Seven Deadly Sins of Emerging Markets Debt Benchmarks

EMsights Capital Group

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Insights

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A R T I S A N P A R T N E R S

Investment Risks: Investments will rise and fall with market fluctuations and investor capital is at risk. Investors investing in strategies denominated in non-local currency should be aware of the risk of currency exchange fluctuations that may cause a loss of principal. These risks, among others, are further described on the last page, which should be read in conjunction with this material.

Emerging markets debt (EMD) has long languished under a cloud of skepticism and disappointment. Complexities and unique risks embedded in the asset class tend to intimidate investors, while limitations of the widely followed EMD benchmarks perpetuate myths of volatility, unpredictability and fragility. Many investors who have approached the asset class through the lens of the benchmark have had unpleasant experiences marked by disappointing performance and stomach-churning volatility. However, investing in EMD does not have to be this way; a different approach to investing can yield positive, alpha-generating outcomes.

Benchmarks are critical in shaping investors' perspectives on an asset class and guiding decisions about asset allocation. They often help define an investment universe, form performance expectations and measure risk parameters. However, benchmarks are far from perfect, especially when tracking expansive and varied asset classes. This is particularly evident in EMD.

EMD encompasses a range of assets, including local, external, sovereign and corporate securities. Each of these assets responds differently to macroeconomic trends and various local idiosyncratic events, making for a heterogeneous collection of securities that is challenging to fully represent with a benchmark. As a result, EMD benchmarks capture only a skewed subset of the available opportunity set and are unnecessarily volatile and under-diversified.

Many investors whose perceptions of EMD are based on its popular benchmarks risk overlooking the asset class's benefits and feeling disappointed by the investment results. However, by understanding EMD's embedded uncertainties and thoughtfully managing around the benchmarks' limitations, investors may be able to reduce volatility, capture additional investment opportunities and achieve a more favorable outcome.

This paper explores the seven EMD benchmark constraints—or seven deadly sins—that contribute to the asset class's checkered reputation. When considered individually, each sin may seem insubstantial, yet combined, they have led EMD benchmarks to fall short in demonstrating the asset class's true opportunity set.

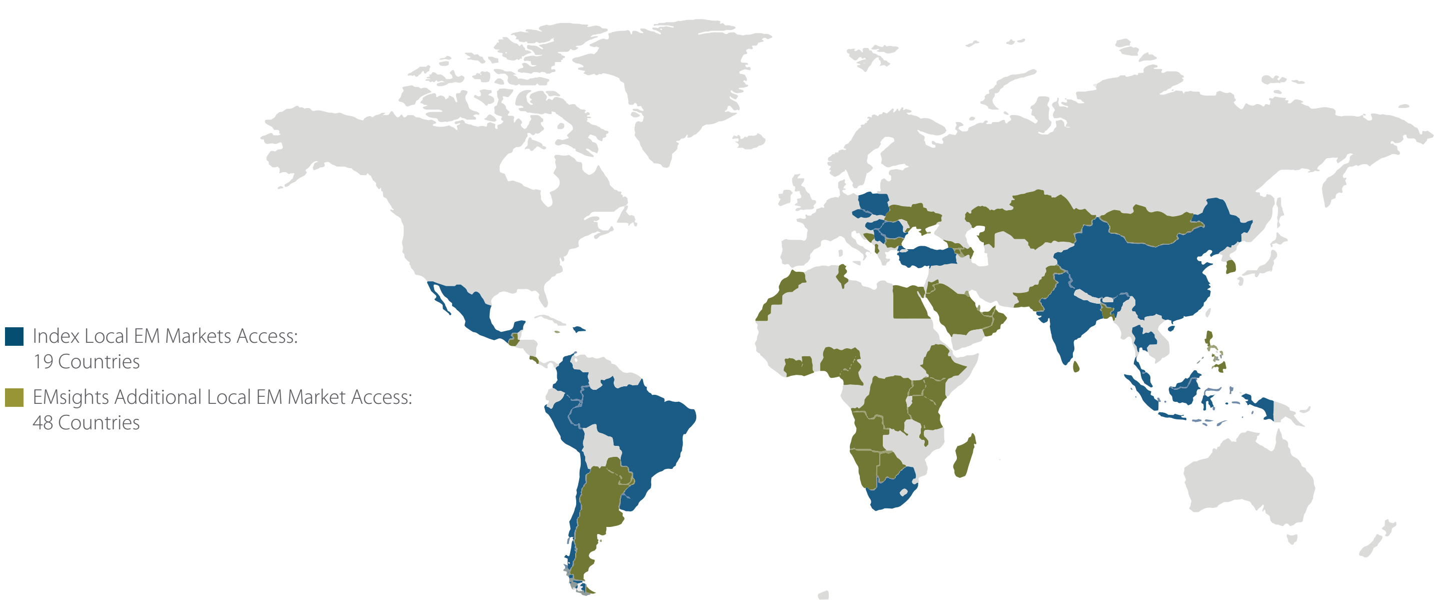
By understanding EMD's embedded uncertainties, investors may be able to achieve a more favorable outcome

1. Excluded Countries, Excluded Opportunities

All benchmarks, including EMD benchmarks, are intended to be comprehensive and efficient metrics of a defined market while remaining investable, measurable and unambiguous. To strike that balance, benchmark providers set strict eligibility criteria for inclusion in their indices. In the case of EMD, that screening process unnecessarily excludes a large subset of the EM-investable universe from consideration.

As shown in Exhibit 1, this limitation is especially pronounced in the local currency market, as represented by the J.P. Morgan GBI-EM Global Diversified Index (local currency benchmark), which includes only 19 countries. In comparison, we have identified an additional 48 countries with investable local debt markets—more than two times the coverage of the benchmark.

Exhibit 1: Local EM Index Market Access vs. EMsights Capital Group's Additional Local Market Access



Source: Artisan Partners/J.P. Morgan. As of 30 June 2024. "Index" is based on the JPM Government Bond Index-Emerging Market Global Diversified (GBIEMGD). Colored countries represent a portion of the trading markets accessible by the EMsights Capital Group.

Identifying and investing in countries outside the scope of the benchmarks is an intensive process that lacks scalability across markets and investment vehicles. Each local market presents a distinct set of investment protocols and requirements, such as local identifications, documentation and regulatory requirements. Market setup can span from six weeks to six months, or longer, and requires ongoing compliance with local trading regulations. Given the heavy administrative work required, many investors are deterred from venturing into these local markets. However, we believe the effort necessary to invest in a broader investment universe is worthwhile given the greater potential opportunities and additional sources of alpha generation.

Exhibit 2 highlights certain inclusion requirements for two of the most widely followed benchmarks of bonds issued by EM governments. Rules for inclusion, such as minimum maturity and face value requirements, pigeonhole benchmarks into longer-dated and more widely subscribed issues while leaving out certain countries and instruments, such as macro-linked bonds and warrants.

While the J.P. EMBI Global Diversified Index (hard currency benchmark) provides a broad sample of the US dollar denominated hard currency universe, it does not incorporate bonds denominated in other hard currencies. For instance, several countries are excluded from the index because they issue exclusively in euro-denominated paper—such as Albania and Macedonia. Another example, Romania, issues in both US dollars and euros. Incidentally, its euro-denominated issues make up a much larger portion of the country's debt and often trade at wider spread levels than the comparable dollar bonds. While various factors contribute to those higher spreads, it is worth noting that common benchmarks are restricted from including the paper.

2. Market Capitalization Weighted

Country allocations in EMD benchmarks are determined by market capitalization, meaning the more indebted a country is or the more debt it issues, the larger its benchmark weighting. This is counter-intuitive to what we believe makes fundamentally sound investments—typically, greater indebtedness means more risk and volatility.

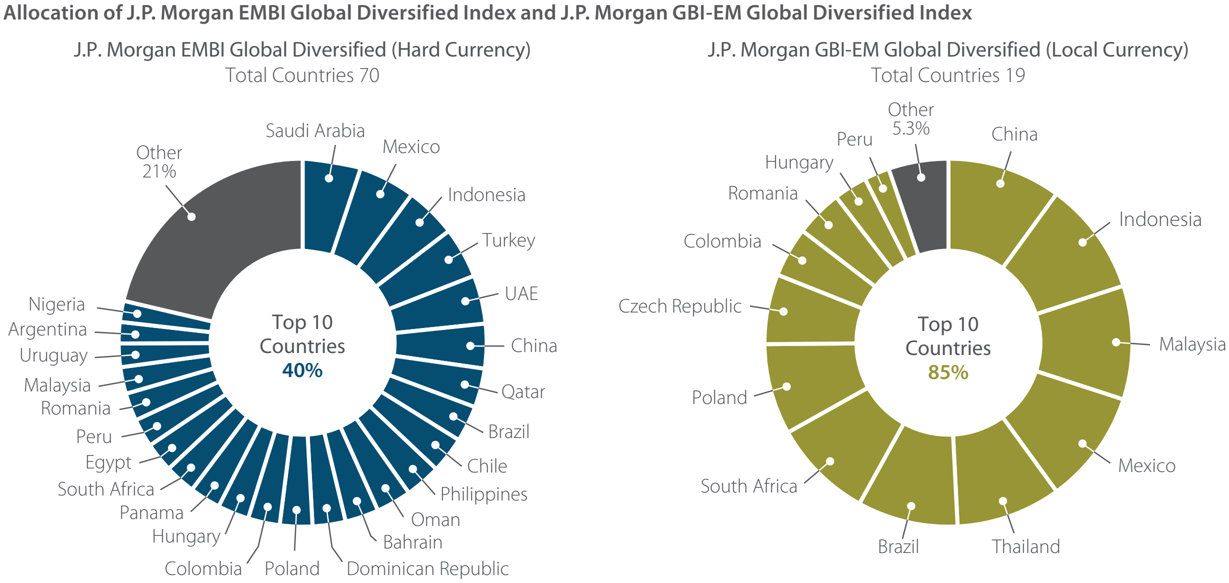
The market capitalization methodology also obscures the composition of benchmarks, which are more concentrated than investors may realize. The hard currency benchmark consists of 70 countries; the 26 largest country weightings amount to 80% of the benchmark while the 26 smallest country weightings amount to only 5%.

Exhibit 2: Rules for Inclusion

	J.P. MORGAN EMERGING MARKETS BOND INDEX (EMBI) GLOBAL DIVERSIFIED	J.P. MORGAN GOVERNMENT BOND INDEX-EMERGING MARKETS (GBI-EM) GLOBAL DIVERSIFIED
CURRENCY	Only USD denominated bonds (Hard Currency)	Local currency denominated bonds (Local Currency)
INSTRUMENT TYPE	All fixed rate, floating rate, capitalizing and amortizing bonds and loans	Fixed coupon and zero-coupon bonds and loans
MINIMUM FACE AMOUNT	US $500M	US $1B for local onshore bonds US $500M (global bonds)
MATURITY REQUIREMENT	At least 2.5 years until maturity	At least 2.5 years until maturity
SUBJECTIVE LIQUIDITY TEST	No	Yes

Source: J.P. Morgan. As of 30 June 2024.

Exhibit 3: Allocation of J.P. Morgan EMBI Global Diversified Index and J.P. Morgan GBI-EM Global Diversified Index



Source: J.P. Morgan. As of 30 June 2024.

3. Diversification Illusion

Investors often assume benchmarks are diversified given their wide scope; however, a closer look at the underlying constituents and their risk characteristics tells a different story. High correlations between constituents and elevated standard deviations erode the presumed diversification benefits.

For instance, the local currency benchmark consists of 19 countries; only nine of them have weights >5%, but they account for 81% of the benchmark. These countries may seem to be an adequate sample of the local currency market—they represent all the major geographic regions and run the gamut of political regimes, monetary policy approaches and primary exports. However, as shown in Exhibit 4, their currencies have exhibited a high positive average pairwise correlation of 0.5 over the past three years. When we expand the analysis to a sample of currencies and currency pairs outside of the benchmark, the average pairwise correlation drops to nearly zero, a notable improvement.

Benchmark currencies also exhibit greater volatility as capital inflows and outflows in the asset class are primarily directed toward or funded by countries within the benchmarks. The upshot of this trend is a benchmark skewed toward more volatile currencies, as seen in Exhibit 5. Countries in the local currency benchmark, particularly those with higher weights such as Turkey, Chile and Brazil, were some of the most volatile currencies over the past three years.

Another factor contributing to the benchmark diversification illusion is the overlap in risk factors among constituent countries. Benchmarks are constructed based on pre-defined criteria and methodologies with little attention paid to underlying constituent characteristics. This results in outsized exposures to certain risk factors over time, such as oil. Oil-producing countries make-up 40% of the J.P. Morgan EMBI Global Diversified Index as of June 30, 2024. As shown in Exhibit 6, this exposure has randomly swung between 26%-48% of the benchmark over the last 20 years.

Exhibit 4: Pairwise Currency Correlations: In EM Local Benchmark vs. Out of Benchmark

J.P. Morgan GBI-EM Global Diversified Index Currencies (>5% Weight)

	Brazilian Real	Czech Kurona	Chinese Renminbi	Indonesian Rupiah	Mexican Peso	Malaysian Ringgit	Polish Zloty	Thai Baht	South African Rand
Brazilian Real	1.00								
Czech Kurona	0.50	1.00							
Chinese Renminbi	0.18	0.62	1.00						
Indonesian Rupiah	0.37	0.49	0.54	1.00					
Mexican Peso	0.58	0.55	0.13	0.37	1.00				
Malaysian Ringgit	0.30	0.69	0.83	0.55	0.34	1.00			
Polish Zloty	0.56	0.84	0.46	0.39	0.54	0.59	1.00		
Thai Baht	0.38	0.63	0.69	0.51	0.32	0.86	0.68	1.00	
South African Rand	0.50	0.58	0.54	0.16	0.22	0.67	0.57	0.57	1.00

Avg: 0.5

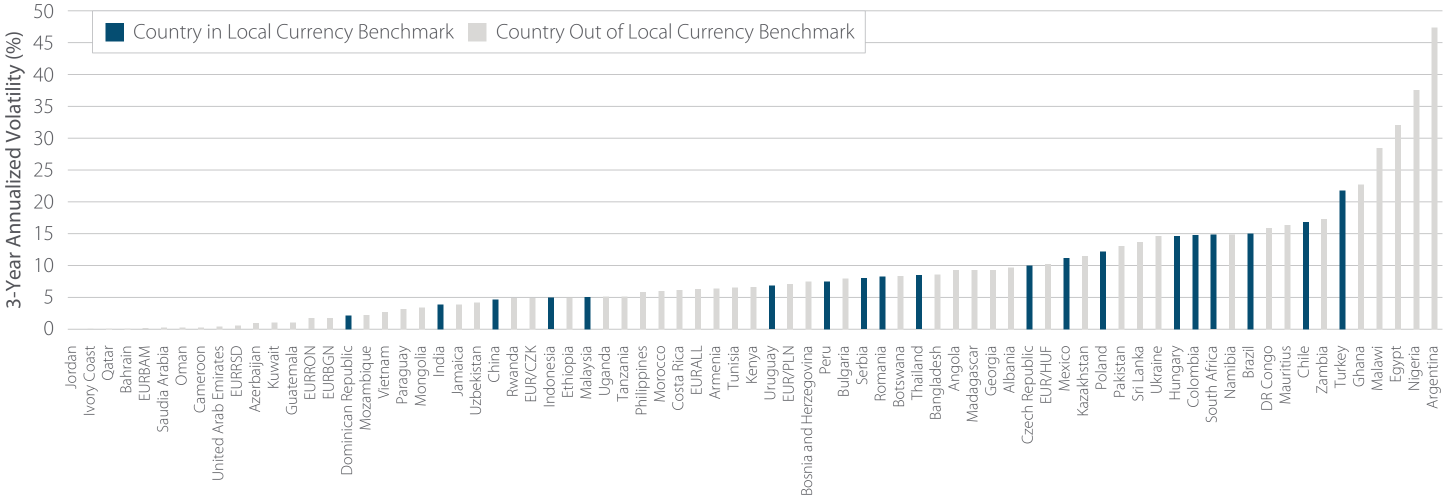
Non-J.P. Morgan GBI-EM Global Diversified Index Currencies

	GBIEMGD Index	Czech Kurona/EUR	Hungarian Forint/EUR	Polish Zloty/EUR	Indian Rupee	Kenyan Shilling	Kazakhstani Tenge	Costa Rican Colon	Ugandan Shilling	Uzbekistani Som	Ghanaian Cedi	Pakistani Rupee	Nigerian Naira	Zambian Kwacha
GBIEMGD Index	1.00													
Czech Kurona/EUR	-0.33	1.00												
Hungarian Forint/EUR	-0.20	0.49	1.00											
Polish Zloty/EUR	-0.55	0.31	0.40	1.00										
Indian Rupee	-0.54	0.16	0.24	0.31	1.00									
Kenyan Shilling	-0.10	0.07	-0.10	0.12	0.00	1.00								
Kazakhstani Tenge	-0.20	0.44	0.22	0.55	0.03	0.20	1.00							
Costa Rican Colon	-0.06	-0.09	0.04	-0.18	0.09	-0.04	-0.08	1.00						
Ugandan Shilling	-0.14	0.14	0.33	0.05	0.30	-0.07	-0.06	0.09	1.00					
Uzbekistani Som	-0.01	-0.08	-0.15	0.06	-0.05	-0.10	-0.09	-0.21	0.07	1.00				
Ghanaian Cedi	-0.09	-0.07	-0.02	-0.12	-0.10	-0.10	0.00	-0.06	-0.07	0.10	1.00			
Pakistani Rupee	0.12	-0.20	0.14	0.18	-0.02	0.11	0.09	-0.31	0.34	0.03	-0.05	1.00		
Nigerian Naira	0.10	0.27	0.14	-0.13	-0.21	-0.22	0.05	0.12	0.01	-0.03	-0.03	-0.10	1.00	
Zambian Kwacha	0.08	-0.13	-0.12	0.05	0.33	0.17	-0.10	-0.24	0.09	0.20	-0.13	0.05	-0.38	1.00

Avg: 0.0

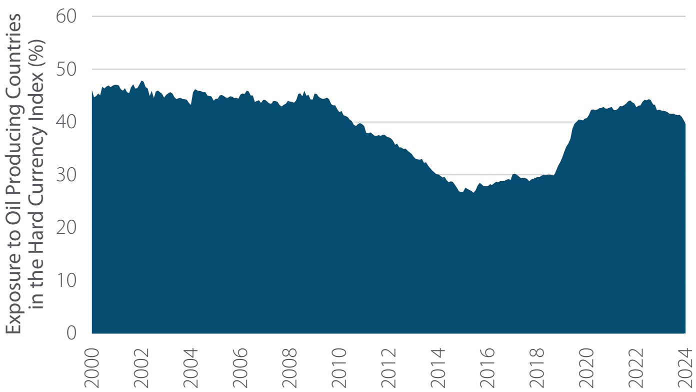
Source: Bloomberg. Correlations shown based on weekly spot rates for the three-year period from 30 June 2021 to 30 June 2024 and are subject to change. Illustrates the change of each currency's relative exchange rate to USD (except those noted as compared to EUR). The JPM Government Bond Index-Emerging Market Global Diversified (GBIEMGD) is an index of local-currency bonds with maturities of more than one year issued by EM government.

Exhibit 5: 3-Year Annualized Currency Volatility: Larger Benchmark Countries Experienced Higher Currency Volatility



Source: JP Morgan. As of 30 June 2024. The JPM Government Bond Index-Emerging Market Global Diversified is an index of local-currency bonds with maturities of more than one year issued by EM governments. Includes current and prior countries within the J.P. Morgan Government Bond Index-Emerging Market Global Diversified Index **Past performance is not indicative of future results.**

Exhibit 6: Total Exposure to Oil Producing Countries in The J.P. Morgan EMBI Global Diversified Index



Source: J.P. Morgan. As of 30 June 2024. Total Exposure to Oil Producing Countries in the hard currency index, J.P. Morgan EMBI Global Diversified, is calculated as the sum of Algeria, Angola, Azerbaijan, Bahrain, Brazil, Gabon, Indonesia, Iraq, Kazakhstan, Kuwait, Malaysia, Mexico, Nigeria, Oman, Qatar, Russia Saudi Arabia, UAE, and Venezuela country weights.

4. More Coverage, More Efficient

EMD encompasses a diverse range of countries, each presenting unique complexities that necessitate investors to have a deep understanding of the markets. While leading sell-side research firms disseminate information, their formal coverage typically focuses on countries in the EMD benchmarks, with only a handful extending beyond that.

We examined the formal country research coverage of eight leading sell-side research firms, illustrated in Exhibit 7. The definition of coverage varies by firm, but it is generally based on number of reports published on a country within the past two years, analyst assignments or forecast availability. Our results indicate that countries in the local currency benchmark are covered by nearly all the sell-side research firms, while countries out of the benchmark receive coverage from only a third of the surveyed firms. Coverage drops even lower for countries outside of the hard currency benchmark.

The disproportionate attention given to benchmark countries increases market efficiency among that group and leaves inefficiencies in markets outside the benchmarks' scope.

We perceive greater potential opportunities and additional sources for alpha generation in countries that are less efficient and not part of the benchmark.

5. Non-EM Risk Is an Ever-Present Danger

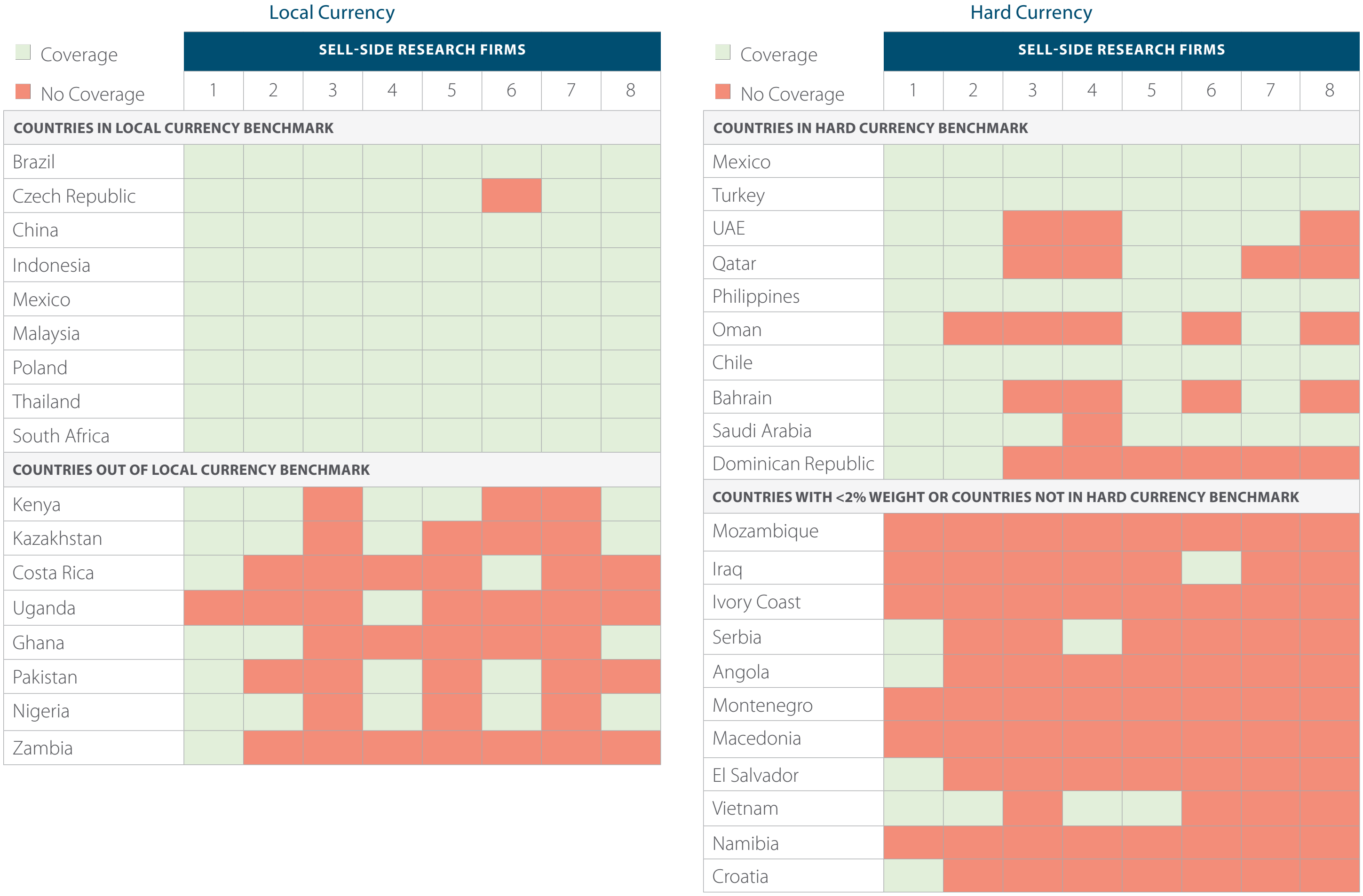
Emerging markets are influenced and impacted by many external factors such as commodity prices, the value of the US dollar and developed market interest rates. Obtaining pure exposure to EM risk is near impossible, and as a result, the benchmarks inherently carry risks that are not associated with EM. These non-EM risks have dictated a significant portion of EMD benchmark returns over time.

Duration is a primary non-EM risk inherent in EMD benchmarks. The hard currency benchmark has historically exhibited six to eight years of US duration. This has proven to be beneficial in some environments but a challenge in others. Across nearly all environments, though, US duration has been a dominant driver of hard currency benchmark returns, overpowering idiosyncratic country-driven returns and eroding some of the asset class's diversification benefits.

Over the last two decades, US duration has accounted for 44% of the J.P. Morgan EMBI Global Diversified Index's annualized return of 5.89%. This means only a little over half of the benchmark's returns have been driven by EM-related events.

Another non-EM risk embedded in benchmarks is the EUR/USD exchange rate's influence on local currency debt. The five Eastern European countries represented in the local currency benchmark, which account for over 20% of the benchmark, exhibit an almost perfect positive correlation to the euro when traded relative to the dollar, as shown in Exhibit 8. This suggests investors who purchase this local debt with US dollars are essentially purchasing euro exposure. A potential antidote to this is purchasing the

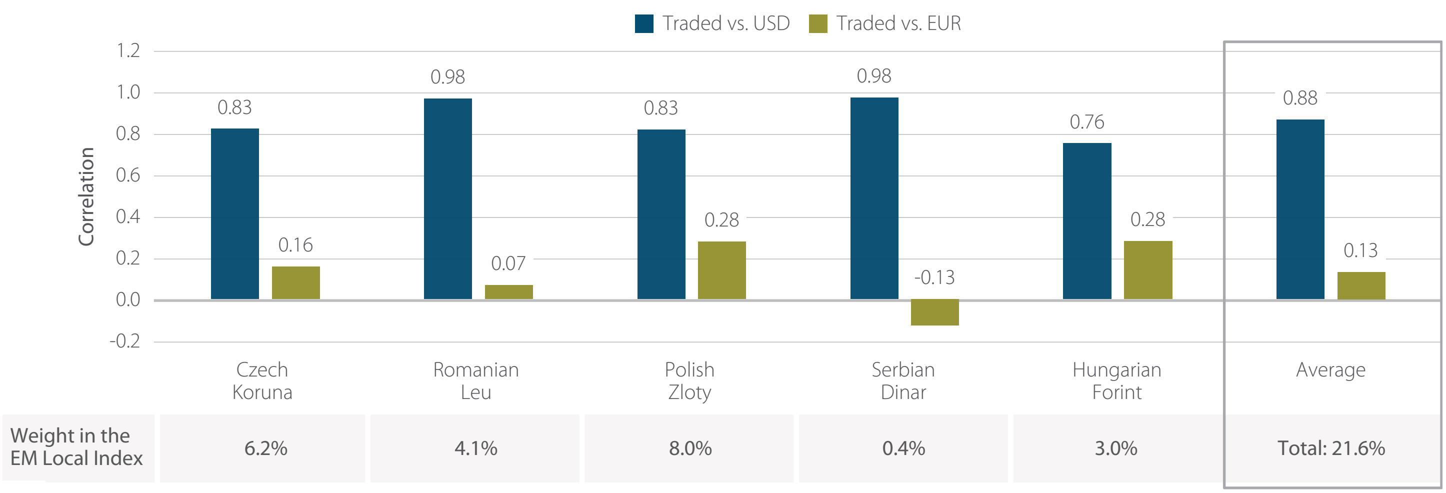
Exhibit 7: Sell-Side Research Coverage by Country



Source: Artisan Partners. Assessment of sell-side research country coverage varies by firm and is based on number of reports published on a country within the past two years, analyst assignments or forecasts available.

Exhibit 8: Euro Exposure in the J.P. Morgan GBI-EM Global Diversified Index

Historical Correlation to Euro

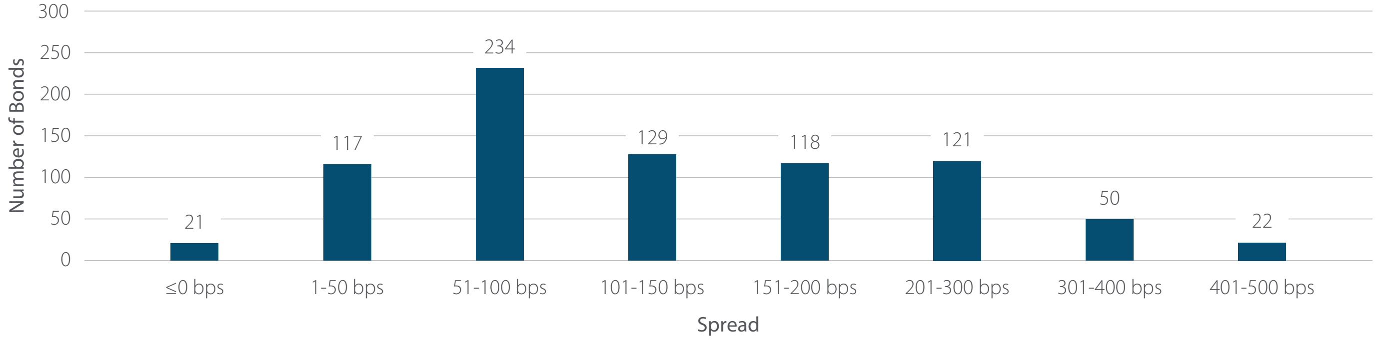


STANDARD DEVIATION	
USD/CZK	0.61%
USD/RON	0.47%
USD/PLN	0.69%
USD/RSD	0.45%
USD/HUF	0.80%
AVERAGE	**0.61%**

STANDARD DEVIATION	
EUR/CZK	0.34%
EUR/RON	0.10%
EUR/PLN	0.41%
EUR/RSD	0.07%
EUR/HUF	0.55%
AVERAGE	**0.29%**

Source: Artisan Partners/Bloomberg. As of 30 June 2024. Correlations and standard deviation shown based on monthly spot rates from 30 June 2019 to 30 June 2024 and are subject to change. **Past performance is not indicative of future results.**

Exhibit 9: Composition of J.P. Morgan EMBI Global Diversified Index by Spread



	≤0 bps	1-50 bps	51-100 bps	101-150 bps	151-200 bps	201-300 bps	301-400 bps	401-500 bps
Allocation in the EMBI Global Diversified Index	2.0%	11.3%	24.3%	12.9%	12.0%	12.8%	4.7%	2.5%

50.4%

Source: JPMorgan. As of 30 June 2024. Spread represents government spread, reflecting the difference in yield between the bond and a treasury bond of the same maturity.

debt with euros, rather than dollars. For dollar-based investors that means borrowing euros or shorting the euro. This strategy, which is outside the permissible scope of the benchmark, has helped isolate the idiosyncratic movements of each country, reduced the average correlation of the five currency pairs to 0.13 and decreased volatility by half in the trailing 3 years.

6. Low Spread Securities

Investors often allocate to EMD for the return potential and a diversified income stream. A bond's spread is a critical component of that return. Yet, as shown in Exhibit 9, half of the hard currency benchmark is allocated to bonds with spreads narrower than 150 basis points (bps). Spreads at those tight levels hardly compensate investors for the higher risk premium they typically require when investing in emerging markets. For many investors, the transaction costs of investing in these bonds can outweigh the potential return benefits. Moreover, 2.0% of the benchmark was allocated to bonds with spreads of 0bps or below, and 13.3% of the benchmark held bonds with spreads narrower than 50bps.

Investment opportunities with more attractive risk-adjusted return profiles exist in the EMD space, but investors must look beyond the benchmarks to identify these bonds.

7. Defaulted Countries Remain in the Benchmark

EM sovereign debt benchmarks permit defaulted bonds to remain in the benchmark, presenting a unique quirk in the methodology. Occasionally, there are opportunities within defaulted or distressed countries, but most of the time these are non-performing bonds that sit in the benchmark, do not pay coupons and weigh on performance. Defaulted countries and their current weights in the hard currency benchmark are shown in Exhibit 10.

Defaulted bonds have baseless characteristics that skew the benchmark's characteristics. In comparison, other fixed income benchmarks, such as corporate EM and non-EM benchmarks, remove defaulted securities at each rebalancing period.

Exhibit 10: Weights of Defaulted Countries in the J.P. Morgan EMBI Global Diversified Index

DEFAULTED COUNTRY	WEIGHT IN INDEX (%)
Ghana	0.94
Sri Lanka	0.93
Ukraine[1]	0.86
Venezuela	0.62
Zambia	0.27
Lebanon	0.14
Ethiopia	0.10
TOTAL	**3.86**

Source: JPMorgan. As of 30 June 2024. [1]Ukraine has not defaulted but is distressed.

The Unconstrained Advantage

Investors who have approached EMD through the lens of a benchmark have had unpleasant experiences marked by disappointing performance and stomach-churning volatility. Yet, investing in EMD does not have to be so unpleasant.

Our benchmark-agnostic, bottom-up research process helps us recognize bright spots and investment opportunities even in the asset class's most challenging times. With an embedded trading team, we identify and invest in countries outside the scope of the benchmarks, creating the broadest investment universe possible. We remain aware of the embedded risks in the asset class and seek to hedge developed market risks while focusing on less efficient segments of the market where we perceive there are greater opportunities for alpha generation. Through this differentiated approach, we thoughtfully manage around the seven deadly sins of the EMD benchmarks, with the aim of helping reduce volatility and improve outcomes.

For more information: Visit www.artisanpartners.com

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The J.P. Morgan (JPM) EMB Hard Currency/Local Currency 50-50 is an unmanaged, blended index consisting of 50% JPM Government Bond Index-Emerging Market Global Diversified (GBIEMGD), an index of local-currency bonds with maturities of more than one year issued by EM governments; 25% JPM Emerging Markets Bond Index-Global Diversified (EMBIGD), an index of USD-denominated bonds with maturities of more than one year issued by EM governments; and 25% JPM Corporate Emerging Market Bond Index-Broad Diversified (CEMBIBD), an index of USD-denominated EM corporate bonds. The index(es) are unmanaged; include net reinvested dividends; do not reflect fees or expenses; and are not available for direct investment.

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