17 August 2023

J.P. Morgan CEMBI Broad Diversified Core Index (CEMBI CORE)

Methodology and Factsheet

Highlights

The J.P. Morgan CEMBI Broad Diversified Core Index (CEMBI CORE) tracks the performance of US dollar-denominated bonds issued by emerging market corporate entities[1]. The CEMBI CORE follows the methodology of the flagship J.P. Morgan CEMBI Broad Diversified (CEMBIB Div) closely, while offering a more liquid and higher credit quality subset. The CEMBI CORE is based on the composition of the CEMBIB Div but removes the instruments with face amounts outstanding less than US$500 million and the instruments with 12 months to maturity. 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 2001.

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 bonds[2].
Issuer Type:	Corporate issuers only
Issuer Country of Risk	• Country of risk of the guarantor (must be 100%), or • Country where majority of issuer's assets are located, or • Country where issuer's operating headquarters is located, and centralized decision-making occurs EM country/economy is defined as a distinct list of countries in the following regions: Asia ex Japan, Latam, Eastern Europe, Middle East/Africa
Amount Outstanding:	Only issues with a current face amount outstanding of US$500 million or more are considered for inclusion[3].
Remaining Maturity:	Only those instruments with at least 2.5 years until maturity are considered for inclusion. Once added, an instrument may remain in the index until 12 months before it matures.
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.

Index Characteristics and Methodology

Pricing:	Bid and Ask prices are taken from a third party pricing source[4].
Aggregate Return:	Index/Country level total return is calculated as a market-weighted average of bond returns using bid side prices.
Rebalancing:	Rebalances on the last US 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.
Hedging Strategy:	Assume a 1-month currency forward position that begins on rebalance day and ends on next rebalance day.
Weighting:	Market capitalization based weighting.
Holiday Calendar:	Follows US bond market calendar set by Emerging Markets Trader Association (EMTA).

1 – in emerging markets. 2 – 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. 3 – A bond is removed from the index when its current outstanding amount falls below $500 million. 4 – Vendor is currently an independent source, PricingDirect Inc.

Inclusion Criteria Comparison

Index Criteria	CEMBI CORE	CEMBI Broad Diversified
Inception Date	Dec 2001	Dec 2001
Launch Date	Apr 2017	Jan 2008
Rebalance Date	Last US business day of the month	Last US business day of the month
Currency	US$	US$
Holiday	Follows US bond market calendar set by Emerging Markets Trader Association (EMTA)	Follows US bond market calendar set by Emerging Markets Trader Association (EMTA)
Pricing Source	Bid and Ask prices are taken from a third party pricing source	Bid and Ask prices are taken from a third party pricing source
FX Spot / Forward Rate	WM/Reuters 4pm London rate	WM/Reuters 4pm London rate
Coupon Reinvestment	All coupons received are immediately reinvested into the index	All coupons received are immediately reinvested into the index
Hedging Strategy	Assume a 1-month currency forward position that begins on rebalance day and ends on next rebalance day	Assume a 1-month currency forward position that begins on rebalance day and ends on next rebalance day
Country	Africa, Asia ex Japan, Latin America, Eastern Europe, and Middle East	Africa, Asia ex Japan, Latin America, Eastern Europe, and Middle East
Instrument Type	All fixed, floaters, amortizers, and capitalizers; excluding defaulted bonds	All fixed, floaters, amortizers, and capitalizers; excluding defaulted bonds
Min Face Amt	US$500 million	US$300 million
Maturity required for initial inclusion	At least 2.5 years till maturity	At least 2.5 years till maturity
Maturity required to maintain	At least 1 year till maturity	At least 6 months till maturity
Issuer Criteria	• 100% secured by assets within EM economies or • Majority of the issuer's asset are within EM economies or • Headquartered in an EM country	• 100% secured by assets within EM economies or • Majority of the issuer's asset are within EM economies or • Headquartered in an EM country
Face Amt Diversification?	✓	✓
Bloomberg Ticker	JPCDCORE	JBCDCOMP

Source: JPMorgan Chase & Co.

Appendix

Defining the universe of eligible countries

The index suite includes a specific set of emerging markets countries. Currently a distinct set of countries falling in Asia ex-Japan/Australia/New Zealand, Eastern Europe, the Middle East, Africa and Latin America are monitored.

Instrument type

The CEMBI CORE 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. A default will force the removal of the affected instrument from the CEMBI CORE index. The issue will be removed at the month-end during the rebalancing period.

Issuer type

Bonds are eligible for inclusion in the CEMBI CORE series if:

- The issuance is 100% guaranteed by an entity within an Emerging Markets economy, or
- Majority of issuer's assets are located in Emerging Markets economy, or
- Issuer's operating headquarter is located, and centralized decision making occurs in Emerging Markets economy.

Weighting Methodology

The CEMBI CORE 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 CEMBI CORE 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 CEMBI CORE's allocation to calculate the market capitalization of each issue in the index. The weight of each instrument in the CEMBI CORE is then determined by dividing its market capitalization by the total market capitalization for all of the CEMBI CORE's instrument allocations. The result represents the weight of each issue expressed as a percentage of the CEMBI CORE. 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 CEMBI CORE.

The underlying CEMBI CORE 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.

Diversified Country Face Amount=

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

where Ctry FA represents the non-diversified country face amount and FAmax represent the Face Amount of the Largest Country.

Finally, a threshold (a maximum cap) 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 CEMBI CORE admission requirements will be assessed for inclusion in the month-end rebalance of the same month provided its settlement date falls on or before that month-end rebalance date. Any taps or tenders will be assessed similarly for index inclusion based on their settlement date. A new issue whose settlement date falls after the first month-end rebalance date is added to the index on the rebalance day of the next month.

An 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 on the basis of having less than 12 months remaining until maturity. 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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