XONTRO®

XONTRO Newsletter

Financial Institutions

No. 18 (English Version)

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Effective January 24, 2005, the following modifications will be introduced in XONTRO:

- Inflation index-linked bonds
- Calculation of interest accrued for French and Italian government bonds

Please also note the information on the last two pages.

Contents:

1. Inflation index-linked bonds

There will be issued two types of inflation index-linked bonds, one of which having two sub-variations:

- Nominal value variation
- Interest rate variation
  - o Additive
  - o Multiplicative

1.1. Nominal value variation

The nominal value variation has the following characteristics:

- The interest rate for these bonds is fixed for the entire duration (basic interest rate).
- Nominal value is multiplied with a factor (index-linked ratio) that reflects the inflation rate at the time the bond was issued.
- As a general rule, the index-linked ratio is changed on a daily basis.
- When market value is being calculated, the nominal must be multiplied with the index-linked ratio valid on (cash) value date.
- When interest accrued is being calculated, the nominal must also be multiplied with the index-linked ratio valid on (cash) value date.
- When a bond becomes due, the capital is multiplied with the index-linked ratio of the day and the resulting sum is paid back. Consequently, inflation protection is done by adjustment of the capital. (Note: As a general rule, index-linked ratios may go down during maturity. Usually, however, a minimum repayment of 100 percent is guaranteed.)

Example

Annual coupon with coupon date	January 1st
Fixed interest rate (basic interest rate)	11%
Change of index-linked ratio	daily
Index-linked ratio, valid as of June 30th	1,001
Index-linked ratio, valid as of July 1st	1,002
Index-linked ratio, valid as of July 2nd	1,003
Price of the bond	98%

For calculation of the relevant data on contract date June 29th, the following applies:

	Overnight value date	Two-day value date	Three-day value date
Interest value date	June 29th	June 30th	July 1st
Cash value date	June 30th	July 1st	July 2nd
Interest days	179	180	181
Market value	Nominal value * 1,001 * 0,98	Nominal value * 1,002 * 0,98	Nominal value * 1,003 * 0,98
Interest accrued	Nominal value * 1,001 * 0,11 * 179/360	Nominal value * 1,002 * 0,11 * 180/360	Nominal value * 1,003 * 0,11 * 181/360

In the example above, as in all following examples, we are using the German method of calculating interest days because of it's ease to follow the example. You may, however, use any method for calculating inflation index-linked bonds.

1.2. Interest rate variation

1.2.1. Additive

The interest rate variation *additive* has the following characteristics:

- These bonds have two components of interest rates: one fixed part (basic interest rate) and one index-linked part. The index-linked part is named index-linked summand. It reflects the annual inflation rate since the last coupon date.
- As a general rule, the index-linked summand is changed once a month.
- The date at which the index-linked summand is changed does not directly refer to coupon length or interest due dates. The index-linked summand that is changed once a month, for example, does not refer to monthly coupons but annual coupons.
- When interest accrued is being calculated, the index-linked summand of the respective (cash) value date must be added to the basic interest rate.
- With the total interest rate calculated in this way, all interest days (from interest due date to interest value date) are calculated in a standardized way.

When a bond becomes due, only the original capital (not inflation-adjusted) is paid back. Protection against inflation takes place by means of higher interest rates adjusted on an ongoing basis.

Example

Annual coupon with coupon date	January 1st
Fixed interest rate (basic interest rate)	5%
Change (validity) of index-linked summand as of	each 1st of the month

	Basic interest rate	index-linked summand	Sum
January 1st	5%	0.5%	5.5%
February 1st	5%	1.0%	6.0%
March 1st	5%	1.5 %	6.5%
April 1st	5%	2.0%	7.0%
Mai 1st	5%	2.5%	7.5%
June 1st	5%	3.0%	8.0%
July 1st	5%	3.5%	8.5%

Price of the bond 98 %

For calculation of the relevant data on contract date June 29th, the following applies:

	Overnight value date	Two-day value date	Three-day value date
Interest value date	June 29th	June 30th	July 1st
Cash value date	June 30th	July 1st	July 2nd
Interest days	179	180	181
Market value	Nominal value * 0,98	Nominal value * 0,98	Nominal value * 0,98
Interest accrued	Nominal value * 0,080 * 179/360	Nominal value * 0,085 * 180/360	Nominal value * 0,085 * 181/360

Please note: Used for the calculation are *not* the interest rates of the respective months for 30 days at a time (i.e., *not* 30/360 * 5.5% + 30/360 * 6.0% etc.).

1.2.2. Multiplicative

The interest rate variation *multiplicative* has the following characteristics:

- Bonds with this interest rate variation have one fixed part (basic interest rate) and one index-linked multiplier. The multiplier is named index-linked coefficient. It reflects the annual inflation rate since the last coupon date. (Mathematically, this multiplication must come to the same result as the addition in 1.2.1., as shown in the example. This index-linked coefficient is *not* identical with the index-linked coefficient of the nominal value variation, even though it goes by the same name.)

- As a general rule, the index-linked coefficient is changed once a month.

- The date on which the index-linked coefficient is changed does not directly refer to coupon length or interest due dates. The index-linked coefficient that is changed once a month, for example, does not refer to monthly coupons but annual coupons.

- When interest accrued is being calculated, the index-linked coefficient of the respective (cash) value date must be multiplied with the basic interest rate.

- With the total interest rate calculated in this way, all interest days (from interest due date to interest value date) are calculated in a standardized way.

When a bond becomes due, only the original capital (not multiplied with the index-linked coefficient) is paid back. Protection against inflation takes place by means of higher interest rates adjusted on an ongoing basis.

Example

Annual coupon with coupon date	January 1st
Fixed interest rate (basic interest rate)	5%
Change (validity) of index-linked coefficient as of	each 1st of the month

	Basic interest rate	index-linked coefficient	Product
January 1st	5%	1,1	5.5%
February 1st	5%	1,2	6.0%
March 1st	5%	1,3	6.5%
April 1st	5%	1,4	7.0%
May 1st	5%	1,5	7.5%
June 1st	5%	1,6	8.0%
July 1st	5%	1,7	8.5%

Price of the bond 98 %

For calculation of the relevant data on contract date June 29th, the following applies:

	Overnight value date	Two-day value date	Three-day value date
Interest value date	June 29th	June 30th	July 1st
Cash value date	June 30th	July 1st	July 2nd
Interest days	179	180	181
Market value	Nominal value * 0,98	Nominal value * 0,98	Nominal value * 0,98
Interest accrued	Nominal value * 0,080 * 179/360	Nominal value * 0,085 * 180/360	Nominal value * 0,085 * 181/360

Please note: Used for the calculation are *not* the interest rates of the respective months for 30 days at a time (i.e., *not* 30/360 * 5.5% + 30/360 * 6.0% etc.).

1.3. Documentation

Until further notice, for documentation of all relevant data in contract notes and contract notes data carriers, the following rules apply:

The interest rate (in data carrier: label 35B, 3rd row) is the interest rate from WM-field 801A. It is not the interest rate used for calculating interest accrued. For the interest rate relevant for calculating interest accrued, refer to the rules described above.

The index-linked coefficient is delivered for nominal value variable only (on data carrier: label 35B, 3rd row. The new identifier is: IK). This is the index-linked coefficient from cash value date, which is relevant for both market value and interest accrued calculation.

2. Interest accrued calculation for French and Italian government bonds

WM keys 11 (French government bonds) and 12 (Italian government bonds) will be displayed accurately as of January 24, 2005. As a general rule, for both keys the act/act method will apply. There are, however, certain rounding rules to be taken into account.

For French government bonds, the following applies:

The product consisting of

interest rate * (interest days / divisor)

will be rounded up or down to 5 digits after the comma (as decimal fraction) or 3 digits after the comma, respectively (as percentage). It will only then be multiplied with or divided by the nominal and all other determining factors for interest accrued such as exchange rate, pool factor, inflation coefficient, etc.

For Italian government bonds, the same rules apply, with the exception of the product being rounded up or down to 7 digits after the comma (as decimal fraction) or 5 digits after the comma, respectively (as percentage).

Example

For a „Five-three-eighth-percenter“ with 179 interest days, the product consisting of

0,05375 * (179 / 365) = 0,026359589....

is to be rounded as follows:

In case of French government bonds to	0,02636	*or*	2.636 %
In case of Italian government bonds to	0,0263596	*or*	2.63596 %

French government bonds always used to be rounded in this way. They were, however, settled according to the English method. Italian government bonds used to be settled in the act/act method, without taking into account the rounding rules described above.

Notes

Adjustment of Turkish Lira

At the change of the year, the Turkish Lira will be adjusted in the ratio of 1:1 million. At the same time, all securities will also be adjusted. Technically, the adjustment will not be considered in XONTRO. Therefore, the following rules apply:

Bonds:

Due to year-end, orders will be deleted automatically. Please note, however, that orders for the following day and orders, which are being entered after accounting close at Dec. 30th, [1] will not be deleted automatically. Such orders must therefore contain the new nominal, or - alternatively - be deleted by the originator and then re-entered. In the unlikely case that individual bonds will be adjusted at a different date, originators must delete all orders and re-enter them.

Intermediaries must delete Aufgaben manually and re-enter them with AS including the re-calculated nominal and the unchanged price.

In case adjustment takes place in between conclusion of a trade and cancel entry, the entire cancel entry documentation will contain the original unchanged nominal. The new trade must be entered with AS including the re-calculated nominal and the unchanged price.
In cases like this, the function “combined cancel entry – new entry” cannot be used.

Stocks:

If stocks are adjusted into units of the same value, there are no direct effects on XONTRO.

Due to year-end, orders will be deleted automatically. Subscription rights orders, subsequent day orders and orders that are entered after accounting close on December 30th, are not deleted automatically. Such orders may, however, remain unchanged, since neither nominal nor limit are effected by the currency adjustment.

Also, Aufgaben are not affected by the currency adjustment.

The cancel entry documentation is identical with the documentation of the original trade.

In case the adjustment coincides with any capital adjustment measures, the rules for capital adjustment measures apply, as before.

[1] As well as subscription rights orders (which do not apply in case of bonds).

XONTRO on-line manual

Currently, there are two separate on-line manuals available for banks: “XONTRO-Order“ and “XONTRO-Trade“. For your convenience, we are working on combining these two into one document. As of January 3, 2005, we will release one consolidated and updated version of “XONTRO Financial Institutions”. We hope to make information more transparent and better accessible for you. In addition, we apologize for the fact that this manual is still, as of now, available in German only.

All old and new manuals can be found on our website “www.xontro.de” at:

Produkte/XONTRO/Dokumentation/Kreditinstitute/Dialoganschluss

Interest accrued calculation in practice

We are currently working on a new edition of the manual to be released in mid-February. In addition to a representation of inflation index-linked bonds, we will go into detail about the tiresome subject “pool factor".