SOURCES OF RETURN WITHIN AN EMERGING MARKETS FIXED INCOME AND FOREIGN EXCHANGE PORTFOLIO

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Abstract

Over the past decade, emerging market investments have increasingly become the focus of investors' interest. Numerous academic and practitioner studies have emphasized the potential for excess return and risk reduction from the addition of emerging market investments into a traditional portfolio. Much of the research, however, has focused on empirical analyses rather than on highlighting the long-term structural arguments for emerging market investments. Moreover, much of the research tended to focus on emerging market equities, rather than on other emerging market securities such as fixed income and FX. In this practitioner note, we introduce the reader to the non-equities EM investment universe, describe a prototypical EM fixed income/FX portfolio, and quantitatively disaggregate the expected returns available from "beta" and "alpha" return sources.

I. Introduction

Over the past decade, Emerging Market (EM) investments have increasingly become the focus of investor interest. This interest mirrors the numerous academic and practitioner studies which emphasize the potential excess return, *and* risk reduction benefits from adding emerging market investments to a traditional portfolio.

Above all, the case for investing in EMs rests on the concept of "convergence"—or, put differently, the "catch up" that the developing world is (and will continue) experiencing relative to the developed world. A simple way of conceptualizing the issue is to think of emerging countries as economies that have capital shortages, and where as a result, the return on capital is high. The "convergence" process is one where exporters of capital to EMs (read: EM investors), attracted by the higher return on capital, benefit from this excess return on their investments.

While the above is theoretical, in a practical sense, there are generally three sources of non-diversifiable/excess returns available from EM investments. These three arbitrage-able premia are an information premium, an access premium, and a liquidity premium. The "information premium" is the amount, quality, cost and uncertainty associated with information on EM countries (and related entities), which can provide a competitive advantage to investors who are capable of promptly accessing, accurately interpreting, and proactively acting upon this information. The second arbitrage-able premia, the "access premium", is available in pockets of recently emerging economies and asset classes, which may not have equity markets, and have generally not been "commoditized" through availability to the general investing public. These pockets are still sufficiently difficult to access, providing those with appropriate infrastructure and local market knowledge, an ability to access a return profile not widely accessible. Finally,

there is a “liquidity premium”, brought about by the tendency of EM investments to suffer from bouts of illiquidity during periods of market stress. As a consequence, managers with experience in managing and navigating this illiquidity are in a position to significantly outperform passive/index based managers.

It is worth noting that, traditionally, academic research focused on the benefits of passive (or index-benchmarked) EM exposures. More recently, researchers have been emphasizing the potential benefits of more active managers who, all things equal, can take active long and short positions in a range of emerging market investments, can benefit from an increasingly liquid derivatives market, and who can judiciously utilise and manage leverage.

The academic research has also tended to emphasize EM investments expressed through the “equity” asset class. This is understandable since equities are the traditional “first port of entry” into any new investment theme. However, more recent literature has suggested that a combined EM equities *and* fixed income *and* FX portfolio can be more efficient (in terms of higher returns and lower volatility) than a pure EM equities portfolio.

The case for including EM fixed income and FX in an EM portfolio rests on three arguments. First, there are significantly more countries with liquid fixed income/FX markets than with liquid equities markets, enabling access to additional emerging market investment opportunities. Second, fixed income/FX instruments tend to be more complicated and more difficult to access (relative to equities), creating “inefficiencies” that are more arbitrage-able than those generally found in the equity markets. Third, EM fixed income (admittedly, not FX) can be *negatively* correlated with equities, since it tends to rally when central bankers ease monetary policies, which usually occurs during recessions (i.e., when equities sell off). This negative

correlation can provide significant diversification benefits to an EM portfolio that consists of both equities and fixed income.

Motivated by the above arguments, this practitioner note elaborates on the 1) the secular case for emerging markets investments (the "beta" case) and 2) the case for why fixed income and foreign exchange, as separate EM asset classes, can be expected to provide idiosyncratic excess returns (the "alpha" case).

II. The General ("Beta") Case for an EM portfolio

The case for a longer term positive risk premia for investments into emerging economies reflects the fact that those countries are in the midst of a multi-decade process of convergence (catching up to industrial countries). As emerging economies "converge", increased informational and capital efficiencies are encouraging a globalization process, characterized by:

- Modernizing capital structures;
- Training and educating human-capital;
- Building institutions; and
- Modernizing political systems.

Admittedly, the catch up process has been (and will continue to be) punctuated with periods of economic and political crises. However, the evidence over the past two decades has shown that EM governments recognize the importance of macroeconomic discipline and economic liberalization (in fact, the recent global credit crisis has shed a very favourable light on most EM countries). With few exceptions, local populism is being eschewed for growth-oriented policies and democratization is replacing totalitarian forms of governance. Globalization is helping integrate emerging countries in the global economy through increased trade relations and

capital flows. In addition, the abundance of commodities in EMs provides the countries with the financial resources to "ease" the sometimes painful transition costs.

As the global convergence process progresses, important investment opportunities within emerging markets will continue to arise. An essential element of these economies is that they are generally characterized by an abundance of labour and a shortage of capital. As a result, their economic structures offer significantly lower production costs and the ability to generate an excess return on capital. As economic convergence progresses, EM economies should, as a result, experience periods of high growth financed through capital inflows, with those providing the foreign inflows (vis. EM investors) in a position to share in the excess return on capital.

III. A Hypothetical (and Prototypical) EM Fixed Income/FX Portfolio

For the purpose of this article, we group non-equity EM investments into four groupings.

1. Local Currency Fixed Income Instruments

Local currency bonds are mainly issued by sovereigns and occasionally by local corporations and banks. These instruments are local currency denominated, and are typically in the form of domestically settled bills and bonds, that can either be held through a local custodian or through the form of Total Return Swaps or Credit Linked Notes. These instruments usually are of short-duration (1-3 years), although many countries are lengthening their yield curve (up to 20 years in some cases). These instruments have three implicit characteristics: an FX risk; a carry component; and an interest rate/duration risk. It should be noted that the pure interest rate/duration risk can also be accessed through the local interest rate swaps market, which in many EM countries has become very liquid.

The rates on EM local currency fixed income instruments tend to be high, largely as a result of five factors:

- **A policy rate component**: EM central banks have a credibility gap to overcome. They often react to inflationary shocks by aggressively raising interest rates. As a result, active investment management requires one to intimately understand the country's macroeconomic policies and the central bankers' reaction functions, to enable one to forecast the beginning and end of easing cycles.

- **A capital shortage premium** reflecting a shortfall of capital supply relative to its demand. Longer term investment is based on the assumption that this shortage will not cause default and/or that the supply of capital (through the balance of payments) is larger than what is priced in by the market.

- **An inflation volatility/monetary policy credibility premium**. The ability to exploit this premium is present whenever one believes that the central bank's credibility exceeds that which is priced in by the market, or when one believes that future inflation (and inflation volatility) is going to be lower than that priced in by the market.

- **A default risk premium**: This premium is conceptually identical to the spread on an external debt instrument, and is exploitable if one believes the market is overstating the risk of default. To better isolate the opportunity one could hedge a portion of the risk through shorting external debt.

- **An FX depreciation risk premium**. This risk premium is obtained through hedging the FX component of the instrument. (Put differently, if one desires to take an FX exposure; we would take it explicitly in an FX strategy rather than in a local rates strategy.—see below).

2. Foreign Exchange

EM foreign exchange has become a very liquid and efficient market. Although it is often traded in non-deliverable forward form, many countries now have fully convertible currencies, enabling their currencies to also be traded in deliverable forward form. EM currencies can be traded through the forward markets from the long or short side. However, the bias is generally to be long, since the carry inherent in EM currencies has empirically been shown to consistently overstate depreciation/devaluation risk. The long bias also reflects the common view that EM

currencies are structurally "cheap" and that their value will rise as part of the convergence/catch up process. The view that EM currencies are structurally underpriced reflects 3 factors.

- **The balance of payments:** Over the past decade, EM countries, as a group, have shifted from large balance of payment deficits to considerable surpluses. In part, this reflects a sharp acceleration in export growth, a benefit derived from earlier reform measures. Moreover, it reflects the sharp rise in capital flows to EM and the ongoing commodity boom. Structural BOP surpluses should continue to underpin EM currency strength over the medium term.

- **Positive growth differentials:** As noted above, the catch up process should coincide with high growth, which in turn should underpin EM currency strength. This, viewed differently, also mirrors productivity growth differentials which are at the core of currency strength.

- **Interest rate differentials:** high domestic rates in emerging economies (as discussed above) makes holding EM currencies an attractive investment proposition.

3. External Debt

Sovereign (and increasingly corporate) Eurobonds are debt instruments that are subject to international law, are internationally clearable, and, most importantly, are denominated in "hard" currencies (predominantly US dollars). The bonds trade on a spread over US treasuries or swaps. External debt is the first port of entry for a foreign investor into EM fixed income. There are three reasons why external debt should represent a core holding in an EM FI/FX portfolio. First, while current spreads appear fair when compared to *comparably* rated US corporates, the spreads do not fully price in the likely *future* credit quality improvements one can expect for emerging countries. Second, there is an important supply/demand imbalance in this sub-asset class, whereas there is currently more demand than supply. As fiscal situations in most emerging markets have improved, there has been a reduction in net issuances of Eurobonds. Moreover, emerging market countries are increasingly relying on local bonds, thus reducing the share of externally issued bonds in their debt stock. At the same time, demand for the external debt

(mainly by foreign investors but increasingly by local players) is rising very sharply. This imbalance is predicted to continue for years to come. Finally, the bonds are very liquid (and there is a developed derivatives markets on them) which permits tactical trading and their usage (on the shorting side) as hedges against other investments.

4. Non-traditional EM opportunities

Non - traditional EM opportunities may be regarded as exotic, relatively illiquid investment instruments, which have a long preparation period, requiring time consuming intensive legal, document, financial, and price-discovery analysis. Generally these instruments have long gestation periods (often taking a year or more before an investment pays off). Moreover, these instruments suffer from massive information failure—only those willing to invest the time, money and effort can properly value them.

Broad categories of these exotic investments include:

- Defaulted, or soon-to-be-restructured debt, whether at the sovereign or corporate levels, with recent examples including defaulted Argentine; Ivory Coast; and Iraqi debt. There are also a number of interesting corporate situations; and

- Exotic local currency opportunities, including structured products and illiquid loans, which trade at steep discounts to bonds of the same credit quality.

Generally, the amount of investment dollars deployed into exotic instruments is a function of a number of investment considerations:

- Given illiquidity, volatility, and the time it takes to analyze and maintain positions in exotic investments, one cannot invest massive amounts into these such securities.

- Given illiquidity, the small (absolute) number of investments in an exotics portfolio, and the long preparation and (especially) gestation periods, the “return threshold” on an exotic investment is much higher than on a traditional EM investment; and

In addition to returns, exotics offer intra-EM diversification benefits. Unlike “plain vanilla” EM investments, returns on exotic instruments have very little correlation with general EM indices.

This diversification characteristic improves the risk/volatility profile of a typical EM fixed income/FX fund.

IV. Expected Sources of Returns on EM Fixed Income/FX

Below, we attempt to "deconstruct" the returns on a typical EM fixed income/FX portfolio. In so doing, we distinguish between two types of returns: first, the "beta' returns associated with both "carry" and "convergence", and second, the "alpha" returns (idiosyncratic or manager-specific) sources of return.

1. Beta Returns on an EM Fixed Income/FX Portfolio

We distinguish between two sources of "beta" returns: "carry" and "convergence".

i. Carry

Carry is an important contributor to returns in an EM fixed income/FX portfolio. Below, we attempt to quantify the, *ceteris paribus*, returns from "coupons" on a hypothetical EM fixed income/FX fund. We do so by examining the returns on the four constituents of such a portfolio: (a) external debt, (b) local markets, (c) FX, and (d) non-traditional investments. Table 1, below, illustrates the calculations.

For external debt, "carry" is in the form of the spread over treasuries. As of the time of writing (mid February, 2010), EM sovereign debt, as measured by JP Morgan's EMBI-global index is "carrying" 320 basis points over treasuries (put differently, the "coupon" on the index is 3.2%). In this example, we assume that i) the prototypical EM fixed income/FX portfolio has a quarter of its holdings in external debt, ii) that spreads on the external debt are 320 bps over

treasuries (see above), iii) the portfolio has an average net long exposure of 40% (i.e., is on average long 70% of the time and short 30% of the time), and iv) portfolio leverage is 2X. Under these assumptions, the carry on external debt will contribute approximately 64 bps of return to the prototypical portfolio. (See Table 1 for the details of the calculations).

With respect to local debt, local yield curves are quite flat (and sometimes inverted), so the carry is generally in the form a spread over the cost of funding. For our calculation, we assume i) a positive carry of 100 basis points; ii) that the manager on average maintains a net long exposure of 80% (i.e. is on average long 90% of the time and short 10%) of the time; and that iii) that local instruments have a 30% allocation in this hypothetical portfolio. Under these assumptions, local market debt will have contributed 72 basis points of return to the prototypical portfolio.

On FX, the carry is calculated as the difference between the annualized local rates and the US one-year Libor. As of mid-February 2010, we assume, conservatively that this difference amounts to 500 basis points (as reference, on the same date, the difference amounted to 7.4% in Turkey, 8.4% in Brazil, 4.8% in Mexico, 0.6% in Korea, and 14% in Argentina). If we hypothetically assume that i) FX constitutes 30% of the portfolio, ii) that the portfolio manager leverages his/her FX book 3X over the year, and iii) that he/she is net long 60% of the time (long 80% of the time and short 20% of the time), then the FX book will contribute 270 basis points to the returns of the portfolio.

Finally, non-traditional EM investments offer very high carry. Assume that they constitute 15% of the portfolio, and that the "carry" yields a 12% annualized rate of return, and assume that the portfolio is not leveraged. The carry on such investments would have contributed 180 basis points of return to the portfolio.

In summary, the *ceteris paribus*, returns from carry in a hypothetical but proto-typical portfolio of EM fixed income/FX amounts to just under 600 basis points a year.

TABLE 1. Annualized "Carry" Return on a Portfolio of EM FI/FX

	Carry	Net Long In percent	Leverage	Percent of Portfolio	Annual Contribution to Portfolio Returns
External Debt	320	40	2X	25	64
Local Markets	100	80	3X	30	72
FX	500	60	3X	30	270
Non-Traditional	1200	100	1X	15	180
Total Carry					586

ii. Structural Convergence Spread/Rate Compression

The second source of returns on an EM fixed income/FX portfolio, "beta" returns, come from a process which we label as "convergence" (or spread/rate compression).

Despite EM spread/rates compression over the past few years, EM's valuations remain attractive. First, spreads on external debt remain high if one considers the credit quality

improvements that major EM countries are likely to experience over the next few years. Second, real interest rates in most emerging economies remain high by international standards (see section III.1 above) and over-estimate the default and macroeconomic risk premia. Third, EM currencies remain cheap as evidenced by balance of payment surpluses, positive productivity/growth differentials, and interest rate differentials.

For illustrative purposes, we assume the following spread/rate compression: another 50 basis points of spread compression (from 320 bps down to 270 bps over treasuries) for external debt; 200 basis points of real interest rate compression on local fixed income instruments; 5% nominal appreciation in FX space; and, 400% spread compression on non-traditional instruments. We also assume that this convergence occurs over a 2 year period. Finally, we make the same assumptions (in terms of "net longness" and share of exposures of each respective sub-asset class in the overall portfolio as we did in the "carry" analysis above). Within these assumptions, an annual contribution to the portfolio of just under 400 basis points is accrued from structural/convergence sources. The details are shown in Table 2, below. [1]

[1] Note that the "duration" column refers to the "duration" of the instrument under consideration which is required so as to calculate the capital appreciation associated with he assumed spread/rates compression. For example, under the assumption that external debt spreads will compress by 25 bps. over a year, and that the average duration of the external debt instrument under consideration is 4 years, then, by simple fixed income math, the total return on this investment is 100 bps.

Table 2—Illustrative Annual Returns on an EM FI/FX Portfolio Resulting from Spread/Rates Compression

	Structural Compression (bps. per year)	Duration (years)	Net Long (% of time)	Leverage	Percent of Portfolio	Contribution to Portfolio Returns (bps)
External Debt	25	4	40	2X	25	20
Local Markets	100	2.5	80	3X	30	180
FX	250		60	3X	30	135
Non-traditional	200	1.5	100	1X	15	45
Total Return						380

iii. ***Summary***

Tables 1 and 2 of this document provide an estimate of what we refer to as the "beta" sources of return on a prototypical EM fixed income/FX fund. In summary, under these assumptions, an investor can, *ex ante*, expect a return of just under 10% a year accruing from carry and a conservative assumption on spread/rates compression.

2. "Alpha" Returns on an EM Fixed Income/FX Portfolio

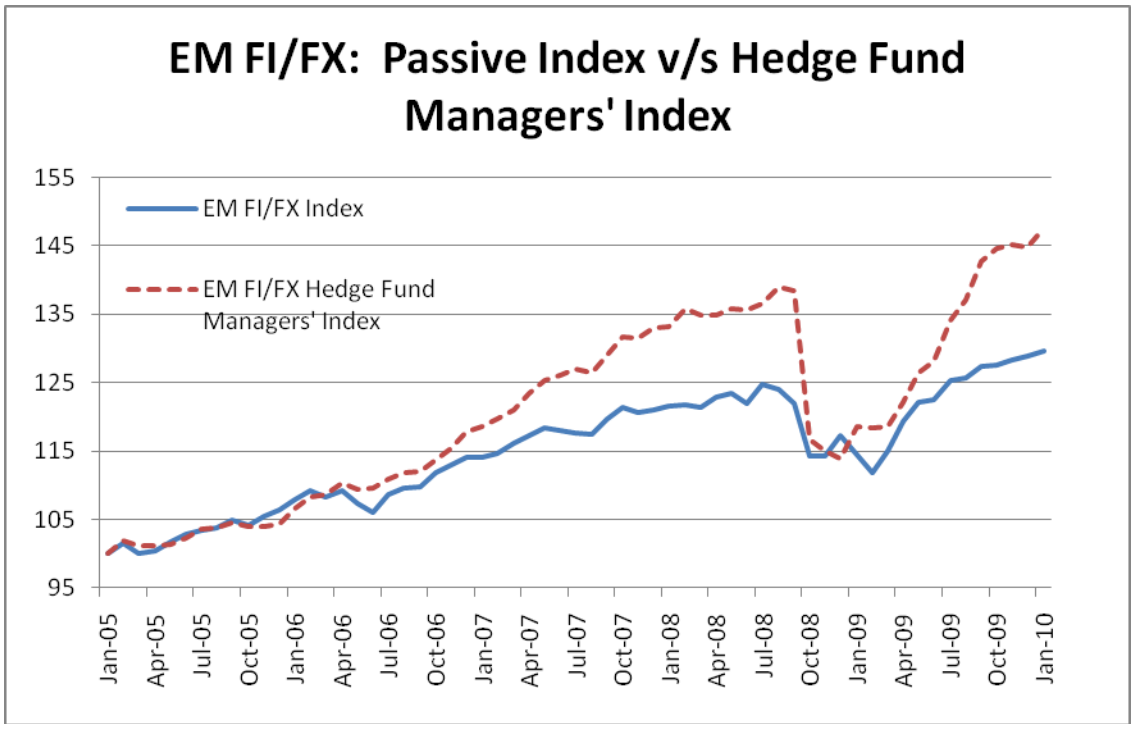
Admittedly, the above estimates of the "beta" returns (both carry and convergence) can best be monetized by an investor always being long EM fixed income and FX. However, and as emphasized in the introduction, there are a number of idiosyncratic forms of returns ("alpha") which offer interesting opportunities for alternative investment strategies focused in the EM fixed income/FX space.

An *ex-ante* estimate of "alpha" is by definition impossible. As a result, the only thing that one can do is to qualitatively discuss the possible sources of such returns—something we do in the remainder of the paper.

However, it is possible to get a sense of the *ex post* magnitude of the idiosyncratic returns by comparing the passive EM FI/FX index, to an index of returns generated by a representative sample of hedge fund managers active in that space. Fortunately, the latter series is publicly available and compiled by Bloomberg Active Indices for Funds (BAIF)[2]. In the chart below, we compare the hedge fund series to a composite passive index that measures the performance of EM local, foreign exchange, and external debt markets.[3] It is evident from the chart that over the period where the data is available (2005-2009), EM fixed income/FX hedge fund managers outperformed the passive index by a material amount. In fact, for the period as a whole (which, incidentally, includes the 2008 global credit crisis), the annualized return for HF managers amounted to 8.2% which compares favourably to the passive index's 5.3%.

[2] Bloomberg ticker BBHFEMDB.

3 The Composite EM Debt, Local Markets, and FX Index is composed of 25% Emerging Markets CDX ("on the run") Index; 37.5% JP Morgan Global Bond Index - hedged ("GBI"); and 37.5% the JP Morgan Local Markets Index Plus ("EMLI+"). Returns on ELMI+ are adjusted by subtracting weighted EUR/USD returns on countries generally traded against the EUR instead of the USD (e.g. CZK, HUF, PLN, RON, RUB, SKK, etc).



Below, we breakdown the sources of "alpha" returns into four categories and qualitatively discuss each.

i. Alpha 1: Country Specific Return

As the asset class has matured, intra correlations have lessened and idiosyncratic sources of return have become much more important. As evidence of this trend, which is clearest at the country level, in 2004 and 2005, the Mexican and Brazilian central banks raised rates aggressively in response to a domestically generated inflationary shock. In each case, aggregate demand slowed and inflation peaked, leading both central banks to start an equally aggressive easing cycle, which in financial terms translated into sharp fixed income rallies. In external debt, political crises in Peru and the Philippines have caused each country's spreads to widen sharply. Had an investor been able to foresee the end of the political crises (and, equally important, when

the market overpriced the political risk), one could have potentially profited from the resulting spread change. Importantly, idiosyncratic forces at the country level can work both on the long and short sides. Moreover, they can be translated into country relative value trades (for example, a long Venezuela and short Ecuador trade can act as a hedge against the oil markets).

ii. Alpha 2: Security Selection and Use of Derivatives

As emerging market economies mature, security selection becomes increasingly important; as yield curves lengthen; swap markets become more liquid, and corporate bonds become increasingly relevant. In conjunction with these developments, a highly liquid and sophisticated options market often develops, which can be used to further enhance risk and return profiles of desired trades. As an example, options could be used to gain exposure to an FX appreciation story, by combining a cash FX position (on which one can gain carry) with an out of the money call that knocks out a few percentage points away from the current spot market (i.e., a KO option). If one has a more specific directional view, this trade can be further complimented by including a far out of the money call spread, which would work best in a moderate rally (since one can benefit from both the cash and the KO). Options strategies can be constructed to profit from a myriad of directional views, and the timing associated with those views, as well as varying levels of risk and return tolerance.[4]

iii. Alpha 3: Non-traditional Investments

[4] A swaption market is developing on external debt and on local rates. This market is still not too efficient and implied volatility is still too high. Nonetheless, over the next few years, it will become more efficient. A manager with a strong background in FX options can be expected to also exploit the swaptions market as well.

In the discussion above, we have taken into account the carry and structural rate compression returns for non-traditional EM instruments. Given the relative under pricing of these securities, reflecting incomplete information, illiquidity and complicated investment structures, these securities are capable of generating equity like returns, often in excess of 20% per annum. In addition to potential outsized returns, non-traditional investments can also carry greater risk, however the risks are often uncorrelated with traditional EM investments, which could improve a portfolio's risk adjusted return profile. Recent examples of such non-traditional securities include: a bond issued by an Argentine credit card company; back-book sovereign loans issued by the Argentine government and owned by local banks; short dated loans to quasi government agencies in Russia and Kazakhstan.

iv. Alpha 4: Calling the Market

The structural spread/rate compression in EM economies does not happen linearly. EM's super-cycle is now more than 10 years old. Nonetheless, it has been punctuated by several crises: 1994 in Mexico; 1997-98 in Asia and Russia; 1999 in Brazil; 2000 in Argentina; 2002 in Brazil; and the generalized global credit shock of 2007/08. In addition to those "mega crises", EM economies and financial markets often face frequent "mini-blow ups" including, for example, the sharp selloffs of spring of 2004 due to the United States Treasuries sell off; the Spring of 2005 due to the problems with the auto sector in the United States.; and the Spring of 2006 due to fears of global liquidity tightening. These crises and mini-blowups will almost inevitably repeat themselves over the next few years either before the end of the super cycle or to announce its end. In either case, these crises/mini-blowups provide important opportunistic investment opportunities within a strong secular growth backdrop.

V. Summary

This article is designed to compliment the large body of academic literature available on the case for EM investing, with a practitioner's perspective on alternative assets classes within emerging markets. Specifically, the intent of this article was to introduce the reader to the opportunities available in emerging market fixed income (sovereign and local currency denominated debt) and FX, and to highlight the sources of expected return available within these asset classes, both from "beta" and "alpha" sources of return.

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