## Rules for the Construction and Maintenance of the

# **OMRX** Indexes

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## 1. Rules for the Construction and Maintenance of the OMRX indexes

### 1.1 Purpose of OMRX

OMRX, is a family of fixed income indexes which share the common purpose of illustrating the changes in value for a particular type of passively managed portfolio of liquid Swedish interest-bearing securities.

All forms of changes in the calculation of indexes in relation to the rules and regulations which are described below must be capable of being justified by the fact that such changes would result in the indexes more accurately reflecting such passively managed, fully-invested portfolios.

OMX AB is the Index Owner, Index Provider and Index Calculator of the OMRX.

## 1.2 General description

The various indexes which are included in the OMRX family are briefly described below:

OMRXTBILL	"Treasury Bill Index", which is an index related to treasury bills.
OMRXMM	"Money Market Index", which is an index related to treasury bills, nominal treasury bonds with benchmark status and a time to maturity of less than one year.
OMRXTBOND	"Treasury Bond Index", which is an index related to nominal treasury bonds with benchmark status.
OMRXGOVT	"Total Index for Government Debt", which is an index related to treasury bills and nominal treasury bonds with benchmark status.
OMRXMORT	"Mortgage Bond Index", which is an index related to mortgage bonds represented by benchmark bonds or the equivalent issued by Stadshypotek AB.
OMRXMORTALL	"Mortgage Bond All Index", which is an index related to mortgage bonds issued by mortgage institutions. Also available in maturity buckets 1-3 years, 3-5 years and 5- years
OMRXBOND	"Bond index", which is an index related to nominal treasury bonds with benchmark status and mortgage bonds represented by benchmark bonds or the equivalent issued by Stadshypotek AB.
OMRXBONDALL	"Bond All index", which is an index related to nominal treasury bonds with benchmark status and mortgage bonds issued by mortgage institutions. Also available in maturity buckets 1-3 years, 3-5 years and 5- years
OMRXTOT	"Total market index", which is an index related to treasury bills, nominal treasury bonds with benchmark status and mortgage bonds represented by benchmark bonds or the equivalent issued by Stadshypotek AB.

OMRXALL "All Index", which is an index related to treasury bills, nominal treasury bonds

with benchmark status and mortgage bonds issued by mortgage institutions.

OMRXON "Overnight Index", which is an index related to rolling overnight investments,

i.e. an index in respect of a portfolio with the shortest possible duration.

OMRXREAL "Real Return Bond Index", which is an index related to government inflation-

linked bonds.

#### 1.3 The index formula

Formula for calculating the OMRX indexes:

(1) 
$$I_t = \frac{\sum_{j=1}^{n_t} (mv_{j,t} + coup_{j,t}) \times issvol_{j,t}}{\sum_{j=1}^{n_t} mv_{j,t-1} \times issvol_{j,t}} \times I_{t-1}$$

Where  $I_t$  indicates the value of the index at time t, t-1 indicates the closing time in the interest rate market on the banking day immediately preceding and where:

 $n_{t} = the number of securities included at time t$ 

 $issvol_{i,t} = the issued volume in nominal terms for loan j at time t$ 

mv<sub>j,t=</sub> the market value for securities j at time t. The term "market value" implies the settlement amount based upon the security's

prospectus and the applicable interest rate for the security at time t for the index calculation. Calculation of the settlement amount is carried out in accordance with calculation principles for the Swedish Money- and Bond Market, i.e. the following is taken into

account:

1. the number of banking days between the expiration day and the settlement day pursuant to practices applicable to the respective securities at any given time, i.e. currently three banking days for

bonds and two banking days for treasury bills.

2. With respect to bonds with coupon, the price is rounded-off to three decimal places before accrued coupon interest is added. Rounding shall take place in accordance with ISMA's principles,

where the number 5 is rounded upwards.

3. Bonds are listed at yield to maturity while treasury bills are listed at the simple interest rate.

4. market value, mv, is calculated in the morning immediately preceding that days index calculation, by using the latest interest

rate (i.e. the interest rate the day before) for the bonds respectively. In this way the fact that the market value has increased, due to that another day has passed and that the market value has increased with the accrued interest, is taken into consideration.

 $coup_{i,t} =$ 

Coupon for bond, with day of coupon at time t.

Separate consideration is given to changes in volumes of issued securities, payable coupons and changes in the securities, which are included in indexes pursuant to equation (1) and in accordance with sections 1.3.1-1.3.4 below. The yields applicable for index calculations are described in section 1.3.5 below.

#### 1.3.1 Eligible securities

Only securities listed on the market OMX STO Fixed Income and submarket OMX STO Benchmark Bonds denominated in SEK (Swedish krona) are eligible.

In order to qualify as index constituents, securities must have a minimum nominal volume of at least SEK 3 bn and a current market quotation by a minimum of three market makers.

## 1.3.2 Monthly index rebalancing

On the fifth banking day each month, the Index Calculator compiles a list with all securities that meet the inclusion criteria and their respective nominal issued volume. The list is published through an index notice on the same day.

The nominal value for volumes issued (issvol $_{j,t}$ ) which are used for index calculation are adjusted after the closing of trading on the seventh banking day each month. For treasury nominal bonds, inflation-linked bonds and treasury bills, changes apply in accordance with the most recent information available from "The Swedish National Debt" or corresponding issue statistics provided by the Swedish National Debt Office.

For mortgage bonds, the issuers provide the index calculator with their respective nominal issued volume.

The above-stated is contingent upon the Index Calculator having obtained, pursuant to an agreement with the Swedish National Debt Office, "The Swedish Central Government Debt" or corresponding issue statistics not later than the seventh banking day during the month in which the adjustment is to be carried out.

## 1.3.3 Intra-month changes

Where a new benchmark or inflation-linked bond is issued in the absence of an exchange of an existing security, such bond shall be included in the index calculation pursuant to the rules and regulations set forth in section 1.3.2 above.

Where a benchmark or inflation-linked bond is exchanged, in whole or in part, the following rules shall apply. The nominal volume shall be adjusted in the morning prior to the opening of trading on the banking day immediately following the last day of the exchange period. The above-stated shall, however, only take place provided the Swedish National Debt Office publishes the total nominal exchange volume for the relevant benchmark bond as well as all other bonds or treasury bills which affect any of the indexes in OMRX at the close of the period, i.e. the last day prior to the carrying out of the adjustment. In the event this information is received by the Index Calculator at a later time, the Index Calculator may carry out the adjustment at a later date.

In the event of an exchange of securities of at least ninety percent of the announced volume during the first exchange day, the index shall be updated on the following Bank Day.

Where a bond is deleted from the Swedish National Debt Office's benchmark system or the equivalent, the nominal value of such bond shall be fixed at 0 on the morning prior to the opening of trading on the banking day immediately following the last day on which the bond has benchmark status or the equivalent.

Bonds are generally excluded from the bond indexes on the first banking day with the settlement date which just have passed one year to maturity<sup>1</sup> – In cases when this occurs close to the monthly rebalancing date, the Index Calculator reserves the right to remove the bond on the same day as the monthly rebalancing date. If such decision is taken, it will be announced in advance through an index notice.

The last day a treasury bond with benchmark status and time to maturity of less than one year is included in index is the banking day with a settlement day on the bonds record date for maturity.

Treasury bills are excluded from index on the banking day with a settlement day the first day in the same month as the treasury bills maturity date.

The Index Calculator shall, in all of the circumstances provide information regarding changes in nominal volumes in due time through an index notice.

#### 1.3.4 Coupon payments

Where a coupon is payable the market value of the bond decreases. However, since the coupon payment is payable to the bondholder, no change in the index value would be justifiable. In order to avoid such circumstances, the index is linked pursuant to equation (1) above.

The index calculation do not take into account record dates, i.e. the banking day which falls five banking days before the coupon date. The index attempts to simulate a passively managed portfolio of benchmark bonds and it is therefore assumed that a payable coupon will be re-invested in the index on the banking day with a settlement day which is identical to the coupon payment day. The fact that bonds are traded without coupons prior to such day will not, therefore, affect the index.

<sup>&</sup>lt;sup>1</sup> This procedure is not applied for treasury bonds with benchmark status in the indexes OMRXGOVT, OMRXTOT and OMRXALL since they allow treasury benchmark bonds with less than one year to maturity.

#### 1.3.5 Interest rates applicable to the index calculations

The interest rates, which are used for the calculation of the applicable interest rate for a specified security, are indicated by authorized dealers of treasury benchmark bonds, inflation linked bonds and treasury bills designated by the Swedish National Debt Office.

The term "interest rates applicable to the index calculations for a specified security" means an interest rate calculated in the following manner. An average value of buy and sell interest rates set forth in the SAXESS system or the equivalent is calculated for each market participant. The applicable interest rate is the median value of the interest rates calculated in such manner.

Erroneous price indications are such indications, which lack a buy and/or sell element as well as such indications according to which the sell interest rate is higher than the buy interest rate. For such erroneous price indications, both the buy and sell interest rates are eliminated prior to the calculation of the applicable rate of interest.

#### 1.4 Publication of the OMRX indexes

All OMRX indexes are calculated in real time and disseminated once per minute between 8.30 a.m. and 4.20 p.m. CET

#### 1.5 Index notices

The Index calculator distributes all OMRX related index information through index notices in the Global Index Watch (GIW) service.

#### 1.6 Limitations of liability

OMX AB shall not be liable for any direct, indirect, incidental, special or consequential damages or lost profits related to or arising out of the use of the index. OMX AB expressly disclaims all warranties of accuracy, completeness, merchantability or fitness for any particular purpose, with respect to the index. Neither OMX AB nor any third party make any warranty or representation whatsoever, express or implied, in respect of the index, the results to be obtained by the use thereof or the value of the index at any given time.

#### 1.7 Amendments

The Index calculator reserves the right to make amendments to these rules and regulations

## Appendix A - Mortgage factor

In calculation of OMRXBOND and OMRXTOT a mortgage factor is used. Since Stadshypotek's benchmark bonds represents the total Swedish mortgage bond market, a percentage calculation of those bonds the nominal volumes is made.

$$f = \frac{NomVolAll}{NomVolStadshypotek}$$

The mortgage factor f is calculated as the ratio between total volume issued by Swedish mortgage institutions and the issued volume of Stadshyptek's Benchmark bonds. Data on total issued volume for Swedish mortgage institutions is obtained from table 6.3.2 in the publication Financial Market Statistics, assembled by SCB (Statistics Sweden) and can be found on SCB's website.

## Appendix B - OMRX Treasury Bill Indexes (30, 60, 90 and 180 days)

$$I_t = I_{t-1} \times \frac{P_t}{P_{t-1}}$$

 $I_t$  = Index value

 $P_t$ = Current trading days index price for the Treasury bill.

 $P_{t-1}$ =Yesterday's trading day's index price for the Treasury bill.

#### **Change of underlying Treasury bill**

When the settlement day of the current Treasury bill falls in a new month, the index is calculated based on a new treasury bill. If due to limitations in issuances and that Treasury bill maturities are missing, a "fictitious" Treasury bill is created, inter- or extrapolated yield will be used.

Example (90-days Treasury bill)

On the day 2010-01-27 (Settlement 2010-01-29) the index is calculated accordingly:

$$I_{27} = I_{26} \times \frac{P_{27,SSV_{1004}}}{P_{26,SSV_{1004}}}$$

On the day 2010-01-28 (Settlement 2010-02-01) the index is calculated accordingly:

$$I_{28} = I_{27} \times \frac{P_{28,SSV1005}}{P_{27,SSV1005}}$$