

## J.P. Morgan GBI-EM Colombia Government Local Currency Bond Index

### Index Methodology and Profile

#### Highlights

The J.P. Morgan GBI-EM Colombia Government Local Currency Bond Index aims to track the performance of eligible fixed-rate COP-denominated Colombian Government Bonds (COLTES). Index returns and statistics are available from January 2003.

#### Index Criteria

<b>Instrument Type</b>	<b>Includes:</b> Fixed-rate Colombian Government Bonds <b>Excludes:</b> Floating-rate bonds, amortizing bonds, capital securities, convertibles and inflation-linked bonds
<b>Minimum Size</b>	USD 1 billion
<b>Remaining Maturity</b>	<b>Entry:</b> Greater than 2.5 years remaining maturity
	<b>Exit:</b> Securities with less than 6 months remaining maturity are excluded
<b>Currency Denomination</b>	COP
<b>Issuer</b>	Colombia

#### Index Characteristics and Methodology

<b>Weighting</b>	Market value weighted
<b>Pricing</b>	Mid prices provided by a third party pricing source, PricingDirect
<b>Aggregate Return</b>	Weighted average bond returns using mid prices
<b>Rebalancing</b>	Rebalances on the last weekday of the month
<b>Coupon Reinvestment</b>	Immediately reinvested back into the index
<b>FX Rates</b>	FX rates are provided by WM/Reuters as of 4pm London time
<b>Price Timing</b>	3pm Bogotá time
<b>Holiday Calendar</b>	Colombian bond market holiday calendar

#### Instrument type

Only COP-denominated, fixed-rate COLTES bonds issued by the Republic of Colombia are included.

Floating-rate, inflation linked, and capitalizing/amortizing bonds are not eligible for index inclusion.

A separate GBI-EM Colombia Government Bond Index, which includes both local currency bonds and dual currency (global) bonds, is available. Global bonds need to have at least USD 500 million outstanding amount to be eligible.

## Liquidity

A key feature that distinguishes our indices from other index products is the strict enforcement of liquidity criteria in the selection of instruments. Yet, while the notion of liquidity differs from market to market, J.P. Morgan indices include only securities, subject to several considerations including but not limited to:

- **Pricing:** Bonds must trade with enough frequency to prevent stale price quotations
- **Availability:** Bonds must be regularly traded in size at acceptable bid-offer spreads and readily redeemable for cash. A reasonable two-way market must exist for the instrument to be included in the index portfolio.
- **Replication costs:** Investors should be able to replicate the index without incurring excessive transaction costs.

## Bond calculations

**Calculations are according to market convention:** all calculations including accrued interest, duration, yield, etc., are done according to local market convention using parameters (ex-dividend rules, settlement conventions, etc.) relevant to each specific bond. All calculations are gross of tax and ignore transactions costs.

**Bond pricing:** Pricing for our underlying instruments is provided on a daily basis from Pricing Direct, a third party valuation vendor. In the event the primary source for pricing is unable to provide a quote, the Index Group reserves the right to consider the use of an appropriate alternative source for index inputs. Please see <http://www.pricing-direct.com> for further details.

**Ex-dividend rules:** ex-dividend rules, when applicable, are incorporated into accrued interest calculations, as appropriate, by country. Ex-dividend rules define the last day a bondholder must own a bond in order to receive that bond's next coupon payment, otherwise known as the ex-dividend date.

- During the period between the ex-dividend date and the coupon date, the bond trades "ex-dividend"
- An investor who purchases a bond for settlement between the ex-dividend date and coupon date will not receive that bond's next coupon payment
- During this period, according to market convention, accrued interest becomes negative resulting in a total price at a discount to the clean price and in effect, compensating the investor for the time the bond will be held without interest
- On coupon date, interest will start to accrue for the subsequent coupon payment

**Returns and return indices:** return indices on individual bonds are calculated on a daily basis and measure bond performance over time:

- Principal return index is based on changes in clean price
- Interest return index is based on changes in accrued interest
- Total return index is based on changes in both clean price and accrued interest

At the individual bond level focus is on total return. The segregation of interest and principal return becomes relevant at the portfolio level.

**Reinvestment of coupons:** the J.P. Morgan indices are always fully invested. All coupons received are immediately reinvested back into the local market.

**Interest accruals:** interest is accrued starting from the bond's dated date up to the first coupon value date. Accrued interest is calculated according to market convention, on a settlement day basis. Interest is accrued by value or settlement date. Weekly, seven days of interest are accrued, including the weekend.

In markets with ex-dividend rules, if a bond is purchased after the ex-dividend date the purchaser will not receive the bond's next coupon. In order to compensate the buyer of the bond, the price paid for the bond must be less than the clean market price, thus, accrued interest will be negative.

**Coupon value date:** The coupon value date is the trade date associated with settlement on coupon date (the day the coupon is paid). Thus, the coupon value date is the last trade date which an investor may purchase a bond and have that bond settle prior to payment of the subsequent coupon. On coupon value date, accrued interest resets to zero, and accruals begin towards the next coupon.

**Yield:** effective annual rate of return, expressed as a percentage. For the J.P. Morgan Government Bond Index body of data, yields are all calculated as yield-to-maturity, which is the discount rate that the present value of future payments equals the price of the security.

## Index calculations

The base for the index level is: January 1, 2003 = 100.

The index rebalances on the last weekday of each month. Bonds with less than 7 months remaining to maturity on rebalance day are required to be excluded from the index.

The index is weighted by the component bonds' aggregate normalized market capitalization (dirty price times par outstanding). The weights change monthly on each rebalance day, and those weights remain active for the remainder of that month.

Accrued interest is assigned to the bonds in the index according to the specific convention of each country's market, and this interest is settlement adjusted.

Daily indicative pricing for each security and FX rate is closely scrutinized and are reconciled using market movements and other pricing sources as guidance. As necessary, an established alternate source will be used to maintain the integrity of daily index calculations. On any given calculation day, if the primary source is unable to provide a quote, the Index Group reserves the right to consider the use of an appropriate alternate source for index inputs, such as pricing and FX. If a permanent switch for the primary third party pricing source is necessary, clients will be notified in advance prior to any official switch.

For any questions or for additional information, please contact [index.research@jpmorgan.com](mailto:index.research@jpmorgan.com)

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### Global Index Research

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