

Rules of the EuroMTS Indices

v2.1

16 October 2006

Contents

1. EuroMTS Indices Structure

- 1.1 Summary of EuroMTS Indices
- 1.2 EMTX: EuroMTS Index (ex-CNO Etrix)
- 1.3 EMTXg and MTS: EuroMTS Broad and MTS Government Indices
- 1.4 EMTXi: EuroMTS Inflation-Linked Index
- 1.5 EMTXc: EuroMTS Covered Bond Index
- 1.6 EMTXn: EuroMTS New EU Index

2. Generic Features of EuroMTS Indices

- 2.1 Total Return
- 2.2 MTS Price Source
- 2.3 Publication of Index and Underlying Data
- 2.4 Monthly Rebalancing
- 2.5 Analytics

3. Index Algorithms

- 3.1 Monthly Rebalancing and Weights
 - 3.1.1 Indices of Nominal Bonds
 - 3.1.2 Indices of Inflation-Linked Bonds
 - 3.1.3 EuroMTS Index (ex-CNO Etrix)
- 3.2 Index Portfolio Capitalisations
 - 3.2.1 Nominal Bond Portfolios
 - 3.2.2 Inflation-Linked Bond Portfolios
- 3.3 Index Calculation
- 3.4 Analytics

EuroMTS Indices are calculated in accordance with this Rules document. In the event of any error or discrepancy in this document or any variations in the calculation and/or publication of the EuroMTS Indices, EuroMTS disclaims all liabilities, makes no representations, disclaims all warranties (whether implied, express or statutory) and provides no undertakings whatsoever in respect thereof. This document is subject to amendment at short notice. The most recent copy of the Rules document shall always be available on the website (www.euromtsindex.com).

1. EuroMTS Indices Structure

The EuroMTS Indices family is calculated and distributed by EuroMTS, part of the MTS group of markets which collectively comprise Europe's premier electronic market in fixed-income securities hosted on a centralised trading platform. Pre-trade and post-trade market data from the consolidated order book is widely distributed via data vendors, offering the best source of realtime price discovery for the listed securities. All quotes made on the platform are live and tradable to member dealers, and the commitment of liquidity by dealers to securities ensures that the order book is tight and deep.

EuroMTS Indices are calculated in realtime using the best bid data from the MTS platform. Consequently, EuroMTS Indices enjoy the highest degree of price discovery, replicability and independence.

Bond portfolios for each index are constructed by first determining 'Eligible' bonds in accordance with the index rules, and then by selecting bonds from amongst these to become 'Selected' bonds. Although most indices automatically select all Eligible bonds, this approach preserves the historical design of the EuroMTS Index (ex-CNO Etrix) – see section 1.2 below.

1.1 Summary of EuroMTS Indices

EuroMTS Indices are comprised of five index groups:

- EuroMTS Index (ex-CNO Etrix): eurozone sovereign fixed-coupon bonds
- EuroMTS Broad and MTS Government Indices: country and pan-eurozone sovereign fixed-coupon bonds
- EuroMTS Inflation-Linked Index: eurozone sovereign inflation-linked bonds
- EuroMTS Covered Bond Index: euro-denominated covered bonds
- EuroMTS New EU Index: euro-denominated sovereign bonds from EU accession states

1.2 EMTX: EuroMTS Index (ex-CNO Etrix)

Designed and originally published by the French Bond Market Association as the CNO Etrix, the EMTX was adopted by EuroMTS in January 2003 and was upgraded as a realtime index in May 2003. The EMTX is designed to facilitate replicability with maximum tracking accuracy by limiting each eurozone sovereign issuer to two bonds per maturity range with the exception of the 15+ years range. Tracking accuracy for the wide maturity ranges above 15 years requires inclusion of all eligible instruments.

The EMTX structure of one global index and eight sub-indices is shown in Figure 1.1.

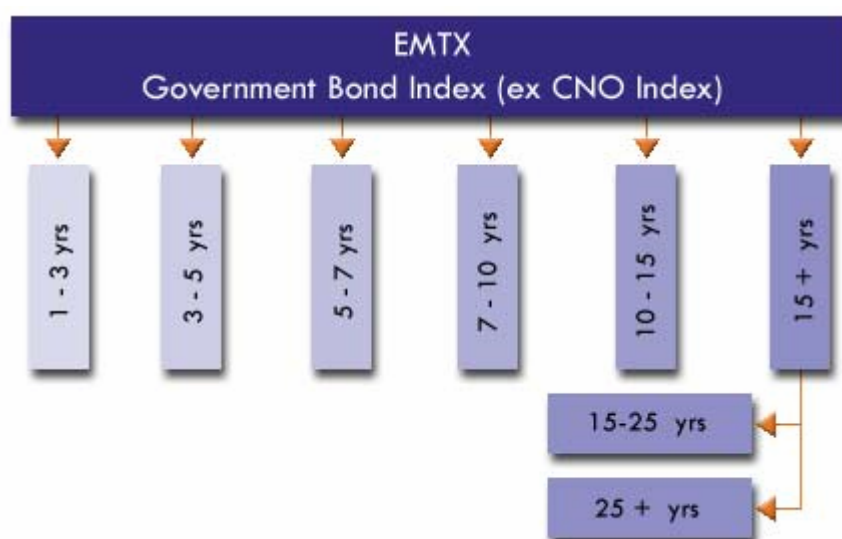


Figure 1.1: EMTX structure

Selections for the EMTX index (ex-CNO Etrix) are done in two steps: first establish Eligible bonds and second, select a limited number of Eligibles for the index as Selected bonds.

Eligibility Criteria

- Nominal, fixed coupon bullet-maturity bonds denominated in euros and having no embedded options or convertibility
- Quoted on the MTS Platform
- Issued by the sovereign government of one of the following eurozone countries: Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, Netherlands, Portugal and Spain
- Having a minimum outstanding amount of €2 billion

Base Dates and Selection Criteria:

<i>Index</i>	<i>Maturity Range</i>	<i>Base Date (Index = 100)</i>	<i>Selection Criteria</i>
EuroMTS Index (all-maturity)	> 1 year	31 Dec 98	All Selected bonds in maturity subindices
EuroMTS Index: subindex	1 – 3 years	31 Dec 98	2 Eligible bonds per issuer that fall in maturity range
EuroMTS Index: subindex	3 – 5 years	31 Dec 98	2 Eligible bonds per issuer that fall in maturity range
EuroMTS Index: subindex	5 – 7 years	31 Dec 98	2 Eligible bonds per issuer that fall in maturity range
EuroMTS Index: subindex	7 – 10 years	31 Dec 98	2 Eligible bonds per issuer that fall in maturity range
EuroMTS Index: subindex	10 – 15 years	31 Dec 98	2 Eligible bonds per issuer that fall in maturity range
EuroMTS Index: subindex	15 – 25 years	31 Dec 98	All Eligible Bonds falling in maturity range
EuroMTS Index: subindex	25+ years	31 Dec 98	All Eligible Bonds falling in maturity range
EuroMTS Index: subindex	15+ years	31 Dec 98	All Eligible Bonds falling in maturity range

If a bond is included in more than one maturity subindex (for example, in both the 15-25 years subindex and the 15+ years subindex), it is included only once in the all-maturity EuroMTS Index.

For maturity sub-indices with a selection limit of 2 bonds per issuer, the Selected bonds belonging to the previous monthly selections that continue to fall in the correct maturity range and continue to be Eligible automatically become Selected bonds for the new month.

For maturity sub-indices with a selection limit of 2 bonds per issuer but having less than 2 Selected bonds to inherit from the previous month for any given issuer, any available Eligible bond with a suitable maturity and issuer is selected. If there is more than one suitable Eligible bond, the bond that maximises the following product becomes the Selected bond:

$$\text{Outstanding Amount} \times \text{Residual Maturity within the Maturity Range}$$

1.3 EMTXg: EuroMTS Broad and MTS Government Indices

The EuroMTS Broad and MTS Government Indices are a family of eurozone sovereign government indices grouped primarily by issuer and secondarily by maturity range. The pan-eurozone, German, French and Italian indices (together with their maturity sub-indices) were launched on 26 June 2006. Each index is supplied with a history of index values dating back to 31 December 1998.

The EuroMTS Broad and MTS Government Indices are:

- EMTXg: EuroMTS Broad Government Index (pan-eurozone)
- MTSD: MTS Deutschland Government Index
- MTSF: MTS France Government Index
- MTSI: MTS Italy Government Index

The purpose of the EuroMTS Broad and MTS Government indices is to represent the performance of individual countries within the eurozone and to facilitate comparisons between different countries and the wider eurozone itself. The indices are based on the same Eligible bonds used for the EuroMTS Index (ex-CNO Etrix) but, unlike that index, all Eligible bonds are selected without restriction (subject to the issuer matching the index). For this reason, the EMTXg will closely track the EMTX (ex-CNO Etrix) but is denoted 'Broad' in order to distinguish it from the EMTX (ex-CNO Etrix).

The EMTXg Broad and MTS Government Indices structure is shown in Figure 1.2.

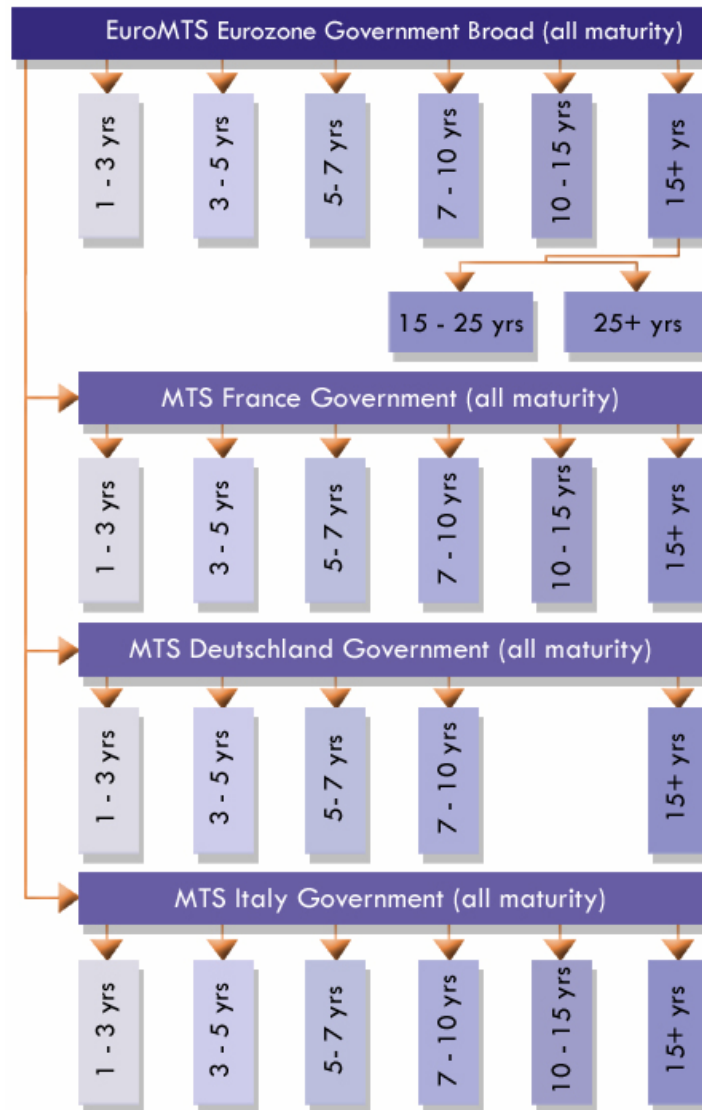


Figure 1.2: EMTXg Broad and MTS Government Indices

Each member of the EMTXg Broad and MTS Government Indices family has the following bond eligibility criteria. All Eligible bonds automatically become Selected bonds.

Eligibility Criteria

- Nominal, fixed coupon bullet-maturity bonds denominated in euros and having no embedded options or convertibility
- Quoted on the MTS Platform
- Issued by the sovereign government of one of the following eurozone countries: Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, Netherlands, Portugal and Spain
- Having a minimum outstanding amount of €2 billion
- Having the following issuer and maturity range

<i>Index</i>	<i>Maturity Range</i>	<i>Base Date (Index = 100)</i>	<i>Issuer (sovereign)</i>
EMTXg (all-maturity)	> 1 year	31 Dec 98	Any eurozone
EMTXg: subindex	1 – 3 years	31 Dec 98	Any eurozone
EMTXg: subindex	3 – 5 years	31 Dec 98	Any eurozone
EMTXg: subindex	5 – 7 years	31 Dec 98	Any eurozone
EMTXg: subindex	7 – 10 years	31 Dec 98	Any eurozone
EMTXg: subindex	10 – 15 years	31 Dec 98	Any eurozone
EMTXg: subindex	15 – 25 years	31 Dec 98	Any eurozone
EMTXg: subindex	25+ years	31 Dec 98	Any eurozone
EMTXg: subindex	15+ years	31 Dec 98	Any eurozone
MTSD (all-maturity)	> 1 year	31 Dec 98	Germany
MTSD: subindex	1 – 3 years	31 Dec 98	Germany
MTSD: subindex	3 – 5 years	31 Dec 98	Germany
MTSD: subindex	5 – 7 years	31 Dec 98	Germany
MTSD: subindex	7 – 10 years	31 Dec 98	Germany
MTSD: subindex	15+ years	31 Dec 98	Germany
MTSF (all-maturity)	> 1 year	31 Dec 98	France
MTSF: subindex	1 – 3 years	31 Dec 98	France
MTSF: subindex	3 – 5 years	31 Dec 98	France
MTSF: subindex	5 – 7 years	31 Dec 98	France
MTSF: subindex	7 – 10 years	31 Dec 98	France
MTSF: subindex	10 – 15 years	31 Dec 98	France
MTSF: subindex	15+ years	31 Dec 98	France
MTSI (all-maturity)	> 1 year	31 Dec 98	Italy
MTSI: subindex	1 – 3 years	31 Dec 98	Italy
MTSI: subindex	3 – 5 years	31 Dec 98	Italy
MTSI: subindex	5 – 7 years	31 Dec 98	Italy
MTSI: subindex	7 – 10 years	31 Dec 98	Italy
MTSI: subindex	10 – 15 years	31 Dec 98	Italy
MTSI: subindex	15+ years	31 Dec 98	Italy

1.4 EMTXi: EuroMTS Inflation-Linked Index

The EMTXi is a family of bond indices comprised of inflation-linked bonds issued by eurozone sovereign governments. The EMTXi Aggregate (all-maturity), comprised of all eurozone sovereign inflation-linked bonds, was launched on 3 June 2004 and has been published in real-time since October 2004. Eight additional members of the EMTXi family were launched in real-time on 16 March 2005.

Each member of the EMTXi family is supplied with a history of index values and analytics dating back to the introduction of their respective underlying bonds (the earliest history dates from 31 December 1998).

The EMTXi Aggregate (all-maturity) is published together with a 'Break-Even' index ("EMTXi Aggregate BE"). The EMTXi Aggregate BE is based on a portfolio of nominal bonds chosen to match the maturities and issuers of the individual inflation-linked bonds. The EMTXi Aggregate BE provides a direct comparison between the inflation-linked bond market and the nominal bond market. The spread between the yields of the EMTXi and the EMTXi Aggregate BE provides the market expectation of future inflation.

The EMTXi family is organised by classifying the universe of eurozone sovereign inflation-linked bonds according to (a) underlying inflation reference, (b) to maturity range and (c) to issuer. The EMTXi family structure of one global index and eight sub-indices is shown in Figure 1.3.

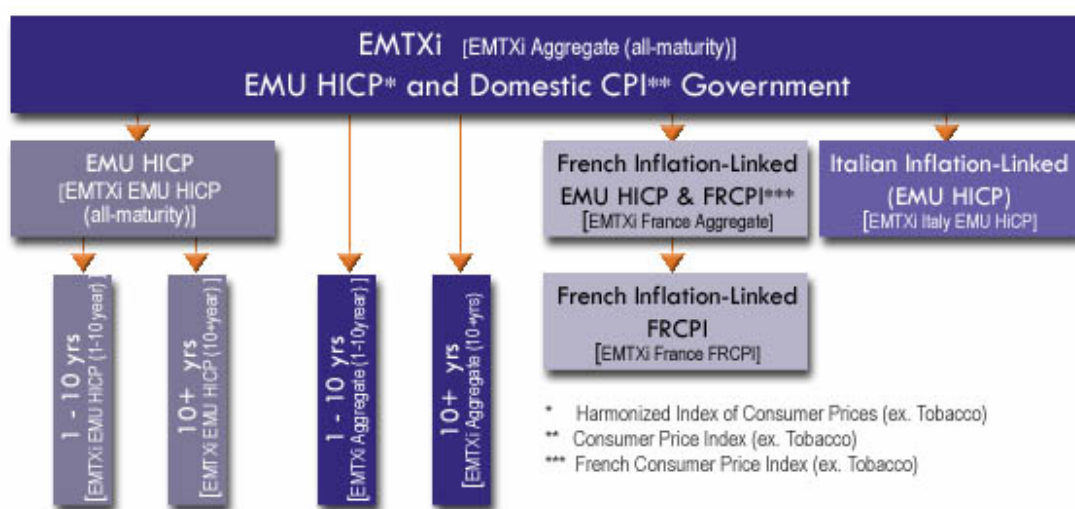


Figure 1.3: EMTXi Family Structure

Each member of the EMTXi family has the following bond eligibility criteria. All Eligible bonds automatically become Selected bonds.

Eligibility Criteria

- Inflation-linked bonds issued by a sovereign government belonging to the eurozone
- At least €2 billion in size
- Quoted on the MTS Platform

- Has the following inflation reference and issuer

<i>Index</i>	<i>Maturity Range</i>	<i>Base Date (Index = 100)</i>	<i>Issuer (sovereign)</i>	<i>Inflation Reference</i>
EMTXi Aggregate	> 1 year	31-Dec-98	Any eurozone	EMU HICP or Domestic CPI
EMTXi Aggregate	1 – 10 years	30-Nov-99	Any eurozone	EMU HICP or Domestic CPI
EMTXi Aggregate	10+ years	30-Nov-99	Any eurozone	EMU HICP or Domestic CPI
EMTXi EMU HICP	> 1 year	31-Dec-01	Any eurozone	EMU HICP
EMTXi EMU HICP	1 – 10 years	31-Dec-02	Any eurozone	EMU HICP
EMTXi EMU HICP	10+ years	31-Dec-02	Any eurozone	EMU HICP
EMTXi France Aggregate	> 1 year	31-Dec-98	France	EMU HICP or France CPI Ex-Tobacco
EMTXi France FR CPI	> 1 year	31-Dec-98	France	France CPI Ex-Tobacco
EMTXi Italy EMU HICP	> 1 year	28-Nov-03	Italy	EMU HICP

in which *EMU HICP* means the eurozone HICP Ex-Tobacco Index and *Domestic CPI* means the France CPI Ex-Tobacco Index or any other as determined by EuroMTS

1.5 EMTXc: EuroMTS Covered Bond Index

The EMTXc is a family of 14 bond indices comprised of euro-denominated covered bonds. The EMTXc family was launched on 18 July 2005. The EMTXc Aggregate (all-maturity) index, which includes all covered bonds in all other EMTXc indices, is supplied with a history of index values and analytics dating back to 3 January 2000.

Seven additional indices defined by nationality of issuer and maturity range are supplied with histories also dating back to 3 January 2000. The EMTXc family is completed with another 6 indices that date from 1 October 2003. In the case of German Pfandbriefe, sub-indices for Oeffentliche and Hypothekenpfandbriefe are included.

Figure 1.4 summarises the EMTXc family structure.

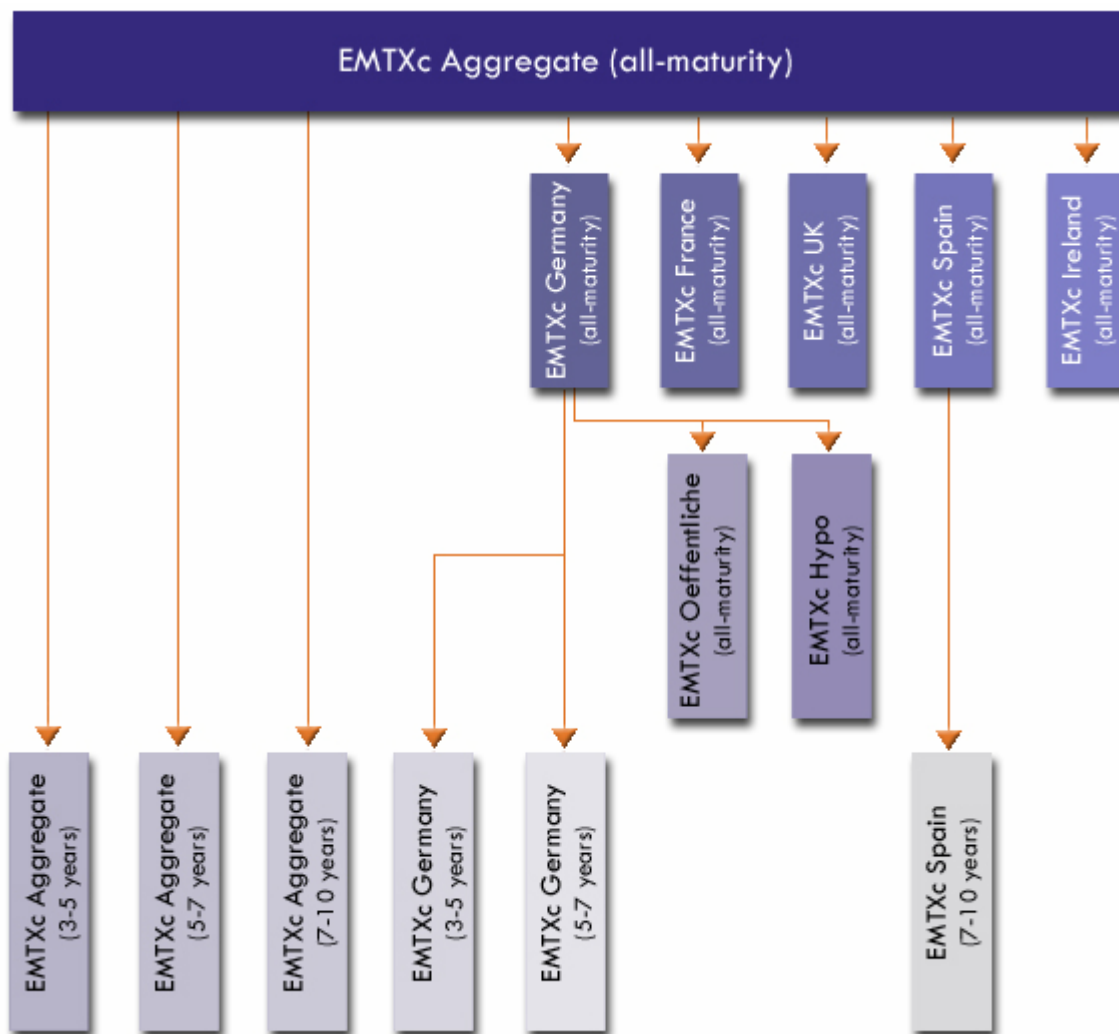


Figure 1.4: EMTXc Family Structure

Each member of the EMTXc family has the following bond Eligibility criteria. All Eligible bonds automatically become Selected bonds.

Eligibility Criteria

- Nominal, fixed coupon bullet-maturity bonds denominated in euros and having no embedded options or convertibility
- Quoted on the MTS platform
- Covered with mortgages and/or public sector loans

- Satisfies the following criteria for each EMTXc index

<i>Index</i>	<i>Maturity Range</i>	<i>Base Date (Index = 100)</i>	<i>Country of Issuer</i>	<i>Note</i>
EMTXc Aggregate (all-maturity)	> 1 year	3 Jan 00	any country	-
EMTXc Aggregate (3 - 5 years)	3 – 5 years	3 Jan 00	any country	-
EMTXc Aggregate (5 - 7 years)	5 – 7 years	3 Jan 00	any country	-
EMTXc Aggregate (7 - 10 years)	7 – 10 years	3 Jan 00	any country	-
EMTXc Germany (all-maturity)	> 1 year	3 Jan 00	Germany	-
EMTXc Germany (3 - 5 years)	3 – 5 years	3 Jan 00	Germany	-
EMTXc Germany (5 - 7 years)	5 – 7 years	3 Jan 00	Germany	-
EMTXc Oeffentliche (all-maturity)	> 1 year	1 Oct 03	Germany	Oeffentliche bonds only
EMTXc Hypo (all-maturity)	> 1 year	1 Oct 03	Germany	Hypothekenpfandbriefe bonds only
EMTXc France (all-maturity)	> 1 year	3 Jan 00	France	-
EMTXc UK (all-maturity)	> 1 year	1 Oct 03	UK	-
EMTXc Spain (all-maturity)	> 1 year	1 Oct 03	Spain	-
EMTXc Spain (7 - 10 years)	7 – 10 years	1 Oct 03	Spain	-
EMTXc Ireland (all-maturity)	> 1 year	1 Oct 03	Ireland	-

1.6 EMTXn: EuroMTS New EU Index

The EMTXn is a single index comprised of sovereign issues from new entrants to the EU and from future accession states.

The EMTXn index has the following bond Eligibility criteria. All Eligible bonds are automatically Selected.

Eligibility Criteria

- Sovereign issue of Poland, Hungary, Lithuania, Slovak Republic, or the Czech Republic, or any future EU member as determined by EuroMTS
- Nominal, fixed coupon bullet-maturity bonds denominated in euros and having no embedded options or convertibility
- Quoted on the New EuroMTS platform
- At least €1 billion in outstanding nominal size

2. Generic Features of EuroMTS Indices

2.1 Total Return

EuroMTS Indices are total return indices. Coupons paid out on any bond in an index portfolio are reinvested overnight in the index itself.

2.2 MTS Price Source

EuroMTS Indices are priced using live quotes from the inter-dealer MTS platform. Each bond quoted on the MTS platform is supported by multiple dealers supplying tight, continuous quotes. These quotes are widely distributed for information to the market via data vendors.

Any bond included in a EuroMTS Index must first be quoted on MTS. This is a very wide criteria that excludes only extremely illiquid bonds, a fact that improves the replicability of the EuroMTS Indices.

Index updates are calculated using best bids. New bonds entering an index portfolio for the first time use the best offer. This replicates the bid-offer spread that would be experienced by a funding tracking the index.

The prices used to update the indices are taken from the MTS market every 30 seconds. In the event that there is no market price for a given 30 second update, the index will be calculated using a "Last Good Price" (LGP), i.e. the most recent acceptable market price for the affected bond. In addition, the index process filters for off-market prices. In the event of an off-market price, the LGP is used until either an on-market price is available or until the filter is overridden.

Note for EuroMTS Covered Bond Index: During each Christmas and New Year period, the established convention of the covered bond market is to suspend all formal covered bond quotation for a period of up to two weeks. During this period, indicative covered bond prices are derived for the EMTXc calculation by applying the par asset swap spread for each bond to a swap curve. Each bond spread is averaged over 10 working days prior to the suspension of bond quotations. The swap curve is updated once per day, meaning that the indicative bond prices are also updated once per day during the suspension period. The dates for such suspension periods are announced each year immediately after they are established by the market.

2.3 Publication of Index and Underlying Data

EuroMTS Indices are published every 30 seconds between 09:00 CET and 17:30 CET, and with two fixings at 11:00 CET and 16:00 CET.

Bond prices used for the 11:00 CET and 16:00 CET fixings are published on the website. Realtime bond prices directly from the MTS platform are available from data vendors. These bond prices are distributed with a higher frequency than the 30 second index updates.

Underlying bond portfolio composition and weights are also published on the website.

Access to the website (www.euromtsindex.com) is free and unrestricted.

2.4 Monthly Rebalancing

EuroMTS Indices are rebalanced every calendar month. New selections for the index portfolios and their weights are established using market data at 11:00 CET on the first TARGET business day following the 15th day of the month prior to the effective date of the new selections (such first business day following the 15th being the "Selection Day"). The first

settlement day of any bond following issuance must be on or before the Selection Day in order for that bond to be eligible for the new monthly selections.

Selections apply from and including the second business day of each month until and including the first business day of the next month.

Maturity ranges for a monthly selection are establishing from the first calendar day of the following month.

In the event that there are no Eligible bonds available to be selected for a new monthly index portfolio, the index is held constant once the current (populated) index portfolio expires. Index calculation resumes from the effective date of the next populated monthly index portfolio.

2.5 Analytics

Each EuroMTS Index is published together with

- Average Coupon
- Average Maturity
- Average Yield
- Average Macaulay Duration
- Average Modified Duration
- Average Convexity

3. Index Algorithms

3.1 Monthly Rebalancing and Weights

Eligible bonds are determined in accordance with the criteria for each EuroMTS Index. Selections are made either by including all Eligible bonds or, in the case of some EuroMTS Index (ex-CNO Etrix) sub-indices, by including a subset of the Eligible bonds.

The weight W_i of each Selected bond i is determined using data from 11:00 CET on the first business day following the 15th day of the month immediately preceding the effective month¹. This time is denoted t_0 .

All weights are published to 3 decimal places.

3.1.1 Indices of Nominal Bonds

For indices of nominal bonds in which all Eligible bonds are automatically Selected, the weight W_i is calculated in accordance with the following equation:

$$W_i = \frac{(Cp_i[t_0] + AI_i[t_0]) \times N_i[t_0]}{\sum_j (Cp_j[t_0] + AI_j[t_0]) \times N_j[t_0]}$$

in which $Cp_i[t_0]$ is the quoted clean price of Selected bond i at t_0 and $AI_i[t_0]$ is the accrued interest. $N_i[t_0]$ is the nominal amount of Selected bond i outstanding on day t_0 and the summation (using the index j) is over all Selected bonds for that index.

3.1.2 Indices of Inflation-Linked Bonds

For indices of inflation-linked bonds in which all Eligible bonds are automatically Selected, the weight W_i is calculated in accordance with the following equation:

$$W_i = \frac{(Cp_i[t_0] + AI_i[t_0]) \times IR_i[t_0] \times N_i[t_0]}{\sum_j (Cp_j[t_0] + AI_j[t_0]) \times IR_j[t_0] \times N_j[t_0]}$$

in which $IR[t_0]$ is the Index Ratio i.e. the inflation multiplier applicable to the un-inflated nominal amount outstanding $N_i[t_0]$ at time t_0 and other definitions are as above.

¹ For example, in respect of the June 06 Selection, t_0 would be 11:00 CET on Tuesday 16th May 06.

3.1.3 EuroMTS Index (ex-CNO Etrix)

For historical reasons, some of the subindices belonging to the EuroMTS Index (ex-CNO Etrix) include only a subset of all Eligible bonds as Selected bonds (see Section 1.2 for details of which). Additionally, Selected bonds for the EuroMTS Index (all-maturity) are simply those that are selected for the maturity sub-indices (i.e. a combination of some and all bonds Eligible in respect of each subindex).

EuroMTS Index subindices that automatically Select all Eligible bonds are weighted in respect of that subindex in accordance with the normal formula for nominal bond weights (see 3.1.1).

EuroMTS Index subindices in which only a subset of the available Eligible bonds become Selected bonds are weighted by splitting the total relative capitalisation of all an issuer's Eligible bonds within that subindex pro-rata the capitalisation of the bonds selected to represent that issuer in the subindex (up to a maximum of two bonds per issuer).

Denoting the market capitalisation of bond i at time t as $CB_i[t]$, i.e.

$$CB_i[t] = (Cp_i[t] + AI_i[t]) \times N_i[t]$$

and denoting the issuer of bond i as $s(i)$ then the weight for the i^{th} bond is calculated as

$$W_i = \left[\frac{\sum_j^{\text{Eligible Bonds}} (CB_j[t_0] \times \delta^{s(j),s(i)})}{\sum_j^{\text{Eligible Bonds}} CB_j[t_0]} \right] \times \left[\frac{CB_i[t_0]}{\sum_k^{\text{Selected Bonds}} (CB_k[t_0] \times \delta^{s(k),s(i)})} \right]$$

The summations over j imply the summation of the market capitalisations of the *Eligible* bonds in respect of the given subindex, whereas the summation over k implies the summation of the market capitalisations of only the *Selected* bonds in respect of the same subindex.

The $\delta^{s(j),s(i)}$ function equals one if issuer $s(j)$ and issuer $s(i)$ are the same government and otherwise equals zero. This term ensures that only bonds from issuer $s(i)$ are included in the summations.

Finally, the EuroMTS Index (all-maturity) is composed of bonds included in the subindices (with only one inclusion of any bond that appears in more than one subindex). The weight of each bond in the all-maturity index is the weight of the bond in the subindex multiplied by the capitalisation of that subindex relative to the total capitalisation of all subindices.

The total capitalisation K_r of subindex r is defined as the total market capitalisation of all Eligible bonds for that subindex, i.e.

$$K_r = \sum_i^{\text{Eligible Bonds}} CB_i[t_0]$$

The weight of bond i in the all-maturity index, $W_i^{\text{all-maturity}}$, is defined in terms of that bond's weight in the subindex r to which it also belongs, $W_i^{r(i)}$, as follows:

$$W_i^{\text{all-maturity}} = W_i^{r(i)} \times \frac{K_{r(i)}}{\sum_s K_s}$$

Note that if a bond is selected in more than one subindex, then

- The bond is selected for the all-maturity index once only
- The weight of the bond in the wider subindex is used in calculating the weight in the all-maturity index (i.e. for a 17 year bond, the 15+ years subindex is considered and the 15-25 years subindex is not used).

3.2 Index Portfolio Capitalisations

Index calculations are based on the weighted capitalisation of the underlying bond portfolios, both including and excluding any coupons paid out.

There are two types of calculation reflecting the two bond types used in EuroMTS Indices: fixed coupon nominal bonds and inflation-linked bonds.

3.2.1 Nominal Bond Portfolios

- including EuroMTS Index (ex-CNO Etrix)

The weighted capitalisation $V[t,d]$ of a nominal bond index portfolio at time t on day d and including any coupons paid out is calculated as

$$V_{\text{WithCoupon}}[t,d] = \sum_i \frac{W_i}{(Cp_i[t_0] + AI_i[t_0])} \times (Cp_i[t,d] + AI_i[d] + \Delta[d,d-1] \times C_i)$$

where $\Delta[d,d-1] = 1$ if and only if the settlement of d falls in a different coupon accrual period from the settlement of the previous trading day ($d-1$) and C_i is the coupon payable in respect of the coupon accrual period in which the settlement of $d-1$ falls (e.g. half the annual coupon if the bond is a semi-annual security, or an adjusted coupon if the accrual period is a long or short first period).

The weighted capitalisation $V[t,d]$ excluding any coupons paid out is

$$V_{\text{NoCoupon}}[t,d] = \sum_i \frac{W_i}{(Cp_i[t_0] + AI_i[t_0])} \times (Cp_i[t,d] + AI_i[d])$$

3.2.2 Inflation-Linked Bond Portfolios

The weighted capitalisations $V[t,d]$ of an inflation-linked bond index portfolio includes the inflation ratio $IR[d]$:

$$V_{\text{WithCoupon}}[t,d] = \sum_i \frac{W_i}{(Cp_i[t_0] + AI_i[t_0]) \times IR_i[t_0]} \times (Cp_i[t,d] + AI_i[d] + \Delta[d,d-1] \times C_i) \times IR_i[d]$$

in which C_i is the real coupon, and

$$V_{\text{NoCoupon}}[t,d] = \sum_i \frac{W_i}{(Cp_i[t_0] + AI_i[t_0]) \times IR_i[t_0]} \times (Cp_i[t,d] + AI_i[d]) \times IR_i[d]$$

3.3 Index Calculation

Each index is calculated at time t on trading day d as follows:

$$I[t,d] = I[11:00\text{CET}, d-1] \times \frac{V_{\text{WithCoupon}}[t,d]}{V_{\text{NoCoupon}}[11:00\text{CET}, d-1]}$$

Note that

- The 11:00 CET base index and the base weighted capitalisation (both on $d-1$) are used for the 11:00 CET fixing, the 16:00 CET fixing and the realtime index process
- The $V_{\text{WithCoupon}}$ and V_{NoCoupon} used in the above equation must always be calculated in respect of the same monthly selection of bonds. For this reason, although an expiring selection of bonds is used until the end of the first business day of a new month, a V_{NoCoupon} calculation is made for the new selection of bonds at 11:00CET on the first business day. This value is not used until the second business day, when it is used as the base (i.e. $d-1$) weighted capitalisation for that day. Note that this value is calculated using best offer prices for new Selected bonds, and using best bid prices for all other Selected bonds.

3.4 Analytics

Each EuroMTS Index is published together with

- Average Coupon
- Average Maturity
- Average Yield
- Average Macaulay Duration
- Average Modified Duration
- Average Convexity

With the exception of the average yield, the average analytics (denoted X) are the sum of the weighted bond analytics x_i :

$$X = \sum_i^{\text{Selected Bonds}} W_i \times x_i$$

The average yield Y is the sum of the individual bond yields y_i weighted with modified durations MD_i :

$$Y = \frac{\sum_i^{\text{Selected Bonds}} W_i \times MD_i \times y_i}{\sum_j^{\text{Selected Bonds}} W_j \times MD_j}$$

For indices of inflation-linked bonds, the yield calculated is the real yield. Similarly, the durations and convexity express price sensitivity with respect to the real yield.

The EMTXi Aggregate Index (all-maturity) is published with a break-even yield spread (BE) calculated using the real yield of the EMTXi Aggregate index y_r and nominal yield of the EMTXi Aggregate BE Index y_n as

$$BE = \frac{(1 + y_n)}{(1 + y_r)} - 1$$