



Inside the Engine Room of EM Local Currency Debt

A potentially rewarding asset class.

May 2023

KEY INSIGHTS

- The volatility of emerging market local currency (EMLC) debt falls significantly with the holding period. This means that investment time horizon is key when investing in the asset class.
- The importance of coupon, price appreciation, and currency to total returns changes with the time horizon. Currency dominates the short run, while coupon dominates the longer term.
- The current attractive yield level of EMLC debt provides a good entry point for investors with over three-year investment horizons.

Emerging market local currency (EMLC)¹ debt is a complex asset class that can behave quite differently over different time horizons. This can make it challenging for investors to analyze the opportunity that it offers. In this paper, we take a look at how investors might frame the opportunity more clearly, exploring alternative ways to think about the risk and return drivers of what is potentially a rewarding asset class.

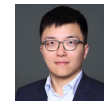
EMLC debt is essentially a government bond investment, driven by currency and sovereign risk. It may be thought of as a higher-yielding, higher-risk extension of an investor's global government bond allocation rather than being solely part of an EM allocation.

The starting point for any analysis is recognizing that the total return to

investors in EMLC debt consists of three distinct drivers: coupon, price appreciation, and currency (FX). We'll begin by looking at the impact of time horizon on EMLC debt investment outcomes and the role played by the different return drivers. We'll then discuss some underlying dynamics of the three return drivers, seeking to draw investment implications for asset owners and asset managers along the way.

While elevated within short periods, the volatility of EMLC debt falls significantly as we extend the holding period. This means investment time horizon should be one of the first decisions to make when thinking about investing in EMLC debt.

The relative importance of the three underlying drivers—coupon, price appreciation, and currency—to total return changes dramatically depending



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— Nathan Wang
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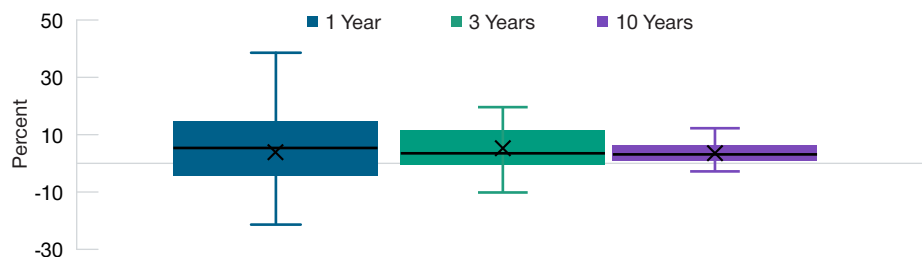
¹ Throughout this study EMLC returns are represented by the JP Morgan GBI-EM Global Diversified Index of EM local currency bond returns expressed in U.S. dollars.

“...realized volatility of the returns can differ markedly depending on the holding period.

— Wenting Shen
Solutions Strategist,
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Distribution of Returns

(Fig. 1) The Impact of Time Horizon on EMLC debt Returns Distribution of 1-year, 3-year, and 10-year Returns in U.S. dollars



As of February 28, 2023.

Data from December 31, 2002, to February 28, 2023.

Past performance is not a reliable indicator of future performance.

The x is the average return; the line is the median return. Returns within the box represent the middle 50% of all the returns. The upper and lower vertical lines show the maximum and minimum returns corresponding to 1.5 times the interquartile range.

Source: Bloomberg Finance L.P.; analysis by T. Rowe Price.

on the time horizon: Currency is the largest driver in the short run, but coupon becomes the dominating factor over time. While investors cannot cleanly access the three components of EMLC debt returns separately, they can actively tilt their exposure toward or away from one or more return drivers.

The Importance of the Investment Horizon

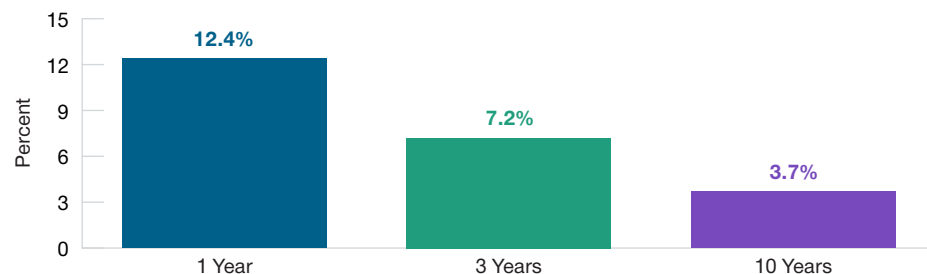
It is tempting for investors to view EMLC debt as a volatile asset class. This is understandable, given that it seldom makes the headlines except at times of market turbulence—often in the form of

currency weakness. As a result, these episodes of “blowups” tend to eclipse the steady, consistent properties that make EMLC debt a worthwhile addition to a portfolio. Away from such short-term noise, and in common with most asset classes, the level of realized volatility of the returns can differ markedly depending on the holding period.

Figures 1 and 2 show historical EMLC debt performance from two angles: (a) the dispersion of returns and (b) the volatility of those returns. In Figure 1, the “box and whisker” chart shows returns measured over 1-, 3-, and 10-year holding

Volatility of Returns

(Fig. 2) The Impact of Time Horizon on EM Local Currency Bond Volatility. Volatility of 1-, 3-, and 10-year EMLC debt Returns in U.S. Dollars



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Volatility is measured by the standard deviation of returns.

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Source: Bloomberg Finance L.P.; analysis by T. Rowe Price.

Over short investment periods, the largest driver of returns is the currency component.

— Nathan Wang
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periods, on a rolling monthly basis since 2002. The distribution of these returns is substantially narrower for the 10-year holding periods—a pattern that occurs to varying degrees in most asset classes, for different reasons. In the next section, we'll discuss the factors behind the short-term dispersion of returns on the one hand, and the long-term compression of return distributions on the other.

Given that returns over 120-month holding periods have been more stable than those over 12-month periods, we would expect to see this pattern reflected in the volatility numbers. The bar chart in Figure 2 shows the volatility of the rolling 1-, 3-, and 10-year periods. On an annualized basis, volatility over 3- and 10-year periods has indeed been significantly lower than it has for one-year periods.

The holding period over which to examine the volatility of an investment is an important (and often incorrectly made) decision. Many investors use monthly return data as a default, to estimate the volatility of an asset class. But this prism only makes sense if you expect to invest in and out of the asset class for periods of months. Most investors tend to hold the investment for much longer time horizons, typically years. This implies that the correct measure of the range of possible investment outcomes is best measured in terms of the volatility of longer holding

periods, aligning the calculation period with the investment period.

Decomposing the Drivers of EMLC Debt Performance

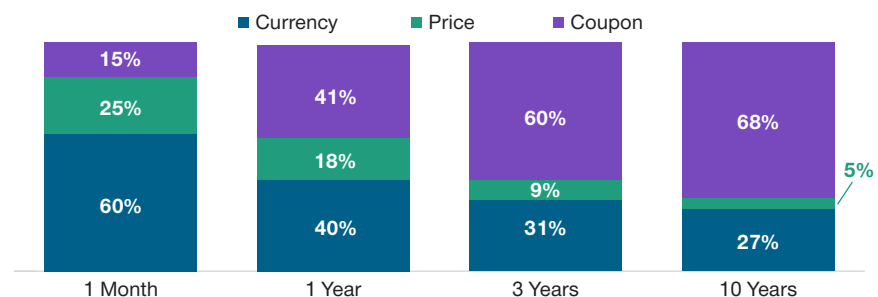
We have noted that longer holding periods are associated with narrower distributions of returns in EMLC debt. The reason lies in the changing importance, over time, of the underlying return drivers of the asset class. The total return to investors in EMLC debt consists of three related, but distinct, components:

- **Coupon:** The regular coupons paid on the debt by the issuing EM sovereigns over time
- **Price:** Returns from price appreciation based on mark-to-market local interest rate movements
- **Currency:** The impact of currency fluctuations on the value of both the principal and the coupons, given that both are denominated in EMLCs rather than in the investor's base currency

Figure 3 shows the proportionate contribution to total return of EMLC debt at the asset class level of the three return drivers. Over short investment periods, the largest driver of returns was the currency component. Over time, the largest driver became the coupon component. Interestingly, currency was the most volatile component, while coupon was very stable. As coupon

Drivers of EMLC Debt Performance Over Time in U.S. Dollars

(Fig. 3) Contribution to Return



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Contributions to total return are estimated and may be subject to rounding error.

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Source: Bloomberg Finance L.P.; analysis by T. Rowe Price.

The historical paradox of EMLC debt is that lower-risk components have delivered higher returns....

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payments accumulate over time, they account for a growing proportion of cumulative total returns. By implication, as the less volatile component became dominant, superseding the more volatile component over longer and longer investment periods, the asset class as a whole became appreciably less volatile.

Investors considering EMLC debt should establish their investment time frame in advance. Shorter-term investments require a view on the direction of EM currencies and rates as well as sufficient risk appetite to absorb short-term FX volatility. Longer-term investments require acknowledgment of the growing importance and attractiveness of the coupon component.

From a manager selection perspective, the divergent behavior of the return drivers highlights the dangers of placing undue emphasis on short-term performance. For example, looking at a sample of managers on a one-year horizon, the winners will likely be those who spend a significant portion of their risk budget on active currency positioning to drive alpha. Over a longer time horizon, large currency bets are likely to be less important; the winners will more often than not be those who

can collect coupon and generate idiosyncratic alpha via security selection.

Putting this a different way, the short-term views give a good picture of the interaction between a manager’s currency stance and the way the currency has moved, but it may reveal little about the manager’s bond selection skills. (This, as we explored in “Analyzing Manager Style in EM Local Currency Debt,” is why it’s important to identify what exposures EMLC debt managers are using to generate their alpha.)

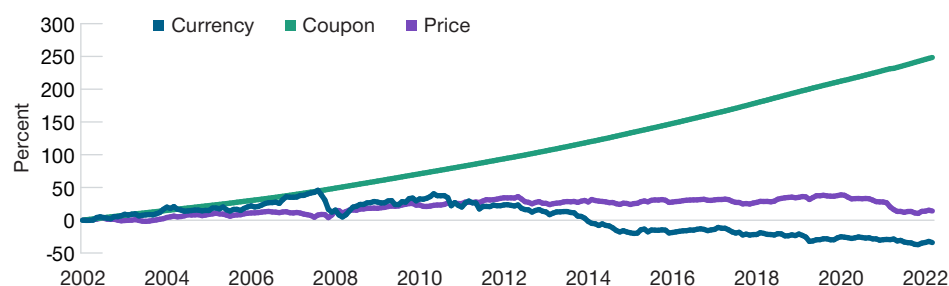
Risk and Return Relationships

The historical paradox of EMLC debt is that lower-risk components have delivered higher returns, while higher-risk components have produced lower returns. As shown in Figure 4, the biggest driver of risk in EMLC debt has clearly been the FX component, but it generated negative returns over the long term. On the other hand, the coupon component, which has minimal volatility (given predictable, contractually agreed coupon flows) and no drawdowns, has been by far the largest driver of long-term returns for the asset class. This is consistent with the investment-grade credit quality of the index. As of the end of December 2022, the sovereign issuers in the J.P. Morgan

EMLC Debt and Its Components

(Fig. 4) Cumulative U.S. dollar return since December 31, 2002

	Total Return	FX Component	Coupon Component	Price Component
Return	4.9%	-2.0%	6.4%	0.7%
Volatility	11.8	8.8	0.2	4.5
Drawdown	-29.0	-57.0	0.0	-20.0



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Source: Bloomberg Finance L.P.; analysis by T. Rowe Price.

GBI-EM Global Diversified Index had an average credit quality of BBB+, a yield to maturity of about 6.84%, and a trailing 12-month default rate of zero.

Learning to Live With Currency Risk

Given that currency has offered the lowest return-to-risk trade-off over time, it would seem an obvious strategy to separate out the three components and invest only in the low-risk, high-return coupon component. Sadly, this is not possible to do. The asset class is a combined package of its underlying components, and investors necessarily need to be exposed to all their risks and returns.

The main reason for this is that the cost of hedging out the FX risk through currency contracts can remove almost all of the income advantage, as emerging markets have high front-end rates that are only marginally lower than their long-end rates. This is because, as emerging markets are competing for international capital, they tend to have higher interest rate structures, particularly at the shorter end. Moreover, when EM countries are under stress, much of the pressure is felt through the currency (assuming a freely floating exchange rate). This often has a knock-on impact at the short end as EM policymakers choose to raise domestic short-term rates to shore up confidence. In other words, while a developed country might not need to adjust policy to deal with currency weakness, emerging markets tend to be capital importers and thus more vulnerable.

While investors cannot profitably isolate and remove all currency exposure, they can be selective about the FX risks they take. Our discussion so far has focused on the asset class as represented by index-level data, which assumes passive currency exposure. Active managers can manage FX risk with a range of techniques such as relative-value pairings and funding EM long positions with nondollar developed market currencies to reduce short dollar exposure.

Two Asset Classes in One

The starkly different behavior of the drivers of EMLC debt returns implies that it

makes sense to think of it as two separate asset classes in risk terms: a relatively high-yielding government bond portfolio and a potentially volatile currency stream.

Over the past decade, one obvious challenge in currency management has been the impact of U.S. dollar strength on EM FX returns. More generally, the Sharpe ratio available from a given currency can be persistently low because currency valuations can deviate from their fair value for a long time; a valuation-based assessment on a given currency can stay “wrong” for extended periods. Currency also tends to move in a wider range around a variable fair value so that it’s not unusual for a currency to be more than 20% over- or undervalued for an extended period.

Bond prices, on the other hand, are more driven by investment flows, which helps create a valuation “anchor” where over- or undervaluation tends to result in an adjustment. One explanation is that there are dedicated investors whose actions tend to “regulate” the price of bonds. For example, the insurance and pension fund investor base in Malaysia is likely to step in and buy domestic government bonds if yields reach a certain level, but they would not respond to a depreciating ringgit in the same way. The self-correcting mechanism for currency is a change in the fundamentals, which can take longer to feed through. At T. Rowe Price, our sovereign analysts review each country carefully and generate rate forecasts and gauge sovereign risk over various time horizons. By going long duration of an EM country when its yield is expected to fall while shorting duration of another country when yield is expected to rise, we aim to gain additional alpha from the subsequent price fluctuations.

For fund managers seeking to use their clients’ risk budgets efficiently, these relationships have important implications. We argued earlier that managers should approach bond and currency exposure as two separate asset classes. In bond selection, we think stronger valuation anchors, together with compensation for risk in the form of coupon, justify

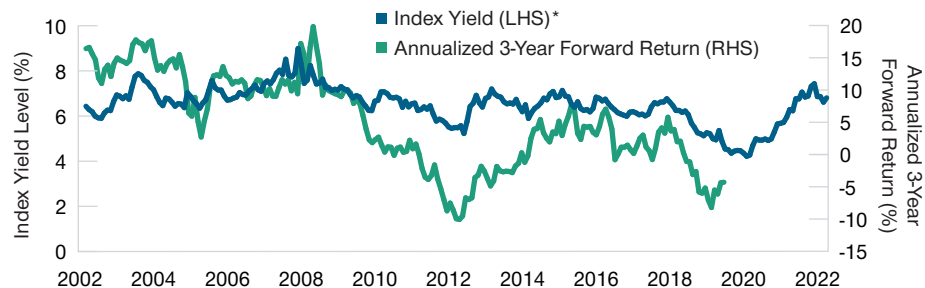
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Yield vs. Annualized 3-Year Forward Return

(Fig. 5) The Impact of Yield on Forward Return in U.S. Dollars



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*Yield refers to the yield to maturity of the JP Morgan GBI-EM Global Diversified Index of EM local currency bonds in U.S. dollars.

Source: Bloomberg Finance L.P.; analysis by T. Rowe Price.

a pure alpha-seeking approach. In currency selection, weaker valuation anchors and a more volatile profile imply that the primary focus should be on volatility management, with active return generation as a secondary objective.

Having said that, active currency selection can be an attractive source of alpha, so long as investors are mindful of the risks and cognizant that reversion to fair value can take time. In an asset class where the penalty for being wrong can be costly, our preference is for active risk to be taken in the form of multiple smaller bets rather than few large exposures.

The Impact of Yield Levels

From an asset allocation perspective, the forward return of EMLC debt looks favorable. An empirical study of historical data shows a strong positive correlation (0.68) between the yield level of EMLC debt and the asset class's three-year forward (or subsequent) return as depicted in Figure 5 below. Hence, starting from an elevated yield level of 6.8% now, the forward return of this asset class looks favorable compared with the lackluster performance over the past years.

This finding may not come as a surprise to many investors. As we demonstrated in Figure 2, when the time horizon extended

beyond three years, the impact from the currency component became modest. On the other hand, the higher yield level reflects larger coupons from the newly issued EM government bonds and more discounted valuations of the existing debt, both of which will likely translate to higher total returns down the road. The compelling yield level of EMLC debt provides a good entry point for investors with over three-year investment horizons.

Conclusion

We think the best way to think about EMLC debt is that the reward (return) comes from the coupon, the risk comes from the currency, and the duration exposure is a more traditional, bridging risk-return relationship. The most important driver in the short term, is currency, while over the longer term it is the coupon. These subtleties of risk and return drivers, and their relative importance over time, are key to understanding the asset class. While investors cannot cleanly access the three components of EMLC debt separately, they can tilt their exposure toward or away from one or more of these drivers. Luckily, the current attractive yield level of EMLC debt provides a good entry point for investors with investment horizons of three years or longer.

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