The iBoxx USD Liquid Emerging Markets Sovereigns & Sub-Sovereigns:

A New Tool for the Emerging Market Bond Ecosystem

Contributors

Catalina Zota
Associate Director
Fixed Income Product Management
elena.zota@spglobal.com

Nicholas Godec, CFA, CAIA, CIPM
Senior Director
Head of Fixed Income Tradables & Private Markets
nicholas.godec@spglobal.com

Executive Summary

The iBoxx USD Liquid Emerging Markets Sovereigns & Sub-Sovereigns index tracks the performance of U.S. dollar-denominated bonds from sovereign and sub-sovereign issuers in emerging markets. The index provides a broad measure of emerging market bonds while adhering to stringent liquidity criteria. The index could serve as a basis for tradable products such as futures, total return swaps (TRS) and exchange-traded funds (ETFs).

Debt issued by sovereign and sub-sovereign issuers with a notional amount of at least USD 1 billion and at least one year to maturity from rebalance date are eligible for entry. Similarly to the benchmark, the index uses the IHS Markit Global Economic Development Classification Methodology to catalogue a country as emerging or developed. Except for the Gulf Cooperation Council (GCC) members, regions with a Global National Income (GNI) per capita higher than two times the World Bank GNI high income cut-off during the past five years are excluded. The index uses a novel country capping methodology, reviewed annually in December. The capping is based on two variables: 1) the average country weight, defined as one divided by the number of countries in the index; and

2) weight-based capping defined as three times the average country weight, rounded to the nearest 2.5%. Exhibit 1 illustrates how the capping methodology was applied starting Dec. 31, 2023. The 7.5% capping became effective in January 2024.

Exhibit 1: Capping Methodology

Variable	Formula	Example Calculation
Average Country Weight	1/number of countries in the index	41 countries in index 1/41 = 2.43%
Weight-Based Capping	3*average country weight	3*2.43% = 7.32%, rounded to the nearest 2.5% = 7.5%

Source: S&P Dow Jones Indices LLC. Data as of May 2024. Table is provided for illustrative purposes.

The index uses bid-side pricing; however, new securities are included at the ask price. Coupons are reinvested at the end of the month and the index is rebalanced monthly, on the last business day. The index excludes floating rate bonds.

The oldest benchmark in the market is J. P. Morgan's Emerging Markets Bond Index Global Core (EMBIG CORE), which is based on J. P. Morgan's EMBI Global. The EMBIG CORE tracks liquid, U.S. dollar-denominated, emerging market fixed and floating rate bonds issued by sovereign and quasi-sovereign entities.[1] The main differences between the iBoxx USD Liquid Emerging Markets Sovereigns and Sub-Sovereigns and the J. P. Morgan EMBI Global are outlined in Exhibit 2.

Exhibit 2: Liquid Indices versus Their Benchmarks

Criteria	EMBIG CORE	EMBI Global	iBoxx USD Liquid Emerging Markets Sovereigns & Sub-Sovereigns	iBoxx USD Emerging Markets Sovereigns & Sub-Sovereigns
Inception Date/ Launch Date	December 1997/ December 2007	December 1997/ July 1999	December 2013/ March 2024	December 2013/ January 2024
Pricing Source	PricingDirect Inc.		S&P Global Market Intelligence	
Coupon Reinvestment	Immediately reinvested in the index		Monthly, at rebalance	
Bond Types	All fixed, floaters, amortizing		Fixed, zero, callable, puttable, amortizing, perpetuals, fixed to float; No floaters	
Country Eligibility	GNI per capita must be below the Index Income Ceiling for three consecutive years or index purchasing power parity ratio must be below emerging market threshold for three consecutive years		IHS Markit Global Economic Development Classification	
Minimum Face Amount	USD 1 billion	USD 500 million	USD 1 billion	USD 250 million
Maturity at Inclusion	At least 2.5 years		At least 1.5 years	
Remaining Time to Maturity	1 year	6 months	1 year	0 (bonds mature in the index)
Capping/Diversification	Diversified – Capped at two times the average notional amount per country	-	Diversified – Depending on the number of countries in the index	-

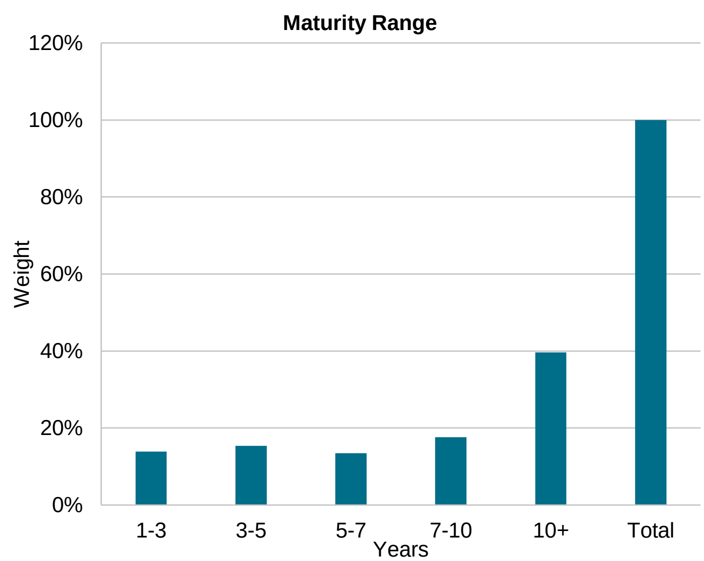
Source: S&P Dow Jones Indices LLC. Data as of May 2024. Table is provided for illustrative purposes.

One notable difference is the coupon reinvestment: the iBoxx indices reinvest coupons at the month-end rebalance, while the J.P. Morgan indices reinvest cash immediately in the index. For country eligibility, the indices use different classification systems. J.P. Morgan's weighting methodology applies an index country average (ICA), defined as the total sum of the country face amount divided by the number of countries in the index. The maximum market capitalization threshold is calculated as two times the ICA.[1] Countries with debt values below the ICA have the entire amount eligible for inclusion. Countries with debt values between the ICA and two times the ICA are linearly interpolated to determine the amount eligible for inclusion. Additionally, maturity at inclusion of new bonds is at least 1.5 years for the iBoxx USD Liquid Emerging Markets Sovereigns & Sub-Sovereigns and 2.5 years for J. P. Morgan's EMBIG CORE. The lower maturity at inclusion of the iBoxx USD Liquid Emerging Markets Sovereigns & Sub-Sovereigns index expands the bond selection universe. Pricing providers are different as well. iBoxx uses S&P Global Market Intelligence's Evaluated Bond Pricing Service, while JP Morgan uses PricingDirect Inc.

Composition-wise, the iBoxx USD Liquid Emerging Markets Sovereigns & Sub-Sovereigns had 536 bonds as of the March 31, 2024, rebalance. Investment grade securities represented 61.33% of the index, while the rest of the 38.67% was high yield. The top four countries capped at 7.5% were Mexico, Indonesia, Turkey and Saudi Arabia. In terms of maturities, more than 39% of the index was concentrated in the 10+ year range. As of March 31, 2024, the index had a total market value of USD 842.61 billion, a yield of 6.57% and a duration of 7.23.

Exhibit 3: iBoxx USD Liquid Emerging Markets Sovereigns & Sub-Sovereigns Countries of Risk and Maturity Ranges

Top 10 Countries of Risk	Index Weight (%)
Mexico	7.50
Indonesia	7.50
Turkey	7.50
Saudi Arabia	7.50
UAE	7.13
Qatar	4.44
Brazil	4.25
Chile	4.12
Argentina	3.78
Colombia	3.76

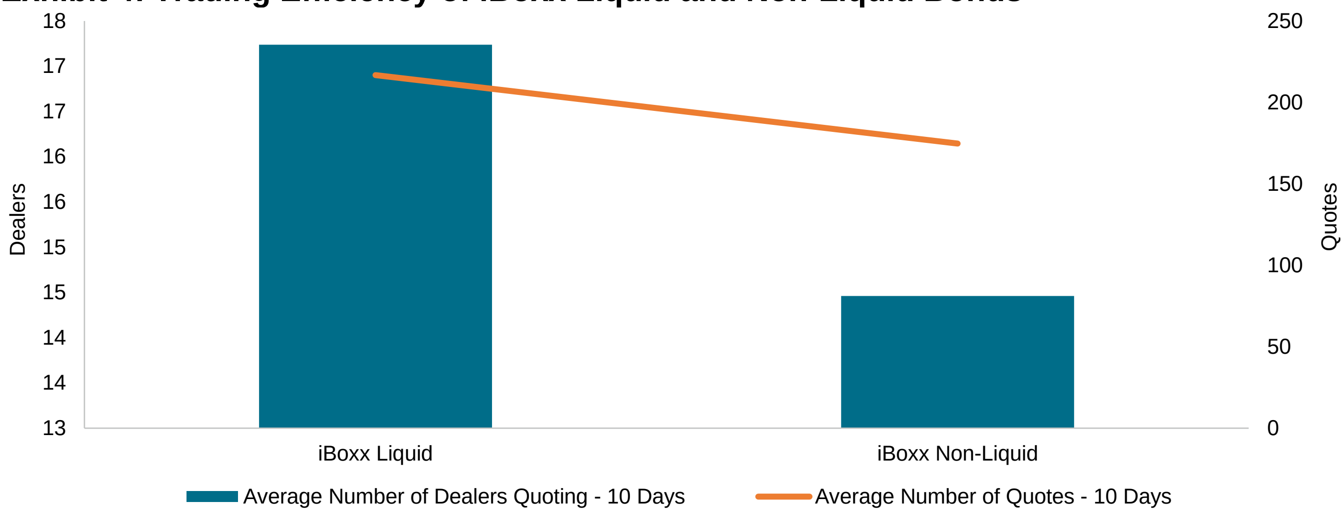


Source: S&P Dow Jones Indices LLC. Data as of May 2024. Chart and table are provided for illustrative purposes.

Liquidity Matters

The distinction between liquid and non-liquid bonds in the emerging market sphere becomes evident through dealer quotations and trading volumes. Liquid bonds tend to exhibit greater trading efficiency, which underscores the superior trade execution capabilities within the liquid bond universe. In Exhibit 4, we define iBoxx Non-Liquid as the securities that are in the benchmark index but not in the iBoxx USD Liquid Emerging Markets Sovereigns & Sub-Sovereigns index; we define iBoxx Liquid as the bonds in the liquid index. As stated in Exhibit 2, liquid bonds have a minimum par amount requirement of USD 1 billion per issue, while non-liquid bonds would have a minimum par amount of USD 250 million, but less than the USD 1 billion liquid bond threshold. We reviewed the average number of dealers quoting liquid versus non-liquid bonds for the prior 10 days, as of April 30, 2024, while also looking at the average number of total quotes sent. Liquid bonds had an average of three more dealers that support their liquidity (17.2 versus 14.5), and 42 additional runs per day (216.8 versus 174.8).

Exhibit 4: Trading Efficiency of iBoxx Liquid and Non-Liquid Bonds



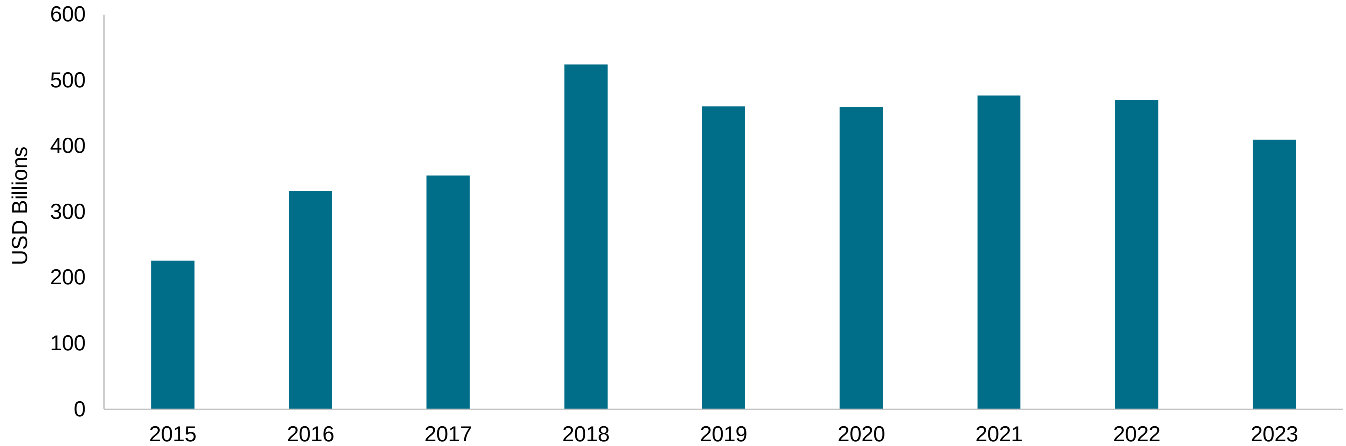
Source: S&P Dow Jones Indices LLC. Data as of April 30, 2024. Past performance is no guarantee of future results. Chart is provided for illustrative purposes.

Tradable Ecosystem

Liquid derivatives linked to the USD emerging market debt market include ETFs and swaps. As of May 13, 2024, there were 17 USD emerging market bond ETFs domiciled in North America with fund assets under management (AUM) greater than USD 100 million. All together, these funds had AUM of USD 29.5 billion.[2] However, ETFs are fully funded investment vehicles.

Swaps on the Markit CDX Emerging Markets Index are the predominant tool for trading external sovereign emerging market credit on an unfunded basis. In 2023, over USD 400 billion[3] traded on the index.

Exhibit 5: Markit CDX Emerging Markets Index – Trading Volumes



Source: DTCC, CDS Kinetics. Data as of May 13, 2024. Past performance is no guarantee of future results. Chart is provided for illustrative purposes.

The trading volume in the Markit CDX Emerging Markets Index and the AUM in emerging market ETFs underscore the burgeoning interest and participation in emerging market debt.

In developed market credit, various cash-based tradable index derivatives are available. In developed markets, in addition to liquid ETFs, standardized iBoxx Total Return Swap contracts traded over USD 130 billion in notional in 2023, along with corporate bond index futures. These contracts see billions in unfunded trading and are standardized so that multiple liquidity providers participate in making markets on standard terms, such that trading in and out across dealers is fully fungible. Today, standardized, liquid and multi-dealer cash-based index derivatives in the USD emerging market bond market only exist via fully funded ETFs. The demand for diversified trading avenues and instruments underpins the need for a more inclusive and accessible market infrastructure. The iBoxx USD Liquid Emerging Markets Sovereigns & Sub-Sovereigns could help bridge the gap.

The Investment Landscape of Emerging Market Debt

On Jan. 1, 1981, the term "emerging markets" was coined by an International Finance Corporation staff member, Antoine van Agtmael, while promoting a global listed equity fund for developing countries.[4] During the next 40 years, this term changed the market's opinion of developing economies and created a new asset class used to diversify portfolios.

One of the factors influencing emerging markets is the U.S. monetary policy. According to a paper by the Kansas City Fed,[5] tightening of U.S. monetary policy reduces capital flows to emerging markets by depreciating their exchange rates, which in turn impacts economic growth. Investors are more likely to invest in U.S. treasuries at a higher guaranteed rate than offshore in perceived riskier assets. As a response, emerging economies raised their own interest rates to combat inflation and reverse lax policies implemented during the COVID-19 pandemic. At the beginning of 2024, it was estimated that the Fed would cut interest rates at least three times; the story changed in the first four months of the year, with a pause on interest rates cuts until June due to a stubborn inflation rate of 3.5%, as measured by the Consumer Price Index. Another factor at play for a presumptive rate cut is the U.S. Bureau of Labor Statistics job report released every month. In April, the unemployment rate edged up to 3.9%,[6] with just 175,000 jobs added in the health care, social assistance and transportation sectors. Some emerging markets like Mexico and Brazil started their rate cut cycles while inflation continued to fluctuate monthly. In light of all these factors, investors considering hard currency bonds may find this index a useful resource.

Historically, emerging markets provided diversification benefits due to low correlations with other asset classes. Emerging markets hard currency bonds could offer yield and duration benefits as well.

A correlation analysis of the iBoxx USD Liquid Emerging Markets Sovereigns & Sub-Sovereigns index with various indices such as the S&P 500®, iBoxx $ Liquid High Yield, iBoxx $ Liquid Investment Grade and iBoxx USD Liquid Leveraged Loan Index was run for various time periods. On a five-year basis, the correlation with the S&P 500 was -3.60%, while the correlation with the iBoxx USD Liquid Leveraged Loan Index was -9.19%. The negative correlation shows that emerging market instruments could be a useful diversification tool when combined with equity or credit.

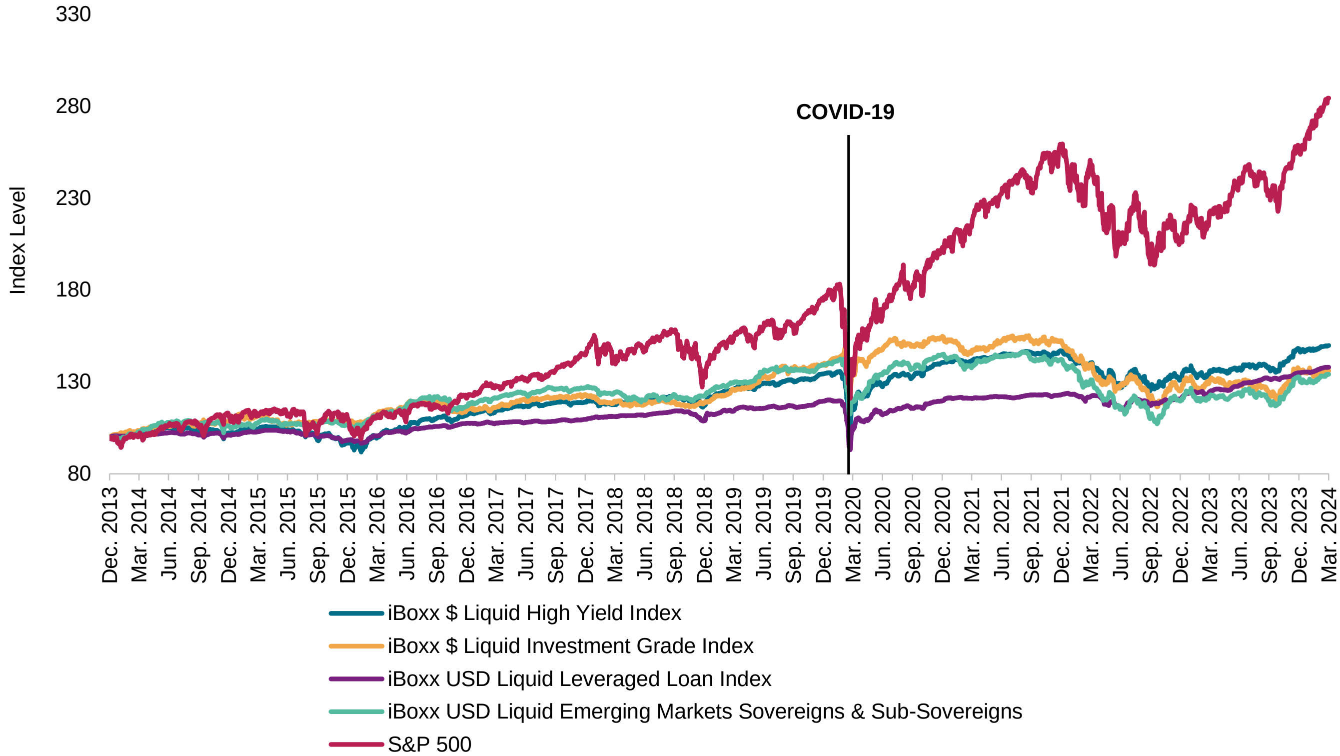
Exhibit 6: Correlation with iBoxx USD Liquid Emerging Markets Sovereigns & Sub-Sovereigns

Period	Correlation with iBoxx USD Liquid Emerging Markets Sovereigns & Sub-Sovereigns			
	iBoxx $ Liquid High Yield Index (%)	iBoxx $ Liquid Investment Grade Index (%)	iBoxx USD Liquid Leveraged Loan Index (%)	S&P 500 (%)
March 2013-March 2024	83.64	93.13	67.07	66.16
1-Year	93.85	91.48	70.47	89.55
3-Year	86.24	97.02	3.46	55.81
5-Year	46.98	88.78	-9.19	-3.60

Source: S&P Dow Jones Indices LLC. Data as of March 29, 2024. The iBoxx USD Liquid Emerging Markets Sovereigns & Sub-Sovereigns was launched Marh 15, 2024. All data prior to such date is back-tested hypothetical data. Past performance is no guarantee of future results. 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.

Analyzing total returns since 2013, we notice a large divergence after the start of the COVID-19 pandemic when comparing the S&P 500 with the iBoxx USD Liquid Emerging Markets Sovereigns & Sub-Sovereigns index and the other fixed income indices. Of note is the similarity of index total returns between the iBoxx $ Liquid Investment Grade Index and the iBoxx USD Liquid Emerging Markets Sovereigns & Sub-Sovereigns index as well as the high correlation of 88.78%. Over the past three years, there was over 97% correlation between the most liquid bonds in the corporate investment grade and liquid sovereign & sub-sovereign universes.

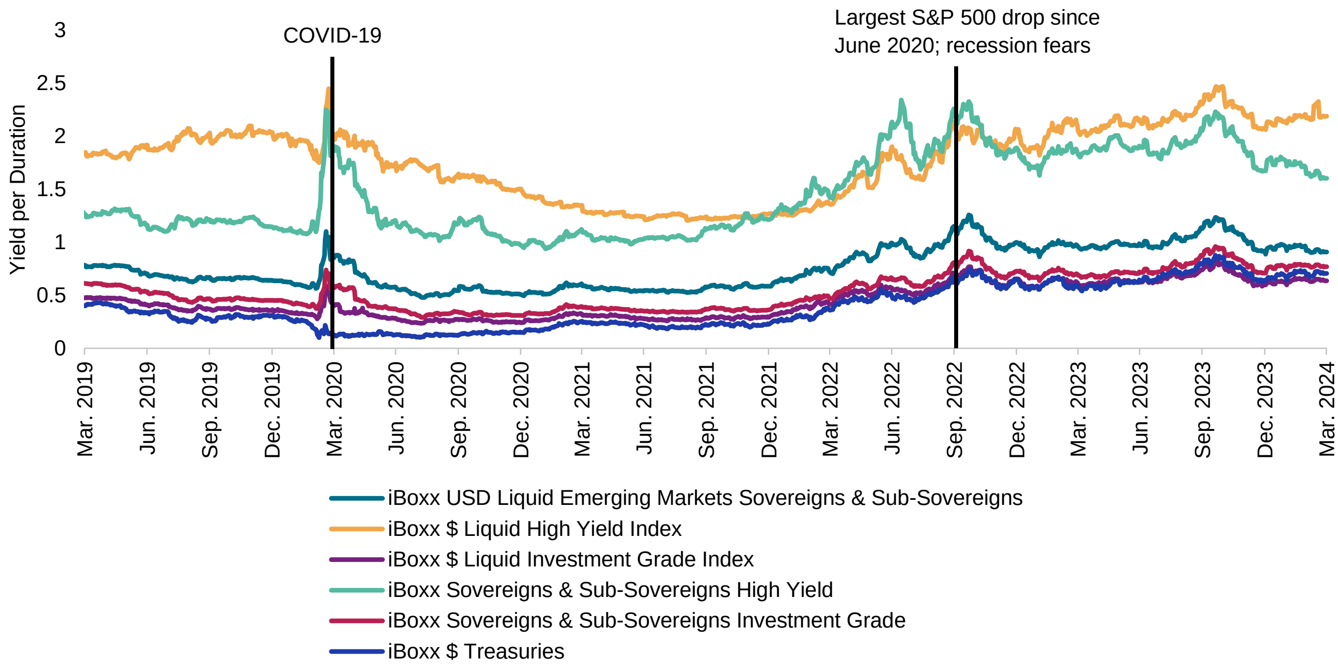
Exhibit 7: Index Performance



Source: S&P Dow Jones Indices LLC. Data as of March 2024. The iBoxx USD Liquid Emerging Markets Sovereigns & Sub-Sovereigns was launched Marh 15, 2024. All data prior to such date is back-tested hypothetical data. Index performance based on total return in USD. 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.

We also looked at a yield per duration unit comparison versus other fixed income indices since 2019. The yield per unit of duration risk for the iBoxx USD Liquid Emerging Markets Sovereigns & Sub-Sovereigns during the five-year period studied was above developed markets corporate investment grade bonds. The iBoxx $ Treasuries—a measure of the overall U.S. Treasury curve—and iBoxx $ Liquid Investment Grade Index had a similar yield per duration unit; starting in June 2023, U.S. Treasuries proved to have better yield and duration. Noticeable peaks in yield and duration were seen at the start of the COVID-19 pandemic and leading up to and including September 2022. On Sept. 13, 2022, the S&P 500 had the largest single-day drop since June 2020, possibly due to recession fears. This had a direct negative effect on bond prices, particularly in emerging markets, which experienced a sell-off while yields jumped to new highs. Corporate high yield, as measured by the iBoxx $ Liquid High Yield Index, and emerging markets sovereign and sub-sovereign high yield, as measured by the iBoxx Emerging Markets Sovereigns & Sub-Sovereigns High Yield index, had the highest yield per duration when compared to the other indices. High yield bonds tend to be more sensitive to market volatility.

Exhibit 8: Index Yield per Duration



Source: S&P Dow Jones Indices LLC. Data as of March 31, 2024. The iBoxx USD Liquid Emerging Markets Sovereigns & Sub-Sovereigns was launched Marh 15, 2024. All data prior to such 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.

Exhibit 9: Average Yield

Index	Average Yield per Unit of Duration (bps)
iBoxx USD Liquid Emerging Markets Sovereigns & Sub-Sovereigns	77
iBoxx $ Liquid High Yield Index	177
iBoxx $ Liquid Investment Grade Index	45
iBoxx Sovereigns & Sub-Sovereigns High Yield	146
iBoxx Sovereigns & Sub-Sovereigns Investment Grade	55
iBoxx $ Treasuries	39

Source: S&P Dow Jones Indices LLC. Data from March 31, 2019, to March 31, 2024. Average yield per unit of duration. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

On average, the liquid hard currency emerging market bonds had a yield per duration that was 32 bps higher than the liquid USD investment grade corporate bonds.

Independent Pricing

Independent pricing is critical to the credibility and acceptance of financial indices. The iBoxx USD Emerging Markets Index Series leverages the S&P Global Market Intelligence Pricing Team, ensuring accuracy and reliability in market valuations. The S&P Global Market Intelligence Pricing Team provides pricing for all iBoxx bond indices underlying tradable products like ETFs, standardized total return swaps and futures. A broad set of investors depend on their pricing to mark their books and assess their risk.

Conclusion

The iBoxx USD Liquid Emerging Markets Sovereigns & Sub-Sovereigns index provides an innovative approach to define the market while ensuring replicability. This new liquid index could serve to refine investors' toolkits for accessing emerging market bonds. The iBoxx USD Emerging Markets Sovereigns & Sub-Sovereigns Index looks to help evolve market standards, offering a sophisticated tool that encapsulates the complexities and opportunities within emerging markets.

References:

1. J.P. Morgan Emerging Markets Bond Index Global Core (jpmorgan.com) https://www.jpmorgan.com/content/dam/jpm/cib/complex/content/markets/composition-docs/pdf-22.pdf
2. FactSet Company/Security Analysis Tool
3. CDS Kinetics Service | Depository Trust & Clearing Corporation Liquidity & Benchmark Analytics Consulting, as of Dec. 31, 2023
4. International Finance Corporation – World Bank https://timeline.worldbank.org/en/timeline/eventdetail/2091
5. Kansas City Fed https://www.kansascityfed.org/Economic%20Review/documents/9847/EconomicReviewV108N4MatschkeVonEndeBeckerSattiraju.pdf
6. BLS Job Report https://www.bls.gov/news.release/empsit.nr0.htm

Performance Disclosure/Back-Tested Data

The iBoxx USD Liquid Emerging Markets Sovereigns & Sub-Sovereigns was launched Marh 15, 2024. All information presented prior to an index's Launch Date is hypothetical (back-tested), not actual performance. The back-test calculations are based on the same methodology that was 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. Complete index methodology details are available at www.spglobal.com/spdji. Past performance of the Index is not an indication of future results. 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.

Index returns shown do not represent the results of actual trading of investable assets/securities. S&P Dow Jones Indices maintains the index and calculates the index levels and performance shown or discussed but does not manage actual assets. Index returns do not reflect payment of any sales charges or fees an investor may pay to purchase the securities underlying the Index or investment funds that are intended to track the performance of the Index. The imposition of these fees and charges would cause actual and back-tested performance of the securities/fund to be lower than the Index performance shown. As a simple example, if an index returned 10% on a US $100,000 investment for a 12-month period (or US $10,000) and an actual asset-based fee of 1.5% was imposed at the end of the period on the investment plus accrued interest (or US $1,650), the net return would be 8.35% (or US $8,350) for the year. Over a three-year period, an annual 1.5% fee taken at year end with an assumed 10% return per year would result in a cumulative gross return of 33.10%, a total fee of US $5,375, and a cumulative net return of 27.2% (or US $27,200).

General Disclaimer

 This document does not constitute an offer of services in jurisdictions where S&P Dow Jones Indices LLC, S&P Global, Dow Jones or their respective affiliates (collectively "S&P Dow Jones Indices") do not have the necessary licenses. Except for certain custom index calculation services, all information provided by S&P Dow Jones Indices is impersonal and not tailored to the needs of any person, entity or group of persons. S&P Dow Jones Indices receives compensation in connection with licensing its indices to third parties and providing custom calculation services. Past performance of an index is not an indication or guarantee of future results.

It is not possible to invest directly in an index. Exposure to an asset class represented by an index may be available through investable instruments based on that index. S&P Dow Jones Indices does not sponsor, endorse, sell, promote or manage any investment fund or other investment vehicle that is offered by third parties and that seeks to provide an investment return based on the performance of any index. S&P Dow Jones Indices makes no assurance that investment products based on the index will accurately track index performance or provide positive investment returns. Index performance does not reflect trading costs, management fees or expenses. S&P Dow Jones Indices makes no representation regarding the advisability of investing in any such investment fund or other investment vehicle. A decision to invest in any such investment fund or other investment vehicle should not be made in reliance on any of the statements set forth in this document. S&P Dow Jones Indices is not an investment adviser, commodity trading advisor, commodity pool operator, broker dealer, fiduciary, promoter" (as defined in the Investment Company Act of 1940, as amended), "expert" as enumerated within 15 U.S.C. § 77k(a) or tax advisor. Inclusion of a security, commodity, crypto currency or other asset within an index is not a recommendation by S&P Dow Jones Indices to buy, sell, or hold such security, commodity, crypto currency or other asset, nor is it considered to be investment advice or commodity trading advice.

Closing prices for S&P Dow Jones Indices' US benchmark indices are calculated by S&P Dow Jones Indices based on the closing price of the individual constituents of the index as set by their primary exchange. Closing prices are received by S&P Dow Jones Indices from one of its third party vendors and verified by comparing them with prices from an alternative vendor. The vendors receive the closing price from the primary exchanges. Real-time intraday prices are calculated similarly without a second verification.

These materials have been prepared solely for informational purposes based upon information generally available to the public and from sources believed to be reliable. No content contained in these materials (including index data, ratings, credit-related analyses and data, research, valuations, model, software or other application or output therefrom) or any part thereof ("Content") may be modified, reverse-engineered, reproduced or distributed in any form or by any means, or stored in a database or retrieval system, without the prior written permission of S&P Dow Jones Indices. The Content shall not be used for any unlawful or unauthorized purposes. S&P Dow Jones Indices and its third-party data providers and licensors (collectively "S&P Dow Jones Indices Parties") do not guarantee the accuracy, completeness, timeliness or availability of the Content. S&P Dow Jones Indices Parties are not responsible for any errors or omissions, regardless of the cause, for the results obtained from the use of the Content. THE CONTENT IS PROVIDED ON AN "AS IS" BASIS. S&P DOW JONES INDICES PARTIES DISCLAIM ANY AND ALL EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE, FREEDOM FROM BUGS, SOFTWARE ERRORS OR DEFECTS, THAT THE CONTENT'S FUNCTIONING WILL BE UNINTERRUPTED OR THAT THE CONTENT WILL OPERATE WITH ANY SOFTWARE OR HARDWARE CONFIGURATION. In no event shall S&P Dow Jones Indices Parties be liable to any party for any direct, indirect, incidental, exemplary, compensatory, punitive, special or consequential damages, costs, expenses, legal fees, or losses (including, without limitation, lost income or lost profits and opportunity costs) in connection with any use of the Content even if advised of the possibility of such damages.

S&P Global keeps certain activities of its various divisions and business units separate from each other in order to preserve the independence and objectivity of their respective activities. As a result, certain divisions and business units of S&P Global may have information that is not available to other business units. S&P Global has established policies and procedures to maintain the confidentiality of certain non-public information received in connection with each analytical process.

In addition, S&P Dow Jones Indices provides a wide range of services to, or relating to, many organizations, including issuers of securities, investment advisers, broker-dealers, investment banks, other financial institutions and financial intermediaries, and accordingly may receive fees or other economic benefits from those organizations, including organizations whose securities or services they may recommend, rate, include in model portfolios, evaluate or otherwise address.

The Global Industry Classification Standard (GICS®) was developed by and is the exclusive property and a trademark of S&P and MSCI. Neither MSCI, S&P nor any other party involved in making or compiling any GICS classifications makes any express or implied warranties or representations with respect to such standard or classification (or the results to be obtained by the use thereof), and all such parties hereby expressly disclaim all warranties of originality, accuracy, completeness, merchantability or fitness for a particular purpose with respect to any of such standard or classification. Without limiting any of the foregoing, in no event shall MSCI, S&P, any of their affiliates or any third party involved in making or compiling any GICS classifications have any liability for any direct, indirect, special, punitive, consequential or any other damages (including lost profits) even if notified of the possibility of such damages.