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Seven questions and answers on emerging market bonds for Swiss pension funds

Swiss pension funds invest an average of 0.8% of their pension assets in emerging market bonds (EM bonds), i.e. bonds from issuers based in emerging markets.[1] Is that a low percentage? Should Swiss pension funds take this asset class, if it is one, into consideration in their strategic asset allocations? What are the different investment options within EM bonds? What about investing in EM bonds but only sovereigns? With the following seven questions and answers, we provide Swiss pension funds with a foundation for evaluating investments in EM bonds.

Should EM bonds be included as a strategic asset class?

There is no conclusive definition of which criteria should be used for the classification of an asset class with strategic, and thus long-term, weighting. One key characteristic pertains to risk and return characteristics. These should ideally be attractive enough to create added value for an investment portfolio. These should also differ from those of other asset classes to a sufficiently clear extent.

One possible starting point for evaluating a potential strategic asset class is to take a look at the fundamentals. In terms of gross domestic product (GDP), for example, emerging markets account for roughly USD 36 trillion as of the end of 2019, corresponding to a considerable 41% share of global GDP.[2] Emerging markets' share of the global debt market provides an additional indicator. The volume of outstanding sovereign and corporate bonds amounts to roughly USD 120 trillion worldwide. Roughly USD 90 trillion of this figure pertains to industrialized countries, led by the US with over USD 40 trillion and Japan with over USD 12 trillion. Emerging markets account for a share of approximately 20%, roughly three-quarters of which are attributable to China. Slightly more than half of this USD 24 billion volume of emerging market debt pertains to companies. The remainder originates mainly from governments.[3,4]

Even if portions of this bond volume are unavailable or unsuitable as an investment for local investors, it still provides an approximate illustration of the balance of power between industrialized countries and emerging markets. On this basis, a strategic weighting in emerging market bonds is thoroughly justified. Whether they also qualify as a strategic asset class with regard to their investment characteristics will be discussed in greater detail in the following sections.

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[1] Credit Suisse (Switzerland) Ltd. (2020): Credit Suisse Swiss Pension Fund Index (as of September 30, 2020).
[2] International Monetary Fund Data Mapper (2020); converted into USD at the respective exchange rates as of October 31, 2020. Adjusted for purchasing power, emerging markets actually account for a share of 57.5%.
[3] Bank for International Settlements (2020): BIS Quarterly Review – international banking and financial market developments.
[4] Bank for International Settlements (2020): BIS statistics – debt securities statistics (https://www.bis.org/statistics/about_securities_stats.htm?m=6%7C33).

How do EM bonds differ from one another?

Just as with other fixed-income asset classes, investments in EM bonds should seek to ensure adequate diversification of credit risk and terms, as well as countries, sectors, and issuers. The most important EM bond indices referred to by asset managers and investors differ with regard to the following characteristics in particular:

- Currencies: Bonds denominated in local currency (LC), "hard currency" (HC; often exclusively contains USD), and hard currency hedged in CHF (HC hCHF)
- Issuer type: Sovereigns vs. corporate bonds
- Credit risk: Investment grade and non-investment grade

The following tables show the returns and Sharpe ratios of EM bond indices frequently used over different periods since the earliest point in time possible based on the available data. For each row, green cells indicate relatively positive values and red cells indicate relatively negative values in the manner of a heat map.

Historical performance of EM bonds in CHF (left: return, right: Sharpe ratio)

				hedged in CHF		
Returns p.a.	**EM Gov.**	**EM Corp.**	**EM LC Gov.**	**EM Gov. hCHF**	**EM Corp. hCHF**	**EM Corp. HG hCHF**
5 years	4.8%	5.0%	3.5%	3.4%	3.6%	3.0%
10 years	4.8%	4.7%	-0.1%	3.6%	3.5%	3.4%
15 years	4.3%	3.7%	2.2%	4.6%	4.0%	3.8%
since 31.12.02	5.5%	4.4%	3.8%	5.9%	4.9%	4.3%

				hedged in CHF		
Sharpe ratios p.a.	**EM Gov.**	**EM Corp.**	**EM LC Gov.**	**EM Gov. hCHF**	**EM Corp. hCHF**	**EM Corp. HG hCHF**
5 years	0.51	0.58	0.34	0.38	0.53	0.58
10 years	0.50	0.53	-0.01	0.45	0.57	0.72
15 years	0.39	0.33	0.20	0.51	0.49	0.57
since 31.12.02	0.50	0.41	0.37	0.68	0.62	0.66

Sources: Morningstar, Credit Suisse. Data from December 31, 2002, to September 30, 2020. Any reference to past performance is not necessarily indicative of future results.

Indices used with brief descriptions (applicable for all of the following figures in this document)
EM Gov. = JP Morgan Emerging Markets Bond Index Global Diversified = EM sovereigns in hard currency (USD)
EM Corp. = JP Morgan Corporate Emerging Markets Bond Index Broad Diversified = EM corporate bonds in hard currency (USD)
EM LC Gov. = JP Morgan Government Bond Index – Emerging Markets Global Diversified = EM sovereigns in local currency
EM Corp. HG = JP Morgan Corporate Emerging Markets Bond Index Broad Diversified High Grade = EM investment grade corporate bonds in hard currency (USD)
The indices marked with "hCHF" are hedged in CHF.

The table on the left shows the annualized return of EM bond indices over different periods. The index for sovereigns denominated in hard currency (EM Gov.) had the best performance, and the index in local currencies (EM LC Gov.) had the worst. The hard currency indices (EM Gov., EM Corp.) show higher returns over the two shorter periods (five and ten years) than their CHF-hedged counterparts. This is attributable to the relatively stable development of the USD/CHF exchange rate over the last ten years. The period from 2003 to 2010, on the other hand, was marked by a significant depreciation of the USD.

When volatility is also taken into consideration, i.e. on the basis of the Sharpe ratio as shown in the table on the right, a different picture emerges: The indices hedged in CHF registered slightly better performance overall in comparison with the unhedged indices. Similarly to the situation for returns, corporate bonds (EM Corp.) show a better result over the periods of five and ten years than over the longer periods. Corporate bonds hedged in CHF with high issuer quality (EM Corp. HG) display the best ratio of risk and return over nearly all periods.

What are the most important characteristics of EM bonds and global bonds?

The following table compares the most important EM bond indices, including in comparison with the Bloomberg Barclays Global Aggregate TR (Global Agg.) global bond index. The main differences between EM bonds and global bonds concern regions/countries, yields to maturity and market capitalization, and thus trading volume as well. In addition, the credit quality of EM bonds is lower than that of global bonds. However, the ratings of many emerging markets have improved since the turn of the century, while those of industrialized nations have stagnated in many cases or even declined.[5]

Various characteristics of key indices for EM bonds and aggregate global bonds

	EM Gov.	EM Corp.	EM LC Gov.	Global Agg.
Yield to maturity p.a.	5.2%	4.6%	4.5%	0.9%
Index rating (Moody's/S&P/Fitch)	Ba1/BBB-/BB+	Baa3/BBB-/BBB-	Baa1/BBB+/BBB	Aa3/AA-/AA-
Investment-grade share	55.5%	58.5%	81.4%	96.0%
Modified duration	8.0	5.0	5.3	7.4
Bond currency	USD	USD	Local currencies	Local currencies
Index market capitalization (USD bn)	708.2	541.9	1'205.0	64'965
Number of issuers	167	706	19	26'379
Number of positions	844	1709	247	25'941
Number of countries	73	59	19	70
Largest countries/regions	Indonesia 4.7%	China 7.4%	Mexico 9.6%	USA 36.9%
	Mexico 4.6%	Brazil 5.2%	Indonesia 9.6%	Europe 24.0%
	China 4.3%	Mexico 4.8%	Thailand 8.9%	Japan 14.5%
Largest sectors	Countries/pseudo-states 100%	Finance 30.2%	Countries 100%	Countries 62.6%
		Oil and gas 12.8%		Secured 6.1%
		Utilities 11.2%		Finance 4.5%

Sources: J.P. Morgan, Bloomberg, Credit Suisse. Data as of October 31, 2020. Global Agg. = Bloomberg Barclays Global Aggregate TR Index.
The yield to maturity shown was calculated as of October 31, 2020, and does not take into account costs, changes in the portfolio, market fluctuations, or potential defaults. The yield to maturity is an indication only and is subject to change.

How does the historical performance of EM bonds behave in comparison with global bonds (in CHF)?

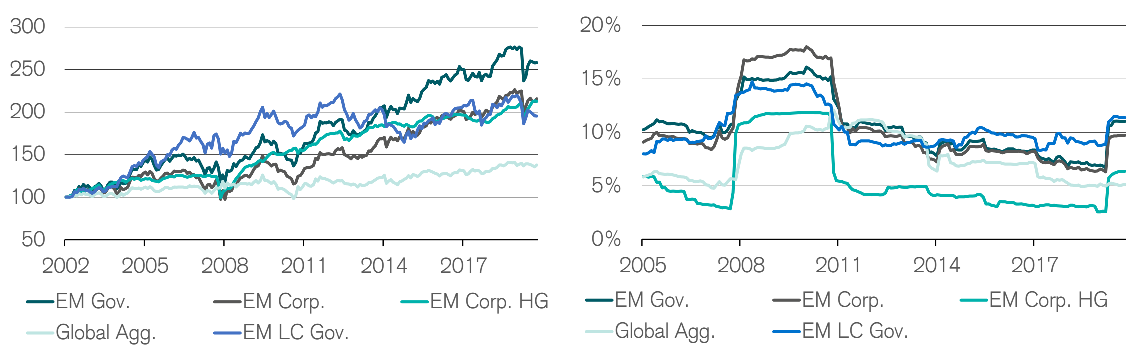
The chart on the next page shows how the characteristics of global bonds and EM bonds are reflected in performance. It compares historical returns (indexed, left) and rolling three-year volatility (p. a., right).

In comparison with Global Agg., all EM bond indices show significantly higher returns over the available period – and more than four times higher in the case of EM Corp. HG. Despite these higher returns, the fluctuations in value of EM Corp. HG were often lower than those of Global Agg. (figure on right). However, exciting developments can also be seen for EM corporate bonds, which also take non-investment grade ratings into consideration (EM Corp.). While EM corporate bonds were more volatile during the 2008 financial crisis than EM sovereigns (EM Gov.), the fluctuations subsequently evened out at a similar level. When the COVID-19 crisis began at the beginning of this year, corporate bonds actually recorded smaller setbacks (-11.6% vs. -13.9%). In addition to the longer durations of EM sovereigns (EM Gov.), another reason for this also lies in the fact that some EM corporate bonds carry higher ratings than the countries they are domiciled in.

5 For more on this subject, see also: Credit Suisse Asset Management (2017): Emerging market corporate bonds. An asset class in flux (update to this publication scheduled for January 2021).

The differences in volatility between global bonds and EM bonds in hard currency were also small for an extended period following the financial crisis. As in 2008, however, volatility increased more dramatically for all EM bonds during the COVID-19 crisis as well.

Indexed return (left) and rolling three-year volatility p. a. (right) in CHF



Sources: Morningstar, Credit Suisse. Data from December 31, 2001, to September 30, 2020.Global Agg. = Bloomberg Barclays Global Aggregate TR Index. Any reference to past performance is not necessarily indicative of future results.

What added value can EM bonds contribute as an addition to a Swiss pension fund's fixed-income allocation (without EM bonds)?

Swiss pension funds hold broadly diversified investment portfolios. When evaluating an asset class, it is thus always necessary to address the question of whether it can create added value for an existing portfolio.

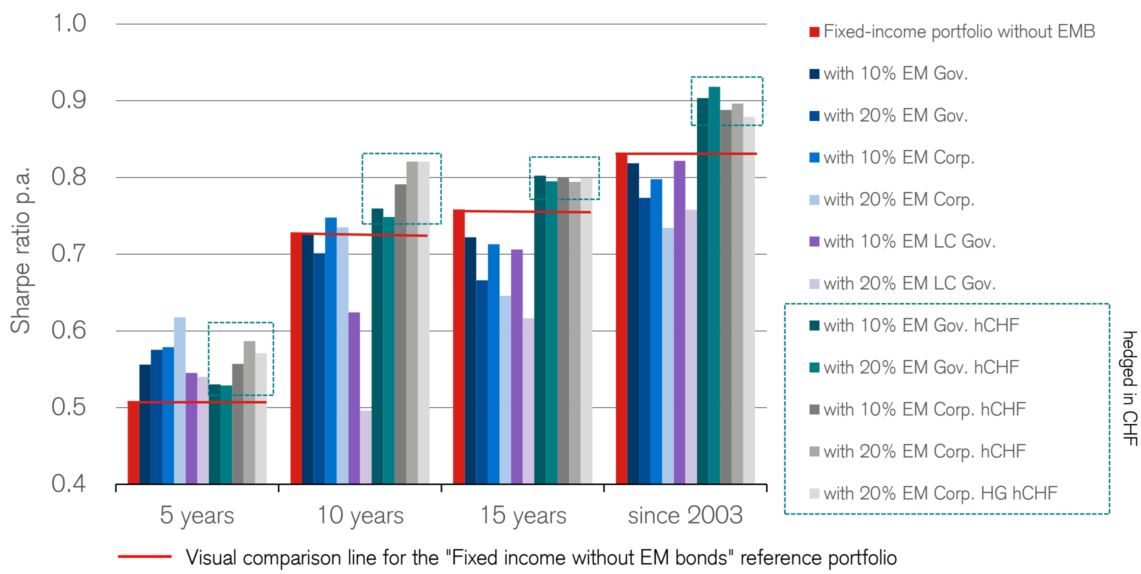
The figure on the next page demonstrates that, in the past, the addition of EM bonds to a currently typical fixed-income allocation without EM bonds (red column) has been sensible.[6] The red horizontal comparison line serves to help compare the new portfolios supplemented with EM bonds with the existing portfolio.

In the last five years, all EM bond categories were able to make a typical Swiss pension fund fixed-income portfolio more efficient, i.e. increase the Sharpe ratio. Over the longer periods, on the other hand, it can be seen that improvement was almost exclusively limited to EM bonds hedged in CHF (dotted lines).

EM bonds in local currencies (EM LC Gov.) showed below-average performance. The often-mentioned advantages of higher returns and diversification benefits from local currencies (e.g. high coupons, foreign currency appreciation or different yield curves) did not pay off. On the contrary, instances of long-term foreign currency depreciation relative to the CHF reference currency and higher volatility have a negative impact on the examined portfolio context.

[6] The allocation corresponds to the weightings of fixed-income investments in the Credit Suisse Swiss Pension Fund Index as of September 30, 2020, extrapolated to 100%: 42% CHF bonds, 42% global sovereign and corporate bonds (hedged in CHF), 20% global sovereign and corporate bonds in foreign currency.

Sharpe ratios of various fixed-income portfolios with EM bonds compared with a typical pension fund fixed-income portfolio without EM bonds over different periods in CHF



Sources: Morningstar, Credit Suisse. Data from December 31, 2002, to September 30, 2020. Any reference to past performance is not necessarily indicative of future results.

As in the examination of individual EM bond indices, this comparison of sovereign bonds with corporate bonds (EM Gov. and EM Corp.) also shows that neither of the two categories consistently performs better. Nevertheless, it is clear that corporate bonds performed best over the shorter / more recent time periods. This is also in line with the economic development seen in emerging markets in recent years, which has resulted in rising growth rates and higher levels of acceptance of corporate bonds by investors.[7]

Among the positive results of the EM bonds hedged in CHF, it is ultimately shown that the Sharpe ratio increases more significantly with an addition from 0 to 10% than from 10 to 20%. In some cases, the latter increase even leads to decreasing Sharpe ratios (e.g. at 15 years). Based on these findings, a strategic weighting for EM bonds (hedged in CHF) within the fixed-income allocation within the range from 10 to 15% is recommended.

[7] For more on this subject, see also: Credit Suisse Asset Management (2017): Emerging market corporate bonds. An asset class in flux (update to this publication scheduled for January 2021).

How do we estimate the future performance of EM bonds?

Historical developments help to understand the properties of an asset class better. In the interest of also providing a forecast, the return and risk figures expected by Credit Suisse are listed below.

Capital market expectations as of 2020 (over the next 5 years p. a., in CHF)[8,9]

	Return	Risk	Cash flow return*
EM hard currency bonds	4.3%	10.6%	3.8%
EM corporate bonds	4.6%	9.8%	4.5%
EM local currency bonds	3.0%	11.9%	3.8%
US corporate bonds	1.1%	9.1%	2.5%
Swiss sovereign bonds	-0.6%	2.0%	2.1%
Swiss corporate bonds	0.3%	2.5%	0.7%

The asset categories presented are based on the following indices: Barclays EM Hard Currency Aggregate TR Index Value Unhedged (EM Hard Currency Bonds); J.P. Morgan Corporate EMBI Broad Diversified Composite Index (EM corporate bonds = EM Corp.); J.P. Morgan GBI-EM Global Diversified Composite Unhedged USD (EM local currency bonds = EM LC Gov.); Barclays US Corporate Total Return Value Unhedged (US corporate bonds); Swiss Bond Index SBI Domestic Government 1-10 TR (Swiss sovereigns); Credit Suisse Liquid Swiss Ex-Swiss Government (CHF) TR Index (Swiss corporate bonds).

* Cash flows, such as coupon payments, in relation to the capital invested. Simplified calculation for the CHF reference currency.
Source: Credit Suisse Group AG. Capital market expectations are not necessarily indicative of future results.

The anticipated development corresponds to the historical development: EM bonds display significantly higher returns, e.g. in comparison with US or CHF bonds, but with higher risk. The latter can be reduced with foreign currency hedging in the case of hard currency bonds as well as with good diversification in the overall portfolio context. In addition, Credit Suisse economists expect EM bonds in hard currency to outperform those in local currency.

One important development concerns China's role. It accounts for a large share of both total global debt and of EM bond indices. In this publication, "diversified" versions of indices are used. These limit the weightings of certain countries in order to reduce concentration risks. Without these restrictions, China's weightings would amount to as much as 25%.[10] Various well-known index providers have also started regularly increasing China's share of industrialized country indices.[11] Such adjustments as well as China's economic development in combination with increasing market liberalization indicate that it is continuing to increase in importance and offers opportunities for investors.

Another development that has long been underway concerns the rapidly increasing incorporation of sustainability criteria into asset management. At present, Swiss asset managers and institutional investors do not yet take ESG criteria into consideration for fixed-income investments to the same extent as for equity investments.[12] As of the current point in time, however, the latter are demonstrating that a sustainability focus actually provides increased potential for return in emerging markets. Whether this development also applies for bonds still has yet to be seen.

[8] Credit Suisse Group AG (2020): Liquidity underpins real assets. Capital market assumptions. Five-year outlook (November 2020).
[9] Apart from EM hard currency bonds (sovereign and corporate bonds together), the categories/indices used for EM bonds correspond with those used previously in this publication.
[10] China's share as of October 31, 2020: JP Morgan EMBI 8.1% vs. JP Morgan EMBI Global Diversified 4.3%; JP Morgan GBI-EM Global 23.4% vs. JP GBI-EM Global Diversified 8%; JP Morgan CEMBI Broad 25.5% vs. JP Morgan CEMBI Broad Diversified 7.4%.
[11] As of September 30, 2020, the Chinese Yuan (CNY) accounts for a 5.95% share of the Bloomberg Barclays Global Aggregate ex CH (TR) Index.
[12] Swiss Sustainable Finance (2020): Swiss Sustainable Investment Market Study 2020.

What characteristics do we recommend for a benchmark for the EM bonds asset class?

Due to the importance of EM bonds in the capital market and their investment characteristics, we recommend including this asset class in investment strategies. Since various investment options are available within EM bonds, the choice of benchmark holds particular importance. It not only serves as an indicator, but also specifies the investment spectrum within which the asset manager should operate.

We recommend taking note of the following criteria in particular with regard to the benchmark:

- For CHF investors, foreign currency hedging has paid off in the past, particularly from a risk-adjusted perspective. Since bonds in local currencies are difficult to hedge, we recommend hard currency bonds hedged in CHF for the strategic position. We consider EM bonds in local currencies to be more sensible as a tactical addition.
- The analyses of EM sovereigns and EM corporate bonds show that these have created long-term added value. For diversification reasons, the benchmark should cover both, e.g. half each.
- The issuer quality of EM sovereigns, as well as EM corporate bonds, has improved significantly in recent years. Focusing on EM investment-grade bonds can be sensible with regard to risk considerations, but we believe that this is not mandatory in consideration of factors including a more attractive return contribution (lower credit quality).

Every pension fund ultimately makes its own decision on what it considers to be the relevant criteria for the benchmark and the subsequent implementation of EM bonds. However, the low interest rate environment and demographic influences account for many of the greatest challenges. We are convinced that EM bonds rank among the asset classes that can be part of the solution: On one hand, they offer increased potential for return and diversification; on the other, their regular cash flows help Swiss pension funds to service increasing retirement benefits.

By Livio Fischbach, CFA, Pension Funds & Corporate Investors, Credit Suisse

CREDIT SUISSE (Switzerland) Ltd.
Uetlibergstrasse 231
CH-8070 Zurich
credit-suisse.com/institutionals