GMO

EMD QUARTERLY
VALUATION UPDATE

VALUATION METRICS IN EMERGING DEBT

By Carl Ross and Victoria Courmes | 1Q 2019

EXECUTIVE SUMMARY

In last quarter's publication we highlighted significant value in emerging external debt, with local debt markets looking to be on the attractive end of a neutral zone. As it happened, the EMBIG hard currency index rose 6.6% for the quarter and the GBI-EMGD local benchmark returned 2.9%. Three themes for the quarter are worth highlighting: 1) the markets have effectively established that the Fed has turned dovish and the hiking cycle is temporarily or permanently stalled; 2) trade tensions moderated with a postponement of U.S. tariffs on China, as talks proceeded; and 3) global economic growth forecasts have been revised down, for both developed and emerging economies. Rightly or wrongly, the market placed relatively more importance on the first two than the third.

As we enter the second quarter, our valuation metrics for emerging external debt are less compelling than they were at the beginning of the year, due to the rally. The asset class looks to be on the cusp of neutral to cheap. This is also how we would currently describe local market emerging debt. Emerging currencies remain at the cheap end of our neutral range. As for local rates, first quarter moves resulted in increased attractiveness of emerging. Emerging real yields rose as a result of inflation moderation, while G-3 real yields fell. Thus, the EM-DM real yield differential moved in favor of emerging, now standing at around 200 bps.

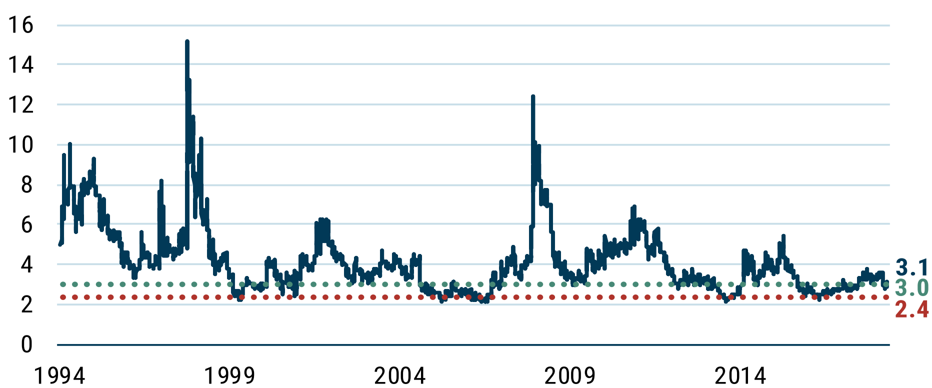
In this piece, we update our valuation charts, and provide our readers with some small changes in methodology that we have adopted (See the Appendix for more detail).

External Debt Valuation

As seen in Exhibit 1, the current multiple of the benchmark's credit spread to the spread that would be required to compensate for credit losses declined markedly in the first quarter, as a result of the market's rally. The multiple stood at 3.1x on March 29, 2019, significantly lower than the 3.6x we saw at end-December 2018. The ratio remains below long-term historical averages, but it is well off its historical lows. The historical minimum ratio was 2.1 in April of 2007, when the spread on the EMBIG index was +161 bps and the 10-year Treasury yield was 5.0%, compared with +378 bps and 2.41%, respectively, at the end of the first quarter.

Recently, we introduced a new way of assessing richness and cheapness of the market. Previously, we implicitly assumed mean reversion in the series, and displayed the mean and median levels (both around 4x) of the spread multiple. We now offer a different methodology, explained in more detail in the Appendix (readers from last quarter can please forgive the repetition). This new framework considers "cheap" to be the spread multiple that, in the past 25 years of history, has been associated with positive credit spread returns in the index over the subsequent 24-month period, 90% of the time. Conversely, "rich" would be the spread multiple that, in the past, has resulted in negative spread returns over the subsequent similar period, 90% of the time. These two levels for the multiple, depicted in Exhibit 1 as the horizontal lines, are 3.0 and 2.4, respectively. By this measure, the year-end multiple of 3.1x is on the cusp of neutral and cheap, after having been very attractive at the end of 2018.

EXHIBIT 1: LONG-TERM VIEW OF THE "FAIR MARKET MULTIPLE" FOR EMERGING EXTERNAL DEBT

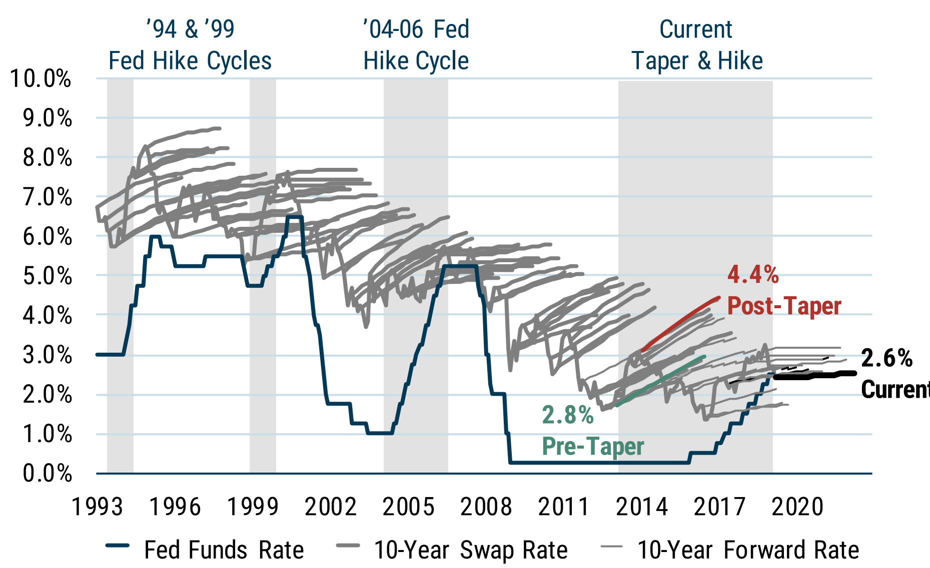


As of 3/31/19 | Source: GMO calculations based on Bloomberg and J.P. Morgan data
Note: Green line represents a credit multiple level above which EMBIG has subsequently delivered positive credit returns historically; red line represents a credit multiple below which EMBIG has subsequently delivered negative credit returns historically.

Rating actions during the quarter, which affect the calculation of the expected credit loss, were tilted toward the negative. Among the systemically important countries, Mexico was assigned a negative outlook on its BBB+ rating, amid ongoing uncertainty as to the new President's economic policies. Hungary was upgraded further into investment grade territory, and Croatia was upgraded to investment grade. Lebanon, Zambia, and Angola were given negative outlooks, but all have fairly small weights in the benchmark. As a net result of these rating moves and weighting changes in the benchmark, our updated calculation of the "fair value" spread of the EMBIG that would be required to compensate for expected credit losses was flat for the quarter, remaining 123 bps at end-March 2019.

The preceding was a discussion of the level of spreads, or credit cushion. From a total return standpoint, the level and changes of the underlying risk-free rate also matters. For the second consecutive quarter, there was a strong rally in the U.S. Treasury market in the first quarter, which accounted for about one-third of the index's total return. Over the past two quarters, there was an 87-bp peak-to-trough (3.24% to 2.37%) move in the 10-year yield, with the trough occurring on March 27. We measure the "cushion" in Treasuries by the slope of the forward curve of the 10-year swap rate, depicted by the highlighted lines in Exhibit 2. The interest rate cushion has been, and remains, very low by historical standards, meaning a sharp rise in the 10-year Treasury yield would be a surprise to the market, and therefore a threat to market confidence. The slope of the 10-year forward curve ended the quarter at 14 bps, the same level as the prior quarter, but the entire curve shifted lower by about 30 bps, likely reflecting more dovish Fed statements. The forward curve now looks identical in level and slope than it did on December 31, 2017, when the Fed funds target rate was 100 bps lower, at 1.50%.

EXHIBIT 2: 10-YEAR U.S. TREASURY SWAP CURVES AT QUARTERLY INTERVALS



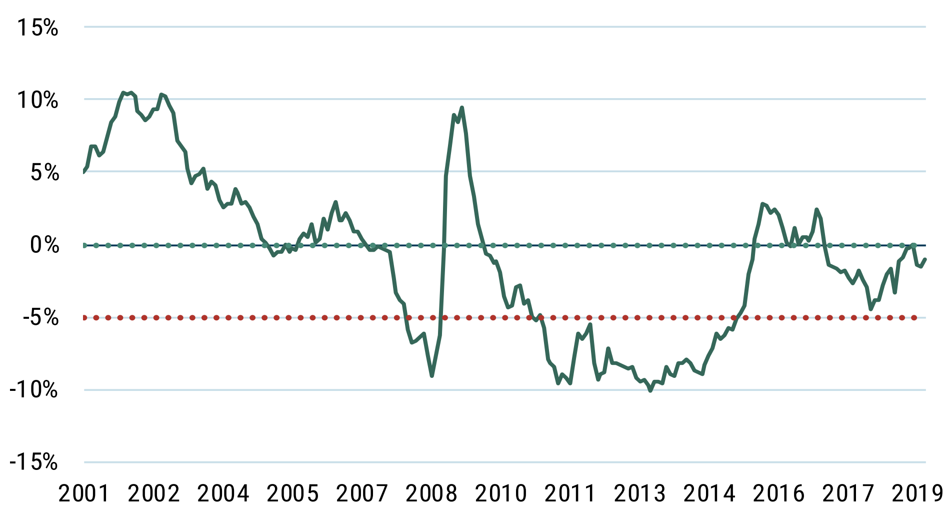
As of 3/31/19 | Source: GMO

Note: Projections as of each date, including those that are beyond 2015, are future prices as determined by the market and are not a GMO projection.

Local Debt Markets Valuation

Exhibit 3 provides a snapshot of our new currency valuation methodology that we introduced at the end of Q2 2018. We have recently made some enhancements that are reflected in the exhibit (for more information please see the Appendix). The underlying model analyzes trends in macroeconomic fundamentals such as balance of payments composition and flows, valuation of the currency, and the economic cycle, via an econometric analysis, to come up with an estimate of total expected FX returns for each country in the GBI-EMGD benchmark. These are then combined into a single value of a total expected FX return using a weighted average of currencies in the GBI-EMGD. We then deduct the GBI-EMGD weighted carry from the estimated GBI-EMGD weighted value of total FX expected return to get to an expected EM FX spot return. Finally, we estimate a neutral range based on the backtest of the overall model (see the Appendix for more information) to assess whether EM currencies are cheap, rich, or fairly valued. A value that is higher (lower) than the upper (lower) value of the neutral range could potentially indicate "cheap" ("rich") currencies. A value that is within the neutral range would be considered "fair." Based on the new methodology, EM currencies, while not outright cheap, are still hovering close to the cheap end of the neutral range. EM FX valuation deteriorated slightly in the first quarter of 2019 after looking relatively cheap at the end of 2018. The fundamental picture deteriorated slightly during the quarter as current accounts and growth deteriorated while bilateral real exchange rates appreciated slightly.

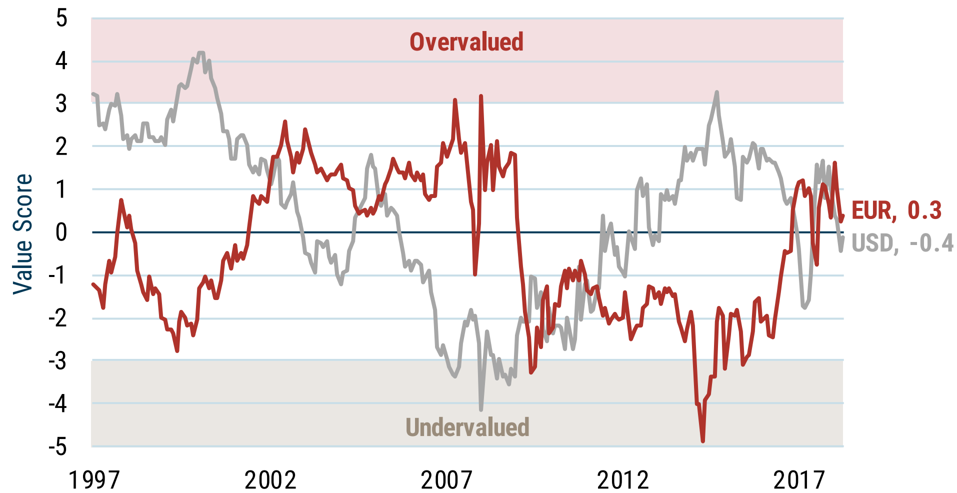
EXHIBIT 3: GBI-EMGD EXPECTED SPOT FX RETURN GIVEN THE FUNDAMENTALS



As of 3/31/19 | Source: GMO
Note: The values shown above apply the GBI-EMGD weights to the emerging currencies.
The expectations provided above are based upon the reasonable beliefs of the Emerging Country Debt team and are not a guarantee. Expectations speak only as of the date they are made, and GMO assumes no duty to and does not undertake to update such expectations. Expectations are subject to numerous assumptions, risks, and uncertainties, which change over time. Actual results may differ materially from those anticipated in the expectations above.

Exhibit 4 provides a snapshot of our traditional currency valuation methodology, which combines trends in the balance of payments and the real effective exchange rate, via a z-score analysis, and measures how far away current values are from their long-term averages. We keep our traditional valuation model in order to monitor the valuation of the USD and EUR. While the EUR remained in overvalued territory in the first quarter, it is less overvalued than in the fourth quarter of last year. Moreover, the USD moved from "rich" territory to about neutral during the first quarter according to this metric. Both USD and EUR look about fairly valued at the end of the first quarter. For dollar-based and euro-based investors, investing in local currency emerging fixed income markets remains attractive from an outright valuation perspective, although not as much as at the end of 2018.

EXHIBIT 4: VALUE SCORE USD AND EUR



Source: GMO
Note: The value scores shown above apply the GBI-EMGD weights to the emerging currencies. GMO calculates a currency's value score using a combination of the currency's trend real price and the country's trend current account balance.

As for emerging market local interest rates, we consider differentials in real yields to gauge the relative attractiveness of EM against developed markets (see Exhibit 5). In this regard, the story that has been in place for many quarters (years, actually) remains as we can still witness a substantial positive gap between EM and developed market real yields. That gap widened again moderately during the quarter as emerging real yields rose to 2.6% from 2.4% thanks to a slowdown in inflation rates. The spread between EM and U.S. real yields rewidened slightly during the quarter. The spread remains above the historical average (1.4%) and is now back to the average spread since 2010 (2.0%), as seen in Exhibit 5. Real yields in the G-3 continue to be at or below zero. Japanese and Eurozone real yields remain negative by our calculations. Real yields in emerging markets are back to their historical average (2.6%) and above the tight range of 2.0% to 2.5% that had been established since the beginning of 2017.

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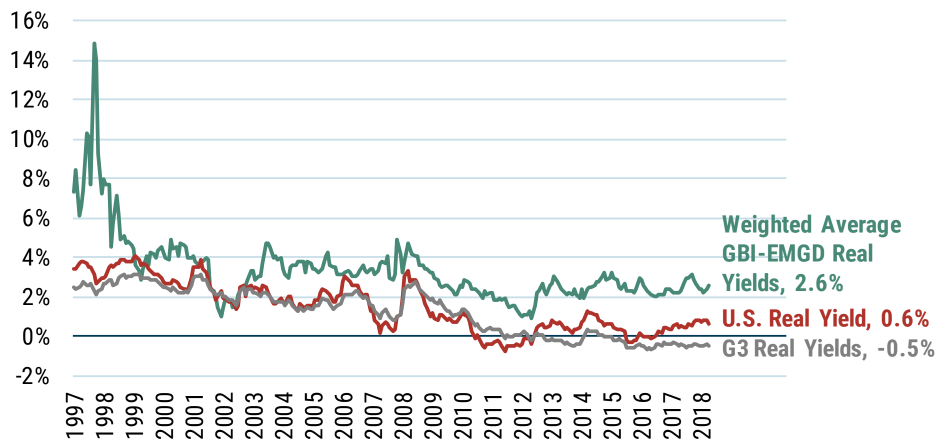
Disclaimer
The views expressed are the views and understanding of Carl Ross and Victoria Courmes through the period ending March 2019 and are subject to change at any time based on market and other conditions. While all reasonable effort has been taken to insure accuracy, no representation or warranty for accuracy is provided nor should be assumed. This is not an offer or solicitation for the purchase or sale of any security and should not be construed as such. References to specific securities and issuers are for illustrative purposes only and are not intended to be, and should not be interpreted as, recommendations to purchase or sell such securities.

EXHIBIT 5: INFLATION-ADJUSTED BOND YIELDS



As of 3/31/19 | Source: GMO
Note: Real yields are measured using the country subindices of the GBI-EMD and GBI Global, respectively, less Consensus Forecast CPI.

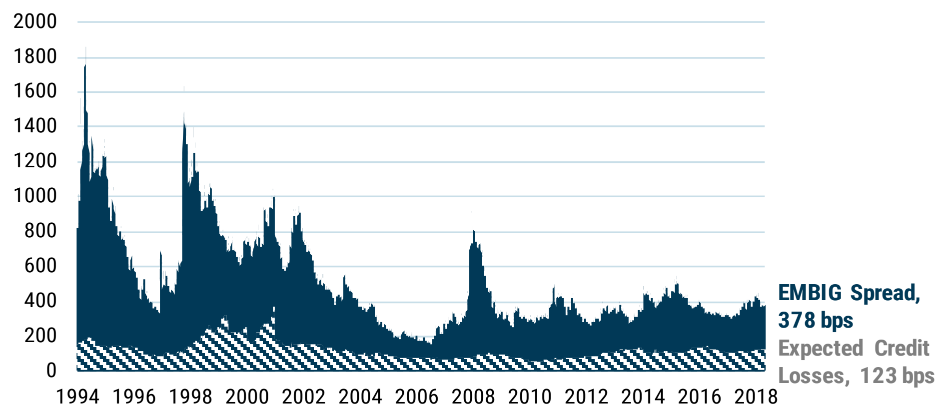
APPENDIX

EXPLANATION OF THE METHODOLOGY

External Debt Valuation

Exhibit 1 is created by first calculating a "fair" spread of the EMBIG over U.S. Treasuries, accounting for the credit rating profile of the EMBIG, default probabilities, and recovery values under default scenarios, based on rating agency studies of the historical default experience. In this way, the fair value spread of the EMBIG can move with time depending on upgrades and downgrades of sovereigns and their relative weightings within the index, ensuring that we are not biasing our measurement due to "rating creep." This fair value spread is the spread on a portfolio represented by the EMBIG that would be needed to compensate for expected credit losses, ignoring risk aversion, liquidity, and other considerations. The chart below shows the EMBIG spread and this fair value spread.

APPENDIX 1: EMBIG SPREAD AND EXPECTED CREDIT LOSSES



As of 3/31/19 | Source: GMO calculations based on Bloomberg and J.P. Morgan data

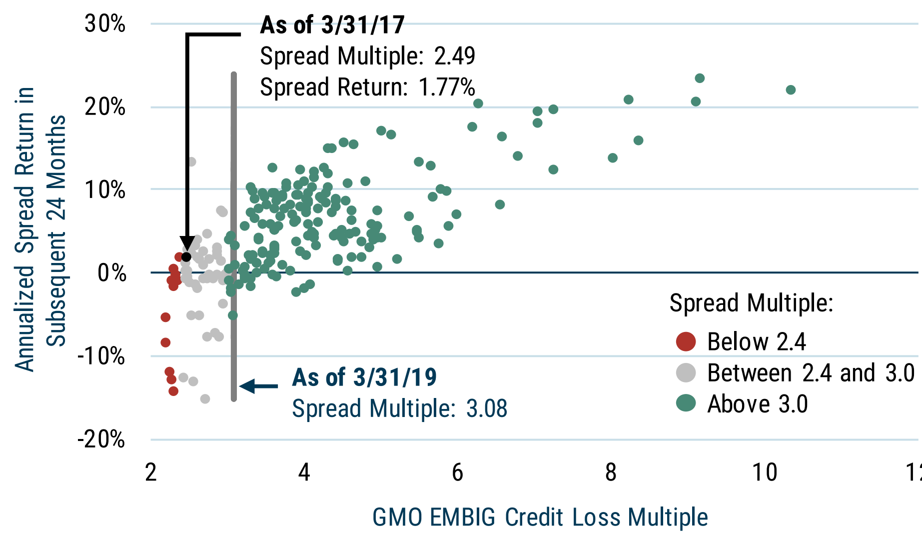
The question then becomes one of determining the appropriate premium the market should demand over the fair value spread. As the chart shows, this varies widely over time. Our traditional answer to this question was to take the ratio of the two spreads (Actual EMBIG Spread/Fair Value Spread) and compare that ratio to its historical average and median (both of which are around 4.0x). This mean reversion approach implies that liquidity and risk aversion are stable over time, and we found it unsatisfying.

As an alternative approach, we asked what have been the benchmark's returns in the past under its varying credit multiples? In the chart below, we plot these multiples over the historical period since 1994 with the benchmark's corresponding 24-month spread return (annualized). That is, given a credit multiple of X, Y would be the subsequent annualized spread return over the following two years.[1] This plot can be seen in the

1
We chose two years because one year did not seem like quite enough, given our long-term, buy-and-hold philosophy to the asset class (and one-year returns can be overly influenced by transitory shocks), and anything beyond two years begins to significantly reduce our number of observations.

chart below. We then calculate the credit multiple that, over the past 25 years of history, has been associated with positive spread returns on the benchmark over the subsequent 2 years 90% of the time. These observations are in green in the chart below, and the multiple that delineates this sample is 3.0x. Thus, over the past 25 years, if one bought the benchmark whenever it was 3.0x its fair value, this would have yielded positive spread returns over the following 2 years 90% of the time. We view this as a measure of cheapness. By contrast, the observations in red mark those multiples in which an investment in the benchmark on those dates would have generated negative spread returns over the following 2 years 90% of the time. We view this condition as rich. The observations in grey fall in between.

APPENDIX 2: GMO EMBIG CREDIT LOSS MULTIPLE AND SUBSEQUENT 2-YEAR SPREAD RETURN



As of 3/31/19 | Source: GMO calculations based on Bloomberg and J.P. Morgan data

Whereas Exhibit 1 deals with credit spreads, Exhibit 2 deals with the *level* of the underlying risk-free rate (in this case, U.S. Treasuries). In our hard currency portfolios, we manage the interest rate duration to be neutral to the EMBIG benchmark (duration of approximately 7). We do not take directional bets on U.S. rates in this portfolio, but we recognize it is an important determinant in the portfolio's total return. Exhibit 2 shows the history of the 10-year U.S. Treasury swap rate (heavy solid line), along with the forward curve (going out 3 years) for the 10-year swap rate (lighter lines) at each point in time (quarterly). In effect, it tries to show three dimensions in a two-dimensional chart. Note that it also shows the path of the Fed funds target rate for a sense of where the Federal Reserve is in its policy cycle. We highlight two things in this chart. First, the level of the 10-year swap rate gives us an idea of the overall interest rate cycle relative to one's view of the natural rate of interest. If this number is very low, there may be more risk of higher rates over a medium-term horizon. The second is the market's pricing of the 3-year forward rate for the same swap. If this forward curve is very flat, there is also less cushion for a negative surprise (i.e., higher rates) on term rates. If there is some positive slope to the forward curve, it is an indication that the market has at least priced in some higher drift in term rates.

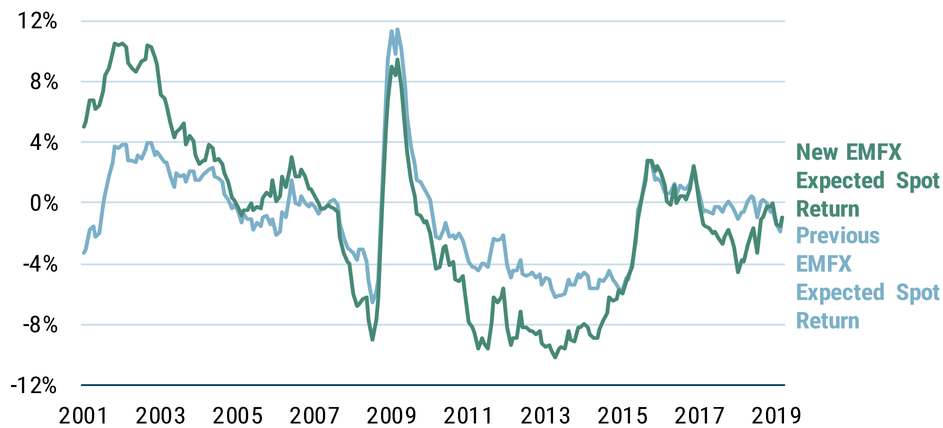
In Exhibit 3, we introduce a new framework to look at currency valuation for local currency debt. We use econometric models to estimate total expected returns for each country in the GBI-EMGD benchmark. We estimate two different models depending on whether the currencies are allowed to float freely or are more "managed." All regressions are estimated with country fixed effects. Expected total returns are a function of interest rate differentials and the underlying fundamentals of each economy. In determining the direction and magnitude of total returns, we find significant the following factors: balance of payment flows and composition; where a country stands within its economic cycle; and the over/undervaluation of the currency. The table below shows the fundamental variables included in the models.

"Floating" and "Peg" Currency Model Variables		
Currency Overvaluation	Balance of Payment Flows	Economic Cycle
▪ Real exchange rate estimate ▪ Term of trade	▪ Current account ▪ Foreign direct investment ▪ FX reserves ▪ Short-term external debt	▪ Growth ▪ Inflation ▪ Credit

After estimating total expected return for each country, we aggregate those returns by the weight each country has in the GBI-EMGD. We then compare this aggregate total expected return to a GBI-EM weighted value for carry by subtracting the two, which gives us an estimate of a GBI-EM weighted spot FX return. With some assumptions, such as a long-term investment horizon, mean reversion, and little or no structural change in the market, Exhibit 3 suggests that the market shows a signal of being attractive when the difference between total expected return and carry is above the upper end of the estimated historical neutral range, and unattractive when it lies below the lower end of that same range.

As a result of our ongoing currency research, we recently made some small adjustments to our new framework. We are now using the bilateral exchange rate instead of the real effective exchange rate as an input variable. We also made some adjustments to our commodity terms of trade variable to include a more robust database from the IMF, and to correct for trends in this variable. As a result of those changes, our overall EMFX valuation measure as shown in Exhibit 3 is now different. The chart below demonstrates how the GBI-EMGD expected FX spot return's line shifted as we improved the model, which means the neutral range will also be slightly different (see below). Please note that that this measure of EM FX valuation will be re-evaluated on a quarterly basis as we get new data, which means that the historical valuation line might shift moderately from quarter to quarter and that the neutral range might shift slightly as well.

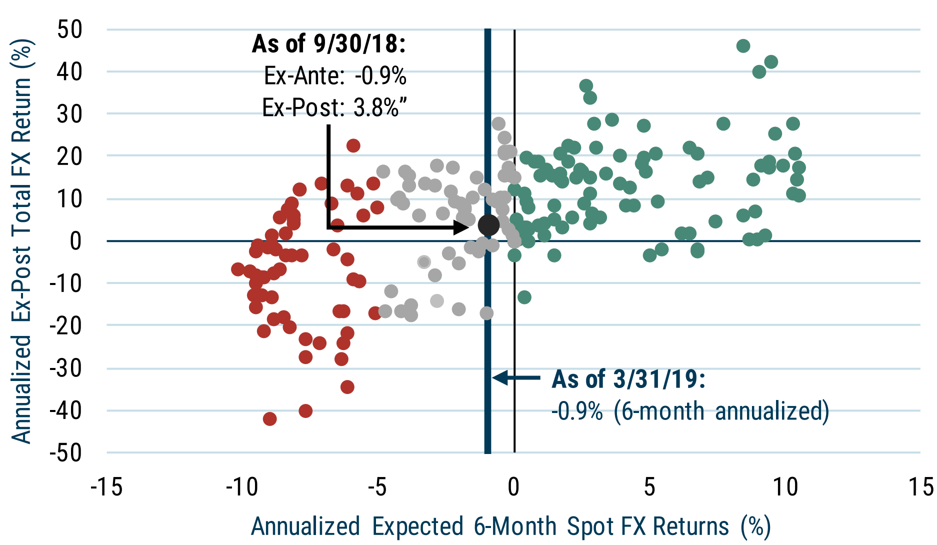
APPENDIX 3: GBI-EMGD EXPECTED SPOT FX RETURN GIVEN THE FUNDAMENTALS



As of 3/31/19 | Source: GMO

To estimate the neutral range, we look at how accurate our estimate of GBI-EM weighted spot FX return has been at predicting actual total FX returns on a six-month horizon as represented in the scatter plot below. As the scatter plot shows, we minimize the false positives when the estimated FX spot return is above 0% (annualized term). Moreover, we minimize the false negatives when the estimated FX spot return is below -5% (annualized term). Any signals between 0% and -5% would be considered uncertain, hence within the neutral range

APPENDIX 4: GMO GBI-EMGD EXPECTED SPOT FX RETURN VS. EX-POST GBI-EMGD TOTAL FX RETURNS



As of 3/31/19 | Source: GMO, Haver, J.P. Morgan