GMO White Paper

Mar 2017

The What-Why-When-How Guide to Owning Emerging Country Debt: 2017 Edition

GMO Emerging Country Debt Team

Introduction

As GMO enters its 23rd year managing emerging debt portfolios, we offer our perspectives on the frequently asked questions that have come up over the years, including:

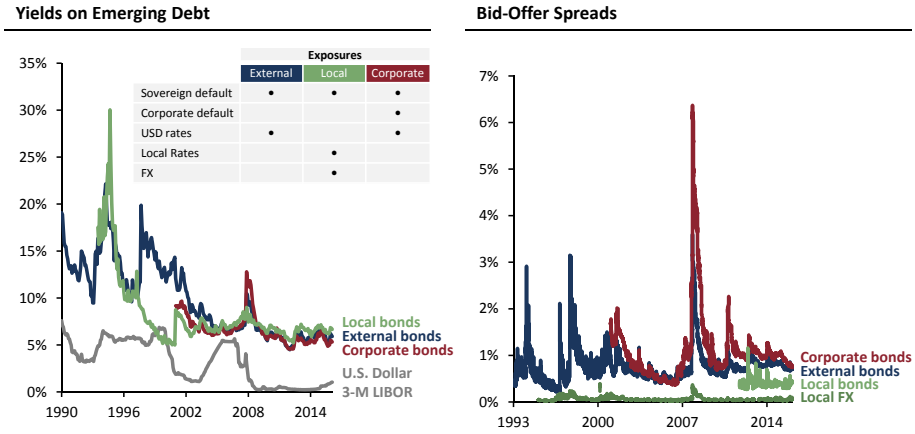
- What are the characteristics of external, local, and corporate emerging debt?
- Why and when should one own emerging debt, considering diversification, alpha, and value?
- How should one own emerging debt? Dedicated external, local, corporate, or blended? Active or passive?

What are the characteristics of external, local, and corporate emerging debt?

Emerging debt has evolved as a concept over the last 30 years. In the late 1980s, the asset class got its start when western banks securitized defaulted sovereign bank loans into tradable "Brady bonds." Over the years, the countries have refinanced these issues into external debt (debt issued in foreign currency) and/or local currency debt (debt issued in their own currencies), while corporates domiciled in these countries have issued corporate debt, mostly in foreign currency.

The graphs in Exhibit 1 depict the yields and the transactions costs (indicative bid-offer spreads on the bonds) associated with the three main benchmarks for the sub-asset classes. The inset exposures table shows the principal macro exposures associated with each type (e.g., "what exposures am I taking to get those yields?"). Appendix 1 discusses language for the risks of each type with more detail, particularly on liquidity risk. The transactions cost graph partially answers the question: "what is the indicative cost to replicate the exposures in the benchmark" assuming "normal" transaction sizes and no market impact? The main conclusions: the bundle of macro exposures varies across type, and the replication costs are high normally and sometimes, around crises, very high.

Exhibit 1: Emerging debt benchmark yields, exposures, and transactions costs



As of 1/31/17
Source: J.P. Morgan

External debt (USD Sovereign and Quasi-Sovereign)

External bonds are represented by the J.P. Morgan Emerging Markets Bond Index Global (EMBIG), which includes sovereign issues as well as those sub-sovereign and corporate issues that are either 100% government guaranteed or where the issuer is 100% federal government owned. The main EMBIG index is restricted to U.S. dollar issues settled in Euroclear, although J.P. Morgan also produces a euro-denominated benchmark separately. For EMBIG, the exposures table in Exhibit 1 highlights the two principal exposures of the class: sovereign default risk and U.S. dollar interest-rate risk. The weighted average rating is Ba1/BB+/BB+ from Moody's/S&P/Fitch, and the U.S. interest-rate duration is 6.7. The weighted average price bid-offer is around 80 bps, or just shy of 40x that of an on-the-run U.S. Treasury issue. Note that J.P. Morgan also publishes a "diversified" version of the index (EMBIG-D), in which larger issuers are capped, although the beta of the two is close to one. Each has 65 countries representing 142 issuers. Lately, EMBIG-D has overtaken EMBIG in terms of assets tracking it, according to J.P. Morgan.

Local currency debt (Sovereign)

Nominal[1] local currency bonds are represented by the J.P. Morgan GBI-EM family of indices (broad, global, narrow), of which the "global diversified" (GBI-EMGD) is the most widely used. As the benchmark currently only captures 15 countries, some of which are large issuers, investors prefer the capped issuer diversified version. Local currency bonds are bonds issued in the country's own currency, regardless of whether such a bond is issued and settled locally under local law or in "global" format under foreign law settling in Euroclear. In the first case, the investor first sells his home currency, buys the local currency of the country in question, and then buys the bonds, reversing the process on exit. In the latter case, all transactions (purchase, sale, coupon, and principal payments) settle in U.S. dollars at a "fixing" exchange rate (generally near the current spot rate). In the first case the investor takes cross-border exposure (the risk that upon exit capital outflow restrictions may exist);

[1] The local debt index these days contains just fixed-rate (including zero-coupon) bonds, although in the past it had included Chilean inflation-linked bonds. Barclays/Bloomberg produces a global inflation-linked index including emerging issuers Chile, Korea, South Africa, Mexico, Brazil, Poland, Russia, Thailand, and Turkey. In local debt there are other interesting instruments (e.g., floating-rate notes, foreign-currency linked, etc.) that are not currently captured by the index.

in the latter case the investor takes sovereign default exposure (the risk that the country may not be able to deliver U.S. dollars). As both are types of sovereign exposure, we view local debt instruments (from a foreigner's perspective) as having sovereign default risk (GBI-EMGD rating is Baa2/BBB/BBB). Furthermore, local debt instruments carry local interest-rate exposure (duration is 4.9) and currency exposure. The weighted average price bid-offer including the FX is around 50 bps. Barclays produces a broader index that includes 19 countries (capturing some more developed countries like Korea, Singapore, Israel, and Czech Republic). Given the country composition difference, the beta of the J.P. Morgan index has been 1.14 with respect to the Barclays index, and since 2013 the J.P. Morgan index has underperformed the Barclays index by a cumulative 7.4%.

Corporate (USD)

Emerging corporate bonds are represented by the J.P. Morgan CEMBI family of indices (with broad/narrow and diversified/undiversified variants). The CEMBI Broad Diversified (CEMBIB-D) is the most widely followed. It is a USD-denominated index of bonds issued by corporates domiciled in emerging countries. Interestingly, J.P. Morgan departs from its EMBIG/GBI-EM method for defining "emerging countries" in this context, adopting a regional-based approach instead. In CEMBIB-D's case, companies headquartered in Latin America, Eastern Europe, Middle East, Africa, or Asia ex-Japan are considered eligible, as are those with 100% of their operations there (as long as the bonds are guaranteed by the local operation). 100% government-owned quasi-sovereigns eligible for EMBIG are specifically excluded, but partially government-owned quasi-sovereigns make up about 30% of CEMBIB-D. A company can migrate from one index to the other based on nationalizations/privatizations. CEMBIB-D contains issues from 51 countries spanning A1/A-rated Qatar and Taiwan to unrated Iraq. The average rating is currently Baa3/BBB-/BBB. Given that the corporates are domiciled in emerging countries that have sovereign default risk themselves to greater or lesser extents, we expect such issuers to pay a spread premium over and above the sovereign's own credit spread to account for their idiosyncratic risks. As the issues are in U.S. dollars, they also carry U.S. interest-rate risk. The issues contained in CEMBI are generally also included in the widely followed global corporate indices provided by Barclays/Bloomberg, with investment-grade issues included in the Global Aggregate and sub-investment-grade issues in the Global High Yield.

Exhibit 2 details some other attributes of the benchmarks as well as the MSCI Emerging Markets index (MSCI-EM), the emerging equities benchmark, for reference. After all, emerging debt often competes with emerging equities for risk assets.

Exhibit 2: Emerging debt and equity index overview

	External Sov/Quasi-Sov*		Local Currency Sovereign		Corporate*		EM Equities
Universe ($ billions)	1236		7192		1590		4976
	EMBIG	EMBIG-D	GBI-EMG	GBI-EMGD	CEMBIB	CEMBIB-D	MSCI-EM
Index Market Capitalization	776	445	966	707	855	406	4230
…Fraction of universe	63%	36%	13%	10%	54%	26%	85%
AUM tracking index	52	266	nm	187	nm	54	
…Fraction of index market cap	7%	60%		26%		13%	

Source: Bank of America for universe size (2015), J.P. Morgan for Index and AUM tracking (2017)
*Recategorizes 30% of what BoA tracks for financial institutions and 10% of corporates as EMBIG-eligible quasi-sovereigns
nm = Not material

Based on the table, we observe:

- For all classes of emerging debt, the fraction covered by the relevant benchmarks is much smaller than for equities. This suggests that there are more opportunities for alpha by taking off-benchmark exposure in debt than in equity.
- The local currency sovereign debt universe is 5.8x the size of external sovereign debt, but the index-captured fraction is much smaller in local debt. This is due to the relatively low fraction of the universe captured by the local debt index.[2] The *most widely followed* local debt benchmark has a market capitalization that is 1.6x that of the most widely followed external debt benchmark.
- In external debt, there are two benchmarks with significant assets tracking them, while among the local debt and corporate debt varieties, one benchmark has become dominant. Exhibit 3 details the differences between the two external debt benchmarks, which we don't view as material in most states of the world (correlation among the two is 1). The key difference is the down-weighting of some of the larger countries (Mexico, Indonesia, China, Russia) and the consequential up-weighting of some of the smaller countries (Peru, Panama, Uruguay, Poland). The overall ratings and spread durations are the same. In comparison, the diversified version has an investment-grade/non-investment-grade split tilted toward the latter; more Africa (due to the up-weighting of smaller countries), less Latin America (mostly less Mexico); and fewer quasi-sovereigns.

Exhibit 3: EMBIG vs EMBIG-Diversified (EMBIG-D)

	EMBIG	EMBIG-D
Rating	Ba1/BB+/BB+	Ba1/BB+/BB+
Spread duration	6.5	6.4
Weights:		
Investment Grade	55%	52%
Non Investment Grade	45%	48%
Sovereign	70%	76%
Quasi	30%	24%
Africa	6%	9%
Asia	23%	20%
Europe	26%	27%
Latin	42%	39%
Middle East	3%	5%
Mexico	13%	5%
Indonesia	8%	4%
China	7%	4%
Russia	7%	4%
Turkey	6%	4%
Venezuela	4%	2%
Brazil	5%	4%
Peru	2%	3%
Panama	2%	3%
Uruguay	1%	2%
Poland	2%	3%

As of 12/31/16
Source: J.P. Morgan

[2] For some key local markets, like China and India (between them $3 trillion), inaccessibility by foreigners is enough for the benchmark provider to exclude them. In other words, the local universe cited exaggerates investability by foreigners. That said, China is taking steps to internationalize its currency, and in 2016 the CNY became part of the IMF's Special Drawing Rights basket. Were China to enter the benchmark, its size would indicate a capped 10% weight to start, crowding out some of the smaller uncapped countries.

- Appendix 2 shows country-level details across the debt and equity indices. Exhibit 4 shows the countries with at least a 4% weight in one of the major benchmarks. Although China has a big presence in equity markets, corporate bond markets, and quasi-sovereign corporate markets (in EMBIG), it has no *investable* local currency debt at present. Mexico, Brazil, and Russia have material presences in all benchmarks, making them (with China) the most systemically important to investors with multi-asset emerging portfolios.

Exhibit 4: Emerging debt and equity index top common countries

	EMBIG	GBI-EMGD	CEMBIB-D	MSCI-EM
Index ($ bn market value)	776	707	406	4230
China	7.0%	0.0%	8.4%	26.7%
Mexico	13.0%	10.0%	5.3%	3.4%
Brazil	5.1%	10.0%	6.8%	8.0%
Russia	6.8%	6.2%	5.7%	4.3%
Indonesia	7.6%	10.0%	1.5%	2.5%
South Africa	2.5%	9.7%	2.1%	7.0%
Turkey	6.3%	9.2%	4.2%	1.0%
Korea	0.0%	0.0%	4.5%	14.8%
Colombia	2.8%	7.6%	4.3%	0.5%
Malaysia	1.9%	9.0%	1.3%	2.4%
India	0.6%	0.0%	5.0%	8.4%
Poland	1.9%	10.0%	0.3%	1.2%
Thailand	0.0%	7.6%	3.4%	2.3%
Taiwan	0.0%	0.0%	0.8%	12.1%
Chile	2.4%	0.1%	4.3%	1.2%
Hungary	2.2%	5.2%	0.1%	0.3%
Philippines	4.0%	0.4%	2.0%	1.2%

As of January 2017
Source: J.P. Morgan, MSCI

Why and when should one own emerging debt, considering diversification, value, and alpha?

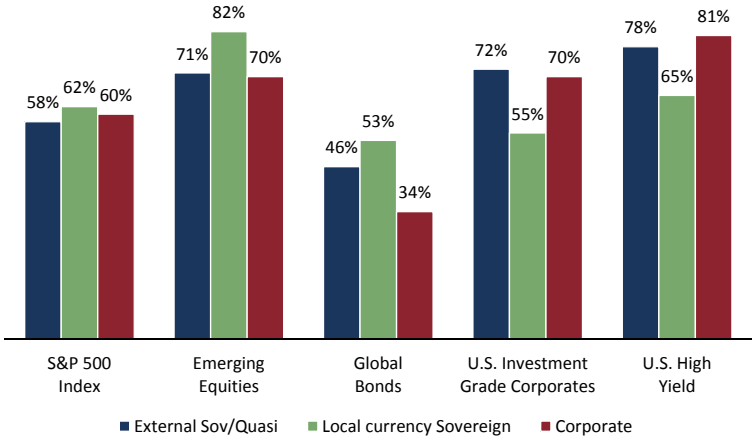
Diversification

As with any risk asset, the time to own it in risk-seeking portfolios is when its prospective returns adequately compensate you for its risks, taking into account the diversification potential with other risky assets you already own or may want to buy. We distinguish historical *statistical* diversification, which affects rebalancing potential, from *fundamental* diversification, which becomes more important in event scenarios that deviate from statistically-implied ones. In such events one asks: "how much do we own of *what*?"

From a statistical diversification perspective, using data from 2005 to 2016, J.P. Morgan calculates that:

- All three debt benchmarks have similar correlations with the S&P (~60%), and EMBIG and CEMBIB-D have ~70% correlations with emerging equities.
- Local debt is even more correlated with emerging equities, likely due to the common currency effect.
- EMBIG and CEMBIB-D, dollar-denominated spread products, have higher correlations with other dollar spread products, such as U.S. investment-grade corporates or U.S. high yield.

Exhibit 5: Correlations of types of emerging debt with other major asset classes



As of January 2017
Source: GMO based on data from J.P. Morgan, MSCI, S&P

From a *fundamental* diversification perspective, we note that the most likely set of uncomfortable exposure questions would likely come from common issuers in CEMBIB-D and the MSCI-EM index family (MSCI-EM plus MSCI-Frontier) – the overlap between CEMBIB-D and MSCI-EM is noticeable. Appendix 3 details our thoughts on this.

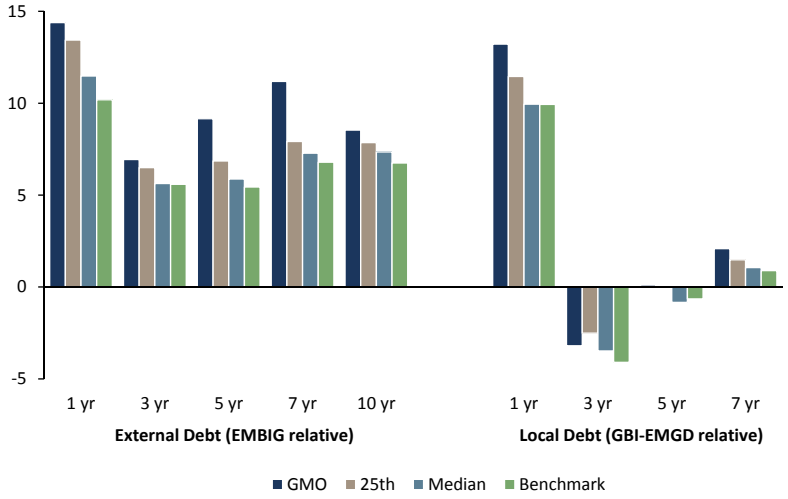
Alpha

The opportunity to do better than the already fairly high yields associated with emerging debt is another key reason investors take interest in emerging debt. Exhibit 6 uses manager data from eVestment, which compiles universes for external and local debt, among other asset classes, to show the returns of the top quartile and median managers relative to the respective benchmarks. We observe:

- In external debt, the median manager beats EMBIG by 1.3-2.3% over the periods shown, with top (5th percentile) managers 50+ bps more than that.
- In local debt (a newer class with less history), the median manager is in line with the benchmark generally, while top managers have added significant alpha, even over the years when local debt struggled in absolute return terms due to the strength in the U.S. dollar.

We conclude that (a) active management is useful; and (b) picking a top manager in local is more important. This is why GMO's Asset Allocation team includes the expected alpha in its assessment of the attractiveness of emerging debt, since emerging debt alpha has been higher and more persistent.

Exhibit 6: Manager performance in external and local debt



As of December 2016
Source: eVestment

We find that the reason the median manager struggles relatively in local debt is (a) the benchmark is gross, while the manager pays high custody fees and taxes (J.P. Morgan has estimated this to detract up to 1.5% annually at times from net returns; in external debt the bonds are all Euroclear, with no tax and very low custody fees); (b) a fairly narrow benchmark (only 15 countries) is a limited opportunity set for very benchmark-aware managers; and (c) there is a temptation among many managers to take macro views, given the nature of the exposures involved, and macro views are (in our opinion) low information ratio ideas.

If we recall the exposures table in Exhibit 1, we refer to "top-down" styles as those that involve any of the dots in the table. For example, in local debt this might mean taking a view on the direction of local interest rates or the currencies, a temptation given the low breadth (15 countries) of the index. In external debt, with 142 issuers (64 sovereign and 78 quasi-sovereign), the menu is wider and the terminology a bit confusing. We refer to "top-down" as choosing one macro aspect of a country over another (whether credit, currency, or interest-rate), and we refer to "bottom-up" as choosing one particular bond over another ("security selection") on a particular credit curve. The security selected bundles any one or more of the credit/currency/rate exposures seen in the table, with some very entertaining examples along the way.[3] For our complete thoughts on this topic, please see our 2010 CFA paper, "Deconstructing and Reconstructing Emerging Market Debt: A Bottom-Up Approach to EMD Investing" (available on www.gmo.com).

A gray area with confusing terminology, therefore, includes in-benchmark quasi-sovereigns (applicable only to EMBIG-relative). Were this an equity portfolio, one would say company selection was "bottom-up." However, for a debt portfolio, where there can be many issues (PEMEX, for example, has 26 bonds representing 6.3% of EMBIG), the company choice is a kind of "market selection" distinct from the issue selection. While in equities there is generally only one instrument per company, in debt there may be many bonds of differing levels of seniority or with different creditor rights in the offering documents.

[3] Our local portfolios held for a while a Mexican peso-denominated issue from a Korean quasi-sovereign, for example. This issue had Korean (quasi) sovereign credit risk, Mexican peso currency risk, and a nebulous interest-rate component that was neither Mexican nor Korean in particular.

GMO distinguishes itself in the industry as being the value manager that emphasizes bottom-up issue selection as its main alpha driver. For example, of the 32 Mexican sovereign individual bonds in the combined EMBIG and GBI-EMGD benchmarks, which is the best one/ones to own? As all carry sovereign default risk (per the Exhibit 1 exposures table) from a foreigner's perspective, there's no need to own them all. In fact, sometimes one outside both benchmarks (excluded merely for its currency denomination – British pound sterling, say) can be even better. After all, hedging GBP currency and interest-rate risk is a trivial exercise for bond managers. We believe that taking this approach is what has allowed us to be at or near the top of the alpha rankings over long periods of time.

Value

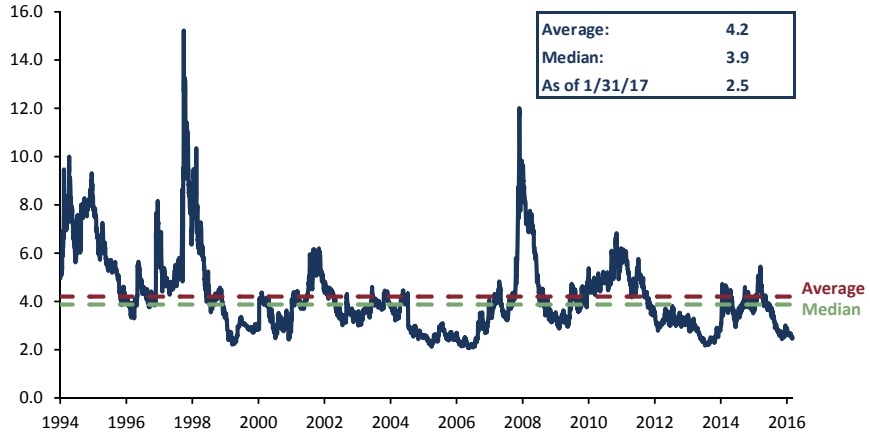
To determine absolute value, we begin with the prevailing yields on the three sub-classes, divide those up into payments for known risk factors (from our exposures table), and then ask ourselves: is it enough?

Below is a summary of our valuation methods for these principal risks. Once a quarter we update these in our Emerging Debt Report (available on www.gmo.com).

External debt: sovereign default and U.S. interest rates

For sovereign default valuation, we first calculate a "fair" spread of the EMBIG, accounting for the credit rating profile of the EMBIG (used to estimate default probabilities), an estimate of future historical credit transition (based on tabulations of historical sovereign transition), and a recovery value assumption. We then take the ratio of the actual EMBIG spread to the fair value spread and compare it to its history. Assuming a long-term investment horizon, Exhibit 7 suggests that the market shows signs of being attractive when the fair value multiple is above the long-run average and median lines, and unattractive when it lies below. We encourage credit investors to do the same exercise for other credit asset classes to determine relative value.

Exhibit 7: External debt markets look attractive when fair value multiple is higher than average

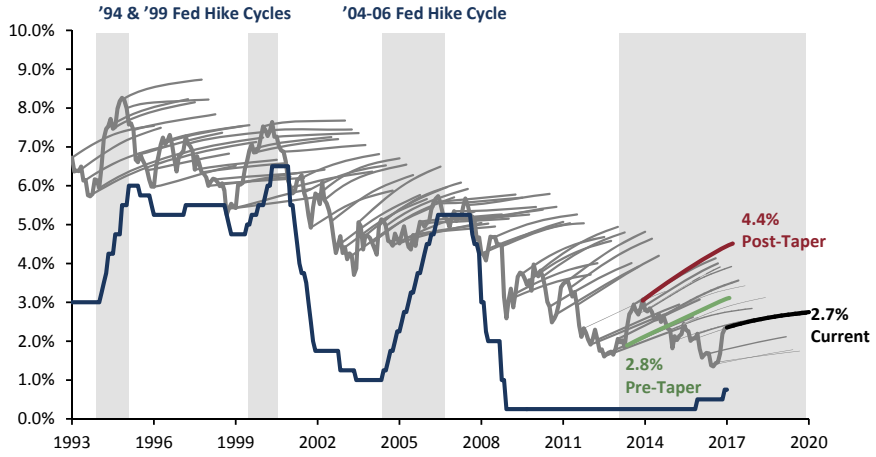


As of 1/31/17
Source: GMO calculations based on data from J.P. Morgan, S&P, Moody's

We haven't made a similar computation for CEMBI, although given the extra risks outlined in Appendix 3, as conservative credit managers, we'd be inclined to say that the multiple should be higher in all cases due to the further illiquidity of corporates as seen in the bid-offer chart in Exhibit 1. We'd also add an extra hurdle when adding them to portfolios that already have emerging equities, given some of the fundamental overlap.

For U.S. interest rates, to which external debt is also sensitive, we count ourselves among the fixed income managers who say "no clue!" Instead, we, along with most, simply look at the level and the curve-implied forward interest rates and wonder when these low rates will end. We share our "hairy graph," which depicts these ideas, with our clients when discussing (lamenting!) the issue (Exhibit 8).

Exhibit 8: Picturing market-implied path of U.S. interest rates using a "hairy graph"

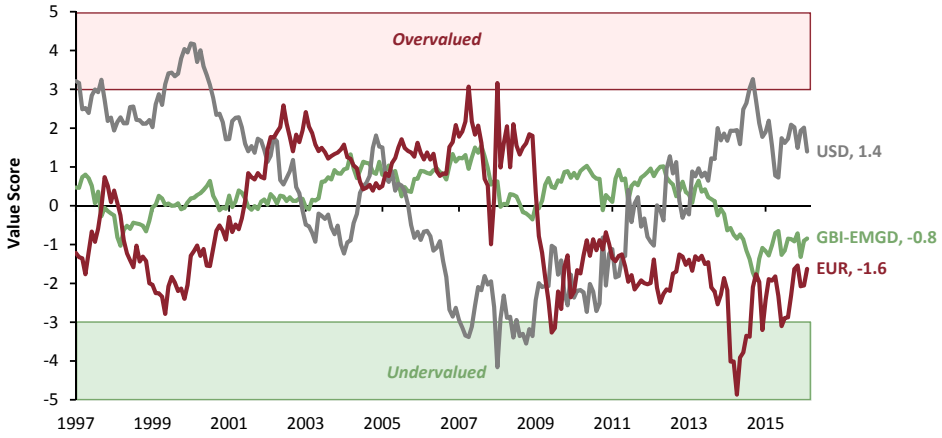


As of 1/31/17
Source: GMO
Note: Projections as of each date, including those that are beyond 2015, are future prices as implied by market pricing and are not a GMO projection.

Local debt markets

To determine local debt market value, we attempt to value the currencies and the local interest rates. Caveat: we believe that currency valuation is the hardest of the macro variables to value, harder even than interest rates. Attempts at currency and interest-rate valuation can be hamstrung by policymaker objectives, so we are careful to make only broad statements on these topics. For currencies, our model analyzes trends in real effective exchange rates and the balance of payments, and measures how far away current values are from their medium-term averages. These are combined into a single value score, as shown in Exhibit 9, where we compare the weighted average of currencies in the GBI-EMGD with values for the USD and EUR. As the Exhibit indicates, scores below the zero line indicate potentially "cheap" currencies, while positive scores indicate potentially "rich" currencies, with three-sigma extreme zones highlighted. It matters the funding currency, too, which is why we plot two of the majors: USD and EUR. Please ask us to see this graph relative to other funding currencies.

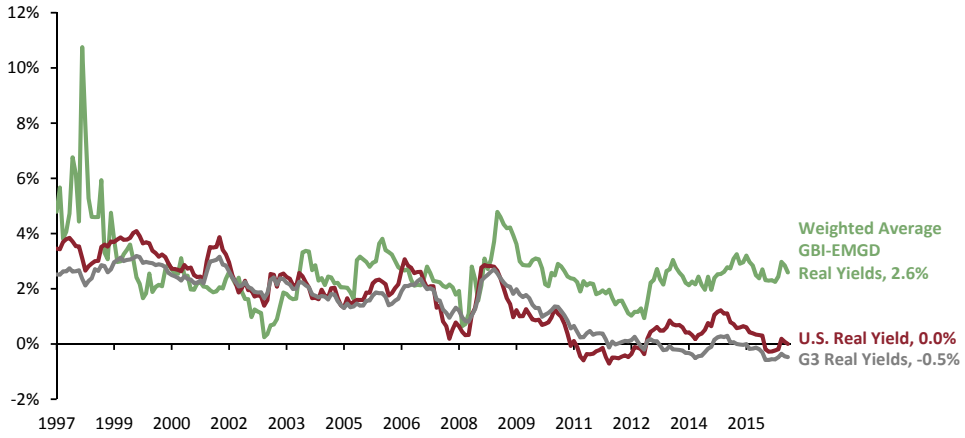
Exhibit 9: Currency valuations



As of 1/31/17
Source: GMO
Note: The value scores shown above apply the GBI-EMGD weights to the emerging currencies. GMO calculates a currency's value score using a combination of the currency's trend real price and the country's trend current account balance.

For local interest rates, we compare real yields offered on local debt (bonds less inflation expectations) to those of the majors (USD and a simple average of USD/EUR/JPY). We use this to determine the "cushion" of emerging local debt relative to the very QE-depressed real yields in G3. We find currently that EM local real yields are in line with their long-run averages, although the real yield differential to G3 is very large presently given their financial repression policies. Indeed, policymaker objectives in the G3 are very at odds with any investor's measures of value!

Exhibit 10: Real yield levels for GBI-EMGD, U.S. and G3 simple average



As of 1/31/17
Source: GMO
Note: Real yields are measured using the country sub-indices of the GBI-EMD and GBI Global, respectively, less Consensus Forecast CPI.

How should one own emerging debt? Dedicated external, local, corporate, or blended? Active or passive?

A very frequently asked question, particularly of late, is whether the best way to own emerging debt is through dedicated funds targeting one of the sub-classes or via "blended" strategies that bundle any or all of the sub-classes. Our thoughts below are only about blended sovereign external and local strategies, as Appendix 3 has extensive thoughts on EM corporate bonds.

As a recap:

- Exhibit 1 showed the significant exposures overlap among external and local debt, as well as the high transactions costs associated with switching.
- Exhibit 6 showed the alpha opportunities in even median EMBIG-relative active management or top GBI-EMGD active management.

We therefore conclude the following, as we do in one of our standard marketing materials, a GMO Emerging Country Debt FAQ, when asked "Why don't you offer an emerging blended product?"

> *We are a benchmark-relative, alpha focused, bottom-up manager. There is no universally-agreed to benchmark for blended, making the demonstration of skill impossible. The main areas (external and local sovereigns) behave very differently over relevant investment periods, rendering the decision more "top-down" in nature. Given that we don't have a top-down investment process, we would be especially unsuited to succeed, even if we thought a low breadth (two or possibly three) asset allocation process were likely to succeed at all. Our skepticism about the likelihood of success is highlighted by our observation that transactions costs in the underlying assets are high, and therefore we charge investors purchase and redemption fees (paid to our funds). Instead, we offer "timing" advice to help our investors with these decisions in light of other relevant areas of their overall portfolios.*

We note the simple strategy of combining well-run dedicated external and local strategies offers the flexibility to consider "portfolio fit" when adding to or reducing from the strategies, consistent with our earlier observations. We believe that "timing" efforts can be elusive, mostly because transactions costs in the underlying securities are so high, and the uncertainties of valuation methods described above are also high. We asked of J.P. Morgan, the provider of the main suite of relevant benchmarks for external sovereigns, local sovereigns, and corporates, why they don't offer a blended benchmark. They noted that a "theoretically correct" cap-weighted benchmark would have much more local debt due to the relative issuance, yet such a benchmark would be too volatile for many USD-based investors. They did also acknowledge that many of those who offer blended products aren't generally interested in knowing by how much they are trailing such a blended benchmark.

We are also asked about ETFs from time to time. We observe:

- Emerging debt as an asset class has high transactions costs (recall the bid-offer chart in Exhibit 1). ETFs are more suited for liquid asset classes where the cost of market timing (if that's your thing, though we don't think it ought to be) is low.
- ETF management fees are hardly a bargain relative to those for active management, and the index tracking is fairly poor. According to Bloomberg, EMB (the largest external debt ETF) has an expense ratio of 40 bps, a NAV tracking error of 0.11, and a

price tracking error of 3.3. ELD (local debt ETF) has an expense ratio of 55 bps, a NAV tracking error of 1.6, and a price tracking error of 3.5 (wow!). Compare this with SPY, an ETF that tracks the S&P 500 index, where the expense ratio is a mere 9.5 bps and which exhibits trivial tracking error under normal circumstances. So, you pay a fairly high fee to take the chance that your price might deviate mightily from the NAV and/or the benchmark! Further, such tracking error is "unintentional," as the ETFs aren't targeting positive alpha, as an active manager is.

- The ETFs also follow reduced, narrower benchmarks (to make tracking easier). This drives up the price of those issues eligible for the narrower benchmarks…a classic issue of less supply meets more demand. It's often the case that the intersection between what the ETFs own and what our portfolios own is the null set for this reason! We are value managers, after all.

Summary

Emerging debt is a mixed bag of U.S. dollar, local currency, and corporate debt. The external dollar debt includes a broad group of countries. The local debt includes a narrower group of many of the same countries. Corporate debt is essentially low-beta equity exposure. External and local currency debt offer high alpha potential for top managers.

Any or all should be owned in risk-seeking portfolios when they're cheap as compared to their fundamentals in proportion to their value and/or portfolio fit.

They can be owned in an unbundled fashion, which gives the investor greater flexibility on the portfolio fit angle. Alternatively, they can be owned in various types of pre-arranged bundles, where the manager has flexibility to focus on relative value while remaining agnostic about portfolio fit, although so far these appear to come at an overall alpha cost relative to the unbundled alternatives.

Appendix 1

Exhibit 11: Principal risks of emerging debt investing

		External Debt		Local Currency Debt		Corporate Debt	
Principal Risk	**Description (Plain English Translation)**	**Importance**	**Why**	**Importance**	**Why**	**Importance**	**Why**
Market Risk – Fixed Income Securities	As bond yields fluctuate, prices do, too. Since we are invested in bonds, as yields go up, prices go down. Interest-rate sensitivity is known as duration.	High	Duration = 6.7	Medium	Duration = 5	Medium/ Low	CEMBIB-D Inv. Grade (Duration = 5.2); CEMBIB-D HY (Duration = 3.6).
Credit Risk	You lent $100 and now you expect to get less than $100 back.	High	Average S&P Rating = BB+	Medium	Average S&P Rating = BBB	High/ Medium	CEMBIB-D HY (average rating BB-); CEMBIB-D Inv. Grade (average rating BBB+).
Liquidity Risk*	You might not be able to sell your bonds for recently-observed prices (or at all) soon.	Depends	Average Bid/ Offer on EMBIG = 0.8	Depends	Average Bid/ Offer on GBI-EMD = 0.5	Depends	Average bid/offer on CEMBIB-D = 0.8
Foreign Investment Risk**	Prices of many foreign securities fluctuate more than those of U.S. securities.	Low	Technically, most external debt instruments are U.S. securities issued under U.S. or English law.	High	Local debt instruments involve more of the typical risks associated with this category.	High	Although the bonds may be U.S. or other foreign jurisdiction, the assets generally aren't (implying the possibility of low recovery values for foreigners). Further, countries with capital controls use offshore SPV structures that effectively transform a bond investor's stake into an equity one.
Currency Risk	FX rates go up and down, and from time to time can become non-convertible or transferrable.	N/A	EMBIG is a USD index	High	About 71% of the volatility of the GBI-EMD's daily return comes from FX movements.	Unknown	Although the bonds are USD bonds, the issuer's earnings may not be; giving rise to asset/ liability mismatches.

* Liquidity risk is time-varying. Sometimes the asset classes are liquid, and sometimes they aren't (Exhibit 1 in main paper). Sometimes investors prize liquidity, sometimes they don't. The longer one's investment horizon, the less this is viewed as a risk.
** Foreign investment risk captures a range of possible risks, including: inferior disclosure and regulatory standards, opaque securities markets (including high and variable custodial services costs), macroeconomic instability including high and variable inflation, political uncertainty with regard to the rules of doing business domestically and abroad, industry or commodity concentration (lack of a diversified economy), heightened possibility of expropriation or confiscatory taxation, imposition of withholding or other taxes, etc.
Source: GMO

Explaining the principal risks in order

Market risk: For the purposes of this discussion, we're limiting this concept to interest-rate sensitivity in order to distinguish it from the other risks that can drive a bond's value up or down (credit, liquidity, currency, etc.). For the two USD classes (external and corporate), duration (interest-rate sensitivity) references the USD term structure. In other words, these bonds can fluctuate due to changes in U.S. interest rates. Since this risk factor can be easily hedged, we don't discuss it here, preferring instead to focus on the emerging parts of the asset classes. Note that higher (credit) quality USD bonds have, all

else equal, more interest-rate sensitivity, generally because they have lower coupons, although both EMBIG and CEMBI encompass investment-grade as well as sub-investment-grade bonds.

For local currency debt, the sensitivity here is to the goings-on in the local debt market, which respond to local inflation, supply/demand, and other considerations. As is the case with all international bond portfolios, the single duration figure wraps up in its calculation the heroic (and not terribly realistic) assumption that all of the underlying country markets' yield curves move simultaneously and in a parallel fashion. While this may make sense when comparing German and Swedish rates, or U.S. and Canadian ones, this is less true in emerging domestic debt markets because of either latent credit risks (discussed below) or capital controls that limit cross-border arbitrage. Therefore, it's hard to apply the kinds of rules of thumb that guide developed market rates investors, where curve slopes and levels behave in fairly predictable relative ways.

Credit risk: Put simply, this is the risk that, due to non-payment by the issuers, you get back less than you invested. Of course this is a buy-and-hold way of thinking: you buy and hold to maturity or default. Along the way, credit spreads can widen and narrow, resulting in mark-to-market losses or gains, but for long-term investors, failure to pay is the real risk. The key to investing is to earn more ex-post credit spread than would be justified by ex-ante expected losses. After all, if you buy a bond at 17 expecting immediate default with a recovery of 20, that's an 18% expected gain. If instead recovery is below 17, then you will have suffered a loss.

Each of the three sub-classes exhibits credit risk to a different extent. For sovereign debt, willingness to pay is often as important as ability to pay, and this has a number of implications. First, it muddies the case often heard that "there's no credit risk in local currency debt because the issuer can always print as many [insert currency name here] as are needed to pay it." We've observed selective defaults in Russia (1998) and Jamaica (2010) where the sovereign selectively defaulted only on its local debt instruments. Second, as was highlighted in 2012 in the case of Greece, the jurisdiction (local law or external law) of the instrument also matters. Local law instruments give the debtor more latitude to punish creditors, and credit spreads should (and generally do) reflect this. After all, a sovereign might be less willing to pay debts as promised if it can change the rules of the bonds retroactively. Third, a straight numerical evaluation of a sovereign's debt position (debt/GDP, fiscal balance) isn't enough to understand likelihood of default. Ecuador defaulted in 2008 because the newly-elected president chose to repudiate obligations incurred by his political opponents, despite reasonably good fiscal indicators.

For emerging corporate (non-quasi-sovereign) debt, the credit fundamentals are even more challenging to establish. First of all, when the sovereign is having difficulty servicing its foreign-pay debts, local corporates will too (the so-called "sovereign ceiling"). In some cases, corporates that earn foreign currency (e.g., oil exporters) may be able to continue to service foreign debts with foreign earnings, but others will struggle, particularly those with local currency earnings and therefore balance sheet mismatches. Even those firms that swap their foreign currency borrowings into local currency (therefore creating "synthetic" local currency borrowing) may run into difficulties. Although they will be insulated from the balance sheet mismatch, in situations where there is a foreign currency shortage, they will still need to convert their hedged local currency into foreign currency, which they may be unable to do if the sovereign is suffering from a shortage of foreign currency.

Foreign investment risk: As the relevant footnote to the risks chart within this Appendix details, this is a broad concept, and it's mostly applicable to local currency and corporate debt. For local currency debt, the relevant risks have to do with the local market itself (structure, regulation, transparency, custodial costs), the macroeconomic framework (inflation, etc.), and political uncertainty (regarding

taxation of local bond investments, among others). For corporate debt, the relevant risks include inferior disclosure and regulatory standards, creditor-unfriendly bankruptcy laws (if such laws exist at all), macroeconomic instability, political uncertainty, industry or commodity concentration, and the possibility of expropriation or confiscatory taxation. For external debt, these relevant factors have already been captured in credit risk. The securities themselves are, by definition, in a foreign jurisdiction.

Whether or not foreign investment risk is important can only be uncovered by reading the offering documents. For example, some local currency-denominated instruments are issued as "global bonds" in foreign markets. These have less foreign investment risk than their pure local debt counterparts. Some corporates set up special-purpose vehicles (SPVs) offshore, and these become the issuing entities, because capital controls or some other factor precludes the raising of foreign funds directly by the local corporate. In these cases, the SPV brings the money onshore as equity, which adds additional risk in terms of recovery values to creditors of the SPV. Anyway, the devil is in the details!

Currency risk: Local currency debt distinguishes itself from the other two debt classes in that currency risk is its principal risk. From a foreign investor's long-term perspective, currency risk is really two things: currency valuation risk and currency convertibility risk. Currency valuation risk is the risk that in purchasing a local currency bond whose currency is overvalued, the investor will suffer declines in the value of his overall investment due to losses as the currency declines toward its fair value. Currency convertibility risk is actually more serious: when trying to get out of a local market, the investor is prohibited from buying foreign exchange at all, leaving him stuck in the local market. This happened to Nigeria, which had been a member of the local debt benchmark. Due to the capital outflow restrictions, Nigeria's local bonds were kicked out of the GBI-EMGD index, but investors who were already there were stuck. In general, this is a rare risk, and of course it is tightly related to credit risk. Like local law risk, though, investors should demand compensation for this additional risk. In certain markets, "convertibility swaps" trade alongside credit default swaps, the market's acknowledgement of the risk's importance.

Liquidity risk: Emerging debt of all three varieties shares with its other fixed income asset class brethren the same problem: when you don't need it, it's plentiful, but when you need it, it's absent. Exhibit 1 in the main text is instructive: we show the weighted-average price bid-offer for the bonds in the external debt index (EMBIG), the corporate debt index (CEMBI), as well as the yield bid-offer for passive emerging currency investments (ELMI+). As a buy-and-hold manager, we don't think of liquidity as being a risk, generally, but rather as an opportunity because sometimes illiquidity causes prices to fall below that justified by their fundamentals, which we consider the opportunity. At the end of the day, whether or not liquidity is a risk or an opportunity is a function of your liquidity preference, which is of course a function of your time horizon.

With the rise of ETFs and their liquidity "promise" (some would say "illusion"), the regulators have taken notice. The issue is how to maintain shareholder equity in the face of flows into/out of funds when the underlying market has high transactions costs – how do investment managers managing collective investment vehicles pass these costs on to the transacting shareholders, thus leaving the existing shareholders unharmed. (Clearly for a separately managed account, these transactions costs are borne by the investor directly.) As the amount of emerging debt assets being managed in pooled funds has gone up, various regulators under the umbrella of the Financial Stability Board have weighed

in on the topic.[4] The SEC's background[5] on the topic gives the U.S. overview, although managers with funds in different jurisdictions face different endorsed methods. All try to get at the issue of dilution of existing/remaining shareholders in the presence of fund flows. Common methods include:

- In the United States, open-ended mutual funds (non-ETFs) can charge purchase premia and/or redemption fees (paid to the fund) to offset these costs. In other words, the transacting shareholder pays a fixed price for the use of fund liquidity. This practice hasn't been widely adopted in the mutual fund industry; rather, it is more common among private collective investment funds. GMO has used this practice in our mutual funds and private funds since 1994. Given our institutional client base, which tends to be a patient group, we try to arrange crosses among investors so that neither party pays the fee.
- With the SEC's latest rule change, these same funds will also have the option of adopting "swing pricing," a practice more commonly used in UCITS funds. Swing pricing allows the NAV of the fund to "swing" between an estimated bid and an estimated ask (of the underlying securities, which would be the same level as the purchase/redemption fees above), once offsetting inflows/outflows have been netted. The NAV may take a "full swing" or there may be two NAVs, one on the bid side, the other on the offer. The economic effect is the same as the purchase/redemption fee method, but there isn't a separate invoice for the costs. A downside of this approach is that it introduces volatility into the NAV as it swings and, with wide bid-offers that the underlying benchmark doesn't exhibit, will exaggerate tracking error.
- ETFs have a separate price from the NAV, which, like a closed-end fund, can result in premia or discount to the NAV. The transacting shareholder is a price taker in this instance, paying and receiving whatever the current price (and volume) is at the time of trade. This is the principal difference from the methods above, where the manager is setting a price ex ante. It is for this reason that the (high) price tracking error as well as the NAV tracking error are shown for an ETF. Hence the "illusion."
- Note that all of these fund types reserve the right to redeem investors in kind in the event of a seizing of liquidity in the underlying market, as happened, for example, in the aftermath of the Lehman crisis. In this event, the investor receives a pro-rated share of the underlying bonds at no fee. It is considered a defensive and highly unusual method reserved for very extraordinary circumstances.

[4] "Proposed Policy Recommendations to Address Structural Vulnerabilities from Asset Management Activities," Financial Stability Board. 22 June 2016. We also thank our friends at BlackRock for compiling information on the asset ownership profile of the emerging debt asset class within their Viewpoint piece from September 2014, "Who Owns the Assets? A Closer Look at Bank Loans, High Yield Bonds, and Emerging Markets Debt." They estimate that U.S., E.U., and other collective investment vehicles own about 18% of the emerging debt markets.

[5] "SEC Adopts New Rules and Rule Amendments for Liquidity Risk Management Programs and Swing Pricing," Sidley Austin LLP. 30 November 2016.

Appendix 2

Exhibit 12: Country breakdown across emerging debt and equity indexes

	EMBIG	GBI-EMGD	CEMBIB-D	MSCI-EM
Index ($ bn market value)	776	707	406	4230
China	7.0%	0.0%	8.4%	26.7%
Mexico	13.0%	10.0%	5.3%	3.4%
Brazil	5.1%	10.0%	6.8%	8.0%
Russia	6.8%	6.2%	5.7%	4.3%
Indonesia	7.6%	10.0%	1.5%	2.5%
South Africa	2.5%	9.7%	2.1%	7.0%
Turkey	6.3%	9.2%	4.2%	1.0%
Korea	0.0%	0.0%	4.5%	14.8%
Colombia	2.8%	7.6%	4.3%	0.5%
Malaysia	1.9%	9.0%	1.3%	2.4%
India	0.6%	0.0%	5.0%	8.4%
Poland	1.9%	10.0%	0.3%	1.2%
Thailand	0.0%	7.6%	3.4%	2.3%
Taiwan	0.0%	0.0%	0.8%	12.1%
Chile	2.4%	0.1%	4.3%	1.2%
Hungary	2.2%	5.2%	0.1%	0.3%
Philippines	4.0%	0.4%	2.0%	1.2%
Peru	1.7%	2.1%	3.1%	0.4%
Argentina	3.9%	0.0%	2.2%	0.8%
Hong Kong			5.3%	
Qatar			4.0%	0.9%
UAE			4.6%	
Israel			4.4%	
Singapore			4.2%	
Venezuela	3.9%			
Romania	0.8%	3.0%		
Kazakhstan	2.0%		0.8%	
Panama	1.7%		0.7%	
Ukraine	2.0%		0.2%	
Lebanon	2.1%			
Jamaica	0.6%		1.1%	
Uruguay	1.4%			
Dominican Republic	1.3%		0.1%	
Kuwait			1.4%	
Sri Lanka	1.2%			
Croatia	1.1%		0.1%	
Saudi Arabia			1.2%	
Nigeria	0.2%		1.0%	
Oman	0.6%		0.4%	
Morocco	0.3%		0.7%	
Ecuador	0.9%			
Egypt	0.4%		0.4%	0.1%

	EMBIG	GBI-EMGD	CEMBIB-D	MSCI-EM
Macau			0.9%	
Costa Rica	0.9%			
Guatemala	0.3%		0.6%	
El Salvador	0.7%		0.1%	
Ghana	0.4%		0.4%	
Trinidad And Tobago	0.4%		0.3%	
Lithuania	0.7%			
Azerbaijan	0.5%		0.1%	
Serbia	0.6%			
Pakistan	0.6%			
Iraq	0.3%		0.2%	
Cote D'Ivoire	0.5%			
Paraguay	0.3%		0.2%	
Kenya	0.3%			
Greece				0.3%
Bahrain			0.3%	
Jordan	0.2%		0.1%	
Angola	0.3%			
Czech Republic			0.1%	0.2%
Mongolia	0.2%			
Gabon	0.2%			
Vietnam	0.2%			
Georgia	0.1%		0.1%	
Slovakia	0.2%			
Namibia	0.2%			
Bolivia	0.1%			
Honduras	0.1%			
Senegal	0.1%			
Armenia	0.1%			
Tunisia	0.1%			
Ethiopia	0.1%			
Cameroon	0.1%			
Latvia	0.1%			
Barbados			0.1%	
Bangladesh			0.1%	
Suriname	0.1%			
Mozambique	0.1%			
Belize	0.0%			
Zambia	0.4%		0.5%	

As of January 2017
Source: J.P. Morgan, MSCI

Appendix 3

Observations about the case for emerging market corporate bonds (CEMBI index family)

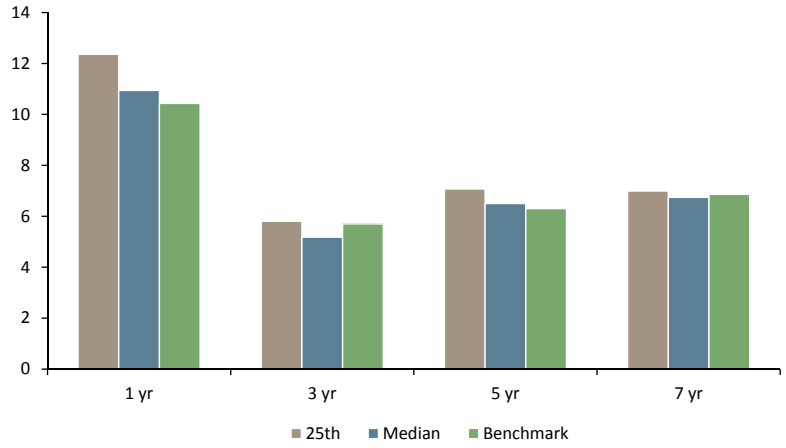
GMO hasn't offered a CEMBI-relative strategy, as we believe the sub-asset class scores poorly on the diversification, value, and alpha criteria discussed herein. Another response from our previously introduced Emerging Country Debt FAQ sums up our take:

> *We expect emerging corporate bonds to offer wide spreads to compensate for their extra risks. They are less liquid, offer poor recourse for creditors in the event of default, and have additional (idiosyncratic) default risk above that of their sovereign. They don't offer much risk diversification, since a sovereign default usually triggers a default of all the associated corporates. In practice, most emerging corporate bonds fail to offer enough compensation for these extra risks. We find that these bonds are marketed more often to managers for whom alpha relative to a sovereign benchmark is not the primary objective.*

In other words, as we are a manager pursuing alpha relative to sovereign benchmarks, most[6] CEMBI issues offer no alpha opportunity to us.

But what of CEMBI-relative managers? What diversification, value, and alpha case can be made? Taking the alpha case first, again using eVestment, we find that over longer periods the median manager bounces around zero alpha, while top-quartile managers have tacked on only 10-77 bps. We note with some interest that while there were only nine managers in eVestment's Emerging Corporate universe seven years ago, there are now 57 in the one-year sample. It has surely been a case of "if you build it, they will come," where the issuers want to issue, so an index is built, managers hang out a shingle, and next thing you know CEMBI Broad Index has a market capitalization of $855 billion (only 54% of the universe, no less!), larger than EMBIG's $776 billion. If the relative expense ratio of the CEMB ETF (50 bps) versus the EMB ETF (40 bps) is an indication of the relative fees, we understand the managers' incentives. That there's no net alpha in it for the ultimate investor hasn't seemed to have been a concern along the way.

Exhibit 13: Manager performance in emerging market corporate debt



Source: eVestment
Data as of December 2016

[6] We do consider part of our investment universe (and do invest in) CEMBI and extra CEMBI quasi-sovereigns, which are those issues with partial government ownership and strategic relevance to the sovereign.

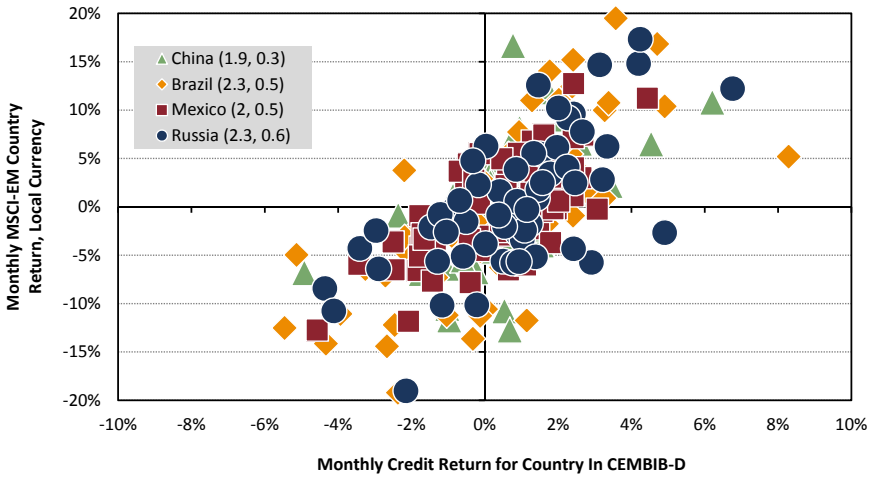
So if alpha isn't the motivation, then surely diversification and value must be. Earlier, we showed that from a statistical perspective, CEMBIB-D and EMBIG have similar correlations with risk assets in typical portfolios (S&P, emerging equities, global and investment-grade bonds). We also showed that CEMBIB-D's bid-offer spreads are wider than EMBIG's, particularly during market stress situations, indicating lower liquidity. So we ask: what *fundamental* diversification properties does CEMBI offer to portfolios that already have emerging risk assets (emerging market sovereign bonds and emerging market equities)? After all, emerging corporate bonds already carry the sovereign default risk *plus* idiosyncratic default risk of the companies involved, as our exposures table highlighted. Below we outline our *unconstrained, fixed income-oriented* way of thinking about the issue of fundamental overlap in portfolio construction.

We say *unconstrained*, as we permit ourselves to think holistically about the nature of an exposure. We say *fixed income-oriented*, as we're fundamentally focused on "what can go wrong?" In the limit, the only thing that can go permanently wrong with a corporate is that it defaults or restructures, resulting in a permanent loss. In this scenario, the equity is wiped out and the bond is written down, with CEMBI recoveries averaging only 27.6% over the last five years.[7] In the no-default scenario, the CEMBI holder earns a yield that can be greater or lesser than the equity dividend yield, while the equity holder bears unique earnings risk.

The question we ask is: are investors better off owning a combination of government bonds (via EMBIG) and equities, a so-called barbell strategy, than they would be owning all three asset classes (government bonds, corporate debt, and equities), assuming the constituents that make up the corporate debt and equity indices are similar in nature? The EMBIG/CEMBI/equity downsides are similar, but the EMBIG/equity barbell offers more upside potential, as equities are higher-beta forms of corporates.

Exhibit 14 plots five years of monthly returns for the MSCI-EM local currency country index for four of the systemic countries against the credit returns for the CEMBIB-D of those countries. The legend provides the beta and the r-squared, respectively, of the relationship. We observe a fairly robust statistical relationship between the CEMBIB-D's credit return (removing the USD rates return) and the corresponding country's local currency MSCI-EM equity index (removing the FX return). As we suggested, emerging equities are a leveraged play on emerging corporate bonds.

Exhibit 14: Relationships between MSCI-EM equity return and CEMBIB-D credit return



Sources: GMO based on data from J.P. Morgan, MSCI. December 2011 – January 2017

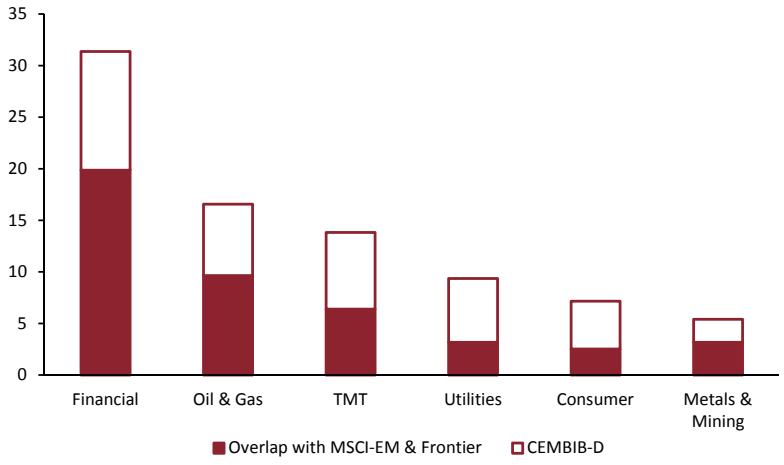
[7] According to J.P. Morgan, CEMBI Monitor, January 2017, which states: bond recovery rate is calculated as bid price after 30 days of default, while Index Recovery Rate is the notional weighted average of bond recovery rate.

Further, from a fundamental standpoint, there exist significant compositional overlaps between emerging market equity and emerging market corporate bond indices, as measured in companies, sectors, and countries represented.

- About half of CEMBIB-D companies by market capitalization are already represented in MSCI-EM/Frontier equity indices.
- By industry, the market capitalization overlap is also high, allowing for the different industry classifications mysteriously propagated by the debt versus equity underwriters (Exhibit 15).
- By country, only nine CEMBIB-D countries are not represented in EMBIG+MSCI-EM/Frontier, while EMBIG+MSCI-EM/Frontier has 37 additional countries beyond CEMBIB-D.

Finally, we note with some alarm that perpetual bonds and Tier 2 bank bonds are also included in CEMBIB-D. Perpetuals and subordinated Basel-3 compliant bank bonds make up 4.3% and are pretty close to equity in spirit and, in the latter's case, are called "preferred equity" in the United States. From a regulator's perspective, even, central banks around the world also consider the latter equity. We don't feel shy about pointing out the arbitrariness of the "debt" versus "equity" label when equity-like instruments are shoe-horned into debt benchmarks.

Exhibit 15: Emerging corporates overlap with emerging equities, by industry (% market cap)



As of February 2017
Sources: GMO calculations based on data from J.P. Morgan, MSCI

A final question we explore: are there *unique* fundamental exposures gained by adding CEMBIB-D to EMBIG+MSCI-EM/Frontier portfolios? In other words, in exchange for taking on enormous redundancy, can we access something unique *and* worthwhile? Exhibit 16 shows the characteristics of the unique piece of CEMBIB-D. We observe:

- It's not particularly different from CEMBIB-D, from a ratings or duration perspective.
- It doesn't represent value relative to EMBIG's quasi-sovereigns insofar as it has the same spread over sovereigns, but poorer liquidity and greater idiosyncratic risks.

Exhibit 16: Characteristics of CEMBIB-D unrepresented by MSCI-EM

Market Cap	$206 billion (USD)	50% of CEMBIB-D
Average Rating	BBB-	One notch lower than CEMBIB-D
Average Life	6.1 years	1.8 years shorter
Spread Duration	4.5 years	0.7 years shorter
Spread over Sovereign	~100 bps	Slightly less than EMBIG's quasi-sovereigns spreads

To illustrate the point, we can look at Mexico (~5% of CEMBIB-D) to show the level of redundancy and tight valuations, with Exhibit 17 showing the Mexican name-by-name comparison. We observe:

- 64% by market capitalization of the companies in CEMBIB-D are already represented in MSCI-EM. Plus, an additional 30% also are constituents of global high yield and/or aggregate bond indices. So, if you already own emerging equities and a global high yield credit portfolio, you are 94% covered. This conclusion is in line with our broader conclusion about the CEMBIB-D. Exhibit 17 also compares the unique portion of CEMBIB-D with EMBIG's quasi-sovereigns. We note that while the unique portion of CEMBIB-D represents only $7.9 billion of market value, EMBIG's quasis represent $59 billion. The credit rating is two notches below and the spread duration is a little under a year shorter.
- We further looked into whether or not the unique CEMBIB-D slice offers compelling relative valuations: the average five-year spread over the corresponding Mexican sovereign curve is 148 bps. For comparison, EMBIG's quasi-sovereign bonds pay 120 bps above the sovereign. So, ultimately, an investor will have to decide if venturing out from safer government-related bonds into private company bonds rated two notches below with little or no potential for government support is worth only 28 bps. We restate the answer from our FAQ: *In practice, most emerging corporate bonds fail to offer enough compensation for these extra risks. We find that these bonds are marketed more often to managers for whom alpha relative to a sovereign benchmark is not the primary objective.*

Exhibit 17: Mexican corporates and quasi-sovereigns in CEMBIB-D

	EMBIG	Unique CEMBIB-D
Market Cap (USD Bln)	58.7	7.9
Average Rating	BBB+	BBB-
Index Weight (%)	7.4	1.9
Spread Duration (yrs)	7.2	6.4
Average Z Spread (bps)	295	379

	Credit Quality	Also in MSCI-EM?	Also in Global Aggregate/ High Yield?
EMBIG			
Mexican Government	BBB+	no	yes
Banco Nacional	BBB+	no	yes
Commission Fed De Electric	BBB+	no	yes
Mexico City Airport Trust	BBB+	no	yes
Nacional Financiera	BBB+	no	yes
Pemex	BBB+	no	yes
CEMBIB-D			
America Movil	A-	yes	yes
Femsa	A-	yes	yes
Coca-Cola Femsa	A-	yes	yes
Santander Mexico	A–	yes	yes
BBVA Bancomer	A–	no	yes
El Puerto Liverpool	BBB+	yes	yes
Grupo Televisa	BBB+	yes	yes
Banco Inbursa	BBB+	yes	yes
Grupo Bimbo	BBB	yes	yes
Fibra Uno	BBB	yes	yes
Mexico Generador	BBB	yes	yes
Gruma	BBB	yes	yes
Fresnillo	BBB	no	yes
Becle	BBB	no	yes
Southern Copper	BBB	no	yes
Sigma Alimentos	BBB	no	yes
Alfa	BBB-	yes	yes
Mexichem	BBB-	yes	yes
Alpek	BBB-	no	no
Fermaca Enterprises	BBB-	no	yes
PLA Administrado	BBB–	no	yes
Banco Mercantile	BB+	yes	yes
Credito Real	BB+	no	yes
Controladora	BB+	no	no
Metalsa	BB+	no	no
Tenedora Nemak	BB+	no	yes
Elementia	BB	no	no
Grupo KUO	BB	no	no
Unifin Financier	BB	no	no
Cemex	B+	yes	yes
Grupo Idesa	B+	no	no
Sixsigma Networks	B+	no	yes
Grupo Posadas	B+	no	no
Offshore Drilling	CCC	no	yes
TV Azteca	NR	no	yes

As of January 2017
Source: GMO based on data from J.P. Morgan, MSCI and Barclays

For further reading…

Selected papers written by the GMO Emerging Country Debt team are presented below. Contact your GMO representative for any of these that are of interest.

Date	Title	Abstract
12/2/2016	Venezuela – Implications of a Default Forestalled	By continuing to pay in the context of extreme social hardship and bond yields well above 20%, Venezuela demonstrates a very high willingness to pay, but defies the "norms" of political economy and public finance. This paper asks whether Venezuela is a unique case, or whether we need to change our approach to investing in countries with high debt distress.
11/15/2016	Twenty-Six Years of Emerging Country Debt	Emerging debt remains attractively priced, particularly local currency debt at current relative levels. Alpha opportunities, especially those approached from the bottom-up, persist despite challenges created by declining liquidity. This presentation comes from the 69th CFA Institute Annual Conference held in Montréal on 8–11 May 2016 in partnership with CFA Montréal.
11/3/2016	The Ukraine Default: A Retrospective Test of Some of Our Emerging Debt Investment Theses	As sovereign-led defaults and restructurings are rare, we use the opportunity to test the assumptions that underpin our investment process. Herein we review select cases in Ukraine, comparing varying default/ restructuring mechanisms across quasi-sovereigns and corporates; implications of specific bond structures in certain cases; and try to highlight where we can make generalizable observations and where, instead, the unique "Ukraineness" dominated.
10/3/2016	The Limits of Populism in Latin America – The Optimal Size of Government and Lessons for Venezuela and Ecuador	In this essay, we draw on the literature covering the optimal size of government, performing our own empirical analysis on our investment universe of countries, to help explain why (and when) this backlash against populism, which we define as ever-increasing size of government in the economy, happens. We ask whether the limits of populism are being reached in Venezuela and Ecuador, and whether there are lessons to be learned from this work on our overall sovereign risk assessment process.
6/10/2016	Can Basel's Capital Adequacy Framework Inform Our Investment Process?	We find that emphasizing the equity-to-asset ratio is much more effective than the Basel-supported risk-weighted capital adequacy ratio in evaluating banks' risk and relative value in their bonds. This makes the Basel framework relatively insignificant in our investment process.
3/25/2016	The Limits of Populism in Latin America – The Case of Brazil	The second in a series on populism in Latin America, this essay focuses on Brazil, where one of our analysts spent a week in-country on a research trip. There was a combination of disappointment, disgust, and disillusionment with elected officials, along with some fear of what lay ahead, in terms of rising unemployment, a deepening recession, and lower real incomes, the hangover from years of populist policies.
12/18/2015	The Limits of Populism in Latin America – The Case of Argentina	This short essay focuses on Argentina, where voters have recently dealt a blow to the incumbent left-wing Peronist governments of Cristina Fernandez de Kirchner and her late husband Nestor Kirchner, electing a pro-market president from a young political party. This could usher in a period of economic renewal and re-engagement with markets.
3/29/2010	Deconstructing and Reconstructing Emerging Market Debt: A Bottom-Up Approach to EMD Investing	This article, first published in the CFA Institute's Conference Proceedings Quarterly (March 2010), discusses a methodology for determining whether or not investors in emerging market debt are being adequately compensated for all of the risks they are taking.

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