

Giving Credit Where It's Due ESG Factors in EM Sovereign Debt

Lazard Emerging Markets Debt Team

Emerging markets investors are increasingly focused on environmental, social, and governance (ESG) considerations when making investment decisions. Several studies, as well as demonstrated market behavior, show a clear correlation between a country's bond performance and the strength of its institutions and governance.

In this paper, we verify this relationship and go further to quantify the impact of ESG factors on a country's credit spread. By disaggregating our spread forecast for each emerging markets country, we are able to estimate the portion of the spread attributable to ESG considerations. These findings have compelled our emerging markets debt team to modify its investment analysis to include a broader set of ESG indicators. The team has also introduced a new methodology that allows for better differentiation between countries with similar ESG profiles for more precise sovereign credit analysis.

ESG's Real World Impact

Environmental, social, and governance factors have a demonstrable impact on a country's macroeconomic performance, a key consideration for fixed income investors. Here, we discuss the significance of these three factors.

Environmental factors can have important consequences for creditworthiness, particularly for many economies that are dependent on agricultural exports and imports, which can be undermined by drought, crop disease, or flooding. These conditions can be caused by human actions like deforestation, or by natural disasters or extreme weather events, such as El Niño. Environmental degradation and extreme weather have contributed to flooding and droughts that have displaced populations, adversely affected agricultural output, and threatened the food supply in many sub-Saharan African countries, as well as in Peru, Chile, Jamaica, and other parts of the Caribbean and Central America. Environmental protections may not directly increase growth or improve per capita GDP, but they can strengthen a country's response to natural disasters or reduce the impact of deforestation, pollution, or other activities that can lower productivity and weaken economic output.

Social conditions also influence sovereign creditworthiness, since low standards of living, income inequality, limited educational opportunities, and political disenfranchisement can exacerbate poverty and unemployment, fueling protests that can lead to economic paralysis and armed conflicts. These factors contributed to the Arab Spring uprisings throughout the Middle East in 2010 and 2011, the rise of the militant Islamic group Boko Haram in Nigeria, the spread of the Islamic State in the Middle East, and mounting political unrest and economic turmoil in Venezuela.

Strong **governance**, as demonstrated by political stability, policy transparency, and an adherence to the rule of law, generally results in policy predictability, greater institutional credibility, and a more favorable business climate. These conditions are conducive to long-term investment and stronger potential growth, since countries that exhibit strong governance, such as Chile and many countries in eastern Europe, are more inclined to respect financial contracts and avoid default. Moreover, countries with a track record of strong governance are usually more resilient during periods of turmoil. For example, spreads on Romanian and Peruvian bonds barely budged after the June 2017 collapse of the Romanian government and the resignation of Peru's finance minister, largely because market participants recognize the institutional strengths of these countries (i.e., Romania's European Union membership and Peru's recent history of market-friendly reforms). Conversely, countries with weak governance, for instance Ecuador and Belize, tend to have a history of frequent defaults. In addition, weak governance often results in greater political instability which can affect a country's ability to service its debt. This occurred in Côte d'Ivoire in 2010, when a disputed presidential election led to a civil war and a temporary sovereign default. Venezuela is a notable exception to

this general rule, since it has continued to service its external debt despite weak governance, although this is largely due to the high cost of default, which could result in a potential seizure of its oil exports and other oil-related assets located outside the country.

ESG Indicators: Their Usefulness and Limitations

Standardized rankings of ESG indicators are valuable inputs to any robust analysis of a given country's ESG practices. Unfortunately, such indicators are typically published just once a year and, at times, even less frequently. While more frequent measurements may not generally add a great deal more value (as improvements in ESG practices tend to occur slowly), lags in data collection mean that these indicators may be slow to reflect recent developments. For example, of the J.P. Morgan EMBI Global Diversified (EMBIGD) Index's 65 constituent countries, Argentina ranks 61st on the World Bank's Regulatory Quality indicator and 55th in its Rule of Law index.¹ These rankings, last released in 2015, fail to capture the marked improvement in governance since President Mauricio Macri took office later that year. Despite their shortcomings, ESG indicators still provide a comprehensive general assessment of ESG trends.

Evaluating ESG compliance is a challenging task owing to the number of factors that must be taken into consideration, but several multilateral and nongovernmental organizations have developed techniques to rank countries according to their adherence to international standards of good governance. Several of these indicators have emerged as international benchmarks, and we rely on these rankings as proxies for measuring ESG compliance. For details of the fourteen indicators that inform our ESG analysis, please consult the Appendix.

Strong Consensus on ESG's Significance

A number of studies have demonstrated that transparency and strong institutions result in narrowing sovereign bond spreads and a reduced likelihood of default. A World Bank paper published in 2012 found that high institutional quality is associated with a low frequency of sovereign default and polarized governments tend to default more frequently.² In a more recent study, the International Monetary Fund (IMF) determined that structural reforms aimed at enhancing data transparency resulted in more reliable macroeconomic and financial data, which in turn improved access to international capital markets and **lowered spreads for emerging markets countries**. The IMF also found that countries that subscribed to its data standards experienced a 15% reduction in spreads one year after the implementation of these reforms.³ In another study, the Asian Development Bank found that good governance is associated with both a higher level of per capita GDP and higher GDP growth over time.⁴ A separate study that examined the impact of ESG factors on OECD country spreads determined that countries with favorable ESG rankings tended to have lower

Exhibit 1
Positive Correlation between ESG Performance and Country Spreads

	Index Spread (bps)	Environmental, Social, and Governance Indicators													
		World Bank Worldwide Governance Indicators						Country Ranking							
		Voice & Accountability	Political Stability	Govt. Effectiveness	Regulatory Quality	Rule of Law	Control of Corruption	Corruption Perception Index	Ease of Doing Business	Human Dev. Index	Global Compet. Index	Environ. Performance Index	Fragile States Index	UN World Risk Index	Freedom of the Press Index
Slovakia	32	6	2	5	6	7	13	9	6	4	23	4	5	8	7
Poland	60	3	3	6	4	3	5	3	5	1	5	10	2	6	13
Lithuania	64	5	5	1	2	2	6	4	3	2	4	3	4	3	3
Latvia	69	7	11	2	3	4	7	6	1	6	12	2	7	7	6
Philippines	91	29	48	22	28	35	33	37	38	45	17	27	52	65	23
Hungary	123	12	4	9	8	11	14	12	11	5	26	5	11	21	22
India	126	19	52	23	43	20	29	24	52	54	7	61	45	39	21
Chile	129	4	13	3	1	1	2	2	17	3	3	17	3	59	10
Malaysia	133	41	18	4	7	6	8	10	4	14	1	24	19	32	52
Romania	135	18	17	28	9	15	17	14	8	10	21	8	12	26	16
China	140	65	41	10	39	33	24	23	28	32	2	49	36	33	64
Serbia	147	24	15	21	23	23	22	20	14	18	38	15	29	43	29
Peru	149	27	39	40	11	44	45	38	16	30	25	31	30	38	24
Panama	155	14	12	13	16	24	27	27	25	15	9	16	13	45	18
Croatia	164	15	10	8	17	13	11	11	12	7	30	1	10	13	17
Vietnam	171	63	25	25	49	31	36	43	30	44	19	58	25	61	61
Russia	176	56	55	34	51	50	56	54	10	9	10	7	48	12	60
Morocco	179	50	36	30	32	22	23	31	23	50	27	25	34	35	47
Indonesia	190	28	45	36	35	38	38	32	33	43	8	47	37	54	30
Uruguay	196	2	1	7	13	5	1	1	32	12	29	26	1	14	4
Guatemala	201	44	46	55	34	59	49	57	31	52	32	37	50	64	40
Colombia	202	34	56	27	14	32	25	30	15	35	20	21	47	34	38
Bolivia	215	33	34	52	59	63	48	45	57	47	57	33	43	18	35
Paraguay	228	36	26	61	38	49	58	52	41	41	54	36	33	9	41
Namibia	231	9	8	15	31	14	9	8	42	51	35	34	27	22	11
Kazakhstan	257	59	30	29	26	36	51	53	7	13	14	30	20	10	62
Mexico	258	37	51	19	15	41	50	49	13	24	13	28	24	28	45
Georgia	269	25	38	11	5	12	4	7	2	19	18	50	44	31	31
South Africa	277	8	33	14	19	18	16	15	26	48	11	35	23	25	15
Brazil	288	20	37	35	36	27	34	25	50	26	34	14	17	15	26
Turkey	293	43	57	18	18	21	19	21	24	20	16	42	41	20	57
Trinidad and Tobago	297	16	14	17	22	25	40	36	36	16	41	23	15	47	5
Oman	300	55	6	24	10	9	12	16	21	11	24	55	9	2	53
Senegal	304	22	32	45	33	26	15	18	56	62	51	53	51	55	27
Armenia	316	49	35	33	20	34	37	44	9	27	33	9	22	30	43
Pakistan	318	51	65	53	53	53	52	46	55	58	58	62	63	41	46
Dominican Republic	324	30	19	42	29	40	53	47	39	38	40	22	26	58	20
Honduras	325	47	40	60	45	57	42	51	40	53	37	38	46	56	50
Azerbaijan	335	64	47	37	37	47	55	50	20	25	6	6	40	24	65
Jamaica	339	11	20	16	24	28	26	26	22	34	31	19	16	60	2
Sri Lanka	340	42	27	26	30	17	28	33	44	22	28	48	54	46	42
Jordan	355	52	42	20	25	10	10	13	48	29	22	32	42	17	51
Costa Rica	372	1	9	12	12	8	3	5	18	17	15	11	6	63	1
Côte d'Ivoire	396	46	49	51	50	48	32	41	54	63	44	56	61	53	32
Kenya	415	38	58	41	41	42	60	60	34	57	43	54	62	40	39
Cameroon	415	54	53	59	58	58	61	61	62	61	56	60	60	57	49
Nigeria	425	45	63	62	57	61	62	58	63	60	59	59	64	49	33
Tunisia	426	26	50	32	44	19	18	22	27	36	42	18	35	23	36
Lebanon	428	48	61	47	40	52	57	56	51	23	45	39	56	19	37
Egypt	448	57	59	58	55	43	41	42	49	42	53	45	57	1	58
Ethiopia	457	62	60	50	62	39	31	40	59	64	50	64	59	42	63
Mongolia	463	23	7	44	42	37	39	28	19	33	46	51	14	5	14
Gabon	468	53	23	56	56	45	47	39	60	40	49	43	31	29	54
Argentina	483	21	29	31	61	55	44	34	47	8	47	12	8	11	25
Ghana	544	13	24	39	27	16	20	19	43	55	52	57	28	50	12
Zambia	549	35	21	49	46	30	30	29	37	56	55	46	53	44	44
El Salvador	564	31	28	38	21	46	35	35	35	46	48	41	32	62	19
Ukraine	585	32	62	48	52	54	59	55	29	28	36	13	38	4	34
Iraq	587	61	64	65	64	64	64	64	61	49	65	52	65	16	55
Angola	617	60	44	63	60	62	65	62	64	59	64	63	58	36	56
Suriname	655	17	16	43	54	29	43	17	58	37	62	40	21	51	9
Ecuador	705	39	31	46	63	60	46	48	46	31	39	44	39	48	48
Belize	732	10	22	54	47	51	21	65	45	39	63	29	18	37	8
Mozambique	1,770	40	43	57	48	56	54	59	53	65	61	65	55	52	28
Venezuela	2,457	58	54	64	65	65	63	63	65	21	60	20	49	27	59

As of 30 June 2017

Countries are ranked by the respective nongovernmental entities from best (1) to worst (65).

Source: Lazard, Freedom House, J.P. Morgan, Transparency International, United Nations Development Programme, United Nations University, World Bank, World Economic Forum, Yale University

default risk and, hence, lower spreads. In addition, this study found that environmental factors appeared to have no financial impact and governance indicators had a greater impact than did social factors.⁵

We see a correlation between ESG performance and emerging markets country spreads. We listed the 65 countries in the EMBIGD index by their sovereign spread, from lowest to highest, and ranked them based on the fourteen ESG indicators that we monitor (Exhibit 1). These ESG rankings range from 1 (best) to 65 (worst) and are respectively assigned by the nongovernmental entities that track the indicators. The results confirmed our hypothesis: Wider spreads generally correspond to a deterioration in ESG rankings.

Our Research

We analyzed and scored each emerging markets country across five governance indicators: the Environmental Performance Index, the Ease of Doing Business Ranking, the Rule of Law Index, the Human Development Index, and policy track record (which we independently determine). Each indicator was scored on a scale of 1 (worst) to 5 (best) and the values summed across the five indicators, resulting in a scorecard that provides an indication of each country's relative institutional strength, with a potential lowest, worst score of 5 and a maximum, best score of 25 (Exhibit 2). This scorecard helps us evaluate a country's creditworthiness.

Exhibit 2
Governance Indicators Are Key to Assessing Institutional Strength

Country	ESG Score	Country	ESG Score
Croatia	25	Philippines	17
Czech Republic	25	Sri Lanka	17
Hungary	25	Rwanda	16
Latvia	25	Argentina	15
Lithuania	25	Dominican Republic	15
Poland	25	El Salvador	15
Romania	25	Indonesia	15
Slovakia	25	Lebanon	15
Slovenia	25	Suriname	15
Chile	24	Ukraine	15
Malaysia	24	Ghana	14
Costa Rica	23	Grenada	14
Serbia	23	Guatemala	14
Bahrain	22	Paraguay	14
Kazakhstan	22	Vietnam	14
Panama	22	Zambia	14
Armenia	21	Republic of Congo	13
Belarus	21	Egypt	13
Georgia	21	Honduras	13
Azerbaijan	20	India	13
Colombia	20	Senegal	13
Mexico	20	Belize	12
Namibia	20	Bolivia	12
Oman	20	Gabon	12
Russia	20	Kenya	12
Trinidad and Tobago	20	Uganda	12
Tunisia	20	Venezuela	12
Turkey	20	Iraq	11
Uruguay	20	Tanzania	11
Brazil	19	Ethiopia	10
Jamaica	19	Angola	9
Morocco	19	Cameroon	9
Jordan	18	Ecuador	9
Peru	18	Mozambique	9
Seychelles	18	Nigeria	9
South Africa	18	Pakistan	9
China	17	Côte d'Ivoire	8
Mongolia	17		

As of 30 June 2017

Governance scores above are calculated as a sum of indicators ranked on a scale of 1 (worst) to 5 (best) for each of the following five indicators: environmental performance, ease of doing business, rule of law, human development, and policy track record.

Source: Lazard

Exhibit 3
Colombia Has Room to Improve



As of 30 June 2017
Source: Lazard

This methodology, however, assigns the same score to several countries. To solve this problem, we developed a method to identify finer differences between countries:

- Rank all EMBIGD countries on each of the fourteen ESG indicators listed in Exhibit 1
- Sort these countries by broad credit rating
- Calculate the median value and standard deviation for each ESG indicator by ratings category
- Determine the number of standard deviations from the median for each country by ESG indicator
- Plot standard deviations by country

We show the results for Colombia in Exhibit 3, with median values for all BBB-rated credits represented by the dark green ring.⁶ Each ring on the radar chart represents one standard deviation, and Colombia's standard deviation from the median for each indicator is represented by the light green line. The weaker Colombia's score relative to its peers in the same credit ratings category, the further the light green line will extend beyond the median.

Looking more closely at the data behind the chart, Colombia's Political Stability ranking, at 56 out of the 65 index countries, is relatively low. The median ranking in the broad BBB-rated category is 33, which places Colombia 1.1 standard deviations below the median. However, the country is ranked 15th for Ease of Doing Business, 0.5 standard deviations above the category median of 22. Overall, Colombia compares favorably to its credit ratings peers on measures such as Ease of Doing Business and Environmental Performance, but it compares poorly on a number

of indicators, namely Voice and Accountability, Political Stability, Government Effectiveness, Rule of Law, Human Development, the Fragile States Index, and Press Freedom. Colombia is nearly on par with equivalent-rated countries on factors such as Regulatory Quality, Control of Corruption, Corruption Perceptions, Global Competitiveness, and World Risk. This approach brings into sharper relief the key ESG strengths and challenges of emerging markets countries. For our radar chart analysis of all countries in the EMBIGD index, see the Appendix.

Given the infrequent publication of these ESG measures, most of these indicators fail to take into account the November 2016 peace agreement signed between the Colombian government and the Revolutionary Armed Forces of Colombia (FARC) rebels; in addition, a peace deal with the smaller National Liberation Army (ELN) guerilla group is currently being negotiated. Because of these efforts, we think it is likely that Colombia's rankings on several ESG measures will improve when they are next updated.

Scoring ESG

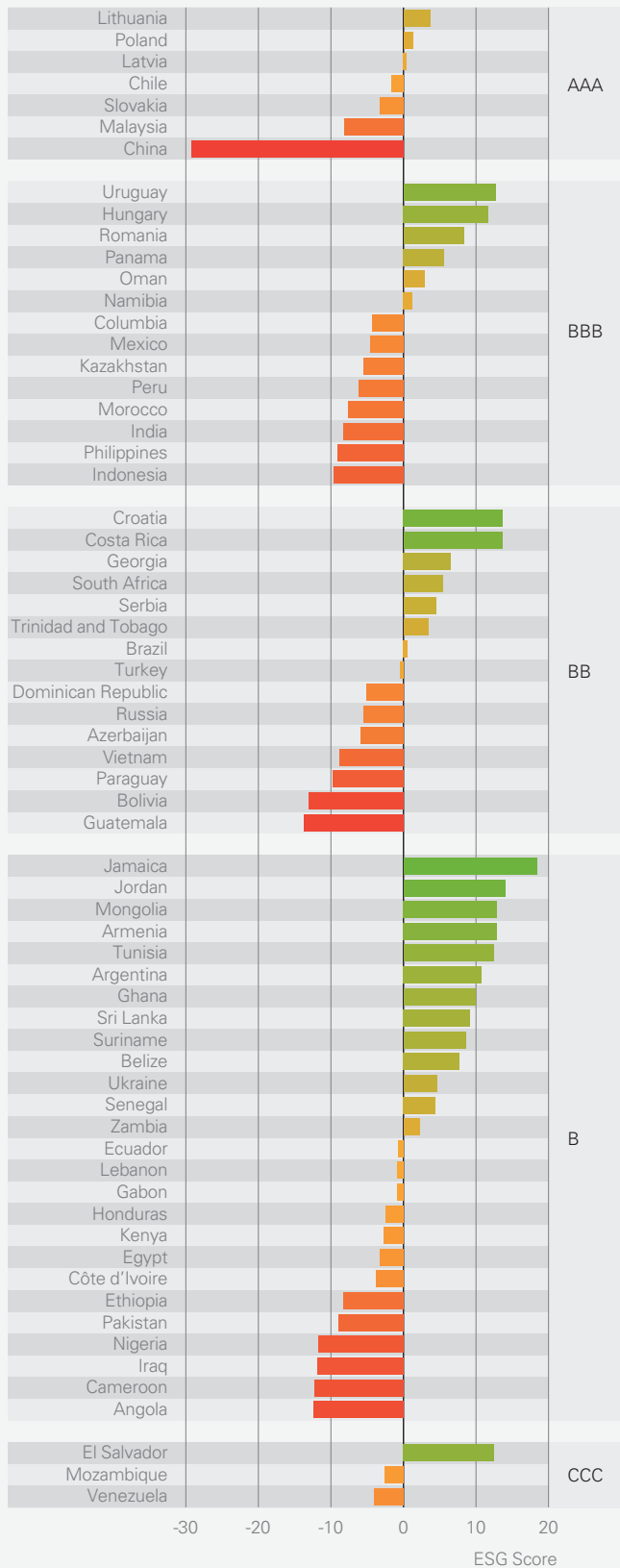
Continuing to build on our results, we created a simplified ESG score for each emerging markets credit relative to similarly rated peers in the EMBIGD index. Based on our methodology, each country's ESG score is the sum of its standard deviations from the median for each of the fourteen ESG indicators we track. Given the wide variety of indicators and the subjectivity involved in assigning degrees of importance to each one, we elected to weight them equally. For ease of interpretation, we multiplied the sum of the standard deviations by -1 in order for relative ESG strength to be expressed as a positive value and weakness as a negative value (Exhibit 4).

Perhaps unsurprisingly, China's ESG performance lags its A-rated peers by a considerable margin. In the BBB category, Latin American and European credits have stronger ESG rankings than do several of their Asian peers. African credits are among the biggest laggards in the B-rated category.

We repeated this exercise, this time calculating the median and standard deviation values of all credits within the EMBIGD universe, rather than for the subset of countries within an individual ratings category. The results also showed a positive correlation between macroeconomic fundamentals and institutional strength, with better quality credits tending to rank more highly on ESG measures than do countries with poor economic performance. Generally speaking, eastern European credits have the strongest ESG scores and African credits have the weakest (Exhibit 5).

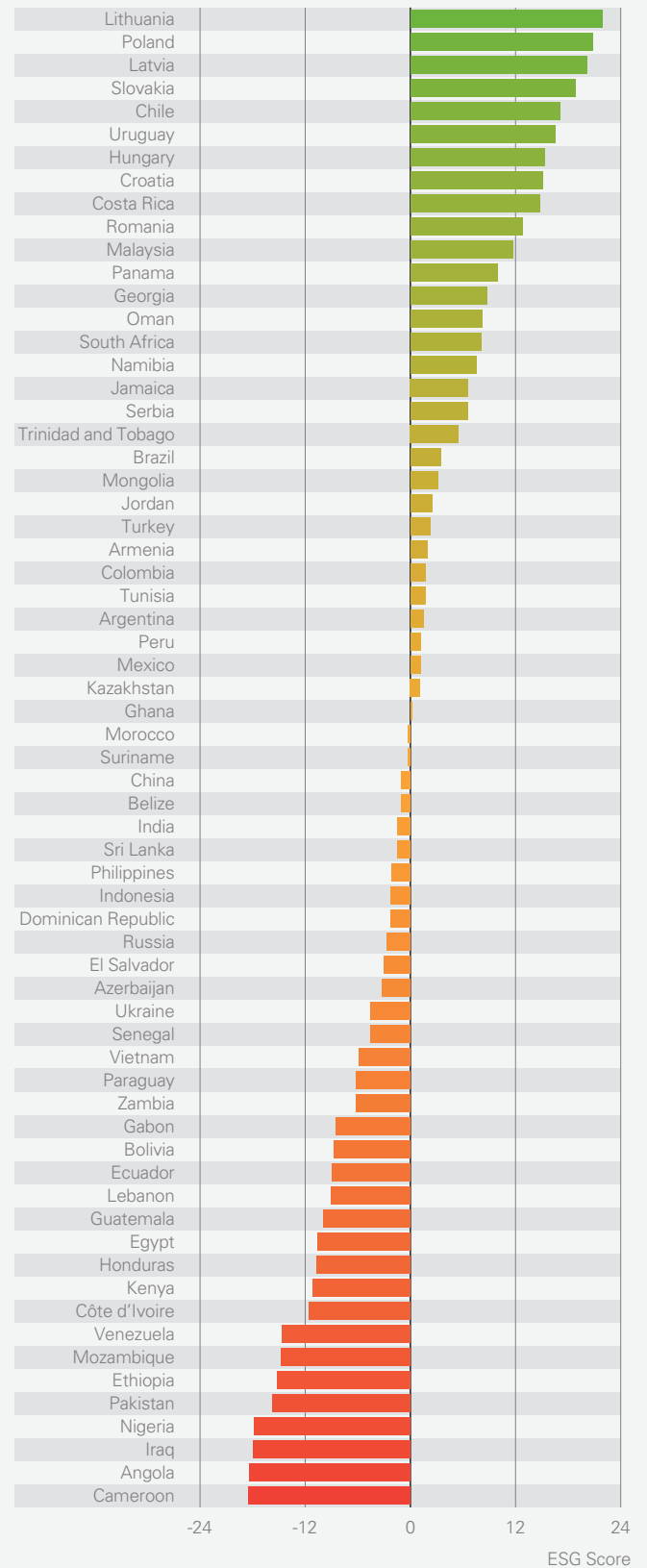
By comparing ESG scores of individual countries both at a ratings level and across the universe of emerging markets countries, our research confirms that ESG factors influence bond market spreads.

Exhibit 4
ESG Performance Varies within Ratings Categories



As of 30 June 2017
Source: Lazard

Exhibit 5
Better-Rated Countries Tend to Achieve Higher ESG Scores



As of 30 June 2017
Source: Lazard

ESG's Contribution to Spread Targets

As part of the Lazard emerging markets debt team's investment process, we establish 12-month forward five-year spread targets for all country constituents of the EMBIGD index. In an attempt to measure the contribution of ESG factors to each country's overall spread target, we leveraged the scoring system that produced Colombia's radar chart.

We assess four factors when analyzing a country's creditworthiness: ESG, government finances, external accounts, and economic strength. Each factor is associated with five indicators, for a total of 20 indicators (Exhibit 6). Each indicator is rated on a scale of 1–5, resulting in a potential overall score that ranges from 20–100 for a given country. We then assign a 50% weighting to ESG factors and a 50% weighting to the remaining three economic factors. The large ESG weighting is in line with our belief that institutional strength is the biggest driver of creditworthiness and, therefore, emerging markets credit spreads, as we discussed at the beginning of this paper. This weighted scoring system is how we estimate the portion of a country's spread that is attributable to ESG factors (Exhibit 7).

Here, we share an example:

Exhibit 6
ESG Factors Drive Our Credit Assessments

ESG	Economic	Fiscal	External
Environmental Performance	GDP per Capita	Fiscal Balance	Current Account/GDP
Ease of Doing Business	Nominal GDP	Interest/Revenues	External Debt/GDP
Rule of Law	Real GDP Growth	Public Debt/GDP	Foreign Reserves/External Debt
Human Development	CPI Inflation	Public Debt/Revenues	Foreign Reserves/Imports
Policy Track Record	Regional Support	Foreign Public Debt/Public Debt	Exchange Rate Regime
50% Weighting	50% Weighting		

For illustrative purposes only.

Economic, fiscal, and external factors are based on our 2018 projections for 15 macro-economic indicators. We rate each indicator on a scale of 1–5.

Source: Lazard

Sample Calculation

$$2 \times \{[(15 (\text{Economy}) + 16 (\text{Fiscal}) + 19 (\text{External}))/3] + 20 (\text{ESG})\} = 74$$

Weighted Total Score = 74

	Col. 1	2	3	4	5	6	7	8	9	10	11	12
Country	Economic Score	Fiscal Score	External Score	ESG Score	50% Weighted Economic	50% Weighted ESG	Weighted Total Score	Economic, % of Total Score	ESG, % of Total Score	Five-Year Spread Target (bps)	Economic Share of Spread Target (bps)	ESG Share of Spread Target (bps)
Colombia	15	16	19	20	34	40	74	46	54	140	76	64

The first four columns list our scores for a given country in the Economic, Fiscal, External, and ESG categories. We calculate the average scores of the three economic factors in Columns 1–3 and equal-weight them relative to the ESG score to yield the scores in Columns 5 and 6. We sum the reweighted ESG and economic scores for a total weighted score in Column 7.

We then calculate the economic and ESG-weighted scores as a proportion of the total weighted score (Columns 8 and 9, respectively). Colombia has a weighted overall score of 74, with 46%

derived from economic factors and 54% from ESG factors. Finally, we estimate the portion of each country's ESG spread premium by multiplying the five-year spread target (Column 10) by one minus ESG's percentage of the total weighted score (Column 9). In the case of Colombia, 64 bps of the spread target of 140 bps (1–0.55) is attributable to ESG factors, and 76 bps is attributable to economic factors. Thus, one conclusion we can draw is that, although Colombia's economic fundamentals are similar to Paraguay's, for example, Colombia's relatively stronger institutions result in a lower spread target for the country.

Exhibit 7
Allocating ESG and Economic Contributors to Country Spread Targets

	1	2	3	4	5	6	7	8	9	10	11	12	13
Country	Economic Score	Fiscal Score	External Score	ESG Score	50% Weighted Economic	50% Weighted ESG	Weighted Score	Economic as % of Total Score	ESG as % of Total Score	Five-Year Spread Target (bps)	Economic Share of Spread Target (bps)	ESG Share of Spread Target (bps)	Lazard Credit Rating
Poland	19	22	15	25	37	50	87	43	57	90	52	38	AA
Chile	19	23	16	24	39	48	87	45	55	70	39	31	AA
Slovakia	20	23	11	25	36	50	86	42	58	60	35	25	AA
Slovenia	19	18	16	25	35	50	85	41	59	75	44	31	A
Latvia	19	21	12	25	35	50	85	41	59	65	38	27	A
Lithuania	19	22	11	25	35	50	85	41	59	65	38	27	A
Hungary	16	20	15	25	34	50	84	40	60	120	71	49	A
Panama	18	20	20	22	39	44	83	47	53	105	56	49	A
Romania	16	16	15	25	31	50	81	39	61	135	83	52	A
Croatia	14	17	14	25	30	50	80	38	63	180	113	68	A
Kazakhstan	12	24	18	22	36	44	80	45	55	150	83	68	A
Russia	14	24	22	20	40	40	80	50	50	120	60	60	A
Malaysia	17	15	15	24	31	48	79	39	61	110	67	43	A
Serbia	13	17	18	23	32	46	78	41	59	185	109	76	A
Peru	16	20	24	18	40	36	76	53	47	100	47	53	A
Costa Rica	15	12	17	23	29	46	75	39	61	335	205	130	BBB
Azerbaijan	7	24	21	20	35	40	75	46	54	225	121	104	BBB
China	20	20	21	17	41	34	75	54	46	85	39	46	BBB
Colombia	15	16	19	20	34	40	74	46	54	140	76	64	BBB
Morocco	16	17	20	19	35	38	73	48	52	160	83	77	BBB
Turkey	12	24	13	20	33	40	73	45	55	180	99	81	BBB
Mexico	14	16	18	20	32	40	72	44	56	125	69	56	BBB
Oman	16	19	11	20	31	40	71	43	57	225	127	98	BBB
Uruguay	11	15	20	20	31	40	71	43	57	135	76	59	BBB
Trinidad and Tobago	13	12	20	20	30	40	70	43	57	195	111	84	BB
Brazil	14	9	24	19	31	38	69	45	55	225	123	102	BB
Philippines	16	16	21	17	35	34	69	51	49	90	44	46	BB
Georgia	11	17	12	21	27	42	69	39	61	200	122	78	BB
Belarus	8	16	13	21	25	42	67	37	63	425	268	157	BB
Namibia	10	15	15	20	27	40	67	40	60	235	141	94	BB
South Africa	11	18	15	18	29	36	65	45	55	185	102	83	BB
Armenia	9	14	10	21	22	42	64	34	66	325	213	112	BB
Indonesia	15	18	17	15	33	30	63	53	47	125	59	66	BB
Tunisia	11	12	12	20	23	40	63	37	63	475	300	175	BB
Bahrain	13	8	6	22	18	44	62	29	71	285	202	83	BB
Guatemala	12	18	21	14	34	28	62	55	45	185	84	101	BB
Jordan	12	12	14	18	25	36	61	41	59	350	205	145	BB
Argentina	13	17	16	15	31	30	61	51	49	300	148	152	BB
Jamaica	8	10	16	19	23	38	61	37	63	300	188	112	BB
Paraguay	10	20	19	14	33	28	61	54	46	150	69	81	BB
India	14	11	21	13	31	26	57	54	46	115	53	62	B
Rwanda	10	16	11	16	25	32	57	44	56	375	212	163	B
Bolivia	10	19	19	12	32	24	56	57	43	250	107	143	B
Dominican Republic	14	11	14	15	26	30	56	46	54	275	147	128	B
Suriname	8	15	15	15	25	30	55	46	54	650	352	298	B
Honduras	9	18	16	13	29	26	55	52	48	300	143	157	B
Lebanon	13	8	16	15	25	30	55	45	55	360	198	162	B
Sri Lanka	12	8	11	17	21	34	55	38	62	350	218	132	B
Vietnam	13	10	16	14	26	28	54	48	52	205	106	99	B
Republic of Congo	11	16	14	13	27	26	53	51	49	1,000	488	513	B
Mongolia	6	5	16	17	18	34	52	35	65	475	311	164	B
Ghana	10	8	17	14	23	28	51	45	55	475	259	216	B
El Salvador	10	11	10	15	21	30	51	41	59	550	326	224	B
Senegal	13	13	11	13	25	26	51	49	51	350	180	170	B
Iraq	14	13	15	11	28	22	50	56	44	525	231	294	B
Zambia	8	8	17	14	22	28	50	44	56	500	280	220	B
Egypt	11	9	15	13	23	26	49	47	53	350	184	166	B
Ukraine	8	11	9	15	19	30	49	38	62	450	277	173	B
Cameroon	12	15	18	9	30	18	48	63	38	450	169	281	B
Gabon	10	11	15	12	24	24	48	50	50	475	238	238	B
Kenya	12	11	13	12	24	24	48	50	50	500	250	250	B
Ecuador	12	20	12	9	29	18	47	62	38	600	228	372	B
Nigeria	10	14	20	9	29	18	47	62	38	325	124	201	B
Angola	9	10	23	9	28	18	46	61	39	575	225	350	B
Côte d'Ivoire	14	15	15	8	29	16	45	65	35	350	124	226	B
Belize	10	13	6	12	19	24	43	45	55	700	388	312	B
Ethiopia	11	15	8	10	23	20	43	53	47	475	223	252	B
Pakistan	13	11	13	9	25	18	43	58	42	385	162	223	B
Mozambique	8	8	13	9	19	18	37	52	48	1,300	627	673	CCC
Venezuela	7	5	7	12	13	24	37	35	65	2,808	1,838	970	CCC

As of 30 June 2017

Forecasted or estimated results do not represent a promise or guarantee of future results and are subject to change.

Source: Lazard

Exhibit 8
Projected ESG Premium by Credit Type

Types of Credits	Lazard Rating	Score Range	Approximate ESG Premium
Extremely Solid Credits	AA	>85	25-40 bps
Solid Investment Grade (IG)	A	76-85	40-75 bps
Weak IG	BBB	71-75	75-100 bps
Strong Non-IG	BB	61-70	100-150 bps
Weak Non-IG	B	41-60	150-300 bps
Risk of Default in Medium Term	CCC	≤ 40	600 bps+

As of 30 June 2017

Forecasted or estimated results do not represent a promise or guarantee of future results and are subject to change.

Given the stressed nature and minimal number of credits we consider in the Risk of Default in Medium Term category, our spread target, and therefore, the approximate ESG premium for the category, is significantly higher than that for the Weak Non-IG category.

Source: Lazard

Our analysis has allowed us to form some useful observations about the relationships between different types of sovereign credits, our assessment of their creditworthiness, and their ESG spread premiums (Exhibit 8). Referring back to Exhibit 7, the ESG pickup for each country is detailed in Column 12, and the range of countries in each credit ratings category is indicated by the colored vertical bars (descending from green to red). We must emphasize that these ranges are approximate since there are instances whereby the ESG premium is out of range due to idiosyncratic country issues.

The scorecard approach is imperfect in that it may not completely capture a country's strengths or vulnerabilities due to lagging ESG indicators, global factors, issues not captured by the macroeconomic or ESG indicators considered in our methodology, or stale macroeconomic forecasts. Nevertheless, we believe these scores are a good approximation of a country's creditworthiness and they provide an excellent starting point for assessing the ESG component of spread targets.

Conclusion

Over the past several years, there has been a marked increase in global investor interest surrounding ESG factors. From our perspective as emerging markets debt investors, this is a welcome trend. Our experience has long driven us to believe that institutional strength is an important determinant of sovereign bond performance in the developing world.

Our conclusion in this paper is consistent with our observations and the findings of several multilateral and nongovernmental organizations. Namely, we see a strong relationship between a country's ESG standards and its creditworthiness. By ranking every country in the EMBIG index on fourteen ESG criteria, we are able to assess more precisely a country's investment attractiveness from an ESG perspective. Comparing the scores against country spreads, we see a clear link between a country's ESG performance and its cost of borrowing. The scoring approach we developed also allows us to identify finer differences between countries with similar overall ESG profiles.

Ultimately, our ability to quantify the portion of our spread targets that is attributable to ESG factors helps us better understand the ESG premium associated with each sovereign credit. While this assessment is not foolproof, it nonetheless provides a strong foundation for our investment analysis.

We believe our findings underscore the importance of monitoring and quantifying ESG developments in emerging markets, particularly in the highly influential area of governance. This also affirms the importance of structural reform progress in the developing world, not least as a way for countries to enhance their credit profile in the eyes of investors.

This content represents the views of the author(s), and its conclusions may vary from those held elsewhere within Lazard Asset Management. Lazard is committed to giving our investment professionals the autonomy to develop their own investment views, which are informed by a robust exchange of ideas throughout the firm.

Notes

- 1 The J.P. Morgan Emerging Markets Bond Index (EMBI) Global Diversified is a uniquely weighted version of the J.P. Morgan EMBI Global Index. It limits the weights of those index countries with larger debt stocks by only including specified portions of these countries' eligible current face amounts of debt outstanding. The two indices have the same country constituents.
- 2 Qian, Rong. "Why Do Some Countries Default More Often Than Others? The Role of Institutions," Policy Research Working Paper Series 5993, The World Bank, 2012, http://econweb.umd.edu/~qian/Qian_job_market_paper.pdf
- 3 Choi, Sangyup and Yuko Hashimoto. "The Effects of Data Transparency Policy Reforms on Emerging Market Sovereign Bond Spreads," IMF Working Paper WP/17/74, March 2017, <https://www.imf.org/en/Publications/WP/Issues/2017/03/28/The-Effects-of-Data-Transparency-Policy-Reforms-on-Emerging-Market-Sovereign-Bond-Spreads-44772>
- 4 Han, Xuehui, Haider Khan and Juzhong Zhuang. "Do Governance Indicators Explain Development Performance? A Cross-Country Analysis," Asian Development Bank, ADB Economics Working Paper Series, No. 417, November 2014, <https://www.adb.org/sites/default/files/publication/149397/ewp-417.pdf>
- 5 Capelle-Blancard, Gunther, Patricia Crifo, Marc-Arthur Diaye, Bert Scholtens and Rim Oueghliissi. "Environmental, Social and Governance (ESG) Performance and Sovereign Bond Spreads: An Empirical Analysis of OECD Countries," November 22, 2016, <https://ssrn.com/abstract=2874262>
- 6 This subset of countries includes Colombia, Hungary, India, Indonesia, Kazakhstan, Mexico, Morocco, Namibia, Oman, Panama, Peru, the Philippines, Romania, and Uruguay.

Important Information

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An investment in bonds carries risk. If interest rates rise, bond prices usually decline. The longer a bond's maturity, the greater the impact a change in interest rates can have on its price. If you do not hold a bond until maturity, you may experience a gain or loss when you sell. Bonds also carry the risk of default, which is the risk that the issuer is unable to make further income and principal payments. Other risks, including inflation risk, call risk, and pre-payment risk, also apply. High yield securities (also referred to as "junk bonds") inherently have a higher degree of market risk, default risk, and credit risk. Securities in certain non-domestic countries may be less liquid, more volatile, and less subject to governmental supervision than in one's home market. The values of these securities may be affected by changes in currency rates, application of a country's specific tax laws, changes in government administration, and economic and monetary policy. Emerging markets securities carry special risks, such as less developed or less efficient trading markets, a lack of company information, and differing auditing and legal standards. The securities markets of emerging markets countries can be extremely volatile; performance can also be influenced by political, social, and economic factors affecting companies in these countries. Derivatives transactions, including those entered into for hedging purposes, may reduce returns or increase volatility, perhaps substantially. Forward currency contracts, and other derivatives investments are subject to the risk of default by the counterparty, can be illiquid and are subject to many of the risks of, and can be highly sensitive to changes in the value of, the related currency or other reference asset. As such, a small investment could have a potentially large impact on performance. Use of derivatives transactions, even if entered into for hedging purposes, may cause losses greater than if an account had not engaged in such transactions.

Appendix

ESG Indicators

- The World Bank's Worldwide Governance Indicators (WGI) are composite indicators that evaluate six dimensions of governance, including Voice and Accountability, Political Stability and Absence of Violence, Government Effectiveness, Regulatory Quality, Rule of Law, and Control of Corruption. The WGI cover 214 countries and are based on data from more than 30 underlying sources, including surveys of households and firms, commercial business information providers, non-governmental organizations, and public sector organizations.¹
- Transparency International's Corruption Perceptions Index is based on an aggregation of data on 176 countries collected from 13 different data sources from 12 public, private, and multinational institutions that quantify perceptions of corruption in the public sector.²
- The World Bank's Ease of Doing Business ranking evaluates the regulatory environment in 190 countries to determine how conducive the environment is to starting and operating a local business. The rankings are determined by an equally-weighted aggregation of scores on ten topics, each consisting of several indicators. Each economy is measured according to its proximity to the best performance observed on each indicator across all economies.³
- The Human Development Index is compiled by the United Nations Development Programme, which ranks 188 countries according to several demographic criteria, including life expectancy, education level, and GDP per capita.⁴
- The World Economic Forum's Global Competitiveness Index assesses the competitive landscape of 138 countries by surveying national authorities, international agencies, and private sources about 114 indicators of productivity and long-term prosperity. These indicators are grouped into 12 topics that include institutions, infrastructure, macroeconomic environment, health and primary education, higher education and training, goods market efficiency, labor market efficiency, financial market development, technological readiness, market size, business sophistication, and innovation.⁵
- The Environmental Performance Index is compiled by Yale University, which is constructed through the calculation and aggregation of more than 20 indicators reflecting national-level environmental data for 180 countries. These indicators are combined into nine issue categories, each of which fit under the overarching themes of ecosystem vitality and environmental health.⁶
- The Fragile States Index is compiled by the Fund for Peace and uses a proprietary software application to analyze millions of documents each year that monitor 12 primary social, economic, and political indicators in 180 countries.⁷
- The United Nations University's World Risk Index calculates the risk of becoming the victim of a disaster resulting from an extreme natural event. The index assesses risks in 171 countries through the combined analysis of natural hazards and societal vulnerabilities, with a focus on each country's infrastructure and logistics chain in its response to a disaster.⁸
- The Freedom of the Press Index is compiled by Freedom House, an independent watchdog organization dedicated to the expansion of freedom and democracy around the world. The index assigns a press freedom score to 199 countries and territories in response to 23 methodology questions that seek to capture the ways in which pressure can be placed on the flow of objective information and the ability of platforms to operate freely and without fear of repercussions. The methodology covers the legal, political, and economic environments in which print, broadcast, and digital media operate.⁹

ESG Radar Charts

Country Constituents of the J.P. Morgan EMBI Global Diversified Index

— Median — Standard Deviation



Côte d'Ivoire



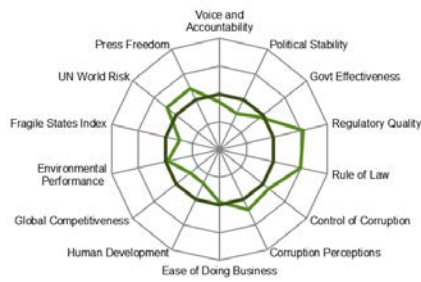
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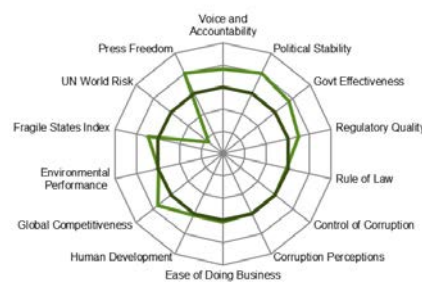
Dominican Republic



Ecuador



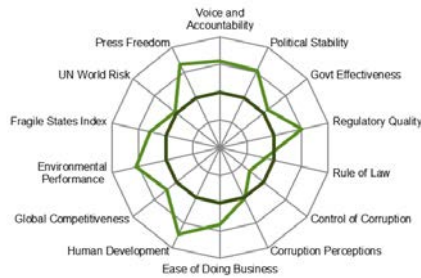
Egypt



El Salvador



Ethiopia



Gabon



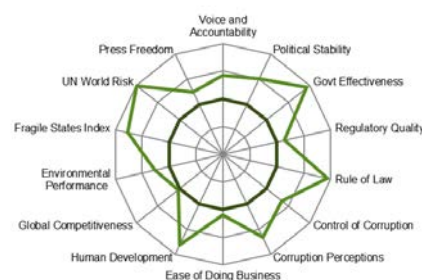
Georgia



Ghana



Guatemala



Honduras



Hungary



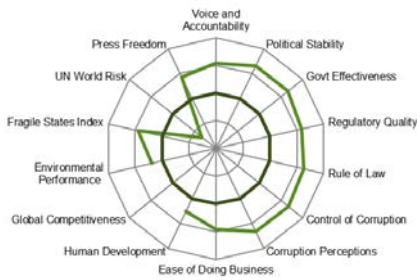
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Indonesia



Iraq



Jamaica



Jordan



Kazakhstan



Kenya



Latvia



Lebanon



Lithuania



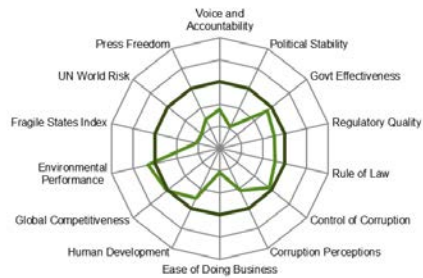
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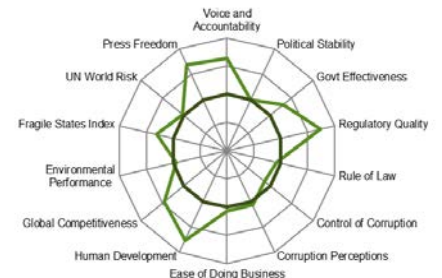
Mexico



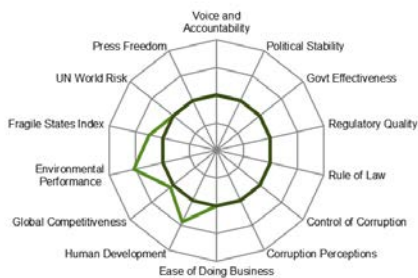
Mongolia



Morocco



Mozambique



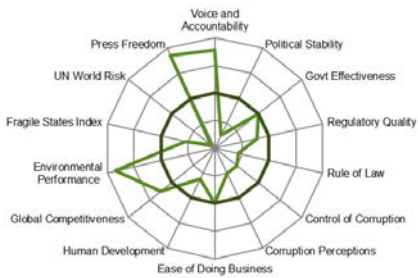
Namibia



Nigeria



Oman



Pakistan



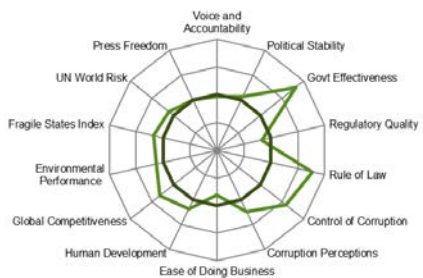
Panama



Paraguay



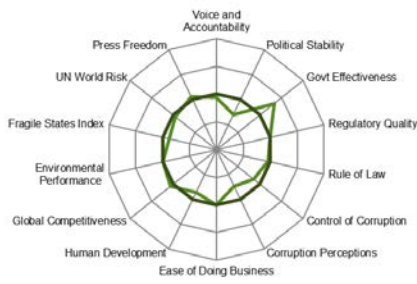
Peru



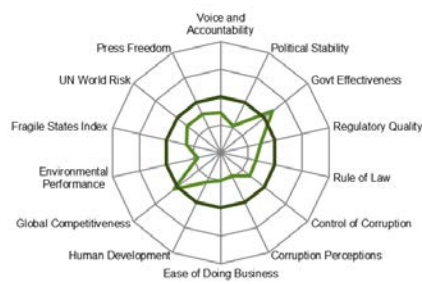
Philippines



Poland



Romania



Russia



Senegal



Serbia



Slovakia



South Africa



Sri Lanka



Suriname



Trinidad and Tobago



Tunisia



Turkey



Ukraine



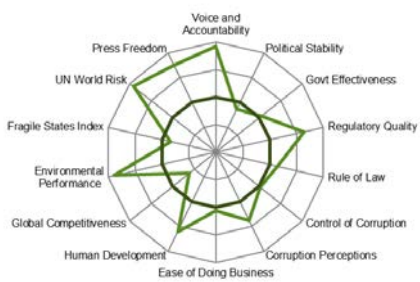
Uruguay



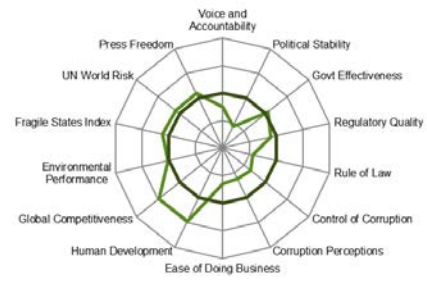
Venezuela



Vietnam



Zambia



Notes

¹ World Bank, Worldwide Governance Indicators, 2015, <http://info.worldbank.org/governance/wgi/index.aspx#home>.

² Transparency International, Corruption Perceptions Index 2016, https://www.transparency.org/news/feature/corruption_perceptions_index_2016.

³ The World Bank, Doing Business, Economy Rankings, June 2016, <http://www.doingbusiness.org/rankings>.

⁴ United Nations Development Program, Human Development Index, 2015, <http://hdr.undp.org/en/composite/HDI>.

⁵ World Economic Forum, The Global Competitiveness Report 2016-2017, http://www3.weforum.org/docs/GCR2016-2017/05FullReport/TheGlobalCompetitivenessReport2016-2017_FINAL.pdf.

⁶ Hsu, A. et al., 2016 Environmental Performance Index, New Haven, CT, Yale University, www.epi.yale.edu.

⁷ Fund for Peace, Fragile States Index 2016, <http://fsi.fundforpeace.org/rankings-2016>.

⁸ World Risk Report 2016, United Nations University Institute for Environment and Human Security, <http://collections.unu.edu/view/UNU:5763>.

⁹ "Press Freedom's Dark Horizon," Freedom of the Press 2017, Freedom House, April 2017, https://freedomhouse.org/sites/default/files/FOTP_2017_booklet_FINAL_April28.pdf.