tests, namely, country and year fixed effects model, a quasi-natural experiment using a differences-in-differences approach, and major financial centres to address econometrics issues such as unobservable time-variant and invariant omitted variable bias, reverse causality issues, and major financial centres driving our results. The results appear similar. Our paper contributes to the growing literature exploring the effects of uncertainty on the cost of capital and investment behaviour. Thus, we demonstrate that economic policy uncertainty increases the cost of capital while the interaction between foreign equity portfolio flow and economic policy uncertainty has the opposite effect i.e., reduces the cost of capital. The implication here is that the combined effects of foreign equity investments and economic policy nullify the deleterious effect of economic policy uncertainty and reduce the cost of capital.

Despite the interesting results, the study's limitation should be explicitly acknowledged. More specifically, due to the paucity of data for economic policy uncertainty for some countries, we restrict our study sample to 20 countries. Further research is urged when data becomes available in the future. Further studies can examine how foreign investors react to economic policy uncertainty.

Appendix

Table A1

Definitions of Variables

Variable	Abbreviation	Description
Historical realized return of the market	*HRRM*	The historical realized market return is calculated as the historical average of excess country equity market return over the risk-free rate.
Country credit rating	*RCred*	Sovereign credit-risk rating dominated in foreign currency (US dollars).
Country equity risk premium	*CERP*	The country equity risk premium is based on adding the sovereign default risk premium (scaled by the relative volatility of equity to bond market) to the equity risk premium of a base country (The United States).
Dividend yield	*DY*	The dividend yield is calculated as the total amount of stock dividend of a country as a percentage of the market capitalization of the country.
Economic policy uncertainty	*EPU*	Baker et al. (2016) economic policy uncertainty index using textual analysis of economic policy-related news reported in the news media.
Foreign equity portfolio flow	*FEPF*	The log value of country-wise aggregate foreign portfolio allocation from country i in country j at time t (w_{ijt}).
Inflation	*Infl*	The one-year lagged rate of inflation is based on the consumer price index.
Interest rates	*Int*	The annual real interest rate obtained from World Development Indicators.
Exchange rate	*Exch*	The three-year moving average covariance of the monthly stock market index return with the monthly change of the domestic currency with respect to the dollar.
Legal origin	*Legal_O*	A country's legal origin is constructed as a dummy variable that takes a value of 1 if common law country and 0 if otherwise.
Stock market fees	*Fees*	Fees incurred as investor liquidity trading cost obtained from Standard and Poor's Global Factbook which is maintained by Elkins/McSherry.
Real gross domestic product growth	*RGDPG*	The real growth rate in the domestic product is sourced from World Development Indicators.
stock market integration	*SMI*	The ratio of a country's annual exports plus imports divided by *GDP* sourced from World Development Indicators.
Economic risk	*EconRisk*	The economic risk rating index of a country from the International Country Risk Guide.
Financial risk	*FinRisk*	The financial risk rating index of a country from the International Country Risk Guide.
Political risk	*PolRisk*	The political risk rating index of a country from the International Country Risk Guide.

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Table 1

Summary statistics of dependent and key independent variables

Country	HRRM	RCred	CERP	DY	EPU	FEPF
Australia	0.02	3.08	0.05	2.19	1260.19	0.0154
Brazil	0.24	2.39	0.11	4.71	1709.67	0.0007
Canada	0.03	3.09	0.05	2.64	1685.28	0.0299
Chile	0.13	2.87	0.06	3.28	1246.77	0.0030
China	0.14	2.84	0.06	2.43	1701.29	NA
France	0.05	3.09	0.05	3.64	2049.45	0.0961
Germany	0.05	3.09	0.05	2.82	1581.69	0.0937
Greece	0.1	2.89	0.06	3.39	1467.73	0.0037
Hong Kong	0.07	2.95	0.06	3.03	1522.25	0.0311
Ireland	0.02	3.09	0.05	2.96	1395.59	0.0701
Italy	0.02	3.01	0.06	3.61	1341.65	0.0466
Japan	0.07	2.92	0.06	1.64	1282.54	0.1176
Korea	0.12	2.77	0.06	1.67	1548.34	0.0046
Mexico	0.22	2.75	0.07	3.78	996.76	0.0013
Netherlands	0.04	3.08	0.05	3.00	1145.21	0.0580
Russia	0.02	2.67	0.08	2.07	1473.15	0.0012
Spain	0.02	3.08	0.05	3.66	1337.51	0.0226
Sweden	0.08	3.09	0.05	2.87	1071.41	0.0166
United Kingdom	0.03	3.09	0.05	3.09	2122.02	0.1240
United States	0.01	3.13	0.05	1.91	1450.31	0.2617

Note: This table reports the means of the dependent and key independent variables across countries. The variables in columns 2-5 are the four cost of capital measures. *HRRM* is the historical realized return of the market. *CERP* is the country's equity risk premium. *RCred* is the country's credit rating. *DY* is the dividend yield. *EPU* is economic policy uncertainty. *FEPF* is foreign equity portfolio flow.

Table 2
Summary statistics of control variables

Country	Infl	Legal_O	Fees	RGDPG	SMI	FinRisk	EconRisk	PolRisk
Australia	0.03	1	21.19	2.94	40.6	36.3	25.79	87.26
Brazil	0.06	0	23.89	3.44	25.98	34.08	34.78	66.39
Canada	0.02	1	17.66	1.77	68.57	30.87	41.98	84.83
Chile	0.04	0	36.55	3.96	74.75	24.01	40.85	77.04
China	0.03	0	19.04	9.49	61.16	46.73	36.44	65.78
France	0.02	0	15.91	0.91	53.31	32.49	36.1	75.17
Germany	0.02	0	15.91	0.89	80.19	24.49	38.13	81.97
Greece	0.08	0	26.6	1.74	56.67	32.01	35.19	74.41
Hong Kong	0.01	1	NA	4.31	370.29	41.9	44.28	79.45
Ireland	0.02	1	NA	3	159	36.01	41.76	85.77
Italy	0.02	0	16.21	0.51	52.62	34.17	35.97	78.19
Japan	0	0	13.04	0.81	28.05	42.72	37.93	79.7
Korea	0.03	1	25.96	4.1	84.6	35	41.85	75.82
Mexico	0.04	0	24.92	2.12	56.87	39.5	38.32	72.63
Netherlands	0.02	0	NA	1.13	135.14	27.23	42.55	87.54
Russia	0.09	0	15.28	4.28	54.42	44.11	39.19	68.45
Spain	0.02	0	NA	1.49	56.32	36.31	38.64	76.54
Sweden	0.05	0	16.38	1.67	91.17	27.54	45.01	90.23
United Kingdom	0.03	1	13.34	1.17	57.68	21.78	35.63	82.29
United States	0.02	1	13.9	2.1	26.95	29.45	27.61	75.57

Note: This table reports the means of the control variables used in our analyses. *Infl* is inflation. *Legal_O* is the legal origin. *Fees* are stock market transaction costs. *RGDPG* is the real gross domestic product growth rate. *LSMI* is stock market integration to capture trade openness. *FinRisk* is a financial risk measure. *EconRisk* is an economic risk measure. *PolRisk* is a political risk measure.

Table 3
Pearson's pairwise correlation coefficients between the dependent and independent variables

	HRRM	RCred	CERP	DY	EPU	FEPF	Infl	Int	Exch	Legal_O	Fees	RGDPG	LSMI	FinRisk	EconRisk	PolRisk
HRRM	1															
RCred	**0.49***	1														
CERP	**0.53***	**0.79***	1													
DY	**0.10***	**0.18***	**0.19***	1												
EPU	**0.14***	**0.23***	**0.27***	**0.10***	1											
FEPF	-0.24	**-0.20***	**-0.11***	**-0.08***	**-0.27***	1										
Infl	**0.19***	0.05*	**0.29***	**0.16***	-0.10	**-0.19**	1									
Int	0.07	0.05	**0.08***	0.05	-0.01	0.03	**0.08***	1								
Exch	**0.13***	**0.08***	0.01	0.02	-0.09	-0.03	**0.17***	-0.01	1							
Legal_O	-0.06	0.05	-0.04	-0.03	**0.12***	0.02	-0.01	-0.04	-0.01	1						
Fees	**0.46***	**0.56***	**0.49***	-0.07	-0.08	**-0.25***	**0.19***	0.04	**0.12***	**0.22***	1					
RGDPG	**-0.10***	-0.24*	**-0.26***	-0.04	-0.10	**-0.12***	**0.09***	0.07	**0.24***	**0.11***	**0.48***	1				
SMI	**-0.17***	**-0.14***	**-0.16***	-0.05	0.02	-0.03	**-0.08***	0.01	-0.01	**0.19***	**0.11***	0.03	1			
FinRisk	**0.09***	0.04	0.03	**-0.14***	0.02	0.03	-0.05	-0.03	0.02	**-0.14***	-0.07	0.07	0.07	1		
EconRisk	0.03	**0.24**	**0.19***	**0.07***	0.04	0.01	**-0.12***	-0.01	0.01	**-0.18***	**-0.13***	-0.02	**0.23***	0.02	1	
PolRisk	**0.25***	**0.13***	**0.47***	**-0.25***	**0.13***	**0.09***	**-0.33***	-0.03	-0.06	**-0.13***	**-0.52***	-0.24*	**0.21***	0.06	**0.21***	1

Note: The variables labeled 2-5 are the four measures of the cost of capital. *HRRM* is the historical realized return of the market. *CERP* is the country's equity risk premium. *RCred* is the country's credit rating. *DY* is the dividend yield. *EPU* is economic policy uncertainty. *FEPF* is foreign equity portfolio flow. *Infl* is inflation. *Legal_O* is the legal origin. *Fees* are stock market transaction costs. *RGDPG* is the real gross domestic product growth rate. *SMI* is stock market integration to capture trade openness. *FinRisk* is a financial risk measure. *EconRisk* is an economic risk measure. *PolRisk* is a political risk measure. For brevity and space, the statistical significance of at least the 5% level is reported in bold.

Table 4
Economic policy uncertainty and cost of capital

$$CoC_{jt} = \alpha + \beta_1.EPU_{jt} + \beta_2.Ctls_{jt} + \beta_3.TFE_t + \epsilon_{jt} \qquad (2)$$

	Model (1) HRRM	Model (2) RCred	Model (3) CERP	Model (4) DY
EPU	0.170**	0.321***	0.289*	0.504***
	(2.36)	(2.72)	(1.73)	(3.05)
Infl	0.347***	0.837**	0.427	0.115***
	(2.65)	(2.48)	(1.41)	(3.06)
Int	0.535	0.356	0.158	0.485
	(1.22)	(0.32)	(1.56)	(0.49)
Exch	0.265**	0.467	0.441	0.559*
	(2.14)	(1.46)	(1.54)	(1.79)
Legal_O	-0.293***	-0.259	-0.503**	-0.462**
	(-3.25)	(-1.11)	(-2.42)	(-2.25)
Fees	0.332***	0.103***	0.646***	0.339
	(5.73)	(6.85)	(4.82)	(0.26)
RGDPG	-0.169	-0.770	-0.449	-0.401
	(-1.09)	(-0.02)	(-0.13)	(-1.13)
SMI	-0.228	-0.208***	-0.191***	-0.193
	(-1.02)	(-3.58)	(-3.68)	(-0.38)
FinRisk	0.491	0.191*	0.200	0.194**
	(1.16)	(1.75)	(0.20)	(2.01)
EconRisk	0.658	0.273**	0.319	0.272**
	(1.32)	(2.12)	(0.28)	(2.39)
PolRisk	0.275***	0.130***	0.602***	0.162
	(4.47)	(8.18)	(4.24)	(1.16)
Constant	0.219***	2.152***	0.105***	2.534*
	(3.57)	(13.54)	(7.42)	(1.81)
Number of observations	331	331	331	331
Adj. R-square	0.45	0.58	0.38	0.27
Year fixed effects	Yes	Yes	Yes	Yes

Note: This table reports estimates of four specifications of Equation (2). In each specification, the dependent variable is one of the four measures of the cost of capital (i.e. *HRRM, RCred, CERP,* and *DY*). The explanatory variable of interest is economic policy uncertainty. All the control variables are defined in the notes in Table 2. The *t*-statistics, reported in parentheses, are based on double clustered standard errors (clustering done at the country and year levels). For tractable interpretation, all the coefficients are reported as elasticity, and the statistical significance is reported against 10% (*), 5% (**), and 1% (***) significance levels respectively.

Table 5 Panel A
Interaction between FEPF and EPU on cost of capital

$$CoC_{jt} = \alpha + \beta_1.EPU_{jt} + \beta_2.FEPF_{jt} + \beta_3.FEPF_{jt} \times EPU_{jt} + \beta_4.Ctls_{jt} + \beta_5.TFE_t + \beta_6.CFE_j + \epsilon_{jt} \quad (3)$$

	Model (1) HRRM	Model (2) RCred	Model (3) CERP	Model (4) DY
EPU	0.539***	0.800*	0.645*	0.121***
	(3.46)	(1.95)	(1.76)	(3.35)
FEPF	-0.648**	-0.450**	-0.555**	-0.231**
	(-2.44)	(-2.38)	(-2.05)	(-2.21)
FEPF×EPU	-0.687***	-0.874**	-0.634**	-0.138**
	(-2.57)	(-2.24)	(-2.01)	(-2.22)
Infl	0.299**	0.725**	0.309	0.676***
	(2.30)	(2.12)	(1.01)	(2.88)
Int	0.520	0.418	0.168*	0.736
	(1.21)	(0.37)	(1.67)	(0.74)
Exch	0.250**	0.433	0.477*	0.440*
	(2.06)	(1.36)	(1.67)	(1.75)
Legal_O	-0.354***	-0.351	-0.580***	-0.376*
	(-3.94)	(-1.48)	(-2.75)	(-1.81)
Fees	0.329***	0.102***	0.638***	0.354
	(5.81)	(6.85)	(4.81)	(0.27)
RGDPG	-0.221	-0.913	-0.502	-0.382
	(-1.45)	(-0.23)	(-0.14)	(-1.08)
SMI	-0.175	-0.200***	-0.184***	-0.267
	(-0.80)	(-3.46)	(-3.57)	(-0.53)
FinRisk	0.605	0.222**	0.140	0.173*
	(1.44)	(2.01)	(0.14)	(1.78)
EconRisk	0.557	0.262**	0.257	0.245**
	(1.14)	(2.04)	(0.22)	(2.17)
PolRisk	0.257***	0.126***	0.562***	0.172
	(4.24)	(7.92)	(3.95)	(1.23)
Constant	0.244***	2.156***	0.103***	1.111
	(3.64)	(12.26)	(6.54)	(0.72)
Number of observations	331	331	331	331
Adjusted. R-square	0.48	0.61	0.42	0.30
Country fixed effects	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes

Notes: This table reports estimates of four specifications of Equation (3) of the interaction between foreign equity portfolio flow and economic policy uncertainty on the cost of capital. In each specification, the dependent variable is one of the four measures of the cost of capital (i.e. *HRRM, RCred, CERP,* and *DY*) as defined in the notes to Table 1. The explanatory variable of interest is foreign equity portfolio flow (*FEPF*). *EPU* is economic policy uncertainty; *FEPF×EPU* is the foreign equity portfolio flow interaction with economic policy uncertainty. All the control variables are defined in the notes in Table 2. The *t*-statistics, reported in parentheses, are based on double clustered standard errors (clustering done at the country and year levels). For tractable interpretation, all the coefficients are reported as elasticity, and the statistical significance is reported against 10% (*), 5% (**), and 1% (***) significance levels respectively.

Table 5 Panel B

Stock market integration interaction with economic policy uncertainty

$$CoC_{jt} = \alpha + \beta_1.EPU_{jt} + \beta_2.SMI_{jt} + \beta_3.EPU_{jt} \times SMI_{jt} + \beta_4.Ctls_{jt} + \beta_5.TFE_t + \beta_6.CFE_j + \epsilon_{jt} \quad (4)$$

	Model (1) HRRM	Model (2) RCred	Model (3) CERP	Model (4) DY
EPU	0.108**	0.102*	0.985**	0.976***
	(2.38)	(1.98)	(2.09)	(2.60)
SMI	-0.433*	-0.373**	-0.356**	-0.931
	(-1.72)	(-2.08)	(-2.22)	(-1.59)
SMI×EPU	-0.482*	-0.121***	-0.162**	-0.820*
	(-1.84)	(-2.98)	(-2.09)	(-1.75)
Infl	0.336***	0.862***	0.452	0.894***
	(2.57)	(2.55)	(1.49)	(2.99)
Int	0.511	0.416	0.164	0.445
	(1.17)	(0.37)	(1.62)	(0.44)
Exch	0.271**	0.453	0.455	0.515*
	(2.18)	(1.41)	(1.58)	(1.81)
Legal_O	-0.279***	-0.294	-0.538**	-0.428**
	(-3.06)	(-1.25)	(-2.56)	(-2.11)
Fees	0.331***	0.103***	0.650***	0.367
	(5.70)	(6.87)	(4.85)	(0.28)
RGDPG	-0.166	-0.425	-0.376	-0.396
	(-1.07)	(-0.00)	(-0.11)	(-1.12)
FinRisk	0.502	0.188*	0.227	0.192**
	(1.19)	(1.72)	(0.23)	(1.99)
EconRisk	0.676	0.269**	0.274	0.268**
	(1.36)	(2.08)	(0.24)	(2.36)
PolRisk	0.281***	0.128***	0.586***	0.151
	(4.55)	(8.03)	(4.10)	(1.07)
Constant	0.186***	2.067***	0.114***	1.959
	(2.65)	(11.41)	(7.03)	(1.22)
Number of observation	331	331	331	331
Adjusted R-square	0.49	0.61	0.39	0.11
Country fixed effects	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes

Notes: This table reports estimates of four specifications of Equation (4) of the interaction between financial integration and economic policy uncertainty on the cost of capital. In each specification, the dependent variable is one of the four measures of the cost of capital (i.e. *HRRM, RCred, CERP,* and *DY*) as defined in the notes to Table 1. The explanatory variable of interest is foreign equity portfolio flow (*FEPF*). *EPU* is economic policy uncertainty; *SMI×EPU* is the stock market integration interaction with economic policy uncertainty. All the control variables are defined in the notes in Table 2. The *t*-statistics, reported in parentheses, are based on double clustered standard errors (clustering done at the country and year levels). For tractable interpretation, all the coefficients are reported as elasticity, and the statistical significance is reported against 10% (*), 5% (**), and 1% (***) significance levels respectively.

Table 6
Fixed effects

	Model (1) RCred	Model (2) DY
EPU	0.140**	0.359**
	(2.37)	(2.46)
Infl	0.373*	0.532**
	(1.80)	(2.18)
Int	0.211	0.464
	(0.36)	(0.56)
Exch	0.233	2.482
	(1.44)	(1.07)
Fees	0.853***	0.177
	(5.67)	(0.83)
RGDPG	-0.481**	-0.260*
	(-1.98)	(-1.75)
SMI	-0.293**	-0.783*
	(-2.33)	(-1.83)
FinRisk	0.633	0.100
	(0.96)	(1.06)
EconRisk	0.536	0.738
	(0.76)	(0.74)
PolRisk	0.469***	0.543***
	(3.16)	(2.57)
Constant	2.665***	6.938***
	(19.51)	(3.57)
Number of observations	331	331
R-square	0.45	0.34

Notes: This table reports fixed effects estimation. In each specification, the dependent variable is one of the four measures of the cost of capital (i.e. *HRRM, RCred, CERP,* and *DY*) as defined in the notes to Table 1. The explanatory variable of interest is *EPU* as defined in table 1. All the control variables are defined in the notes in Table 2. The *t*-statistics, reported in parentheses, are based on double clustered standard errors (clustering done at the country and year levels). For tractable interpretation, all the coefficients are reported as elasticity, and the statistical significance is reported against 10% (*), 5% (**), and 1% (***) significance levels respectively.

Table 7
Differences-in differences results

$$CoC_{jt} = \alpha + \beta_1.EPU_{jt} + \beta_2.POST2011 + \beta_3 GIIS + \beta_4.POST2011 \times GIIS \times EPU + \beta_5.Ctls_{jt} + \epsilon_{jt} \quad (5)$$

	Model (1) HRRM	Model (2) RCred	Model (3) CERP	Model (4) DY
EPU	0.179***	0.192**	0.233**	0.391**
	(2.61)	(2.03)	(2.35)	(2.42)
POST2011	0.494*	0.370**	0.133**	0.462**
	(1.77)	(2.41)	(2.06)	(2.25)
GIIS	0.237**	0.120***	0.343**	0.284*
	(2.34)	(2.71)	(2.34)	(1.94)
POST2011×GIIS×EPU	0.574***	0.514***	0.391***	1.084***
	(3.13)	(3.20)	(2.73)	(2.88)
Infl	0.546***	1.217***	0.621*	4.362
	(4.35)	(3.58)	(1.96)	(1.48)
Int	0.585	0.576	0.152	0.670
	(1.45)	(0.53)	(1.49)	(0.70)
Exch	0.262**	-0.474	-0.431	4.840*
	(2.32)	(-1.55)	(-1.51)	(1.82)
Legal_O	-0.414***	-0.438*	-0.551***	-0.340*
	(-4.91)	(-1.92)	(-2.58)	(-1.71)
Fees	0.361***	0.953***	0.602***	0.544
	(6.50)	(6.33)	(4.29)	(0.42)
RGDPG	-0.365***	-0.364	-0.130	-0.248
	(-2.50)	(-0.92)	(-0.35)	(-0.07)
SMI	-0.286	-0.173***	-0.176***	-0.476
	(-1.34)	(-2.99)	(-3.27)	(-0.95)
FinRisk	0.612	-0.227**	0.323	0.232***
	(1.59)	(-2.17)	(1.03)	(2.55)
EconRisk	0.366	0.220*	0.241	0.254**
	(0.80)	(1.77)	(0.21)	(2.35)
PolRisk	0.251***	0.140***	0.654***	0.267*
	(4.25)	(8.73)	(4.38)	(1.92)
Constant	0.214***	2.042***	0.110***	1.505
	(3.68)	(12.94)	(7.50)	(1.10)
Number of observations	331	331	331	331
Adj.R-square	0.54	0.62	0.39	0.21

Notes: This table reports estimates of four specifications of Equation (5) using differences-in-differences. In each specification, the dependent variable is one of the four measures of the cost of capital (i.e. *HRRM, RCred, CERP,* and *DY*) as defined in the notes to Table 1. EPU_{jt} is economic policy uncertainty. *POST2011* represents post Eurozone crisis dummy variable which takes a value of 1 if the year is beyond 2011 or 0 if otherwise, *GIIS* represents the treatment group (Greece, Italy, Ireland, and Spain) takes a value of 1 if otherwise 0. *POST2011×GIIS×EPU* is the interactive term between the Eurozone post debt crisis year, the treatment group, and economic policy uncertainty. All the control variables are defined in the notes in Table 2. The *t*-statistics, reported in parentheses, are based on double clustered standard errors (clustering done at the country and year levels). For tractable interpretation, all the coefficients are reported as elasticity, and the statistical significance is reported against 10% (*), 5% (**), and 1% (***) significance levels respectively.

Table 8
Results without major financial centres

	Model (1) HRRM	Model (2) RCred	Model (3) CERP	Model (4) DY
EPU	0.226**	0.379**	0.471**	0.586***
	(2.38)	(2.00)	(2.16)	(3.01)
Infl	0.377**	0.754**	0.407	6.217**
	(2.34)	(2.33)	(1.32)	(2.35)
Int	0.421	0.578	0.163	0.431
	(0.66)	(0.21)	(1.13)	(0.38)
Exch	0.302**	-0.482	-0.402	3.452
	(2.13)	(-1.35)	(-1.17)	(1.65)
Legal_O	-0.244*	-0.467	-0.322	-0.432*
	(-2.08)	(-1.69)	(-0.06)	(-1.76)
Fees	0.374***	0.853***	0.474***	0.273*
	(5.87)	(4.79)	(2.88)	(1.78)
RGDPG	-0.241*	-0.577	-0.211	-0.364
	(-1.84)	(-0.06)	(-0.51)	(-0.98)
SMI	-0.219	-0.262***	-0.277***	-0.227***
	(-0.67)	(-3.40)	(-3.72)	(-3.63)
FinRisk	0.397	0.858	0.254**	-0.202*
	(1.68)	(0.64)	(2.13)	(-1.85)
EconRisk	0.662	0.245	0.408	0.214
	(0.71)	(1.28)	(0.17)	(1.32)
PolRisk	0.389***	0.133***	0.825***	0.349**
	(4.88)	(8.61)	(4.49)	(2.30)
Constant	0.322***	2.244***	0.132***	2.496
	(3.17)	(9.16)	(7.44)	(1.46)
Number of observations	262	262	262	262
Adj.R-square	0.42	0.63	0.41	0.22
Country fixed effects	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes

Note: This table reports estimates of four specifications without major financial centres. In each specification, the dependent variable is one of the four measures of the cost of capital (i.e. *HRRM, RCred, CERP,* and *DY*). The explanatory variable of interest is economic policy uncertainty. All the control variables are defined in the notes in Table 2. The *t*-statistics, reported in parentheses, are based on double clustered standard errors (clustering done at the country and year levels). For tractable interpretation, all the coefficients are reported as elasticity, and the statistical significance is reported against 10% (*), 5% (**), and 1% (***) significance levels respectively.