



ООО «Cbonds.Ru»

Санкт-Петербург, Пироговская наб., д. 21

Телефон: +7 (812) 336-97-21

[www.cbonds.info](http://www.cbonds.info)

Elena Skurhina

Head of Projects

Tel/fax: (812) 336 9721, ext.118.

e-mail: [sea@cbonds.info](mailto:sea@cbonds.info), [russia@cbonds.info](mailto:russia@cbonds.info)

## Cbonds Indices

Russian government Bonds Indices			Russian Municipal Bonds Index	Russian Corporate Bonds Indices		
Composite Index			Composite Index	IFX-Cbonds		
1-3Y	3-5Y	more than 5Y		Composite Index BBB	Composite Index BB	Composite Index B
				Composite Index 1-3Y	Composite Index 3-5Y	
				Banks and Financial Institutions BBB	Banks and Financial Institutions BB	
				Real Sector Companies BBB	Real Sector Companies BB	

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## Calculation Formula

The International Bond Indices offered by Cbonds.ru are total return indices calculated according to the following formula:

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

$n$  – 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 the coupon payment date being simultaneously the beginning of 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.

As a price of security  $i$  at moment  $t$  we use a weighted average price on the trading floor, which has the highest turnover of this paper on the required trading day.

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 In addition to the main index, we also calculate a auxiliary (“conjuncture”) index. It us a price-based index calculated the following way:

$$IP_0 = 100; \quad IP_t = IP_{t-1} \frac{\sum_{i=1}^n P_{i,t} N_{i,t}}{\sum_{i=1}^n P_{i,t-1} N_{i,t}}$$

$n$  – 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

In addition to the 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)

## Methodology of Index List Formation

### Russian government bonds Index family:

#### Cbonds-GBI RU

#### Cbonds-GBI RU 1-3Y

#### Cbonds-GBI RU 3-5Y

#### Cbonds-GBI RU 5Y

1. When calculating the index we primarily take into account all municipal bonds traded on the Moscow Exchange.
  2. Foreign currency-pegged bonds are excluded from the list of bonds described in 1.
  3. Bonds having a maturity of less than 360 days are excluded from the list described in 2. For Cbonds-GBI RU 1-3Y with maturity of more than 1080 days are also excluded. For Cbonds-GBI RU 3-5Y with maturity of less than 1080 days and more than 1800 days are also excluded. For Cbonds-GBI RU 5Y with maturity of less than 1800 days are also excluded.
  4. Floating rate bonds are excluded from the list of bonds described in 3.
  5. Low liquidity bonds defined according to the following criteria are excluded from the list described in 4:
  6. The number of days when the issue was not traded on at least one of the trading floors mentioned in 1 exceeds half the trading days of the quarter when the issue was admitted for trading.
- The list formed in line with the above mentioned criteria is referred to as the Market Securities List.

The list is reviewed on a quarterly basis according to this methodology.

Indexes are calculated daily as of the date, when we have updated the quotes, based on at least 5% of the issues in the index portfolio.

## Russian municipal bonds Index family:

### Cbonds-Muni

1. When calculating the index we primarily take into account all municipal bonds traded on the MICEX and SPICEX.
2. Foreign currency-pegged bonds are excluded from the list of bonds described in 1.
3. Bonds having a tenor of less than 2 months are excluded from the list described in 2.
4. Low liquidity bonds defined according to the following criteria are excluded from the list described in 3:
  - 4.1 The number of days when the issue was not traded on at least one of the trading floors mentioned in 1.1 exceeds half the trading days of the quarter when the issue was admitted for trading.
  - 4.2 Bonds of this issue had a turnover below RUR10bn in the previous month.

The list formed in line with the above mentioned criteria is referred to as the Market Securities List.

#### Index List Formation

1. The index list includes 20 bond issues having the biggest par amount.
2. If the sample represents 25% of the par amount of bonds included in the market securities list, the list is considered to be completed. If there are several issues having the same par amount and it is possible to include only some of them, the selection is done based on the highest turnover per month.
  - a. If 20 securities have been selected but they do not account for 25%, we continue to select bonds till we reach the 25% cap.
3. The list is reviewed on a quarterly basis according to this methodology and criteria set out in 4.

Indexes are calculated daily as of the date, when we have updated the quotes, based on at least 5% of the issues in the index portfolio.

## Russian corporate bonds Index family:

### IFX-Cbonds

**Cbonds-CBI RU BBB**

**Cbonds-CBI RU BB**

**Cbonds-CBI RU B**

**Cbonds-CBI RU 1-3Y**

**Cbonds-CBI RU 3-5Y**

**Cbonds-FBI RU BBB**

**Cbonds-FBI RU BB**

**Cbonds-RBI RU BBB**

**Cbonds-RBI RU BB**

### IFX-Cbonds Index List

1. In the framework of this Methodology the Index List is a list of ruble-denominated bonds issued by Russian issuers and admitted for trading on the MICEX. IFX-Cbonds Index is calculated on the basis of this list.
2. The Index List is formed and amended by the Expert Board set up for this purpose. The Index List contains bonds of no fewer than 10 issues.
3. The Index List is revised by the Expert Board no sooner than once a quarter. Information on amendments to the Index List is disclosed on the website of OOO Cbonds.info and in the newswire of ZAO Interfax no later than two weeks prior to changing the List.

### IFX-Cbonds Index List Formation

1. We start forming the list for calculating IFX-Cbonds by picking all ruble-denominated corporate bonds listed on quotation lists (A1, A2 and B) of the MICEX.
2. Then we exclude foreign currency-pegged bonds from the array of bonds outlined in Clause 3.1.
3. Then we exclude bonds maturing or puttable/callable in less than 120 days from the array of bonds selected in Clause 2.
4. Then we exclude bonds with low secondary market liquidity from the array of bonds selected in Clause 3.3. Bonds are excluded if
  - 4.a. the number of days when the bond issue was not traded in the main trading mode on the MICEX exceeds half of the trading days in the quarter;
  - 4.b. the average daily trading turnover for this bond issue in the previous quarter over the period when the issue was admitted for trading on the trading floor was below RUB 3bn.
5. The list formed in line with the above mentioned rules is called the Market Securities List and is used for formation of the Index List.

6. The Index List includes all bonds from the Market Securities List if their market capitalisation accounts for 5% or more of the total market value of bonds on the MICEX quotation lists.
7. If this list accounts for 95% of the market value of all bonds from the Market Securities List but counts fewer than 10 issuers, it is expanded by bond issues having the biggest share by market value until the number of issuers reaches 10 whereby the formation of the list is completed.
8. If this list does not account for 95% of the market value of all bonds from the Market Securities List, it is expanded by bond issues having the biggest share by market value until either the 95% threshold is reached (and then all steps to meet conditions outlined in Clause 7 are taken) or the number of bond issues reaches 30.
9. If the selection process outlined in Clause 3.8 is completed based on the criterion of the number of securities on the list, but all securities on the list account for 25% or more of market value of all bonds but the number of issuers on the index list is fewer than 10, then the index list formation is completed. Otherwise the list is expanded by bond issues having the biggest share by market value until the number of issuers reaches 10.
10. If 30 bonds are selected, but the 25% threshold is not reached, the list is expanded by bonds until this threshold is reached and until the number of issuers on the Index List is no fewer than 10.

### Russian Corporate Bond Index List Formation

1. When calculating the index we primarily take into account all corporate bonds traded on the MOEX.
2. Foreign currency-pegged bonds are excluded from the list of bonds described in item 1;
3. Floating rate bonds are excluded from the list of bonds described in 1;
4. Bonds with maturity less than 1 year are excluded from the list of bonds described in 2;
5. Bonds with total value less than 1 bln RUB are excluded from the list of bonds described in 3;
6. Bonds, issued by organizations rated lower than B- (Fitch, Standard&Poor's) or B3 (Moody's) or having less than 2 ratings from different rating agencies in any combination are excluded from the list of bonds described in 4;
7. Low liquidity bonds are excluded from the list of bonds described in 5. Low liquidity bonds defined according to the following criteria: the number of days when the issue was not traded on the trading floor mentioned in item 1 exceeds half the trading days of the month when the issue was admitted for trading.

The list formed in line with the above mentioned criteria is referred to as the Market Securities List.

### Index List Formation:

1. Market Securities List is divided into 2 sectorial sub lists (further "Sectorial Lists"): "Banks and Financial Institutions" and "Real Sector Companies";
2. Each of the Sectorial Lists is divided into 3 sectorial sub lists according to the issuer's credit quality : BBB, BB, B (further "Sectorial Sub Lists");
3. Aggregated List fully consisting of securities included in Market Securities List is generated;
4. Aggregated List is divided into 3 sectorial sub lists according to the issuer's credit quality: BBB, BB, B and 3 sectorial sub lists according to the bonds time to maturity: 1-3 years, 3-5 years, more than 5 years (further "Aggregated Sub Lists");
5. Sectorial Sub Lists and Aggregated Sub Lists form set of Index Lists.

The Index Lists are reviewed according to the following criteria:

1. On a quarterly basis, in the first working day of January, April, July, September;

2. On the first working day of the month, following the month, during which the assignment of a credit rating below B- (Fitch, Standard&Poor's) or B3 (Moody's) to the issuer, whose securities are listed in any number of Index Lists, was disclosed according to the current laws of the Russian Federation.

Indexes are calculated daily as of the date, when we have updated the quotes, based on at least 5% of the issues in the index portfolio.

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## Annex: summary table of index lists criteria

Index	Region	Country	Type of notes	Coupon	Segment	Currency	Min. term to maturity (days)	Max. term to maturity (days)	Rating	Review frequency	Index calculated since	Number of days when quotes were posted on Cbonds	The issue minimum amount
<b>Russian government bonds Index family</b>													
<b>Cbonds-GBI RU</b>	CIS	Russia	Bonds	fixed	gov	RUB	360	-	-	quarterly	01.01.2010	half the trading days of the quarter	-
<b>Cbonds-GBI RU 1-3Y</b>	CIS	Russia	Bonds	fixed	gov	RUB	360	1080	-	quarterly	01.01.2010	half the trading days of the quarter	-
<b>Cbonds-GBI RU 3-5Y</b>	CIS	Russia	Bonds	fixed	gov	RUB	1080	1800	-	quarterly	01.01.2010	half the trading days of the quarter	-
<b>Cbonds-GBI RU 5Y</b>	CIS	Russia	Bonds	fixed	gov	RUB	1800	-	-	quarterly	01.01.2010	half the trading days of the quarter	-
<b>Russian municipal bonds Index family</b>													
<b>Cbonds-Muni</b>	CIS	Russia	Bonds	fixed	muni	RUB	4 months	-	-	quarterly	01.09.2003	half the trading days of the quarter, turnover below RUR10bn	-

### Russian corporate bonds Index family

<b>IFX-Cbonds</b>	CIS	Russia	Bonds	fixed	corp	RUB	120	-	-	quarterly	01.01.2002	half the trading days of the quarter, turnover below RUR3bn	-
<b>Cbonds-CBI RU BBB</b>	CIS	Russia	Bonds	fixed	corp	RUB	360	-	not lower than Baa3 by Moody's and/ or BBB- by S&P and Fitch (2 of 3)	quarterly	01.01.2010	half the trading days of the quarter	1 000 000 000
<b>Cbonds-CBI RU BB</b>	CIS	Russia	Bonds	fixed	corp	RUB	360	-	not lower than Ba3 by Moody's and/ or BB- by S&P and Fitch (2 of 3)	quarterly	01.01.2010	half the trading days of the quarter	1 000 000 000
<b>Cbonds-CBI RU B</b>	CIS	Russia	Bonds	fixed	corp	RUB	360	-	not lower than B3 by Moody's and/ or B- by S&P and Fitch (2 of 3)	quarterly	01.01.2010	half the trading days of the quarter	1 000 000 000
<b>Cbonds-CBI RU 1-3Y</b>	CIS	Russia	Bonds	fixed	corp	RUB	360	1080	not lower than B3 by Moody's and/ or B- by S&P and Fitch (2 of 3)	quarterly	01.01.2010	half the trading days of the quarter	1 000 000 000
<b>Cbonds-CBI RU 3-5Y</b>	CIS	Russia	Bonds	fixed	corp	RUB	1080	1800	not lower than B3 by Moody's and/ or B- by S&P and Fitch (2 of 3)	quarterly	01.01.2010	half the trading days of the quarter	1 000 000 000
<b>Cbonds-FBI RU BBB</b>	CIS	Russia	Bonds	fixed	corp	RUB	360	-	not lower than Baa3 by Moody's and/ or BBB- by S&P and Fitch (2 of 3)	quarterly	01.01.2010	half the trading days of the quarter	1 000 000 000
<b>Cbonds-FBI RU BB</b>	CIS	Russia	Bonds	fixed	corp	RUB	360	-	not lower than Ba3 by Moody's and/ or BB- by S&P and Fitch (2 of 3)	quarterly	01.01.2010	half the trading days of the quarter	1 000 000 000
<b>Cbonds-RBI RU BBB</b>	CIS	Russia	Bonds	fixed	corp	RUB	360	-	not lower than Baa3 by Moody's and/ or BBB- by S&P and Fitch (2 of 3)	quarterly	01.01.2010	half the trading days of the quarter	1 000 000 000
<b>Cbonds-RBI RU BB</b>	CIS	Russia	Bonds	fixed	corp	RUB	360	-	not lower than Ba3 by Moody's and/ or BB- by S&P and Fitch (2 of 3)	quarterly	01.01.2010	half the trading days of the quarter	1 000 000 000