

Cbonds Eurobond Indices

Cbonds publishes its own Eurobond indices on different Eurobond market segments of the CIS. The index calculation base has been maintained since 01.01.2008.

The following Cbonds indices are published on a daily basis:

1. Euro-Cbonds Sovereign (RU, UA) – Indices of Russian and Ukrainian sovereign Eurobonds.
2. Euro-Cbonds IG (Investment grade: RU) – Indices of Eurobonds with investment grade ratings issued by Russian institutions.
3. Euro-Cbonds NIG (Non-Investment grade: RU) – Indices of Eurobonds with upper non-investment grade ratings issued by Russian institutions.
4. Euro-Cbonds Corporate (UA, KZ) – Indices of Eurobonds issued by Ukrainian and Kazakh institutions.

Methodology of Index List Formation

1. Selecting Eurobonds for the list.
 - 1.1. When calculating the index we primarily take into account all outstanding Eurobonds from the country (Russia, Ukraine, Kazakhstan), the type of debt (senior unsecured debt), the issue structure (LPNs, global Eurobonds or Eurobonds listed on international stock exchanges and rated by at least one international rating agency).
 - 1.2. Eurobonds denominated in the currency other than US\$, are excluded from the list formed according to the principles outlined in 1.1.
 - 1.3. Eurobonds having a maturity of less than one year are excluded from the list formed in 1.2.
 - 1.4. Low liquidity Eurobonds defined according to the following criteria, are excluded from the list formed in 1.3:
 - 1.4.1. The issue amount for Euro-Cbonds Sovereign and Euro-Cbonds IG Indices is under \$250 m; for Euro-Cbonds NIG and Euro-Cbonds Corporate it is under \$100 m.
 - 1.4.2. The number of days when quotes on this Eurobond issue were not posted on Cbonds exceeds half the trading days of the month.
 - 1.5. The list of Eurobonds formed in 1.4 is filtered according to credit rating levels and sovereign/non-sovereign debt for every index.
 - 1.5.1. Euro-Cbonds Sovereign includes Eurobonds with any rating issued by the government.
 - 1.5.2. Euro-Cbonds IG includes non-sovereign issues rated no lower than Baa3 by Moody's and/ or BBB by S&P and Fitch (at least by 2 agencies if the issue is rates by more than one agency).
 - 1.5.3. Euro-Cbonds NIG includes non-sovereign issues rated below Baa3 by Moody's and/ or BBB by S&P and Fitch but no lower than B3 by Moody's and B- by S&P and Fitch (at least by 2 agencies if the issue is rates by more than one agency).
 - 1.5.4. Euro-Cbonds Corporate comprises non-sovereign issues with ratings no lower than B3 (Moody's) and B- (S&P and Fitch).
 - 1.6. Lists created according to the above mentioned criteria for every index are called Index Lists.
 - 1.7. Lists are reviewed by Cbonds on a monthly basis according to this methodology with inclusion of new issues.

Calculation Methodology for Eurobond Indices

The CIS Eurobond indices offered by Cbonds.ru are total return indices calculated according to the following formula:

$$I(0) = 100; I(t) = I(t-1) * \sum_{i=1}^n \frac{[P(i,t) + ACI(i,t) + G(i,t)] * V(i)}{[P(i,t-1) + ACI(i,t-1)] * \sum_{j=1}^n V(j)} ;$$

n – number of securities on the Index List;

P (i,t) – price of the i-th security at moment t (*);

ACI (i,t) - accrued coupon income on the i-th security at moment t (this figure equals 0 on a coupon payment date being simultaneously the beginning on a new coupon period);

G(i,t) – coupon payments made on the i-th security at moment t;

V(i) – par amount of the i-th issue on the Index List.

(*) - By a price of the i-th security at moment t we understand an average price among best bid and ask quotes displayed on Cbonds in the Market Quotes section.

The Index is calculated in the beginning of a trading day (every trading day) using the data from the previous trading day at its closure.

Apart from the main index we also calculate a subsidiary (“conjuncture”) index. It is a price-based index calculated the following way:

$$IP(0) = 100; IP(t) = IP(t-1) * \sum_{i=1}^n \frac{P(i,t) * V(i)}{P(i,t-1) * \sum_{j=1}^n V(j)} ;$$

n – number of securities on the Index List;

P (i,t) – price of the i-th security at moment t;

V(i) – par amount of the i-th issue on the Index List.

Concomitant figures

Apart from indices we calculate a number of gauges characterizing weighted average yield to maturity and weighted average duration of the index portfolio.

We calculate “simple” weighted average yield (not including within-year coupon investments; it meets the standards of yield calculation on the Eurobond market).

Weighted average duration is average duration weighted according to the share of each security in general capitalization. We use duration to maturity for every security if it is possible to calculate it correctly, otherwise duration to put option is used.

$$D_p = \frac{\sum_i D_{i,t} * [P_{i,t} + ACI_{i,t}] * V_{i,t}}{\sum_i [P_{i,t} + ACI_{i,t}] * V_{i,t}}$$

D_p – Duration _ for _ portfolio

$D_{i,t}$ – Duration _ of _ i - th _ security _ at _ moment _ t

Weighted average yields are weighted yields either to maturity or to put option of securities included in the Index portfolio. If it is possible to calculate yield to maturity correctly, we use yield to maturity, otherwise we employ yield to put option. Yields are weighted according to the security's share in the market capitalization and duration.

$$Y_p = \frac{\sum_i Y_{i,t} * D_{i,t} * [P_{i,t} + ACI_{i,t}] * V_{i,t}}{\sum_i D_{i,t} * [P_{i,t} + ACI_{i,t}] * V_{i,t}}$$

$$Y_p^* = \frac{\sum_i Y_{i,t}^* * D_{i,t} * [P_{i,t} + ACI_{i,t}] * V_{i,t}}{\sum_i D_{i,t} * [P_{i,t} + ACI_{i,t}] * V_{i,t}}$$

Y_p – *Weighted _ average _ yield _ on _ portfolio _ (simple)*

$Y_{i,t}$ – *Weighted _ average _ yield _ on _ i – th _ security _ at _ moment _ t _ (simple)*

Y_p^* – *Weighted _ average _ yield _ on _ portfolio _ (effective)*

$Y_{i,t}^*$ – *Weighted _ average _ yield _ on _ i – th _ security _ at _ moment _ t _ (effective)*

Contacts on using the indices:

Konstantin Vasilyev, Partner, Head of Global Markets, Cbonds.ru

Tel/fax: (812) 336 9721, ext.105. e-mail: kv@cbonds.info, world@cbonds.info

Olga Kolesnikova, English Version Manager, Cbonds.ru

Tel/fax: (812) 336 9721, ext. 218. e-mail: eng@cbonds.info

<http://www.cbonds-group.com/>