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Should indexes have a conscience?

The tragedy of Venezuela prompts a rethink of how emerging-market bond indexes are constructed

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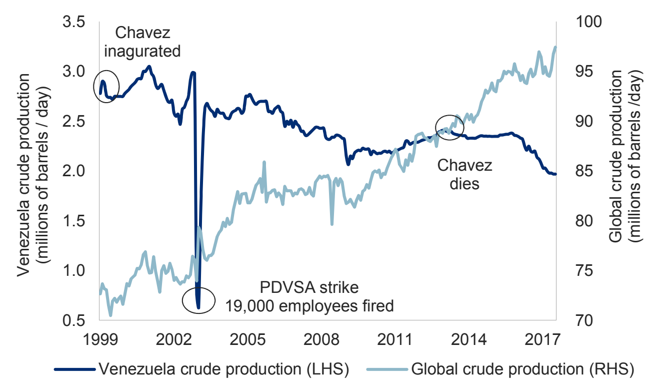
Emerging market countries, by their very definition, are those with weaker institutions and governance, which lack checks and balances on power and which suffer from poor transparency. Investor focus on these features ebbs and flows with liquidity and headlines. The vast majority of active investors will screen for a broad variety of economic and valuation factors. But at what point do "social values" indicators make a country un-investable?

Much of this debate for RBC GAM's emerging market bond team has surrounded Venezuela over recent months. The country has recently announced a restructuring of its debt. In mid-November it began partially defaulting on bond payments. This followed decades of economic mismanagement under former President Hugo Chavez and his handpicked successor, President Nicolas Maduro.

Last May, Professor Ricardo Hausmann, head of the Centre for International Development at Harvard and himself a former Venezuelan planning minister, asked the following question in an article entitled "The Hunger Bonds" on the Project Syndicate website:[1]

> "*Investing often creates moral dilemmas over goals: Should we aim to do well or to do good? Is it appropriate to invest in tobacco companies? Or in companies that sell guns to drug gangs?... Nowadays, it is emerging markets as an asset class that should make people morally queasy. Should decent people put their money in emerging-market bond funds?*"

Exhibit 1: Venezuelan oil production has fallen even as global production has risen



Note: Data as of Jul. 31, 2017. Source: Bloomberg, RBC GAM

How to blow a trillion dollars

Perhaps it is first worth asking how Venezuela, the wealthiest country in Latin America with a credit rating of Aaa in 1976, became the Caa3 rated pariah of today?[2] How did this happen to the country with the world's

[1] Ricardo Hausmann, *The Hunger Bonds*, Project Syndicate, May 26, 2017

[2] Moody's Investor Service

largest proven oil reserves?[3] How did Venezuela see its oil production decline 31% from 1998 while production elsewhere in the world was sky-rocketing (Exhibit 1)?

Why, over the last twenty years, when Norway, Saudi Arabia and Russia were building up enormous sovereign wealth funds, did Venezuela run steadily growing budget deficits and sextuple its foreign currency debt, even as oil prices touched US$145? The country, with a population of 31 million, received an estimated $1 trillion in oil revenues over the last 18 years (Exhibit 2).

At the moment, 25% of Venezuelan production goes to domestic sales at wildly subsidized prices. All Venezuelans, whether wealthy or poor, pay less than 1 cent per litre for gasoline. This is a dramatic incentive to smuggle it across borders into Colombia and Brazil. Another 25% goes to China and Russia as debt repayments. Where does the rest of it go?

An oil boom masquerading as a “Bolivarian Socialist Revolution”

In politics, timing is everything. Hugo Chavez had the luck to be elected president – with 56% of the vote on a voter turnout of 63%[4] – near the post-Asia-crisis nadir in oil prices in December 1998 (Exhibit 3).

An electorate embittered by an indifferent oligarchy voted for his anti-corruption and social inclusion platform. He promised them a “Bolivarian Socialist Revolution.”

[3]BP Statistical Review of World Energy, 2016

[4]Election Guide – Democracy Assistance & Election News

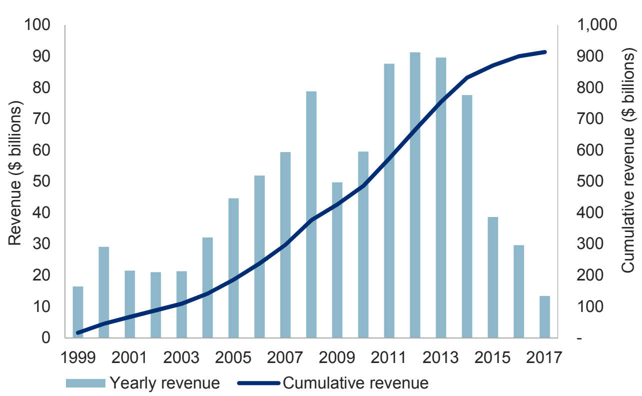
Venezuelans were understandably enamoured of Chavez’s free-wheeling spending programs for healthcare, food and education for the poor. Similar programs had been successfully enacted in Mexico and Brazil. Yet the Venezuelan programs came at a price. Within a year of President Chavez’s election, Freedom House[5] had downgraded the country from “free” to “partly free” following a referendum that began the dismantling of the country’s institutions. The judiciary came under presidential control as did the country’s electoral council that oversaw the legitimacy of elections. Press freedom was muzzled. Reporters without Borders ranked Venezuela 137 out of 180 countries in 2015. Mexico and Brazil had managed to successfully introduce poverty alleviating programs without making the institutional sacrifices Venezuela was seeing. Higher spending was accompanied by far lower transparency. Corruption began to skyrocket. Veteran Venezuela analyst Siobhan Morden of Nomura estimates corruption and capital flight have cost the country $300 billion over the past 17 years. Crime increased; most notably the homicide rate which tripled from 1998 to 2015, from 19 per 100,000 people to 57, making Venezuela the third most dangerous country in the world.[6]

President Chavez began to seize more direct control of national oil company PDVSA, which until then had operated in a reasonably independent and professional manner, in the first years of the new century. Ultimately this led to a strike at PDVSA in 2002 which prompted Chavez to fire 40% of the company’s staff, many of them oil industry experts.

[5]Freedom House is a U.S. based NGO conducting research and advocacy on democracy, political freedom and human rights. It is funded by the U.S. government.

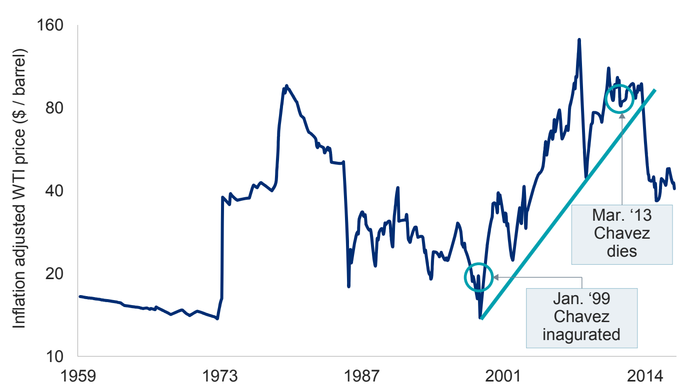
[6]After El Salvador and Honduras, World Bank

Exhibit 2: Venezuela’s squandered oil wealth



Note: Data as of Aug. 31, 2017. Petroleos de Venezuela crude oil basket used for oil price. Crude production is an average of DOE and OPEC data. Source: Bloomberg, RBC GAM

Exhibit 3: Chavez’s regime accompanied a historic boom in oil



Note: Data as of Jun. 30, 2017. Price data adjusted using PCE deflator (2009 = 100). Source: Bloomberg, Bondlab, RBC GAM

Most of them fled the country and their energy expertise went with them. They were replaced by people whose principal qualification was loyalty to the president. The country's barrels of production per dollar of capex fell from 13 in early 2003 to as low as 1.14 per dollar in 2014 (Exhibit 4).

Yet Venezuelans re-elected President Chavez in 2000, 2006 and 2012. As luck would have it, he would die in 2013 just as the China-driven oil price boom was coming to a close.

An economic travesty has become a social tragedy

The country is a text-book case of economic mismanagement. GDP has plunged more than 40% since 2013. The minimum wage has collapsed more than 88% measured at the black-market foreign exchange rate. People are picking through garbage in search of food. In-patient mortality has risen 10-fold while the death of newborns in hospitals is up 100-fold.[7]

Multiple exchange-rate regimes permit those with privileged access to buy dollars from the central bank at advantageous prices and then sell them at vast multiples on the black market. Two years ago the black market rate to buy one dollar was 467 bolivares. At the beginning of December it took more than 100,000[8].

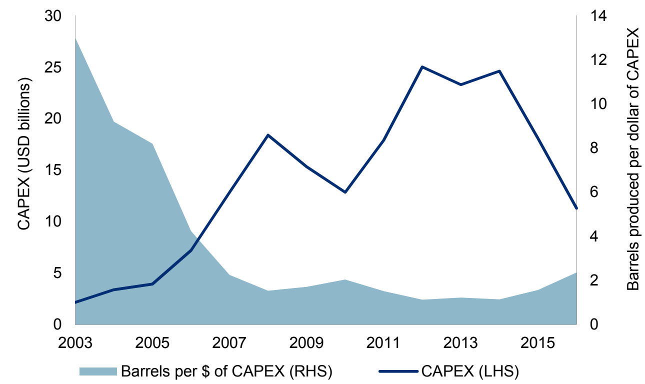
Expropriations and political interference have caused domestic production of goods to slump and capital to flee. The country must now import virtually everything it requires, particularly food, prompting intense competition for scarce dollars. Even refined gasoline is imported. Yet as local production of goods has cratered, imports too have collapsed, falling 75% from 2012 to 2016. Analysts estimate they contracted another 15% to the end of August this year. Basic products are imported, the government establishes artificially low regulated prices for them and they are distributed to stores by the military. A military general is Minister for Food. A bakery will pay 2 cents per pound for sugar and then 60 cents for the same pound, separately, as a kickback.[9] Estimates are that half of imports are appropriated for the black market, much of which is sold in neighbouring countries.

[7]Ricardo Hausmann, *Venezuela's Unprecedented Collapse*, Project Syndicate August 18,2017

[8]www.dolartoday.com

[9]Hannah Dreier and Joshua Goodman, *Venezuela military trafficking food as country goes hungry*, Associated Press, December 28, 2016

Exhibit 4: PDVSA's CAPEX skyrocketed even as production collapsed



Note: Data as of Jan. 31, 2017. Source: Macrobond, Bloomberg, RBC GAM

For years PDVSA has made "social contributions" to the government. In its recent annual report the company noted that from 2015 to 2016 these contributions plunged from US$9.2 billion to US$1 billion as a consequence of buckling oil revenues.

In late July, despite four months of street protests, the Venezuelan government held elections for a new constituent assembly to rewrite the constitution. This was viewed as a broadside against the opposition controlled National Assembly. The election was widely regarded as fraudulent. Twelve nations from the Americas, including Canada, refused to recognize any decision taken by the constituent assembly and further condemned the government for not accepting foreign donations of food and medicine.

The UN recently issued a scathing report charging the government with human-rights abuses and torture by Venezuelan security forces. Opposition leaders have been jailed. Close to 5,000 people have been detained for participating in demonstrations, and 124 demonstrators have been killed this year.

The U.S. Treasury subsequently introduced sanctions, banning U.S. banks from participating in new issues by the Venezuelan government or trading new bonds in the secondary market. Treasury's OFAC[10] must issue a license to permit investment banks to participate in a restructuring. It will not issue a license if a restructuring is not approved by Venezuela's National Assembly.

Confusing as it is the US exports both gasoline and light crude to Venezuela. Venezuela requires light crude to mix with its heavy crude permitting the latter to be transported.

[10]Office of Foreign Assets Control, enforces economic and trade sanctions

In turn, close to 500,000 barrels of Venezuelan oil go to U.S. refiners each day. This puts considerable leverage in U.S. government hands, but using it comes at a cost. The introduction of sanctions has been used as "evidence" by the Venezuelan government that the country is failing, not due to its own ineptitude but as a consequence of a conspiracy by the "Imperialist Americans." President Maduro's approval rating rose from 17% to 23% following the U.S. decision.[11]

Similar "Imperialistic" cries have been raised as the U.S. brought indictments for drug trafficking against the former head of the intelligence service, former anti-drug officials, the former Minister of Defense and the former head of the National Assembly, accusing them of partnering with Colombian and Mexican drug cartels. In February this year, the U.S. added Venezuela's current Vice President, Tarek El Aissami, to the list. On November 2, President Maduro appointed El Aissami as chief debt negotiator for the government.

Perhaps what is most disheartening is that despite all of the burdens that have befallen Venezuelans, ineffective and infighting opposition groups have been unable to arrive at anything resembling a coherent collective strategy.

Venezuela is depending on the "kindness of strangers"

Venezuela was able to meet external debt payments last spring only through the "good graces" of Russian state-owned oil company Rosneft. There is little transparency regarding the terms of the transactions with Russia, which amount to some US$6 billion. Similarly, we lack information on the estimated US$19 billion in funding the country has outstanding with Chinese development banks. The country has been shut out of issuance in international capital markets for some time due to its economic deterioration. Instead, the government has relied on selling dollar-denominated debt to locals at an advantageous foreign exchange rate only to have the bonds then leak into international secondary markets at deeply discounted prices.

On August 30, Hausmann published a new article on Project Syndicate. Here he castigated Goldman Sachs Asset Management for reportedly purchasing US$2.8 billion in "hunger bonds" from the Venezuelan national oil company at a deep discount from already low market prices. Hausmann challenged the morality of purchasing such bonds even as the country's economy collapsed.[12]

Clearly, Venezuelans have been desperately-ill served by their government. What has happened to investors?

Investors answer the "siren call of the interest carry"

From a post oil crash low in January 2015 to early March this year, the Venezuela sub index of the EMBIGD rose more than 150%. Government officials, in order to maintain their grip on power, have chosen to pay bond holders for fear of the steps investors might take to seize the proceeds of oil exports, thus bringing dollar inflows to a halt.

As October came to a close, Venezuelan bonds had fallen 17% from their early spring peak. The total 12-month return on the Venezuela sub-index was -1.4%. However, investors looking more closely would see that while bond **prices** were down 18.3% over the previous year, **interest** returns were positive, nearly 21%. Bond holders had been playing the equivalent of Russian roulette with the Venezuelan government. On November 13th, with the first defaults, the chamber was finally found to be loaded. For the month of November the Venezuelan subindex fell 29%. The cost to the overall emerging market bond index was 41 basis points. Despite this, the overall index still turned in a modest +0.05% return for the month of November.

In his original May article for Project Syndicate, Hausmann observed that Venezuela represented "only" 5% of the JPMorgan EMBI+ (one widely followed EM bond index) but accounted for 20% of the index's yield. We employ the JPMorgan Emerging Market Bond Index Global Diversified (EMBIGD) which limits individual country weightings. Venezuela accounted for only 1.42% of our index at the end of October. However, with the country's bonds carrying yields of more than 30%, this small part of the index contributed nearly 10% of the index's 5.10% yield. Exhibit 5 illustrates the difference between the yield on the index, with and without Venezuela, and how much Venezuela contributed to this yield.

Why we found it hard to jettison Venezuela

Why don't we just ignore Venezuela? In part it is driven by that cost of carry, or loss of yield. To try to replace Venezuela's 30%+ yield contribution to the index at

[11]Reuters World News, October 2, 2017

[12]Ricardo Hausmann, Ugo Panizza, *Odiousness Ratings for Public Debt,* Project Syndicate, August 30, 2017

the end of October would have required, for example, increasing the allocation to single B-rated bonds from 21% of the benchmark index to 45% (employing the 6.28% yields prevailing on the single B sector at the end of October).[13] We believed it too late in the credit cycle to so dramatically increase the allocation to riskier bonds. Many single B rated bonds are trading near 100 cents on the dollar. Many of these countries also have fundamentals that are deteriorating. Countries in this group, including Angola, Iraq and Pakistan, display social challenges and indicators that are equal to or worse than those faced by Venezuela. To eliminate the yield differential would have dramatically reduced both the average credit quality and qualitative, or social values, measures for our EM investments overall. In addition to this, we have investment policy limits on how much our average credit quality can be below its benchmark. Lastly, measurements of our active risk relative to the benchmark (tracking error) would increase significantly were we to have simply eliminated Venezuela on its own. Thus while we have been under weight Venezuela for years, except for a brief period following Hugo Chavez's death when we hoped policies might change, we nonetheless have maintained an allocation. We have emphasized bonds with the lowest price as all bonds tend to trade at similar levels as defaults unfolds. From 2015 on we assumed there would be a restructuring. During an investor trip to Venezuela in 2015 we advised one opposition leader on how they might constructively begin preparing for this.

Putting a price on havoc

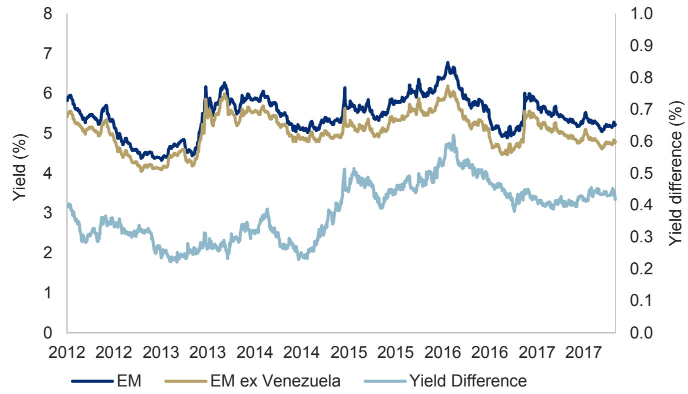
In his article Hausmann argued:

> *"Analysts who are bullish on Venezuelan debt have been lobbying the government and opposition leaders with an implied threat. Even considering the restructuring of your bonds, they point out, will allow those managing your assets (sic) to cause havoc in Venezuela."*

With the sovereign bonds trading at 21 to 25 cents on the dollar at the end of November, our team would argue that both restructuring and havoc have largely been priced in. The country has been unable to access international capital markets for some time. It has been receiving no foreign direct investment. What the market finds enormously difficult to price is how events will unfold following the default – most critically, with or without more violence and with or without the existing regime.

[13]According to Bloomberg Port analytics

Exhibit 5: Venezuela contributes an ever larger part of index yield as the country approaches collapse



Note: Data as of Nov. 2, 2017. Source: Macrobond, JPMorgan, RBC GAM

With a coherent economic policy, international support from multilateral lenders, aid to the many vulnerable in the economy and, yes, a debt restructuring, both citizens and investors could do well. In fact, analysis by our team shows outsize returns by countries as they emerge from restructurings.

Why is this? Well, they exit with lower debt burdens, lower interest costs and maturities extended, thus overall reduced refinancing risk. They have generally adopted better public policies and benefit from IMF oversight. (Venezuela has not undergone an IMF Article IV "audit" since 2004). With this improved outlook and generally high exit yields in line with vulnerable countries, bonds of restructured countries become comparatively attractive.[14]

Furthermore, countries can make use of restructuring tools that align the interests of investors and citizens. These include warrants that pay out when GDP growth rises above a certain threshold or when oil prices or oil production rise above a particular level. Essentially the country pays more to holders of restructured bonds (who have absorbed principal losses) when it is in a better position to do so.

The historical average recovery value following sovereign defaults was 65 cents on the dollar from 1998 to 2016 according to Moody's.[15] When re-weighted for the size of the issued debt, this falls to 46 cents on the dollar thanks to Argentina, Greece and Russia. Ecuador and Argentina, two serial defaulters, have seen recovery rates as low as

[14]The obvious question would be why don't more countries restructure? Markets demanding higher risk premiums for countries that default, the risk of having assets seized by creditors, as well as the loss of access to funding both for the sovereign and its banks – all act as deterrents.

[15]Moody's Investor Service, *Sovereign Default and Recovery Rates, 1983-2016*, June 30, 2017

26 and 27 cents respectively. Exhibit 6 illustrates the impact on the Venezuelan sub index and broad index returns using these historic recovery values. Attractive? The Catch: Will this restructuring occur within the next 12 months or will it take 15 years as it did with Argentina? And during this time – however long – you receive no interest payments and lose the effect of compounding on those interest payments. A second catch – if the current government were to achieve a restructuring without the consent of the National Assembly, then a new government would likely choose to repudiate the restructured debt. And what investor would trust the existing government to change its economic spots to stripes?

Hausmann has demanded that JPMorgan eject Venezuela from its various indexes. Unlike many bond indexes, the JPMorgan EMBIGD does not use credit ratings to determine membership but instead employs a Gross National Income (GNI) per-capita ratio measure from the World Bank. To be eligible, countries must have an adjusted GNI below a prescribed level for a minimum of three years. Potential members are also screened for whether pricing is available daily from a third-party vendor. The minimum-issue size for a bond to be included in the index is US$500 million. Even countries that default are not sent into exile. These criteria lead to the amazing result that Mozambique, which defaulted in 2016, delivered returns on its sub-index of well over 15% from January 1 to November 30 in 2017. Very strong inflows to EM bonds, particularly by passive investors who are called upon to simply replicate the benchmark, pushed up the price of the bonds despite Mozambique making no interest payments.

JPMorgan quietly introduced an alternative benchmark, the EMBIGD – ex Venezuela index, in August. **But the random elimination of one country from an index does not answer the underlying question of whether there are minimum qualitative standards countries should meet**. Venezuela is not the only "offender." Is the problem with particular countries or does it lie, as we believe, with the index itself?

Can national governments be judged on their "corporate governance"?

Even as the popularity of emerging-market investments has grown, so too has the interest of investors in the social impact of the investments they make. Consequently, debates about social values in emerging markets are destined to increase. In August 2015, RBC GAM became a signatory to the UN's Principles for Responsible Investment.

Exhibit 6: Impact of a Venezuela restructuring

Impact of a Venezuela restructuring on the index under different recovery values, assuming an average price for index bonds of 23.5 cents

	26 cents (Ecuador)	46 cents ($ wtd. avg.)	65 cents (issuer avg.)	Weighted average
Venezuela Sub-Index Return	+10.6%	+95.9%	+176.6%	+94.2%
Impact on Index	4 bps	96 bps	177bps	92 bps

Note: Data as of Nov. 30, 2017. Return refers to the price impact only, assumes a neutral weighting of 1% and no accrued interest. Recovery values from Moody's. Source: RBC GAM

The UN PRI is recognized as the leading global network for investors committed to integrating environmental, social and corporate governance (ESG) considerations into investment practices and ownership policies. RBC GAM is also a founding member of the Canadian Coalition for Good Governance and has recently become a founding member of the U.S. Investor Stewardship Group, providing a set of six corporate-governance principles for U.S. companies and six "stewardship" principles for U.S. investors.

The challenge is that sovereign governments are not corporations. Equity investors have the right to vote on corporate management's decisions or the composition of a company board. Sovereign investors do not. Corporate bond investors can take management to court or seize assets should a company default. If a sovereign government defaults, the ability of investors to confiscate assets in order to be repaid is very constrained. Most notably, foreign investors cannot seize central bank foreign exchange reserves. Investors are buying a sovereign government's track record and promises.

RBC GAM's emerging-market bond team considers five broad themes when analyzing the 70+ countries that we follow. Together, these themes comprise our Global Fundamental Model (GFM). Among these themes is a 20% weighting in qualitative factors, as opposed to economic or other quantitative measures. While the team had long considered public policy and governance risk in its analysis, we refined this approach further in 2015. We believe the best opportunities lie in countries that are on an improving path. We are not looking for "the best," as risk premiums will be low, but we ARE looking for "the getting better." So we review both current measures and their trends.

Exhibit 7: Excerpts from UN Human Development Index (HDI) Report 2016

Country	HDI rank End 2015	Inequality adjusted HDI Rank	Index score 2015	Avg. ann. % inc. in score 1990 to 2015	Chg- HDI rank 2010-2015
Norway	1	1	0.949	0.45%	0
Singapore	5	5	0.925	1.02%	0
Canada	10	12	0.920	0.32%	1
USA	10	20	0.920	0.27%	-3
UK	16	17	0.909	0.64%	-4
Russia	49	48	0.804	0.37%	5
Venezuela	71	82	0.767	0.76%	-4
Mexico	77	89	0.762	0.65%	-5
Brazil	79	98	0.754	0.85%	7
China	90	NA	0.738	1.57%	11
India	131	127	0.624	1.52%	4
Rwanda	159	158	0.498	2.89%	4

Note: 188 countries, to be above median, must have a rank of 1-94. Looks at three dimensions of human development – long and healthy life, knowledge and decent standard of living. Source: UN HDI

The current components of our team's qualitative basket are as follows:

- **The World Bank's Ease of Doing Business Survey** is published annually. The focus of the survey is a country's regulatory system, government efficiency and quality of business governance. Countries that create a legal and regulatory framework fostering private enterprise, especially small firms, are those that encourage investment, and therefore economic growth.
- **The United Nations Human Development Index (HDI)** was based on the work of Nobel Laureate Amartya Sen, a development economist. We look to this measure to ask: Is the country improving the quality of life for its citizens? The HDI index measures such things as life expectancy at birth, expected years of schooling for children, average schooling of adults and income per capita. In 2015, the UN took a new step, adjusting this last indicator for income inequality within countries. Note that under both UN scores, Venezuela ranks above median (Exhibit 7).
- We employ **The Eurasia Group's political trajectory** from our political risk consultants, the Eurasia Group, which has developed a political-risk rating based on six-month and two-year views. We have adapted this analysis to develop a proprietary scoring model.
- **Transparency International's Corruptions Perceptions Index** is published annually. The CPI employs 13 surveys from 12 institutions.
- **The MSCI Environmental Score** assesses the extent to which a country's long-term competitiveness is affected by its "ability to protect, harness and supplement its natural resources, and to manage environmental vulnerabilities." Data comes from the Energy Information Agency, the Central Intelligence Agency and the UN, as well as proprietary work done by MSCI.

The challenges in scoring social values

But a closer look at these indicators betrays their weaknesses and thus the difficulty in trying to "score" or "rank" countries on a social-values scale. One problem is the frequency with which data are published – usually only once a year. Then there is the lag between the time the data is collected and when it is released. For example, in 2017, we are working with reports based on data from the end of 2015 for the UNHDI. While Venezuela has been steadily deteriorating for some time, the UN survey pre-dates the precipitous decline of the past 18 months.

Another issue is subjectivity. Transparency International's index measures the "perception" of corruption and is based on opinion surveys rather than hard data. Furthermore, not all countries are covered and in some cases the data histories are quite short. We also need to assess how reliable the data is and whether the supplier of the data has a political bias/agenda. Do we ignore U.S. think-tank Freedom House, which measures levels of democracy, freedom and human rights, because it is funded by a national government?

How does one measure a country such as Rwanda? It has a leader with authoritarian leanings but ranks, according to the UNHDI report, among the countries most rapidly improving its citizens' well-being. It is in the top quartile of countries worldwide, out of 190, in the World Bank Ease of Doing Business Survey. It qualitatively leaves regional peer (and oil blessed) Nigeria in its dust. What if a country is engaged in a civil war? Does one invest in Colombia, which has long been in the index but only in the last twelve months emerged from a decades-long conflict with FARC guerrillas? Does a country have to be a democracy? If so, what do you do with China, the world's second-largest economy? What do you do with countries where democracy is deteriorating, such as Poland and Hungary?

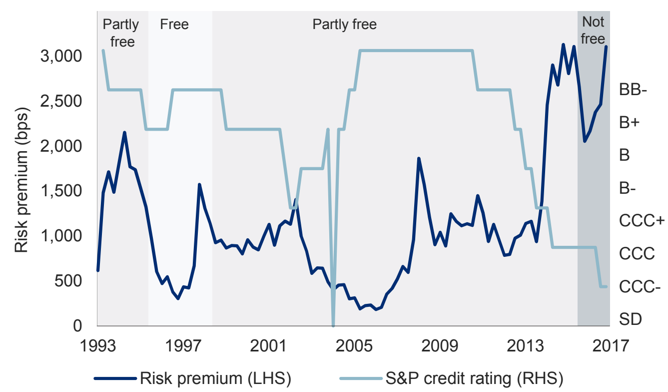
In Exhibit 8 we provide Venezuela's overall GFM rank as well as the qualitative rank alone. What qualitative score or rank should make a country "un-investable"?

Exhibit 8: Venezuela's qualitative rankings relative to 69 peers EM Country Universe

Overall Global Fundamental Rank	**65 / 70**
Qualitative Ranking Only	**65 / 70**
Comprised of:	
World Bank Ease of Doing Business rank	70 / 70*
Transparency International Corruptions Perception Index	67 / 69
UN Inequality – Adjusted Human Development Index	29 / 62
MSCI Environmental Risk rank	26 / 70
Eurasia Group Political Trajectory Rank	55 / 55**

Note: Data as of Oct. 17, 2017. *Joint with two other countries. **Joint with eight other countries. Source: RBC GAM

Exhibit 9: Venezuela in crisis – Markets and rating agencies slow to react to democratic decline



Note: Data as of Sep. 1, 2017. Source: Bloomberg, RBC GAM

An Odious Index?

In August this year, Hausmann argued that countries should carry not only credit ratings, but "odiousness ratings" as well. He drew on the writings of Alexander Sack, a Russian legal theorist who developed the concept of "odious debt" in 1927 following the First World War.

Sack argued:

> *"If a despotic power incurs a debt not for the needs or in the interest of the State, but to strengthen its despotic regime, to repress its population that fights against it, this debt is odious for the population of the State…The debt is not an obligation for the nation; it is a regime's debt, a personal debt of the power that has incurred it."*

However, as some academics have asked, at what point is a regime determined to be "despotic?"[16] Venezuelans elected Chavez in 1998, affirmed his policies in a 1999 referendum and repeatedly re-elected him until his death in 2013. And yet Freedom House had been downgrading the country since 1999 (Exhibit 9).

Lee Buchheit, one of the best attorneys and legal scholars on the subject of sovereign debt restructurings, poses another question[17]: *"Someone must assume the task of painting a scarlet letter "O" on a great many regimes around the world. Who will make this assessment of odiousness and on what criteria?"*

Who indeed would undertake this Solomon-like decision? Rating Agencies? The UN Security Council? The UN Human Rights Council? Past members of the UNHRC have included Saudi Arabia and Libya under Muammar Gaddafi!

[16] *Applied Legal History: Demystifying the Doctrine of Odious Debts*, Sarah Ludington (Campbell University, Mitu Gulati (Duke University) and Alfred Brophy (University of North Carolina at Chapel Hill).

[17] Lee Buchheit, Mitu Gulati, Robert Thompson, *The Dilemma of Odious Debt,* Duke University Law Journal, March 2007.

Do investors care about social values?

Perhaps the most fundamental question Hausman posed in "The Hunger Bonds" was: Do investors really care about social values? At first glance, the answer seems to be "no" for many investors.

Exhibit 9 shows the risk premium was falling during the second period the country was declared "partly free" by Freedom House. Similarly, rating agencies ignored this democratic decline.

Exhibit 10 illustrates in the first column the returns on various credit quality tiers for the period from the low of March 2009 when quantitative easing began in earnest to the end of November this year. Poorer quality bonds have generally outperformed the broad index.

Now what if we look through the financial cycle from immediately before the financial crisis at the end of June 2007, when risk premiums were at historic lows?

Total returns for B rated bonds and below are materially reduced. Venezuela's is reduced by 60% and CCC and below falls into negative territory. The index by comparison sees its total return reduced from 119.8% to 111.2%. In the second column the BB sector with a return of 139.4% is the standout throughout this period.

Now let's look at the magnitude of the decline from the June 2007 peak prior to the financial crisis to its depths in March 2009 in the third column. The index is down 3.9% through the period, while Venezuela is down 30.2%. Single B's broadly are down 29.7%, while CCC's and below are down 86.9%. When times are tough, quality counts.

Clearly these returns are not about qualitative indicators alone. However, looking at our Global Fundamental Model scores and our Qualitative scores in Exhibit 11 it is intriguing to observe that the difference between the AA&A rated bucket and the bottom credit bucket is more pronounced for the Qualitative score alone than for the broader GFM score alone.

Four strong winds: EM bond investors are being herded by liquidity

So investors don't care? In fact we would argue that dedicated active EM investors like ourselves who would otherwise decline to own fixed-income securities issued by countries such as Venezuela are being thwarted by four key factors:

Exhibit 10: Cumulative returns (%)

Credit Quality	After onset of QE Mar. 2009 - Nov. 30, 2017	Pre crisis peak Jun. 2007 - Nov. 30, 2017	Crisis (peak to trough) Jun. 2007 - Mar. 2009
A	69.9	84	8.3
BBB	95.6	99.39	1.9
BB	150.9	139.4	-4.6
B	216.3	122.2	-29.7
CCC-C	114.5	-71.9	-86.9
Venezuela	102.5	41.29	-30.2
EMBIGD	119.8	111.2	-3.9

Source: RBC GAM

Exhibit 11: Comparison of RBC GAM Global Fundamental Model (GFM) score to qualitative score only

	Overall (GFM) score	Qualitative score only
AA & A	6.10	7.10
BBB	5.04	5.60
BB	4.67	4.95
B	3.90	4.03
≤ CCC	3.80	4.13

Note: Data as of Oct. 17, 2017. Source: RBC GAM

1. Waves of quantitative easing by multiple central banks since late 2008 have left government-bond yields negative in many countries and investors grasping for yield. As of November 30 US$9.2 trillion in bonds around the world, or nearly 23% of all outstanding bonds, were trading at negative yields (Exhibit 12). According to JPMorgan, total investment flows into emerging-market investments to the end of November have amounted to more than US$170 billion – multiples of last year for the same period.
2. Issuers that would have been penalized by markets for poor economic and social policies have been shielded by waves of Chinese state-owned bank lending as the country sought to secure commodity supplies and increase its geopolitical reach. Russia has acted similarly.

Official sector lenders such as the IMF normally impose "conditionality" or require policy changes to improve the economy's recovery chances in exchange for loans. No such demands are in evidence with these bilateral loans. Chinese loans now dwarf those from official sector lenders (Exhibit 13). Both Russia and China have recently rescheduled their loans to Venezuela.

3. Passive indexes, which account for a significant share of inflows to EM bonds, do not employ any screening, much less screen for social shortcomings. If Venezuela makes up 5% of the EMBI+ index, passive ETF investors will invest that same percentage automatically. The effect is particularly pronounced on smaller country issuers. In a recent report, Citigroup noted that passive investment in emerging-market assets has grown from just over 12% two years ago to nearly 19% today.
4. Lastly, markets have come to believe that the IMF will lend under virtually any circumstances. Traditionally, the IMF was seen as a task master demanding stringent conditions in exchange for loans. However, the fund lost credibility with markets in recent years after it continued to lend to Greece and Ukraine amid unsustainable conditions, a breach of its own guidelines. The IMF may have done so in Greece out of fear for Europe's financial system and potential contagion risk. For Ukraine the decision was complicated by geopolitics after Russia seized the Crimea region of southern Ukraine. Markets now seem to "assume" that all countries seeking IMF support will receive it.

These successive waves of liquidity, real or expected, have propped up riskier bets in emerging markets, postponing the day of reckoning for poor policy choices.

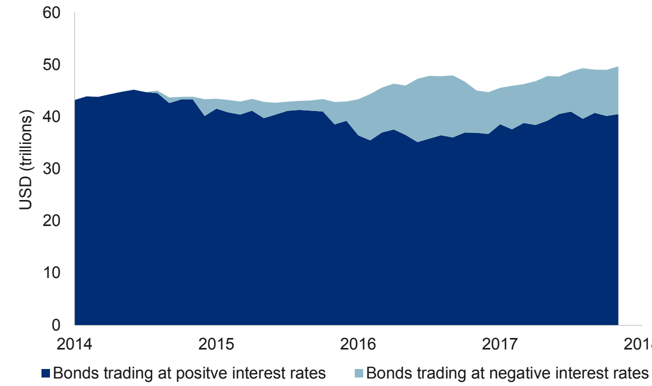
Some social values indicators under stress, even as debutante issuers multiply

Social value indicators are under threat in many emerging markets. Freedom House's report[18] of a trend away from democracy over the last 10 years is particularly striking (Exhibit 14).

A look at the Emerging Market Bond Index suggests overall sovereign credit quality has been falling (Exhibit 15). However, there are two forces at work. It's true that credit quality has been declining with some countries, such as Brazil and Turkey losing their investment-grade status.

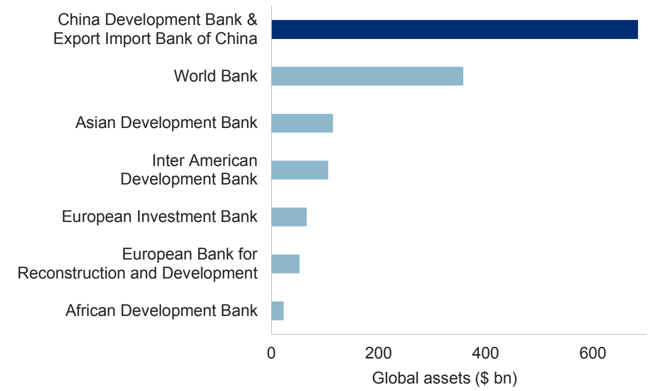
[18] *Freedom In The World 2017, Populists and Autocrats: The Dual Threat to Democracy*, Freedom House

Exhibit 12: A growing number of bonds have negative yields



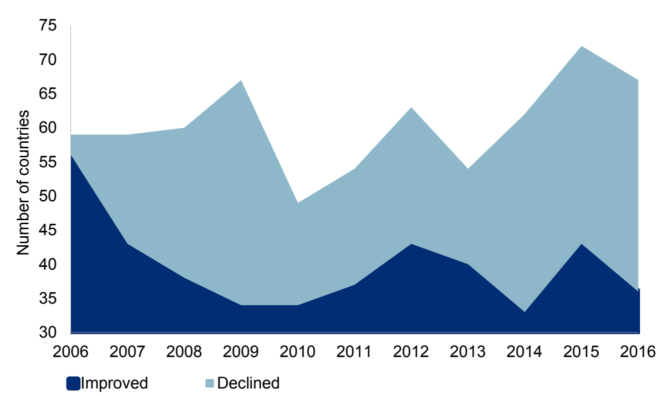
Note: Data as of Nov. 30, 2017. Source: Bloomberg, Deutsche Bank, RBC GAM

Exhibit 13: Chinese state-owned banks fund growth in developing countries with fewer restrictions



Note: Data as of May, 2016. Source: Boston University – Global Economic Governance Initiative, RBC GAM

Exhibit 14: Net declines in "freedom" scores have outnumbered gains



Note: Data as of Dec. 31, 2016. Source: Freedom House, RBC GAM

However, at the same time it is worth considering the growth in the sheer number of issuers in recent years, most of which have been poorer-quality governments. At the end of 2007 the number of countries in the EMBIGD index was 38. Today it is 67. Similarly, the number of sovereign governments covered by Moody's grew from 71 in 1996 to 132 by the end of 2016.[19]

Strong commodity markets and abundant liquidity warranted increased investor attention to many new issuers. Many African countries and some Latin American countries were newly rated having undergone Highly Indebted Poor Country (HIPC) debt relief from the official sector. Here lenders such as the IMF and World Bank forgave debt in exchange for improved economic policies, notably an increase in spending on poverty-reduction measures. This was enacted as part of the United Nations' Millennium Development Goals.

A recent long-term default study from Moody's determined that the median rating of countries one year prior to default was B2, five notches below the lowest investment-grade rating. Single B countries now represent 31% of rated sovereigns, the single largest credit tier in the sovereign spectrum as Exhibit 16 illustrates.

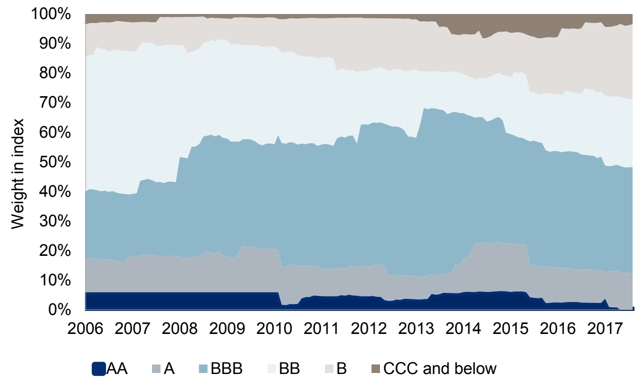
This is not to criticize emerging-markets generally. It is worth comparing the quality of the most widely followed emerging-market equity index (MSCI EM Equity) versus that for emerging-market bonds (JPMorgan EMBIGD). In the case of the equity index, close to 62% of the index carries a credit rating of A or above, with more than 80% rated investment grade (Venezuela is not part of the EM equity index). By contrast, only 48% of the EM bond index is rated investment grade (Exhibit 17).

A "doing well by doing good" benchmark?

So what have we determined? Well, we know that default rates are sharply higher for countries rated B2 and below relative to their higher-rated brethren and that single-B-rated countries have proliferated. We have seen that the sweet spot through a cycle has been in the BB area; and drawdowns are less pronounced in bad times for those rated BB and above. We also know that there is an association between higher qualitative or social ratings and higher credit quality.

[19]Moody's Investor Service, *Sovereign Default and Recovery Rates, 1983-2016*, June 30, 2017

Exhibit 15: Quality breakdown of EMBI global diversified



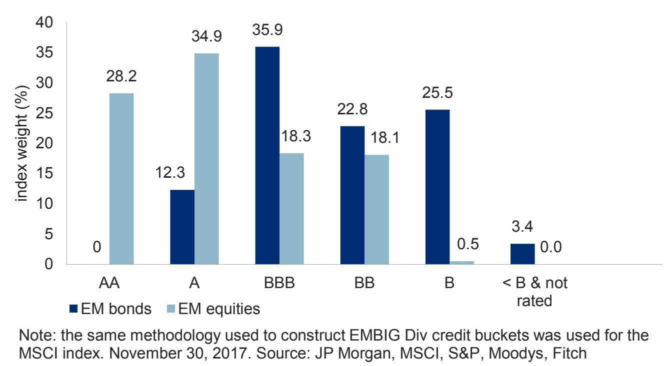
Note: Data as of Nov. 30, 2017. Source: JPMorgan, RBC GAM

Exhibit 16: Distribution of foreign ratings from 1995 to 2016 (%)

Rating	1995	2005	2016
Aaa	18%	20%	9%
Aa	24%	7%	12%
A	18%	22%	13%
Baa	18%	14%	16%
Ba	16%	16%	12%
B	5%	16%	31%
Caa-C	0%	5%	7%
Investment Grade	78%	63%	50%
Speculative Grade	22%	37%	50%

Source: Moody's investor services, RBC GAM

Exhibit 17: Country level credit rating comparison of EM bonds (EMBIG div. Index) and EM equities (MSCI EM Index)



Note: Data as of Nov. 30, 2017. The same methodology used to construct EMBIG Div credit buckets was used for the MSCI index. Source: JP Morgan, MSCI, S&P, Moodys, Fitch

Hausmann has recommended that JPMorgan introduce a "Decent Emerging Markets Index," or "DEM Index adhering to minimal standards of respect for (EM country) citizens." In principle, we agree with him. The existing index is indiscriminate. It does not serve investors in the long term and it is certainly not serving the interests of EM country citizens. In the meantime, international investors have little leverage over these countries' decisions and are driven by widely referenced benchmarks against which they and their peers are measured. Passive investors simply amplify the effect.

However, given the challenges we have noted in applying indicators that measure social values, the path to such an index is by no means clear. Perhaps, as qualitative indicators mature and there is sufficient data to infer sound conclusions, this will come about.

Once it could credibly be created, a DEM index would guide investors toward countries making decisions with the well-being of their citizens in mind. It would also incentivize countries with lower levels of social capital to improve outcomes for their citizens in order to be included in such an index and thereby gain access to additional international funding.

Or as Hausmann puts it: *"You could do well, without feeling bad."*

Global Asset Management