Bloomberg Emerging Markets Tradable External Debt (EMTED) Index

This document is intended to be read in conjunction with the Bloomberg Fixed Income Index Methodology; these documents collectively constitute the index methodology for this Index. This Index does not take into account any ESG factors or pursue any ESG objectives; please refer to the Bloomberg Fixed Income Index Methodology for more detail on ESG disclosures.

The Bloomberg Emerging Markets Tradable External Debt (EMTED) Index is a rules-based index designed to provide diversified exposure to dollar-denominated sovereign debt from Emerging Markets (EM) issuers spanning four broad regions: Latin America; Eastern Europe; Middle East and Africa; and Asia. The index is designed to be: 1) broad based in its coverage of EM sovereign hard currency issuers; 2) diversified, by capping the number of eligible countries and weights of each market; 3) representative, using as an objective measure of liquidity to select the most liquid countries and securities; and 4) tradable, by selecting a maximum of three bonds per country and rebalancing only semi-annually, thereby minimizing rebalancing costs.

The Bloomberg Emerging Markets Tradable External Debt (EMTED) Index is a subset of flagship Emerging Markets USD Aggregate Bond Index (EMUSTRUU) with additional rules on sector, country selection and security selection as detailed in the sections further below.

Description of Index Constituents	EM USD sovereign debt issues
Index Ticker	I27062 Index: Total Return USD Unhedged

Eligibility Requirements

Currency	USD.
Eligible universe	EM USD Aggregate Index
Sector	Sovereign
Credit Rating	Investment grade, high yield and unrated securities are permitted. Unrated bonds may use an implied issuer rating when not rated by a credit rating agency (Moody's, S&P, and Fitch).
Minimum Amount Outstanding	USD 2.5bn minimum issuer level par amount outstanding. USD 1bn bond level par amount outstanding.
Maturity	Greater than 18 months.

A.Country selection and weights

1.Country eligibility

Bloomberg uses a fixed list of emerging market countries that is reviewed annually to define country eligibility in dedicated EM hard currency, local currency, and inflation-linked benchmarks. Criteria for inclusion in the EM country list are rules-based and include:

- Countries that meet one of the following two criteria: World Bank Income group classifications of low/middle income OR International Monetary Fund (IMF) classification as a non-advanced country.
- Additional countries that bond investors classify as EM due to factors such as investability concerns, the presence of capital controls, and/or geographic considerations may also be included on the list and are also reviewed on an annual basis. As of April 2014, 4 additional markets are included in the Bloomberg EM country list: Czech Republic, Israel, South Korea, and Taiwan.

Not every eligible country that satisfies these criteria will have issued benchmark index eligible debt or have debt that qualifies for the Bloomberg EM Tradable External Debt (EMTED) GDP Weighted Capped Index based on the liquidity and security selection methodologies outlined in the subsequent section. Countries that are in default on their debt and have not yet restructured are not eligible.

2.Country selection

Countries represented in the Bloomberg Emerging Markets Tradable External Debt (EMTED) Index country list is divided into four regions:

- Latin America
- Eastern Europe
- Middle East and Africa
- Asia

Within each region, a maximum of five countries are eligible for inclusion in the index. Country selection occurs annually on the Index Selection Date as follows:

- By region, the total amount outstanding (in USD) of all benchmark index-eligible securities in each country is summed, excluding securities with less than 18 months to maturity remaining.
- Those countries with at least $2.5bn of debt outstanding are eligible for selection. A maximum of five countries per region are ranked based on the amount outstanding[1] of the index eligible debt. Those (up to) five countries with the highest amount outstanding are selected for the subsequent semi-annual rebalancing period. If fewer than five countries from a single region are available, then all eligible countries from that region are included in the EMTED Index.
    - A newly selected country(ies) must have an amount outstanding that is more than 10% of the amount outstanding of the country(ies) that it would replace in the EMTED index. Otherwise, the country that is already included in the index is retained. This rule is designed to reduce rebalancing costs by minimizing country turnover in the index.
    - Any country that newly meets the country inclusion criteria in between EMTED Index Rebalancing Dates will not be eligible for selection until the next semi-annual Index Rebalancing Date.
    - An eligible country that is classified as high income by the World Bank whose sovereign rating is upgraded above A1/A+ (using the middle rating of Moody's, S&P, and Fitch ratings) between Index Rebalancing Dates and no longer meets any of the criteria listed above will be removed at the next tradable Index Rebalancing Date[2].

3.Regional weights

- The calculation of country specific EMTED weights at each Index Rebalancing Date is a two-step process. The first step involves the calculation of regional weights using the nominal GDP of EMTED-eligible countries selected, followed by the allocation of these weights to index-eligible countries based on market value. For all Bloomberg GDP weighted bond indices (benchmark and tradable indices), a trailing three-year weighted average of nominal GDP as reported by the IMF is used for each country. This value is then summed for each of the countries selected per region (maximum of five) to create a regional GDP total that is used to calculate regional GDP weights[3].

- To prevent excessive concentrations in a single region, a regional cap of 40% and a floor of 10% are then applied to these uncapped GDP weights. 40% cap is applied first, and excess weight is redistributed across the rest of the regions that are not capped on a pro rata GDP weighted basis. After that redistribution, if any of the regions fall below 10%, it will be floored at 10% with shortfall allocated from the other regions that are uncapped[3]. Same methodology is used for country caps and floors as well. This process is carried out iteratively to ensure that all four regional weights are between the cap and floor.

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1. Prior to May 2023, country selection within the region and security selection within a country were based on Trade volume. BISL has decided to use total Amount outstanding of index-eligible debt for country selection and the individual bond amount outstanding for security selection based on the feedback from consultation.
2. A country may be replaced by a new country at the next rebalancing date subject to the index inclusion rules. Any change in country inclusion/eligibility in the tradable index will affect GDP weights when the index is next rebalanced.
3. For more details on the application of GDP weights and index rationale, please see GDP Weighted Bond Indices: 2023 Country weights and rebalancing details.
4. Prior to May 2023, 40% cap and 10% floor were simultaneously applied to countries with GDP weight above 40% and below 10% respectively and this could result in infeasible weights within regions

4.Country weights

After calculating regional GDP weights, country-specific weights for the EMTED Index are then calculated by allocating the regional GDP weight to index-eligible countries on a pro rata basis based on market value of benchmark index-eligible debt as of the Index Selection Dates. Country weights are then reset at month-end on the Index Rebalancing Dates. The details are as follows:

- The GDP weight of each region is allocated on a pro rata basis to each of the (up to) five countries within that region based on the relative market value in USD of each country's outstanding benchmark index-eligible debt (all maturities greater than or equal to 18 months) as of the Index Selection Date.
- A country cap of 10% and a floor of 2.5% as a percentage of the overall index are then applied to each country's uncapped weight.
  - Countries with market value weights above the cap have their weights adjusted down to the cap value, with excess weight firstly allocated pro rata to other countries within the region and then across the index to countries whose weight has not satisfied the country floor.
  - Countries with market value weights below the floor are adjusted up to the floor value, with the shortfall weight coming pro rata from other countries within the region in the first instance. If a country within a particular region has no excess weight to bring the given country to the country floor, excess weight is drawn from countries in other regions that are not capped or floored. The weight allocation is repeated iteratively such that all of the country capping and flooring conditions have been satisfied.

5.Exceptions

Bloomberg, as the Index Sponsor, reserves the right to select a different country for inclusion in the index if other factors impair the liquidity, tradability, or accessibility of bonds from a particular country selected using the rules above. These factors may include, but are not limited to, market dislocations and credit/default events at or in between Index Rebalancing Dates, market implied expectations of a high likelihood of default, the existence of currency restrictions or convertibility concerns, conditions that make it restrictively difficult and cost prohibitive for foreign investors to access the local markets, or any other indications that bonds from the country are unavailable to trade or relatively illiquid. The Index Sponsor will make reasonable efforts to publish any exceptions prior to the Rebalancing Date, and any such exception will be made by the Index Sponsor at its sole discretion, acting in good faith and in a commercially reasonable manner.

B. Security selection and weights

Securities are selected for the EMTED Index in a manner that offers representation across an issuer's term structure of outstanding benchmark index-eligible debt and selects the largest bond by amount outstanding within the selected maturity bands.

A maximum of three bonds per country are chosen, with the highest amount outstanding from the 2y, 5y and 10y points of the curve. If a country's issuance is concentrated in a particular maturity range, more than one bond may be selected from that target maturity, but no more than three bonds may be selected in total.

1.Security selection

All benchmark-eligible securities from each EMTED-eligible country list are classified into one of three maturity buckets reflecting the target maturities: 1.5-3.5 years (2y bucket), 3.5-7.5 years (5y bucket) and 7.5+ years (10y bucket).

- For each country, the market value weight of each of its three maturity buckets is calculated as a percentage of its overall country exposure. A maturity bucket must include at least 20% of the overall country exposure to have a bond selected from the maturity bucket.
    - If all three buckets satisfy this condition, one bond from each maturity bucket will be selected.
    - If only two of the country's three maturity buckets meet this condition, two bonds will be selected from the eligible maturity bucket with the largest market value and one bond will be selected from the other eligible maturity bucket.
    - If only one of the country's maturity buckets meets this condition, all three bonds will be selected from this eligible maturity bucket.
- In each of the eligible buckets, all the bonds are ranked based on amount outstanding and those bonds with the highest amount outstanding will be selected. If two or more bonds in a maturity bucket have same amount outstanding, the one maturing closest to target maturity is selected. If they have same maturity date, then the bond issued most recently will be selected.
- If fewer than the prescribed number of securities meet the maturity bucket inclusion condition, or if an eligible security is deemed to be illiquid by the Index Sponsor, fewer than the prescribed number of securities may be selected for the maturity bucket.

2.Security weights

All bonds from a country are assigned equal weights within the country as of the Index Rebalancing Date.

3.Exceptions

Bloomberg, as the Index Sponsor, reserves the right to select a different bond for inclusion in the index if other factors impair the liquidity, tradability, or accessibility of the bond selected using the above rules. These factors may include, but are not limited to, large concentrations held by local institutional investors or governments, market dislocations and credit/default events at or between Index Rebalancing Dates, and exceptionally high bid/offer spreads at the Index Rebalancing Date or other indications that the bond is unavailable to trade or is relatively illiquid even after applying these selection criteria.

Rebalancing Rules

Frequency

Index composition for the Emerging Markets Tradable External Debt Index will be determined and reset by the Index Sponsor twice a year, in May and November, namely the Index Rebalancing Months. The index is rebalanced on the Index Rebalancing Dates, which is the last business day of the Index Rebalancing Months (May and November). Index country eligibility, composition and weights are calculated by the Index Sponsor as of the Index Selection Date, which is the last business day of the previous month of the Index Rebalancing Months (May and November). Countries and securities that have been selected for the index on the Index Selection Dates based on the index rules will be published in the first week of the respective rebalancing months.

Index Changes

During the month, indicative changes to securities (credit rating change, sector reclassification, amount outstanding changes, corporate actions, and ticker changes) are reflected daily in the Projected and Returns Universe of the index. These changes may cause bonds to enter or fall out of the Projected Universe of the index on a daily basis but will affect the composition of the Returns Universe at month-end only, when the index is next rebalanced.

Reinvestment of Cash Flows

Intra-month cash flows from interest and principal payments contribute to monthly index returns but are not reinvested at a short-term reinvestment rate between rebalance dates. At each rebalancing, cash is effectively reinvested into the Returns Universe for the following month so that index results over two or more months reflect monthly compounding.

New Issues

No new issues enter between the rebalancing Months (May and November).

Substitutions

Bloomberg, as the Index Sponsor, reserves the right to select a substitute bond or remove a bond between Index Rebalancing Dates if other factors impair the liquidity, tradability or accessibility of the bond chosen applying the above rules. These factors may include but are not limited to: large concentrations held by local institutional investors or governments; market dislocations and credit/default events at or between Index Rebalancing Dates; and exceptionally high bid/offer spreads at the Index Rebalancing Dates or other indications that the bond is unavailable to trade or is relatively illiquid even after applying the selection criteria.

As the Index Sponsor, Bloomberg also reserves the right to substitute or remove a country in the index between rebalancing dates if other factors impair the liquidity, tradability, or accessibility of bonds from a particular country selected using the rules above. These factors may include, but are not limited to: market dislocations and credit/default events at or in between Index Rebalancing Dates,5 market implied expectations of a high likelihood of default, the existence of currency restrictions or convertibility concerns, conditions that make it restrictively difficult and cost prohibitive for foreign investors to access the local markets, or any other indications that bonds from the country are unavailable to trade or relatively illiquid.

The Index Sponsor will make reasonable efforts to publish any substitutions or removals, and any such substitution or removal will be made by the Index Sponsor at its sole discretion, acting in good faith and a commercially reasonable manner.

Index Costs

Semi-annual index rebalancing cost

We also publish Emerging Markets Tradable External Debt Index: Net Return (27069) calculated net of costs incurred in entering new positions at each semi-annual rebalancing date. This cost is rounded up to the nearest basis point and is applied at each semi-annual rebalancing date. If a credit or substitution event requires an extraordinary rebalancing, costs may also be incurred in a similar manner.

Rebalancing cost (RBC_i) for any index-eligible bond i:

$$RBCi = \left(\frac{\Delta MV_i}{MV_{basket}}\right) x \left(\frac{P_{t,ask} - P_{t,bid}}{P_{t,bid}}\right)$$

Where ΔMV_i =increase in market value holding of bond i at semi-annual rebalancing. This applies only to new bonds entering or increases in holdings of existing bonds. For new bonds $\Delta MV_i = MV_i$.

Semi-annual index rebalancing cost (RBC_{index}) in % for the index

$$RBC_{index} = \sum(RBC_i)$$

Pricing and Related Issues

Sources & Frequency All index-eligible bonds are priced on a daily basis by Bloomberg's evaluated pricing service, BVAL.

Timing

- Prior to January 14, 2021, bonds are priced at 3 p.m. (New York time). On early market closes, prices are taken as of 1 p.m. (New York time), unless otherwise noted.
- From January 14, 2021 and onwards, bonds are priced at 4 p.m. (New York time). On early market closes, prices are taken as of 2 p.m. (New York time), unless otherwise noted.
- If the last business day of the month is a public holiday, prices from the previous business day are used.

Bid or Offer Side Bonds in the index are priced on the bid side

Settlement Assumptions T+1 calendar day settlement basis. At month-end, settlement is assumed to be the first calendar day of the following month, even if the last business day is not the last day of the month, to allow for one full month of accrued interest to be calculated.

Verification Daily price moves for each security are analyzed by the index pricing team. Index users may also challenge price levels, which are then reviewed and updated as needed.

Calendar The Emerging Markets Tradable External Debt (EMTED) Index follows the US bond market holiday schedule.

Accessing Index Data

Bloomberg Terminal®

Bloomberg benchmarks are the global standard for capital markets investors.

- INDE<GO> - The Bloomberg Indices dashboard page, which contains daily, monthly, and year-to-date index returns for key indices from each index family as well as a link to index publications.
- IN<GO> - The Bloomberg Index Browser displays the latest performance results and statistics for the indices as well as history. IN presents the indices that make up Bloomberg's global, multi-asset class index families into a hierarchical view, facilitating navigation and comparisons. The "My Indices" tab allows a user to focus on a set of favorite indices.
- DES<GO> - The index description page provides transparency into an individual index including membership information, aggregated characteristics and returns, and historical performance.
- INP<GO> - The Bloomberg Indices Publications page, which includes methodologies, factsheets, monthly reports, announcements and technical notes. A user may also subscribe to index publications via the "Actions" button.
- PORT<GO> - Bloomberg's Portfolio & Risk Analytics solution includes tools to analyze the risk, return, and current structure of indices. Analyze the performance of a portfolio versus a benchmark or use models for performance attribution, tracking error analysis, value-at-risk, scenario analysis, and optimization.

Bloomberg Indices Website (www.bloomberg.com/indices)

The index website makes available limited index information including:

- Index methodology and factsheets
- Current performance numbers for select indices

Data Distribution

Index subscribers may choose to receive index data in files. Files may include:

- Index level and/or constituent level returns and characteristics for any indices
- Automatic delivery of files via email or SFTP following the completion of the index production process after market close
- Clients may receive standard files or may customize file contents
- Index data is also available via authorized redistributors

Index Licensing

Bloomberg requires index data licenses for services and products linked to the Indices

- Index or Constituent-Level Redistribution
- Exchange Traded Notes (ETNs)
- OTC Derivative Products
- Bond Pricing Service
- Index-Linked Insurance Products
- Custom Index Solutions
- Exchange Traded Funds (ETFs)
- Mutual Funds
- Separately Managed Accounts (SMAs)

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