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MARKET COMMENTARY

Ashmore

Free Money: Arbitrage opportunities in EM external debt

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Conventional wisdom has it that Emerging Markets (EM) are risky. This is why EM forms a side allocation in most investors' portfolios rather than the core component. Yet, the very fact that EM countries are perceived as risky is part of their attraction. EM bonds explicitly command a risk premium, whereas risks in Developed Markets (DM) are barely perceived and hence not priced in. Arguably, this makes DM structurally more risky than EM.

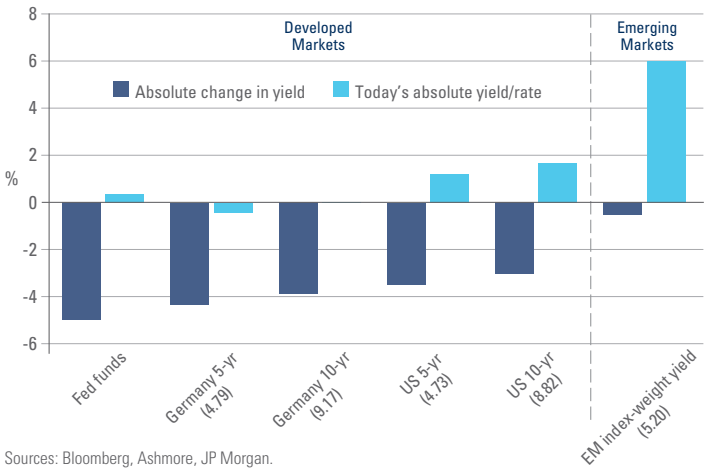
Two recent developments in the global macroeconomic environment and within the EM asset class suggest that EM dollar bonds now offer arbitrage opportunities. First, EM external debt has become mispriced versus DM fixed income, probably due to the highly asymmetric effect of QE asset purchase programmes on fixed income in DM versus EM bonds. Secondly, the market does not appear to have priced in the benefit of greater diversification within the EM external debt asset class arising from the sharply increasing number of index names. We demonstrate and quantify the size of these opportunities.

Two potential sources of arbitrage in EM dollar debt

Two developments have contributed to possible arbitrage opportunities in the EM external debt asset class right now. One is Quantitative Easing (QE), which has dramatically pushed up EM bond yields versus DM bond yields. The second is a largely unrecognised benefit arising from the increasing diversification within the EM external debt asset class. Consider first the EM risk premium.

An EM risk premium arbitrage may exist at this point due to QE's powerful effect on relative prices in global bond markets in recent years. Since 2009/2010 central banks in the US, Europe, the UK and Japan have bought more than USD 13trn of bonds. This is equivalent to more than 10% of all outstanding sovereign and corporate bonds in DM, but the QE central banks have not bought a single bond in EM. As if that was not enough, global institutional investors have been quick to jump on the QE bandwagon, financing their additional exposure in QE markets by selling non-QE markets, including EM. This has created the dramatic shift in relative bond yields shown in the chart below.

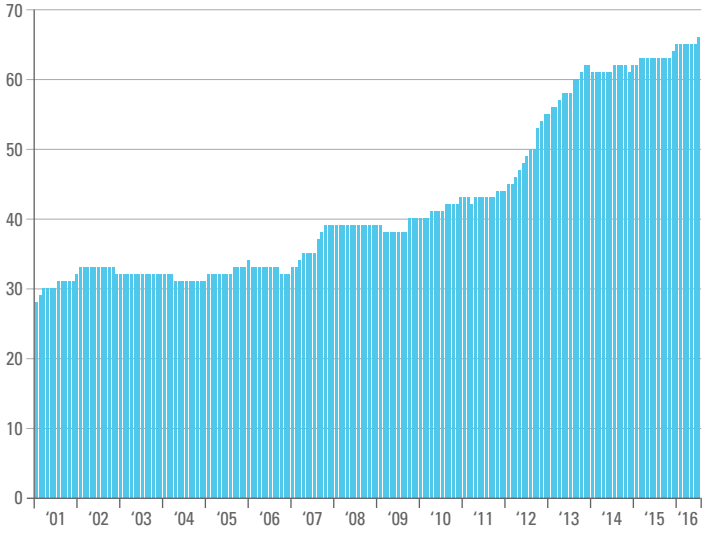
Fig 1: **EM versus DM yields: Today versus pre-crisis**



Sources: Bloomberg, Ashmore, JP Morgan.

We also think another arbitrage opportunity exists due to the market's failure, so far, to recognise growing diversification within the asset class. Under the radar, the number of EM countries in the JP Morgan's EMBI Global Index – an index of EM sovereign and quasi-sovereign issuers of Dollar-denominated bonds – has gently crept higher, doubling to 66 countries from 34 countries ten years ago (see chart below).[1] The increase in the diversification of the index has been particularly pronounced since late 2011, that is, within the last five years, when no fewer than 23 new countries joined the index. The doubling of the number of index names raises the level of diversification and thereby reduces the riskiness of investing in this asset class. Our hypothesis is that this benefit has not yet been priced in.

Fig 2: **JP Morgan's EMBI Global Index: Countries in the index**



Sources: JP Morgan, Ashmore, Bloomberg.

[1] Assuming that Oman will shortly be included in the index.

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Testing the hypotheses (1): EM risk premium

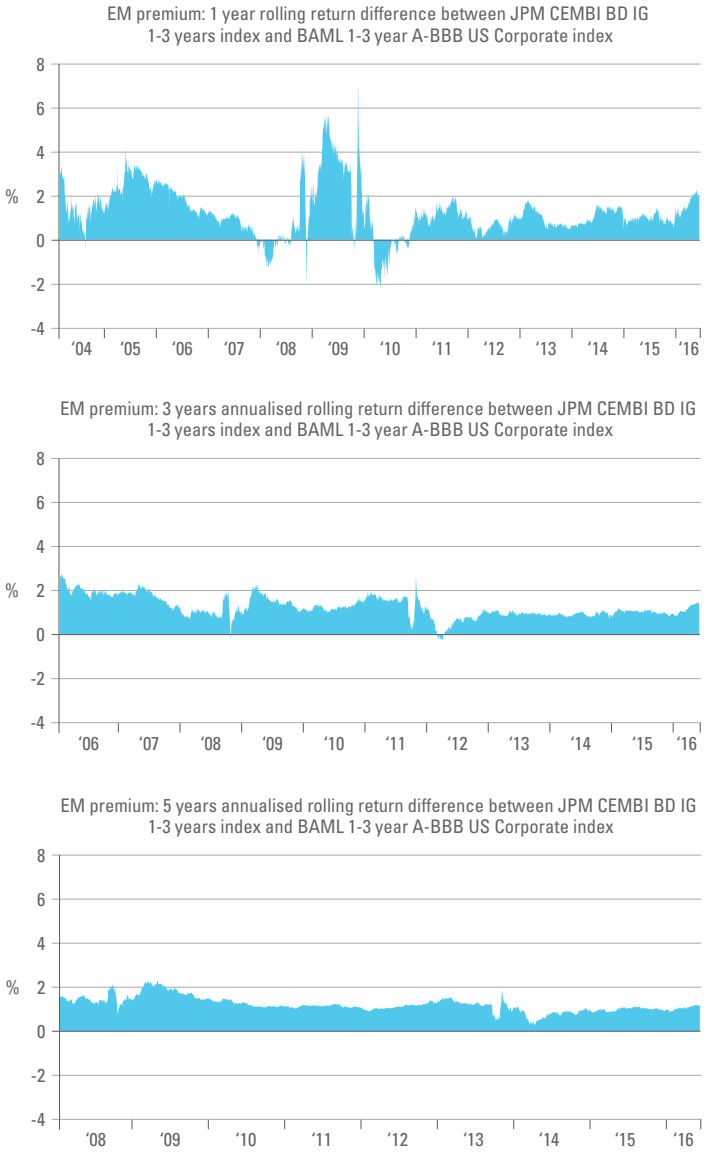
To test the hypothesis that the EM risk premium has become excessive we compared relatively short duration, highly-rated Dollar-denominated EM corporate bonds with US corporate bonds of similar ratings and duration. This segment of the market is less noisy, because it does not contain large variation in credit risk, duration and currencies, while drawdowns have historically been very small. In other words, there is no reason to expect a major risk premium to exist in this market segment. We use corporate debt indices only to obtain the largest sample size possible.

EM markets appear to be especially under-priced relative to the US market by at least 1% per year

The three charts in figure 3 show 1-year, 3-years and 5-years rolling annualised return differentials between JP Morgan's CEMBI BD IG 1-3 year index and Bank of America Merill Lynch's ('BAML') 1-3 year A-BBB US corporate index. We draw two main conclusions from these charts:

- First, there is evidence of permanent mispricing of EM fixed income versus DM fixed income of at least 1% per year across all three time horizons. A sustained, stable 1% a year out performance suggests that EM bonds are priced below what is justified by fundamentals. This is a meaningful yield pick-up for no additional risk at a time when DM sovereign bonds in the 1-3 years duration all pay negative real yields.
- Secondly, EM and US 1-3 years IG corporate debt markets ought to perform similarly, yet 1-year rolling annualised return differentials have recently spiked to more than 2% versus DM bonds. EM markets therefore appear to be especially under-priced relative to the US market right now. We interpret the excess return of twice the longer-term annualised return differential as a direct consequence of the financial policies in developed economies in recent years, notably the QE programmes. These programmes pushed yields for DM bonds to all-time lows, while encouraging institutional investors to sell EM bonds. We expect the arbitrage opportunity to remain strong until the yield differential comes back to the historical norm.

Fig 3: **EM return premium versus US bonds: 1-year, 3-years and 5-years rolling annualised return differentials**



Sources: Ashmore, Bloomberg, JP Morgan.

Testing the hypotheses (2): Diversification benefits

A greater number of countries in the EMBI Global Index ought to add diversification to the index. Provided that the countries are different from one another, a more diverse index ought to be more resilient in the face of shocks and hence the index spread should be lower, all else even.

To the extent that the index spread has not declined as diversification has increased – investors are in effect being paid a spread, which is partly 'risk free', i.e. an arbitrage opportunity.

To determine the size of potential 'free spread', we first calculated the weighted average volatility of each of the EMBI Global countries.[2] We then compared this volatility with the volatility of the EMBI Global Index itself. The diversification benefit is reflected in the difference in volatilities, that is, the extent to which volatility is lower in index than from the weighted average of the volatilities of the individual constituents.

We calculated a diversification ratio, defined as the ratio of index volatility to the index constituents' volatilities. This ratio, which is less than 1 as diversification lowers volatility, is then applied to the index spread in order to calculate how much the index spread ought to be lower due to diversification. This is the 'risk free' spread, i.e. the part of the spread at the index level that does not have a corresponding risk associated with it.

For example, if the weighted average country spreads are 400 bps for a weighted average volatility of 9% then the Sharpe ratio would be 0.44 (spread/volatility). On the other hand, if the index-level volatility is 6% for the same yield then clearly a Sharpe ratio of 0.44 would imply a spread of 267 bps, not 400 bps. In other words, 133 bps of the spread is gained for free.

[2] We dropped countries with less than two years of data at any point in time, in order to have a meaningful number of monthly data points. This took the sample from 66 index constituents to 60.

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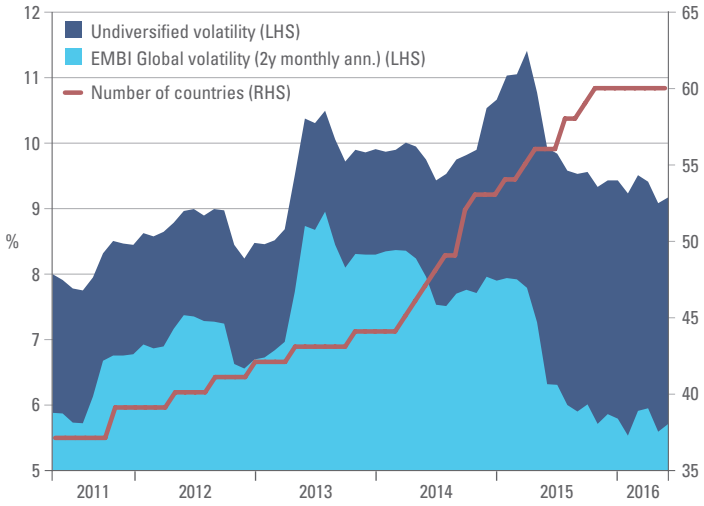
Figure 4 shows the number of index countries (in red) with the volatility of the individual countries and the index volatility. Index-level volatility has dropped far more sharply than the weighted average volatility of the individual names as the number of index countries has gone up.

Figure 5 then relates the changes in volatility to index spreads and shows that the size of the 'risk free' spread for the EMBI Global Index has increased from less than 100 bps to nearly 200 bps. It is also clear that the rise in this 'free spread' has been particularly pronounced late in the sample when the number of index countries rose more quickly.[3]

Fig 4: **Volatility**

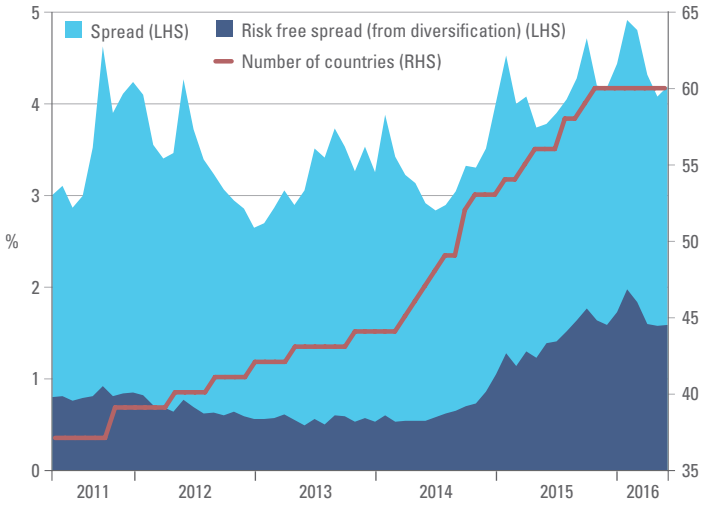
Weighted average of individual index members versus the index



Source: Ashmore, Bloomberg, JP Morgan.

Fig 5: **Spread**

Free spread due to increases in the number of index constituents



Source: Ashmore, Bloomberg, JP Morgan.

The 'risk free' spread for the EMBI Global Index has increased from less than 100bps to nearly 200bps due to the rising number of countries in the index

Conclusion

EM sovereign debt spreads are almost 400 bps over US Treasuries despite EM's stronger growth and growth potential, lower debt levels, better quality macroeconomic policies, stronger reform efforts, better demographics, and larger FX reserves. Prior to the Developed Market Crisis of 2008/2009 the EMBI GD Index traded 165 bps over US Treasuries. In addition, there are twice as many countries in EM's benchmark fixed income index than a decade ago.

We believe that EM bonds have cheapened due to technical factors, notably the enormous demand for DM bonds, which has led institutional investors to sell EM in order to ride the QE bubble. The resulting price action has increased the EM risk premium without a corresponding increase in riskiness. We also think the market has failed to price in the benefits of greater diversification as the number of EM index countries have gone up.

The combined value of this arbitrage, in our view, is close to 200 bps of spread. If this value was realised investors would stand to make Dollar returns in the low teens, given external debt's duration of just under seven years. Even if spreads do not come down immediately the external debt asset class is still attractive because high current spreads are generous relative to risks, such that 'risk-free' out-performance will be maintained.

We strongly recommend an active management approach. While EM countries are generally healthy, every year a small percentage of countries get into trouble, either due to external shocks or self-inflicted. While disasters in any individual country no longer capsizes the entire asset class investors can both increase returns and reduce risk by taking an active approach to managing EM risk.

[3] We based the analysis on data for the past five years to avoid the temporary noise caused by the Developed Market Crisis of 2008/2009, but a longer-term analysis covering 13 years produced the same result – the free spread has increased as the number of index countries has gone up.

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