

Impact of Geopolitical Risks on the Stock Market : Evidence from Large, Mid, and Small-Cap Stocks

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Abstract

Purpose : This paper studied the impact of geopolitical risks (GPR) in the top 10 economies on India's large-cap, mid-cap, and small-cap stocks.

Methodology : For the investigation, we employed the quantile regression technique using a monthly dataset from January 2004 to December 2020.

Findings : We discovered some extremely interesting and valuable outcomes. First, geopolitical risk threats (GPRT) and China had a significant impact; additionally, GPR, geopolitical risks acts (GPRA), France, Germany, India, and the UK had a considerable impact; Canada, Japan, South Korea, and the USA had negligible impacts; and Italy had no impact on large-cap and mid-cap stocks. Second, GPRT and China had a significant impact; GPR, GPRA, India, and the United Kingdom had a considerable impact; and Canada, France, and Germany had a minimal impact on small-cap stocks. The aggregate impact of global and country-specific GPR on Indian LMS stocks was not homogeneous, showing that GPR in these economies did not uniformly influence Indian LMS stocks.

Practical Implications : Our findings could assist investors in identifying market patterns, managing portfolio risk, anticipating probable stock market changes, and adjusting their investing plan accordingly. By implementing our results into their investing strategy, investors might be able to earn higher returns or minimize risk, and improve their total investment performance.

Originality : As far as we know, this is the first study that looked at the impact of GPR in the top 10 economies on Indian large-cap, mid-cap, and small-cap equities.

Keywords : geopolitical risks, stock market, large-cap, mid-cap, small-cap, quantile regression, India

JEL Classification Codes : C21, D81, E6, G12

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Market participants, entrepreneurs, and the central bank consider geopolitical risk (GPR) a key determinant of the stock market and investment decisions. The top global organizations such as the World Bank, the International Monetary Fund, and the European Central Bank have focused on and supervised the risks to the outlook posed by geopolitical tensions in recent years. GPR is a critical predictor of an economy's growth and considerably impacts the securities market. Events ranging from World War I and II to the Taliban-Afghanistan war to the Russia-Ukraine war have had a negative impact on commercial relations.

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This study is driven by the reality that economies become increasingly intertwined as the volume of international transactions, products, services, and financial flows increases. (Ahmad et al., 2005). On June 14, 2022, India's Chief Economic Adviser, V. Anantha Nageswaran, stated that the country's economy will reach \$5 trillion by 2026–2027 and \$10 trillion by 2033–2034. Because India is one of the world's main rising economies and is heavily interconnected, GPR issues from around the world may impact India. In general, stock markets get affected due to uncertainties ranging from economic to political factors to inflationary and geopolitical issues. GPR are the hardest to gauge as they have the most comprehensive range of outcomes. In this regard, we investigate the effects of global and country-specific GPR on the stock market in general and the stock prices of Indian LMS in particular. We employ the global and country-specific GPR index developed by Caldara and Iacoviello (2022). This index is a new gauge for bad geopolitical events based on a tally of newspaper articles about geopolitical tensions. Stock exchanges frequently classify stocks into three groups depending on their market capitalization (or market cap) large-cap, mid-cap, and small-cap (hence referred to as LMS) stocks. This classification allows investors to make informed investing decisions. The LMS stocks differ in market size, growth potential, and volatility.

Against this backdrop, our study seeks solutions to the following unresolved questions:

- Do global GPR and country-specific GPR of the top 10 economies affect the LMS stock prices equally?
- Do the LMS stock prices go down significantly due to increased GPR?
- Is the effect persistent and stronger during extreme volatility periods?

In this context, we investigate how the LMS stock prices are sensitive to global GPR and country-specific GPR in the 10 economies in the world, namely, Canada, China, France, Germany, India, Italy, Japan, South Korea, the United Kingdom, and the United States. We also investigate the impact of GPR, geopolitical risk acts (GPRA), and geopolitical risk threats (GPRT). GPRA includes the beginning of the war, escalation of the war, and terrorist acts. GPRT contains war threats, peace threats, military build-up, nuclear threats, and terrorist threats.

The present study has two contributions to the existing literature. The foremost of the contributions is that, to the best of our knowledge, this is the first study investigating the impact of EPU in the top 15 countries on the LMS stocks in India. In this paper, to segregate results as per the nature of companies instead of mixed results, we select three representative sub-stock indices in India to represent LMS: Nifty 100, Nifty Midcap 100, and Nifty Small Cap 100. The reason is that the companies listed on stock exchanges are heterogeneous. The heterogeneity may be due to company size, expansion opportunities, liquidity, and borrowing capacity. Second, we use global and top 10 countries' GPR to check the impact on LMS in India, which differs from past studies as the previous literature has ignored it.

The effect of global and country-specific GPR is diverse across LMS equities in India, implying that risk related to geopolitical difficulties in these economies does not consistently influence Indian LMS stocks. Our findings offer a new dimension to the existing research and are critical for market participants when allocating portfolios in emerging markets.

Previous Research

Salisu et al. (2022) discovered that stock market volatility in emerging economies responds more favorably to GPR using the GARCH – MIDAS technique. Furthermore, Jung et al. (2021) revealed that stock returns go down due to increased GPR in South Korea. Yang et al. (2021) showed that the global and most regional GPR significantly impact China's stock market. Rawat and Arif (2018) found no homogeneity between BRIC (Brazil, Russia, India, China) equity returns and their country GPR using the quantile-on-quantile regression. This result is in similar line with Balcilar et al. (2018), who revealed the effects of GPR on examining the impact of

geopolitical uncertainty on return and volatility dynamics in the BRICS (Brazil, Russia, India, China, and South Africa) stock markets return. Volatility is not a uniform way to use the nonparametric causality-in-quantiles tests. The findings of Hoque and Zaidi (2020) detected that the stock returns of Brazil, India, Indonesia, South Africa, and Turkey are influenced by global and country-specific GPR employing a three-regime Markov-switching approach. From July 18, 2010 to May 31, 2018, Aysan et al. (2019) evaluated the prediction potential of the global GPR index on daily returns and price volatility of Bitcoin. They discovered that GPR has predictive potential on Bitcoin returns and volatility using the Bayesian graphical structural vector autoregressive (BSGVAR) approach.

Adebayo et al. (2022) used the nonparametric causality-in-quantiles test to assess how GPR, exchange rate, and EPU influence the South Korean stock market. Jiang et al. (2022) detected a significant and negative impact of GPR and both negative and positive effects of EPU on Chinese stock returns with the quantile-on-quantile method and causality-in-quantiles approach. This result is supported by Zhou et al. (2020), who also showed GPR effects on stock returns and volatility of China's rare metals by adopting a time-varying parameter vector autoregression (VAR) model. Furthermore, Kannadhasan and Das (2020) used the QR approach and found that GPR and EPU affect the Asian emerging stock markets. Alqahtani et al. (2020) studied the impact of GPR and crude oil on the stock return of six Gulf Cooperation Council countries using a feasible generalized least square estimator.

Previous research has also indicated that GPR impacts oil and gold. Triki and Ben Maatoug (2021) used an MV-GARCH model and a dynamic copula to discover that the S&P500 correlates less with a low GPR index and more with dramatic political events. Furthermore, Antonakakis et al. (2017) found that GPR has a detrimental impact on oil returns and volatility. According to Syed et al. (2021), the first and second waves of COVID-19 impacted Indian stock and commodity markets.

Kalra and Gupta (2023) showed the effect of EPU on the Indian stock market using linear and logarithmic regression. Škrinjarić and Orlović (2020) examined how the EPU shocks affect Central and Eastern European stock market returns using VAR. Czech Republic, Lithuania, Slovenia, and Poland react significantly to EPU compared to other countries. A recent study by Youssef et al. (2021) considered the EPU of badly affected COVID-19 countries and examined the linkages between stock indices and EPU using the time-varying VAR. They show the substantial positive impact of EPU on total dynamic spillover. On the other hand, the results of Dakhlaoui and Aloui (2016) and Istiak and Alam (2020) found the negative influence of US EPU on stock markets. Numerous studies have used the EPU index for different research purposes (Faniband, 2021; Faniband & Jadhav, 2023). Few studies showed the impact of macroeconomic and company-specific factors on the stock markets (Chellaswamy et al., 2020, 2021; Faniband & Marulkar, 2020). Nayak and Barodawala (2021) found the impact of macroeconomic factors on the stock market using the ARDL model. Furthermore, Sunil et al. (2019) studied the interlinkages among macroeconomic factors in India.

Previous research on LMS stocks includes Jagotra and Singh (2018), who discovered a strong impact of macroeconomic parameters (Index of industrial production, inflation, exchange rate, and so on) on the BSE LMS indexes. According to Khanra and Dhir (2017), small-cap equities (the NSE Small 100 index) are less affected by the market volatility index than large and mid-cap companies. Jena et al. (2021) employed Diebold and Yilmaz's projected error variance decomposition spillover approach. They discovered that the mid-cap index was the largest contributor to total volatility, followed by the small- and large-cap indexes. Wang et al. (2013) investigated large and small-cap stocks in 23 emerging economies and discovered that the international asset pricing model applies to most large-cap equities. Small-cap stocks, on the other hand, are unsuitable. Faniband et al. (2023) discovered a disparity between net sales, net profit, and earnings per share on LMS stock returns in India.

Against this background, this paper addresses an unanswered question and investigates the impact of global and country-specific GPR on the LMS stock prices in India.

Data and Variables

As previously stated, we investigate the impact of global and country-specific GPR indices on LMS stock prices in India. We chose the GPR index of the top ten GDP countries: Canada, China, France, Germany, India, Italy, Japan, South Korea, the UK, and the USA. We chose a sample of Nifty stock indices' close prices: Nifty 100, Nifty Midcap 100, and Nifty Small Cap 100. The data for the global and country-specific GPR indices are gathered from the policyuncertainty.com website. The stock indices data are retrieved from the website of niftyindices.com. We looked at the months from January 2004 to December 2021.

Furthermore, daily data for large-cap, mid-cap, and small-cap companies are transformed into monthly data to ensure consistency in the dataset. STATA and R are used for the analysis. Table 1 indicates the independent variable descriptive statistics and unit root results. The mean values of all countries are more than the values of the median. Thus, these variables are turned (skewed) on the right.

Moreover, the kurtosis value for all the variables is more than the baseline value, equal to 3, revealing the state of heavy tails compared to the Gaussian distribution (leptokurtic distributions). The Jarque–Bera (JB) test strongly contradicts the normality hypothesis for all variables. At this level, all of the variables under investigation are stationary. The performance of the LMS stock prices is depicted in Figure 1. The worldwide and country-specific GPR indicators are shown in Figure 2.

Econometric Methodology

Ordinary least squares (OLS) regression is a linear regression that estimates the unknown coefficient of independent variables by the least-squares principle. All variables yield results estimated by only one measure of the central distribution. The estimations of OLS are likely inefficient and biased because financial data are heterogeneous, nonnormally distributed, and contain large outliers. The OLS model provides less information about the estimated results because the relationship between stock indices and GPR may exhibit nonlinearities. The quantile regression (QR) is useful to comprehensively study the dynamic relationship between LMS stock prices and its determinants. Therefore, this paper considers the QR methodology proposed by Koenker and Bassett (1978) because it helps to cover different characteristics of a bunch of regression curves of different

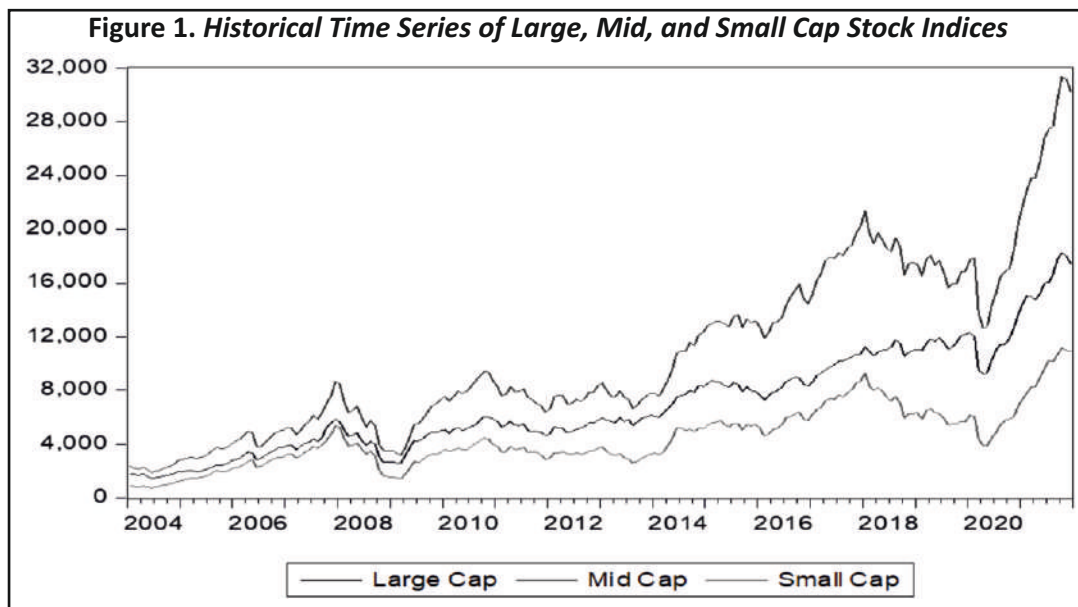
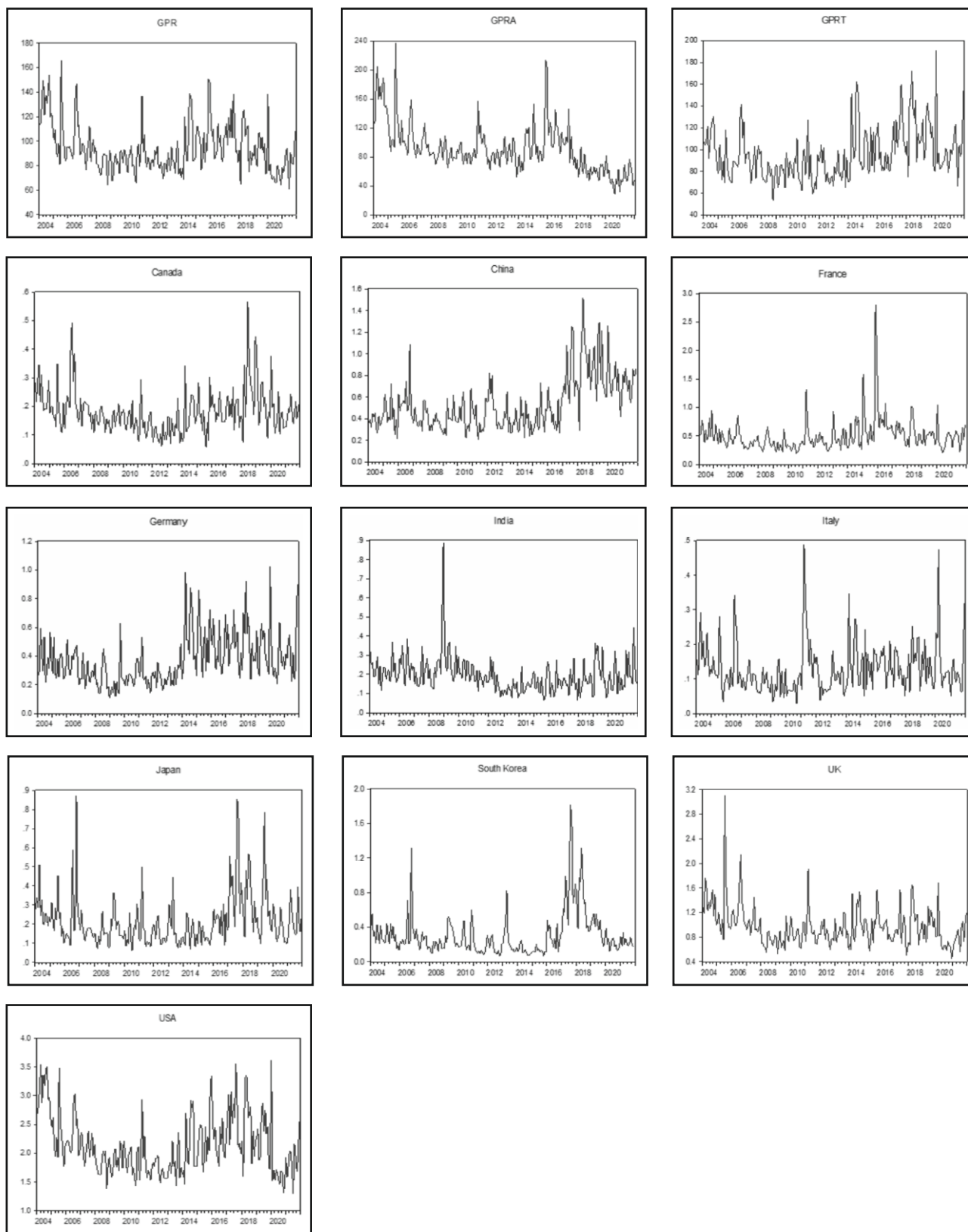


Table 1. Descriptive Statistics and Unit Root Test Results of the Explanatory Variables

	GPR	GPRA	GPRT	Canada	China	France	Germany	India	Italy	Japan	South Korea	UK	USA
Mean	94.15	91.16	95.93	0.18	0.53	0.50	0.37	0.19	0.13	0.21	0.31	0.97	2.14
Median	90.27	85.57	90.29	0.17	0.47	0.44	0.33	0.18	0.11	0.18	0.23	0.92	2.02
Maximum	165.90	237.57	190.84	0.57	1.52	2.80	1.02	0.89	0.49	0.87	1.82	3.10	3.62
Minimum	60.68	28.45	53.12	0.06	0.21	0.19	0.11	0.06	0.03	0.06	0.06	0.44	1.30
Std. Dev.	19.77	33.60	23.50	0.08	0.25	0.28	0.17	0.09	0.07	0.13	0.25	0.32	0.51
Skewness	1.12	1.39	1.11	1.61	1.29	3.94	1.26	2.68	1.89	2.25	2.79	2.13	0.92
Kurtosis	4.10	5.92	4.33	7.07	4.54	27.73	4.74	19.01	8.54	9.67	13.20	12.23	3.27
Jarque-Bera	55.83***	145.77***	60.46***	242.27***	80.95***	6064.54***	83.93***	2564.87***	405.63***	582.94***	1217.14***	930.78***	30.94***
Observations	216	216	216	216	216	216	216	216	216	216	216	216	216
ADF	-7.79***	-5.78***	-5.92***	-9.26***	-4.55***	-8.84***	-8.46***	-4.32***	-8.95***	-9.13***	-3.79***	-9.11***	-7.51***
KPSS	0.33	0.97	0.76	0.28	1.14	0.45	1.03	0.65	0.18	0.33	0.24	0.59	0.25

Note. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Figure 2. Global and Country-Specific GPR Indices



quantiles (e.g., median) of the conditional distribution of the dependent variable. Therefore, a better explanation regarding the impact of global and country-specific GPR on LMS stock prices can be studied using the QR methodology.

The QR model of Koenker and Bassett (1978) can be stated in Eq. (1) as follows:

$$y_i = x_i' \beta_\theta + u_{\theta i} \text{ with } Q_\theta(y_i | x_i) = x_i' \beta_\theta \quad (1)$$

where, x_i' indicates a vector of regressors, β_θ denotes the vector of parameters to be estimated, and $u_{\theta i}$ represents a vector of residuals. $Q_\theta(y_i | x_i)$ refers to the θ^{th} conditional quantile of y_i given x_i' .

The θ^{th} regression quantile solves the following problem:

$$\begin{aligned} \min_{\beta} &= \sum_i \theta |y_i - x_i' \beta| + \sum_i (1 - \theta) |y_i - x_i' \beta| \\ &= \min_{\beta} \sum_i \rho_\theta(u_{\theta i}), \theta \in (0, 1) \end{aligned} \quad (2)$$

where, ρ_θ is known as the “check function” and is defined as follows:

$$\begin{aligned} \rho_\theta(\varepsilon) &= \theta \varepsilon \text{ if } \varepsilon \geq 0 \\ &= (\theta - 1) \varepsilon \text{ if } \varepsilon < 0 \end{aligned}$$

The linear programming technique is used to solve Eq. (2). The median regression is obtained by setting $\theta = 0.5$. Other quantiles of the conditional distribution can be found through variations of θ . This paper uses the bootstrap method illustrated in Buchinsky (1995) to obtain estimates of the standard errors for the coefficients in QR.

The following Eq. (3) is the basic model of this empirical study:

$$SP_{it} = \alpha_i + \beta_1 GPR_t + \beta_2 GPRA_t + \beta_3 GPRT_t + \beta_4 Ca_t + \beta_5 Ch_t + \beta_6 Fr_t + \beta_7 Gr_t + \beta_8 In_t + \beta_9 It_t + \beta_{10} Ja_t + \beta_{11} SK_t + \beta_{12} UK_t + \beta_{13} USA_t \varepsilon_{it} \quad (3)$$

Discussion

GPR and Response of Large-Cap Stocks

Table 2 and Figure 3 show the outcomes of GPR's influence on large-cap stocks. The first set of findings shows the impact of global geopolitical issues, including GPR, GPRT, and GPRA. Global geopolitical risk, as indicated by GPR, has a strong and negative impact on large-cap equities. Still, GPRA significantly and positively impacts all quantiles except the 0.25 quantile. This conclusion implies that as GPR rises, the price of large-cap equities falls. It is important to note that large-cap stocks reacted positively and significantly to the threats, measured in terms of GPRT, because it has a positive sign.

Our second set of country-specific results shows that the large-cap stocks do not react to Italy because all the quantile coefficients are insignificant. Canada has a significant and positive impact, and Japan has a significant and negative effect only for the bottom quantiles. In contrast, the impact is not observed for the middle and higher quantiles. This connotes that the dependence structure is asymmetric, having the bottom tail dependence and the higher tail independence. South Korea has no impact except 0.25 quantile.

China is the only country in the top 10 that has a significant impact on large-cap stocks across all quantiles. Because the coefficient sign is positive, large-cap stock prices rise when China's GPR rises. The large-cap stocks are affected by Germany for the bottom, median, and end quantiles significantly and positively. The home

Table 2. Results for Large - Cap Stocks

Variables	0.5	0.10	0.25	0.50	0.75	0.90	0.95
GPR	-239.24* (138.60)	-274.16* (153.35)	-186.41 (119.90)	-542.10*** (135.29)	-846.61*** (162.41)	-900.39*** (256.21)	-1,303.84*** (193.62)
GPRT	187.93*** (69.27)	237.97*** (76.65)	158.51*** (59.92)	335.38*** (67.62)	519.70*** (81.17)	518.38*** (128.05)	722.75*** (96.77)
GPRA	105.77* (54.97)	116.27* (60.82)	61.53 (47.55)	197.93*** (53.66)	350.31*** (64.41)	338.78*** (101.62)	523.16*** (76.79)
Canada	5,742.79* (3,342.73)	8,342.28** (3,698.49)	2,074.78 (2,891.59)	-930.97 (3,262.88)	-4,751.50 (3,916.83)	3,930.36 (6,179.08)	7,524.28 (4,669.55)
China	5,844.87*** (1,709.68)	9,054.52*** (1,891.64)	5,899.06*** (1,478.94)	6,999.00*** (1,668.84)	11,591.59*** (2,003.31)	10,500.78*** (3,160.37)	13,212.16*** (2,388.30)
France	2,027.10* (1,075.63)	3,570.87*** (1,190.11)	2,806.40*** (930.46)	2,134.50** (1,049.94)	1,364.94 (1,260.37)	1,983.74 (1,988.32)	4,450.02*** (1,502.58)
Germany	3,659.09* (2,132.26)	4,008.32* (2,359.19)	739.83 (1,844.48)	4,203.02** (2,081.32)	2,600.27 (2,498.46)	4,208.13 (3,941.50)	6,661.16** (2,978.60)
India	-7,503.00*** (2,340.87)	-10,050.15*** (2,590.00)	-9,270.27*** (2,024.94)	-7,361.82*** (2,284.95)	-7,446.68*** (2,742.90)	-4,217.69 (4,327.12)	-1,964.09 (3,270.02)
Italy	130.17 (3,553.23)	-4,367.01 (3,931.38)	2,923.50 (3,073.67)	676.45 (3,468.34)	-2,438.94 (4,163.47)	-1,171.18 (6,568.17)	-6,089.45 (4,963.59)
Japan	-4,555.97* (2,735.17)	-5,143.54* (3,026.26)	-109.91 (2,366.02)	-2,733.27 (2,669.83)	-1,935.85 (3,204.92)	-1,483.15 (5,055.99)	-2,590.28 (3,820.83)
South Korea	589.82 (1,466.19)	1,453.92 (1,622.23)	-2,119.44* (1,268.31)	-534.72 (1,431.17)	-1,140.22 (1,718.00)	-1,092.14 (2,710.27)	-428.78 (2,048.16)
UK	-7,531.76*** (1,183.19)	-10,618.41*** (1,309.11)	-4,991.70*** (1,023.50)	-2,469.11** (1,154.92)	-692.60 (1,386.40)	-762.73 (2,187.14)	-859.62 (1,652.83)
USA	-1,315.17 (1,574.73)	1,650.84 (1,742.33)	-1,180.42 (1,362.20)	-1,326.04 (1,537.12)	-4,439.07** (1,845.19)	-2,955.94 (2,910.91)	-4,457.04** (2,199.78)
Constant	4,918.07*** (1,486.24)	6,159.75*** (1,644.41)	6,453.02*** (1,285.65)	8,746.84*** (1,450.73)	11,815.85*** (1,741.49)	13,666.70*** (2,747.33)	15,606.21*** (2,076.16)

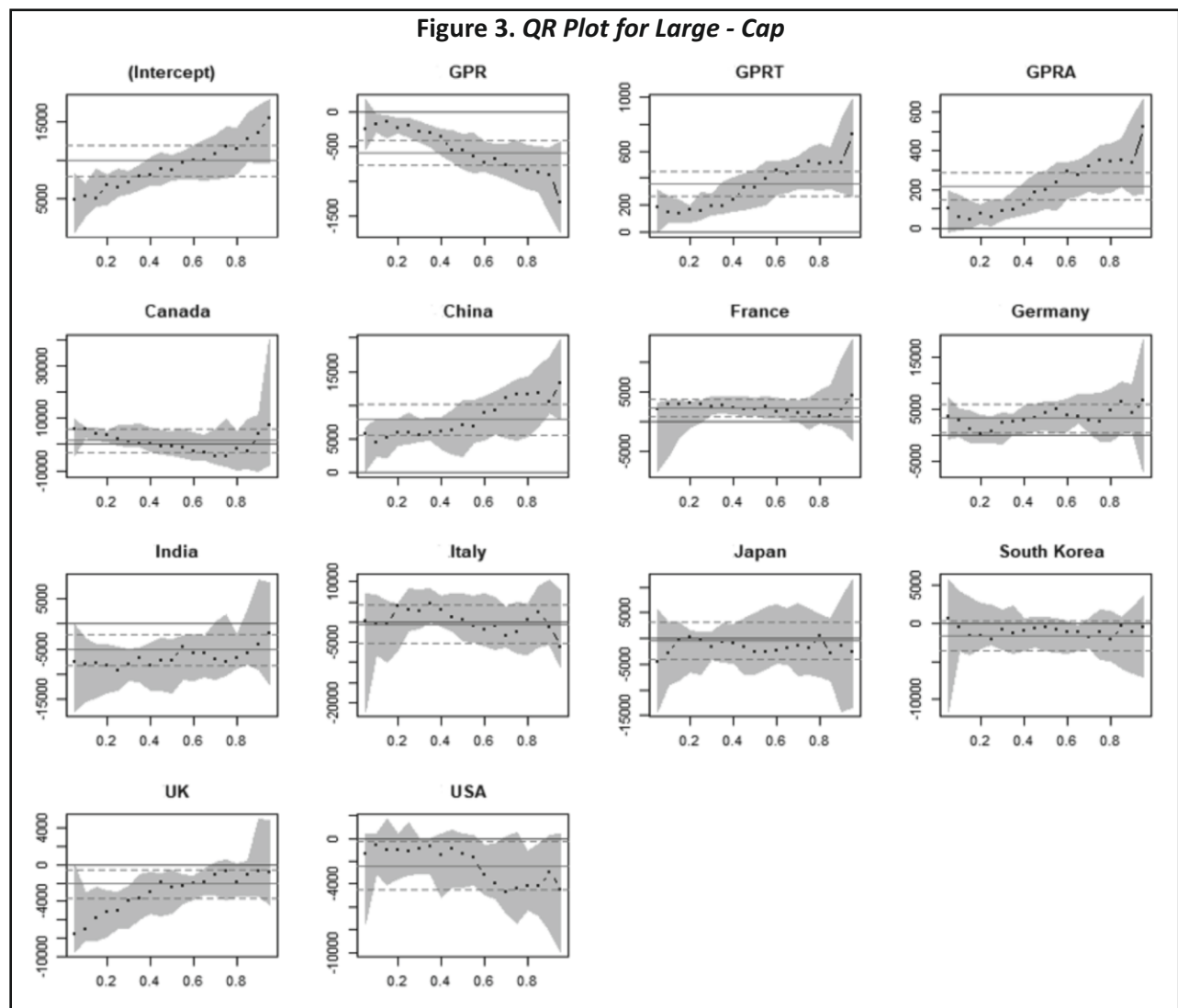
Note. Standard errors are in parentheses.

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

country, India, influences significantly and negatively bottom and middle quantiles. However, the impact is not seen for the higher quantiles. It reveals asymmetric dependence, having bottom tail dependence and higher tail independence.

Similarly, the UK significantly and positively influences large-cap equities at the bottom, 0.25, and 0.50 quantiles, demonstrating bottom quantile reliance and higher quantile independence. Except for the 0.75 and 0.95 quantiles, large-cap equities are not sensitive to the world's largest economy, the United States. The bottom, 0.25, 0.50, and 0.95 quantiles greatly and favorably impact France.

Investors should consider the global-level GPR, GPRT, GPRA, and the country-specific GPR issues in China, France, Germany, India, and the UK while buying or selling large-cap stocks, as they highly influence large-cap



stock prices. Furthermore, Canada, Japan, South Korea, and the USA are the countries that have a negligible effect on large-cap stock prices. Moreover, investors do not need to consider Italy as it does not impact large-cap stock prices.

GPR and Response of Mid-Cap Stocks

The results for mid-cap equities are shown in Table 3 and Figure 4. GPR has a considerable and detrimental impact for 0.10, 0.50, 0.75, and higher quantiles. Mid-cap equities, on the other hand, have a positive correlation with GPRT and GPRA. GPRT affects all quantiles of mid-cap stocks, while GPRA affects all quantiles except 0.25.

It is important to note that the mid-cap results of Canada, China, France, India, Italy, and the UK are in similar line with the large-cap stocks. We observe that Canada significantly and positively impacts the bottom quantiles. However, the impact is not detected for middle and higher quantiles. It shows asymmetric dependence, having bottom tail dependence and higher tail independence. China significantly and positively influences the mid-cap

Table 3. Results for Mid - Cap

Variables	0.5	0.10	0.25	0.50	0.75	0.90	0.95
GPR	-299.76 (181.48)	-274.16* (153.35)	-272.92 (206.35)	-804.84*** (248.55)	-1,552.55*** (276.95)	-1,822.30*** (624.54)	-2,323.29*** (506.37)
GPRT	238.15*** (90.70)	237.97*** (76.65)	224.05** (103.13)	507.79*** (124.23)	899.94*** (138.42)	1,072.12*** (312.15)	1,291.26*** (253.09)
GPRA	135.01* (71.98)	116.27* (60.82)	96.64 (81.84)	305.17*** (98.58)	630.30*** (109.85)	735.46*** (247.71)	933.75*** (200.84)
Canada	8,508.50* (4,376.79)	8,342.28** (3,698.49)	3,178.38 (4,976.56)	-2,638.73 (5,994.37)	2,137.68 (6,679.39)	-810.20 (15,062.37)	12,531.67 (12,212.32)
China	9,943.80*** (2,238.56)	9,054.52*** (1,891.64)	11,067.60*** (2,545.32)	10,596.23*** (3,065.90)	16,843.64*** (3,416.26)	17,993.68** (7,703.83)	22,736.75*** (6,246.14)
France	3,021.49** (1,408.37)	3,570.87*** (1,190.11)	4,192.88*** (1,601.37)	4,699.29** (1,928.88)	2,787.29 (2,149.31)	3,181.55 (4,846.81)	7,323.40* (3,929.71)
Germany	6,046.55** (2,791.86)	4,008.32* (2,359.19)	2,495.22 (3,174.44)	8,464.75** (3,823.68)	8,383.07* (4,260.64)	12,681.57 (9,607.96)	17,120.67** (7,789.98)
India	-8,971.54*** (3,065.00)	-10,050.15*** (2,590.00)	-15,851.14*** (3,485.02)	-10,643.64** (4,197.78)	-11,884.70** (4,677.48)	-6,052.11 (10,547.96)	872.24 (8,552.12)
Italy	1,486.04 (4,652.40)	-4,367.01 (3,931.38)	3,198.68 (5,289.93)	-0.70 (6,371.84)	4,296.41 (7,099.99)	-2,390.15 (16,010.84)	-8,805.64 (12,981.33)
Japan	-12,466.38*** (3,581.28)	-5,143.54* (3,026.26)	-3,161.82 (4,072.04)	-4,850.37 (4,904.86)	-9,990.14* (5,465.37)	4,605.58 (12,324.69)	-8,203.20 (9,992.65)
South Korea	3,927.99** (1,919.75)	1,453.92 (1,622.23)	-1,149.48 (2,182.82)	1,537.24 (2,629.26)	4,739.95 (2,929.72)	-545.26 (6,606.67)	826.47 (5,356.58)
UK	-12,317.13*** (1,549.20)	-10,618.41*** (1,309.11)	-6,984.63*** (1,761.50)	-5,038.17** (2,121.76)	-2,574.08 (2,364.23)	-2,422.05 (5,331.46)	-3,322.40 (4,322.66)
USA	-876.98 (2,061.87)	-1,650.84 (1,742.33)	-1,554.47 (2,344.41)	-2,737.63 (2,823.90)	-6,258.35** (3,146.60)	-8,741.46 (7,095.75)	-7,502.48 (5,753.12)
Constant	5,208.59*** (1,946.00)	6,159.75*** (1,644.41)	7,666.42*** (2,212.67)	12,088.31*** (2,665.20)	20,028.30*** (2,969.77)	23,434.31*** (6,696.99)	25,342.03*** (5,429.81)

Note. Standard errors are in parentheses.

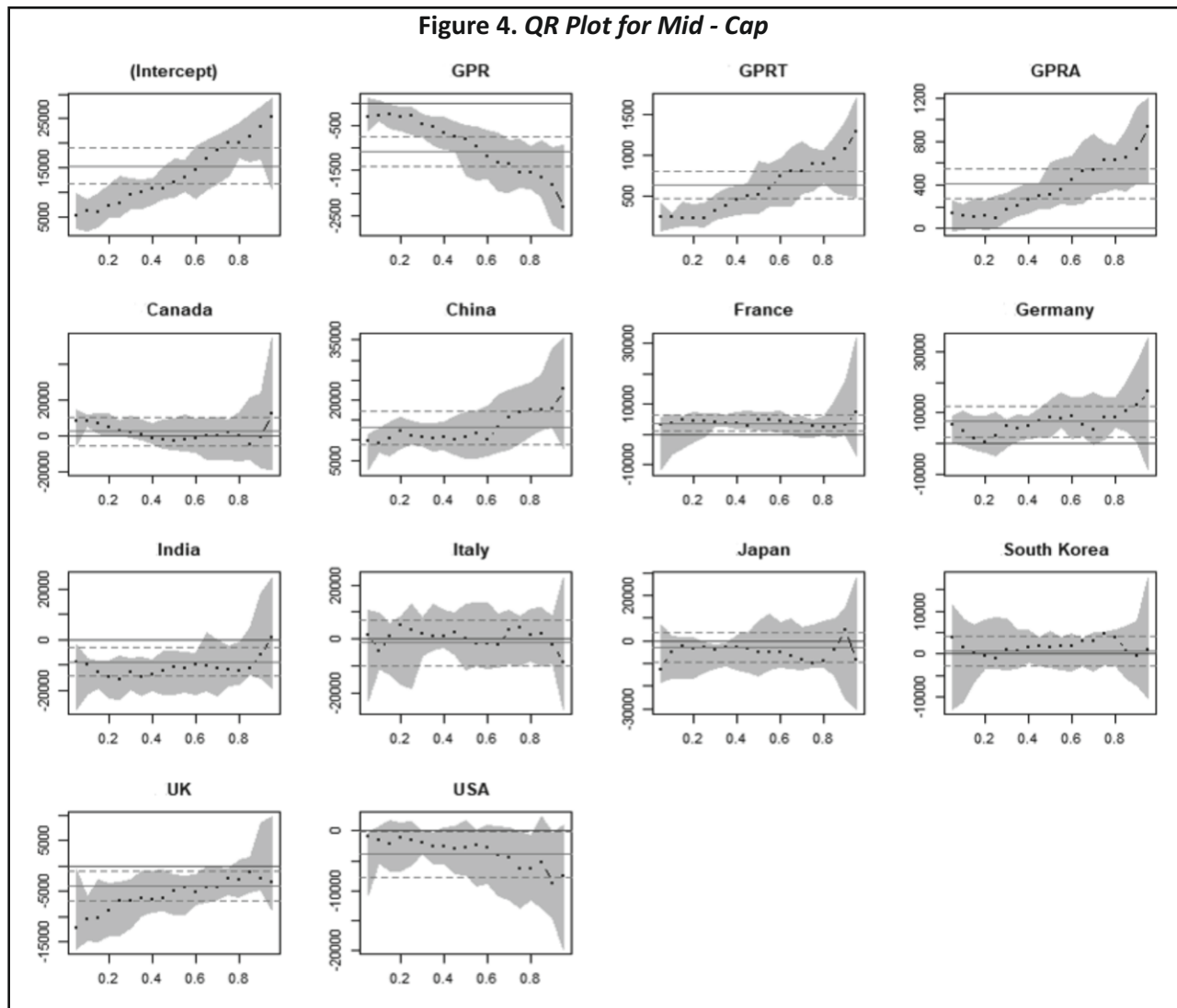
*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

stocks for the bottom, middle, and higher quantiles. We put it on record that China is the only country among the top 10, significantly influencing all the quantiles. Furthermore, France and Germany have positive influence and significance in nearly all the quantiles except 0.75 and 0.90 quantiles for France and 0.25 and 0.90 for Germany. South Korea barely affects (positively) mid-cap stocks, only for the 0.1 quantiles.

As expected, the mid-cap stocks have a significant inverse relationship with the Indian GPR. The impact is significant for the bottom and the middle quantiles and insignificant for the higher quantiles. Interestingly, Italy does not influence mid-cap stocks, as all the quantile coefficients are insignificant. Furthermore, Japan's effects are found to be significant and negative only for the bottom and 0.75 quantiles. The USA has a negligible negative impact only for the 0.75 quantiles. The mid-cap stocks suffer only because of India, Japan, the UK, and the USA.

The mid-cap stock prices are majorly affected by the global-level GPR, GPRT, GPRA, and the country-

Figure 4. QR Plot for Mid - Cap



specific geopolitical issues in China, France, Germany, India, and the UK. When purchasing and selling mid-cap stocks, investors should consider both the global and country-specific GPR. Mid-cap equities are less susceptible to Canada, Japan, South Korea, and the United States. Investors should ignore Italy since it has no bearing on mid-cap stocks.

GPR and Response of Small-Cap Stocks

Finally, we examine the effects of global and country-specific GPR on small-cap stocks; the results are shown in Table 4 and Figure 5. GPR has significant and adverse consequences for the 0.50, 0.75, and upper quantiles. Small-cap see an increase in prices as they have a strong positive relationship with threat for all the quantiles and act for all the quantiles (except 0.5). In terms of country-specific geopolitical risk, only the lowest quantiles of Canada, Germany, and South Korea have a significant positive influence. In contrast, the effects for the medium and higher quantiles are small, indicating asymmetric independence. France also exhibits significant and favorable effects for the 0.10, 0.25, and 0.50 quantiles. Furthermore, China has a large and favorable influence on small-cap equities across all quantiles.

Table 4. Results for Small - Cap

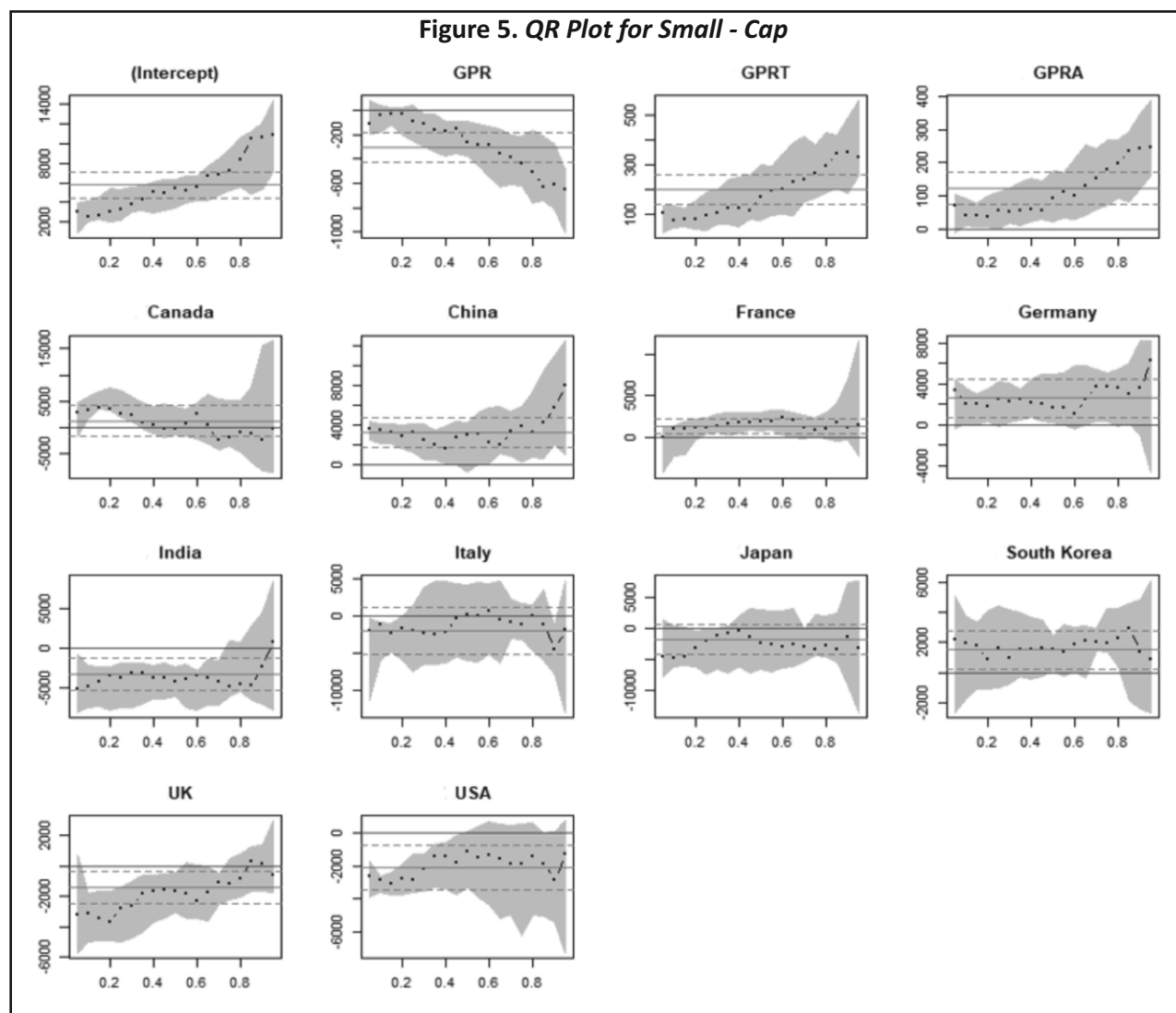
Variables	0.5	0.10	0.25	0.50	0.75	0.90	0.95
GPR	-108.70 (76.38)	-39.21 (45.05)	-88.29 (83.22)	-260.52*** (94.56)	-434.87*** (117.72)	-612.45*** (182.15)	-654.45*** (140.55)
GPRT	106.49*** (38.17)	74.85*** (22.52)	97.08** (41.59)	171.93*** (47.26)	267.10*** (58.84)	351.06*** (91.04)	332.78*** (70.25)
GPRA	69.30** (30.29)	41.16** (17.87)	54.29 (33.01)	93.71** (37.51)	177.55*** (46.69)	240.85*** (72.25)	245.76*** (55.74)
Canada	2,764.24 (1,842.07)	3,325.24*** (1,086.58)	2,556.41 (2,007.05)	-223.87 (2,280.63)	-1,789.48 (2,839.10)	-2,367.10 (4,393.07)	-199.70 (3,389.60)
China	3,593.04*** (942.15)	3,534.98*** (555.75)	3,298.17*** (1,026.53)	3,060.90*** (1,166.45)	3,872.58*** (1,452.09)	5,779.42** (2,246.89)	7,968.89*** (1,733.65)
France	80.30 (592.74)	1,089.90*** (349.64)	1,147.45* (645.83)	1,937.10*** (733.87)	854.04 (913.57)	1,206.43 (1,413.61)	1,532.54 (1,090.71)
Germany	3,402.50*** (1,175.01)	2,020.38*** (693.11)	2,566.21** (1,280.25)	1,727.30 (1,454.76)	3,674.22** (1,811.00)	3,615.76 (2,802.24)	6,295.13*** (2,162.16)
India	-5,262.31*** (1,289.97)	-4,924.09*** (760.92)	-3,750.87*** (1,405.51)	-4,253.62*** (1,597.09)	-4,823.55** (1,988.18)	-2,411.16 (3,076.40)	747.26 (2,373.69)
Italy	-1,997.95 (1,958.06)	-1,178.34 (1,155.01)	-2,018.16 (2,133.43)	136.20 (2,424.24)	-1,160.84 (3,017.88)	-4,542.06 (4,669.70)	-1,895.94 (3,603.05)
Japan	-4,571.16*** (1,507.26)	-4,712.12*** (889.09)	-1,836.63 (1,642.25)	-2,355.30 (1,866.11)	-3,281.53 (2,323.08)	-1,392.00 (3,594.60)	-3,190.27 (2,773.52)
South Korea	2,236.90*** (807.97)	1,934.48*** (476.60)	1,646.10* (880.33)	1,566.30 (1,000.33)	1,936.29 (1,245.29)	1,380.66 (1,926.89)	895.20 (1,486.75)
UK	-3,245.47*** (652.02)	-3,108.42*** (384.61)	-2,810.42*** (710.41)	-1,682.09** (807.25)	-1,126.78 (1,004.92)	173.76 (1,554.96)	-551.53 (1,199.78)
USA	-2,617.94*** (867.78)	-2,878.63*** (511.88)	-2,841.32*** (945.50)	-1,128.35 (1,074.38)	-1,876.39 (1,337.48)	-2,830.21 (2,069.54)	-1,248.99 (1,596.81)
Constant	2,986.56*** (819.01)	2,550.51*** (483.11)	3,335.44*** (892.37)	5,445.78*** (1,014.01)	7,232.24*** (1,262.31)	10,636.25*** (1,953.23)	10,821.60*** (1,507.08)

Note. Standard errors are in parentheses.

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Our second set of results shows that small-cap equities negatively associate with India, Japan, the UK, and the USA. Japan, the UK, and the USA have a large and negative impact solely on the bottom quantiles, with insignificant coefficients for the middle and upper quantiles. These findings suggest that the reliance structure is asymmetric. Italy is the only country with insignificant coefficients across all quantiles, and its impact on small-cap stocks is negligible.

In short, global-level GPR, GPRT, GPRA, and geopolitical events substantially impact small-cap stock prices solely in China and India. Italy has no effect, and all other countries have a small impact on mid-cap stock prices. As a result, based on these major results, investors should make the required investment judgments before investing in mid-cap stocks.



Conclusion

We investigate how the top 10 countries' LMS stock values respond to global and country-specific geopolitical concerns. This paper analyzes monthly data from 2004 to 2021 using the QR technique. Table 5 also contains fascinating and crucial stylized statistics about the sensitivity of LMS stock to global and country-specific GPR. We discover that the impact of global and country-specific GPR is not uniform across Indian LMS equities, meaning that GPR in these economies does not have a uniform impact on Indian LMS stocks. As mentioned earlier, the plausible reason may be that the LMS companies share differences in market capitalization (company size), volatility, growth potential, and volatility.

This study will help investors understand the differences between LMS stock prices regarding the sensitivity to GPR in India in terms of investment. Our results could benefit portfolio managers, investors, and policymakers. Understanding the long-run relationship between the GPR and big, mid, and small-cap indices is critical for making sound judgments. This can also help investors, mutual fund managers, and overseas institutional investors diversify their asset allocation/portfolio. As a result, investors in large, mid, and small-size

Table 5. Summary Results of Impact of Global and Country-Specific GPR on LMS Stocks

Variables	Large-Cap	Mid-Cap	Small-Cap
GPR	Considerable	Considerable	Considerable
GPRT	Significant	Significant	Significant
GPRA	Considerable	Considerable	Considerable
Canada	Negligible	Negligible	Negligible
China	Significant	Significant	Significant
France	Considerable	Considerable	Negligible
Germany	Considerable	Considerable	Negligible
India	Considerable	Considerable	Considerable
Italy	No Impact	No Impact	No Impact
Japan	Negligible	Negligible	Negligible
South Korea	Negligible	Negligible	Negligible
UK	Considerable	Considerable	Negligible
USA	Negligible	Negligible	Negligible

Note. All quantile coefficients significant- Significant, 4 or more than 4- Considerable, 3 or less than 3- Negligible, all quantiles insignificant- No impact.

stocks should pay close attention to the global and country-specific GPR in the top 10 countries and diversify their portfolios accordingly.

Limitations of the Study and Scope for Further Research

Although this work focused on India, the influence of global and country-specific GPR on LMS equities in other emerging nations would be a fascinating area of research. Furthermore, the effects of a country's GPR on its own LMS stocks, other than India, will be an intriguing subject of investigation in the future. Furthermore, employing daily return series could be interesting future extensions of this work.

Authors' Contribution

Muhammadriyaj Faniband and Dr. Pravin Jadhav conceived the idea and developed a quantitative design to undertake the empirical study. Mr. Muhammadriyaj Faniband extracted research papers with high reputations, filtered these based on keywords, and identified the research gap. Dr. Pravin Jadhav verified the analytical methods and supervised the study. The data was analyzed by Muhammadriyaj Faniband using STATA and R. Muhammadriyaj Faniband wrote the manuscript in consultation with Dr. Pravin Jadhav.

Conflict of Interest

The authors certify that they have no affiliations with or involvement in any organization or entity with any financial or nonfinancial interest in the subject matter or materials discussed in this manuscript.

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