

# Political Risk and Emerging Market Equities: Applications in an Index Framework

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## INTRODUCTION

Political risk is widely presumed to affect emerging market equities. However, its impact has historically been difficult to assess due to the lack of quantifiable, systematic, and standardized political risk metrics.

The growing popularity of alternative data derived from natural language processing and sentiment analysis of global news media has opened new opportunities in the political risk space, including novel methods of devising systematic investment and asset allocation frameworks that are uniquely informed by a new generation of political risk indicators.

To take advantage of this development, S&P Dow Jones Indices has collaborated with [GeoQuant](#), an AI-driven political risk data firm, to devise a best-in-class Emerging Markets Political Risk-Tilted Concept Index (hereafter the “Political Risk-Tilted Concept Index” or “Concept Index”).

The Concept Index takes the S&P Emerging BMI as its starting point and rebalances country allocations monthly based on GeoQuant’s custom “Macro-Government Political Risk Indicator,” yielding the Political Risk-Tilted Concept Index by overweighting (underweighting) countries with relatively low (high) political risk.

We find that systematically incorporating political risk as a factor into emerging market equity allocation decisions can potentially drive outperformance relative to the benchmark [S&P Emerging BMI](#). Outperformance is largely attributable to reduced overall volatility and greater insulation from downside risk.

Over a 2013-2020 back-test period, the Concept Index outperformed the S&P Emerging BMI using a standard set of back-test parameters. Specifically, the Concept Index yielded higher return/risk ratios over three- and five-year horizons, and on a cumulative basis over the full back-tested period, with an annualized excess return of 1.31% relative to its benchmark. It also demonstrated a consistently lower level of volatility, a relatively low annualized tracking error of 2.03%, and a lower monthly average turnover than its benchmark. On a monthly basis, the back-tested Concept Index outperformed the S&P Emerging BMI in the majority of *all*

*The Political Risk-Tilted Concept Index is the first of its kind and offers novel opportunities to leverage S&P DJI and GeoQuant data to inform emerging market equity allocation decisions.*

months, and in a larger majority of *down* months in which benchmark returns decreased. The back-test also outperformed the S&P Emerging BMI over 2020 despite well-known challenges in forecasting equity market performance during the COVID-19 pandemic.

The Political Risk-Tilted Concept Index is the first of its kind (to the best of our knowledge) and offers novel opportunities to leverage S&P Dow Jones Indices and GeoQuant data to inform emerging market equity allocation decisions.

## **MEASURING POLITICAL RISK: AN OVERVIEW**

GeoQuant is a venture-backed, AI-driven political risk data firm that fuses political science and machine learning to systematically measure and predict political risks in real-time.

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Well before COVID-19, the interplay of macro-economic policymaking and government (in)stability, and the lack of high-frequency data to measure these factors, made it notoriously difficult to assess the impact of political risk on equity prices, particularly in emerging markets. Technical advances in monitoring and predicting political risk were necessary.

To that end, GeoQuant has developed a best-in-class set of more than 20 political risk indicators for modeling and understanding the impact of political risk on markets. These indicators enable data-driven and systematic asset allocation in response to measurable, real-time variation in political risk.

*GeoQuant has developed a best-in-class set of more than 20 political risk indicators for modeling and understanding the impact of political risk on markets.*

Exhibit 1 provides a snapshot of GeoQuant's core set of risk indicators, which collectively comprise GeoQuant's "Fundamental Risk Model." The indicators measure the full spectrum of risks that are likely to affect commerce, trading, investment decisions, and intergovernmental relations. All indicators are generated by real-time natural language processing of traditional news media using proprietary algorithms for text-based sentiment analysis, as well as synchronous inputs and review by a team of PhD political economists.

**Exhibit 1: GeoQuant’s Fundamental Risk Model**

**Risk Model: Fundamental Indicators**

*The Concept Index uses a proprietary S&P-GeoQuant political risk indicator, based on GeoQuant’s Fundamental Risk Model, to inform relative country allocation decisions.*

*The Macro-Government Risk Indicator is a weighted combination of two component risk indicators from GeoQuant’s fundamental risk model.*

Political Risk	Governance	Government	Mass Support Elite Support Institutional Support
		Institutional	Institutional Stability State Capacity Rule of Law
		Policy	Rule of Law Macro-Economic Policy Micro-Economic Policy Investment/Trade Policy
	Society	Human Development	Civil Liberties Health Human Capital
		Social Polarization	Ethno-Religious Socio-Economic Migration/Population
	Security	Internal	Political Violence Criminal Violence Security Force Environment/Geography
		External	Security Force Environment/Geography International Relations
	<b>Tier 0</b>	<b>Tier 1</b>	<b>Tier 2</b>

Source: GeoQuant. Chart is provided for illustrative purposes.

**POLITICAL RISK-TILTED CONCEPT INDEX: DESIGN**

**Overview**

The Concept Index uses a proprietary S&P-GeoQuant political risk indicator, based on GeoQuant’s Fundamental Risk Model, to inform relative country allocation decisions. This section describes the indicator and provides motivating examples in the context of emerging market equities.

**MACRO-GOVERNMENT RISK INDICATOR**

The Macro-Government Risk Indicator is a weighted combination of two component risk indicators from GeoQuant’s fundamental risk model: (1) Macro-Economic Policy Risk and (2) Government risk. These indicators were selected from GeoQuant’s larger indicator set based on their relevance to global equity markets.

*Macro-Economic Policy Risk assesses the riskiness of policies surrounding macro-economic management, including those bearing on fiscal and monetary policymaking.*

*Government Risk is expected to have a second-order impact on equity markets by raising uncertainty surrounding the survival and capacity of incumbent governments, which in turn heightens uncertainty surrounding policymaking.*

Macro-Economic Policy Risk assesses the riskiness of policies surrounding macro-economic management, including those bearing on fiscal and monetary policymaking, both of which have historically shaped equity market performance.

Government Risk is expected to have a second-order impact on equity markets. An increase in Government Risk reflects greater uncertainty surrounding the survival and capacity of incumbent governments, which in turn heightens uncertainty surrounding policymaking, and macro-economic policymaking more specifically. Government risk's impact on equity markets increases as risk rises, as investors commonly respond by shifting assets into less risky countries.

The Macro-Government Risk Indicator covers 22 of the 26 total countries included in the S&P Emerging BMI between 2013 and 2020.<sup>1</sup> The four omitted countries are Czech Republic, Greece, Kuwait, and Morocco. The first three have a combined weight of 0.99% in the S&P Emerging BMI as of December 2020; Morocco has not been included in the S&P Emerging BMI since Q4 2015. These countries were not covered by GeoQuant at the time of creation of the Concept Index and are therefore kept neutral to their weights in the benchmark index.

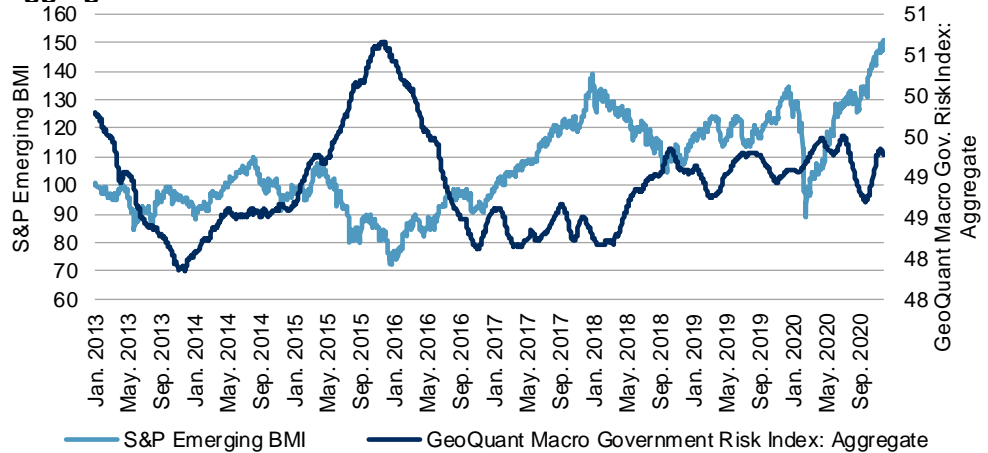
*A weighted cross-country aggregate of the Macro-Government Risk Indicator among the 22 included countries is inversely correlated with the S&P Emerging BMI.*

GeoQuant's country-specific Macro-Government Risk Indicator series are on average negatively correlated ( $r = -0.25$ ) with S&P DJI's country-specific BMI Indices in the 22 countries we assess among the broader S&P Emerging BMI country universe. A weighted cross-country aggregate of the Macro-Government Risk Indicator among those 22 countries is inversely correlated ( $r = -0.27$ ) with the S&P Emerging BMI, as can be seen in Exhibit 2.<sup>2</sup>

<sup>1</sup> Brazil, Chile, China, Colombia, Egypt, Hungary, India, Indonesia, Malaysia, Mexico, Pakistan, Peru, Philippines, Poland, Russia, Saudi Arabia, South Africa, Thailand, Turkey, Taiwan, Qatar, and United Arab Emirates.

<sup>2</sup> Each country's contribution to the aggregate Indicator is calculated by multiplying its risk value by its default weight under the S&P Emerging BMI. The four countries not covered by the Macro-Government Risk Indicator are omitted from the aggregate calculation reported here, but are included in the subsequent back-test by assigning them a tilt value of 1, such that we remain neutral to their weights in the S&P Emerging BMI.

**Exhibit 2: S&P Emerging BMI and GeoQuant Macro-Government Risk Index Aggregate**



*In emerging markets, low political risk enhances the ability to withstand economic shocks.*

Source: S&P Dow Jones Indices LLC and GeoQuant. Data from Jan. 31, 2013, to Dec. 31, 2020. Past performance is no guarantee of future results. Chart is provided for illustrative purposes. Aggregate Indicator excludes Czech Republic, Greece, Kuwait, and Morocco.

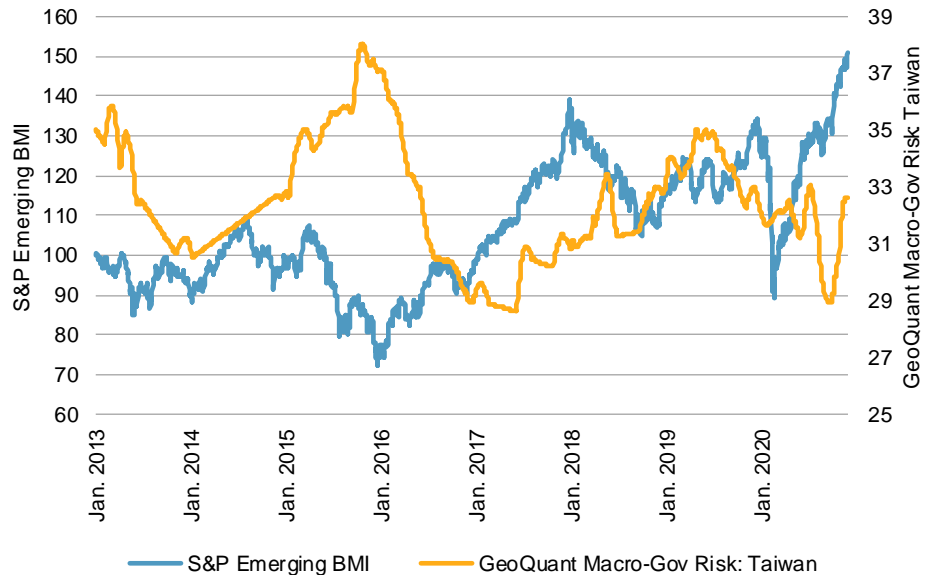
**MOTIVATING EXAMPLES**

Politics and asset values are often entwined to a greater degree in emerging markets than in developed markets. Among emerging markets, low political risk enhances the ability to withstand economic shocks. In the context of GeoQuant’s Macro-Government Risk Indicator, lower risk indicates greater capacity to calibrate fiscal and monetary policy to the magnitude of economic shocks at hand (captured by the Indicator’s “Macro-Economic Policy Risk” component), as well as greater capacity to enact such policies, owing to a relatively high degree of government stability (captured by the Indicator’s “Government Risk” component). In contrast, emerging markets with elevated risk face greater challenges on both fronts.

*A sharp increase in Macro-Government Risk in 2014-2015 among several countries with high weights in the S&P Emerging BMI is illustrative of the type of risks that inform the Macro-Government Risk Indicator’s design.*

A sharp increase in Macro-Government Risk in 2014-2015 among several countries with high weights in the S&P Emerging BMI—coinciding with a decline in that index—is illustrative of the type of risks that inform the Macro-Government Risk Indicator’s design. As an example, Taiwan, the country with the second-highest weight (on average) in the S&P Emerging BMI, exhibits such a relationship (see Exhibit 3). Specifically, Macro-Government Risk rose sharply in 2015 and the S&P Emerging BMI for Taiwan declined ahead of its January 2016 election, as untested DPP candidate Tsai Ing-wen’s candidacy and uncertainty over the Kuomintang Party’s nominee sparked volatility in Taiwanese equity markets. Macro-Government Risk subsided sharply after Tsai Ing-wen’s election, owing to strong popular support and Tsai’s vision for the economy.

**Exhibit 3: The S&P Emerging BMI versus Taiwan’s Macro-Government Risk Indicator**



*These examples illustrate the range of risks captured by the Macro-Government Risk Indicator that undergirds the Political Risk-Tilted Concept Index.*

*The S&P Emerging BMI had its largest drawdown during the 2014-2015 period (28.27%); the drawdown under the Political Risk-Tilted Concept Index for the same period was 25.54%.*

*The Concept Index seeks to measure the performance of securities in the S&P Emerging BMI by overweighting countries with relatively low values on GeoQuant’s Macro-Government Risk Indicator.*

Source: S&P Dow Jones Indices LLC and GeoQuant. Data from Jan. 31, 2013, to Dec. 31, 2020. Past performance is no guarantee of future results. Chart is provided for illustrative purposes.

Russia and Brazil are also suitable examples. In Russia, a sharp rise in Macro-Government Risk in 2014 caused equities to tumble, owing to the government’s longstanding policy of heavy dependence on oil revenue amid collapsing prices, sanctions linked to its incursion into Ukrainian territory in 2014, and domestic anti-government protests. In Brazil, another S&P Emerging BMI heavyweight, growing uncertainty over the stability of incumbent President Dilma Rousseff’s beleaguered government in 2014, coupled with the shortcomings of the government’s so-called New Economic Matrix, drove Macro-Government Risk steadily upward. Brazilian equities fell in response.

These examples, while anecdotal, illustrate the range of risks captured by the Macro-Government Risk Indicator that undergirds the Political Risk-Tilted Concept Index. Amid political challenges in these and other areas, the S&P Emerging BMI itself declined accordingly over 2014-2015 and rebounded thereafter as Macro-Government Risk subsided in all three countries. In fact, the S&P Emerging BMI had its largest drawdown during this period,<sup>3</sup> returning -28.27%. The drawdown under the Political Risk-Tilted Concept Index for the same period was -25.54%.

<sup>3</sup> The largest drawdown from the S&P Emerging BMI in the time period covered was between Aug. 29, 2014 and Jan. 29, 2016.

## INDEX METHODOLOGY SUMMARY AND BACK-TESTED RESULTS

*On average, Taiwan, Saudi Arabia, and Poland were the most heavily overweighted in 2020.*

In this section, we present a full set of back-tested results for the Political Risk-Tilted Concept Index. We then return to a brief discussion of global and country-specific trends in Macro-Government Risk during the COVID-19 pandemic in 2020 and highlight factors driving the Concept Index's outperformance during a period of heightened equity market volatility.

The Concept Index seeks to measure the performance of securities in the S&P Emerging BMI by overweighting (underweighting) countries with relatively low (high) values on GeoQuant's Macro-Government Risk Indicator, reflecting low (high) levels of political risk. In turn, country weights are tilted so that countries with lower political risk are overweighted and countries with higher political risk are underweighted. The tilt is derived on a monthly basis by first converting the Macro-Government Risk Indicator into a z-score to standardize the indicator for the countries in the index universe. Each country is then given a tilt score, which is multiplied by each country's weight in the S&P Emerging BMI (see Appendix). To avoid concentration, countries are capped at a maximum of 200% and a minimum of 50% of their float market capitalization weight in the S&P Emerging BMI.

*While China experienced the largest decrease in weight in 2020 among all countries covered, it nevertheless remained the largest country by average weight.*

As previously noted, the Macro-Government Risk Indicator covers 22 of the 26 total countries included in the S&P Emerging BMI between 2013 and 2020.<sup>4</sup> The four omitted countries (Czech Republic, Greece, Kuwait, and Morocco) are assigned a tilt score equal to 1, reflecting a neutral position relative to their weights in the S&P Emerging BMI.

### COUNTRY ALLOCATIONS

*China and Taiwan are the largest countries by weight in 2020 for the S&P Emerging BMI.*

Exhibit 4 shows each country's average active weight in the Political Risk-Tilted Concept Index compared to the S&P Emerging BMI as of December 2020 and on a cumulative basis. On average, Taiwan, Saudi Arabia, and Poland were the most heavily overweighted in 2020, averaging 14.2%, 1.0%, and 0.8%, respectively, in excess weight above the benchmark. China, Brazil, and India on average carried a smaller weight in the Concept Index, underweighted 6.9%, 3%, and 2.5%, respectively. While China experienced the largest decrease in weight in 2020 among all countries covered, it nevertheless remained the largest country by average weight (see Exhibits 4 and 5). China and Taiwan were the largest countries by weight in 2020 for the S&P Emerging BMI, comprising 42% and 14%, respectively.

<sup>4</sup> Brazil, Chile, China, Colombia, Egypt, Hungary, India, Indonesia, Malaysia, Mexico, Pakistan, Peru, Philippines, Poland, Russia, Saudi Arabia, South Africa, Thailand, Turkey, Taiwan, Qatar, and United Arab Emirates.

**Exhibit 4: Political Risk-Tilted Concept Index Average Back-Tested Active Weights against the S&P Emerging BMI**

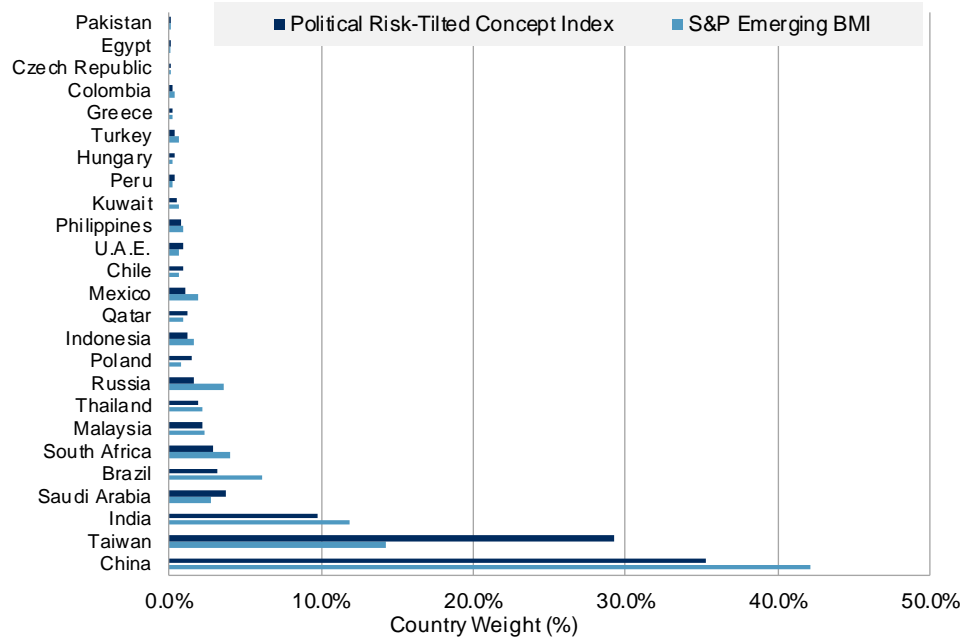
COUNTRY	2020 (%)	CUMULATIVE SINCE JANUARY 2013 (%)
Taiwan	14.2	14.1
Saudi Arabia	1.0	0.2
Poland	0.8	1.4
Qatar	0.5	0.4
Chile	0.3	0.8
U.A.E.	0.3	0.3
Peru	0.2	0.3
Hungary	0.1	0.2
Malaysia	0.1	0.1
Czech Republic	0.0	0.0
Greece	0.0	0.0
Pakistan	-0.1	0.0
Philippines	-0.1	-0.2
Colombia	-0.1	-0.2
Egypt	-0.1	-0.1
Kuwait	-0.1	0.0
Thailand	-0.1	-0.3
Turkey	-0.3	-0.7
Indonesia	-0.4	-0.6
Mexico	-0.8	-1.8
South Africa	-1.1	-1.8
Russia	-1.8	-2.3
India	-2.5	-2.1
Brazil	-3.0	-4.3
China	-6.9	-3.1

Source: S&P Dow Jones Indices LLC. Back-tested data from Jan. 31, 2013, to Dec. 31, 2020. Table is provided for illustrative purposes. Table is provided for illustrative purposes and reflects hypothetical historical performance. Please see the Performance Disclosure at the end of this document for more information regarding the inherent limitations associated with back-tested performance.



**Exhibit 5: S&P Emerging BMI and Political Risk-Tilted Concept Index Average Back-Tested 2020 Country Weights**

*Although there is an active bet on country weights, the Concept Index maintained a low annualized tracking error, and a monthly average turnover that was similar to its benchmark.*



Source: S&P Dow Jones Indices LLC. Back-tested data from Jan. 31, 2019, to Dec. 31, 2020. Chart is provided for illustrative purposes. Table is provided for illustrative purposes and reflects hypothetical historical performance. Please see the Performance Disclosure at the end of this document for more information regarding the inherent limitations associated with back-tested performance.

*Given the monthly rebalance frequency, the methodology retains sufficient flexibility to react to variation in political risk, as measured by GeoQuant's Macro-Government Risk Indicator.*

Although there is an active bet on country weights, the Concept Index maintained a low annualized tracking error and a monthly average turnover that was similar to its benchmark (see Exhibit 6).

*Reacting quickly to active weight changes, as the Concept Index does, may translate into better risk-adjusted returns under certain conditions.*

In general, the methodology aims to yield stable country tilts, as illustrated by the relatively high consistency between the one-year and cumulative average active weights. However, given the monthly rebalance frequency, the methodology retains sufficient flexibility to react to variation in political risk, as measured by GeoQuant's Macro-Government Risk Indicator. Over the back-tested period, several countries—including China and Saudi Arabia—experienced material active weight changes. This dynamism is noteworthy because political risk may shift rapidly as a function of changing macro-economic policymaking and government instability. Reacting quickly to such changes, as the Concept Index does, may translate into better risk-adjusted returns under certain conditions, as we discuss in the following section.

**BACK-TESTED INDEX PERFORMANCE**

The performance and risk/return characteristics presented in Exhibits 6 and 7 confirm that tilting the Concept Index according to countries' relative political risk levels yielded higher annualized returns over the period studied—both short and long term—while also maintaining low volatility, resulting in higher return/risk ratios when compared with the S&P Emerging BMI.

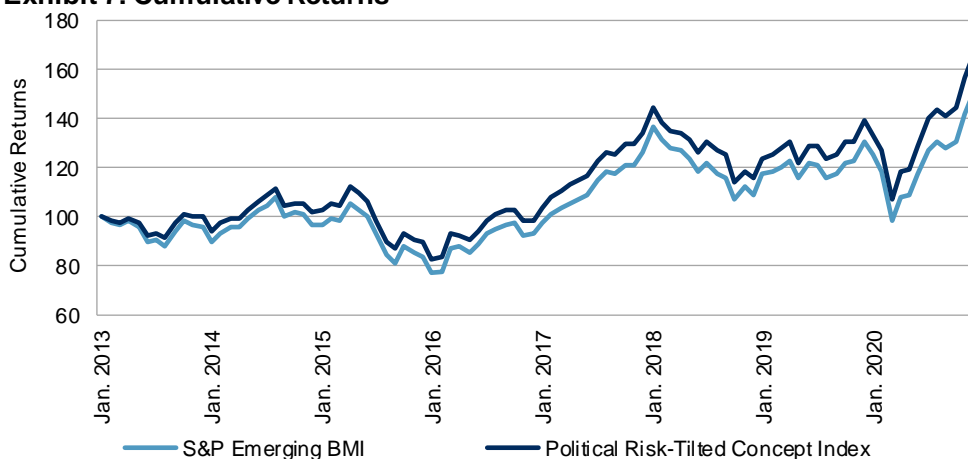
Exhibit 6: Risk/Return Profile		
ANNUALIZED RETURN (%)	POLITICAL RISK-TILTED CONCEPT INDEX	S&P EMERGING BMI
1-Year	19.52	15.51
3-Year	7.53	6.18
5-Year	13.25	12.56
Cumulative	6.65	5.34
ANNUALIZED VOLATILITY (%)		
3-Year	19.16	19.58
5-Year	16.77	17.32
Cumulative	15.73	16.48
RETURN/RISK		
3-Year	0.39	0.32
5-Year	0.79	0.73
Cumulative	0.42	0.32
Annualized Tracking Error (%)	2.03	-
Monthly Average Turnover (%)	1.84	1.65

The Political Risk-Tilted Concept Index is a hypothetical index. Source: S&P Dow Jones Indices LLC. Back-tested data from Jan. 31, 2013, to Dec. 31, 2020. Table is provided for illustrative purposes and reflects hypothetical historical performance. Please see the Performance Disclosure at the end of this document for more information regarding the inherent limitations associated with back-tested performance.

*In almost eight years of history, the Political Risk-Tilted Concept Index had an annualized 1.31% excess return over its benchmark, which translates to a 15% gain over the S&P Emerging BMI in the time period analyzed.*

In almost eight years of history, the Political Risk-Tilted Concept Index had an annualized 1.31% excess return over its benchmark, which translates to a 15% gain over the S&P Emerging BMI in the time period analyzed. The Concept Index also had a consistently lower level of volatility, a relatively low annualized tracking error of 2.03%, and a low monthly average turnover of 1.84% (compared to a turnover of 1.65% for its benchmark). In general, the Political Risk-Tilted Concept Index displayed a superior risk/return profile over the period analyzed.

**Exhibit 7: Cumulative Returns**



The Political Risk-Tilted Concept Index is a hypothetical index. Source: S&P Dow Jones Indices LLC. Back-tested data from Jan. 31, 2013, to Dec. 31, 2020. Chart is provided for illustrative purposes and reflects hypothetical historical performance. Please see the Performance Disclosure at the end of this document for more information regarding the inherent limitations associated with back-tested performance.

*The Concept Index outperformed the S&P Emerging BMI in 56% of the total monthly periods covered by the back-test.*

Between 2013 and 2020, when the S&P Emerging BMI had negative monthly returns, the Concept Index outperformed 70% of the time; whenever the benchmark had positive monthly returns, the Concept Index outperformed 45% of the time. This downside protection with some upside participation is expected from a low volatility strategy. The Concept Index outperformed the S&P Emerging BMI in 56% of the total monthly periods covered by the back-test.

*The ability to decrease the severity of drawdowns demonstrates the potential to hedge returns against unfavorable market conditions faster than with traditional methods.*

The largest drawdown of the S&P Emerging BMI was -28.27%, compared to -26.13% for the Concept Index.<sup>5</sup> Moreover, during the first quarter of 2020, which was marked by an unanticipated shock to equity markets due to the onset of the COVID-19 pandemic, the Concept Index lost 22.9% compared to 24.61% for the benchmark. The ability to decrease the severity of drawdowns demonstrates the potential to hedge returns against unfavorable market conditions faster than with traditional methods. This downside protection, even when limiting upside participation, was the primary driver of the Concept Index's longer-term outperformance.

## COUNTRY-LEVEL PERFORMANCE DRIVERS

Of the countries in the index universe covered by GeoQuant, 67% contributed positively to index returns in cumulative terms. This implies that systematic over- and under-weighting according to GeoQuant's Macro-Government Risk Indicator contributed to alpha generation.

*Of the countries in the index universe covered by GeoQuant, 67% contributed positively to index returns in cumulative terms.*

To analyze each country's contribution to the 15% accumulated gain of the Political Risk-Tilted Concept Index over its benchmark, we multiplied each country's average active weight by the difference in returns between the Concept Index and the benchmark (see Exhibit 8). The largest contributor to returns was Taiwan, reflecting its low average levels of Macro-Government Risk relative to the country universe of the S&P Emerging BMI. Accordingly, Taiwan generated the highest cumulative returns of all countries in 2020.

In cumulative terms, Taiwan contributed 16.15% of returns under the Concept Index, followed by Brazil (2.64%) and Mexico (1.36%). Conversely, China had the most negative contribution due to the underweight given to this country, subtracting 1.7% from overall cumulative returns under the Concept Index, followed by India (1.0%) and Poland (0.7%).

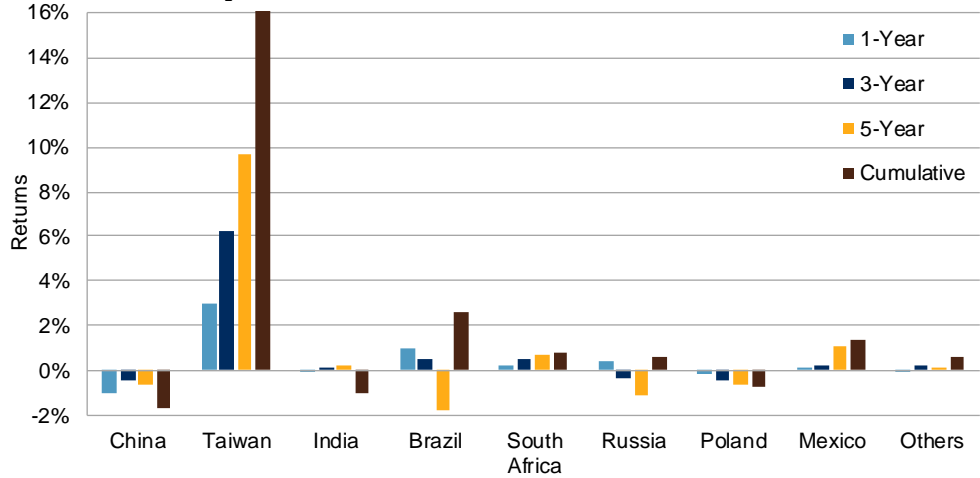
<sup>5</sup> The largest drawdown from the S&P Emerging BMI between 2013 and 2020 was recorded between Aug. 29, 2014, and Jan. 29, 2016, while the largest drawdown from the Political Risk-Tilted Concept Index occurred between April 30, 2015, and Jan. 29, 2016.

Taiwan contributed 16.15% of returns under the Concept Index, followed by Brazil and Mexico.

Comparing weighted country-specific returns over 2020 provides a clear demonstration of the Political Risk-Tilted Concept Index's outperformance during a time of market uncertainty.

Comparing weighted country-specific returns over 2020 demonstrates the Concept Index's outperformance during a time of market uncertainty, due especially to greater insulation from downside risk.

**Exhibit 8: Country Attribution**



The Political Risk-Tilted Concept Index is a hypothetical index. Source: S&P Dow Jones Indices LLC. Data from Jan. 31, 2013, to Dec. 31, 2020. Chart is provided for illustrative purposes and reflects hypothetical historical performance. Please see the Performance Disclosure at the end of this document for more information regarding the inherent limitations associated with back-tested performance.

**CASE STUDY: POLITICAL RISK-TILTED CONCEPT INDEX PERFORMANCE DURING THE COVID-19 PANDEMIC**

Comparing weighted country-specific returns over 2020—the time period most closely associated with COVID-19’s global spread—provides a clear demonstration of the Political Risk-Tilted Concept Index’s outperformance during a time of market uncertainty, due especially to greater insulation from downside risk.<sup>6</sup>

Exhibit 9 reports country-weighted returns across the S&P Emerging BMI (the benchmark), as well as the Political Risk-Tilted Concept Index. As indicated in the table, the majority of countries (19 of 25) exhibited non-positive weighted returns in the S&P Emerging BMI during 2020, an outcome commonly attributed to COVID-19-related economic pressures.<sup>7</sup> Within that country set, the Political Risk-Tilted Concept Index yielded returns at least as positive as those observed under the benchmark in 14 of 19 countries (blue rows in Exhibit 9), including for Brazil and Russia, both of which experienced negative returns and have high weights in the S&P Emerging BMI. Among the remaining countries with non-positive returns (4 of 19), the benchmark outperformed by at most 3 bps (for Poland).

In the context of COVID-19, the Concept Index’s outperformance stemmed from its ability to price in political aspects of governments’ pandemic response policies. Some of the aspects included are the adequacy of fiscal and monetary loosening (included in the Macro-Economic Policy Risk

<sup>6</sup> Weighted country returns are calculated by multiplying each country’s annual returns for 2020 by its average weight over the 12 component months.

<sup>7</sup> Morocco has not been included in the S&P Emerging BMI since the last quarter of 2015 and is excluded from the assessment here.

component of the Macro-Government Risk Indicator) and governments' stability in the face of widespread socioeconomic pressures that translated (to varying degrees) into popular unrest (measured by the Government Risk component of the Indicator).

Of the six countries in the benchmark exhibiting positive returns, the Political Risk-Tilted Concept Index outperformed in two—Saudi Arabia and Taiwan (yellow rows in Exhibit 9)—and yielded comparable returns in the remaining four, with the exception of China (where the benchmark outperformed by roughly 2.10%) and India (where the benchmark outperformed by roughly 0.43%).

*Of the 19 countries in the benchmark exhibiting non-positive weighted returns during 2020, the Concept Index yielded returns at least as positive in 14 of 19 countries.*

*The Political Risk-Tilted Concept Index yielded comparable returns in the remaining four countries, with the exception of China.*

<b>Exhibit 9: Back-Tested 2020 Weighted Returns</b>			
<b>COUNTRY</b>	<b>POLITICAL RISK-TILTED CONCEPT INDEX (%)</b>	<b>S&amp;P EMERGING BMI (%)</b>	<b>DIFFERENCE (%)</b>
China	10.70	12.80	-2.10
Taiwan	10.32	5.16	5.16
India	1.64	2.06	-0.43
Saudi Arabia	0.24	0.18	0.06
Malaysia	0.18	0.18	0.01
Turkey	0.00	0.01	0.00
Czech Republic	0.00	0.00	0.00
Pakistan	0.00	0.00	0.00
Qatar	0.00	0.00	0.00
Philippines	-0.01	-0.01	0.00
Mexico	-0.01	-0.02	0.01
Egypt	-0.02	-0.03	0.02
Greece	-0.03	-0.03	0.00
Colombia	-0.03	-0.05	0.01
Peru	-0.03	-0.02	-0.01
Hungary	-0.04	-0.03	-0.02
Chile	-0.05	-0.03	-0.02
United Arab Emirates	-0.05	-0.04	-0.01
Kuwait	-0.06	-0.06	0.01
Poland	-0.07	-0.04	-0.04
Indonesia	-0.08	-0.11	0.03
Thailand	-0.13	-0.14	0.01
South Africa	-0.14	-0.19	0.05
Russia	-0.14	-0.28	0.14
Brazil	-0.52	-1.04	0.52
<b>Total Period Return</b>	<b>19.52</b>	<b>15.51</b>	

The Political Risk-Tilted Concept Index is a hypothetical index.

Source: S&P Dow Jones Indices LLC and GeoQuant. Back-tested data from Dec. 31, 2019, to Dec. 31, 2020. Past performance is no guarantee of future results. Table is provided for illustrative purposes and reflects hypothetical historical performance. Please see the Performance Disclosure at the end of this document for more information regarding the inherent limitations associated with back-tested performance.

*Brazil and Russia offer two clear cases where the Political Risk-Tilted Concept Index outperformed the benchmark by limiting downside risk.*

*The Political Risk-Tilted Concept Index's direct "pricing in" of political constraints in the form of rising Macro-Government Risk drove its outperformance relative to the benchmark.*

*Taiwan's returns under the Political Risk-Tilted Concept Index outperformed the benchmark in 2020 due to an accurate read on upside potential linked to politics.*

Several examples drawn from countries with high weights in the S&P Emerging BMI add nuance to the aggregate results presented in Exhibit 9. They demonstrate specifically that amid an unexpected global pandemic, equity market projections that skewed a risk-tilted approach missed an opportunity to outperform the S&P Emerging BMI.

Brazil and Russia offer two clear cases where the Political Risk-Tilted Concept Index outperformed the benchmark by limiting downside risk. In Brazil, Macro-Government Risk heading into 2020 was elevated relative to average risk levels observed in 2017-2018. The 2020 trend continued a pattern of both elevated and volatile risk that began in earnest in 2019 and persisted in 2020, owing to policy disagreements between President Bolsonaro and opposition-controlled state and local governments over how best to manage COVID-19. The Political Risk-Tilted Concept Index's direct "pricing in" of these constraints in the form of rising Macro-Government Risk (specifically over the first half of 2020) drove its outperformance relative to the benchmark. Although the S&P Emerging BMI and the Political Risk-Tilted Concept Index experienced negative weighted annual returns for Brazil in 2020, the Concept Index's returns were consistently less negative, -0.52% versus -1.04%, under the benchmark.

Russian Macro-Government Risk exhibited similar trends over 2020, but with different underlying drivers. Distinct from Brazil, rising risk in early 2020 was in reaction to anti-government protests over the 2019 Duma elections; these protests persisted heading into regional elections in September 2020. In parallel, the persistent threat of oil sanctions posed clear macro-economic policy challenges for President Putin amid already plummeting oil prices linked to a reduction in global economic activity during the pandemic. Russia's weight in the Political Risk-Tilted Concept Index decreased accordingly over 2020, helping to generate less negative annual weighted returns under the Political Risk-Tilted Concept Index relative to the S&P Emerging BMI.

While outperformance in the Russian and Brazilian cases was linked to a reduction in downside risk, Taiwan's returns under the Political Risk-Tilted Concept Index outperformed the benchmark in 2020 due to an accurate read on upside potential linked to politics. Specifically, Taiwanese Macro-Government Risk trended downward on over much of 2020 (excepting Q4), as incumbent President Tsai Ing-wen headed toward an easy re-election and promised a continuation of macro-economic policymaking that had positively sustained Taiwanese equity market performance since Tsai assumed the presidency in 2016. Taiwanese Macro-Government Risk thus continued to decline even as COVID-19 spread globally (excepting a late fourth quarter upswing), facilitated by an aggressive government response on the economic policy front as well as by Tsai's success in limiting COVID-19's spread domestically. Accordingly, Taiwan's weighted annual returns under the Political Risk-Tilted Concept Index far exceeded those under the

S&P Emerging BMI in 2020, outperforming the benchmark by more than five percentage points.

Collectively, these cases provide country-level insight into *why* the Political Risk-Tilted Concept Index outperformed the S&P Emerging BMI in 2020, in line with the Concept Index’s broader outperformance over 2013-2020.

**Exhibit 10: Macro-Government Risk Indicator – Brazil (left panel), Russia (middle panel), and Taiwan (right panel)**



*By applying a simple yet innovative index methodology, the Concept Index seeks to provide new tools with which to measure and assess the impact of political risk and adapt equity allocation decisions accordingly.*

The Political Risk-Tilted Concept Index is a hypothetical index.  
 Source: GeoQuant. Past performance is no guarantee of future results. Charts are provided for illustrative purposes and reflects hypothetical historical performance. Please see the Performance Disclosure at the end of this document for more information regarding the inherent limitations associated with back-tested performance.

**CONCLUSION**

The effect of political risk on emerging market equities has been difficult to quantify due to a lack of high-quality, systematic data that measures risk at sufficiently high frequency. By applying a simple yet innovative index methodology, the Political Risk-Tilted Concept Index seeks to provide market participants with new tools with which to measure and assess this impact and adapt equity allocation decisions accordingly. The results demonstrate that incorporating political risk as a systematic factor into emerging market equity allocation decisions may yield outperformance relative to conventional market-cap-weighted benchmarks, while simultaneously lowering volatility and maintaining low tracking error.

## APPENDIX: WEIGHTING METHODOLOGY

At each rebalancing, country weights are determined using a Political Risk Tilt Score ( $S_i$ ). Each Political Risk Tilt Score ( $S_i$ ) is calculated as follows:

- a. The Macro-Government Risk Indicator for each country is transformed into a z-score ( $Z_i$ ) at the underlying index level by:
  - i. Dividing by 100 and taking the inverse of the normal cumulative distribution function with a mean of zero and a standard deviation of one.
  - ii. The z-score ( $Z_i$ ) for each country is re-standardized using the mean and standard deviation of the available z-scores.
- b. If a country is not covered by the Macro-Government Risk Indicator, it will be assigned a z-score ( $Z_i$ ) equal to zero.
- c. The z-score ( $Z_i$ ) for each country is transformed into the Political Risk Tilt Score ( $S_i$ ) as follows:
  - If  $Z_i > 0$ ,  $S_i = 1 + \lambda Z_i$
  - If  $Z_i < 0$ ,  $S_i = 1 / (1 - \lambda Z_i)$
  - If  $Z_i = 0$ ,  $S_i = 1$

where  $\lambda = 1$  (Tilt Scaling Factor).

The resulting weight for each country is thus given by:

$$\text{Country Weight} = \frac{S\&P \text{ Emerging BMI Country Weight} * S_i}{\sum (S\&P \text{ Emerging BMI Country Weight} * S_i), \text{ for all countries in the Index}}$$



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