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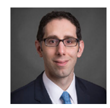
ON GLOBAL FIXED INCOME

Emerging Markets Bond Investing: A Q&A With Samy Muaddi

Managing through an unprecedented period for EM bond investors.

September 2023



Samy Muaddi, CFA
Head of Emerging Markets Fixed Income, Portfolio Manager, Emerging Markets Bond Fund

KEY INSIGHTS

- Complex market environments over recent years emphasize the importance of having a long-term approach with fundamental research and risk-awareness at its foundation.
- A disciplined risk management framework is critical in the emerging market debt space.
- While some emerging market countries are currently experiencing distress, this may lead to reforms and better policies that help improve future prospects.

Samy Muaddi recently marked his three-year anniversary as lead manager of the T. Rowe Price Emerging Markets Bond Fund (“the fund”). We discuss how he has managed the fund through an unprecedented period for both emerging markets and fixed income more broadly. He talks about the successes and the lessons learned, describes his investment process, and emphasizes the importance of prudent risk management in the emerging market space.

Q. How would you describe your first three years as lead portfolio manager?

It has been quite a roller coaster—managing through a global pandemic, the outbreak of war in Ukraine, and central banks unleashing aggressive hiking cycles to respond to multi-decade high inflation. The developments have brought about huge changes in markets—the 10-year U.S. Treasury yield was only 0.66% when I took over, but it was yielding over five times that level at around 3.84% on my three-year anniversary.[1] In emerging markets (EM), it’s a similar story—bond yields have risen considerably. Then there’s Russia, which has gone from trading with a credit spread above 100 basis points to having its entire market sanctioned to the point of residual value.[2]

It’s unsurprising that these multiple crosscurrents have weighed on the overall performance of the sector. But I’m proud that the fund outperformed

[1] June 30, 2023.
[2] Credit spreads measure the additional yield that investors demand for holding a bond with credit risk over a similar-maturity, high-quality government security. A basis point is 0.01 percentage point.

Significant Change in Market Dynamics

(Fig. 1) A comparison of prices and key metrics with three years ago

	June 30, 2020	June 30, 2023
10-year U.S. Treasury Yield	0.66%	3.84%
EMBI Global Diversified Yield*	5.52%	8.37%
Brazil Selic key interest rate	2.25%	13.75%
USD/TRY†	6.85	26.01

As of June 30, 2023.
For illustrative purposes only.
Past performance is not a reliable indicator of future performance.
*Yield to maturity of the J.P. Morgan Emerging Markets Bond Index Global Diversified.
†USD/TRY is the U.S. dollar/Turkish Lira exchange rate.
Source: Bloomberg Finance L.P., J.P. Morgan, analysis by T. Rowe Price (see Additional Disclosures).

its benchmark index during such a challenging period.[3] Outperforming when markets are rising is typically "easier," but mitigating loss when markets are falling is what separates managers. I'm pleased that we have been able to do that for our clients during such challenging circumstances.

Q. What have been your biggest investment successes? What have been your mistakes, and what lessons have you learned?

EM risk is not evenly distributed, so it's important to get the big calls right. Russia's invasion of Ukraine in February 2022 was the catalyst for substantial economic and financial market stress that reshaped the EM investing sphere. The onset of heavy Western sanctions resulted in the collapse in value of Russian government and quasi-government bonds. Thanks to our research platform, we were able to help mitigate the impact for our clients, which is something I'm very proud of. How did we do this? In the final quarter of 2021, our dedicated research analysts for the region flagged that Russian rhetoric was becoming more aggressive and that the tail risk of military escalation was rising. In response, we reduced Russian exposure across our EM debt portfolios in the months prior to the invasion.

Our research platform also benefited the fund in other areas. We identified credit upgrade stories, such as Angola and Oman, early. We also identified areas of deterioration and potential for a rating downgrade such as Ghana, which went into default in late 2022.

Not everything has gone right, so it's been important to recognize that and learn. A contrarian view on China property implemented during the fourth quarter of 2021 and first quarter of 2022 was a bad call that weighed on performance. But our risk management approach helped mitigate the extent of losses, underscoring the importance of a disciplined risk framework.

[3] Based on 3-year annualized total return as of June 30, 2023. **Past performance is not a reliable indicator of future performance. Please see the Appendix at the end for standardized performance of the Fund as of June 30, 2023.**

Risk Management Approach

(Fig. 2) Four dimensions of risk management

Linear Risk
Are positions appropriately sized to reach expected return targets?

Tail Risk Awareness
How resilient are the portfolio and specific positions to unexpected shocks?

Portfolio Fit
Does the mix of positions lead to a well-diversified portfolio?

Market Efficiency
When should we increase the size of our active positions?

As of June 30, 2023.
For illustrative purposes only. Diversification cannot assure a profit or protect against loss in a declining market.
Source: T. Rowe Price.

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Q. How would you describe your investment process and style?

At the heart of our process is fundamental research and active involvement in the full emerging markets opportunity set. Emerging markets remain one of the last plentiful sources of pricing inefficiencies in the financial world. Dispersion of asset prices, lack of transparency, information gaps, illiquidity, and other technical factors can cause significant valuation anomalies for us, as active investment managers, to potentially exploit. We believe that our long-term focus and extensive research resources that integrate our proprietary corporate; sovereign; equity; and environmental, social, and governance (ESG) analysis allows for the early identification of countries with the greatest long-term potential for rerating and outperformance, as well as those countries with deteriorating credit profiles or increased risks due to ESG considerations. This research is used to build a portfolio that balances conviction, flexibility, and risk-awareness.

Q. Can you tell me more about your risk management approach?

Risk management is critical. I have evolved our approach in three distinct ways during my tenure.

First, the implementation of a position-sizing framework to help with diversification and the balancing of risk exposures. This means the portfolio does not become overly concentrated in riskier segments of the market such as distressed debt and frontier markets.

Second, we have an anchoring framework to assess which countries meet the distressed threshold. This country-specific debt sustainability analysis evaluates four interrelated components (fiscal; external; social, political, and institutional; and contingent assets and liabilities). Each represents a potential anchor to market confidence and access to capital markets throughout an economic cycle. (Readers can learn more in **"Foundations of Emerging Market Bond Investing"** published in May 2023.)

Third, we developed a 4D risk management process in collaboration with our credit and quantitative teams. This looks at four key dimensions of portfolio risk: **linear risk** (Are positions appropriately sized to reach expected return targets?); **tail risk awareness** (How resilient are the portfolio and specific positions to unexpected market or exogenous shocks?);

> Risk management is ingrained in every step of my investment process, from bottom-up fundamental research to position sizing and the incorporation of custom-built quantitative models that provide holistic analysis of risk.

portfolio fit (Does the mix of positions lead to a well-diversified portfolio?); and **market efficiency** (When should the size of our active positions be increased?).

Risk management is ingrained in every step of my investment process, from bottom-up fundamental research to position sizing and the incorporation of custom-built quantitative models that provide holistic analysis of risk. Even once a position is implemented, we continue to monitor for risks as circumstances can change quickly in emerging markets.

Q. How do you see the market environment for emerging market debt going forward?

Emerging markets are going through their greatest period of debt distress since the 1990s. The cycle is not over—I anticipate more sovereign defaults, with recoveries potentially below the historical average. This is a consequence of three issues: first, a narrow group of developing countries losing market access due to monetary or fiscal policy errors; second, these errors are occurring at a time of aggressive tightening in financial conditions; and third, untested policy architecture is slowing the adoption of sustainable, multilateral supported solutions.

However, we have been here before. The concept of creative-destructive tells us that the best policies can be formed as a result of stress. This happened in the 1990s when we had the Asian financial crisis and the Russian default. This was followed by a five-year period of reform that set off a 20-year boom in emerging markets. So, it may take time for distressed emerging market countries to work through their issues, but we are optimistic for reforms and better policies.

APPENDIX: PERFORMANCE TABLE

Emerging Markets Bond Fund

Periods Ended 30 June 2023. Figures are Calculated in U.S. Dollars.

				Annualized					
	Three Months	Year-to-Date	One Year	Three Years	Five Years	Ten Years	Fifteen Years	Twenty Years	Since Manager Inception 30 Jun 2020
Emerging Markets Bond Fund (Net of Fees)	2.56%	4.15%	9.39%	-2.23%	-0.59%	1.70%	3.72%	5.33%	-2.23%
Linked Benchmark*	2.19	4.09	7.39	-3.21	0.49	2.44	4.46	5.60	-3.21
Value Added (Net of Fees)†	**0.37**	**0.06**	**2.00**	**0.98**	**-1.08**	**-0.74**	**-0.74**	**-0.27**	**0.98**

Performance data quoted represents past performance and is not a reliable indicator of future performance. Investment return and principal value will fluctuate so that an investor's shares, when redeemed, may be worth more or less than their original cost. Current performance may be lower or higher than the performance data quoted. To obtain the most recent month-end performance, visit troweprice.com.

The fund's expense ratio as of the most recent prospectus was 0.99%. See the prospectus for details.

This fund involves a high-risk approach to generating income from foreign bonds and its share price could fluctuate significantly. International investments can be riskier than U.S. investments due to the adverse effects of currency exchange rates, differences in market structure and liquidity, as well as specific country, regional, and economic developments. These risks are generally greater for investments in emerging markets. In addition, there are interest rate and credit risks normally associated with investing in bonds.

To the extent the fund uses futures, swaps, and other derivatives, it is exposed to additional volatility and potential losses.

The fund(s) may have other share classes available that offer different investment minimums and fees. See the prospectus for details.

The fund's total return figures reflect the reinvestment of dividends and capital gains, if any.

* Effective 1 January 2021, the benchmark for the Emerging Markets Bond Fund changed to J.P. Morgan Emerging Markets Bond Index Global Diversified. Prior to this change, the benchmark was the J.P. Morgan Emerging Markets Bond Index Global. Historical benchmark representations have not bee restated.

† The Value Added row is shown as Emerging Markets Bond Fund (Net of Fees) minus the benchmark in the previous row.

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Call 1-800-225-5132 to request a prospectus or summary prospectus; each includes investment objectives, risks, fees, expenses, and other information you should read and consider carefully before investing.

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T. Rowe Price Investment Services, Inc.

ID0006285 (09/2023)
202309-3109896