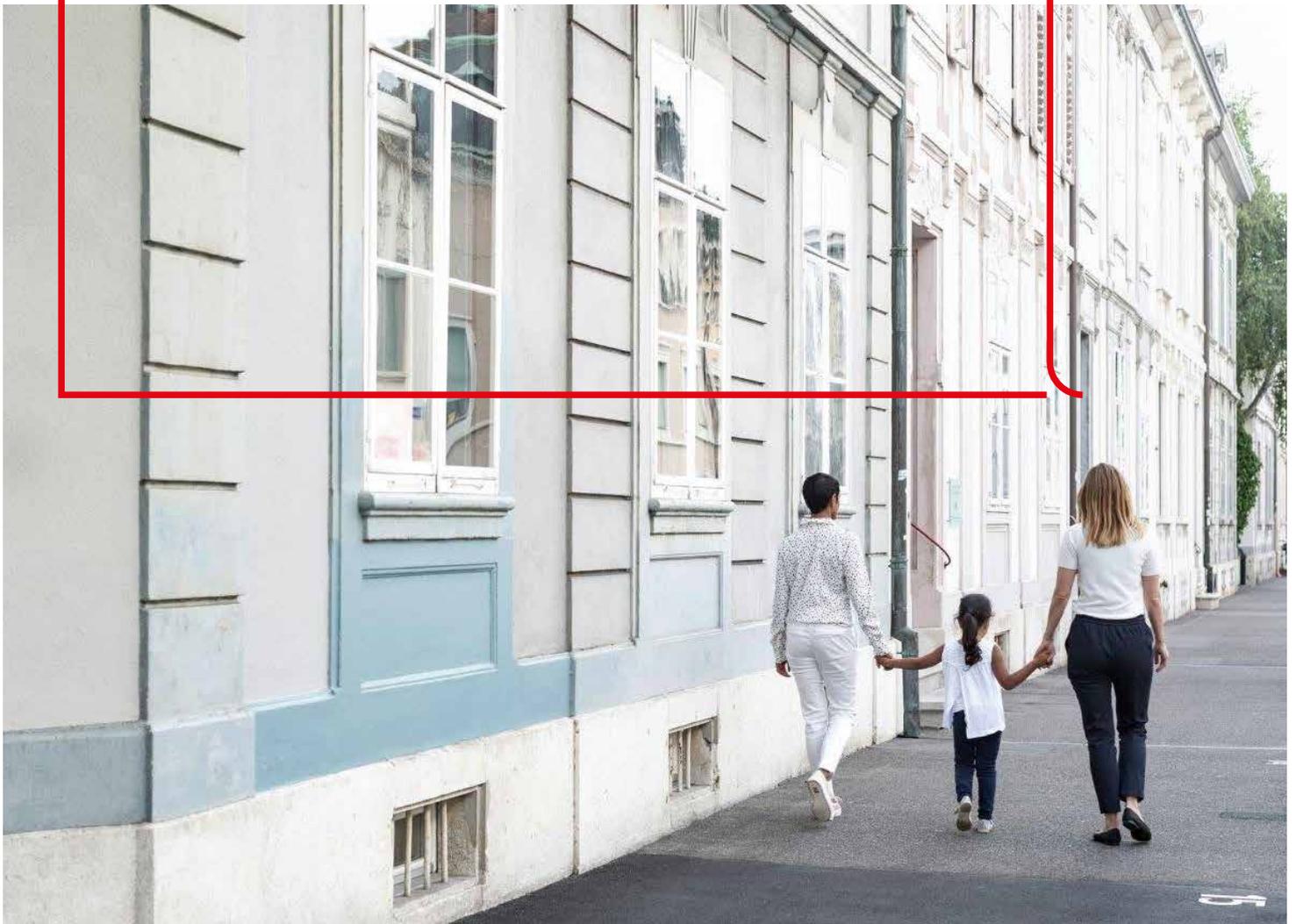


Where next for Emerging Market Debt?

UBS Asset Management | Emerging Market Debt

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Is Emerging Market Debt at a pivotal point?

Emerging Market Debt (EMD) has had a tough 2022 so far. Will markets continue to fall or is there light at the end of the tunnel? To help us formulate our views, we analyzed three decades of data to see if past EMD sell offs and rallies hold any clues given today's market environment.

Russia's war in Ukraine, along with rapidly accelerating rates of inflation globally, a renewed global hiking cycle, as well as the zero COVID policy in China, have not been kind to emerging market fixed income. As of April 28, the JP Morgan EMBI Global Diversified (EMBI GD), a proxy for US dollar denominated emerging market sovereign bonds, had lost 14.53%. Of this, 8.75% had been due to falls in US Treasury prices and 6.33% due to EMBI GD spread widening. While of course it's important

to emphasize that past performance is not a reliable indicator of future results, for emerging market fixed income at least, sell-offs of this magnitude have often been followed by significant upswings in performance. The question therefore is, should investors dip their toes back into this asset class now?

To explore this question, we broke down the returns from the EMBI GD index into those resulting from changes in fundamentals and those deemed

residual (unexplained) returns. The idea is that, in significant emerging market sell-offs, these unexplained (negative) excess returns reflect excessive emerging market risk aversion, which tends to be mean-reverting. That is, if the EMBI GD index sells off more than what can be explained by fundamentals, then it is likely due to 'EM panic' which can lead to big rallies for a period of time after. In general, emerging market debt tends to exhibit a high level of beta to global risk appetite.

Modelling emerging market fixed income risk premium

We looked at three-month returns for the EMBI GD index dating back to its inception in January 1994, and used the changes in US 10-year yields (to account for the global trend in yields), in the MOVE index of Treasury market implied volatility (as a proxy for developed fixed income market risk aversion), and in the Bloomberg commodity index BCOM (as a proxy for emerging markets business cycle) as explanatory variables. Using weekly data since inception, these three variables explain 29% of the variation in EMBI GD three month returns, and all three independent variables are highly significant and have intuitive signs (US 10 year and MOVE betas have negative signs and

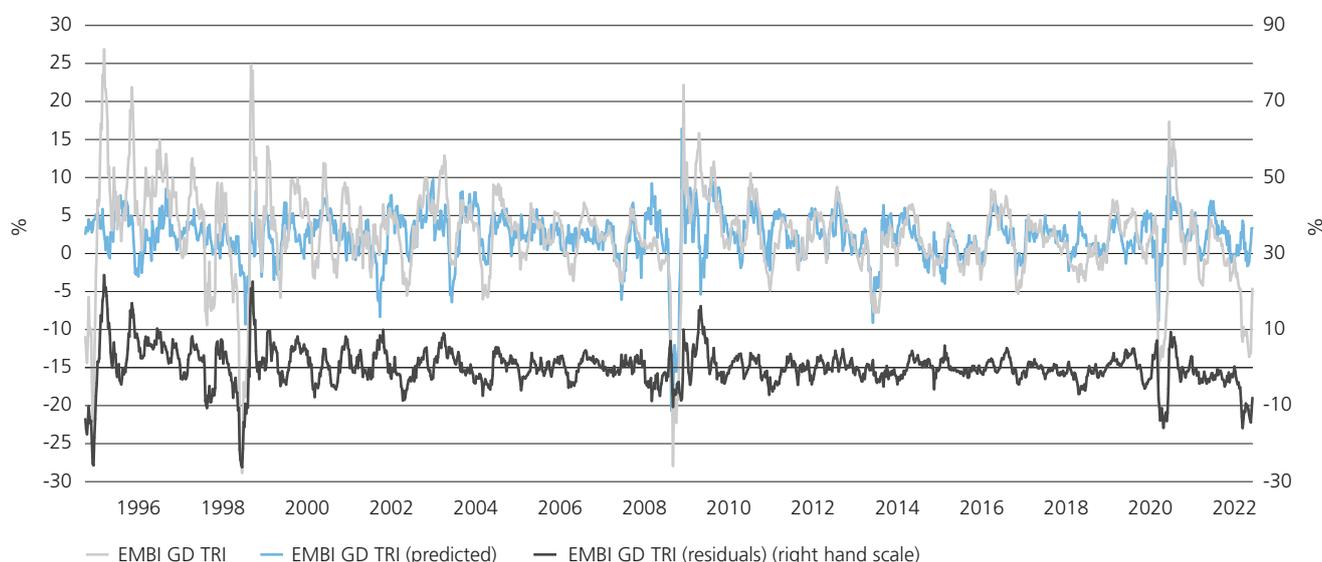
BCOM beta has a positive sign). Exhibit 1 shows the realized returns, what the returns should have been given the fundamentals, and unexplained excess returns to approximate changes in EM risk premium.

There have been only five episodes where the residual, that is, the unexplained excess return or the difference between the realized three-month return and what it should have been, given fundamentals, was below -10%. And, most interestingly, one of those five episodes took place the week of March 7 when the three-month realized return was 1650 bps below what it should have been given

fundamentals. The four other episodes are: (i) the three-month period ending the week of March 6, 1995, after the Federal Reserve had hiked rates by 300 bps in seven meetings over the course of 12 months; (ii) the three-month period ending the week of September 7, 1998, after the Russian default and the collapse of hedge fund Long-Term Capital Management; (iii) the three-month period ending the week of October 20, 2008, after the Lehman Brothers bankruptcy; and (iv) the three-month period ending the week of April 30, 2020, after the COVID-19 crisis began. Naturally, one would want to know what occurred following those episodes.

Exhibit 1: EMBI GD realized returns, predicted returns, and residuals

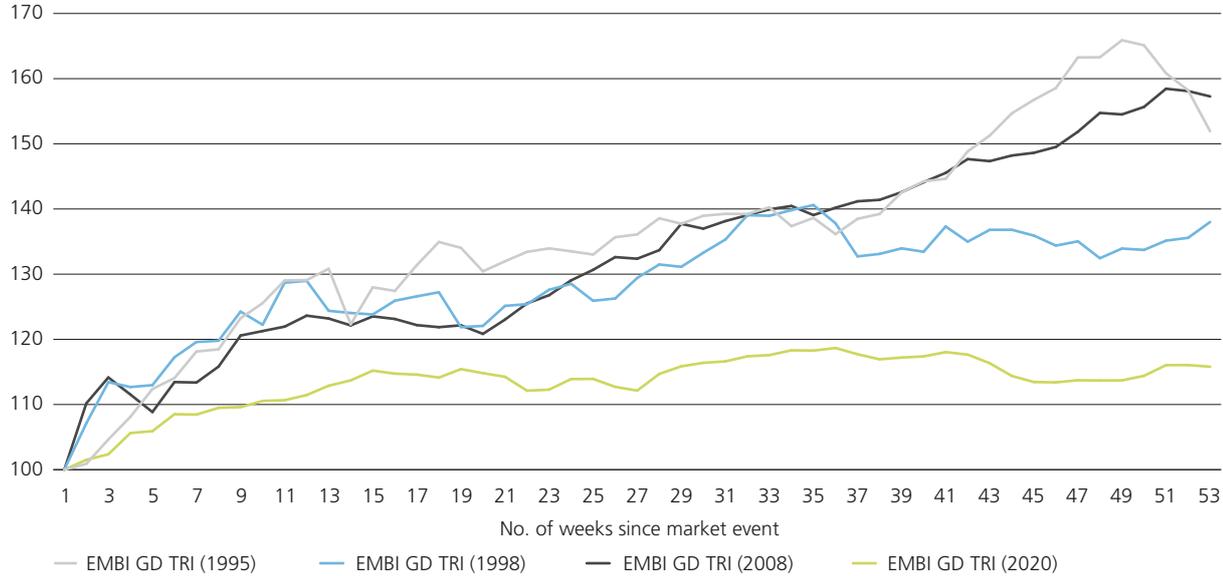
EMBI GD Tri 3m predicted by MOVE, US 10y and BCOM Index 3m Chg



Source: UBS Asset Management, Macrobond, Bloomberg. Data as of April 2022.

Exhibit 2 displays the EMBI Global Diversified Index total return normalized to 100 after the above four episodes. In all four cases, the EMBI GD gained double digit returns after three months and in two instances, starting in March 1995 and October 2008, the return was more than 50% after nine months.

Exhibit 2: EMBI GD total return in 1995, 1998, 2008 and 2020



Source: UBS Asset Management, Macrobond, Bloomberg. Data as of April 2022.

EMBI GD High Yield and Investment Grade

Exhibits 3-6 repeat the above exercise for the JP Morgan EMBI GD High Yield (HY) and the JP Morgan EMBI GD Investment Grade (IG) corporate bond indexes –proxies for emerging market high yield or investment grade bonds. The methodology and the results remain approximately the same. However, as EMBI GD HY is more volatile and the EMBI GD IG is less volatile than EMBI GD, we revised the threshold for considering exceptional sell-offs (in the case of EMBI GD we used residual below -10%). Failure to make these adjustments would have resulted in either too few episodes (in case the threshold was too large

in absolute terms) to have much confidence in our results or too many episodes (in case the threshold was too small in absolute value) increasing the risk of having overlaps in episodes and compromising our results.

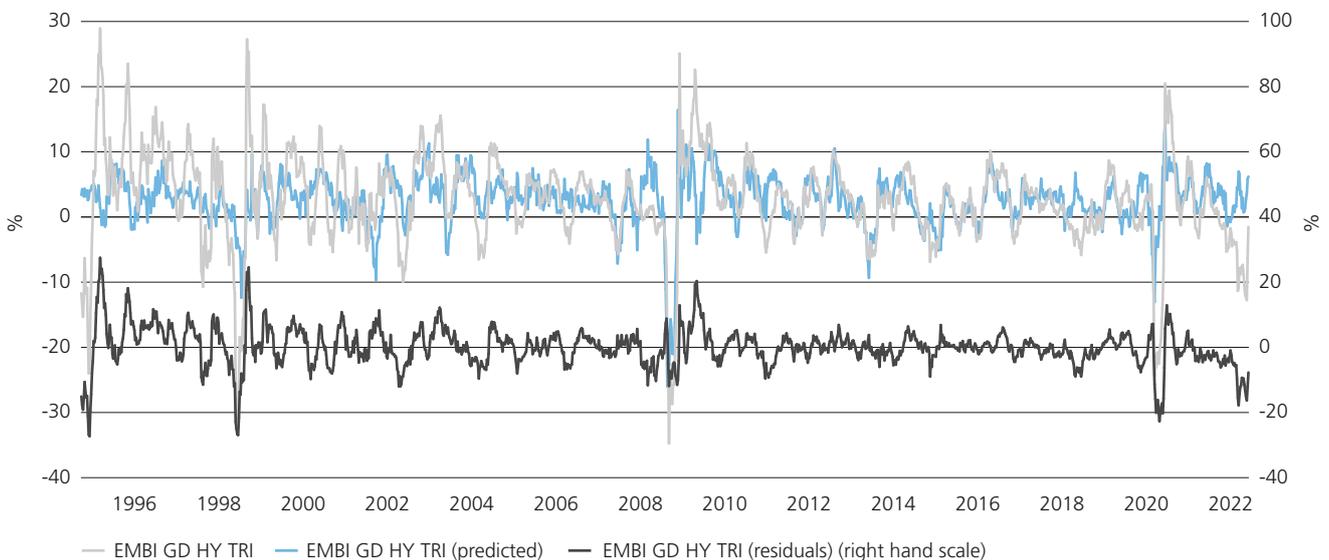
Consequently, we used residuals below -15% for HY and below -7.5% for IG as thresholds. This led to four ‘exceptional’ high yield sell-offs and five exceptional investment grade sell-offs – sell-offs when the difference between the realized three-month return and what it should have been given fundamentals were below the threshold. Our findings were as follows: seven of these nine

episodes occurred prior to 2022, and interestingly, in every one of these seven episodes, the total return, after the threshold was hit, was positive after six months. In one instance, the total return over the period was above 30%, in three between 20% and 30%, and in another between 10% and 20%. There was only one case where the total return was between 5% and 10%.

Based on these results, we conclude that investors may want to consider exposure to the emerging market fixed income asset class at current valuations, as part of a diversified portfolio.

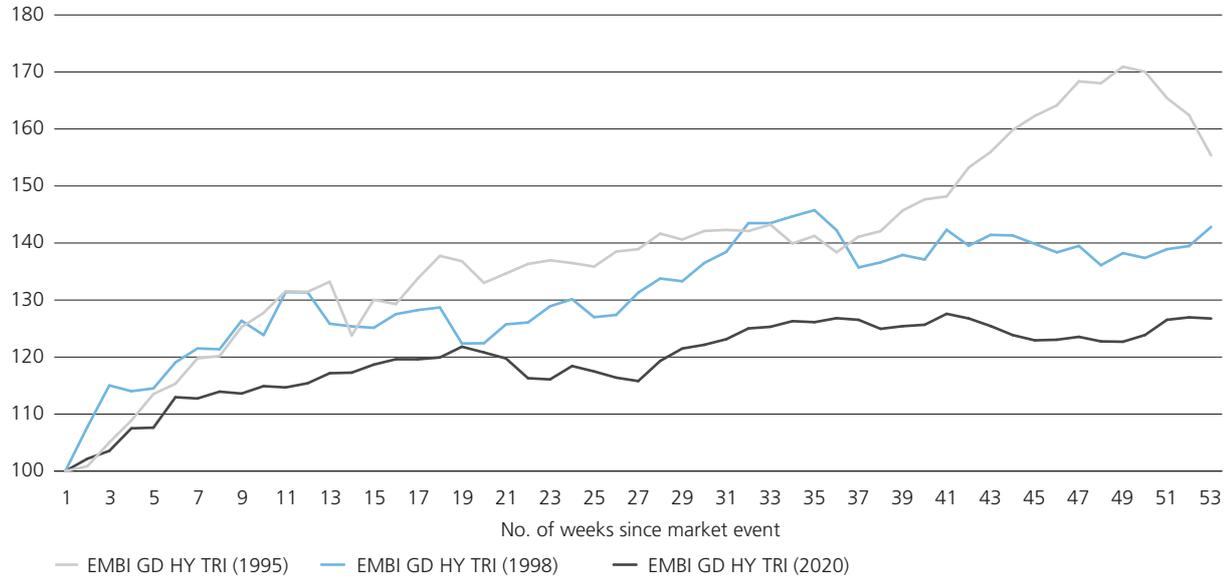
Exhibit 3: EMBI GD HY realized returns, predicted returns, and residuals

EMBI GD HY Tri 3m predicted by MOVE, US 10y and BCOM Index 3m Chg



Source: UBS Asset Management, Macrobond, Bloomberg. Data as of April 2022.

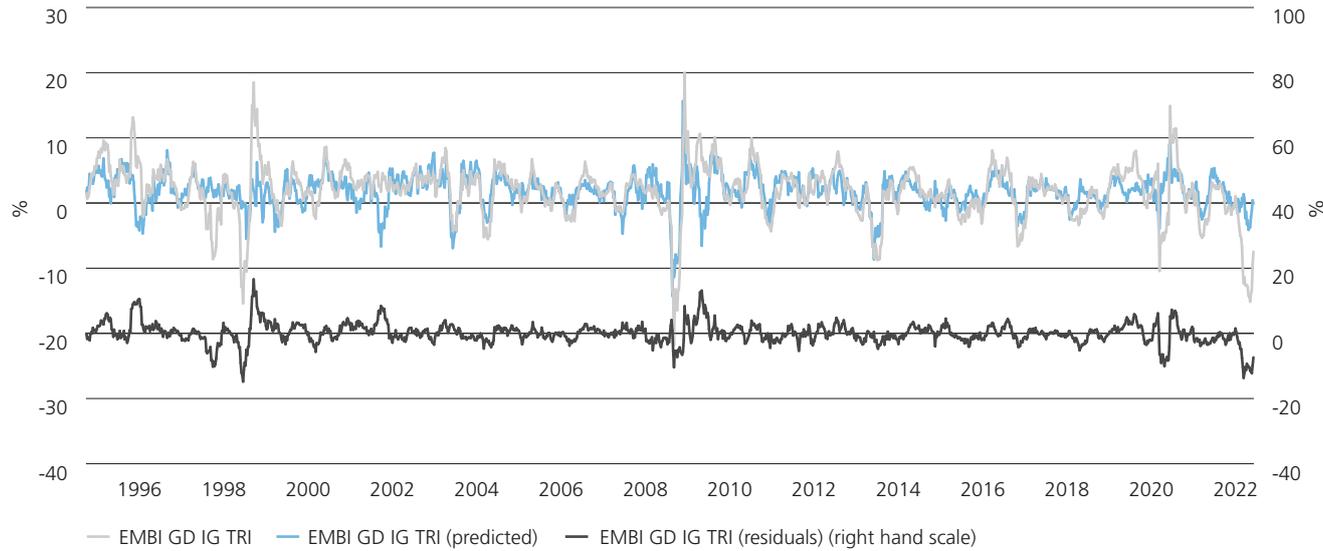
Exhibit 4: EMBI GD HY total return in 1995, 1998 and 2020



Source: UBS Asset Management, Macrobond, Bloomberg. Data as of April 2022.

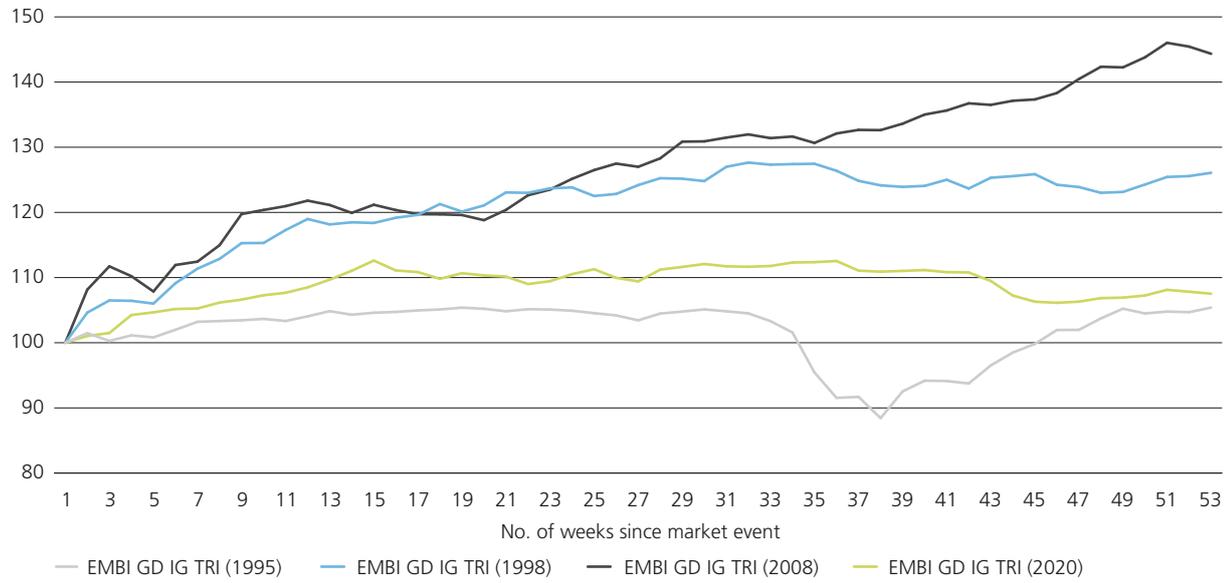
Exhibit 5: EMBI GD IG realized returns, predicted returns, and residuals

EMBI GD IG Tri 3m predicted by MOVE, US 10y and BCOM Index 3m Chg



Source: UBS Asset Management, Macrobond, Bloomberg. Data as of April 2022.

Exhibit 6: EMBI GD IG total return in 1995, 1998, 2008 and 2020



Source: UBS Asset Management, Macrobond, Bloomberg. Data as of April 2022.

Based on these results, we conclude that investors may want to consider exposure to the emerging market fixed income asset class at current valuations, as part of a diversified portfolio.

What if we are wrong?

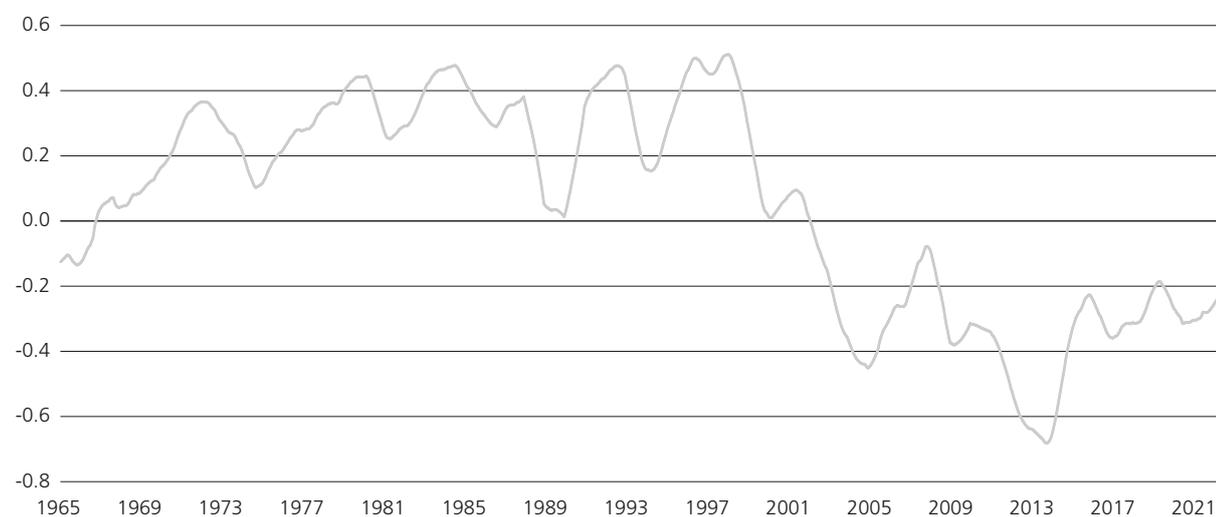
We used 28 years of historical data in our analysis, which is quite extensive and captures multiple market cycles. However, it is possible that the next 28 years will be different from the past 28 years. One possible scenario for the future was raised in our recent publication, [EM Fixed Income Quarterly: Bye Bye Globalization, Hello Stagflation](#). This is the scenario where inflation remains permanently higher in the future than where it has been in recent past. The last such occurrence, discussed extensively in our quarterly report, was in the late 1960s and 1970s.

The most important development during this period for financial markets was that the correlation between risk assets (approximated here by returns to the S&P 500 Index) and 'risk-free' assets (approximated by returns to the US 10-year Treasury rate) turned from negative to positive as shown in Exhibit 7. In a regime where stock-bond correlations are positive, inflation is the biggest risk to financial assets. Higher inflation is bad news for both risk assets and 'risk-free' assets and hence they move in the same direction depending on inflation expectations.

However, since the mid-1990s the world has experienced a negative stock-bond correlation regime. In this regime, inflation expectations have remained well-anchored and the most significant threat to risk assets has been growth. Since higher growth tends to be correlated with higher inflation, it is associated with positive risk asset and negative 'risk-free' asset returns.

Exhibit 7: Correlation between S&P-500 and US 10-year rate returns

2y Rolling Correlation between S&P-500 and US 10y (1y MA)



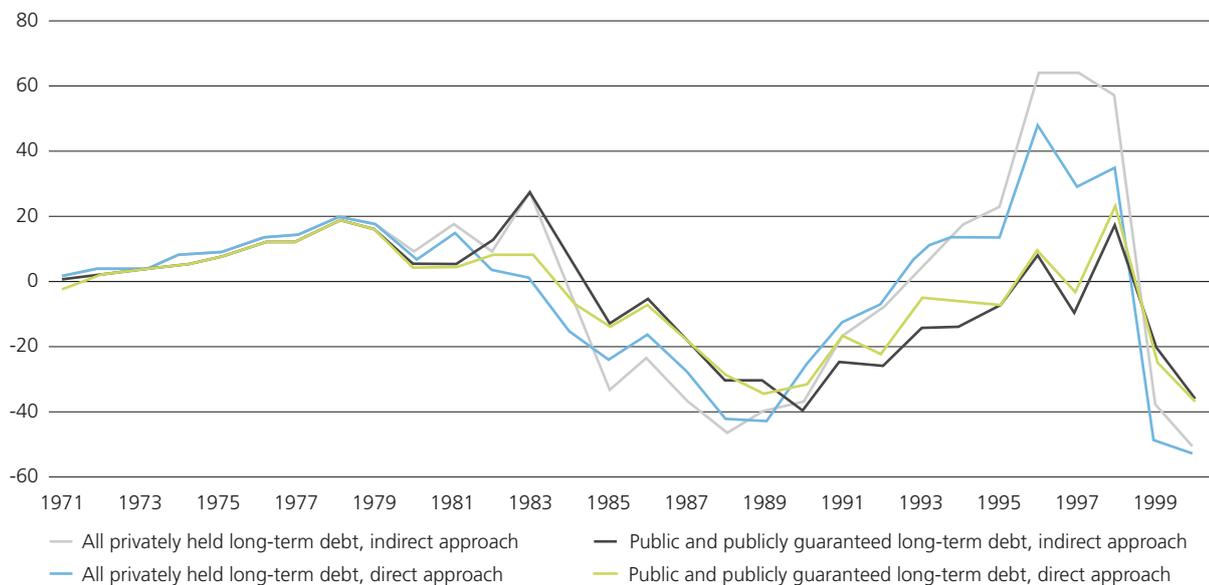
Source: UBS Asset Management, Macrobond, Bloomberg. Data as of April 2022.

What would happen to emerging market fixed income if financial markets return to a positive stock-bond correlation regime? Unfortunately, there is lack of data on emerging market fixed income returns in the 1970s so it is not

possible to make a direct inference. Fortunately, there is a 2004 IMF working paper which has constructed these data. Exhibit 8 displays the main results of this paper for our purposes. Emerging market fixed income received

steady inflows throughout the 1970s. This, in turn, was most likely the consequence of the commodities boom of the 1970s.

Exhibit 8: Flows to EM long-term debt in 1970-2000



Source: [How Private Creditors Fared in Emerging Debt Markets, 1970-2000](#) by C.A. Klingern, B. Weder di Mauro, and J. Zettelmeyer, IMF Working Paper No. 04/13.

Conclusion

Both our econometric and historical analysis suggests that emerging market fixed income is potentially very attractive now – especially if commodity prices remain high.

The caveat is that prices of emerging market risk assets are not determined in isolation. For emerging market fixed income to realize its value, external conditions need to improve.

This would mean less economic and policy uncertainty and stable developed market asset prices, particularly in fixed income.

Past performance is not a guide to future results.



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