

## 1. Description of the index

### 1.1 Official Hungarian name of the index:

MAX Composite CA IB Értékpapír Rt. - Profitvadász Magyar Állampapír Index

### 1.2 Official English name of the index:

MAX Composite CA IB Securities Ltd. - Profitvadász Hungarian Government Debt Securities Total Return Index

### 1.3 Official abbreviation of the index:

MAX Composite

### 1.4 Basis of the index:

100.0000 points on December 31, 1996 (trading day)

### 1.5 Frequency of calculating and publishing the index:

The index is calculated once each trading day during the daily trading hours of government securities. The daily index value is rounded to four decimal points and published in HUF, US dollars and German Marks (from 1 January, 1999 in euros) on Reuters' HUBONDINDEX1 and .HUMAXCOMP pages after 2 pm CET every day.

### 1.6 Formula of the index:

$$MaxCom_t = MaxCom_{t-1} \cdot \left[ \frac{Max_t}{Max_{t-1}} \cdot \frac{w(Max_{t-1})}{w(Max_{t-1}) + w(RMax_{t-1})} + \frac{RMax_t}{RMax_{t-1}} \cdot \frac{w(RMax_{t-1})}{w(Max_{t-1}) + w(RMax_{t-1})} \right]$$

where

$Max_t$  is the value of Max index on trade date t,

$RMax_t$  is the value of RMax index on trade date t,

$w_{t-1}$  is the daily market value of Max index, or RMax index on trade date t-1.

The MAX Composite Index shall be calculated as an average of MAX and RMAX index values on the basis of their market weight. The weight of index constituents is expressed in percentage form and it is a relationship of the daily market value of the given index on 't-1' day to the sum of the daily market value of the two indices. The application of the 't-1st' day can be explained by the index methodology, because 't-1' day weights are used in 't' day index values.

## 2. Objective of the index

The successful introduction of MAX Index in 1997 encouraged the elaboration of another index supplementing the government bond index. Although from the second

half of 1995, the market demand has shifted to longer term fixed rate government securities from short term or floating rate securities playing a dominant role until then, the share of instruments with residual maturity shorter than one year is still significant in the maturity structure.

These aspects were taken into consideration when the RMAX Index was worked out that contains government bonds and discount Treasury bills with residual maturity between three months and one year. The calculation method of the index is the same as for MAX Index, i.e. the total return index concept laid down by the European Federation of Analysts' Societies (EFFAS) Commission on Bonds was applied. The RMax index as well as Max index were described in a separate document in a very detailed fashion.

A characteristic feature of the total return index is that it uses dirty prices (clean price + accrued interest) so the accrued interest is continuously increasing the index value. For discount Treasury bills the accrued interest is contained in the price and accrues until redemption. All coupons paid by the issuer for the constituent bonds are automatically reinvested in the index, proportionally to the weights of the papers (government bonds + discount Treasury bills) in the index basket. If a government bond, or a discount Treasury bill is excluded from the index basket, the market value of the security shall be reinvested in the actual index basket. As the index is calculated by using the so called chain-link method, i.e. the today's index value is defined as the previous day index value multiplied by the weighted percentage change in dirty prices of the current constituents since the previous index calculation, the changes in the constituents should not cause the index calculations to jump or get distorted.

The RMAX Index is very closely related with the MAX Index, because the government bonds excluded from the latter index are automatically included in RMAX Index thereby complementing discount Treasury bills. The composite index of the two indices based on their market shares is the MAX Composite index, which contains all discount Treasury bills and government bonds included in the primary dealer system.

### 3. General principles

#### 3.1 Composition of the index basket

A government security shall be added to the index basket if it meets the following criteria:

- it is a fixed rate Hungarian Government Bond and Discount Treasury Bill that has been issued publicly,
- it is subject to Primary Dealer price quotation obligation, and Primary Dealers quote secondary market bid and offer prices for the government bond or the discount Treasury bill,
- it has more than 91 days to final maturity when it is added to the index basket.

#### 3.2 Weighting of government securities included in the index basket

Government bonds and discount Treasury bills are represented in the index basket by their amount accepted at the auctions at par value. The sum of these amounts constitute the total nominal value of the index basket. The weight of individual government bonds and discount Treasury bills in the index basket is determined by the relationship of their nominal value accepted at the auction to the nominal value of the whole index basket. The weights of constituent government bonds is reviewed once a month, on the first trading day of the month following the month when the government bond was re-opened. In case the re-opening date of a constituent government bond falls on the first trading day of a month, the weight of the bond is reviewed on the first trading day of the given month. If a constituent government bond is bought back through a publicly announced reverse auction than its weight is changed when the index basket is revised following the payment date of the reverse auction. The weight of Discount Treasury Bills is modified on the Tuesdays following the auction date. If this day is a holiday than the modification shall be effected on the next trading day.

### 3.3 Reinvestment of coupons paid

The coupons paid by the issuer for constituent bonds are reinvested in government bonds and Discount Treasury Bills included in the current index basket on the interest payment date in proportion to the weights of the individual securities.

### 3.4 Reviewing the index basket

#### 3.4.1 Inclusion

In case the Hungarian State Treasury Government Debt Management Agency issues a government bond that has not existed before and meets all the requirements for the inclusion in the index basket, the government bond will be selected for being added to the basket on the first trading day of the next month. If a given government bond meets all requirements for inclusion in the index basket on the first trading day of the month, it is added to the basket on that day.

In case the Hungarian State Treasury Government Debt Management Agency issues a discount Treasury bill that has not existed before and meets all the requirements for the inclusion in the index basket, the discount Treasury bill will be added to the basket on the Tuesday (trading day) following the discount T-bill auction. If on that day the Hungarian State Treasury Government Debt Management Agency does not disseminate price information for the given discount T-bill than the discount T-bill shall be included in the index on the next revision day connected with discount T-bill auction.

#### 3.4.2 Exclusion

In case the residual maturity of a constituent discount Treasury bill or government bond decreases below 105 days from the value date of the index to the redemption date of the security, than it is excluded from the index basket at its current price value on the next Monday (trading day). If the exclusion day is not a trading day than the securities are excluded on the next trading day.

In line with the index calculation method, the current price value of the bonds and discount T-bills excluded is reinvested in the index constituents according to their weights on the day of exclusion.

If the Hungarian State Treasury Government Debt Management Agency buys back an index constituent bond through a publicly announced reverse auction than on the next index basket revision day the weight of the given bond in the index basket shall be reduced by the amount accepted at the reverse auction.

### 3.5 Treatment of extraordinary events

#### 3.5.1 Interest payments falling due on holidays

If the interest payment of a constituent bond falls due on a holiday, the amount of interest will not be paid or reinvested until the next working day. For index calculation purposes, the coupon payment shall be included in the formula two trading days before the actual payment date.

#### 3.5.2 Lack of price quotation for a security

In case Primary Dealers temporarily suspend price quotation for a constituent security, or incorrect price information is disseminated for technical reasons, the last correct clean price should be used for calculating the index for not longer than 5 consecutive trading days.

In case Primary Dealers' price quotations or the dissemination of correct price information of the security is not restored within 5 trading days from the date of suspension the security must be temporarily excluded from the basket at its current price value on the fifth trading day.

If Primary Dealers' price quotations or the dissemination of correct price information of the security temporarily excluded from the basket return, the security must be reinstated at its current price value in the index basket with the same value date.

In accordance with the index calculation method, the current price value of government bonds being temporarily excluded from the index basket is reinvested in constituent bonds according to their weights on the day of exclusion.