Chapter VIII of the Clearing Conditions of Eurex Clearing AG

# Clearing of OTC Interest Rate Derivative Transactions, OTC FX Transactions and OTC XCCY Transactions

As of 18.11.2019

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AMENDMENTS ARE MARKED AS FOL	LOWS:
INSERTIONS ARE UNDERLINED	',
DELETIONS ARE CROSSED OUT	Г.

# Part 1 General Provisions

[...]

1.8 Index-related Provisions

[...]

#### 1.8.2 Permanent Index Cessation

[...]

(3) [...]

[...]

(c) If an index is formally designated, nominated or recommended by (i) the competent central bank for the currency of the relevant index, the regulatory supervisor for either the relevant index or the Index Administrator, or any working group or committee officially endorsed or convened by any of the foregoing authorities, a group of any of the foregoing authorities, or the Financial Stability Board, or any part thereof, or (ii), if (i) does not apply, the Index Administrator of the relevant index as a fallback, then, as of the Index Cessation Date, this index shall be applied as the Successor Index, provided that Eurex Clearing states in accordance with Chapter I Part 1 Number 16.1 of the Clearing Conditions that it is operationally and legally capable to use this fallback.

[...]

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# Part 2 Clearing of OTC Interest Rate Derivative Transactions

2.1 General Provisions

[...]

2.1.5 Novation Criteria and Process Regarding OTC Interest Rate Derivative Transactions

[...]

2.1.5.1 Transaction Type Specific Novation Criteria

[...]

(7) [...]

(c) For IRS floating payments, the floating rates for Interest Rate Stub Periods must be specified in the Trade Record submitted via the ATS as follows:

[...]

(bb) a floating rate index tenor is specified, which is used for the fixing in respect of the Interest Rate Stub Period. The following tenors (W = week(s), M = month(s), Y = year) are eligible: in case the currency is EUR: 1W, 1M, 3M, 6M, 1Y;-in case the currency is GBP: 1W, 1M, 2M, 3M, 6M, 1Y; in case the currency is USD, GBP, CHF or JPY: 1W, 1M, 2M, 3M, 6M. Only neighboring tenors of the Interest Rate Stub Period length are allowed (e.g. 3M or 6M for Interest Rate Stub Period length 3M+1W). In case the currency is DKK, SEK, NOK or PLN, only subcase (aa) is accepted; or

[...]

(dd) a floating rate index tenor is specified, which is used for the fixing in respect of the Interest Rate Stub Period. The following tenors (W = week(s), M = month(s), Y = year) are eligible: in case the currency is EUR 2W, 3W, 2M, 4M, 5M, 7M, 8M, 9M, 10M, 11M; in case the currency is GBP: 2W, 4M, 5M, 7M, 8M, 9M, 10M, 11M; in case the currency is USD, GBP, CHF or JPY: 2W, 4M, 5M, 7M. In this case, a linear interpolation as laid out in subcase (cc) will be applicable.

[...]

(8) Floating rate indices

The floating rate index (Floating Rate Option or base rate) must be one of the following:

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(n) CHF-SARON-OIS-COMPOUND

#### (o) EUR-EuroSTR-COMPOUND

where:

For Paragraphs (a) - (e) and (j) - (m), the payment is between the period end date and the second Business Day following the period end date. The fixing for Paragraphs (a) - (e) and (k) - (n) is between ten Business Days prior to the period start date and the period start date;

for Paragraphs (h), (i), (n) and (no), the payment is between the period end date and the second Business Day following the period end date;

[...]

[...]

## 2.1.7 Margin Requirements

[...]

(4) [...]

PAI shall be calculated and payable for each currency on each Business Day with respect to each CTM Interest Rate Derivative Transaction in accordance with the following formulas.

For PLN and CHF, PAI is defined as:

$$PAI(T) = -MtM_{ex}CF(T-1) * ONR(T,T+1) * YF(T,T+1),$$

where:

" $MtM\_exCF(T-1) = MtM(T-1) - DCF(T-1,T)$ " is the present value of the previous Business Day excluding today's <u>discounted</u> cash flows from coupons or fees

[...]

For T+2 currencies (JPY, DKK, SEK, and NOK) VM is settled on T+2 (in contrast to EUR, USD, GBP, CHF and PLN where VM is settled on T+1). Thus, PAI for T+2 currencies is defined as:

$$PAI(T) = -MtM_{exc}F(T-2) * ONR(T,T+1) * YF(T,T+1),$$

with

$$MtM_{ex}CF(T-2) = MtM(T-2) - DCF(T-21,T-1) - DCF(T-21,T).$$

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[...]

# 2.2 General product-related terms for OTC Interest Rate Derivative Transactions

[...]

## 2.2.1 Payment Obligations

[...]

- (5) [...]
  - (b) [...]

IRS PAA shall be calculated and payable for each currency on each Business Day with respect to each STM Interest Rate Derivative Transaction in accordance with the following formulas.

For PLN and CHF, IRS PAA is defined as:

$$IRS PAA(T) = -MtM_{ex}CF(T-1) * ONR(T,T+1) * YF(T,T+1),$$

where:

"MtM\_exCF(T-1) = MtM (T-1) - DCF (T-1,T)" is the present value of the previous Business Day excluding today's cash flows from coupons or fees discounted to T-1,

[...]

For T+2 currencies (JPY, DKK, SEK, and NOK) the IRS STM Amount is settled on T+2 (in contrast to EUR, USD, GBP, CHF and PLN where the IRS STM Amount is settled on T+1). Thus, IRS PAA for T+2 currencies is defined as:

$$IRS PAA(T) = -MtM_excF(T-2)*ONR(T,T+1)*YF(T,T+1),$$

with

 $MtM\_exCF(T-2) = MtM(T-2) - \underline{D}CF(\underline{T-2}, T-1) - \underline{D}CF(\underline{T-2}, T).$ 

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## 2.2.5 Rates for calculating the Floating Amount

(1) The applicable Relevant Rate (in case of ISDA Interest Rate Derivative Transactions) or Base Rate (in case of DRV Interest Rate Derivative Transactions) applied by Eurex Clearing AG in calculating Floating Amounts will be set out in the OTC Trade Novation Report on the basis of the floating rate index specified in the Trade Record transmitted to Eurex Clearing AG via the ATS whereby:

[...]

(j) "CHF-SARON-OIS-COMPOUND", "USD-Federal Funds-H.15-OIS-COMPOUND", "GBP-SONIA-COMPOUND", "EUR-EONIA-OIS-Compound", "EUR-EuroSTR-COMPOUND", "JPY-TONA-OIS-COMPOUND" will be calculated as set out in Number 2.2.7 below.

[...]

[...]

#### 2.2.7 OIS Rate Calculation

[...]

"EUR-EONIA-OIS-COMPOUND" means that the rate for a Reset Date, calculated in accordance with the formula set forth below in this subparagraph, will be the rate of return of a daily compound interest investment (it being understood that the reference rate for the calculation of interest is the arithmetic mean of the daily rates of the day-to-day-Euro Overnight Index Average (EONIA) Euro-zone interbank euro money market).

The EURO-EONIA-OIS-COMPOUND will be calculated as follows, and the resulting percentage will be rounded, if necessary, in accordance with the method set forth in Section 8.1(a) of the 2006 ISDA Definitions or, in the case of DRV Interest Rate Derivative Transactions, Number 2.4 Paragraph (3) below, but to the nearest one tenthousandth of a percentage point (0.0001 per cent):

$$\left[\prod_{i=1}^{d_0} \left(1 + \frac{EONIA_i \times n_i}{360}\right) - 1\right] \times \frac{360}{d}$$

where:

- "do", for any Calculation Period, is the number of TARGET Settlement Days in the relevant Calculation Period;
- "*I*" is a series of whole numbers from one to d<sub>0</sub>, each representing the relevant TARGET Settlement Days in chronological order from, and including, the first TARGET Settlement Day in the relevant Calculation Period;

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- "EONIA"; for any day "i" in the relevant Calculation Period, is a reference rate equal to the overnight rate as calculated by the European Central Bank and appearing on the Reuters Screen EONIA Page in respect of that day;
- " $n_i$ ", is the number of calendar days in the relevant Calculation Period on which the rate is EONIA; and
- "d" is the number of calendar days in the relevant Calculation Period.

"EUR-EuroSTR-COMPOUND" means that the rate for a Reset Date, calculated in accordance with the formula set forth below in this subparagraph, will be the rate of return of a daily compound interest investment (it being understood that the reference rate for the calculation of interest is the the euro short term rate (€STR)).

The EUR-EuroSTR-COMPOUND will be calculated as follows, and the resulting percentage will be rounded, if necessary, in accordance with the method set forth in Section 8.1(a) of the 2006 ISDA Definitions or, in the case of DRV Interest Rate Derivative Transactions, Number 2.4 Paragraph (3) below, but to the nearest one tenthousandth of a percentage point (0.0001 per cent):

$$\left[ \prod_{i=1}^{d_0} \left( 1 + \frac{EuroSTR_i \times n_i}{360} \right) - 1 \right] \times \frac{360}{d}$$

#### where:

- <u>"do"</u>, for any Calculation Period, is the number of TARGET Settlement Days in the relevant Calculation Period;
- "I' is a series of whole numbers from one to d<sub>0</sub>, each representing the relevant TARGET

  Settlement Day in chronological order from, and including, the first TARGET

  Settlement Day in the relevant Calculation Period;
- <u>"EuroSTR"</u>; for any day "i" in the relevant Calculation Period, is a reference rate equal to to EuroSTR in respect of that day as published on the ECB's Website;
- <u>"EuroSTR"</u> is the euro short term rate (€STR) provided by the European Central Bank as administrator of the benchmark (or a successor administrator) on the ECB's <u>Website</u>;
- "<u>n</u>", is the number of calendar days in the relevant Calculation Period on which the rate is EuroSTR<sub>i</sub>:
- "d" is the number of calendar days in the relevant Calculation Period.

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<u>"ECB's Website"</u> means the website of the European Central Bank at <a href="https://www.ecb.europa.eu/home/html/index.en.html">https://www.ecb.europa.eu/home/html/index.en.html</a>, or any successor source (as defined in Section 7.2 (b) of the 2006 ISDA Definitions).

"GBP-SONIA-COMPOUND" means that the rate for a Reset Date calculated in accordance with the formula set forth below in this subparagraph, will be the rate of return of a daily compound interest investment (it being understood that the reference rate for the calculation of interest is the Sterling daily overnight reference rate).

[...]

#### 2.3 Terms for ISDA Interest Rate Derivative Transactions

[...]

# 2.3.2 Terms for ISDA Fixed Rate-Floating Rate Swaps

In addition to the general terms for ISDA Interest Rate Swaps, the following product-specific terms, which are specified in, or may be derived from, the relevant OTC Trade Novation Report shall apply to ISDA Interest Rate Swaps that are fixed rate-floating rate swaps: (including, for the avoidance of doubt, swaps where a floating rate is based on an overnight interest rate):

[...]

2. Floating Amounts:

[...]

(i) Compounding ("**straight**") or Flat Compounding, if applicable (not applicable, in particular, for a floating rate that is based on an overnight interest rate)

[...]

#### 2.3.3 Terms for ISDA Floating Rate-Floating Rate Swaps

In addition to the general <u>provisionsterms</u> for ISDA Interest Rate Swaps, the following product-specific terms, which are specified in, or may be derived from, the relevant OTC Trade Novation Report, shall apply to ISDA Interest Rate Swaps that are floating rate-floating rate swaps ("**basis**" swaps) (including, for the avoidance of doubt, swaps where a floating rate is based on an overnight interest rate):

(a) Floating Rate Payer 1:

[...]

(viii) Compounding ("**straight**") or Flat Compounding, if applicable (not applicable, in particular, for a floating rate that is based on an overnight interest rate)

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(b) Floating Rate Payer 2:

[...]

(viii) Compounding ("**straight**") or Flat Compounding, if applicable (not applicable, in particular, for a floating rate that is based on an overnight interest rate)

[...]

## 2.3.4 Terms for ISDA Overnight Interest Rate Swap Transactions

In addition to the general terms for ISDA Interest Rate Swaps, the following productspecific terms, which are specified in, or may be derived from, the relevant OTC Trade Novation Report, shall apply to ISDA Interest Rate Swaps that are overnight interest rate-swap transactions:

- 1. Fixed Amounts:
  - (a) Fixed Rate Payer
  - (b) Fixed Rate Payer Payment Dates or Period End Dates, if Delayed Payment or Early Payment applies (subject to adjustment in accordance with any applicable business day convention)
    - (c) Fixed Rate and Fixed Rate Day Count Fraction
- 2. Floating Amounts:
  - (a) Floating Rate Payer
  - (b) Floating Rate Payer Payment Dates or Period End Dates, if Delayed Payment or Early Payment applies (subject to adjustment in accordance with any applicable business day convention)
  - (c) Floating Rate for initial Calculation Period, if applicable
  - (d) Floating Rate Option
  - (e) Reset Dates being the last day of each Calculation Period (subject to adjustment in accordance with any applicable business day convention)
  - (f) Compounding ("straight") or Flat Compounding shall not be applicable.

## 2.3.52.3.4 Terms for ISDA Forward Rate Agreements

[...]

#### 2.3.62.3.5 Terms for ISDA Zero Coupon Inflation Swaps

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#### 2.4 Terms for DRV Interest Rate Derivative Transactions

[...]

## 2.4.2 Terms for Fixed Rate-Floating Rate DRV Interest Rate Swaps

In addition to the general terms for DRV Interest Rate Swaps, the following product-specific terms, which are specified in, or may be derived from, the relevant OTC Trade Novation Report, shall apply to fixed rate-floating rate DRV Interest Rate Swaps (including-OIS, for the avoidance of doubt, swaps where a floating rate is based on an overnight interest rate):

(a) Fixed rate payer (Zahler der Festbeträge)

[...]

(k) Compounding ("**straight**") or Flat Compounding, if applicable (not applicable, in particular, for a floating rate that is based on an overnight interest rate)

[...]

## 2.4.3 Terms for Floating Rate-Floating Rate DRV Interest Rate Swaps

In addition to the general terms for DRV Interest Rate Swaps, the following product-specific terms, which are specified in, or may be derived from, the relevant OTC Trade Novation Report, shall apply to floating rate-floating rate swaps ("basis" swaps) (including, for the avoidance of doubt, swaps where a floating rate is based on an overnight interest rate):

(a) Floating rate payer 1 (Zahler der variablen Beträge 1):

[...]

(vi) Compounding ("**straight**") or Flat Compounding, if applicable (not applicable, in particular, for a floating rate that is based on an overnight interest rate)

[...]

(b) Floating rate payer 2 (Zahler der variablen Beträge 2):

[...]

(vi) Compounding ("**straight**") or Flat Compounding, if applicable (not applicable, in particular, for a floating rate that is based on an overnight interest rate)

[...]

#### 2.4.4 Terms for DRV Forward Rate-Agreements

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# Part 3 Clearing of OTC FX Transactions

#### 3.1 General Provisions

[...]

#### 3.1.7 Margin Requirements

[...]

(2) [...]

The Variation Margin Requirement and/or any Redelivery Amount shall be calculated in USD with respect to each CTM FX Transaction in accordance with the following formula:

$$VM_{\$}(t) = NPV_{\$}(t) - NPV_{\$}(t-1) + DCF_{\$}(t-1,t) - DCF_{\$}(t,t+1) + \frac{1}{2}DCF_{\pounds,\pounds}(t-1,t) \cdot FX(t-1) - DCP_{F,\pounds,\pounds}(t,t+1) \cdot FX(t)$$

where:

FX(t) denotes the FX spot rate at time t for EUR/USD or GBP/USD;

<u>DCF(t,t+1)</u> denotes trade related cash flows in the respective currency at time t+1 <u>discounted to time t with the relevant currency-dependent discount factor</u>; and

[...]

(3) [...]

FX PAI shall be calculated and payable on each Business Day with respect to each CTM FX Transaction in accordance with the following formula:

$$FX PAI(T) = -MtM_{ex}CF(T-1) * ONR(T-1,T) * YF(T,T+1)$$

where:

" $MtM\_exCF(T-1) = MtM(T-1) - DCF(T-1,T)$ " is the present value of the previous Business Day excluding today's trade related cash flows discounted to T-1;

[...]

#### 3.2 Product-related terms for OTC FX Transactions

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# 3.2.1 Payment obligations

[...]

(4) [...]

(a) [...]

The FX STM Amount shall be calculated in USD with respect to each STM FX Transaction in accordance with the following formula:

$$\begin{split} FX \, STM \, Amount_{\S}(t) \\ &= NPV_{\S}(t) - NPV_{\S}(t-1) + \frac{D}{D}CF_{\S}(t-1,t) - \frac{D}{D}CF_{\S}(t,t+1) \\ &+ \frac{D}{D}CF_{\in;E}(t-1,t) \cdot FX(t-1) - \frac{D}{D}CF_{\in;E}(t,t+1) \cdot FX(t) \end{split}$$

where:

FX(t) denotes the FX spot rate at time t for EUR/USD or GBP/USD;

 $\underline{DCF(t,t+1)}$  denotes trade related cash flows in the respective currency at  $\underline{t+1}$  discounted to time t, and

NPV(t) denotes the net present value of the trade at time t.

(b) [...]

FX PAA shall be calculated on each Business Day with respect to each STM FX Transaction in accordance with the following formulas.

$$FX PAA(T) = -MtM_{ex}CF(T-1) * ONR(T-1,T) * YF(T,T+1)$$

where:

" $MtM_exCF(T-1) = MtM(T-1) - DCF(T-1,T)$ " is the present value of the previous Business Day excluding today's trade related <u>discounted</u> cash flows;

[...]

[...]

# Part 4 Clearing of OTC XCCY Transactions

## 4.1 General Provisions

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## 4.1.5 Novation Criteria and Process Regarding OTC XCCY Transactions

[...]

#### 4.1.5.1 Transaction Type Specific Novation Criteria

[...]

(6) Shortened or extended calculation period (stub period)

[...]

(c) The floating rates for XCCY Stub Periods must be specified in the trade record submitted via the ATS as follows:

[...]

(bb) a floating rate index tenor is specified, which is used for the fixing in respect of the XCCY Stub Period. The following tenors (W = week(s), M = month(s), Y = year) are eligible: in case the currency is EUR: 1W, 1M, 3M, 6M, 1Y; in case the currency is GBP: 1W, 1M, 2M, 3M, 6M, 1Y and in case the currency is USD or GBP: 1W, 1M, 2M, 3M, 6M. Only neighbouring tenors of the XCCY Stub Period length are allowed (e.g. 3M or 6M for XCCY Stub Period length 3M+1W);

[...]

(dd) a floating rate index tenor is specified, which is used for the fixing in respect of the XCCY Stub Period. The following tenors (W = week(s), M = month(s), Y = year) are eligible: in case the currency is EUR 2W, 3W, 2M, 4M, 5M, 7M, 8M, 9M, 10M, 11M; in case the currency is GBP: 2W, 4M, 5M, 7M, 8M, 9M, 10M, 11M and in case the currency is USD or GBP: 2W, 4M, 5M, 7M. In this case, a linear interpolation as laid out in lit. (cc) above will be applicable.

[...]

[...]

# 4.1.7 Margin Requirements

[...]

(2) [...]

The Variation Margin Requirement and/or any Redelivery Amount shall be calculated in USD with respect to each CTM XCCY Transaction in accordance with the following formula:

$$VM_{\$}(t) = NPV_{\$}(t) - NPV_{\$}(t-1) + DCF_{\$}(t-1,t) - DCF_{\$}(t,t+1) +$$

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$$DCF_{\in :E}(t-1,t) \cdot FX(t-1) - DCF_{\in :E}(t,t+1) \cdot FX(t)$$

where:

FX(t) denotes the FX spot rate at time t for EUR/USD or GBP/USD;

 $\underline{\textit{EDCF}(t,t+1)}$  denotes trade related cash flows in the respective currency at time  $\underline{t+1}$  discounted to time  $\underline{t}$ , and

[...]

[...]

4.2 General product-related terms for OTC XCCY Transactions

[...]

4.2.1 Payment Obligations

[...]

- (5) [...]
- (a) [...]

The XCCY STM Amount shall be calculated in USD with respect to each STM XCCY Transaction in accordance with the following formula:

$$\begin{aligned} \textit{XCCY STM Amount}_{\$}(t) &= \textit{NPV}_{\$}(t) - \textit{NPV}_{\$}(t-1) + \textit{DCF}_{\$}(t-1,t) - \\ & \textit{DCF}_{\$}(t,t+1) + \textit{DCDF}_{\texttt{$\in;E$}}(t-1,t) \cdot \textit{FX}(t-1) - \textit{DCF}_{\texttt{$\in;E$}}(t,t+1) \\ & \cdot \textit{FX}(t) \end{aligned}$$

where:

FX(t) denotes the FX spot rate at time t for EUR/USD or GBP/USD;

 $\underline{DCF(t,t+1)}$  denotes trade related cash flows in the respective currency at time t+1 discounted to time t, and

NPV(t) denotes the net present value of the trade at time t.

(b) [...]

XCCY PAA shall be calculated on each Business Day with respect to each STM XCCY Transaction in accordance with the following formulas.

$$XCCY\ PAA(T) = -MtM_{ex}CF(T-1) * ONR(T-1,T) * YF(T,T+1)$$

where:

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	$-\frac{DCF(T-1,T)}{T}$ is the present value of the ing today's trade related discounted cash

\*\*\*\*\*\*\*