

## Political risk and portfolio performance: Implications for Shariah-compliant investors

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### Abstract

The COVID-19 pandemic has forced the Malaysian economy into a recession, with GDP plummeting to negative growth for the first time since the 1998 Asian Financial Crisis. Fiscal and monetary tools are inevitable during this crisis. Businesses have been forced to close shops due to a series of Movement Control Orders (MCO), resulting in massive layoffs and a rise in the unemployment rate, which is a red flag for the economy. On the other hand, zakat has emerged as a poverty alleviation tool in the Islamic economy landscape and is particularly relevant during an economic crisis. However, there is a lack of literature discussing the impact of macroeconomic indicators on zakat. Therefore, this study was conducted to examine whether the unemployment rate explains the trend in zakat collection. Time series data from the period between 2006 and 2020 was utilized, and linear regression analysis was conducted. An interesting finding is that the zakat collection trend by State Islamic Religious Councils (SIRCs) and the movement of the unemployment rate are not statistically significant. This indicates that zakat collection is not affected by high unemployment in the labor force market and remains strong even during an economic slump, thanks to increased digitalization efforts and FinTech adoption.

**Keywords:** Political risk, International portfolio diversification, Shariah-compliant portfolios, Performance evaluation, Shariah-compliant investments.

### Introduction

Does political risk affect portfolio returns? The literature shows that dramatic political events cause market movements and thus have serious implications for investors. The benefits of international diversification in politically risky countries in the context of conventional equity portfolios (henceforth CEPs) are well-documented (Cosset and Suret, 1995; Diamonte et al., 1996; Errunza, 1977; Bilson et al., 2002; Bekaert et al., 2014; Gatzert and Vogl, 2016; Omar et al., 2017; Ahmed, 2018; Cotter et al., 2018). Another type of portfolio that has witnessed significant growth in the last few decades is a Shariah-compliant equity portfolio (henceforth SCEP). However, no study has evaluated the effect of changes in political risk on the performance of SCEPs, leading to a key question: Why is it important to revisit the question of international diversification for SCEPs within the framework of political risk?

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In order to answer this question, it is important to first understand the fundamental differences between a SCEP and a CEP. One of the basic assumptions of the Capital Asset Pricing Model (Sharpe, 1964) is that all active and potential investors can consider all available assets to optimize their equity portfolios. Unlike a CEP, a SCEP violates this assumption because such investment vehicles are guided by Shariah investment principles. A SCEP is not allowed to invest in firms whose core operations are non-compliant (Ashraf, 2016; Boudt et al., 2019; Raza and Ashraf, 2019). Thus, the SCEP cannot invest in firms involved in the production or distribution of interest (Riba), alcohol, tobacco, weapons, media (except news), adult entertainment services, and pork-related products (Arslan-Ayaydin et al., 2018). Shariah also strictly prohibits gambling (Maisir), excessive risk under uncertainty (Gharar), and speculation (Mujazafah) (Raza, 2019; Raza and Ashraf, 2019; Boudt et al., 2019). This means that Shariah investment principles impose constraints on diversification opportunities and exclude many important sectors from the SCEP. The heterogeneous sector allocation makes the risk-return characteristics of SCEPs dissimilar from CEPs (Boudt et al., 2019). A line of research has explored the effect of Shariah restrictions on portfolio performance and found that both these portfolios perform differently not only in market rallies but also in times of economic turmoil (Al-Khazali et al., 2014). A recent study by Boudt et al. (2019) compared the financial performance of conventional portfolios and SCEPs in macro-financial regimes and found that both these portfolios have different exposure to different regimes.

The above discussion shows that the focus is mainly on the effect of Shariah restrictions on the performance of CEPs. Some studies have evaluated the effect of macro-financial regimes on the performance of both CEPs and SCEPs. However, to our best knowledge, there are only two studies on the effect of political risk on the performance of internationally diversified SCEPs – Shugaa and Masih (2014) and Ahmed (2018). The former focuses on the effect of spring uprisings on the volatility of SCEPs and CEPs in the MENA region, while the latter aims at the differential impact of political risk on both groups of portfolios. Neither study takes the perspective of portfolio managers who are considering political risk as a broader measure of risk to diversify a portfolio across international markets.

This study aims to fill this gap through two key contributions. Unlike previous efforts, we construct SCEPs in a broader set of international markets and then create well-diversified portfolios based on the principles of international diversification. The returns of these portfolios are calculated by weighting each country's returns by the absolute value of its out-of-sample political risk score. Thus, the weights of a particular country at a given period of time are driven by its political score in the previous time period. While constructing these portfolios, a potential challenge is to quantify political risk. In order to cope with this challenge, this study uses the country-wise political risk score provided by the International Country Risk Guide (ICRG)

(Boudt et al., 2019). This measure is forward-looking and is available on a monthly basis.

In addition to SCEPs, we also construct CEPs to replicate the findings of Diamonte et al. (1996), Han et al. (2017), and Cotter et al. (2018) and examine whether SCEPs exhibit any difference in financial performance. We examine a number of hypothetical investment strategies over a period beginning in January 1996 and ending in December 2018. In this study, the Dow Jones Global Index (DJGI) serves as a benchmark portfolio.

The results show that, although political risk is converging globally and emerging markets are becoming safer, political risk still plays a vital role in designing international diversification strategies. Developing markets demonstrate relatively superior financial performance (lower stability) compared to developed markets. Out of a total of 61 international markets, SCEPs outperform their conventional counterparts in 52 countries. Compared to CEPs, SCEPs gain superior economic benefits when the allocation decision of a tilted portfolio is based on political risk. These findings have significant implications for Shariah-compliant investors. The political risk score can be used as a diversification tool in international markets to generate superior financial performance and enhance stability in returns (Boudt et al., 2019).

The remainder of the paper is organized as follows: Section 2 presents the data and methodology. Section 3 presents descriptive statistics. The effect of political risk on the performance of SCEPs and CEPs is discussed in Section 4. The proposed investment strategies are discussed in Section 5. Section 6 summarizes the study.

## **Data and methodology**

### **Political Risk Data**

A number of institutions have designed diverse sets of approaches to assess a country's political risk. For example, Bank of America, Business Environment Risk Intelligence, Economist Intelligence Unit, Euromoney, Institutional Investor, Standard and Poor's Rating Group, Political Risk Service Group, Coplin-O'Leary Rating system, and Moody's Investment Service offer country-by-country analysis of political risk (Diamonte et al., 1996; Howell and Chaddick, 1994; Hoti, 2005). These ratings are widely accepted in policy circles as well as in academic research. However, the qualitative nature of ratings makes them less than ideal for practitioners seeking international portfolio diversification. A few of the above-mentioned agencies provide quantitative analysis, but the frequency of publication does not suit frequent portfolio rebalancing.

Since January 1984, the ICRG has been compiling economic, financial, political, and composite risk ratings for over 90 countries on a monthly basis. As of December 2014, these four risk ratings were available for 140 countries. This study employs political risk indices developed by the ICRG and compiled by the PRGS Group (Diamonte et al., 1996). Analysts at ICRG designed a composite index of political risk from 13 political risk attributes. Based on the composite score, each country is ranked from 0 to 100, where a score of 0 means high political risk and a score of 100 indicates maximum political stability.

Another prominent reason for using the ICRG score as a proxy for political risk is that experts at the IMF, World Bank, United Nations, and other international institutions have cited their risk ratings. Moreover, academicians also value the ICRG ranking; for example, Howell and Chaddick (1994) find that ICRG indices are more reliable and able to predict risk better than other organizations. Hoti (2005) examined the qualitative comparison of the country risk rating used by seven leading agencies and found ICRG as the best to forecast political, financial, and economic risk. The political risk score is available on the official website of the PRS Group, Inc, which publishes its ICRG for 140 countries on a monthly basis.

### **Stock market data and portfolio construction**

The basic objective of this study is to construct and test the performance of internationally diversified SCEPs where weights of a particular country-level index are driven by relative exposure to political risk. In the first step, stock-level data is used to construct country-level SCEP and CEP portfolios. The price data of all stocks listed on the main index of a country is obtained from COMPUSTAT on a monthly basis.

To construct the SCEP, we screen the investment universe with the Shariah screening guidelines of the Dow Jones Islamic Market Index (DJIM). The qualitative screens are implemented with Global Industrial Classification Standards (GICS), which are available at COMPUSTAT on a monthly basis. The remaining asset universe is further screened to assess the level of interest revenue generated from minor operations with quantitative screens. Under these screens, a firm is considered Shariah-compliant if its current assets, financial leverage, and interest revenue are lower than a pre-specified threshold level. Specifically, these screens are implemented as follows:

$$\frac{TD_{i,t}}{MC_{i,t}} < 33\% \quad \text{i}$$

$$\frac{CSI_{i,t}}{MC_{i,t}} < 33\% \quad \text{ii}$$

$$\frac{AR_{i,t}}{MC_{i,t}} < 33\% \quad \text{iii}$$

In the above equations, TD shows the total debt of firm  $i$  at time  $t$ . MC is the market capitalization of the firm. CSI, AR, TR and IR, demonstrates cash and short-term investment, account receivables, total revenue, and interest revenue of the firm, respectively. The fundamental data of firms is available at the end of each quarter; therefore, the Shariah compliance of each firm at time  $t$  is estimated with the data available at time  $t-1$ . The fundamental data of firms is obtained from COMPUSTAT on a quarterly basis. All the portfolios are fully invested and not allowed for short selling. The weights are rebalanced periodically on a monthly basis.

This study proposes two investment strategies that consider the political risk of a country in the allocation decision. The first investment strategy tilts the weights toward a politically stable country (e.g., US, UK, and France receive larger weights as compared to Pakistan, India, and Saudi Arabia). We refer to this portfolio as the politically stable portfolio (hereafter referred to as PSP). The weights of each constituent of the Shariah-compliant PSP are estimated as,

$$W_{i,t}^{PSP} = \frac{PR_{i,t-1} * S_{i,t-1}}{\sum_{i=1}^n PR_{i,t-1} * S_{i,t-1}}. \quad \text{v}$$

Where  $W_{i,t}^{PSP}$  Shows the out-of-sample weight of an individual country  $i$  within the PSP at time.  $PR$  shows the political risk of country  $i$  at time  $t - 1$ .  $S$  denotes the dummy variable, which ensures that the portfolio is Shariah-compliant.

The second investment strategy is also based on relative exposure to political risk. However, this strategy allocates more weight to politically risky countries, e.g., Pakistan, India, and Saudi Arabia. We refer to this portfolio as the politically unstable portfolio (hereafter referred to as PUP). The weights of this portfolio are estimated as

$$W_{i,t}^{PUP} = \frac{\frac{1}{PR_{i,t-1}} * S_{i,t-1}}{\sum_{i=1}^n \frac{1}{PR_{i,t-1}} * S_{i,t-1}}, \quad \text{vi}$$

$W_{i,t}^{PUP}$  Shows the out-of-sample weights of an individual country  $i$  within the PUP at time  $t$ .  $PR_{i,t-1}$  stands for political risk of a country  $i$  at time period  $t - 1$ .

For raw performance evaluation, we report annualized returns (compounded on a monthly basis) and annualized risk (measured with standard deviation and annualized with the square root of time rule). We also assess the relative riskiness of both portfolios and estimate downside measures of risk, i.e., drawdowns, Value at Risk,

and expected shortfalls. As a benchmark index, this study uses the Dow Jones Global Index (DJGI).

### ***Impact of transaction cost***

The risk and returns measures mentioned above are for the gross returns, estimated in the absence of transaction cost. The investment strategy proposed in this study focus on international diversification and hence can result in a significant amount of transaction cost to rebalance the portfolio weights. Furthermore, as noted by Boudt et al. (2019), imposing Shariah constraints significantly increases the turnover of a portfolio. From the practitioner's perspective, turnover is very important as it has a direct effect on gross returns. To quantify this, we report the time-series average of the two-way turnover of all the portfolios. Specifically, we estimate turnover as the sum of absolute values of the transaction (both purchases and sales) needed to rebalance the portfolio weights. The turnover at selection date  $t + 1$  is given by

$$Turnover_{t+1} = \sum_{i=1}^N |w_{i,t+1} - w_{i,t}|,$$

Where  $w_{i,t+1}$  is the new weight at selection date  $t + 1$  and  $w_{i,t}$  is the actual weight before rebalancing? In order to measure the efficiency of any investment strategy, it is very important to deduct the transaction cost. As the transaction cost varies across countries, therefore, it would not be practical to assume a unified transaction cost for all countries and then penalize the gross returns with it. Therefore, instead of assuming a specific transaction cost, we estimate the breakeven transaction cost for all the portfolios. These statistics show the level of cost at which the higher Sharpe ratio portfolio with higher turnover equals the Sharpe ratio of the benchmark portfolio. This technique assumes the transaction cost to be associated with the respective number of transactions such that the net return is given by the gross returns  $R_t$ . From which the proportional transaction costs are deducted, as shown below.

$$R_{t+1}^{Net} = R_t - \tau * turnover_t,$$

Where  $\tau$  is the transaction cost per dollar traded, we then evaluate how much the Shariah-compliant investor is willing to pay in terms of transaction cost to switch from a low turnover to a high turnover portfolio. We determine the breakeven transaction cost as the value of  $\tau$  for which the Sharpe ratio of the higher turnover strategy equals the reference investment strategy.

### Descriptive analysis of the risk-return trade-off in developing and developed countries

The results in Table 1(A & B) report the summary statistics for 61 countries (28 developed and 33 developing countries) for the time period 1996–2018. From the analysis, we can infer a few interesting findings. First, developed countries have a relatively high ranking on the political risk score and lower (high) annualized returns (stability) as compared with the developing markets. Second, the developing markets, reported in Table 1(B), produce more extreme observations as compared with developed markets Table 1(A). Third, the conventional indices yield more than 20% annualized returns in 11 countries (Brazil, Russia, Philippines, Argentina, Turkey, Bangladesh, Australia, Chile, Colombia, Botswana, and India), while the Shariah-compliant indices result in more than 20% annualized returns in 23 countries (Brazil, Indonesia, Argentina, Turkey, India, Korea, Philippines, Thailand, Chile, Kuwait, Peru, Pakistan, Bangladesh, China, Poland, Russia, Australia, Malaysia, Nigeria, Sri Lanka, Japan, and Singapore). Out of a total of 61 international markets, SCEPs outperform their conventional counterparts in 52 countries, and the difference in returns is statistically significant. However, in most of the cases (in 39 countries), the SCEPs are slightly riskier than CEPs (39 cases).

**Table 1A:** Summary statistics: Political risk and stock returns in developed markets.

	Ann Ret	Std	SR	Ann Ret (%)	Std	SR	Polrisk
	Conventional portfolios			Shariah-compliant equity			
Australia	21.22	28.87	0.7	25.09	23.53	1.0	83.84
Austria	2.03	32.69	0.0	7.19	28.36	0.2	85.92
Belgium	3.51	26.66	0.1	4.80	28.66	0.1	80.91
Croatia	17.24	105.7	0.1	6.86	28.19	0.2	72.22
Cyprus	8.69	41.01	0.2	9.42	44.49	0.2	72.50
Czech	6.06	10.94	0.5	8.86	16.10	0.5	78.35
Denmark	5.59	12.63	0.4	14.95	15.49	0.9	85.15
Estonia	13.70	30.10	0.4	7.00	27.72	0.2	74.54
Finland	5.75	15.84	0.3	13.38	21.46	0.6	89.58
France	6.41	23.39	0.2	17.89	26.21	0.6	77.33
Germany	8.50	19.84	0.4	16.27	18.73	0.8	84.05
Hungary	11.10	20.24	0.5	14.41	25.29	0.5	76.89
Iceland	6.62	12.33	0.5	9.56	16.45	0.5	86.22
Ireland	8.47	17.65	0.4	19.80	19.60	1.0	83.85
Italy	1.57	18.32	0.0	9.75	19.27	0.5	76.67
Japan	4.91	19.44	0.2	22.88	21.21	1.0	83.06

Luxembur	6.30	15.46	0.4	6.27	18.73	0.3	91.60
Netherland	4.81	14.68	0.3	11.88	14.59	0.8	87.01
New	6.71	16.30	0.4	14.79	17.64	0.8	86.62
Poland	9.27	27.16	0.3	27.06	34.70	0.7	72.75
Portugal	5.05	15.19	0.3	8.47	22.55	0.3	78.90
Romania	7.67	35.58	0.2	18.66	33.65	0.5	64.61
Russia	32.02	47.61	0.6	26.42	41.63	0.6	59.61
Spain	8.09	17.60	0.4	13.53	20.36	0.6	74.58
Sweden	9.13	16.12	0.5	19.28	17.75	1.0	86.87
Swiss	4.42	12.32	0.3	8.81	12.16	0.7	89.25
UK	9.02	18.07	0.5	18.32	20.26	0.9	82.25
USA	13.26	18.38	0.7	12.38	24.61	0.5	82.45
<b>Average</b>	<b>8.83</b> (***_**_*)	<b>24.65</b>	<b>0.3</b>	<b>14.07</b> (***_**_*)	<b>23.55</b>	<b>0.6</b>	<b>80.27</b>

(\*\*\*\_\*\*\_\*) show the difference in means based on a paired t-test of a particular index with the remaining three indices, respectively, at 99%, 95%, and 90% confidence intervals. For example, CEP in a developed market with SCEP developed market, CEP developing market, and SCEP developing market. Ann Ret, Std Dev, and SR show the annualized returns, annualized volatility, and Sharpe ratio for the time period 1996–2018. Polrisk shows the average political risk for the period 1996–2018. The list of developed countries is based on the quality of human development index provided by the United Nations. The score ranges from 0 to 1, where countries with a score above 0.80 are considered developed.

**Table 1B:** Summary statistics: Political risk and stock returns in developing markets.

	Ann Ret (%)	Std	SR	Ann Ret	Std	SR	Polris
	Conventional portfolios			Shariah-Compliant			
Argentina	27.42	40.1	0.6	38.85	62.29	0.6	66.13
Bahrain	10.69	16.7	0.6	9.48	14.26	0.6	64.76
Banglades	21.86	27.8	0.7	29.10	30.33	0.9	48.00
Botswana	20.57	23.4	0.8	13.04	22.55	0.5	72.73
Brazil	51.44	70.7	0.7	52.82	73.67	0.7	65.76
Chili	21.15	19.7	1.0	31.89	26.82	1.1	70.95
China	19.33	55.1	0.3	28.64	76.39	0.3	64.23
Colombia	20.76	36.2	0.5	15.43	21.35	0.7	59.90
Egypt	11.72	27.1	0.4	13.97	27.92	0.5	56.49
Ghana	1.30	30.1	0.0	4.12	32.32	0.1	60.53



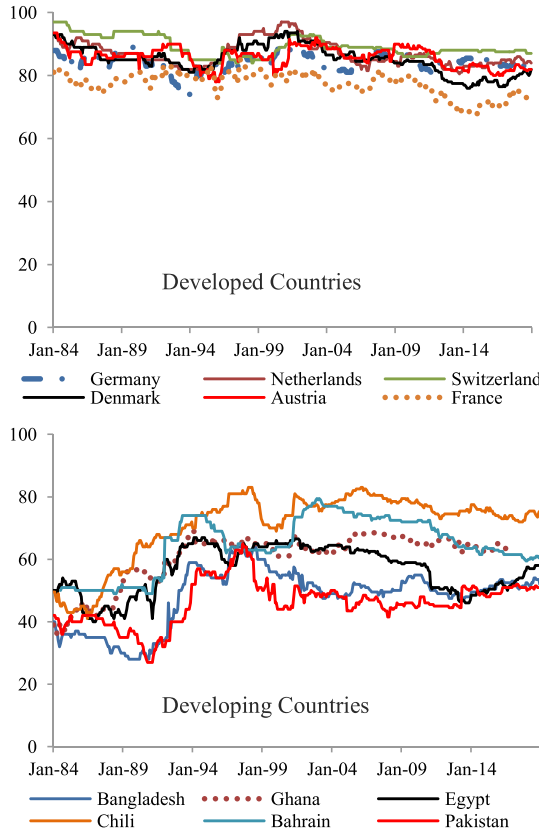
India	20.42	31.9	0.6	37.01	29.10	1.2	56.78
Indonesia	19.62	28.6	0.6	41.84	26.23	1.6	53.80
Israel	8.56	17.7	0.4	9.81	18.65	0.5	60.24
Jordan	1.57	18.3	0.0	6.07	12.95	0.4	62.51
Kenya	2.66	12.7	0.2	13.56	32.35	0.4	56.94
Korea	12.68	26.8	0.4	36.23	34.26	1.0	73.68
Kuwait	12.29	29.6	0.4	31.43	293.5	0.1	65.22
Malaysia	11.70	82.4	0.1	24.90	30.99	0.8	71.48
Mexico	11.10	34.1	0.3	19.21	16.43	1.1	68.29
Morocco	15.83	22.3	0.7	13.04	15.75	0.8	63.60
Nigeria	18.87	23.4	0.8	24.09	23.47	1.0	45.83
Pakistan	18.55	25.1	0.7	30.33	23.55	1.2	46.18
Peru	16.57	20.2	0.8	30.64	40.74	0.7	56.12
Philippine	28.01	32.9	0.8	35.33	76.97	0.4	58.31
Qatar	13.66	27.9	0.4	17.82	30.28	0.5	67.39
Saudi.	11.03	31.3	0.3	13.28	31.92	0.4	63.86
Singapore	8.93	26.7	0.3	21.63	27.09	0.8	82.66
Sri Lanka	17.25	24.5	0.7	23.40	22.21	1.0	51.71
Taiwan	4.27	26.2	0.1	18.63	25.80	0.7	77.62
Thailand	16.75	28.4	0.5	32.81	33.25	0.9	61.82
Turkey	27.40	49.1	0.5	37.78	48.75	0.7	59.49
UAE	10.39	17.4	0.5	17.07	22.35	0.7	67.77
Zambia	12.70	28.3	0.4	19.16	30.67	0.6	58.96
<b>Average</b>	<b>16.44</b> <sup>(*** ** *)</sup>	<b>58.3</b>	<b>0.4</b>	<b>24.08</b> <sup>(** ** *)</sup>	<b>40.49</b>		<b>63.71</b>

(\*\*\* \*\* \*) show the difference in means based on a paired t-test of a particular index with the remaining three indices, respectively, at 99%, 95%, and 90% confidence intervals. For example, CEP is in a developing market, with CEP developed market, SCEP developed market, and SCEP in a developing market. Ann Ret, Std Dev, and SR show the annualized returns, annualized volatility, and Sharpe ratio for the time period 1996–2018. Polrisk shows the average political risk for the time period 1996–2018.

Figure 1 shows that the global market experienced significant changes in exposure to political risk, and the trend indicates a global convergence.<sup>1</sup> Eighteen countries in our sample experienced a negative average change (riskier) in their political risk score, while only ten countries showed improvement for the time period 1996–2018. Noticeably, Ireland, Croatia, Cyprus, and Spain have shown improvement in political stability. Australia and Japan experienced the highest downgrade in the political risk score.

<sup>1</sup> For brevity, we only report the plot for six developed and six developing countries. The remaining countries' scores are available upon request.

The developing countries, on the other hand, experienced considerable improvement in political stability. 8 out of 33 countries resulted in a downgrade, while 25 countries experienced an upgrade and hence became safer. UAE and Chili experienced the largest improvement in political stability, primarily due to strong political reforms. Countries such as Zambia, Pakistan, and the Philippines showed a slight improvement in political stability.



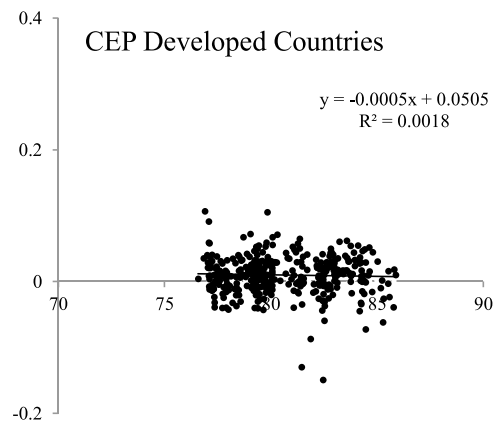
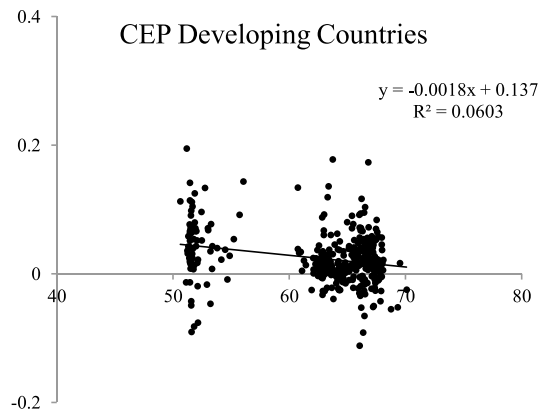
**Figure 1:** Time series plot showing the monthly political risk score of developing and developed countries.

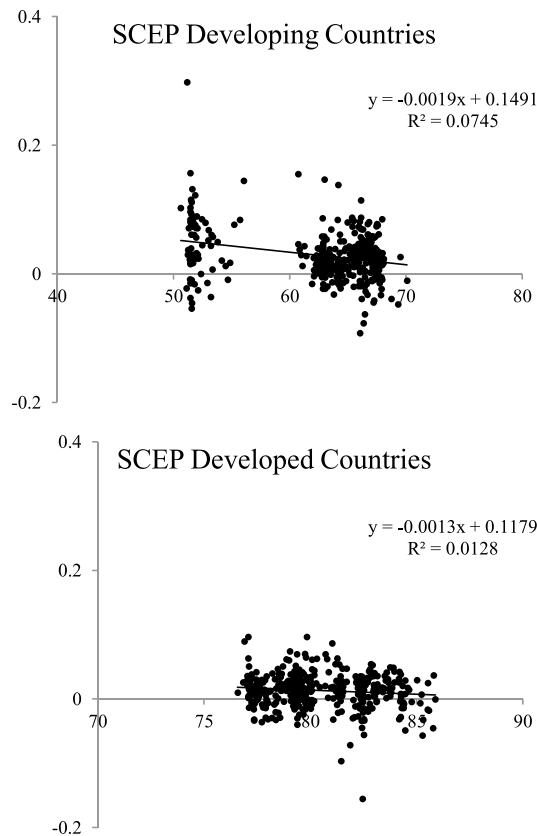
The results in Table 1 document large and volatile changes in the political risk of emerging and developed countries. The overall change in political risk may explain the level of changes in the financial performance of country-level indices.

**Effect of political risk and portfolio performance**

The analysis so far revealed heterogeneous financial performance across countries with varying political risks. However, we still do not know whether the changes in political risk have any power to explain the cross-sectional variation in returns of SCEPs and CEPs. This study investigates the nature and magnitude of the relationship by performing a regression analysis with political risk as a predictor of portfolio returns across countries. The scatter plot in Figure 2 depicts the trend line and the coefficient loadings from the regression analysis.

The explanatory power of political risk in explaining the cross-sectional variation in returns is higher in emerging markets, which shows that change in political risk is a relatively less important determinant of equity return in developed markets. The negative coefficient indicates that politically stable countries have relatively lower returns. It also hints that tilting the weights toward less politically stable markets can increase overall portfolio returns. Based on these findings, we propose investment strategies in the coming sections. These results are in line with the results reported in Table 1(A & B). The comparatively higher R square value in the lower panel of Figure 2 depicts extra benefits for SCEPs and indicates that Shariah-compliant investors can optimize their portfolio returns in the presence of political risk. These findings are consistent with Cosset and Suret (1995) and Ahmed (2018).





**Figure 2:** The effect of political risk on the performance of CEPs and SCEPs across the globe.

### Changes in political risk and international diversification

Section 4 demonstrates that the risk-return trade-off is more favorable in the case of SCEPs. The heterogeneity in the risk-return trade-off of SCEPs and CEPs in a diverse group of countries gives rise to an interesting question: What would happen if we tilt the portfolio weights of SCEPs based on their relative exposure to political risk?

### Portfolio Weights Tilted toward Politically Stable Countries

In order to answer the important question, we proposed the following two investment strategies. The first portfolio is PSP which allocates funds to all countries, with

prominent tilts toward politically stable markets, while the second strategy (PUP) seeks optimization opportunities in politically risky countries. Based on each investment strategy, this study constructs a CEP and a SCEP. The portfolios are rebalanced on the last trading day of each month to obtain a time series of portfolio returns.

Table 2 evaluates the out-of-sample performance of the politically stable CEP and SCEP. Let us first compare the financial performance of the tilted portfolios (PSP) with the benchmark portfolio. The results in Panel A show that the DJGI results in 4.62% annualized returns for the time period 1996–2018. The results in Panel B show that the incorporation of political risk in the portfolio construction process has a positive effect on the performance of the PSPs. Both CEP and SCEP significantly outperform the annualized returns of DJGI by 8.43% and 16.41%, respectively. However, if we talk specifically about the effect on the CEP and SCEP, then the latter has a clear advantage over the former. Though such tilting improves the level of stability in returns of the CEP, this advantage comes at the cost of a huge difference in annualized returns. The tilted CEP underperforms the tilted SCEP by 798 basis points. The relatively lower stability of the tilted SCEP is compensated by high annualized returns and hence results in a higher Sharpe ratio. However, the Shariah-compliant investors have to pay an additional cost as the SCEPs result in higher turnover. A possible explanation for such higher turnover is the strict Shariah constraints. The fund manager frequently monitors the portfolio and liquidates all those stocks that have violated any of the Shariah investment guidelines. The breakeven transaction cost analysis shows that both the CEPs and SCEPs are able to generate enough returns to compensate for the higher turnover. It also indicates that the Shariah-compliant investors are willing to pay an additional cost for fulfilling their primary objective of adherence to faith.

**Table 2:** Portfolio invested in all countries based on exposure to political risk

	$\mu$ (%)	PTT	$\sigma$ (%)	SR	MDD	ES	VaR	TO	BETC
Panel A: Benchmark Portfolio									
DJI World	4.62		15.2	0.3	55.89	-10.63	-0.87	--	--
Panel B: Portfolio invested in all country-level indices									
Conventional portfolio	13.05***	--	8.71	1.49	33.09	-5.18	-2.87	0.77	1.57
Shariah-compliant portfolio	21.03***	2.37**	9.59	2.19	21.79	-4.44	-2.3	1.86	2.29
Panel C: Portfolio invested in indices of top 20 politically stable country									
Conventional portfolio	08.13***	4.73***	10.06	0.8	39.77	-6.81	-4.1	0.52	0.17
Shariah-compliant portfolio	15.69***	-0.28	10.53	1.49	26.31	-6.15	-3.68	0.68	1.33

In the above table, PTT represents the paired t-test, which shows the difference in means of the CEP versus the SCEP portfolio. For performance comparison, we use the unrestricted CEP as a benchmark and compare its performance with the SCEP, CEP in 20 stable countries, and SCEP of 20 stable countries.  $\mu$  shows the annualized returns,  $\sigma$ , SR, MDD, ES, VaR represents annualized volatility, Sharpe ratio, expected shortfall, maximum drawdowns, and Value at Risk.

The lower stability of SCEP returns is a bit surprising, as most of the previous studies report that the Shariah restrictions improve stability in portfolio returns (Boudt et al., 2019). Therefore, we further assess the relative riskiness of the SCEP and report more advanced downside measures of portfolio risk in Table 2. Interestingly, we notice that in comparison with the CEP, the politically stable SCEP results in improved drawdowns (33.09 versus 21.79), expected shortfall (-5.18 versus -4.44), and Value at Risk (-2.87 versus -3.30). The improvement in these statistics confirmed that the tilted SCEP has less exposure to the risk of fund redemption and requires fewer assets to recover from the worst losses. A major reason for such improvement is the twofold negative screens. First, Shariah restriction ensures that the portfolio is invested in quality stocks. Second, this strategy buys when the political score is improving and sells when the political risk score decreases. Thus, the portfolio allocates more funds to countries whose returns are more stable.

For robustness, we reduce the number of countries in each portfolio. In order to ensure weight concentration in politically stable countries, this time, we invested both the CEP and SCEP in only 20 countries during each rebalancing period. The results in Panel C of Table 2 show that, even with the reduced investment universe, the tilted portfolios are able to outperform the benchmark portfolio. However, there is a significant reduction in the economic gains for the CEP compared with the SCEP. A possible reason could be that such concentrated portfolios fail to reap the benefits of diversification to emerging markets.

### **Portfolio Weights Tilted toward Highly Politically Unstable Economies**

As noted by Divecha et al. (1992), the country-level indices of politically unstable countries can be categorized by higher returns and relatively higher standard deviation (see Table 1 for details). What would happen if we tilt the portfolio weights to politically unstable countries? Which type of portfolio, SCEP or CEP, would be affected more by such a tilt?

To answer these questions, we tilt the portfolio weights to politically unstable countries (countries with a lower political score receive more weights). In practice, such strategies focus on both the selection and weighting of a portfolio. Therefore, we also tried different combinations. First, we invest in a portfolio of all countries, and the results are reported in Panel B of Table 3. We interpret the results of this



investment strategy in two steps. First, we compare the performance of the tilted portfolio with the benchmark portfolio. Second, we compare the effect of such tilts on the SCEP versus the CEP.

The results show that the tilt toward politically unstable countries has a positive effect on the financial performance of the portfolio. The tilted CEP and SCEP both outperform the benchmark portfolio by 10.03% and 18.34% returns per year. This is interesting because the tilted politically unstable portfolio improves the annualized returns of the tilted politically stable portfolio by 187 basis points for the CEP, while it is 193 basis points for the SCEP.

Now let us compare the performance of the tilted CEP with the tilted SCEP. The results in Table 3 show that the annualized returns of the politically unstable SCEP significantly outperform the annualized returns of the politically unstable CEP by 8.04%. However, for the SCEP, this improvement comes at the cost of slightly high instability in returns. Apart from volatility, the SCEP results in a lower drawdown risk. The SCEP also improved the expected shortfall and Value at Risk statistics of the CEP. These results show that, at a specific period of time, the SCEP can lose a relatively less amount of its total investment in comparison with the CEP.

Table 3: Portfolio invested in all countries based on exposure to political risk.

	$\mu$ (%)	PTT	$\sigma$ (%)	SR	MDD	Var	ES	TO	BETC
Panel A: Benchmark Portfolio									
DJ World	4.62		15.2	0.3	55.89	-10.63	-0.87	--	
Panel B: Portfolio invested in all countries									
Inverse political risk CEP	14.92***	--	8.49	1.75	30.13	-2.7	-4.66	82	0.8
Inverse political risk SCEP	22.96***	0.57***	9.55	2.4	19.56	-2.23	-3.9	1.11	1.97
Panel C: Top 20 risky countries									
Inverse political risk CEP	21.38***	2.40**	9.05	2.36	23.24	-2.4	-3.95	0.42	0.74
Inverse political risk SCEP	28.85***	1.4	9.9	2.91	15.21	-1.4	-3.03	0.63	1.13

In the above table, PTT represents the paired t-test, which shows the difference in means of the CEP versus the SCEP portfolio. For performance comparison, we use the unrestricted CEP, whose weights are tilted toward politically unstable countries.  $\mu$  shows the annualized returns,  $\sigma$ , SR, MDD, ES, VaR represent annualized volatility, Sharpe ratio, expected shortfall, maximum drawdowns, and Value at Risk of each individual portfolio.

The politically unstable CEP portfolio outperforms the benchmark and politically stable CEP portfolio by 187 and 1030 basis points, respectively. On the other hand, the politically unstable SCEP portfolio outperforms the benchmark and the politically stable SCEP by 193 and 1834 basis points, respectively. In the case of the CEP, these results are consistent with the findings of Divecha et al. (1992), Cosset and Suret (1995), and Diamonte et al. (1996). The improvement in performance due to the tilt toward the developing market is an indication of greater integration between developed markets. The developing markets, on the other hand, provide attractive benefits for international diversification (less correlation between the returns of the developed market and developing market).

It is very important to mention that the PUP has a higher turnover as compared to PSP. A possible explanation is that such portfolios invest more in developing markets, and the returns of these markets are highly volatile, which distorts the portfolio weights at a relatively higher frequency and hence results in more transactions.

As a robustness test, we further restrict the number of constituents in each portfolio and invest only in 20 countries. This strategy ensures that the weights are only exposed to extremely politically risky countries. An interesting finding is that unlike the tilt toward politically stable countries, the weight concentration in politically unstable countries further improves the annualized returns of both the CEP and the SCEP, and the latter outperforms the former in terms of annualized returns.

## **Conclusion**

The importance of political risk in international portfolio diversification is documented by a number of studies. This study adds to the existing literature on international portfolio diversification to the extent of Shariah-compliant investments. Shariah investment principles impose constraints on diversification and exclude many important sectors from the investment universe. The negative screens result in heterogeneous sector allocation and display significant differences in risk-return characteristics if compared with a CEP. This paper highlights the effect of political risk on the financial performance of a SCEP invested in 61 international markets. The weights of the SCEP are driven by the relative exposure of each constituent to political risk. Results show that developed countries (high political score) can be categorized

by relatively lower (high) returns (stability) and vice versa. It is important to mention that there is a global convergence point and that in the past three decades, developing countries have witnessed an upward shift in their political risk score while developing countries have experienced a slight decline in political stability.

This study capitalizes on the heterogeneous distribution of political risk and financial performance of 61 developing and developed markets. We construct two portfolios for each country, namely a CEP and a SCEP. For performance comparison, we use DJGI as a benchmark portfolio. The performance evaluation of both the SCEP and the CEP shows that political risk can be used as a vital determinant in explaining the cross-sectional variation in the returns of country-level indices. An interesting finding is that the economic benefits of international diversification in the presence of political risk are greater for Sharia-compliant investors as compared with conventional investors. Tilting the weights toward a politically risky country has more advantages (higher economic gains) in comparison with investing more in politically stable countries. The allocation decision based on political risk helps fund managers to reduce the risk of fund redemption and the worst losses in a single period of time. Future studies should investigate the effect of alternative weighting methods on the performance of both CEPs and SCEPs.

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