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Introducing the iBoxx USD Emerging Markets Broad Index Series

Contributor

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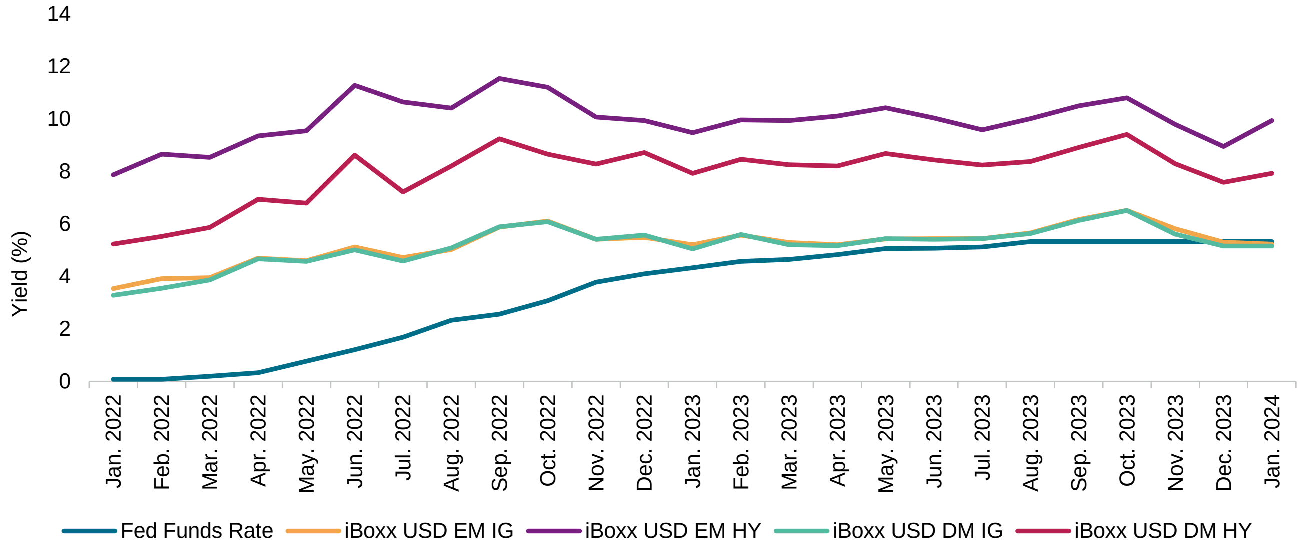
Introduction

Emerging market bonds are coming back into focus in 2024 due to their lower duration, higher yield and prospects of diversification when compared with those of developed markets. The iBoxx USD Emerging Markets Broad Index Series was launched on Jan. 31, 2024. The index series is designed to offer a comprehensive view of the USD emerging market bond universe while upholding minimum standards of investability and liquidity. The iBoxx USD Emerging Markets Index Series is powered by S&P Global Market Intelligence's bond pricing, an independent multisource pricing provider used by market participants to value portfolios.

Please note that throughout this paper we use the following abbreviations.

- iBoxx USD Emerging Markets Broad Sovereign & Sub-Sovereign Investment Grade: iBoxx USD EM IG
- iBoxx USD Emerging Markets Broad Sovereign & Sub-Sovereign High Yield: iBoxx USD EM HY
- iBoxx USD Liquid Investment Grade: iBoxx USD DM IG
- iBoxx USD Liquid High Yield: iBoxx USD DM HY

Exhibit 1: The Emerging Market Debt Landscape – U.S. Federal Funds Rate vs. iBoxx Indices



Source: S&P Dow Jones Indices LLC and FRED Economic Data, St. Louis Fed. Data from Jan. 31, 2022, to Dec. 31, 2023. The iBoxx USD Emerging Markets Sovereign & Sub-Sovereign Investment Grade, iBoxx USD Emerging Markets Sovereign & Sub-Sovereign High Yield were launched Jan. 31, 2024. All data prior to index launch date is back-tested hypothetical data. Past performance is no guarantee of future results. Chart is provided for illustrative purposes and reflects hypothetical historical performance. Please see the Performance Disclosure at the end of this document for more information regarding the inherent limitations associated with back-tested performance.

As rate hikes by the U.S. Federal Reserve appear to be ending, emerging economies are shifting back into focus and market attention is drawn to the need for better strategies that track the distinctiveness of these economies: higher inflation, higher long-term economic growth potential, the potential for political turmoil and a shifting regional focus. Hard currency emerging market debt could provide higher yields and shorter duration than developed market bonds.

Starting in early 2022, the U.S. Federal Reserve embarked on a journey of raising interest rates to curb inflation. In January 2022, the rate was 0.08%. Over the course of 2022 and 2023, 11 rate increases were executed, reaching a high of 5.33% in August 2023.[1] During this same period, emerging market USD IG bonds had yields almost identical to developed market USD IG bonds—an average yield of 5.23% for bonds in the iBoxx USD EM IG versus 5.16% for bonds in the iBoxx USD DM IG. It is interesting to note that in the last five months of 2023, bond yields for the iBoxx USD DM IG and iBoxx USD EM IG remained close to the Federal Funds rate of 5.33%. In comparison, there were consistently larger gaps between the iBoxx USD EM HY and iBoxx USD DM HY, which averaged 9.95% and 7.92%, respectively, over this two-year period. The average bond yield in the iBoxx USD EM IG proved to be slightly more attractive, outperforming that of the iBoxx USD DM IG by 8 bps on average.

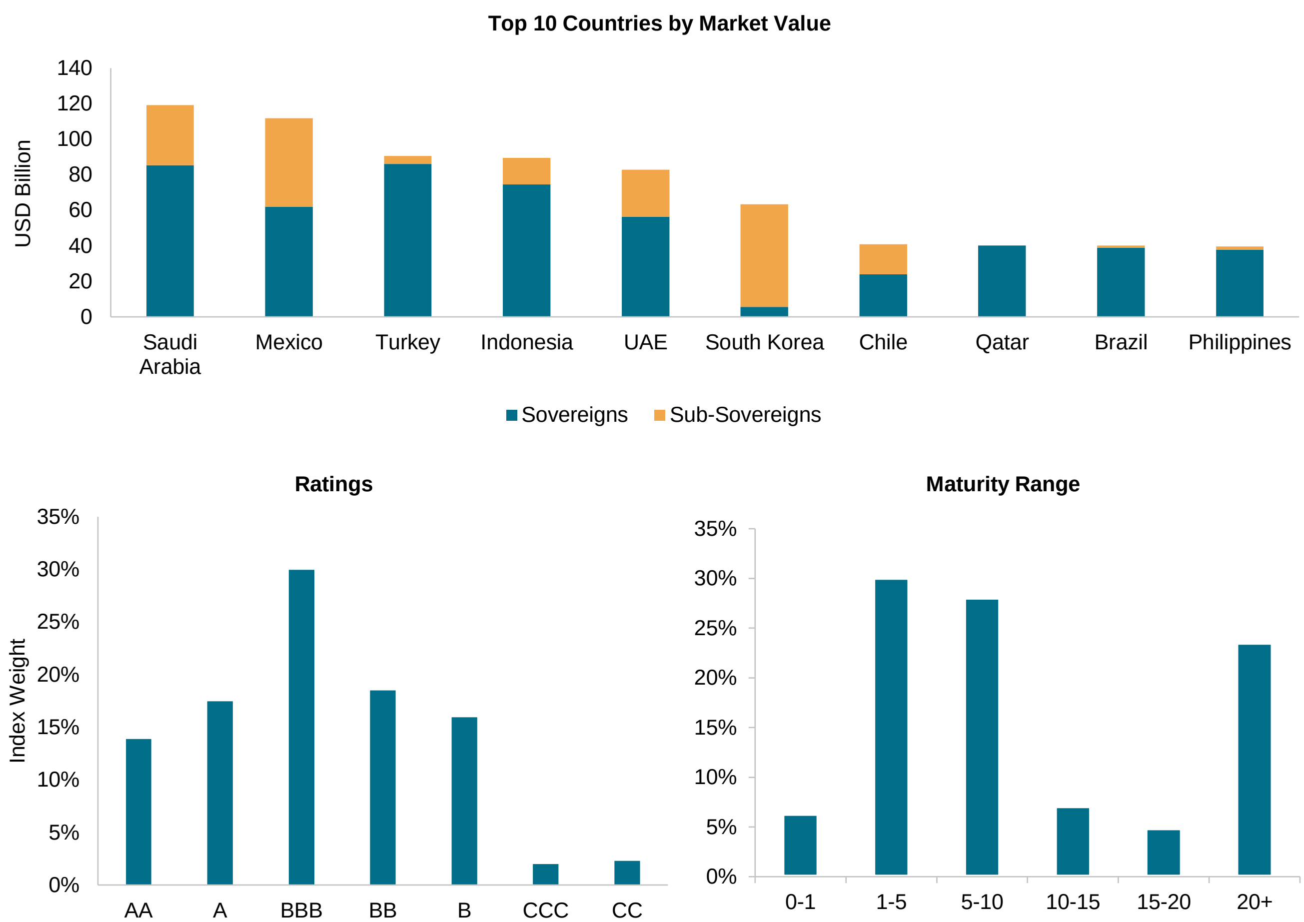
[1] FRED Economic Data, St. Louis Fed. Data accessed on Jan. 8, 2024.

Introducing the iBoxx USD Emerging Markets Broad Sovereigns & Sub-Sovereigns Index

To reflect the development of the sovereign and quasi-sovereign portion of the emerging market fixed income hard currency bond market, we created the iBoxx USD Emerging Markets Broad Sovereigns & Sub-Sovereigns Index. Bonds must be denominated in U.S. dollars, trade in international markets and have a minimum notional amount of USD 250 million. No credit rating is required, but issuers in default are removed from the index. The index includes fixed coupon and zero-coupon bonds, callable and puttable bonds, and step-up and amortizing bonds, while floating-rate bonds are excluded. The index adheres to U.S. and European sanctions and excludes issuers and countries that are subject to financial sanctions.

A unique feature of the index is that there is no minimum time to maturity rule; all bonds are allowed to mature in the index, and the corresponding cash will be reinvested into the index at the next monthly rebalancing date.

Exhibit 2: Top 10 Countries, Ratings and Maturity Range



Source: S&P Dow Jones Indices LLC. Data as of Dec. 31, 2023. Charts are provided for illustrative purposes.

As of Dec. 31, 2023, the iBoxx USD Emerging Markets Broad Sovereigns & Sub-Sovereigns Index had a total market value of USD 1.2 trillion and contained 960 bonds. This constituted about half of the market value of the iBoxx USD Emerging Markets Broad Overall Index universe, with the remainder being corporate bonds. The index includes 64 countries, with the top 10 accounting for 59.5% of the index weight, and 61.3% or USD 739 billion of the index market value is rated investment grade. High yield and investment grade subindices along with maturity, country and regional subindices are available.

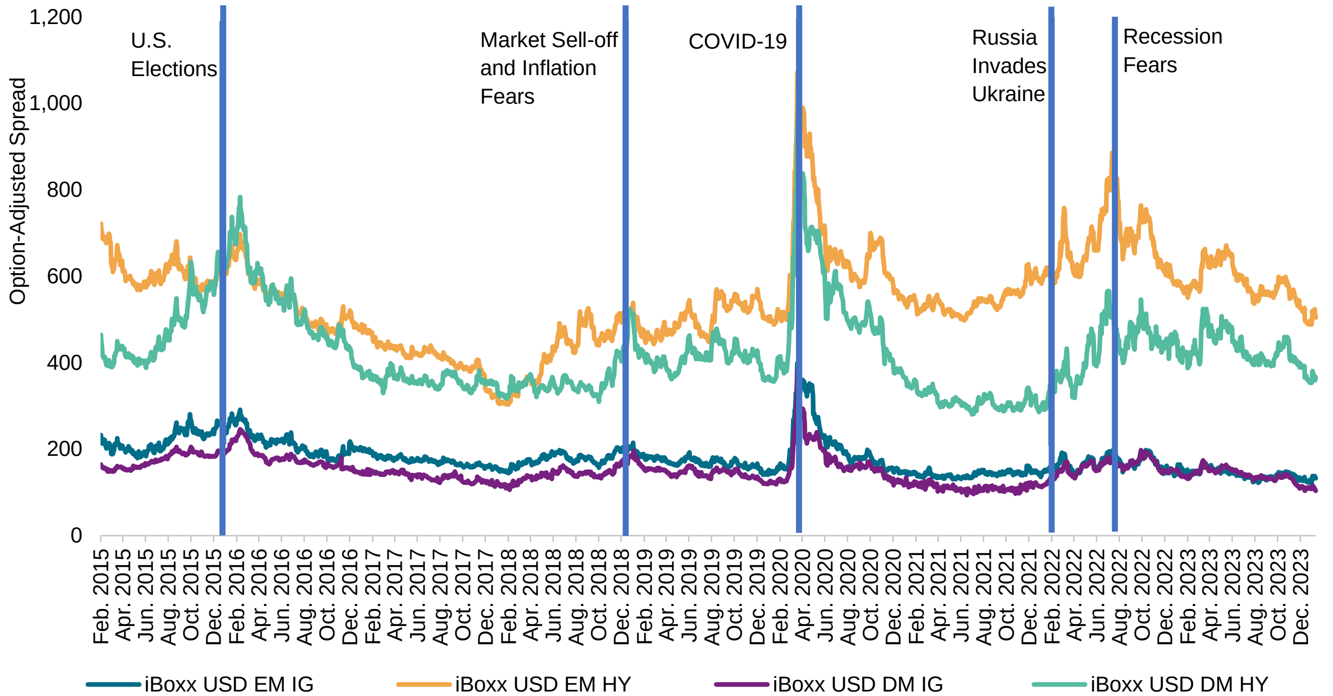
Sovereign bonds made up 77.8% of the index as of Dec. 31, 2023, while the rest of the constituents were issued by sub-sovereign entities. Of the bonds in the index, 64% had a time to maturity below 10 years. The largest maturity segment was the 1- to 5-year maturity range, covering 30.1% of the bonds, followed closely by the 5- to 10-year bucket at 28%.

Long-Term Performance

Emerging market liquidity conditions are directly affected by USD interest rates. The U.S. Federal Reserve is a significant contributor to USD interest rates, especially those in the <2 year maturity segment. According to a S&P Global Ratings report, markets are pricing in an average rate cut by emerging market central banks of 125 bps (excluding Argentina) by the end of 2024. For Latin America, as a result of the region's more aggressive rate increases to combat inflation during 2022-2023, larger rate cuts are expected versus emerging economies in Asia. S&P Global Ratings forecasts that overall GDP growth (excluding China) for emerging markets will stand at 3.8% compared with the 10-year pre-pandemic average of 4.7%. Regionally, Latin America is expected to be led by Brazil and Mexico, while Asia's growth should focus on countries in its southern and southeastern regions: India, the Philippines, Vietnam and Indonesia.

To further assess emerging market hard currency sovereign & sub-sovereign bond performance, we compared option-adjusted spread (OAS), yield and duration data available from the indices' back-tested history.

Exhibit 4: Option-Adjusted Spreads

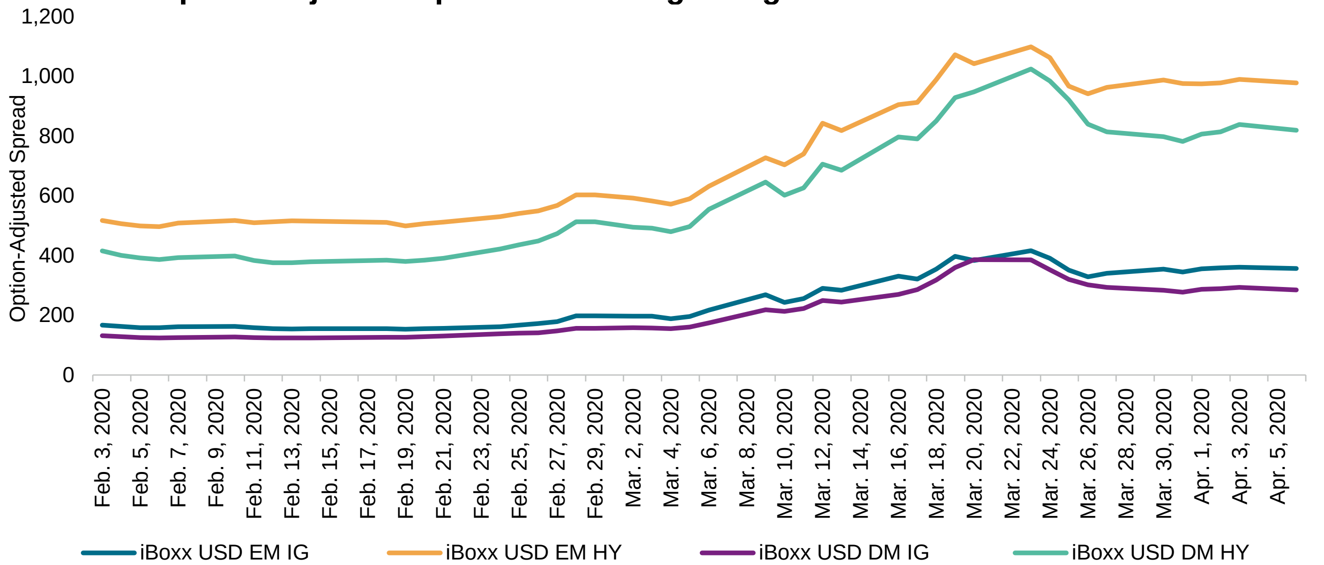


Source: S&P Dow Jones Indices LLC. Data from Feb. 2, 2015, to Jan. 12, 2024. The iBoxx USD Emerging Markets Sovereign & Sub-Sovereign Investment Grade, iBoxx USD Emerging Markets Sovereign & Sub-Sovereign High Yield, iBoxx were launched Jan. 31, 2024. All data prior to index launch date is back-tested hypothetical data. Past performance is no guarantee of future results. Chart is provided for illustrative purposes and reflects hypothetical historical performance. Please see the Performance Disclosure at the end of this document for more information regarding the inherent limitations associated with back-tested performance.

OAS is a measure of a bond's performance that considers the yield spread added to the benchmark yield curve to capture the market price. For bonds with embedded options, OAS shows the impact on a bond's yield. Assuming the benchmark as the risk-free rate, the OAS shows the spread that can be earned on the security versus the risk-free option. Exhibit 4 shows OAS variability during times of market volatility, such as the 2016 U.S. presidential election, market sell-offs due to inflation fears in 2018 and the bear market beginning in 2022. As seen in Exhibit 5, the COVID-19 pandemic exacerbated the OAS for all issuers in the iBoxx USD EM IG and iBoxx USD EM HY, as well as the developed market liquid indices (iBoxx USD DM IG and iBoxx USD DM HY).

At the end of February 2020, the OAS for the iBoxx USD EM IG and the iBoxx USD EM HY was 198.4 and 603.3, while that for the iBoxx USD DM IG and iBoxx USD DM HY was 156.3 and 513.0, respectively. By March 23, 2020, the hard currency bonds analyzed doubled their spreads, reaching a peak of 1,099 for the iBoxx USD EM HY and 1,024 for the iBoxx USD DM HY. Of note, the iBoxx USD EM IG and iBoxx USD DM IG OAS tracked closely together despite measuring different countries with distinct economic conditions.

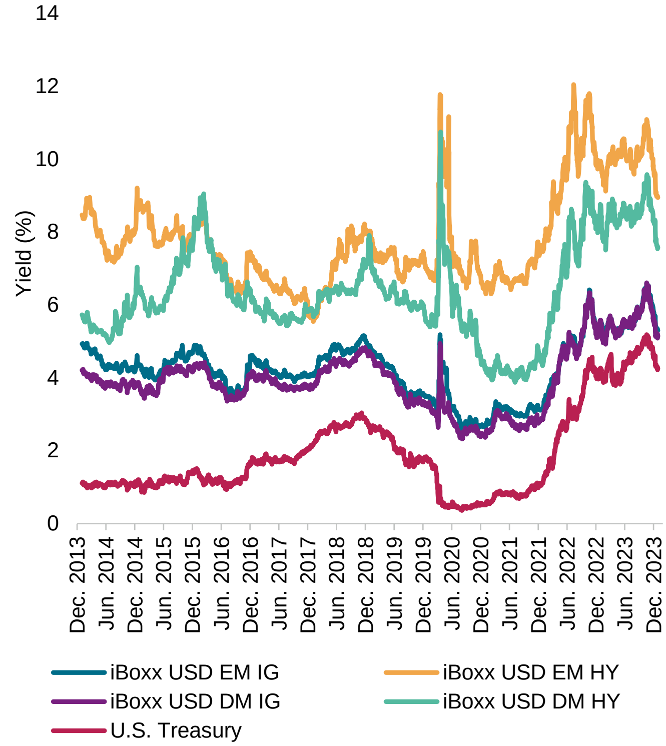
Exhibit 5: Option-Adjusted Spread at the Beginning of COVID-19



Source: S&P Dow Jones Indices LLC. Data from Feb. 3, 2020, to April 6, 2020. The iBoxx USD Emerging Markets Sovereign & Sub-Sovereign Investment Grade, iBoxx USD Emerging Markets Sovereign & Sub-Sovereign High Yield were launched Jan. 31, 2024. All data prior to index launch date is back-tested hypothetical data. Past performance is no guarantee of future results. Chart is provided for illustrative purposes and reflects hypothetical historical performance. Please see the Performance Disclosure at the end of this document for more information regarding the inherent limitations associated with back-tested performance.

Next, we explore the duration and yield of the iBoxx USD EM IG and iBoxx USD EM HY versus the iBoxx USD DM IG and iBoxx USD DM HY. Exhibit 6 shows that over the period studied, investment grade emerging market debt offered a shorter duration when compared with investment grade developed market debt. For high yield bonds, emerging market debt offered a longer duration than developed markets. Bonds in the iBoxx USD EM IG and iBoxx USD DM IG had similar yields over the period studied. The iBoxx USD EM IG had a higher yield per unit of duration risk compared with the iBoxx USD DM IG. Debt in the iBoxx USD EM HY was largely composed of EM sovereign bonds and therefore its duration was significantly longer than that of the iBoxx USD DM HY, which is solely composed of corporate debt. The iBoxx USD EM HY’s duration was still much shorter than that of the iBoxx USD EM IG. The bond yields across all four indices versus U.S. Treasury bonds over the period studied show that markets moved in tandem, with the exception of 2020 when there was a “flight to safety.” The correlation of the iBoxx USD EM IG with the iBoxx USD DM IG over the period observed was 99.17%, while the correlation with U.S. Treasuries stood at 94.76%.

Exhibit 6: Duration and Yield



Source: S&P Dow Jones Indices LLC. Data from Jan. 2, 2013, to Jan. 12, 2024. The iBoxx USD Emerging Markets Sovereign & Sub-Sovereign Investment Grade, iBoxx USD Emerging Markets Sovereign & Sub-Sovereign High Yield were launched Jan. 31, 2024. All data prior to index launch date is back-tested hypothetical data. U.S. Treasury is measured by the S&P U.S. Treasury Bond Index. Past performance is no guarantee of future results. Charts are provided for illustrative purposes and reflect hypothetical historical performance. Please see the Performance Disclosure at the end of this document for more information regarding the inherent limitations associated with back-tested performance.

Finally, hard currency emerging market bonds have historically been less volatile than local currency debt due to less exposure to local interest rate risk. As an example, we looked at 3 of the top 10 countries in the iBoxx USD Emerging Markets Sovereign & Sub-Sovereign Index located in Latin America and calculated the 10-year standard deviation of the index's total return (i.e., the realized volatility). The difference in standard deviation is 2.9X for Brazil and 1.5X for Mexico.

Exhibit 7: Realized Volatility

Index	10-Year Realized Volatility
iBoxx USD Emerging Markets Broad Brazil Sovereigns	18.80
iBoxx GEMX Brazil (BRL)	55.23
iBoxx USD Emerging Markets Broad Chile Sovereigns	12.93
iBoxx GEMX Chile (CLP)	16.19
iBoxx USD Emerging Markets Broad Mexico Sovereigns	15.27
iBoxx GEMX Mexico (MXN)	23.00

Source: S&P Dow Jones Indices LLC. Data from December 2013 to December 2023. The iBoxx USD Emerging Markets Indices were launched Jan. 31, 2024. All data prior to index launch date is back-tested hypothetical data. Table is provided for illustrative purposes and reflects hypothetical historical performance. Please see the Performance Disclosure at the end of this document for more information regarding the inherent limitations associated with back-tested performance.

Conclusion

Emerging markets have historically been a tool for portfolio diversification, due to their shorter durations and higher yield. The comprehensive methodology of the iBoxx USD Emerging Markets Broad Sovereigns & Sub-Sovereigns Index provides a detailed dataset to understand and analyze the opportunities and risks in emerging market hard currency debt.

Performance Disclosure/Back-Tested Data

The iBoxx USD Emerging Markets Sovereign & Sub-Sovereign Investment Grade and iBoxx USD Emerging Markets Sovereign & Sub-Sovereign High Yield were launched Jan. 31, 2024. All information presented prior to an index's Launch Date is hypothetical (back-tested), not actual performance, and is based on the index methodology in effect on the index launch date. However, when creating back-tested history for periods of market anomalies or other periods that do not reflect the general current market environment, index methodology rules may be relaxed to capture a large enough universe of securities to simulate the target market the index is designed to measure or strategy the index is designed to capture. For example, market capitalization and liquidity thresholds may be reduced. In addition, forks have not been factored into the back-test data with respect to the S&P Cryptocurrency Indices. For the S&P Cryptocurrency Top 5 & 10 Equal Weight Indices, the custody element of the methodology was not considered; the back-test history is based on the index constituents that meet the custody element as of the Launch Date. Complete index methodology details are available at www.spglobal.com/spdji. Back-tested performance reflects application of an index methodology and selection of index constituents with the benefit of hindsight and knowledge of factors that may have positively affected its performance, cannot account for all financial risk that may affect results and may be considered to reflect survivor/look ahead bias. Actual returns may differ significantly from, and be lower than, back-tested returns. Past performance is not an indication or guarantee of future results.

Please refer to the methodology for the Index for more details about the index, including the manner in which it is rebalanced, the timing of such rebalancing, criteria for additions and deletions, as well as all index calculations. Back-tested performance is for use with institutions only; not for use with retail investors.

S&P Dow Jones Indices defines various dates to assist our clients in providing transparency. The First Value Date is the first day for which there is a calculated value (either live or back-tested) for a given index. The Base Date is the date at which the index is set to a fixed value for calculation purposes. The Launch Date designates the date when the values of an index are first considered live: index values provided for any date or time period prior to the index's Launch Date are considered back-tested. S&P Dow Jones Indices defines the Launch Date as the date by which the values of an index are known to have been released to the public, for example via the company's public website or its data feed to external parties. For Dow Jones-branded indices introduced prior to May 31, 2013, the Launch Date (which prior to May 31, 2013, was termed "Date of introduction") is set at a date upon which no further changes were permitted to be made to the index methodology, but that may have been prior to the Index's public release date.

Typically, when S&P DJI creates back-tested index data, S&P DJI uses actual historical constituent-level data (e.g., historical price, market capitalization, and corporate action data) in its calculations. As ESG investing is still in early stages of development, certain datapoints used to calculate S&P DJI's ESG indices may not be available for the entire desired period of back-tested history. The same data availability issue could be true for other indices as well. In cases when actual data is not available for all relevant historical periods, S&P DJI may employ a process of using "Backward Data Assumption" (or pulling back) of ESG data for the calculation of back-tested historical performance. "Backward Data Assumption" is a process that applies the earliest actual live data point available for an index constituent company to all prior historical instances in the index performance. For example, Backward Data Assumption inherently assumes that companies currently not involved in a specific business activity (also known as "product involvement") were never involved historically and similarly also assumes that companies currently involved in a specific business activity were involved historically too. The Backward Data Assumption allows the hypothetical back-test to be extended over more historical years than would be feasible using only actual data. For more information on "Backward Data Assumption" please refer to the FAQ. The methodology and factsheets of any index that employs backward assumption in the back-tested history will explicitly state so. The methodology will include an Appendix with a table setting forth the specific data points and relevant time period for which backward projected data was used.

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