**Supplementary Material**

**Additional Analyses**

Based on the suggestions of an anonymous referee, in this supplementary file, we conduct three additional analyses: (a) A pure time-series model is estimated for each country to analyze the impact of geopolitical risks on returns and volatility; (b) In order to control for possible over-parameterization of the model, we re-estimate the panel-GARCH model with the same constant for each country in the conditional variance equation, and; (c)Re-conduct the panel-GARCH estimations, by categorizing countries into regions.

**Time series analysis**

First, we examine the relationship between country-specific GPRs and stock returns (and volatility) in terms of time series-based models. We estimate the following individual specification for the stock returns of each separate emerging market $i$:

$$R_{it} = \beta_{i0} + \sum_{k=1}^{3} \beta_{ik} R_{it-k} + \gamma_1 GPR_{it} + u_{it} \ (6)$$

$$\sigma_{it}^2 = k_{i0} + \theta_{i1}\sigma_{it-1}^2 + \varphi_{i1}u_{it-1}^2 + \delta_{i1}GPR_{it}, \ (7)$$

where $u_{it}/\psi_{it-1} \sim N\left(0,\sigma_{it}^2\right)$ and $\psi_{it-1}$ is the information set available at time $t$-1.Equations (6) and (7) are estimated by using the quasi-maximum likelihood method.

Table S1 in the Appendix summarizes the results of the estimated models for each country. Exhibit A of Table S1 demonstrates that the coefficient of GPR term in the conditional mean equation is statistically significant for only two countries, namely Indonesia and Venezuela, with the effect being positive and negative respectively. Exhibit B of Table S1 presents the estimates of the conditional variance specification. We observe that GPR has a statistically significant effect on the second moments of the stock returns for a limited number of economies, specifically Indonesia, Venezuela and Philippines. As expected, country-specific political risks have a positive impact on the stock return volatility in Indonesia and Venezuela (but not for Philippines), with the estimated coefficients being

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7.323 and 10.555. Overall, the evidence from the time series GARCH-based analysis suggests that the country-specific geopolitical risks are not related to the first and second conditional moments of the stock returns, in general. These findings are in contrast to our main results from the panel-GARCH model, and could be attributed to the inability of the time series-based framework to capture cross-sectional inter-dependencies.

**Panel-GARCH model without country-specific effects in the conditional volatility**

In Table S2, we present the results of the panel-GARCH with and without fixed effects. The positive impact on volatility is observed under both cases, though significance is observed only under the latter case. Interestingly, the impact on the mean of stock returns is negative but insignificant in the model with fixed effects, but positive and significant under the model without the fixed effects. In general, however, the positive impact of GPR on volatility is retained just like our benchmark analysis of panel-GARCH reported in Table 4.

**Region-based analysis**

In Table S3, we explore robustness of our panel-GARCH results to sample segmentation. In particular, the eighteen emerging markets are divided into three different panel datasets based on the geographical region they belong to. The first subsample of Americas, include Mexico, Argentina, Colombia, Brazil and Venezuela. The second subsample of Asia, include Korea, China, India, Indonesia, Malaysia, Thailand, and Philippines. And the third subsample is named Europe, Middle East and Africa, and it includes Russia, Turkey, Ukraine, Israel, Saudi Arabia and South Africa. The three subsamples have more or less the same number of markets to make the results comparable. Our basic model, described in equations (1) to (5) of Section 2, is estimated for these three different panels. The estimated coefficients and the corresponding *p*-values of the conditional mean and variance specifications are reported in

Exhibit A and B respectively of Table S3. It is observed that the stock return volatility of the region Americas, as well as the region Europe, Middle East and Africa, is highly sensitive to country-specific GPRs. As in the full sample analysis, a one-unit increase in the country-GPRs will increase the stock market volatility of both regions. Moreover, the magnitude of these associations has increased when compared to the results of the analysis involving all the eighteen countries in the panel. For instance, based on pooled regression, the coefficient values are 0.305 and 0.387 for the two regions respectively, while for the case when all the countries were included, the coefficient is 0.135. This increase possibly stems from the higher degree of regional stock market integration. As reported earlier, the panel-GARCH model explicitly accounts for cross-sectional dependencies, and since the interdependencies between stock markets within a specific geographical region are stronger, this will eventually lead to stronger linkages between country-specific GPRs and stock market volatility. Again, we document no relation between the geopolitical risks and the conditional mean of the stock returns. Therefore, our results are robust in terms of significance of the estimated coefficients, as well as the sign of the estimated coefficients, when we compare across the cases of regions and the panel involving all the countries.

**Table S1: Time series-based analysis**

| Parameters | Constant | $R_{t-1}$ | $R_{t-2}$ | $R_{t-3}$ | $GPR_{it}$ |
|---|---|---|---|---|---|
| *Countries* | | | | | |
| Turkey | 0.322 | 0.048 | -0.067 | 0.047 | 0.003 |
| | (0.898) | (0.516) | (0.333) | (0.483) | (0.986) |
| Mexico | 0.397 | 0.128 | -0.006 | 0.072 | 0.032 |
| | (0.910) | (0.106) | (0.943) | (0.398) | (0.917) |
| Korea | 0.889 | 0.040 | -0.034 | 0.118* | -0.009 |
| | (0.505) | (0.611) | (0.626) | (0.085) | (0.930) |
| Russia | -0.095 | 0.171** | 0.012 | -0.007 | 0.089 |
| | (0.967) | (0.044) | (0.868) | (0.913) | (0.635) |
| India | 1.621 | 0.029 | -0.005 | 0.064 | -0.102 |
| | (0.342) | (0.699) | (0.938) | (0.384) | (0.565) |
| Brazil | 2.226 | 0.102 | 0.060 | -0.042 | -0.163 |
| | (0.474) | (0.168) | (0.435) | (0.614) | (0.606) |
| China | -1.064 | 0.079 | -0.027 | -0.022 | 0.138 |
| | (0.644) | (0.304) | (0.725) | (0.768) | (0.500) |
| Indonesia | -1.416 | 0.119 | 0.001 | 0.038 | 0.313** |
| | (0.263) | (0.194) | (0.986) | (0.533) | (0.042) |
| Saudi Arabia | 0.703 | 0.233*** | -0.038 | 0.011 | 0.031 |
| | (0.654) | (0.001) | (0.619) | (0.893) | (0.817) |
| South Africa | 0.602 | -0.006 | -0.047 | 0.045 | -0.001 |
| | (0.755) | (0.951) | (0.490) | (0.494) | (0.996) |
| Argentina | -0.770 | 0.116 | -0.058 | -0.049 | 0.278 |
| | (0.651) | (0.148) | (0.439) | (0.450) | (0.110) |
| Colombia | 1.039 | 0.081 | 0.105 | -0.010 | -0.069 |
| | (0.618) | (0.249) | (0.160) | (0.891) | (0.770) |
| Venezuela | 2.871 | -0.022 | -0.062* | -0.002 | -0.508*** |
| | (0.105) | (0.766) | (0.084) | (0.949) | (0.000) |
| Thailand | 1.784 | 0.076 | -0.039 | 0.091 | -0.151 |
| | (0.133) | (0.285) | (0.566) | (0.184) | (0.201) |
| Ukraine | 1.354 | 0.393*** | -0.103 | 0.104 | -1.004 |
| | (0.493) | (0.000) | (0.258) | (0.189) | (0.546) |
| Israel | 0.739 | 0.154** | -0.071 | 0.052 | 0.002 |
| | (0.702) | (0.037) | (0.320) | (0.480) | (0.993) |
| Malaysia | 1.439 | 0.092 | 0.036 | 0.026 | -0.097 |
| | (0.116) | (0.209) | (0.625) | (0.735) | (0.268) |
| Philippines | 0.061 | 0.053 | 0.008 | 0.147 | 0.047 |
| | (0.945) | (0.463) | (0.876) | (0.011) | (0.555) |

Exhibit A: conditional mean specification

| Exhibit B: conditional variance specification | | | |
|---|---|---|---|
| Parameters | Constant | ARCH | GARCH | $GPR_{it}$ |
| Countries | | | | |
| Turkey | 2.551 | -0.024*** | 1.013*** | -0.183 |
| | (0.493) | (0.000) | (0.000) | (0.487) |
| Mexico | 44.487 | -0.075 | 0.586** | -0.597 |
| | (0.284) | (0.113) | (0.040) | (0.819) |
| Korea | 5.890 | 0.109** | 0.849*** | -0.358 |
| | (0.132) | (0.020) | (0.000) | (0.176) |
| Russia | 12.278 | 0.231** | 0.649*** | -0.052 |
| | (0.304) | (0.011) | (0.000) | (0.958) |
| India | -0.091 | 0.085** | 0.895*** | 0.125 |
| | (0.982) | (0.031) | (0.000) | (0.777) |
| Brazil | -12.188 | 0.103 | 0.632*** | 4.372 |
| | (0.641) | (0.106) | (0.000) | (0.117) |
| China | 19.813 | 0.229*** | 0.679*** | -1.060 |
| | (0.131) | (0.003) | (0.000) | (0.316) |
| Indonesia | -21.441* | 0.392*** | 0.114 | 7.323*** |
| | (0.062) | (0.000) | (0.493) | (0.002) |
| Saudi Arabia | 3.842 | 0.221*** | 0.706*** | 0.002 |
| | (0.365) | (0.000) | (0.000) | (0.996) |
| South Africa | 23.040 | 0.212*** | 0.143 | 1.526 |
| | (0.405) | (0.000) | (0.737) | (0.469) |
| Argentina | 2.223 | 0.455** | 0.395*** | 2.699 |
| | (0.905) | (0.013) | (0.004) | (0.226) |
| Colombia | 2.122 | 0.046 | 0.871*** | 0.345 |
| | (0.708) | (0.289) | (0.000) | (0.636) |
| Venezuela | -18.467 | 3.731*** | -0.002 | 10.555*** |
| | (0.482) | (0.000) | (0.560) | (0.000) |
| Thailand | -2.940 | 0.119*** | 0.900*** | 0.187 |
| | (0.107) | (0.000) | (0.000) | (0.251) |
| Ukraine | 17.279 | 0.157** | 0.624*** | 14.147* |
| | (0.175) | (0.023) | (0.000) | (0.073) |
| Israel | 2.685 | 0.121*** | 0.848*** | -0.159 |
| | (0.528) | (0.007) | (0.000) | (0.742) |
| Malaysia | 1.368 | 0.075** | 0.832*** | 0.074 |
| | (0.495) | (0.042) | (0.000) | (0.657) |
| Philippines | 3.089*** | -0.019*** | 1.012*** | -0.269*** |
| | (0.000) | (0.000) | (0.000) | (0.000) |

*Notes*: the table presents the estimated coefficients of the individual conditional mean and variance specifications of stock market returns. Exhibit A presents the estimation results of the conditional mean equation, and Exhibit B presents the results of the conditional variance equation. The conditional mean specification for each market is $R_{it} = \beta_{i0} + \sum_{k=1}^{3} \beta_{ik} R_{it-k} + \gamma_1 GPR_{it} + u_{it}$. where $R_{it}$ denotes the logarithmic stock returns of economy$i$ for the time period (t) between 11/1998 and 12/2016, while $GPR_{it}$ denotes the country-specific GPR factor. The conditional variance specification for each market is $\sigma_{it}^2 = k_{i0} + \theta_{i1}\sigma_{it-1}^2 + \varphi_{i1}u_{it-1}^2 + \delta_{i1}GPR_{it}$. P-values are in parentheses. * indicates statistical significance at level 10%; ** indicates statistical significance at levels 5% and 10%; *** indicates statistical significance at levels 1%, 5% and 10%.

**Table S2: Estimation results of Panel GARCH models which allow for individual homogeneity in the variance**

| Models | Country GPR with fixed effects (A) | Country GPR without fixed effects (B) |
|---|---|---|
| Exhibit A: conditional mean specification | | |
| Constant | 0.113 | 0.166 |
|  | (0.849) | (0.357) |
| $R_{i,t-1}$ | 0.111*** | 0.112*** |
|  | (0.000) | (0.000) |
| $R_{i,t-2}$ | 0.023 | 0.023 |
|  | (0.161) | (0.152) |
| $R_{i,t-3}$ | 0.048*** | 0.048*** |
|  | (0.003) | (0.002) |
| $GPR_{i,t}$ | -0.051 | 0.005*** |
|  | (0.396) | (0.000) |
| $GGPR_t$ | | |
| Exhibit B: conditional variance specification | | |
| Constant | 20.637*** | 22.634*** |
|  | (0.000) | (0.000) |
| GARCH | 0.492*** | 0. 394*** |
|  | (0.000) | (0.000) |
| ARCH | 0.389*** | 0.537*** |
|  | (0.000) | (0.000) |
| $GPR_{i,t}$ | 0.043 | 0.059*** |
|  | (0.582) | (0.000) |
| $GGPR_t$ | | |
| Log-likelihood | -141010000 | -142090000 |

*Notes*: the table presents the estimation results of the mean and variance specifications of models A toD, respectively. Exhibit A presents the estimation results of the conditional mean equation, and Exhibit B presents the results of the conditional variance equation. The conditional mean equation of models A and B is specified as $R_{i,t} = \beta_{i,0} + \beta_{i,1}R_{i,t-1} + \beta_{i,2}R_{i,t-2} + \beta_{i,3}R_{i,t-3} + \beta_{i,4}GPR_{i,t} + u_{i,t}$, where $R_{i,t}$ denotes the logarithmic stock returns of countries i = Turkey,...,Philippines, for the time period (t) between 11/1998 and 12/2016, while $GPR_{i,t}$ denotes the country-specific GPR factor. Model A is estimated as a panel regression with fixed effects while model B is estimated as a pooled regression. The conditional variance equation of each model is specified as $\sigma_{i,t}^2 = k + \theta_1\sigma_{i,t-1}^2 + \varphi_1 u_{i,t-1}^2 + \delta_1 GPR_{i,t}, i=1,...,N$ ; the conditional covariance equation is specified as

$\sigma_{ij,t} = l_{ij} + n_1\sigma_{ij,t-1} + m_1 u_{i,t-1}u_{j,t-1}, i \neq j$.

p-values are in parentheses.

* indicates statistical significance at level 10%; ** indicates statistical significance at levels 5% and 10%; *** indicates statistical significance at levels 1%, 5% and 10%.

**Table S3: Results of the country-specific GPR models based on panles of geographical regions**

| Models | Fixed Effects | | | Pooled Regression | | |
|---|---|---|---|---|---|---|
| Regions | Americas | Asia | Europe, Middle East and Africa | Americas | Asia | Europe, Middle East and Africa |
| Exhibit A: conditional mean specification | | | | | | |
| Constant | -0.646 | 1.022 | 1.016 | -0.599 | 1.075* | 1.029 |
| | (0.676) | (0.105) | (0.222) | (0.695) | (0.082) | (0.201) |
| $R_{i,t-1}$ | 0.072** | 0.086*** | 0.201*** | 0.072** | 0.086*** | 0.202*** |
| | (0.019) | (0.001) | (0.000) | (0.019) | (0.001) | (0.000) |
| $R_{i,t-2}$ | 0.061** | 0.004 | -0.038 | 0.062** | 0.004 | -0.038 |
| | (0.046) | (0.868) | (0.172) | (0.045) | (0.864) | (0.178) |
| $R_{i,t-3}$ | 0.032 | 0.039 | 0.087*** | 0.033 | 0.039 | 0.089*** |
| | (0.292) | (0.125) | (0.001) | (0.286) | (0.123) | (0.001) |
| $GPR_{i,t}$ | 0.107 | -0.038 | -0.047 | 0.102 | -0.043 | -0.049 |
| | (0.475) | (0.515) | (0.517) | (0.488) | (0.449) | (0.488) |
| Exhibit B: conditional variance specification | | | | | | |
| Turkey | | | 11.332** | | | 10.785*** |
| | | | (0.014) | | | (0.006) |
| Mexico | 0.562 | | | 0.439 | | |
| | (0.997) | | | (0.998) | | |
| Korea | | 1.958 | | | 1.867 | |
| | | (0.167) | | | (0.182) | |
| Russia | | | 5.606** | | | 5.171*** |
| | | | (0.018) | | | (0.005) |
| India | | 3.094** | | | 2.979* | |
| | | (0.059) | | | (0.066) | |
| Brazil | 5.657** | | | 5.892** | | |
| | (0.041) | | | (0.036) | | |
| China | | 3.921** | | | 3.800** | |
| | | (0.026) | | | (0.030) | |
| Indonesia | | 3.314** | | | 3.200** | |
| | | (0.024) | | | (0.027) | |
| Saudi Arabia | | | 0.985 | | | 0.038 |
| | | | (0.997) | | | (0.892) |
| South Africa | | | 2.654* | | | 2.537*** |
| | | | (0.052) | | | (0.000) |
| Argentina | 4.894** | | | 5.075** | | |
| | (0.024) | | | (0.021) | | |
| Colombia | 1.792 | | | 1.877 | | |
| | (0.155) | | | (0.142) | | |
| Venezuela | 64.285*** | | | 68.443*** | | |
| | (0.006) | | | (0.005) | | |
| Thailand | | 2.828 | | | 2.709 | |
| | | (0.067) | | | (0.075) | |
| Ukraine | | | 12.788*** | | | 12.372*** |
| | | | (0.001) | | | (0.000) |
| Israel | | | 0.263 | | | 0.239 |
| | | | (0.782) | | | (0.794) |
| Malaysia | | 0.927 | | | 0.862 | |
| | | (0.416) | | | (0.444) | |

| | | | | | | |
|---|---|---|---|---|---|---|
| Philippines | | 2.079 | | | 1.967 | |
| | | (0.116) | | | (0.131) | |
| GARCH | 0.835*** | 0.839*** | 0.778*** | 0.833*** | 0.841*** | 0.782*** |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| ARCH | 0.111*** | 0.103*** | 0.122*** | 0.109*** | 0.103*** | 0.120 |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.934) |
| $GPR_{i,t}$ | 0.291** | 0.084 | 0.393*** | 0.305** | 0.088 | 0.387*** |
| | (0.025) | (0.405) | (0.001) | (0.023) | (0.379) | (0.000) |
| Log-likelihood | -42072000 | -51301000 | -46816000 | -42082000 | -51306000 | -46829000 |

*Notes*: the table presents the estimation results of the mean and variance specifications of the logarithmic stock returns of three different geographical regions. The first region, denoted as Americas, includes Mexico, Argentina, Colombia, Brazil, and Venezuela. The second region, denoted as Asia, includes Korea, China, India, Indonesia, Malaysia, Thailand, and Philippines. The third region, denoted as Europe, Middle East and Africa, includes Russia, Turkey, Ukraine, Israel, Saudi Arabia and South Africa. Exhibit A presents the estimation results of the conditional mean equation, and Exhibit B presents the estimates of the conditional variance equation. The conditional mean equation is specified as

$$R_{i,t} = \beta_{i,0} + \beta_{i,1}R_{i,t-1} + \beta_{i,2}R_{i,t-2} + \beta_{i,3}R_{i,t-3} + \beta_{i,4}GPR_{i,t} + u_{i,t},$$ where $R_{i,t}$ denotes the logarithmic stock returns of countries iof the specific region for the time period (t) between 11/1998 and 12/2016, while $GPR_{i,t}$ denotes the country-specific GPR factor. The previous equation is estimated as a panel regression with fixed effects and as a pooled regression. The conditional variance equation of each model is specified as

$$\sigma_{i,t}^2 = k_i + \theta_1\sigma_{i,t-1}^2 + \varphi_1 u_{i,t-1}^2 + \delta_1 GPR_{i,t}, i = 1,...,N;$$ the conditional covariance equation is specified as

$$\sigma_{ij,t} = l_{ij} + n_1\sigma_{ij,t-1} + m_1 u_{i,t-1}u_{j,t-1}, i \neq j.$$

* indicates statistical significance at level 10%; ** indicates statistical significance at levels 5% and 10%; *** indicates statistical significance at levels 1%, 5% and 10%.