07 September 2023

J.P. Morgan USD EM Diversified 3% capped 1-5 Year Index

Methodology and Factsheet

Highlights

The J.P. Morgan USD EM Diversified 3% capped 1-5 Year Bond Index (EM index) is designed to track the performance of US dollar-denominated eligible short term Emerging Market Sovereigns, Quasi- Sovereigns and Corporate bonds. The EM index is a subset of the flagship J.P. Morgan CEMBI Broad Diversified (Corporates) and EMBIG Diversified (Sovereign and Quasi-sovereigns), but offers a more short term, liquid and higher credit quality subset of the two, while following their methodology closely. Country weights are capped at 3%. Bonds with an amount outstanding size lower than US$500 million are excluded. In addition, Corporate bonds (from the CEMBI Broad component) rated lower than B- are excluded from the EM index. The diversification methodology limits the weights of the larger index countries by only including a specified portion of those countries' eligible face amount outstanding, thus reducing single issuer concentration and providing a more even distribution of weights. The Returns and Statistics are available from Dec 2006.

Index Criteria

Instrument Type:	Includes both fixed and floating rate securities along with capitalizing/amortizing bonds or loans. Excludes convertibles, inflation-linked instruments, and defaulted Includes both fixed and floating rate securities along with capitalizing/amortizing bonds or loans. Excludes convertibles, inflation-linked instruments, and defaulted.
Issuer Type and Country of Risk:	*Sovereign and Quasi-sovereign bonds* (from the EMBI component): Bonds issued from EM countries with GNI per capita below the index income ceiling (IIC) for 3 consecutive years or Index PPP ratio (IPR) is below the EM threshold for 3 consecutive years, will be eligible. *Corporate bonds* (from the CEMBI component): Issuer must meet one of the following: (1) 100% secured by assets within EM economies or (2) Majority of the issuer's assets are within EM economies, or (3) headquartered in an EM country.
Remaining Maturity:	Only those instruments with at least 2.5 years until maturity are considered for inclusion. At each month-end, instruments that fall below 12 months to maturity during the upcoming month, will be excluded from the Index.
Amount Outstanding:	Only issues with a current face amount outstanding of $500 million or more are considered for inclusion.
Currency:	Only USD denominated bonds are included. Instruments where the amount of coupon or redemption payment is linked to an exchange rate are not eligible for inclusion.
Ratings:	For Sovereign and Quasi-Sovereign bonds (from the EMBI component): there are no ratings related restrictions for eligibility. For Corporate bonds (from the CEMBI component): The EM index will only include only instruments rated B- or above (Instrument has to be rated B-/B1/B- or higher by S&P, Moody and Fitch)

Index Characteristics and Methodology

Pricing:	Bid and Ask prices are taken from a third party pricing source, Pricing Direct
Aggregate Return:	Index/Country level total return is calculated as a market-weighted average of bond returns using bid prices.
Rebalancing:	Rebalances on the last business day of the month.
Coupon Treatment:	All coupons received are immediately reinvested into the index.
FX Rates:	All FX rates used for hedged/unhedged returns are as of 4pm London time provided by WM/Reuters.

1 – Bonds with embedded options and warrants are eligible for inclusion if the options/warrants are attached to the instruments that would otherwise be included in the index and the prices are quoted cum options or warrants.

Hedging Strategy:	Assume a 1-month currency forward position that begins on rebalance day and ends on next rebalance day.
Weighting:	Diversified, country weights will be capped at 3% and any excess weights above the cap will be redistributed to smaller countries that are below the cap to limit concentration risk.
Holiday Calendar:	Follows US bond market calendar set by Emerging Markets Trader Association (EMTA).
Bloomberg Ticker:	JPEI15TR

Source: JPMorgan Chase & Co.

For any questions or for additional information, please contact index.research@jpmorgan.com

Appendix

Defining the universe of eligible countries

Sovereign and Quasi-Sovereign issuers: Following the 2018 Index Governance Review, a country will be eligible for the EM sovereign suite of indices if it either meets the GNI per capita-based Index Income Ceiling (IIC) criterion or the PPP-based Index PPP Ratio (IPR) criterion. J.P. Morgan defines the Index Income Ceiling (IIC) as the GNI per capita level that is adjusted every year by the growth rate of the World GNI per capita, Atlas method (current US$), provided by the World Bank annually. An existing country may be considered for removal from the index if its GNI per capita is above the Index Income Ceiling (IIC) for three consecutive years and the country's long term foreign currency sovereign credit rating (the available ratings from all three agencies: S&P, Moody's & Fitch) is A-/A3/A- (inclusive) or above for three consecutive years. The 2023 IIC level is $21,756.

For the IPR, it is calculated, as below, from the one-year lagged GDP data available in IMF's World Economic Outlook publication. The EM IPR threshold is an indexed number which mimics the changes to the World IPR. IPR = GDP (current prices, USD) / GDP (current prices, PPP dollars) * 100. IPR criterion states that a country's IPR should be below the EM threshold for three consecutive years, to be eligible. The 2023 IPR level is 62.9.

Corporate issuers: The index uses regional approach. Currently a distinct of countries failing in Asia ex-Japan/Australia/New Zealand, Eastern Europe, the Middle east, Africa and Latin America are monitored.

Instrument type

EM index includes both fixed and floating rate instruments, as well as capitalizing/amortizing bonds or loans. Bonds or loans with embedded options and warrants are eligible for inclusion if a) the options/warrants are attached to instruments that would otherwise be included in the index and b) the quotation convention—as recommended by the Emerging Markets Traders Association (EMTA)—is for instrument prices to be quoted cumulative options or warrants. Convertible bonds are not eligible for inclusion into the index.

Default treatment

Sovereign and Quasi-Sovereign issuers: Bonds that are deemed to be in credit default by EMTA convention will continue to remain in the EM index, provided the securities in question continue to satisfy other relevant index eligibility criteria such as regular pricing, sufficient liquidity, and minimum outstanding. Certain eligibility criteria such as minimum maturity, will not be applied to defaulted Sovereign and Quasi-Sovereign securities currently in the index. No new instruments that are currently in default will be added to the index, unless restructuring occurs or the instrument is no longer recognized as defaulted by EMTA.

In the event of unexpected delay of or default on a payment, the specific cash flow would not be recognized until the payment is actually received. The calculation of an individual non-performing instrument's return and the resulting index return would follow the settlement cash flow entitlement convention set by either EMTA or a similar market trade group.

Corporate issuers: A default of a corporate bond will force the removal of the affected instrument from the EM index. The issue will be removed at the month-end during the rebalancing period.

Issuer type

As the EM index is a combination of EMBIG Div and CEMBI Broad Div, Sovereign and Quasi-sovereign bonds (from the EMBI component) in the EM index contains only those bonds or loans issued by sovereign and quasi-sovereign entities from index-eligible countries. Historically, any quasi-sovereign issue was considered eligible for inclusion. As of May 31, 2002, we strengthened our definition of "quasi-sovereign" as an entity that is 100% guaranteed or 100% owned by the national government, and resides in the index eligible country.

Corporate bonds (from the CEMBI component) are eligible for inclusion in the EM index series if: (1) The issue is 100% guaranteed by an entity within an Emerging Markets economy, or (2) Majority of the issuer's operating assets are located within Emerging Markets economies, or (3) The issuer is headquartered in an Emerging Market country.

Weighting Methodology

The EM Index limits the weights of those index countries with larger debt stocks by only including a specified portion of these countries' eligible current face amounts of debt outstanding. The EM Index is geared toward managers who want maximum diversification or those who face limitations on the amount of portfolio exposure they can take to individual issuers. Once these instrument allocations are derived for each country, the current settlement price for each instrument is applied to its EM Index allocation to calculate the market capitalization of each issue in the index. The weight of each instrument in the EM Index is then determined by dividing its market capitalization by the total market capitalization for all of the EM Index's instrument allocations. The result represents the weight of each issue expressed as a percentage of the EM Index. By allocating their portfolios according to these exact instrument weights, and accounting for coupon reinvestments and index instrument allocation changes, investors can replicate the performance of the EM Index.

The underlying diversification methodology anchors on the average size of the countries in the index and the debt stock size of the largest country in the index.

We define Index Country Average (ICA) = Σ(Ctry Face Amount) / (No. of Countries in the index)

Based on the ICA, the diversified face amount for any country in the index is derived according to the following rules:

1. The largest country based on face amount will be capped at double the average country debt stock in the index (ICA*2). This is the maximum threshold and sets the scale to determine the diversified face amounts of other countries in the index.

2. If a county's debt stock is below the index country average (ICA), the entire amount will be eligible for inclusion.

3. Countries whose debt stock falls between the index country average (ICA) and double the average (ICA * 2) will be linearly interpolated.

Subsequently, the diversified (adjusted) face amount determined using the above step is then converted to a market value (based on dirty price), which is then converted to an index weight percentage based on the proportion of the total index market capitalization that the country represents. Any excess weight above the cap will be redistributed to smaller countries that are below the cap to limit concentration risk.

$$\text{Diversified Country Face Amount} = \begin{cases} \text{ICA} * 2 & \text{, if } \text{FA}_{max} \\ \text{ICA} + \dfrac{\text{ICA}}{\text{FA}_{max} - \text{ICA}} * (\text{Ctry FA} - \text{ICA}) & \text{, if Ctry FA} > \text{ICA} \\ \text{Ctry FA} \text{ ,} & \text{, if Ctry FA} \leq \text{ICA} \end{cases}$$

where Ctry FA represents the non-diversified country face amount and $\text{FA}max$ represent the Face Amount of the Largest Country.

Finally, a threshold (a maximum cap of 10%) is applied at the country level to improve diversification; i.e. sum of all the issuer weights within the country must be equal to or less than the maximum cap/threshold. Excess weight is re-distributed to other countries below the threshold. The maximum cap/threshold will be reviewed on a periodic basis and adjusted accordingly.

New Issue Timing

A new issue that meets the EM Index admission requirements is added to the index on the first month-end business date after its issuance, provided its settlement date falls before the last US business day of the month. Prior to January 2021, the cut-off date for bonds to settle to be eligible for inclusion on the same month-end was the 15th of the month.

An exception applies to a new issue that is released as part of a debt exchange program. At the month-end rebalancing date immediately following this event, the amount of debt retired in this exchange would be removed from the index, and the new issue would be added to the index (provided official exchange results are made available in a timely manner AND the issue settles by month end).

The second exception concerns Reg S securities. An instrument that is issued purely in reliance on Regulation S of the US Securities Act of 1933 and not pursuant to Rule 144A will be ineligible for inclusion in the index until it is seasoned (that is, until the expiration of the relevant Regulation S restricted period). The date at which the seasoning restriction is lifted will effectively be the new "issue" date, at which point the settlement date rule will apply.

If an announcement is made for a bond to be called, it is removed the month-end prior to its call date. If an announcement is not made in time for the bond to be removed the prior month-end, it will be removed the first month-end following the announcement.

For any questions or for additional information, please contact index.research@jpmorgan.com

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