



Emerging Market Investment Grade Debt for insurers

Capturing higher yields while maintaining credit quality and capital requirements

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Jason Trujillo
Senior Portfolio Manager



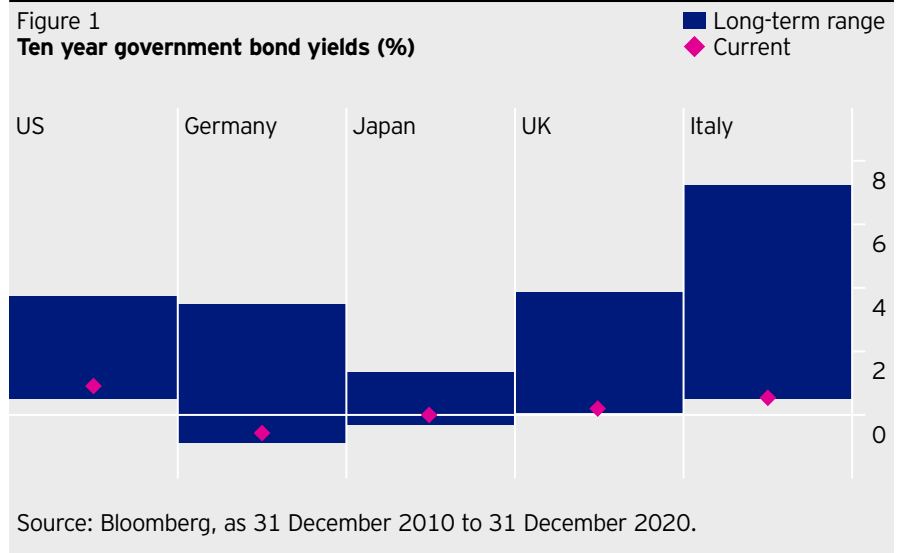
Charles Moussier
Head of EMEA Insurance Client Solutions



Richard Glenn
Head of EMEA Insurance Distribution

Introduction

Since the global financial crisis, we continue to live in an increasingly low yield world. There has been hope that highly accommodative rates across the major developed economies would eventually drive a meaningful acceleration in global GDP and a normalised rate environment. However, that has not happened (Figure 1). Instead, after seeing short term European rates hold in negative territory for several years (Figure 2) and US rates at historical lows, we saw global rates driven even lower by the COVID-19 pandemic which caused the most highly synchronised contraction in global GDP in modern history. While uncertainty remains high, we do think it is reasonable to expect that this environment of extremely low interest rates is here to stay for at least the next few years.



Reasons to consider Emerging Markets Credit



Attractive Long Term Returns



Broad and Diverse Universe



Regulatory Capital Treatment



Robust Economic Outlook



Introduction (cont.)

As a result of this low rate environment, high quality-oriented insurance fixed income investors looking for reasonable yields are now left having to go very far out the duration curve to bonds with maturities of 30 years or longer or look beyond traditional developed market investment grade bonds. In our view, emerging market investment grade hard currency debt is an attractive option for such investors for a number of reasons.

Firstly, and most importantly, the asset class offers compelling long-term value. As we will show, emerging market hard currency debt offers an attractive spread premium over similarly rated developed market debt that is primarily a function of volatility, not credit risk. As a result, long term asset class returns are quite strong on a comparable basis, providing attractive compensation in our view for that higher volatility. Secondly, this is a broad and diverse asset class with over \$3.5 trillion of hard currency bonds spanning more than 70 countries with very different characteristics. Such breadth and depth provide diversification benefits and attractive investment opportunities in our view. Consider, for instance how

different the economies of China, Saudi Arabia and Peru are from each other. It is also important to note for insurance clients that emerging market hard currency investment grade bonds get the same regulatory capital treatment by rating category as developed market bonds.

Taking all of this into consideration, we find investment grade emerging market debt to be very compelling for high quality oriented insurers with a longer term focus as they are able to benefit from the additional spread and yield offered by the asset class while looking past the sometimes higher volatility. In addition, this focus on the higher quality segment of the emerging market debt space allows investors to fully avoid the occasional severe volatility and default risk (Argentina and Lebanon for example) that can be found in the very low quality segment of the market. This lower quality segment certainly garners a lot of media attention, but the reality is that this is a small part of the market and investors are able to potentially generate superior risk-adjusted returns and often better total returns by avoiding this segment of the market.

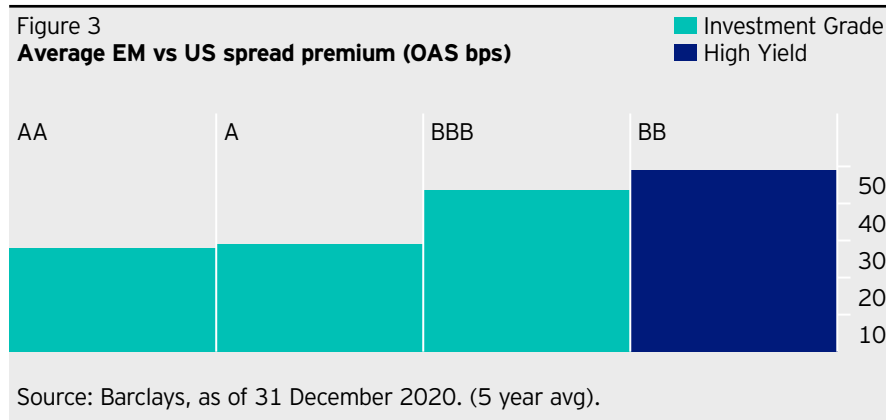
Attractive relative value versus developed market debt

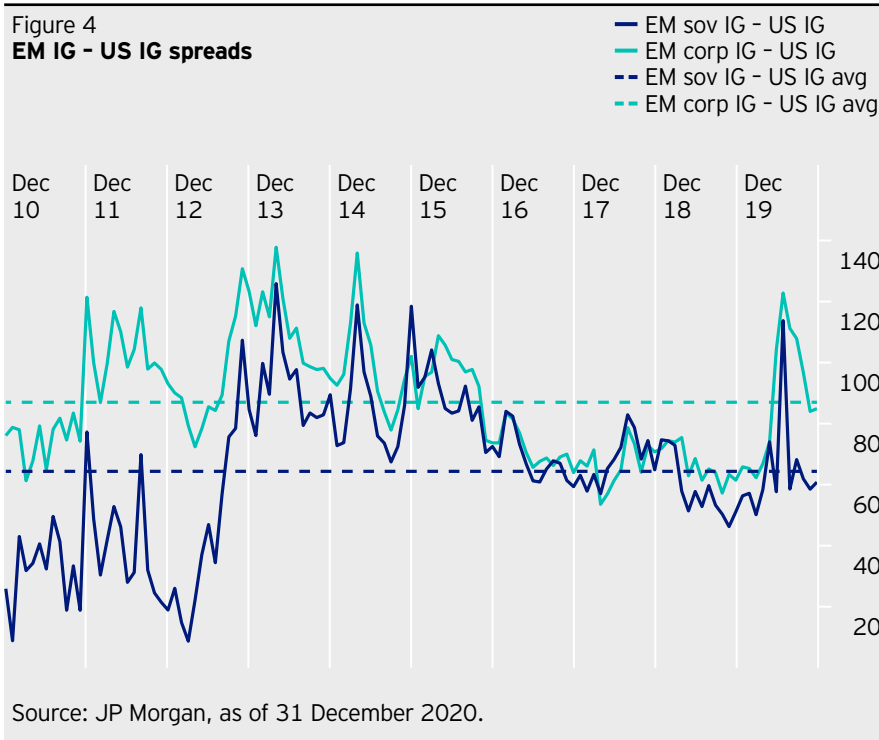
As Figure 3 shows below, emerging market debt has consistently offered an attractive spread pick up on comparable quality over time. While the spread pick up in the investment grade space is certainly less than high yield, even this modest difference in spread can make a big difference in terms of total returns over time.

Over the past 10 years, even taking into account the impact from the 2020 pandemic, annualised returns for emerging market investment grade debt look very favorable in comparison to developed markets. Over this period, returns have averaged 6.52% and 5.84% (Figure 5) for investment grade emerging market sovereign and corporate debt, respectively. This compares favorably to the 4.49% average return for US investment grade debt (Figure 5).

Volatility has been higher for emerging market debt but in our view investors are well compensated for that volatility.

While our view is that emerging market investment grade debt should be a consistent core allocation for insurers rather than a tactical allocation given the attractive long-term value. It is worth noting that relative value and future returns coming out of periods of crisis tend to be quite favorable on a lagged basis as emerging investment grade debt spread tightening typically lags that of US investment grade debt, especially as it relates to emerging market corporate debt. As Figure 4 shows relative spread differentials between emerging market and US investment grade corporate bonds have only just recently begun to compress and remain at quite elevated levels, well above historic averages. While emerging market investment grade sovereign spread differentials have compressed from their peak, they have only come back to longer term averages and are well wide of their historic tight. As such, we do find the present conditions to be quite compelling for investment into emerging market investment grade debt.





A comparison of volatility adjusted returns

While we believe a long-term orientation is best for emerging market credit, bouts of volatility in any asset class can test an investor's resolve. As such, volatility does warrant consideration especially as it is an area where emerging market does not compare as favorably to developed markets. Generally, on a like for like basis emerging market credit is more volatile. If you take a typical 10 year USD BBB emerging market sovereign or corporate bond it will exhibit more volatility than the typical US corporate 10 year USD BBB bond. However, you do get compensated well for that higher volatility, especially in the emerging market corporate space.

The data in Figure 5 looks at total returns and volatility for the past 10 years comparing emerging market IG credit (USD bonds only) to US investment grade credit (USD bonds only). Firstly, if you compare emerging market sovereign IG and US Corp IG, you see that while you do have higher volatility for a broadly

similar duration profile, annualised returns are almost 75bp higher over the past 10 years. When looking at the corporate space, the comparison is also quite favorable with EM IG Corporates a Sharpe ratio of 0.90 over the past 10 years versus 0.98 for US IG and with a 7bp annualized return pick up. Overall, the data shows that emerging market hard currency debt offers a comparable risk adjusted returns profile to US investment grade and higher total potential returns.

While US IG Sharpe ratio compares somewhat favorably to EM IG, duration for US IG is materially longer than its emerging market counterpart. Given the higher degree of interest rate risk and lower credit spreads in developed market debt, we believe there is scope for superior total and risk adjusted returns for Emerging Markets in an environment of steady to rising rates.

Figure 5
Comparative Sharpe Ratios Global Investment Grade Credit

| | Duration | Annualized returns | Volatility | Sharpe ratio |
|------------|----------|--------------------|------------|--------------|
| EM Sov IG | 8.29 | 6.52% | 7.36% | 0.89 |
| EM Corp IG | 5.09 | 5.84% | 6.45% | 0.90 |
| US Corp IG | 8.84 | 5.77% | 5.91% | 0.98 |
| US IG | 6.22 | 4.49% | 3.19% | 1.41 |

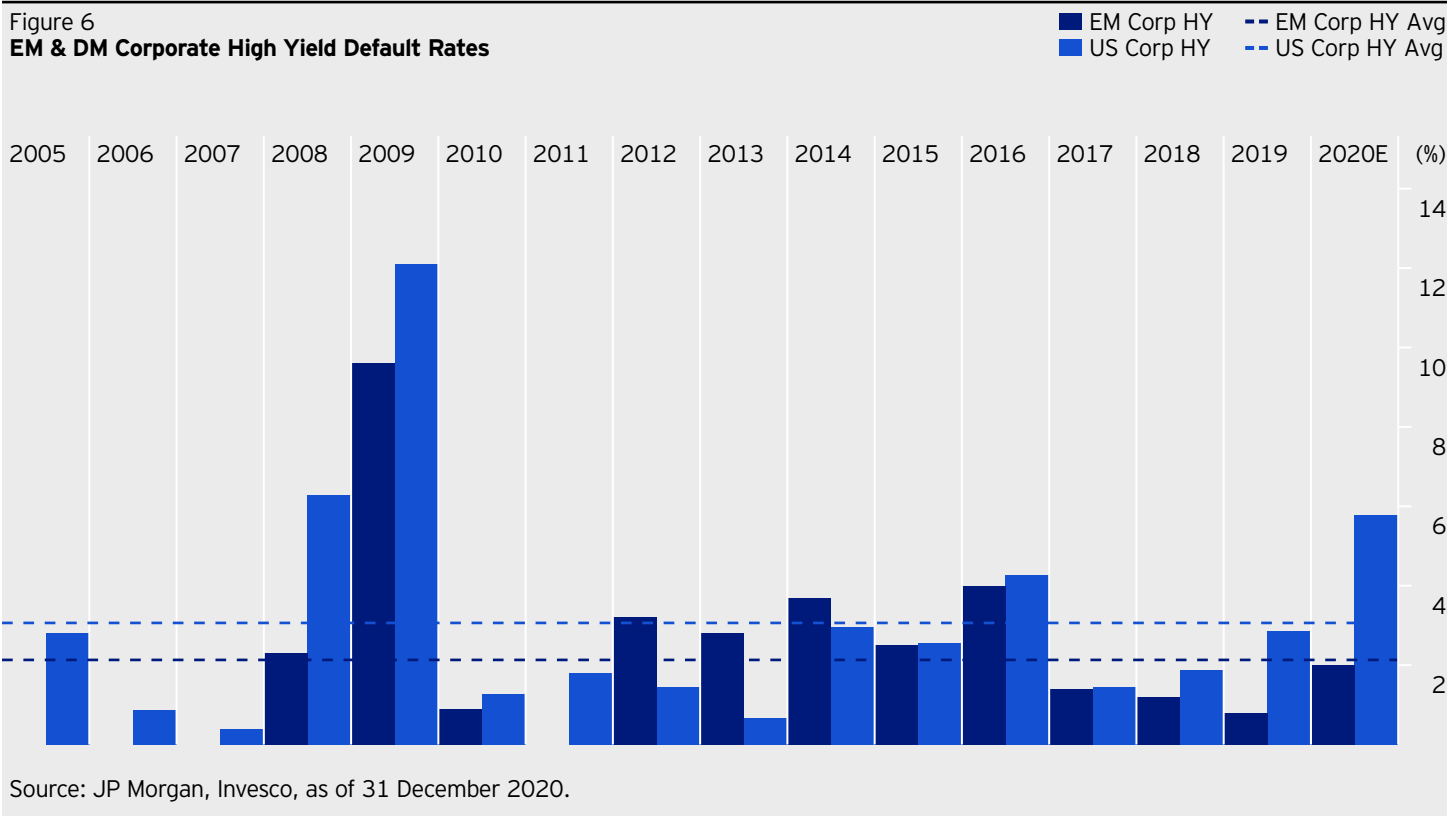
Source: Bloomberg, JP Morgan, Barclays, as of 31 December 2020. (10 year average).

Credit risk: emerging market vs developed market

The most common objection from insurers as it relates to emerging market credit is that it is much 'riskier', even in the investment grade space, than developed market credit. When addressing this concern, it is important to define specifically what is meant by 'riskier', as that is a very broad term. Here we are going to focus on what we view as the two main types of risk in the public credit space - price or spread volatility and credit/default risk. While volatility is certainly a concern for all investors, for insurers with a long-term orientation, default risk is the key risk when investing in hard currency bonds, emerging market or developed markets. Given some of the prominent

and overstated headlines that we see in the emerging market space there is a perception that default risk is higher in the emerging market space. It is certainly true that many emerging market economies are more volatile from an economic or political standpoint. However, the rating agencies consider the economic and political volatility of a given country as part of the consideration when assigning both sovereign and corporate ratings for emerging market issuers. As such, when you look at the default data on a comparable quality basis, the default rates in the emerging market space in aggregate are not materially different from developed market credit (Figure 6).

Figure 6
EM & DM Corporate High Yield Default Rates



When considering credit risk in the emerging market space it is also important to note that similar to developed markets there is really no incidence of default of IG rated bonds in any given year. There are bonds that are downgraded from IG to HY and then ultimately default over a multi-year period but this occurs in developed markets

as well. Secondly, when you look at the high yield segment of the market, you see roughly similar corporate default rates among high yield issuers. This data illustrates quite clearly that the rating agencies do a reasonable job of adjusting for the relevant country dynamics when it comes to emerging market hard currency debt ratings.

Volatility - rather than default risk - is a key driver of the additional credit spread premium in EMs

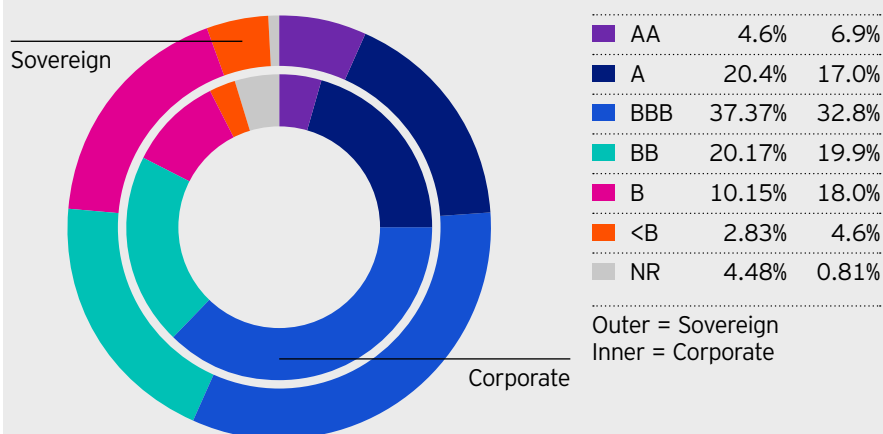
After examining both the volatility and credit risk characteristics for emerging market hard currency debt as compared with developed market debt it is our view that the persistent spread premium in emerging market is driven by a combination of higher asset class

volatility and perhaps a lack of familiarity with the market rather than true credit risk. As the return data in Figure 5 highlights this is a market characteristic that long term oriented investors can take advantage of.

Diversification Benefits and Broad Investment Opportunity

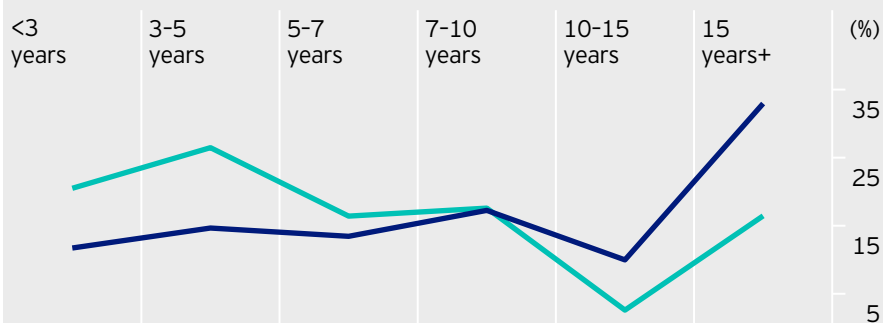
It is worth noting the broad opportunity set and diversification benefits of investing in emerging market fixed income. A decade or two ago emerging market hard currency debt was a much narrower asset class with a higher degree of correlation amongst constituent issuers. Whether you owned Mexican sovereign bonds or a Chinese corporate bond there was a tendency for the prices of these securities to move in tandem. Today, that is no longer the case as Figures 7 and 8 illustrate. Since the GFC the EM debt market has grown substantially. This is a function of the higher growth and interest rates in emerging economies, improving fundamentals and greater connectivity with the global financial system. Over this time period the number of sovereign issuers included in the most common benchmark index has doubled and the market value of sovereign and corporate indices have grown 5-8x. The opportunity set today is quite broad in terms of credit quality and maturity range with over \$3.5 trillion in total bond stock spread across 74 countries (Figure 9).

Figure 7
EM Credit Rating Profile



Source: JP Morgan, Bloomberg, as of 31 December 2020.

Figure 8
EM Credit Maturity Profile



Source: JP Morgan, Bloomberg, as of 31 December 2020.

Figure 9
Market size, composition and growth of EM

Market Size

- >\$2 Trillion of Index Eligible Bonds
- Sovereign - \$1.33 Trillion
- Corporates - \$1.25 Trillion

Market Composition

- 74 countries
- 713 corporate issuers
- 90 quasi-sovereign issuers
- 54% of Sov / Quasi-sov rated IG
- 58% of Corporates rated IG

Market Growth (past decade)

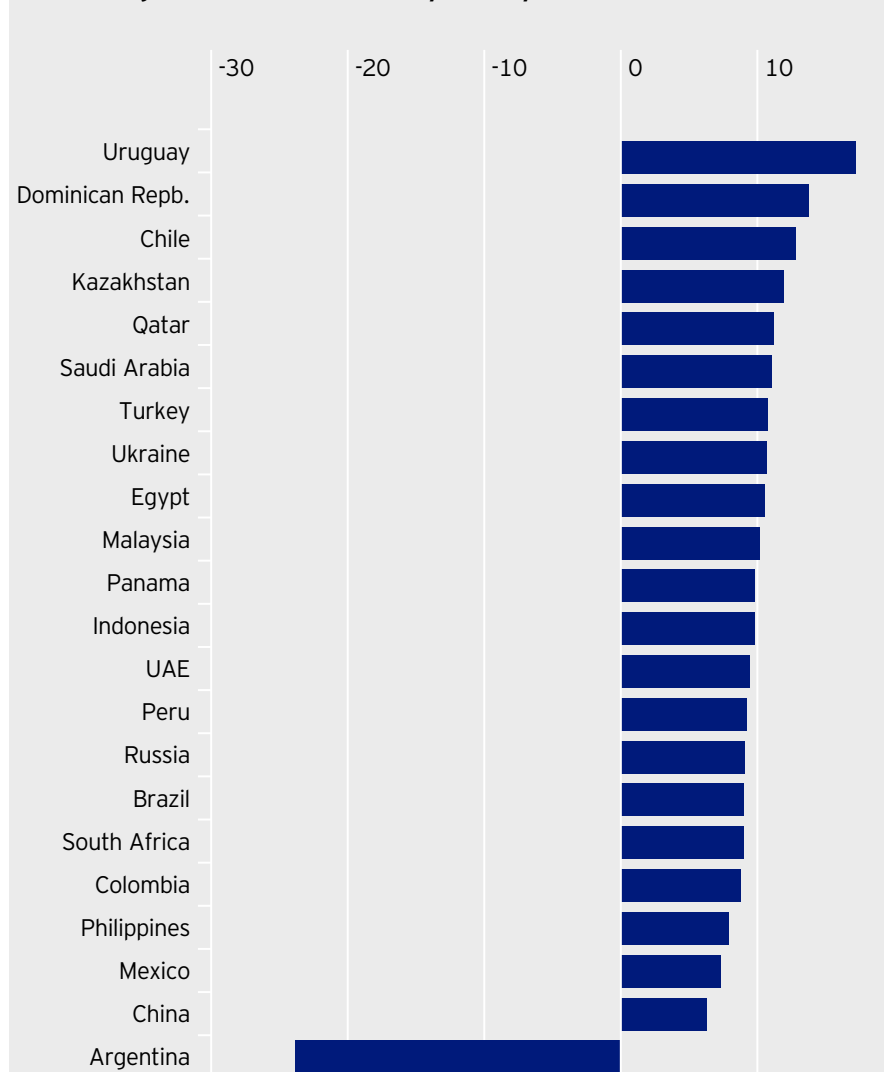
- Corporate hard currency - 6x
- Sovereign debt - 3x

Source: JP Morgan, Bloomberg, as of 31 December 2020.

The less homogenous nature of these economies is observable in the greater dispersion of returns by country, sector and individual issuer, which is often particularly evident during periods of market or economic stress. In 2020 returns across emerging market range from deeply negative to sharply positive with the best performing of the large constituent countries up almost 14% and the worst performing country down almost 23% (Figure 10). Even within the investment grade universe dispersion of returns can be high. The very large majority of hard currency EM debt is issued in US dollars and therefore

is priced on a spread to the US treasury curve. In 2020 the dramatic move lower in US rates was a primary driver of returns across dollar denominated fixed income in both developed and emerging markets. This also increased historical correlations amongst asset classes. However, the variance in credit spread premium amongst this more heterogeneous mix of emerging economies provided a continued source of diversification as well as opportunities for managers to express their investment views using the expansive opportunity set afforded by the asset class in its modern form.

Figure 10
EM Sovereign Debt Returns FY2020 by Country



Source: JP Morgan, as of 31 December 2020.

This dispersion of returns is not surprising given the varied economic impact we have seen even with a shock as broad and uniform as from the pandemic. This highlights the diversification benefits of the asset class, especially in the context of credit risk. Think about how different in terms of economic fundamentals and drivers China, Peru, Qatar and Malaysia are from each other as well as from the US. At any given point in time such countries are at different points in the economic cycle.

This dynamic, in our view, provides diversification against fundamental credit risk, as typically any given negative shock will affect the various countries across emerging markets quite differently. We saw examples of this in the 2008/2009 financial crisis, where emerging market economies fared much better than developed market economies. And again, in the 2020 pandemic where China has recovered much more quickly than the US and the bulk of Latin America.

Currency Considerations - Cross Currency Swaps

The emerging market credit asset class does have a sizeable amount of debt stock in Euros, however, the vast majority of the market is US dollar denominated. This can leave some uncertainty for European institutions with a base currency of Euros or Sterling that will need to hedge. Typically, foreign exchange hedging in such situations has been done using currency forwards on a one to six month basis. While simple to implement, such a strategy leaves longer-term investors subject to fluctuations in hedging costs. Over the past three years for example we have seen those

costs fluctuate from 1.8% to 3.2% and then back down to 1.9%. Such movements can have a large impact on returns and are problematic for investors who are looking for certainty over the life of their portfolio. By using a slightly more complex hedging strategy that makes use of cross currency swaps insurers are able to match the hedge to the duration of the portfolio. We find this to be a much more robust approach to managing foreign exchange risk in such portfolios than simple hedges using currency forwards because it protects against potential rising hedging costs.

Regulatory Capital Treatment

The European insurance regulation is straightforward in its treatment of all fixed income assets, regardless of their origin. Under the Standard Formula of Solvency II, the capital charge is captured under the spread risk, the same as for other bonds.

There is no specific treatment for emerging market debt.

Standard formula considerations

If hedged into local currency, an emerging market bond will consume no more capital than a domestic issue with an equivalent rating.

For bonds and loans of central banks and states of countries and denominated in their own currency, specific favorable shocks apply (Article 180.3). In comparison to corporate bonds, these shocks are much more favorable.

Matching adjustment considerations

Emerging market debt which is completely swapped back into Sterling (using cross currency swaps) are eligible for matching adjustment.

Inclusion of Emerging Market Debt can increase the efficiency of portfolios under Solvency II

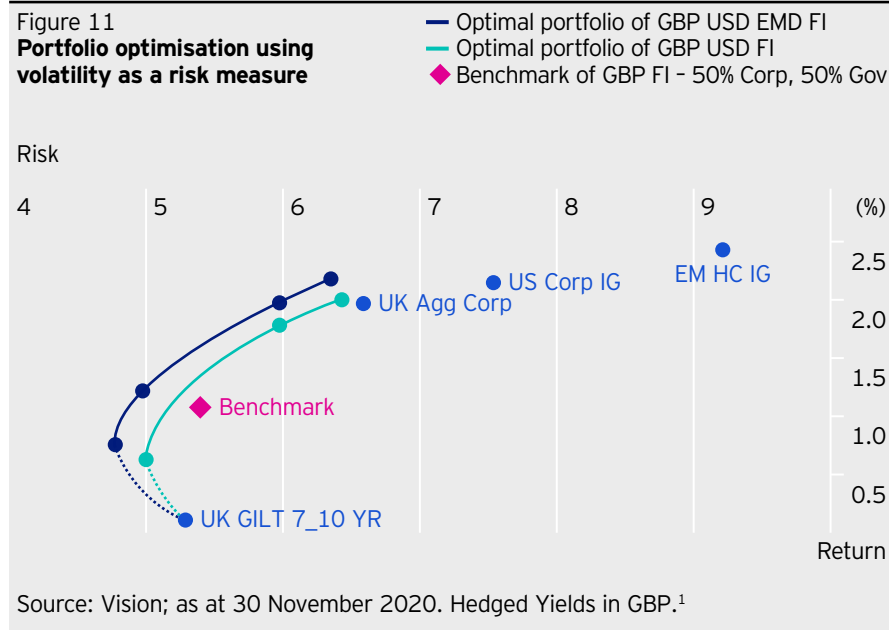
There are two key reasons emerging market debt is attractive under Solvency II:

1. Extra yield compared to an equivalent rated developed market bond
2. Additional diversification of the portfolio

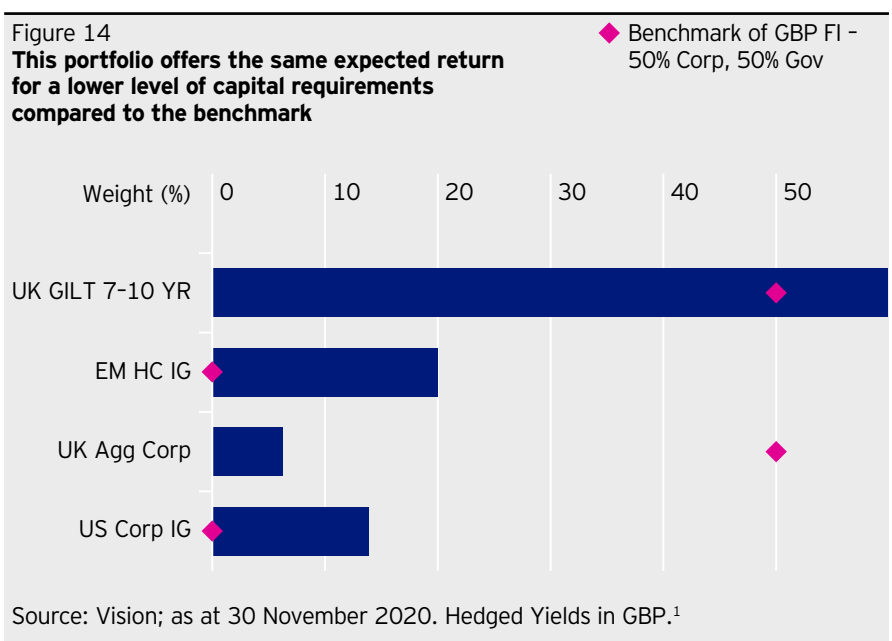
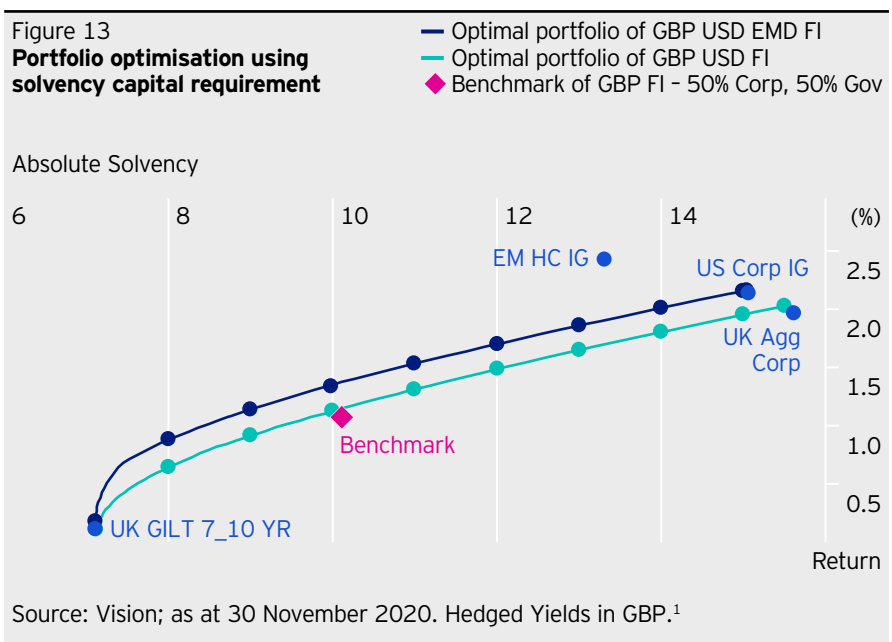
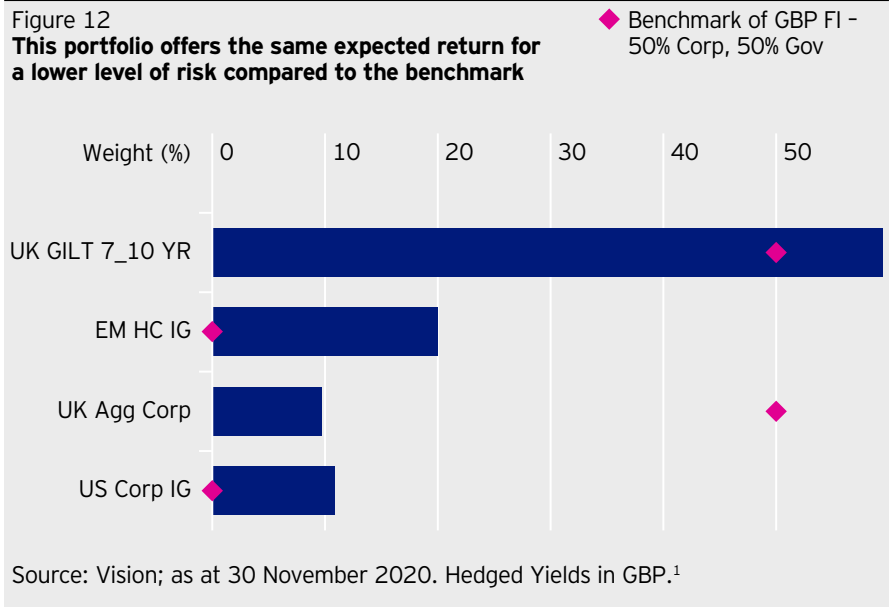
Inclusion of emerging market debt increases the efficiency of both economic and regulatory perspective as shown in Figures 11 and 13. This improves the frontier and the insurer can obtain

higher expected returns for the same level of risk. In our example below, we have compared two universes, one with emerging market debt and one without versus a third 'benchmark' of GBP Fixed Income only.

The integration of emerging market debt leads to higher efficiency in the portfolios. The sample portfolios below offer the same expected return for a lower level of risk and capital requirements compared to the benchmark.



¹ The Foreign Exchange impact is modelled considering the International Fischer Effect where the foreign returns are adjusted by the 10 years governmental bonds yields differential between countries. This fx hedging is used to reduce the uncertainty of those expected returns.



Summary

In today's very low yield environment insurers need to cast an increasingly broad net to find compelling investment opportunities and maximise potential risk-adjusted returns. Given the compelling opportunity set offered by emerging market credit we believe it warrants serious consideration within fixed income portfolios. In our view, whether due to misconceptions about the riskiness of the asset class or a lack of familiarity, too many institutions are under allocated to an asset class with attractive returns both in total and on a risk adjusted basis, which is larger than US high yield and whose constituent countries account for more than 50% of global GDP.

As we have shown, emerging market credit, especially investment grade credit, has a host of characteristics that make it an attractive investment opportunity with adequate breadth and depth to meet a range of investment requirements. For these reasons, we believe insurers should give emerging market credit serious consideration as part of their investment allocation. Invesco Insurance Solutions partner with insurers to integrate this exposure across their portfolios and design a highly customised solution which ultimately can improve the capital generation of the insurer. In this framework, Emerging Market Debt improves the Solvency ratio and the capital generation potential of the portfolio.

Investment Risk

The value of investments and any income will fluctuate (this may partly be the result of exchange rate fluctuations) and investors may not get back the full amount invested.

Debt instruments are exposed to credit risk which is the ability of the borrower to repay the interest and capital on the redemption date.

Changes in interest rates will result in fluctuations in value.

When investing in less developed countries, you should be prepared to accept significantly large fluctuations in value.

Investments in debt instruments which are of lower credit quality may result in large fluctuations in value.

Investing in distressed securities carry a significant risk of capital loss.

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Issued by Invesco Asset Management Limited
Perpetual Park, Perpetual Park Drive, Henley-on-Thames, Oxfordshire RG9 1HH, UK
Authorised and regulated by the Financial Conduct Authority

ID1341/2021