

## The Long-Term Strategist

Strategic questions on EM allocations

- We look at a set of long-term strategic questions on Emerging Markets, such as what are they, why distinguish them from DM, what returns to expect vs. DM, do they offer diversification, where is value, how much to hold, and how the rise of China is changing the asset class.
- Over the full period since their entry into global markets, taken as the inception of their indices, EM has beaten DM across equities, bonds, credit, and FX. But performance has been far from straight line.
- EM has been a story of two feast and famine cycles, each roughly seven years up and then down, driven by growth cycles. The last famine phase is now seven years old, but we do not yet see signs of rebirth of globalization and governance needed for long-term EM outperformance.
- Paradoxically, we find that to harvest EM's higher long-term growth, one should focus on local bonds and currencies and not on equities or credit as growth has not produced faster earnings growth but instead higher interest rates. Equities are the right asset for any reacceleration of EM growth, even as we are still awaiting the right signal for that.
- EM equities have produced only the same earnings growth as DM since 1995, despite higher GDP growth. Current relative valuations are slightly/modestly cheap. High volatility and correlations to DM limit diversification value. We are currently tactically OW.
- EM currencies carry risk premia with a long-term return to risk similar to other risk assets. Against USD, EM FX is 2/3rd sigma cheap to long-term averages.
- EM local bonds do not generally offer higher term premia than DM, with the yield excess over DM coming from their currencies, but they currently do offer good entry value, given QE-driven DM richness, and good diversification vs. DM duration, when currency hedged.
- EM credit from sovereign and corporate hard-currency debt offers ~50bp risk premium over DM in HG. The asset class beats DM when EM equities rally vs. DM and largely holds par with DM when EM equities underperform. Diversification value is not large. Entry points vs. DM are neutral to rich. Its by now massive size, though, offers opportunities to express views on individual EM companies.
- China's economy is now almost half of overall EM and is reshaping the asset class as it grows in size, and its markets will at some point enter global indices. In FI, this lowers overall EM carry but makes it more reliable. In equities, China has yet to produce good earnings growth and returns to pull in more DM capital.

• [Video](#).



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Since Emerging Markets have been opening up in the 1980s and 1990s, global investors have been pouring in, in search of returns from high EM growth and convergence on DM. But the 1990s' EM crises and underperformance in the current decade are now raising the question whether EM is really worth its high volatility.

We look here at a set of **strategic issues** on how global investors should be approaching EM. What is an EM? What returns we can expect relative to DM across equities, bonds, currencies, and credit? Does the past give us any guidance? Is today a good entry point? Where is long-term value? What will make EM equities produce higher returns again? Is there enough return potential for TAA vs. DM and what skill do you need? Is EM still good diversification and where? How can we monetize the higher growth that EM economies produce? Will tomorrow's EM still be anything like yesterday's, especially with China starting to dominate more than ever? What can we say about how much EM you should hold strategically in your global portfolio over the next decade?

We consider EM **from a DM investor point of view**, largely in USD and focus on investable assets covered by the major indices managed by MSCI, J.P. Morgan, and Barclays Bloomberg. Government bonds to us mean central government debt issued in local currency, measured by our GBI index family. Debt issued by EM sovereigns in dollars and euros—our EMBIG index—is subject to default risk, and we thus analyze it as credit, even as some indices and analysts only consider corporate bonds to be credit.

## What is EM?

Emerging Markets (EMs) used to be called *underdeveloped* countries, and then developing countries, or in French, *pays en voi de développement* (countries on the way to development). An EM must thus be seen to be developing something, generally understood to be their **standard of living**, for which the best single measure is taken to be income per capita.

**Income per capita** comes from labor productivity (income per worker) and labor participation (share of workers in the population). Productivity can be improved through capital spending, physical and human (education, know-how, management), as well as better functioning institutions, labor and capital markets. In Appendix I, we show how different institutions and index providers define what they consider EM countries and their counterpart, DM, for developed markets.

In general, index providers start with a **Gross National Income (GNI) per capita cutoff**, above which a country becomes a DM, and then combine these with quantitative and qualitative measures of liquidity and market access to judge how developed it is financially. There is thus no single accepted official definition of what is an EM, even as there is a lot of commonality. Some countries live around the border between EM and DM, with Korea being part of DM in FTSE equity and JPM bond indices but of EM in MSCI equities. Over time, some EMs do emerge and graduate into the DM category, while some later are downgraded back into EM when conditions worsen. As the criteria are continuous, some index providers in turn distinguish among EM, calling the lesser developed ones Frontier markets, or Next Generation.

One area where this **diversity** within EM is important and persisting is in the **different country composition of the EM indices across asset classes**. Appendix II lists the country weights across four EM asset classes—equities, local government bonds, external sovereign, and external corporate credit. EM equities are dominated by China with the latter already at a 31% weight, set to rise as the domestic market opens up to international investors. China is not yet in local bond indices, but this will change from next year on. These differences do affect performance and value, just as country and sector weight differences affect DM equity and bond indices. At the end of the day, though, the indices describe what is on offer to international investors and thus have to be considered as is.

## Why distinguish EM from DM?

To keep the investment process manageable, investors generally break it up in stages, at the simplest level first deciding how to allocate across asset classes, such as bonds and equities, then dividing by region, before deciding how to invest within these regional asset classes. Geography is the obvious way to define regions, with funds usually spread across the Americas, Europe, Asia, and Africa. But why would one then combine a group of countries from different parts of the world on the basis of economic and financial development into a separate region if not overall asset class? For this to work, **it must be the case that there is something fundamentally different about EM**.

It can be argued that EM investing requires different analysis and consideration of factors that do not come up much in DM, such as the risk of regime change or expropriation, a weak rule of law, low liquidity, and

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extreme volatility. EM risk and price action are **at times discontinuous** and subject to gaps that cannot be traded. DM price action is much more continuous with markets rarely shutting down. EM investing thus requires a different mindset and risk management. Asset managers and market makers—the buy and the sell side—have therefore traditionally separated their EM business from their DM one as **EM markets require a different type of risk management.**

As EMs develop, their income levels and risk profiles will gradually mature and graduate to those of DM markets. Portugal and Israel, e.g., graduated some 20 years ago from EM to DM, while Greece first moved up and then down again into EM.

**Distinguishing EM as an asset class against DM remains relevant today** as there is a steady supply of new EMs that are not yet part of any index, or only of Frontier indices, that are opening their markets and developing their economies to enter the existing EM indices. This movement of countries across the EM/DM divide is similar to the steady move of companies between investment grade and sub-investment grade (high yield) indices in the corporate bond world, which we also consider different asset classes requiring different analysis and risk management.

## What long-term return on EM vs. DM?

Any higher future expected returns on EM vs. DM could come from three sources: (1) any persistent **risk premia** to compensate for higher EM risk or information gaps on EM economies and companies; (2) any relative **current** cheapness that is expected to correct itself over the long term; and/or (3) any expectation that EM will surprise on the upside more than DM over the medium term.

We start by analyzing past return differences between EM and DM equities, bonds, credits, and currencies over the longest time series that we can find to look for patterns to help us project future relative returns for the next decade. Table 1 shows that **EM has beaten DM across the main asset classes since inception** of each of their respective indices: equities; government bonds, currency hedged and unhedged; FX; and credit, high-grade and high yield, sovereign and corporate. These high past EM returns have created the belief of many that EM is both a high-growth and high-return asset class. Below we discuss for each whether we can extrapolate these excess returns, or if the past is a good guide to the future. The conclusion will be a bit of both.

**Table 1: Total Returns of different EM and DM asset classes**

% compound annual returns, in USD

Asset Class	EM	DM	EM-DM	EM Sharpe	DM Sharpe	Since
Equities	10.84%	8.05%	2.79%	0.32	0.31	Dec'87
GBI	6.40%	4.00%	2.40%	0.41	0.38	Dec'02
GBI Hedged	4.34%	3.99%	0.36%	0.65	0.79	Dec'02
EMBI HG vs USCorp IG	7.45%	5.84%	1.61%	0.62	0.57	Dec'93
EMBI HY vs US Dom HY	9.44%	7.53%	1.92%	0.47	0.60	Dec'93
CEMBI HG vs JULI	6.32%	5.92%	0.40%	0.70	0.84	Dec'01
CEMBI HY vs US Dom HY	8.97%	8.41%	0.55%	0.58	0.82	Dec'01
EMFX	5.29%			0.34		Dec'93

Source: J.P. Morgan, MSCI. Last obs is Aug 2018

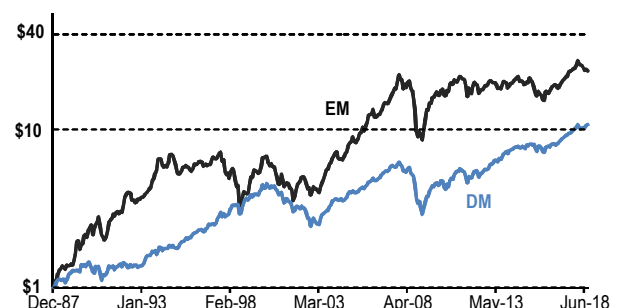
Indices used: MSCI EM, MSCI World, GBI EM Global Diversified, GBI DM Diversified, GBI EM Global Diversified Hedged, GBI DM Diversified Hedged, EMBI Global IG, US Bloomberg Barclays Corporate IG, EMBI Global non-IG, JPM US Domestic HY, CEMBI Broad IG, JULI ex EM, CEMBI Broad non-IG, JPM US Domestic HY, ELMI Plus.

## EQUITIES

**The data:** Figure 1 shows the cumulative total return on the MSCI EM index and its DM equivalent (MSCI World) in common currency (US\$) since inception of the EM index at the end of 1987, on a log scale. EM did outperform by 2.8% over this period vs. a DM annual compound return of 8%. EM produced much higher volatility at 23% vs. 15% for DM, discussed and shown below in Table 4 under Diversification. Over this period, EM exhibited a beta of 1.16 to DM.

**Figure 1: MSCI EM and DM (World) Total Return Indices**

Dec 1987 = 1 in natural log scale, monthly



Source: J.P. Morgan, MSCI. Last obs is Aug 2018

Figure 2 shows the same in ratio terms. It highlights that the excess return from EM is highly dependent on where we start from. The full **30-year history** is really one of a **roughly seven-year EM feast followed by seven years of famine, and then again the same roundtrip**. Starting only five years later, EM had the same performance as DM equities.

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Figure 2: MSCI EM to DM (World) Total Return Index

Ratio, Dec 1987 = 100, monthly



Source: J.P. Morgan, MSCI. Last obs is Aug 2018

**What drove this relative return pattern?** Equity returns come from **income (dividends) and capital gains**, which in turn consist of **earnings growth and multiple changes (P/E)**. We can decompose the return gap between these three factors only since Sep 1995 as dividend and actual earnings data start then. In Table 2, we do this for the feast/famine periods we can detect, since 1995: 1995-2001; 2001-09, 2009-15; 2015-today. It shows that in each period, **relative earnings growth explains most** of the EM/DM rolling return difference, with multiple changes amplifying the impact of earnings growth differentials in the first two periods but not adding much in the latter two.

Table 2: Total return composition of MSCI DM vs EM return gap % , pa.

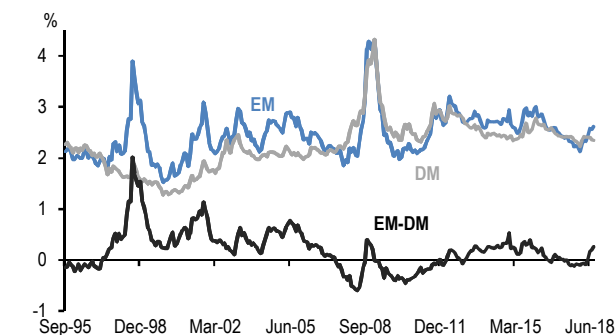
Period	Return Gap	Dividend Gap	EPS growth Gap	Multiple change Gap
95-'01	-11.52%	0.45%	-5.80%	-6.03%
01-'09	14.05%	0.20%	9.12%	3.76%
09-'15	-9.76%	0.04%	-10.28%	-0.09%
15-today	0.90%	0.04%	0.05%	0.57%
95-today	-1.12%	0.21%	-1.09%	-0.32%

Source: J.P. Morgan, MSCI. Last obs is Aug 2018

To show this more graphically, Figure 3 charts the dividend yields of MSCI World and EM, showing only an average 20bp higher yield on EM between the two and little variation in the gap. Dividends were **not a big source of return differences**.

Figure 3: Dividend yields on MSCI DM and EM

Dec 1987 = 100, monthly

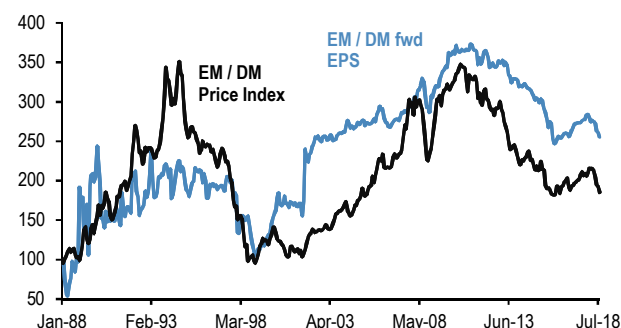


Source: J.P. Morgan, MSCI. Last obs is Aug 2018

Return gaps must thus come more from different earnings growth or **multiple** changes. Figure 4 shows the ratio of operating forward \$ EPS of EM over DM as well as the relative price index ratios. EM outperformed when analysts raised earnings projections for EM more than for DM, and vice-versa. EM equity prices followed, one-for one in the second feast/famine period, but less than one-for one in the first.

Figure 4: EM/DM 12m forward EPS ratio & corresponding Price Index Ratio

Jan 1988 = 100, monthly



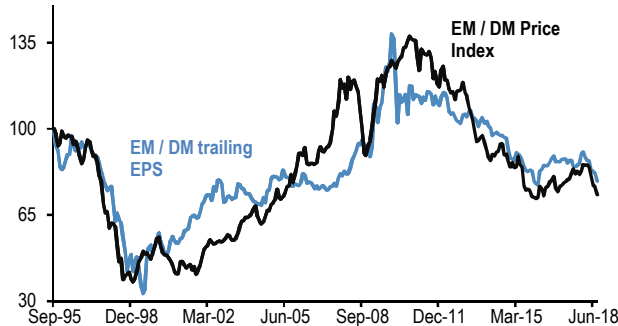
Source: J.P. Morgan, IBES, MSCI. Last obs is Aug 2018

Figure 5 shows the same chart, but for **actual, trailing earnings** for which we have data only since 1995. Here we find that EM/DM relative performance in equities was simply a question of relative earnings growth as relative prices moved virtually one for one with relative earnings delivery. 1995 was the end of one seven-year feast in EM and thus indeed an expensive starting point for EM.



**Figure 5: EM/DM 12m trailing EPS & the corresponding Price Index Ratio**

Sept 1995 = 100, monthly



Source: J.P. Morgan, MSCI. Last obs is Aug 2018

Figure 5 does indicate that **EM outperforms when its companies produce stronger earnings growth than DM**: Over the full period since 1995, **EM earnings in USD did not grow faster than DM**. But is it not the case that in GDP terms, EM economies grow faster than DM in both real and nominal terms, in both local terms and in common currency? **Faster economic growth in a country does not mean faster earnings growth** for companies that happen to be listed there but that are frequently doing business worldwide and thus depend more on global than on domestic growth. In addition, in both EM and DM, growth comes mostly from new companies that are not yet in the large-cap indices. That is why, in the U.S., SPX EPS growth has run below nominal GDP growth over the long run. Finally, any faster growth that is due to inflation should by Purchasing Power Parity be lost through currency losses. Since 1995, EM produced the same EPS growth as DM in US\$ terms despite the fact that EM economies grew from 20% to close to 40% of world nominal GDP in USD terms.

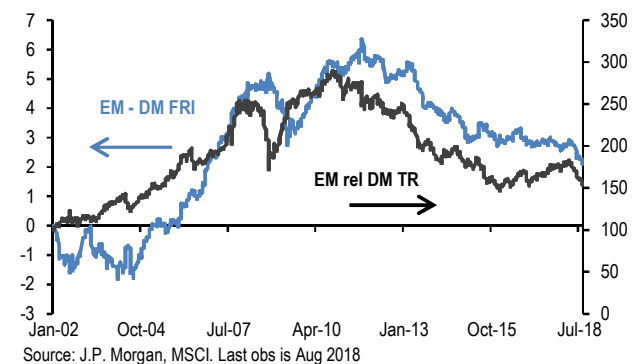
A better way to link EM performance to economic growth is in **surprise terms** as it should only be unexpected growth that drives asset price movements. Figure 6 shows the relative performance of EM vs. DM equities as well as the cumulative difference between our economic real GDP forecast *changes* for EM and DM. If our economists are not changing their forecasts over a certain period, then the accumulated information over that period cannot have been a surprise. The figure shows clearly that EM will outperform DM when our economists raise EM growth more than they raise DM, or lower it less, and vice versa. It is thus not the difference in growth between EM and DM that determines relative equity performance but the changes in growth expectations of one versus the other. It is only when we expect that the market will be consistently more surprised

by EM positively than by DM that we can expect EM to outperform DM over a longer period.

Some will argue here that we do not have to rely on economists' forecasts but can simply **monitor relative growth rate changes**. We tested this and could find some correlation, with the best one depicted in Figure 7 that shows year-on-year EM/DM relative growth rate changes as well as relative equity performance. Relative growth acceleration or deceleration does correlate with relative equity performance, but the fit is not as good as the one with our relative growth forecast changes.

**Figure 6: EM vs DM Forecast Revision Indices (FRI) & corresponding Total Return Index Ratio**

Jan 4 2002=100, weekly

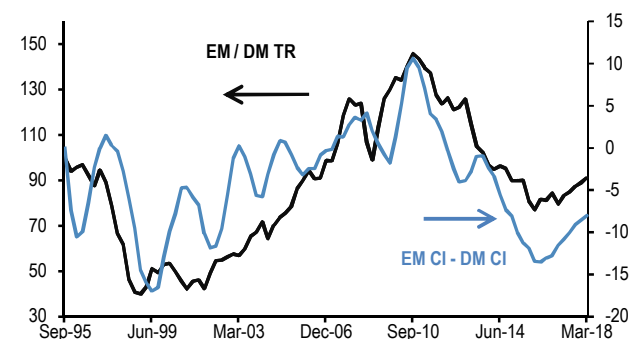


Source: J.P. Morgan, MSCI. Last obs is Aug 2018

**Figure 7: Change Index of Real GDP EM/ DM and corresponding Total Return Index Ratio**

Sept 1995 = 100

$CI_t = CI_{t-1} + (Q_t/Q_{t-4} - Q_{t-4}/Q_{t-8}) * 100$ , quarterly

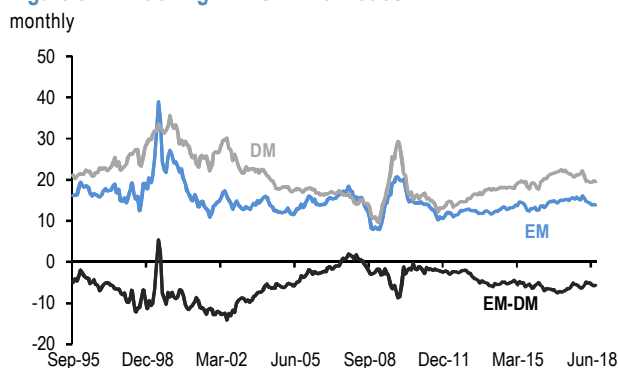


Source: J.P. Morgan. Last obs is Q1 2018 as per availability

**Relative multiple changes:** Figure 8-Figure 9 show the trailing and forward P/E multiples of EM and DM as well as the difference between the two. On average, EM has lower multiples, as one would expect for a riskier asset class. This gap, reversed, is the extra risk premium on EM over DM. The 5.4 point EM multiple discount since 1995 is thus worth 1 3/4% extra IRR on EM equities. The bullish case for EM assets usually consists of arguments

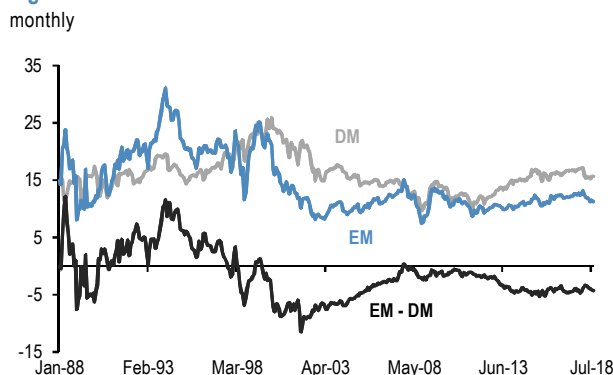
that EM grows faster and is indeed emerging and converging on DM levels of productivity, governance and policy standards. This ought to bring EM volatility and risk premia down and their multiples to converge on DM ones. Volatility has come down, but so has DM vol (discussed lower). Figure 8-Figure 9 show that multiples have not converged yet, despite clearly better EM macro policy governance since the 1990s crises (see, e.g., Aziz et al., [1990s' lessons helped EM avoid GFC crisis, Ten Years after the GFC: A Changed world](#), J.P. Morgan Perspectives, Sep 4).

Figure 8: 12m trailing EM vs DM P/E ratios



Source: J.P. Morgan, MSCI. Last obs is Aug 2018

Figure 9: 12m forward EM vs DM P/E ratios



Source: J.P. Morgan, IBES, MSCI. Last obs is Aug 2018

**In short**, over the full data history since 1987, EM equities have beaten DM, but much of that is due to the first few years of the EM economies and asset class entering the world economy and markets. Starting only five years later, EM performed on par with DM. The full 30-year period can best be described as a double-act of two roughly seven-year feast and famine periods, with feasts coming from steady growth upgrades and famines from downgrades. EM equities offer little in extra dividend, the same \$ earnings growth, and have so far shown no inclination for their multiples to converge on DM levels.

## Implications for future long-term performance:

Arguments to expect higher returns on any EM asset must come from any structural income/risk premium advantage (carry); value, or an advantageous entry point; or better than expected macro performance.

As to **income/carry**, at a 20bp extra dividend yield, both historically and at the moment, there is **not much from an income side to prefer either EM or DM**. Income-oriented investors, [as we are](#), should focus on high-dividend stocks in *both* EM and DM, but this is not a reason to prefer one over the other. US high-dividend stocks pay close to 4%, while EM and non-US DM pay around 5%.

As to **Value**, we need to check whether EM multiples are cheap/wide versus DM ones. Table 3 below reviews relative EM/DM valuation metrics and finds that on a *trailing* multiple basis, the EM/DM gap is only 0.06 sigma wide to its historical mean, while it is 0.59 sigma wide on a *forward* basis. The forward gap at 4.15 points below DM is similar to the 5.65 point discount on trailing earnings, but has been a lot tighter, and above DM in the first decade of global investors entering EM. The forward multiple has the advantage of a longer history, but it has not been mean reverting cleanly and has been below its 30-year mean for most of the past 20 years. At the same time, trailing is by definition backward looking.

Clearly the EM valuation/multiple discount vs. DM is a focus for investors who have seen their EM holdings underperform severely over the past seven years. As strategists, we are currently **tactically OW EM** vs. DM (see [Global Asset Allocation](#), Sep 18) on the discount in forward multiples, a belief that trade war is priced in, and the observation that after a seven-year relative bear market, the international investor is underinvested EM.

Can we expect better **macro outperformance** relative to current expectations? In particular, after just having passed the last roughly seven-year famine period, should we now not be at the start of a new seven-year feast? We know that there is significant [serial correlation in growth forecast changes](#), but this is giving us an EM underperformance signal as our economists have been downgrading DM (and upgrading the US) less than EM in recent months (see Figure 6, above). In EM's defense, though, this signal by itself is more tactical than strategic. We can see that long-lasting surprises on growth expectations are driven by structural, supply-side changes, in particular productivity, which are hard for investors to project in advance, or even to understand ex post. Macro economists are better at understanding and forecasting the demand side than the supply side. Figure

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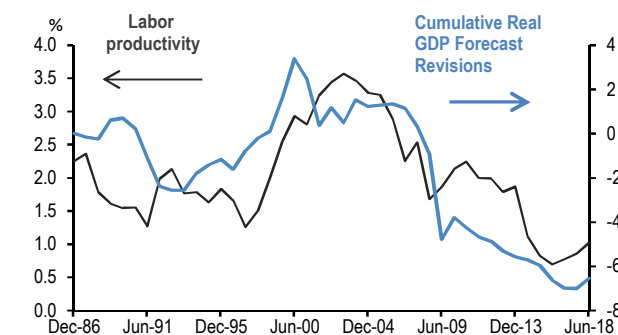
10 shows that the steady upside surprises in US growth coincided with and were probably caused by the 1990s' acceleration in productivity growth, much as the post-GFC steady downside surprise on growth coincided with a slowing in productivity growth.

Table 3: EM vs DM valuation histories

Asset Class	Average	Current	Standard Deviations from Mean	Since
EMBI HG-BB Barclays HG YTM	0.96	1.01	0.08	Dec'93
EMBI HY-US DOM HY YTW	0.44	3.36	1.32	Dec'01
CEMBI HG-JULI ex EM HG YTM	0.68	0.65	-0.11	Dec'01
CEMBI HY-US DOM HY YTW	1.33	1.25	-0.04	Dec'01
GBI EM nominal yield	6.77	6.62	-0.25	Jan'04
GBI Global nominal yield	2.40	1.67	-0.88	Jan'04
GBI EM-Global nominal yield	4.37	4.95	0.88	Jan'04
GBI EM real yield	2.44	2.96	0.61	Jan'04
GBI Global real yield	1.02	0.71	-0.44	Jan'04
GBI EM-Global real yield	1.42	2.26	1.03	Jan'04
12m trailing PE EM	15.14	13.80	-0.36	Sept'1995
12m trailing PE DM	20.57	19.45	-0.22	Sept'1995
12m trailing PE EM-DM	-5.43	-5.65	-0.06	Sept'1995
12m forward PE EM	14.51	11.28	-0.64	Sept'1995
12m forward PE DM	16.03	15.62	-0.13	Jan'1988
12m forward PE EM-DM	-1.52	-4.15	-0.59	Jan'1988
EM FX real bilateral Index	115.03	106.25	-0.68	Jan'1992

Source: J.P. Morgan, MSCI. Last obs is Aug 2018.  
Standard Deviation is calculated in level terms. GBI Global has 13 core DMs.

Figure 10: US productivity growth and cumulative consensus growth forecast changes  
%, quarterly

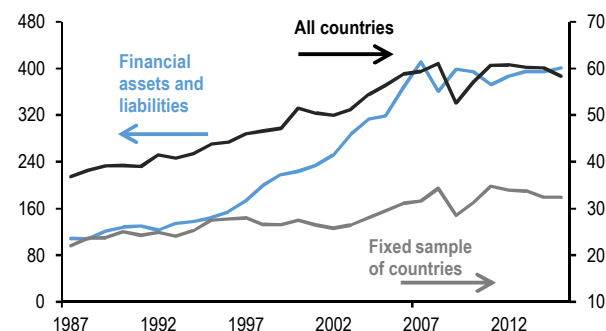


Source: J.P. Morgan. Last obs is Q2 2018

As discussed below Figure 11, a reacceleration of EM vs. DM growth will likely highly depend on renewed globalization in trade and finance, both of which peaked at the start of the decade (Figure 11), not surprisingly also the time when the current relative bear market in EM took off. Currently, we are not seeing any sign that

globalization is about to pick up again, and if anything, trade war risks point the other way.

Figure 11: Globalization in trade and finance  
% of GDP



Source: J.P. Morgan, BIS. Last obs is 2015 The All country line is global trade to GDP. The Fixed sample line follows only the countries that existed at the start of BIS analysis (1835).

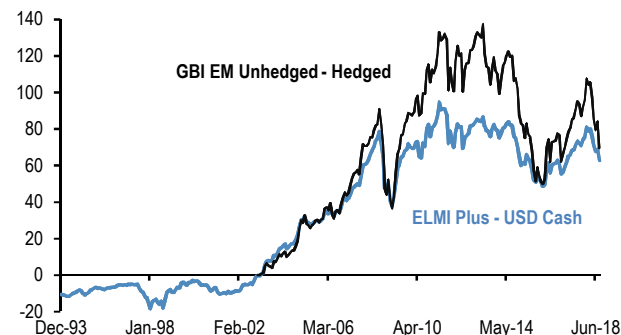
In conclusion, we see **little income, value, or macro advantage or disadvantage for EM to perform better or worse than DM equities** over a period as long as the next 10 years. Our strategic signals are neutral here.

## CURRENCIES

Figure 12 shows the cumulative return of owning **EM currency cash-like instruments**, funded in dollars (thus deducting US\$ 1-month cash) on our ELMI+ index since 1994. As an alternative measure, it also depicts since 2002 the cumulative returns on the EM currency element of our GBI-EM Global Diversified index of local EM government bonds, further reviewed in the next section. This measure of EM FX returns takes GBI-EM unhedged returns minus the same hedged in USD and thus also takes out USD funding costs.

Figure 12: Cumulative returns of EM currencies against USD

Dec 2002 = 100, ELMI+ minus USD cash; GBI-EM Global Diversified Unhedged in USD minus hedged into USD



Source: J.P. Morgan. Last obs is Aug 2018

The chart shows that EM currencies gained against US dollar cash since inception of our ELMI+ index at the start at Dec 1993. Over that period, ELMI+ earned 5.3% p.a. in US\$ terms. Taking out the average funding cost of 2.8% in US\$ left **2.5% excess return p.a. of EM over USD cash**. During this period, the average yield on ELMI+ was 9.32%, showing that EM currencies over the period actually depreciated against the dollar, but by 2.5% less than implied by the interest rate differential (Uncovered Interest Parity, UIP). The difference between our GBI EM hedged and unhedged return, for the shorter sample since end 2002, at 2.4% p.a. produced a similar result, despite its different country composition. **ELMI+ since 1993 produced an excess return to risk of 0.34**, while the FX component of our EM local bond index **since 2002 gave us a Sharpe of 0.28**. Both are very close to the returns to risk earned on US equities, bonds, and credit over the past 90 years and thus can be considered **normal**. EM FX performance looks to have been concentrated in the 2002-06 period, which corresponded to China's emergence, the commodity boom, and the impact of the EM reforms following the Asia financial crisis. For the decade prior to 2002 and the decade since 2008, EM FX returns have been flat.

### Implications for future long-term performance

EM FX has earned over the past 25 years what can be considered a normal return to risk. This risk premium was likely there to compensate investors for the extra risk discussed on p. 2 of investing in EM instead of DM. **Can we count on this EM risk premium to still be there over the next decade?**

If all EMs have become "developed" by now, then this risk premium should have disappeared. Some EM countries have indeed emerged and have joined the DM bond and equity indices. And the overall region, especially Asia, has learned much from the 1990s' crises and is now running more stability-oriented policies that should thus have reduced the required risk premium (Aziz et al., [1990s lessons helped EM avoid GFC crisis](#), Sep 4). However, the persistence of higher interest rates in EM than in DM tells us that the world investor does not think that the overall EM block has fully emerged by now and continues to require an extra premium on EM currencies and local assets. Current EM countries may well emerge over time, but new frontier countries will likely continue to join the investable EM asset class and thus retain the case for an EM risk premium.

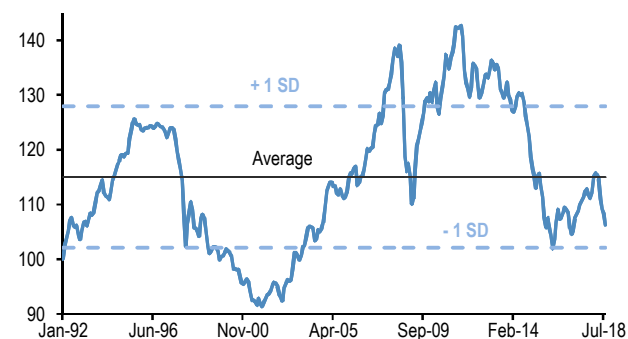
### Is there attractive long-term Value in EM FX today?

With empirical observation telling us that the main part of carry on EM FX is higher EM inflation than DM, one should inspect whether EM FX offers good entry points

today by looking at real, inflation-adjusted FX values. Figure 13 aims to do that by taking the average of 20 inflation-adjusted EM exchange rates against the US dollar. It shows slow but clean mean reversion in real EM FX, which is what we need to make a value judgement. Earlier this year, that average real EM exchange rate was close to its historical mean and thus did not offer an attractive entry point into a strategic long position. By now, with concerns about trade wars, softening growth expectations relative to the US, and idiosyncratic shocks in EM, the average real EM FX rate has cheapened 5% against the dollar and is at end August 8%, or 2/3<sup>rd</sup> sigma below its historical mean. Yes, from this long-term mean reversion point of view, **EM FX is cheap against the dollar** today and thus offers an **attractive reentry point for long-term investors**.

Figure 13: 20 country EM FX real spot index equally weighted vs USD

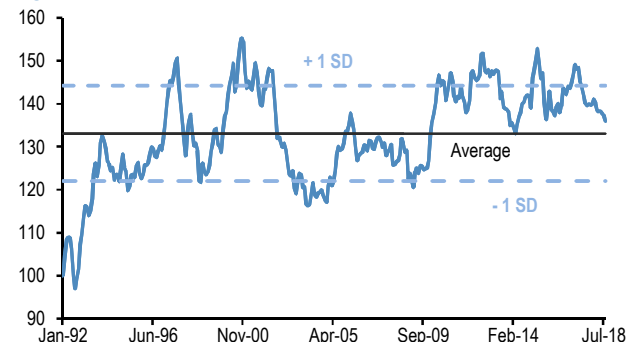
Monthly, deflated with relative PPIs.



Source: J.P. Morgan. Last obs is Aug 2018

Figure 14-Figure 15 show the same real EM FX values against the **euro and yen**. Against the euro, EM FX is close to average valued. Against the yen, there has been no mean reversion of EM FX because the yen itself has steadily fallen in real, inflation-adjusted terms against the dollar, making it hard to make any value argument for EM FX vs. the yen.

Figure 14: EM FX Real Bilateral Index vs Euro



Source: J.P. Morgan. Last obs is Aug 2018



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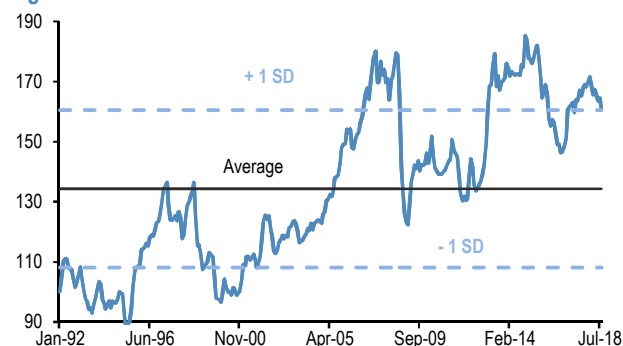
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Figure 15: EM FX Real Bilateral Index vs Yen



Source: J.P. Morgan. Last obs is Aug 2018

Value is very much a question of how far one looks into the future. Real FX mean reversion takes some 5-10 years, and Figure 13 does not suggest real EM FX levels are necessarily stretched or approaching an imminent turning point. For investors looking at shorter time horizons we have developed other fair value tools in [Assessing EM FX Fair Value](#), Jan 2017, Christovova et al. These standard REER models use variables such as productivity differentials, terms of trade, interest rate differentials, external balances, and growth and also show that EM FX is currently cheap. However, other stressed (FEER) valuation models that look at EM FX in an environment of capital flow stoppage do not show the same cheapness across the board (see 2018 [Midyear Emerging Markets Outlook & Strategy](#), Jun 2018, Ogan's & Goulden).

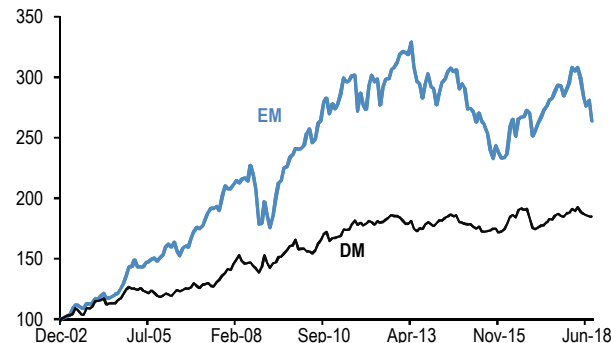
## BONDS

Figure 16-Figure 17 show the cumulative total returns on our EM and DM government bond indices in both currency-hedged and unhedged terms in USD. Since the inception of our GBI-EM Diversified local government bond index in Dec 2002, EM local bonds have earned 6.4% p.a. in USD, on a currency unhedged basis, and 4.3% after hedging into USD. Our DM GBI earned over this period 4% both hedged and unhedged. Figure 18 shows the same as total return ratios of EM over DM bonds.

Since 2002, EM has thus beaten DM bonds by 2.4% pa, but almost all due to currency appreciation and carry, which we discussed in the *Currency* section above. **In currency-hedged terms, EM has outperformed by only 36bp pa.** As with equities, EM relative performance went through feast and famine periods, around the same time as equities. And here too, starting from a different entry period changes the results.

Figure 16: GBI EM and DM Cumulative Total Return Indices ratios, Unhedged in USD

Dec 2002 = 100



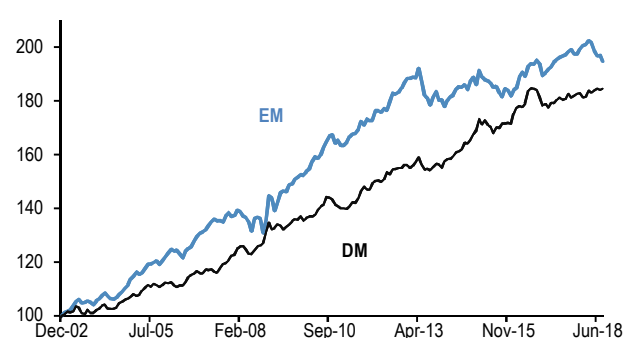
Source: J.P. Morgan. Last obs is Aug 2018

EM: GBI-EM Global Diversified

DM: GBI-DM Diversified rebased to Dec'02

Figure 17: GBI EM and DM Cumulative Total Return Indices ratios, Hedged into USD

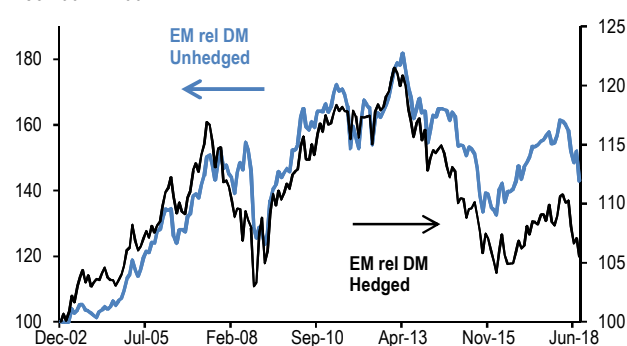
Dec 2002 = 100



Source: J.P. Morgan. Last obs is Aug 2018

Figure 18: GBI EM to DM relative Total Return Indices ratios, Hedged and Unhedged

Dec 2002 = 100



Source: J.P. Morgan. Last obs is Aug 2018

EM local government bonds pay **higher yields** than DM ones both in nominal and real terms, using past inflation as a measure of inflation expectations (Figure 19).

The higher nominal yield reflects a higher inflation rate among most EMs. The higher *real* yield largely reflects

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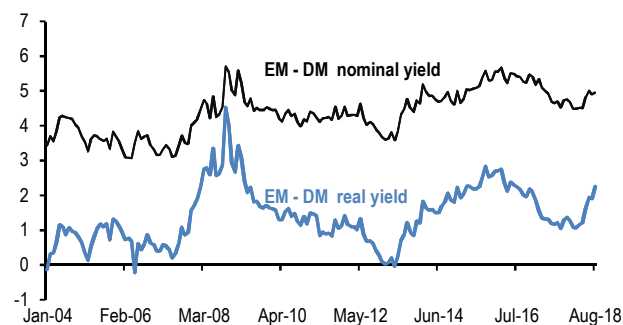
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higher real economic growth and risk and perhaps the perceived inability of EM to cope with higher fiscal deficits or debt loads, even as the latter are on average actually much lower than those in DM (Figure 20)

Weaker governance, past debt crises, and a reliance on foreign capital inflows are probably the reason why most EMs cannot run the same high deficits of many DMs.

Figure 19: EM vs DM real and nominal yield

%, Dec 1999 = 100, monthly

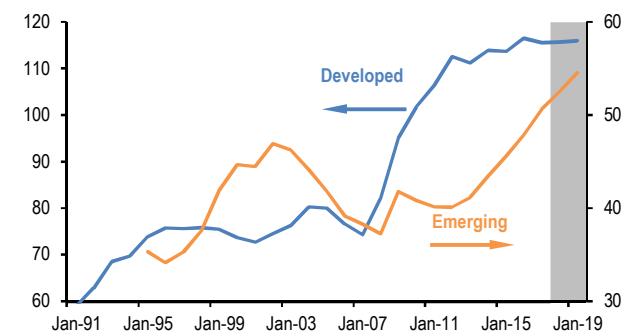


Source: J.P. Morgan. Last obs is Aug 2018.

EM is GBI EM Global Diversified while DM is GBI Global

Figure 20: Gross debt. General government

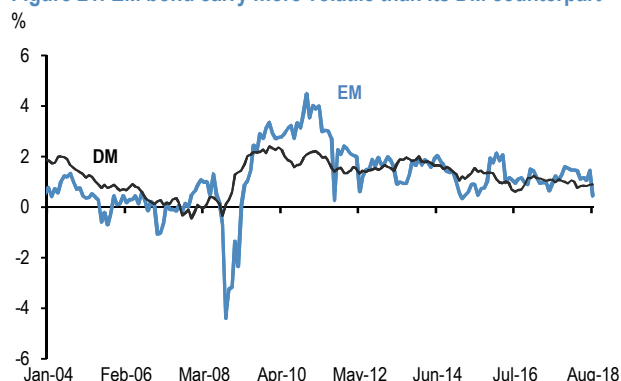
% of GDP



Source: J.P. Morgan. Last obs is June 2019, shaded areas are forecasts.

One could argue and expect that higher inflation and governance risk on EM should create a higher term premium than DM and thus steeper yield curves that global investors can harvest by strategically overweighting EM local bonds. The fact that our currency hedged EM local bond index barely beat its DM equivalent suggests that may not be the case, although that could be due to the short sample period. However, we do find, in Figure 21, that when we look at the average carry along the curve of EM bond markets, it is virtually the same at that on DM bonds, even as EM carry is clearly a lot more volatile.

Figure 21: EM bond carry more volatile than its DM counterpart



Source: J.P. Morgan. Last obs is Aug 2018

### Implications for future long-term performance

We have found a persistent risk premium on EM FX, due to the failure of UIP, but have **not found evidence of a higher bond term premium on EM bonds than on DM**. Hence, we see no reason to expect systematic EM outperformance on EM local bonds, aside from the currency element that cannot be gained without incurring local EM duration risk.

Is there a good Value/Entry point today?

Figure 19 and Table 3 earlier show that both the nominal and real yield gaps between EM and DM markets are some 1 sigma higher than their historical means, suggesting a good entry point for EM. There appears to be an uptrend in the EM/DM yield gap that could thwart mean reversion and EM outperformance, but this is probably largely due to some \$10tr in QE buying by DM central banks post the GFC. Both the real and the nominal yield gap have mean reverted quite cleanly over these 14 years and are thus meeting the most important condition to make a relative value judgement. It can be countered here that this year's rise in EM yields is driven by the 4% and 7% rise in the yields of Argentina and Turkey where inflation is now rising rapidly. However, these two countries account only for ~10bp of the 50bp rise in the index yield YTD and are thus not enough to eliminate the relative cheapness of EM local bonds.

The **EM-DM bond yield gap is thus decently above its mean** since 2004, which is not a long history, with longer term outperformance of EM local bonds hostage to DM central bank balance sheet normalization. At a 84bp wider real yield gap than its historic mean, five-year index duration for EM, and assuming no change in the relative inflation expectations, yield convergence would produce an extra 4.2% price return on EM local bonds over DM, FX hedged, or 42bp over 10 years—a decent

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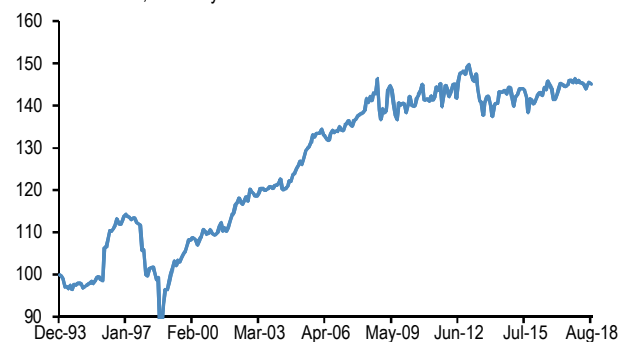
return pickup. In nominal terms, the yield gap is only 58bp wider than the mean, giving us a 10-year out 29bp return pickup, still worth it.

## CREDIT

Global investors largely access EM credit risk through bonds issued by **EM sovereigns and corporates in the US dollar bond market**. Their returns are best captured by J.P. Morgan's market leading EMBIG (sovereign) and CEMBI (corporate) indices (Gloria Kim, [J.P. Morgan Index Product Guide](#), May 10). Figure 22-Figure 25 show the total return ratios of both the high grade and high yield component of these indices relative to their US corporate bond equivalents since inception end-1993 for EM sovereigns and end-2001 for EM corporates.

**Figure 22: EMBI HG vs Bloomberg Barclays Corporate IG Total Return Index**

Dec 1999 = 100, monthly



Source: J.P. Morgan. Last obs is Aug 2018

**Figure 23: EMBI HY vs US Domestic HY Total Return Index**

Dec 1993 = 100, monthly



Source: J.P. Morgan. Last obs is Aug 2018

**Figure 24: CEMBI HG vs US JULI HG Total Return Index**

Dec 2001 = 100, monthly



Source: J.P. Morgan. JULI HG is Ex EM. Last obs is Aug 2018

**Figure 25: CEMBI HY vs US Domestic HY Total Return Index**

Dec 2001 = 100, monthly



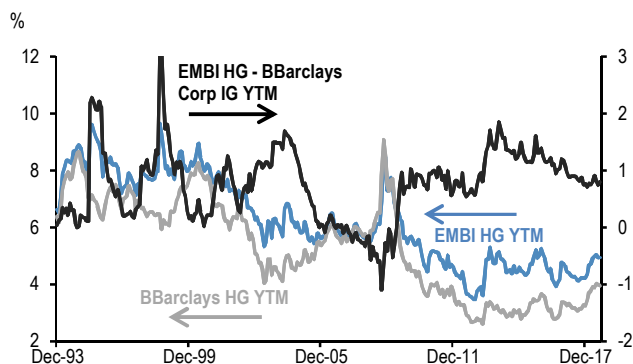
Source: J.P. Morgan. Last obs is Aug 2018

These charts show a similar rhythm to equities with one major difference: **when EM outperforms DM, so does EM credit; but when EM equities underperform DM, EM credit performs largely on par to slightly down vs. DM**, allowing EM credit to net outperform over the EM equity feast-and-famine cycle. Credit is about downside. As long as the growth downgrades that are pulling EM equities and currencies down against DM do not worsen EM default risk too much versus DM, EM credit can hold itself vs. DM credit. The longer term EM credit outperformance signals to us that **EM credit earns a risk premium above DM credit**.

### Implications for future long-term performance

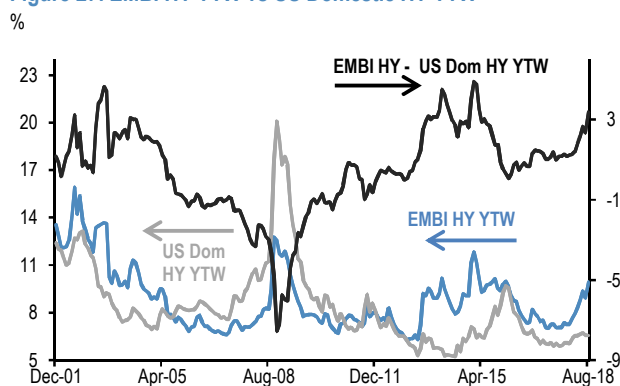
In fixed income, for one asset class to outperform over the long term, it needs to offer a yield premium that should be visible by comparing the different index yields. Figure 26-Figure 29 below show the yield histories for HG and HY EMBIG and CEMBI as well as their US corporate equivalents and the spread between them. Each has systematically offered a higher yield than their US corporate counterparts.

Figure 26: EMBI HG YTM vs Bloomberg Barclays Corporate IG YTM



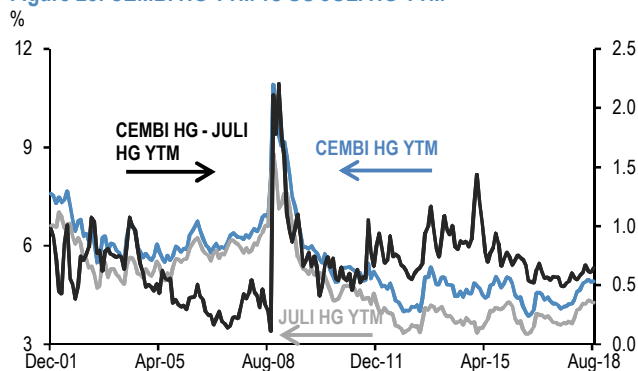
Source: J.P. Morgan. Last obs is Aug 2018

Figure 27: EMBI HY YTW vs US Domestic HY YTW



Source: J.P. Morgan. Last obs is Aug 2018

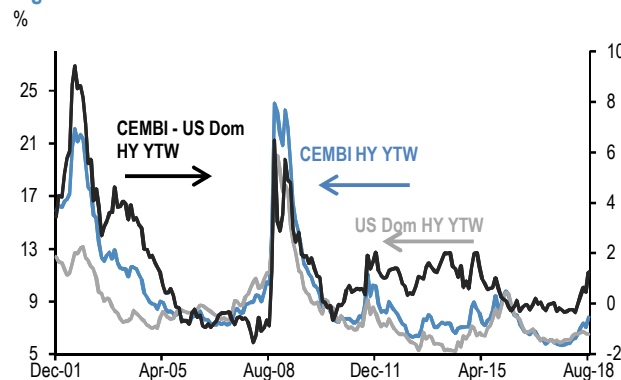
Figure 28: CEMBI HG YTM vs US JULI HG YTM



Source: J.P. Morgan. Last obs is Aug 2018

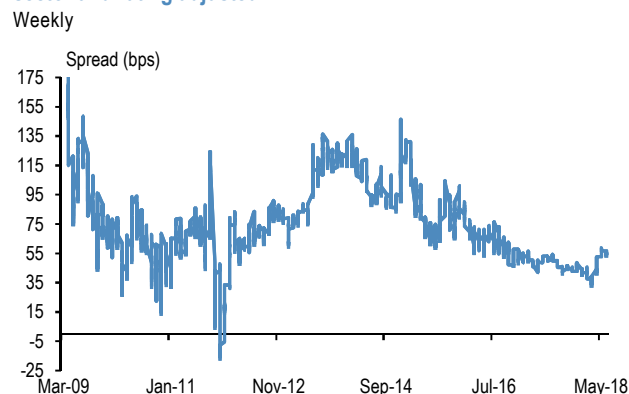
There are obvious questions about whether duration, sector, and rating differences could have caused these yield differences. To check this, our EM and Credit research team has created a yield series of HG EM corporates in our CEMBI index matched against the yield on US corporate bonds with the same duration, sector, and rating (Figure 30, [EM vs US HG Relative Value report](#)).

Figure 29: CEMBI HY YTW vs US Domestic HY YTW



Source: J.P. Morgan. Last obs is Aug 2018

Figure 30: CEMBI HG vs US HG spread adjusted for duration, sector and rating adjusted



Source: J.P. Morgan. Last obs is June 2018

This shows that **EM corporates have paid on average 75bp more than their US equivalent**, likely reflecting compensation for lower liquidity, greater uncertainty as to what can be recovered in default, and the higher costs of managing an EM bond portfolio. Currently, end investors can access EM credit quite efficiently through ETFs, but here we find that the 50bp average expense on 18 US listed EM credit ETFs exceeds easily the typical 10bp charged on US HG corporate bond ETFs.

In the case of EM corporates, the yield spread to the US is **directional**, widening out during recessions, which would be an argument for an extra risk premium, as a recession is not a time you are looking for underperformance. In the case of EM sovereigns, we are finding the reverse as the spread to US corporates comes in during a US recession, giving EMBIG good diversification value.

Why EM credit offers a more permanent risk premia to DM could be seen as an EM branch of the broader “credit spread puzzle” phenomenon (see [The Credit](#)



[Spread Puzzle](#), Amato & Remolona, 2003), where credit spreads are observed to persistently offer excess compensation beyond their experienced default risk. This may be due to the challenge markets have in assessing the probabilities of unlikely events. In DM corporates, the market is largely assessing the *ability* of a company subject to a predictable legal framework to pay. For EM sovereigns, the market also needs to assess the *willingness* of a government to pay debts it has incurred with only limited recourse of investors to the country's assets. This adds an additional credit risk assessment that markets need to make for EM countries. The persistence of long-term risk premia in EM credit vs. DM could be seen as evidence of an overestimation of this downside for EM-specific credit risk (see [Interpreting sovereign spreads](#), Remolona et al, 2007).

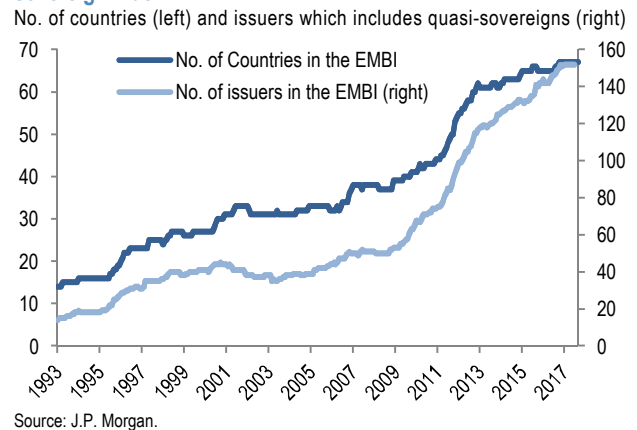
### Implications for future long-term performance

The persistent yield premium on EM HG credit over US HG corporate credit gives a good indication that over the next decade, one should expect EM HG to outperform, probably by order of magnitude 50-100bp pa.

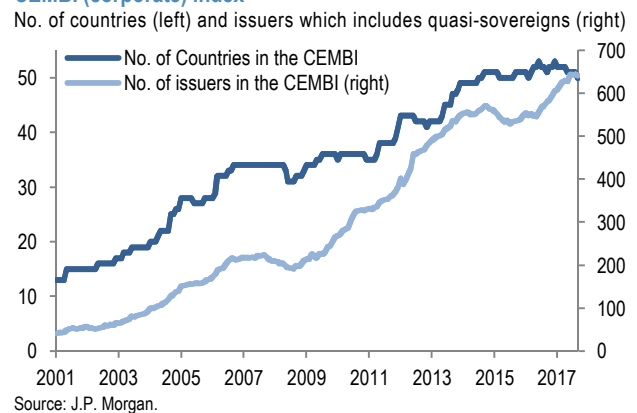
**Value and entry points:** Table 3 above shows that the current spread of each of our four EM credit asset classes is close to its historical mean, with the exception of HY Sovereigns (EMBIG), which is over 1 sigma wide (see recent analysis for CEMBI in Steve Dulake et al., [Sifting through the EM Credit Rubble. A Perspective on EM vs DM corporate credit valuations](#), Sep 24).

Forecasting based on the long-term EM history needs to acknowledge that today's **EM credit universe is not the same as the one we knew in the 1990s and 2000s**. Here we find indeed that the composition of the market has changed dramatically. In 2009, there were 30 countries in EMBIG; by now there are nearly 70 (Figure 31), with the new entrants best described as Next Generation, or Frontier issuers. The large expansion of the EM corporate universe (Figure 32) has also seen a meaningful increase in quasi-sovereign issuers, which explains the number of issuers in the EMBIG rising from 14 to 152 currently. The ratings improvement of the index that took place for 20 years from 1994 and helped drive EM returns also looks to have started to reverse from 2015, with the percentage of HG-rated debt in the EMBIG peaking at 75% in 2015 and now down to 58%. Some of the needed adjustment for the changed composition is done because we compare HG with HG and HY with HY, but overall, it likely biases the spread to US up, though not enough to completely explain away the above historical mean yield spread, and thus keeping HY EM sovereign wide vs. US HY.

**Figure 31: Expansion of the countries and issuers in the EMBI sovereign index...**



**Figure 32: ... and expansion of the countries and issuers in the CEMBI (corporate) index**



**Summary on long-term returns EM vs DM:** We have found no strong case for EM long-term outperformance in equities; a normal risk premium on EM FX to compensate for FX volatility, similar to the risk premia on other types of risk; a cheap entry into EM local bonds, but no persisting extra term premium over DM; a ~1/2% risk premium on EM HG credit, with EM HY sovereigns currently wide to historical averages.

### Does EM offer good diversification?

The case for higher returns on EM over DM in line with its higher economic growth thus very much depends on the asset class, with local FX and bonds giving more exposure to growth over the very long run and equities more over the short to medium term. But surely we should also look at whether exposure to EM economies through EM assets could provide risk diversification for portfolios that are largely allocated to DM. The impact on portfolio risk of adding EM assets to DM portfolios depends on how volatile EM returns are compared with DM and how correlated they are with DM. The lower

EM vol is and the lower its correlation with DM, the more adding EM to DM portfolios will lower portfolio risk.

Table 4 shows the return volatility of the EM and DM asset classes discussed above over the different EM histories we have, as well as the correlation between the two. In the case of government bonds, we use the 1-10-year part on the DM side as otherwise the relative volatility will be driven by the much higher duration of DM. The table shows **that EM has had higher volatility than DM in each case**. In equities and credit, the correlations are relatively high, generally ~0.7. But they are lower in government bonds, at ~0.5, across the broad EM/DM divide, and much lower when we position EM bonds currency hedged against the US, Japanese, UK and Euro government bonds markets on their own.

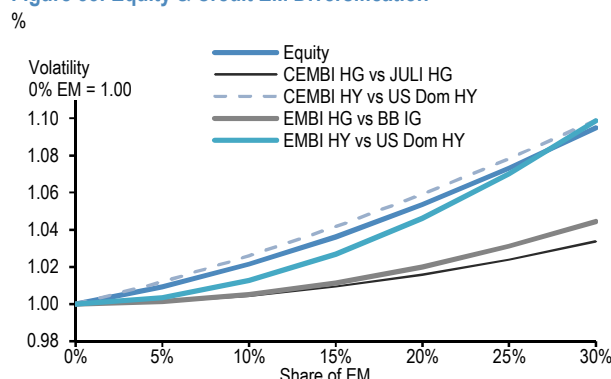
**Table 4: Volatility and Correlation of the different asset classes**

	EM Vol	DM Vol	Correlations	Since
Equity	22.93%	14.61%	0.74	Dec'87
GBI (1-10)Y vs EM Div Unhedged	11.87%	5.78%	0.54	Dec'02
GBI (1-10)Y Global vs GBI EM Div Hedged	4.32%	1.98%	0.42	Dec'02
CEMBI HG & JULI	6.83%	5.22%	0.77	Dec'01
CEMBI HY & US HY	12.68%	8.41%	0.81	Dec'01
EMBI HG & BB IG	7.50%	5.29%	0.70	Dec'93
EMBI HY & US Dom HY	13.97%	7.79%	0.57	Dec'93
GBI EM Hedged & (1-10)Y JGBs in Yen	4.34%	1.38%	0.11	Jan'03
GBI EM Hedged in Sterlg & (1-10)Y UK Gilts in Sterlg	4.46%	3.11%	0.39	Jan'03
GBI EM Hedged & (1-10)Y UST in USD	4.32%	3.03%	0.40	Jan'03
GBI EM Hedged & (1-10)Y EMU in Euro	4.19%	2.85%	0.36	Jan'03

Source: J.P. Morgan. Last obs is Aug 2018.

Figure 33-Figure 34 show this differently by sequentially **adding EM to DM portfolios in 5% segments**. They assume equal EM and DM returns and then measure how this changes portfolio volatility. Figure 33 shows that the high volatility of EM stocks and their relative high correlation with MSCI World means that any move into EM raises portfolio vol, although the impact is small. Adding 10% EM to a DM equity portfolio raises vol from 14.6% to 14.9%. In Credit, this is the case also for HY, though less so for HG where adding EM for 10-15% of the portfolio raises portfolio volatility only by 5bp to 5.27%.

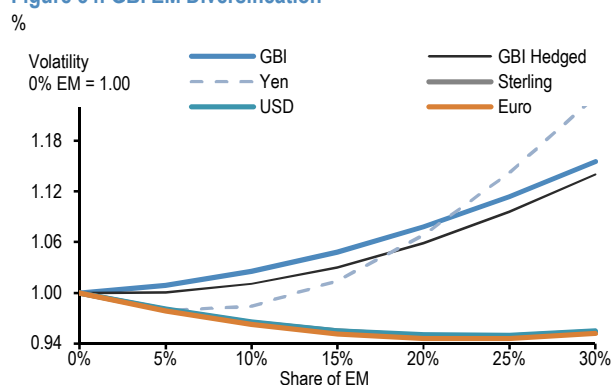
**Figure 33: Equity & Credit EM Diversification**



Source: J.P. Morgan. Last obs is Aug 2018. The vertical axis rebases DM portfolio volatility to 1.00. A 1.02 volatility level for a 10% EM allocation means that portfolio vol rises to 1.02 times that of the 0% EM allocation, pure DM portfolio.

Figure 34 looks only at domestic government bonds. Adding the overall GBI-EM asset class to our DM government bonds index, both currency hedged and unhedged raises volatility, though only slightly when currency hedged. Most investors, however, hold only domestic bonds as they have nominal liabilities in their own currency. They would thus “launch” an EM venture from their own bond market. Figure 34 shows that adding EM bonds currency-hedged to US Treasuries, UK gilts, or Japanese JGBs does significantly lower overall bond portfolio volatility, even at 20% allocations, largely due to the very low correlation with EM, shown in Table 4. In the case of JGBs, this reduced volatility reverses at over 15% EM allocation as the JGB market has so little volatility on its own.

**Figure 34: GBI EM Diversification**



Source: J.P. Morgan. Last obs is Aug 2018. The vertical axis rebases DM portfolio volatility to 1.00. A 1.02 volatility level for a 10% EM allocation means that portfolio vol rises to 1.02 times that of the 0% EM allocation, pure DM portfolio.

GBI: GBI Global (1-10)Y vs GBI-EM Global Diversified  
GBI Hedged: GBI Global (1-10)Y Hedged vs GBI-EM Global Diversified Hedged  
Yen: GBI EM Hedged in Yen vs GBI Japan (1-10)Y in Yen  
Sterling: GBI EM Global Diversified Hedged in Sterling vs GBI UK (1-10)Y in Sterling  
USD: GBI EM Global Diversified Hedged in USD vs GBI US (1-10)Y in USD  
Euro: GBI EM Global Diversified Hedged in Euro vs EMU (1-10)Y in Euro

## EM equities as a tactical asset class

By itself, it is hard to make a strong long-term case for DM investors to hold EM equities as the latter are more volatile and do not appear to offer stronger earnings growth to pay for the extra risk. But this same volatility does offer an opportunity and reason to hold EM for investors with a more active investment approach. That is, **an EM allocation can be a source of alpha.**

In a nutshell, the EM-DM equity return differential is both volatile and trending, as seen in Figure 12, above. Its apparent non-randomness and seven-year long trends should make it predictable. Many investors are unable to go outright short and thus have to hold some EM in order to both under- and overweight the asset class. We will show below that under not implausible assumptions on correlations, you need to have success rate of slightly below 60% on choosing the right side of EM vs. DM equities on a quarterly basis to earn a return-to-risk on trading of 0.3 to compete with simply passively holding on to a broad DM equity portfolio.

Consider a simple once-a-quarter decision to go UW or OW EM vs. DM equities, with a position size equal to P (e.g., 10% of portfolio). Your success rate in choosing the right side is S (e.g., 60%). Your trading return TR as a % of the portfolio is

$$(1) \quad TR = P*(S*|R_{EM}-R_{DM}| - (1-S)*|R_{EM}-R_{DM}|) \\ = P*(2S-1)*|R_{EM}-R_{DM}|$$

$R_{EM}$  is the return on EM equities that quarter in USD and  $R_{DM}$  the DM return. The vertical lines  $||$  denote absolute value. The mean of the absolute value of a random variable with normal distribution is  $\sqrt{2/\pi} * \text{quarterly volatility}$  (i.e.,  $0.8 * \sigma q(R_{EM}-R_{DM})$ ). Your expected trading return per quarter is then

$$(2) \quad E(TRq) = P*(2S-1)*0.8*\sigma q(R_{EM}-R_{DM})$$

On an annual basis, you make this four times, and using annualized vol this becomes

$$(3) \quad E(TR) = 4*P*(2S-1)*0.8*\sigma(R_{EM}-R_{DM})/(\sqrt{4})$$

With a position size of 10%, a 60% success rate, and a 15.6% historic annual vol of the EM-DM return gap, the expected return to this trader becomes 50bp. This needs to be adjusted for transaction and market impact costs, which we guesstimate generously at 25bp for EM and 15bp for DM, or 40bp total. If you move from UW to OW, then you pay this 2\*P each quarter, but if you stay

on the same side, then you pay nothing. Assuming half the time no change, that means your trading costs  $4*P*40bp$ , or 16bp. That leaves 34bp profits after transaction costs.

**Is this enough to pay for the extra risk?** Making initially the assumption that trading returns are not serially correlated, the *trading* volatility of the equity portfolio that toggles each quarter between zero and 2\*P in EM will have annualized trading vol of

$$(4) \quad \text{Trading vol} = P*\sqrt{4*\sqrt{(E(TRq^2)-(E(TRq))^2)}}$$

With a success rate of 50/50, the standard deviation of our trading return would equal the absolute gain to be made ( $0.8*\sigma q(R_{EM}-R_{DM})$ ). With a success rate of 60/40, it is slightly lower, at 0.98 times the absolute gain, making it 1.25% trading volatility.

We now need to add this to our underlying portfolio volatility, which now has 10% in EM needed to go 10% UW EM. As Figure 33 shows, adding 10% EM equities to DM raises portfolio vol slightly (1.02 times) from 14.6% since 1988 to 14.9%.

Making the not unreasonable assumption that these trading gains and losses are not correlated to the underlying benchmark (i.e., not directional), we can then build the volatility of this active portfolio as

$$(5) \quad \text{Active portfolio vol, 10% in EM} \\ = \sqrt{((\sigma(P*R_{EM}+(1-P)*R_{DM}))^2 + (P*\sqrt{4*\sqrt{(E(TRq^2)-(E(TRq))^2)}})^2)}$$

This moves overall portfolio vol from 14.9% to 14.95%, barely noticeable.

With many models only seeing 5% on DM Equities over the next decade, or a 0.33 Sharpe, which is still at its historical mean, adding 34bp pa alpha from EM-DM trading is surely meaningful as it comes with little added overall portfolio risk. We could relax our assumptions of no serial correlation and no directionality in trading gains, but this would likely not have that much impact. Making in extremis the even more unrealistic assumption of perfect directionality and 100% correlation between trading and benchmark returns would raise overall portfolio vol from 14.9% to 16.15% and still leave the portfolio Sharpe the same as the passive DM equity portfolio. Relaxing the success rate from 60% to 55% lowers the after transaction cost returns to 9bp (25bp-16bp), requiring the manager to use cheaper forms of positioning, such as through ETFs.

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**How much** should you allocate to EM to have enough to gain from tactical trading opportunities thus depends largely on one's ability to call the market relative to the transaction and management cost of moving large parts of one's AUM in and out of EM. For most of the managers we know, a quarterly 10% move in and out of EM is probably the max they can handle.

## Will tomorrow's EM be like yesterday's?

The above analysis assumes it will be and that Emerging Markets will always be emerging with mean-reverting, though stationary economic and market characteristics described by growth, risk premia, volatilities, and correlations relative to DM. If DM changes, EM comes along, but the gap is assumed to stay stationary. Some EMs will graduate to DM, but the asset class will be replenished steadily by new EMs coming from the frontier or beyond. EM stays EM.

Is that a good assumption? We see three challenges to this unchanged EM assumption coming from the rise of China, de-globalization, and the eventual opening of EM to global investors.

On the **rise of China**, its economy is now 43% of EM, virtually the same as the US's 44% share of DM GDP (Zina Saijid, [Global convergence resumes: Updating the 2017 weights](#), Sep 18). During the 30 years up to the GFC, China's GDP averaged only 17% of EM. Should we then not accept that **tomorrow's EM will be driven more by China** and will change character? Yes. Replicating the analyses above with China instead of overall EM, we find some differences—more equity vol, lower earnings growth, less carry, less FX and bond vol, lower bond correlation—but they reinforce our preference for EM FX and bonds over equities as a way to tap EM growth.

**China's equity** market has been more volatile than the rest of EM, had lower returns and earnings growth, but lower correlation to DM. Its **currency** produced positive carry vs. USD, less than overall EM, but with much less volatility and thus a better Sharpe ratio. Chinese companies' external debt is offering the same spread over comparable US ones as the rest of EM, with the same volatility and correlations as overall EM. The measured volatility of China USD HY was much higher than overall EM due to a short-term collapse in prices during the GFC. Otherwise, Chinese HY had the same vol as the rest of EM. China's local bond market similarly performed less strongly than the rest of EM, but with significantly less vol and thus better returns to risk, and also with half the correlation to DM that overall EM had.

Overall, **Chinese equities perform worse and with higher vol than overall EM, but its bond markets and currency, though offering less yield and return pickup, are a lot more stable and less correlated with DM than overall EM.** Hence, EM becoming more dominated by China reinforces the case for local EM bonds and currencies as the better way to strategically harvest high EM economic growth.

As **globalization** has peaked, and EM growth depends less on trade, won't it both slow down and become more stable and less correlated to DM? Won't this improve the benefit from diversification out of DM markets? In principle, yes, as market volatility should follow fundamental volatility. Figure 11 shows the peak in globalization was about 2011. Since then, EM GDP growth volatility and its growth correlation to DM have indeed both come down dramatically. EM market volatility has fallen proportionally. However, the same has happened in DM, and the relative volatility of EM to DM has remained the same while its correlations have if anything inched up. EM has thus not yet become better diversification to DM. It is not impossible that this is simply a question of time. As globalization has peaked, and may be fading, EM growth may be even more driven by domestic forces that ought to bring down both their fundamental and financial beta and correlation with DM economies and markets.

A third challenge is the eventual **opening up of EM markets to foreign investors**, driving its share of world financial outstanding toward that of its 40% GDP weight. Figure 35 shows that as EM became a larger share of world GDP, so did their equity markets' share. Since 1990, EM doubled its share of world GDP and tripled its share in world equity capitalization, despite the recent setback.

The equity share should grow faster as EM has less than a third the DM Equitization Ratio (equity capitalization to GDP ratio). This is because a lot more companies are in private hands and thus not exchange listed yet. As EM grows, its companies will need access to larger pools of capital and will thus over time be forced into the public markets.



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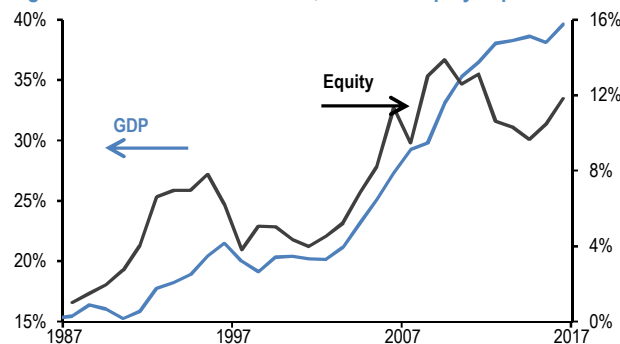
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Figure 35: Share of EM to Global, GDP and Equity capitalization



Source: J.P. Morgan, MSCI.

The share of EM local bond markets in global indices is even lower, at 5% in our GBI, and has not grown as fast as the EM equity share as a variety of restrictions have limited the international access that is required to be in global bond indices. But this is changing, with all eyes on the coming entry, March next year, of Chinese local government and policy bank bonds into the Barclays Bloomberg Global Agg. As a proxy for how much local market opening can do to the EM share, our own GBI-EM Broad covers all local EM bond markets, including those not currently accessible and thus not in our GBI-EM Global. GBI-EM Broad is twice the size of GBI-EM Global (~\$2tr vs \$1tr), thus implying a doubling of the EM share if all EMs were to be equally accessible as DM markets to foreign investors.

Won't the steady rise in the EM share in global indices automatically force global investors into EM? Yes, to some extent, but not immediately and not for all. Some investors follow directly the CAPM rule of using relative market outstandings as benchmark weights. Most do not, though, and use all the standard SAA inputs—long-term returns, vols, correlations, investment objectives, liquidity needs, and base currency—to create their own EM/DM allocation.

In short, the rise of China, the end of globalization, and the steady markets opening should **stimulate DM holdings of EM most in local bond markets much more than in equities** as China's equities have been underperforming broad EM, have been more volatile, while overall EM equities have not yet de-correlated vs. DM. In contrast, China's bond markets, while not offering as much yield pickup to DM investors as the rest of EM, have offered more reliable excess returns, due to China's policy of currency stabilization. China's and broad EM local bonds are way behind in foreign access vs. equities and are thus set to gain much more as foreign access steadily improves in coming years.

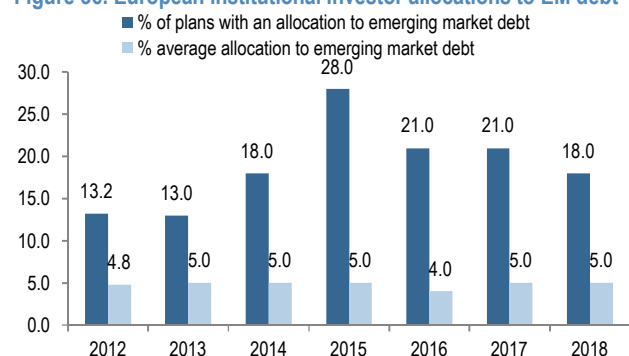
## Conclusion: How much EM?

How does one now translate these views on expected returns, risks, and correlations into an actual strategic allocation across EM and DM? In theory, we should plug these views into a quadratic optimizer to produce an efficient frontier that shows the weights that maximize returns for given levels of portfolio volatility. It is well known, though, that such results are highly sensitive to minor differences in returns and frequently lead to corner solutions (many zero weights) that do not appeal to prior concepts of diversification. It is possible to optimize only on deviations from index (Black-Litterman), but that also requires plenty of parameter estimates and assumptions.

We therefore prefer a more practical and qualitative approach that starts where most investors are currently allocated strategically on EM asset classes. We then see whether our return, value, risk, and macro arguments currently make a case for higher weightings in one of our four EM asset classes, lower weightings, or make no case either way and are thus indifferent (call this Neutral).

**How much do global investors have in EM?** We frequently hear from internationally active managers that they have generally some 5-10% in EM. Mercer's [European Asset Allocation Survey](#) shows European institutional investor allocations to EM debt of around 4-5% since 2012 (Figure 36), and anecdotal evidence suggests similar/slightly lower allocations for US institutional investors.

Figure 36: European institutional investor allocations to EM debt



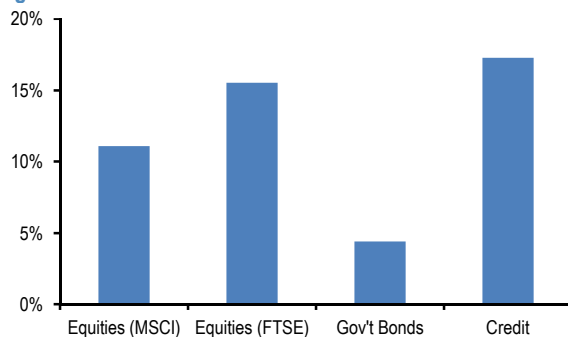
Source: J.P. Morgan, [Mercer](#)

Starting from the truism that all assets are owned by all people, the average holdings should be simply a question of measuring how much of global outstandings are issued by EM entities. The problem here, though, is that many investors cannot freely invest abroad and many markets are not easily accessible to foreign buyers. Both these restrictions apply especially to EM countries. For this

reason, we have focused here mostly on globally accessible markets that are well measured by the global index providers we review in the Appendix.

Figure 37 shows that EM equities make up some 10-15% of global outstandings (MSCI and FTSE respectively); 5% of government bonds (J.P. Morgan GBI index family); and up to 17% in credit (Barclays Bloomberg bond index family). In the case of fixed income, government, and corporate bonds, these numbers are likely too high as a decent amount of them will be held by domestic investors, both as some are issued in their own currency and they are more familiar with the issuer. In the case of EM hard currency corporate bonds, we have estimated that more than half are bought by local investors ([Where in the world are EM corporate bonds?](#) YM Hong, et al., June 29).

Figure 37: Current share of EM



Source: J.P. Morgan.

Equities (MSCI): Market share of MSCI EM to Global (EM+DM) equities

Equities (FTSE): Market share of FTSE EM to Global (EM+DM) equities

Gov't Bonds: Market share of GBI EM (GBI EM Global) to Global (GBI EM Global + GBI Global) Gov't Bonds

Credit: Market share of Bloomberg Barclays EM hard currency Agg to Global Credit (IG+HY)

For EM (ex-China) local currency government bonds, international (non-domestic) investor holdings are near all-time highs at ~\$730bn (using national sources). Over the past decade, EM countries have increasingly shifted toward financing in domestic currency, propelling the growth of EM local markets and ownership by foreign investors. This rising foreign ownership of EM local bond markets has happened against a background of global asset allocations to EM debt having been fairly stable (Figure 36) as the value of global assets has risen and there may also be some reallocation from other parts of the EM debt market.

Given the many different currencies, liabilities, investment horizons, and risk tolerances that are out there, we think it best to advise EM allocations relative to a general international mean of ~10%. Given that in our mind, the EM/DM return and risk gaps depend on the

asset class, we should think of each EM % allocation as only applying to that asset class and not to the full multi-asset portfolio.

**Equities:** Over the next decade, we do not yet see a strong case for higher EM returns than in DM. There is slight cheapness in multiples and currencies, depending on how measured, but still a troublesome macro outlook given weaker globalization and no convincing sign of improved policy governance. But the high volatility of the return gap with EM does create tactical opportunities that require the active manager to have “skin in the game.” A 5-10% EM allocation thus seems reasonable.

**Local bonds and FX:** EM FX carry has offered and likely continues to offer a return to risk that is comparable with the main risk asset classes. Against the dollar, EM FX is cheap, but it not against other currencies. EM FX is for return but costs you higher volatility. On their own, EM local bonds do not offer a risk premium versus DM as this is already captured by their currencies. EM local bonds do offer good relative value given the overvaluation of DM bonds caused by G4 QE buying. And currency-hedged EM local bonds offer good diversification against DM, especially for investors that hold at the moment only their domestic bond market. Ideally, fixed income investors hold some **5% plus of EM cash**, or short duration instruments for yield, and another **15% plus EM local bonds currency hedged** for diversification and yield convergence. Both numbers should be on the high side for euro- and yen-based bond investors given the low yield in their markets and on the lower side for dollar-based ones given higher yields in USD and much greater diversification opportunities within the USD markets, including into EM credit.

Investors who cannot currency hedge should probably hold some 10-15% in EM local debt, with the higher number for euro and yen based investors.

**Credit:** EM sovereign and corporate bonds continue to offer some 50bp risk premium vs. DM names for the same rating, sector, and maturity. They are relatively fairly valued at the moment. Diversification comes largely from the EM sovereigns. 15% plus allocations within a credit portfolio make sense.

## Appendix I: What is an EM?

The **IMF's** World Economic Outlook (WEO) uses (1) per capita income level, (2) export diversification, and (3) the degree of integration into the global financial system to divide the world into advanced economies vs. emerging market and developing economies. This makes 31 out of 194 countries developed.

The **United Nations** Development Program (UNDP)'s Country Classification System divides the world into developed and developing countries based on the 75th percentile in its Human Development Index (HDI) distribution. HDI is based on life expectancy, education, and income.

The **World Bank** uses a development threshold of \$6,000 GNI per capita to divide the world into high-income vs low- and middle-income countries. In 2010, 26% of the world was developed. EM index providers generally start from the World Bank's GNI per capita measure to classify a country as EM or DM.

Below we show describe concisely how the main index providers in equities and fixed income define what is an Emerging Market, with links to more detailed descriptions.

	MSCI	FTSE Russell
Income Level	DM must have GNI per capita 25% above of the World Bank high income threshold—\$12,056 in 2017—for three consecutive years.	FTSE Quality of Markets Assessment Matrix takes World Bank GNI per capita rating 2015 as income criterion.
Market Criteria	<b>Market Accessibility Criteria:</b> openness to foreign ownership, ease of capital inflows/outflows, efficiency of operational framework, competitive landscape, and stability of the institutional framework.	<b>FTSE Quality of Markets Assessment Matrix</b> takes credit worthiness, market & regulatory environment, custody & settlement, dealing landscape & derivatives as other market eligibility criteria.
References	<a href="#">MSCI Market Classification</a> <a href="#">MSCI Market Classification Framework - May 2018</a> <a href="#">World Bank Country and Lending Groups</a>	<a href="#">FTSE Country Classification</a> <a href="#">FTSE Country Classification - March 2018</a> <a href="#">FTSE Country Classification Process</a>
List of DM	Austria, Belgium, Canada, Denmark, Finland, France, Germany, Hong Kong, Ireland, Israel, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, , Singapore, Spain, Sweden, Switzerland, UK, US.	Australia, Austria, Belgium/Luxembourg, Canada, Denmark, Finland, France, Germany, Hong Kong, Ireland, Israel, Italy, Japan, Netherlands, New Zealand, Norway, Poland, Portugal, Singapore, South Korea, Spain, Sweden, Switzerland, UK, USA.
List of EM	Brazil, Chile, China, Colombia, Czech Republic, Egypt, Greece, Hungary, India, Indonesia, Korea, Malaysia, Mexico, Pakistan, Peru, Philippines, Poland, Qatar, Russia, South Africa, Taiwan, Thailand, Turkey, United Arab Emirates.	<b>Advanced Emerging:</b> Brazil, Czech Republic, Greece, Hungary, Malaysia, Mexico, South Africa, Taiwan, Thailand, Turkey.  <b>Secondary Emerging:</b> Chile, China, Colombia, Egypt, India, Indonesia, Pakistan, Peru, Philippines, Qatar, Russia, UAE, Kuwait, Saudi Arabia
List of FM	Argentina, Bahrain, Bangladesh, Croatia, Estonia, Jordan, Kazakhstan, Kenya, Kuwait, Lebanon, Lithuania, Mauritius, Morocco, Nigeria, Oman, Romania, Serbia, Slovenia, Sri Lanka, Tunisia, Vietnam, WAEMU.	Argentina, Bahrain, Bangladesh, Botswana, Bulgaria, Côte d'Ivoire, Croatia, Cyprus, Estonia, Ghana, Jordan, Kazakhstan, Kenya, Latvia, Lithuania, Macedonia, Malta, Mauritius, Morocco, Nigeria, Oman, Palestine, Romania, Serbia, Slovakia, Slovenia, Sri Lanka, Tunisia, Vietnam.

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	JP Morgan	Bloomberg Barclays
<b>Income Level &amp; Credit</b>	<p>EM has GNI per capita below the Index Income Ceiling (IIC) for three consecutive years, or from Jan 31, 2019, a \$ exchange rate that is over 2/3rds undervalued vs. PPP (only EMBI). As of January 2018, the IIC is \$18,769.</p> <p>GBI-DM has GNI per capita above the Index Income Ceiling (IIC) for three consecutive years plus satisfies any of the following: country rated A-/A3/A- or above for three consecutive years; or local currency government debt size of a country above the JPM defined Index Debt Ceiling (IDC) for three consecutive years for GBI-DM.</p>	<p>EM meets one of the following two criteria: World Bank Income group classification of low/middle income OR International Monetary Fund (IMF) classification as a non-advanced country.</p>
<b>Market Criteria</b>	<p><b>Liquidity Criteria:</b> EMBI+: must pass a series of liquidity tests, EMBI Global, EMBI Diversified GBI Global: Daily available pricing from a third-party valuation vendor.</p>	<p><b>Investibility:</b> EM also includes high-income countries that investors classify as EM due to capital controls and/or geographic considerations.</p>
<b>References</b>	<p><a href="#">EMBI Global and EMBI Diversified: Rules and Methodology</a></p> <p><a href="#">Government Bond Index - Emerging Markets Family of Indices</a></p> <p><a href="#">J.P. Morgan Index Product Guide 2018</a></p>	<p><a href="#">Bloomberg Barclays Index Methodology</a></p> <p><a href="#">EM Local Currency Government + China Index</a></p> <p><a href="#">Emerging Markets USD Aggregate Bond Index</a></p> <p><a href="#">EM Local Currency Government + China 10% Capped Index</a></p> <p><a href="#">Emerging Market Local Currency Sovereign Bond Index</a></p>
<b>List of DM</b>	<p><b>GBI-DM:</b> Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Ireland, Israel, Italy, Japan, Korea, Netherlands, New Zealand, Portugal, Singapore, Spain, Sweden, United Kingdom, United States.</p>	<p><b>DM Sovereign Bond Composite:</b> Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Hong Kong, Ireland, Italy, Japan, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Slovenia, Slovakia, Singapore, Spain, United Kingdom, United States.</p>
<b>List of EM</b>	<p>All others.</p>	<p>All others. No list provided here as countries depend on the index used (local, external, corporate, sovereign) with sometimes bonds issued by DM subsidiaries of EM based countries.</p>



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## Appendix II: Country weights in EM Indices

Country	MSCI Emerging Markets	GBI EM Global Diversified	EMBI Global Diversified	CEMBI Broad Diversified	Country	MSCI Emerging Markets	GBI EM Global Diversified	EMBI Global Diversified	CEMBI Broad Diversified
	MSCI EM	GBI EM	EMBI	CEMBI		MSCI EM	GBI EM	EMBI	CEMBI
China	30.94	-	4.45	8.27	Latvia	-	-	0.13	0.07
Korea	14.76	-	-	-	Macau	-	-	-	2.14
Taiwan	12.25	-	-	-	Mongolia	-	-	0.67	0.09
India	9.32	-	0.95	4.59	Morocco	-	-	0.44	0.64
South Africa	6.26	-	2.76	2.81	Nigeria	-	-	1.50	1.11
Brazil	5.79	9.97	3.16	6.17	Oman	-	-	2.67	0.68
Russia	3.38	7.67	3.53	4.96	Panama	-	-	2.88	1.05
Mexico	3.11	9.91	5.14	5.14	Paraguay	-	-	0.66	0.07
Malaysia	2.48	5.77	2.59	1.62	Saudi Arabia	-	-	-	1.66
Thailand	2.41	8.34	-	2.10	Singapore	-	-	-	3.12
Indonesia	1.99	9.26	4.28	2.45	Taiwan PoC	-	-	-	0.42
Poland	1.24	9.64	2.09	0.22	Tanzania Unit Rep.	-	-	-	0.13
Chile	1.07	2.64	2.76	4.25	Ukraine	-	-	2.56	0.96
Philippines	1.05	0.29	3.26	1.97	United Arab Emirates	-	-	-	4.59
Qatar	0.94	-	-	3.01	Zambia	-	-	0.40	1.30
UAE	0.67	-	-	-	Angola	-	-	1.03	-
Turkey	0.51	4.02	3.44	3.89	Armenia	-	-	0.20	-
Colombia	0.46	7.41	2.98	4.37	Azerbaijan	-	-	1.17	-
Peru	0.40	3.07	2.84	3.75	Belize	-	-	0.06	-
Hungary	0.29	4.75	2.71	-	Bolivia	-	-	0.37	-
Greece	0.28	-	-	-	Cameroon	-	-	0.15	-
Czech Republic	0.19	4.79	-	0.07	Costa Rica	-	-	1.08	-
Egypt	0.14	-	2.57	0.36	Cote D'Ivoire	-	-	0.82	-
Pakistan	0.06	-	1.14	-	Croatia	-	-	1.63	-
Argentina	-	0.61	2.98	3.07	Ecuador	-	-	2.65	-
Dominican Republic	-	0.10	2.64	0.07	Ethiopia	-	-	0.19	-
Romania	-	2.94	1.34	-	Gabon	-	-	0.40	-
S. Africa	-	8.57	-	-	Honduras	-	-	0.34	-
Uruguay	-	0.25	-	-	Kenya	-	-	0.74	-
Bahrain	-	-	-	0.29	Lebanon	-	-	2.28	-
Barbados	-	-	-	0.07	Lithuania	-	-	0.98	-
Belarus	-	-	0.39	0.08	Mozambique	-	-	0.11	-
El Salvador	-	-	1.13	0.22	Namibia	-	-	0.23	-
Georgia	-	-	0.20	0.14	Senegal	-	-	0.46	-
Ghana	-	-	0.79	0.38	Serbia	-	-	0.71	-
Guatemala	-	-	0.49	0.55	Slovak Republic	-	-	0.30	-
Hong Kong	-	-	-	4.94	Sri Lanka	-	-	2.00	-
Iraq	-	-	0.68	0.16	Suriname	-	-	0.11	-
Israel	-	-	-	4.18	Tajikistan	-	-	0.09	-
Jamaica	-	-	1.06	0.94	Trinidad And Tobago	-	-	0.39	-
Jordan	-	-	0.55	0.11	Tunisia	-	-	0.17	-
Kazakhstan	-	-	2.82	0.72	Uruguay	-	-	2.48	-
Korea Rep.	-	-	-	4.49	Venezuela	-	-	0.92	-
Kuwait	-	-	-	1.56	Vietnam	-	-	0.34	-
					Sum	100.00	100.00	100.00	100.00

Source: J.P. Morgan.

## Disclosures

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	Overweight	Marketweight	Underweight
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#### J.P. Morgan Credit Research Ratings Distribution, as of July 02, 2018

	Overweight	Neutral	Underweight
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IB clients*	64%	63%	59%

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