



February 5, 2017

**Via CFTC Portal**

Christopher J. Kirkpatrick  
Secretary of the Commission  
Commodity Futures Trading Commission  
Three Lafayette Centre  
1155 21st Street, N.W.  
Washington, D.C. 20581

**RE: trueEX LLC Amendment of Product Terms and Conditions (trueEX LLC submission #2017-02S)**

Dear Mr. Kirkpatrick:

Pursuant to Section 5c(c)(1) of the Commodity Exchange Act, as amended (the “Act”), and Commission Regulation 40.6(a), trueEX LLC (“trueEX” or the “Exchange”) hereby submits to the U.S. Commodity Futures Trading Commission (the “Commission”) certain amendments to terms and conditions of fixed vs. floating interest rate swaps offered for trading on trueEX.

Summary of Amendments

| <b>trueEX Rule</b>  | <b>Nature of Amendment</b> |
|---|----------------------------|
| <b>Rule 1001</b> – Added language to clarify that interest rate swaps covered by this rule can be traded as Cleared Transactions or Uncleared Transactions on the SEF Trading System. | CFTC Regulation 40.6(a)    |
| <b>Schedule 1001</b> – added the specific terms applicable for each Currency itemized in Rule 1001 to be traded as an Uncleared Transaction on PTC.                                   | CFTC Regulation 40.6(a)    |

Exhibit 1 contains the redlined amendments to Rules 1001. Exhibit 2 contains redlined amendments to indicate the terms applicable for each Currency to be traded as an Uncleared Transaction (columns Y through AF).

trueEX certifies that these amendments comply with the Act and the Commission’s regulations thereunder. trueEX’s analysis of the operation, purpose and effect of the proposed rule change and its compliance with the Act, core principles and Commission’s regulations thereunder is included in the chart above. There were no substantive opposing



views expressed by the trueEX governing board or market participants to the rule amendments.

trueEX certifies that this certification has been concurrently posted on the Exchange's Web Site at <http://www.trueex.com/rules-and-notice>. These amendments will be effective on February 17, 2017.

If you have questions regarding this notice, please contact me at (312) 320-8934 or by email at [fran@trueex.com](mailto:fran@trueex.com).

Sincerely,

A handwritten signature in cursive script that reads "Fran Kenck".

Fran Kenck  
Chief Compliance Officer

# Exhibit 1

## CHAPTER 10 INTEREST RATE SWAP CONTRACTS

### **RULE 1001. Fixed for Floating Interest Rate Swap Contracts**

(a) Contract Description. Fixed for Floating Interest Rate Swap. This is an Interest Rate Swap for which settlement is in the form of periodic fixed interest payments and a stream of periodic floating interest payments based on floating rate index over a term to maturity. The interest rate payments are exchanged for a specified period based on a notional amount. This Rule 1001 contains general information about the Contract terms and conditions. Contracts eligible for trading on the DCM Trading System and SEF Trading System as Cleared Transactions or Uncleared Transactions (SEF only), as well as the specific terms attributes available for -related to each Currency can be found on Schedule 1001, which forms an integral part of this Rule, at -on the Web Site (www.trueex.com). Contracts traded on the SEF Trading System may be traded as Cleared Transactions or as Uncleared Transactions if not subject to a clearing mandate or if the market participant qualifies for a clearing exception/exemption.

(b) Trading Hours.

(i) DCM Trading Hours. The Trading Hours of the DCM Trading System that are applicable to the Contract described in this Rule 1001 will commence each Business Day at 8:00 a.m. London time (BST/GMT) and end each Business Day at 5:00 p.m. New York time (EST/EDT).

(ii) SEF Trading Hours. The Trading Hours of the SEF Trading System that are applicable to the Contract described in this Rule 1001 will be as follows:

- The RFQ Trading Hours will commence each Business Day at 8:00 a.m. London time (BST/GMT) and end each Business Day at 5:00 p.m. New York time (EST/EDT).
- The PTC Trading Hours will commence each Business Day at 8:00 a.m. London time (BST/GMT) and end each Business Day at 6:00 p.m. New York time (EST/EDT).

(c) Currency.

(i) Super-Major Currencies

- United States dollar (USD)
- European Union Euro Area euro (EUR)
- Japan yen (JPY)
- United Kingdom pound sterling (GBP)

(ii) Major Currencies

- Australia dollar (AUD)
- Canada dollar (CAD)
- Denmark krone (DKK)
- Kingdom of Norway krone (NOK),
- Kingdom of Sweden krona (SEK)
- New Zealand dollar (NZD)
- Republic of South Africa rand (ZAR)
- Switzerland franc (CHF)

(iii) Non-Major Currencies

- Brazilian Real (BRL)
- Chilean Peso (CLP)
- Czech Koruna (CZK)
- Hong Kong dollar (HKD)
- Hungarian Forint (HUF)
- Mexican Peso (MXN)
- Polish Zloty (PLN)
- Singapore dollar (SGD)

(d) Trading Conventions.

- (i) Buyer (Payer) pays fixed interest rate and receives floating interest rate.
- (ii) Seller (Receiver) receives fixed interest rate and pays floating interest rate.

(e) Swap Leg Conventions. The terms of Fixed vs. Floating Interest Rate Swaps are based on a number of combinations of the criteria below. Approved contracts available for trading on the Exchange can be found on the Web Site ([www.trueex.com](http://www.trueex.com)).

(i) Fixed Leg

(A) Payment Frequency. 28 Days, Monthly (1M), Quarterly (3 M), Semi-Annually (6 M), Annually (12 M), One Time (1T)

(B) Day Count Convention.

- 30/360
- 30E/360
- 30E/360.ISDA
- ACT/360
- ACT/365.Fixed
- ACT/365.ISDA
- ACT/ACT.ISMA
- ACT/ACT.ISDA
- ACT/ACT.ICMA
- BUS/252

(C) Holiday Calendar. Dependent on Currency

- US – New York (USNY)
- Europe – Target (EUTA)
- Great Britain – London (GBLO)
- Japan – Tokyo (JPTO)
- Australia – Sydney (AUSY)
- Canada – Toronto (CATO)
- Denmark – Copenhagen (DKCO)
- New Zealand – Wellington (NZWE)
- New Zealand – Auckland (NZAU)
- Norway – Oslo (NOOS)
- South Africa – Johannesburg (ZAJO)

- Sweden – Stockholm (SEST)
- Switzerland – Zurich (CHZU)
- Brazil – Brazil Business Day (BRBD)
- Chile – Santiago (CLSA)
- Czech Republic – Prague (CZPR)
- Hong Kong –(HKHK)
- Hungary – Budapest (HUBU Singapore – (SGSI)
- Mexico – Mexico City (MXMC)
- Poland – Warsaw (PLWA)
- Singapore – Singapore (SGSI)

(D) Business Day Convention. Modified Following with adjustment to period end dates. Business days in this convention must be valid business days in respect to Holiday Calendar associated with Currency for effective and payment dates. If not, it will be the next day that is a business day. If the adjusted end dates fall at the end of the month, the day rolls to the preceding day.

(E) Fixed Rate. The traded interest rate yield or basis points on Trade Date.

(ii) Floating Leg

(A) Reset Frequency. One Day (1D), 28 Days, Monthly (1M), Quarterly (3 M), Semi-Annually (6 M), or Annually (12 M).

(B) Day Count Convention.

- 30/360
- 30E/360
- ACT/360
- ACT/365.Fixed
- ACT/ACT.ISDA
- 30E/360.ISDA
- ACT/ACT.ICMA
- BUS/252

(C) Holiday Calendar. Dependent on Currency

- US – New York (USNY)
- Europe – Target (EUTA)
- Great Britain – London (GBLO)
- Japan – Tokyo (JPTO)
- Australia – Sydney (AUSY)
- Canada – Toronto (CATO)
- Denmark – Copenhagen (DKCO)
- New Zealand – Wellington (NZWE)
- New Zealand – Auckland (NZAU)
- Norway – Oslo (NOOS)
- South Africa – Johannesburg (ZAJO)
- Sweden – Stockholm (SEST)
- Switzerland – Zurich (CHZU)
- Brazil – Brazil Business Day (BRBD)
- Chile – Santiago (CLSA)

- Czech Republic – Prague (CZPR)
- Hong Kong –(HKHK)
- Hungary – Budapest (HUBU)
- Mexico – Mexico City (MXMC)
- Poland – Warsaw (PLWA)
- Singapore – Singapore (SGSI), London (GBLO)

(D) Business Day Convention. Modified Following with adjustment to period end dates. Business days in this convention must be valid business days in respect to Holiday Calendar associated with Currency for effective and payment dates. If not, it will be the next day that is a business day. If the adjusted end dates fall at the end of the month, the day rolls to the preceding day.

(E) Payment Frequency. 28 Days, Monthly (1M), Quarterly (3 M), Semi-Annually (6 M), Annually (12 M), One Time (1T)

(F) Float Rate Index.

- USD-LIBOR-BBA
- EUR-EURIBOR-REUTERS
- EUR-EURIBOR-Telerate
- EUR-LIBOR
- JPY-LIBOR-BBA
- GBP-LIBOR-BBA
- AUD-BBR-BBSW
- CAD-BA-CDOR
- DKK-CIBOR-DKNA13
- DKK-CIBOR2-DKNA13
- NOK-NIBOR-NIBR
- SEK-STIBOR-SIDE
- NZD-BBR-FRA
- ZAR-JIBAR-SAFEX
- BRL-CDI
- CLP -TNA
- CHF-LIBOR-BBA
- CZK-PRIBOR-PRBO
- HKD-HIBOR-HKAB
- HUF-BUBOR-REUTERS
- MXN-TIIE-Banxico
- PLN-WIBOR-WIBO
- SGD-SOR-REUTERS
- SGD-SOR-VWAP

(f) Effective Date. The first date from which fixed and floating interest amounts accrue. It is also referred to as the Start Date. The Effective Date of the Swap must be a business day subject to the appropriate Business Day Convention.

(g) Trade Start Type

(i) Spot Starting. A swap with an Effective Date that follows market convention per each Currency, ranging from T+0 to T+2. For example USD is 2 business days from the Trade Date (T+2).

(ii) Forward Starting. A swap whose Effective Date is anything after the Effective Date for a Spot Starting swap.

(h) “Maturity Date” means the final date until which Fixed and Floating amounts accrue. The Maturity Date may also be referred to as the “Termination Date” or “End Date”.

(i) “Tenor” means the duration of time from the Effective Date to the Maturity Date. The Exchange will support Tenors of any duration greater than 0 years up to 50 years.

(i) Listed Tenors, with respect to the DCM Trading System, also referred to as On-the-Run, means whole year Spot Starting Contracts with a Tenor of 2 through 10, 12, 15, 20, 25 and 30 years.

(ii) Other Tenors, also referred to as Off-the-Run, means any whole year Tenors other than the Listed Tenors and any partial year Tenor. Transactions in Other Tenors (with the exception of Block Trades), are executed through the System’s Off-the-Run trading functionality. All such trades will be subject to the requirements of Exchange Rule 524(c).

(A) Standard Off-the-Run means any whole year Other Tenor that is Spot Starting.

(B) Non-Standard (or Custom) Off-the-Run means any partial year Tenor that is Spot Starting and all Forward Starting Contracts (whole and partial year Tenors).

(j) Roll Day Convention. The date used for determining all fixed and floating Reset Dates. Roll Days define the beginning and end of Fixed and Floating interest accrual periods. For On-the-Run Contracts, the Roll Day is the same date of the month as the Effective Date. For Off-the-Run Contracts, it can be any date of the month, subject to the provisions of the Business Day Convention. Roll Day marks the start of a new interest accrual period, and is the date on which a Reset Rate takes effect. The Exchange supports the following roll types:

(i) Standard. Standard roll will be the same day of the month accordingly aligned to the roll frequency. For example, Effective date January, 10th, 2013 and Maturity Date January, 10th, 2015 with a 3M payment, roll frequency will settle on the 10th day every three months.

(ii) End of Month (EOM). For EOM convention, if the roll date falls at the end of the month the date moves back to the preceding business day based on the applicable Business Day Convention employed.

(iii) International Money Market (IMM). IMM roll dates are the 3rd Wednesday of March, June, September and December.

(k) Floating Reset Dates. Dates utilized to determine the Floating Rate amounts for each interest accrual period during the Tenor of the contract. Except in the case of a Stub Period, the Reset Date is 2 business days prior to the Roll Date for that interest accrual period.

(l) First Period Fixing Date. (Based on Holiday Calendar of the Currency)

(i) For Spot Starting swaps, the Interest Rate for the first interest period is fixed on the Trade Date, for both Floating and Fixed Rates.

(ii) For Forward Starting swaps, the Fixed Rate for the first interest period is fixed on the Trade Date, and the Floating Rate for the first interest period is fixed up to 2 business days prior to the Effective Date

(m) **Stub Period Rate.** For swaps with partial year Tenors, a first interest period that is shorter than the standard underlying Floating index interest periods may occur between the Effective Date and the first Roll Date (known as a Stub Period). In these cases, the Interest Rate for such Stub Period is determined using linear interpolation based on the two index rates that surround the Stub Period.

(i) **Stub Index Frequency.** 1 Week (1W), 2 Week (2W), 28 Days, 1 Month (1M) to 12 Month (12M)

(n) **Trade Types.** The Platform may support the following trade types:

(i) **Outrights.** An Outright swap is where one party is the payer of the fixed rate and receiver of the floating rate and the other party is the receiver of the fixed rate and payer of the floating rate.

(ii) **Switches.** Switches are the simultaneous purchase and sale of two different Tenors of the yield curve (e.g. 2 year by 10 year).

(iii) **Butterflies.** Butterflies are the simultaneous purchase(s) and sale(s) of three different Tenors of the yield curve (e.g. 2 year by 5 year by 10 year).

(iv) **Spreads.** A Spread trade consists of a transaction where the payer and receiver of the fixed rate on the Interest Rate Swap simultaneously enter into a transaction for a treasury security of an equivalent Tenor. For the treasury transaction, the payer of the fixed rate on the swap buys and the receiver of the fixed rate on the swap sells either a single treasury security or two treasury securities using a simple weighted average to match the risk,

(v) **Invoice Spreads.** An Invoice Spread trade consists of a transaction where two parties enter into a treasury futures contract and simultaneously enter into an interest rate swap transaction. The buyer of the futures contract is the payer of the fixed rate on the interest rate swap transaction and the seller of the futures contract is the receiver of the fixed rate on the interest rate swap transaction. The interest rate swap is of an equivalent Tenor to match the risk.

(vi) **Block Trades** has the meaning as defined in Chapter 1 of this Rulebook.

(o) **Contract Size.**

(i) **On-the-Run.** Minimum notional size of \$1 million USD or multiple thereof and increments of \$1 million USD depending on Tenor.

(ii) **Off-the-Run.** Minimum notional size of \$1 million USD and increments of \$1,000 USD.

(iii) **Block Trades.** Minimum notional size as indicated in Rule 1001(t) and increments of \$1,000 USD.

(p) **Quoting Convention**

(i) **Outrights.** Outrights are quoted in interest rate yield.

(A) **On-the-Run.** The interest rate yield is quoted to 3 decimal places.

(B) **Off-the-Run.** The interest rate yield is quoted to 5 decimal places.



(C) Block Trades. The interest rate yield, regardless of Tenor, is quoted to 5 decimal places.

(ii) Switches, Butterflies. These trade types are quoted in basis points. The basis points are quoted to 1 decimal place.

(iii) Spreads, Invoice Spreads. These trade types are quoted in basis points. The basis points are quoted to 1 decimal place.

(q) Minimum Price Fluctuation.

(i) Outrights. The interest rate yield is quoted in increments of .001 (1/10<sup>th</sup> of a basis point).

(ii) Switches, Butterflies. The basis points are quoted in increments of .1 (1/10<sup>th</sup> of a basis point).

(iii) Spreads, Invoice Spreads. The basis points are quoted in increments of .1 (1/10<sup>th</sup> of a basis point).

(r) Last Trading Day.

(i) Spot Starting. Close of business on Trade Date.

(ii) Forward Starting. Close of business three business days prior to the Effective Date of the swap.

(s) Final Settlement Price. Multiple payments take place during the term of the swap. Settlement price used for the periodic exchange of fixed and floating payments is based on the following factors:

(i) Fixed Leg. Payment amount on the fixed leg is based on the trade price of the swap on Trade Date. Payment timing on the fixed leg is based on the Payment Frequency, Day Count Convention, Business Day Convention, and Roll Day.

(ii) Floating Leg. Payment on the floating leg is based on the Interest Rate Benchmark of the swap. Payments on the floating leg are based on the Payment Frequency, Day Count Convention, Business Day Convention, Roll Day Convention and Floating Reset Dates.

(t) Block Trades.

(i) Minimum Notional Sizes. The Exchange has established the following minimum Block Trade sizes in accordance with Appendix F to Part 43 of the CFTC Regulations:

| Initial Maturity greater than | Initial Maturity less than or equal to | Minimum Block Size (\$ Notional) |                  |                      |
|-------------------------------|--|----------------------------------|------------------|----------------------|
|                               |  | Super Major Currencies           | Major Currencies | Non-Major Currencies |
| 0 days                        | 46 days                                | \$6.4 billion                    | \$2.2 billion    | \$230 million        |
| 46 days                       | 3 months (107 days)                    | \$2.1 billion                    | \$580 million    | \$230 million        |
| 3 months (107 days)           | 6 months (198 days)                    | \$1.2 billion                    | \$440 million    | \$150 million        |
| 6 months (198 days)           | 1 year (381 days)                      | \$1.1 billion                    | \$220 million    | \$110 million        |
| 1 year (381 days)             | 2 years (746 days)                     | \$460 million                    | \$130 million    | \$54 million         |
| 2 years (746 days)            | 5 years (1,842 days)                   | \$240 million                    | \$88 million     | \$27 million         |
| 5 years (1,842 days)          | 10 years (3,668 days)                  | \$170 million                    | \$49 million     | \$15 million         |
| 10 years (3,668 days)         | 30 years (10,973 days)                 | \$120 million                    | \$37 million     | \$16 million         |
| 30 years (10,973 days)        |  | \$67 million                     | \$15 million     | \$15 million         |

(ii) For non-US dollar denominated swaps, the minimum block sizes will be based on a currency exchange rate that is widely published within the preceding two business days from the date of execution of the swap transaction.

(iii) Terminations. When executing a Transaction that is terminating an existing Contract, the Maturity Date of the Contract shall be its remaining time to maturity and not the original Tenor of the Contract.

(iv) Reporting. All Block Trades must be reported to the Exchange as soon as technologically practicable after execution but in no event more than 10 minutes after the parties have agreed to the terms of such Block Trade.

(u) Clearing House. CME or LCH. Choice of Clearing House is determined at the time of order entry. Trades that are not intended to be cleared will not have a Clearing House associated with the order.

Exhibit 2

Schedule 1001  
 IRS Fixed for Floating Swaps eligible for Portfolio Terminations and  
 Compactions ("PTC") on The SEF Trading System.

Holiday Business Day  
 Convention

CME

| Currency   | Float Rate Index | Product Type | Start Date (Spot Starting) | Fixing Date Offset | Roll Types               | Holiday Business Centers - Float Fixing Dates | Holiday Business Centers - Effective and Payment Dates | Max Tenor (yrs) | Valid Fixed Payment Frequencies | Valid Float Designated Maturities | Valid Float Payment Frequencies | Valid Float Reset Frequencies | Valid Stub Index Frequencies |
|------------|------------------|--------------|----------------------------|--------------------|--------------------------|---|--|-----------------|---------------------------------|-----------------------------------|---------------------------------|-------------------------------|------------------------------|
| <u>AUD</u> | AUD-BBR-BBSW     | IRS          | 1                          | 0                  | Standard, IMM, EOM, None | AUSY  | AUSY   | 30              | 1M, 3M, 6M, 12M                 | 3M, 6M, 12M                       | 3M, 6M, 12M                     | 3M, 6M                        | 1M-6M                        |
| <u>BRL</u> | BRL-CDI          | IRS          | 0                          | 0                  | None                     | BRBD  | BRBD, USNY   | 10              | 1T                              | 1D                                | 1T                              | 1D                            | n/a                          |
| <u>CAD</u> | CAD-BA-CDOR      | IRS          | 0                          | 0                  | None                     | CATO  | CATO   | 30              | 1M, 3M, 6M, 12M                 | 3M, 6M, 12M                       | 3M, 6M, 12M                     | 3M                            | 1M, 2M, 3M, 6M, 12M          |

**Schedule 1001**  
**IRS Fixed for Floating Swaps eligible for Portfolio Terminations and**  
**Compactions ("PTC") on The SEF Trading System.**

**Holiday Business Day**  
**Convention**

**CME**

| Currency   | Float Rate Index | Product Type | Start Date (Spot Starting) | Fixing Date Offset | Roll Types               | Holiday Business Centers - Float Fixing Dates | Holiday Business Centers - Effective and Payment Dates | Max Tenor (yrs) | Valid Fixed Payment Frequencies | Valid Float Designated Maturities | Valid Float Payment Frequencies | Valid Float Reset Frequencies | Valid Stub Index Frequencies    |
|------------|------------------|--------------|----------------------------|--------------------|--------------------------|---|--|-----------------|---------------------------------|-----------------------------------|---------------------------------|-------------------------------|---------------------------------|
| <u>CHF</u> | CHF-LIBOR-BBA    | IRS          | 2                          | -2                 | Standard, IMM, EOM, None | GBLO  | CHZU, GBLO   | 30              | 1M, 3M, 6M, 12M                 | 6M, 12M                           | 6M, 12M                         | 6M                            | 1W, 1M, 2M, 3M, 6M, 12M         |
| <u>CLP</u> | CLP-TNA          | IRS          | 2                          | 0                  | Standard, IMM, EOM, None | USNY, CLSA                                    | USNY, CLSA   | n/a             | n/a                             | 1D                                | n/a                             | n/a                           | n/a                             |
| <u>CZK</u> | CZK-PRIBOR-PRBO  | IRS          | 2                          | -2                 | Standard, IMM, EOM, None | CZPR  | CZPR   | 10              | 1M, 3M, 6M, 12M                 | 6M                                | 6M, 12M                         | 6M                            | 1W, 2W, 1M, 2M, 3M, 6M, 9M, 12M |

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**Compactions ("PTC") on The SEF Trading System.**

**Holiday Business Day**  
**Convention**

**CME**

| Currency   | Float Rate Index  | Product Type | Start Date (Spot Starting) | Fixing Date Offset | Roll Types               | Holiday Business Centers - Float Fixing Dates | Holiday Business Centers - Effective and Payment Dates | Max Tenor (yrs) | Valid Fixed Payment Frequencies | Valid Float Designated Maturities | Valid Float Payment Frequencies | Valid Float Reset Frequencies | Valid Stub Index Frequencies    |
|------------|---|--------------|----------------------------|--------------------|--------------------------|---|--|-----------------|---------------------------------|-----------------------------------|---------------------------------|-------------------------------|---------------------------------|
| <u>DKK</u> | DKK-CIBOR-DKNA13, DKK-CIBOR2-DKNA13                                   | IRS          | 2                          | 0 (-2 for CIBOR2)  | Standard, IMM, EOM, None | DKCO  | DKCO   | 30              | 1M, 3M, 6M, 12M                 | 6M                                | 6M, 12M                         | 6M                            | 1W, 2W, 1M-12M                  |
| <u>EUR</u> | EUR-EURIBOR-Reuters, EUR-EURIBOR Telerate, EUR-LIBOR (Libor LCH only) | IRS          | 2                          | -2                 | Standard, IMM, EOM, None | EUTA  | EUTA   | 50              | 1M, 3M, 6M, 12M, 1T             | 1M, 3M, 6M, 12M                   | 1M, 3M, 6M, 12M, 1T             | 1M, 3M, 6M                    | 1W, 2W, 1M, 2M, 3M, 6M, 9M, 12M |
| <u>GBP</u> | GBP-LIBOR-BBA   | IRS          | 0                          | 0                  | Standard, IMM, EOM, None | GBLO  | GBLO   | 50              | 1M, 3M, 6M, 12M, 1T             | 1M, 3M, 6M, 12M                   | 1M, 3M, 6M, 12M, 1T             | 1M, 3M, 6M                    | 1W, 1M, 2M, 3M, 6M, 12M         |

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**Holiday Business Day**  
**Convention**

**CME**

| Currency   | Float Rate Index  | Product Type | Start Date (Spot Starting) | Fixing Date Offset | Roll Types               | Holiday Business Centers - Float Fixing Dates | Holiday Business Centers - Effective and Payment Dates | Max Tenor (yrs) | Valid Fixed Payment Frequencies | Valid Float Designated Maturities | Valid Float Payment Frequencies | Valid Float Reset Frequencies | Valid Stub Index Frequencies |
|------------|-------------------|--------------|----------------------------|--------------------|--------------------------|---|--|-----------------|---------------------------------|-----------------------------------|---------------------------------|-------------------------------|------------------------------|
| <u>HKD</u> | HKD-HIBOR-HKAB    | IRS          | 0                          | 0                  | Standard, IMM, EOM, None | HKHK  | HKHK   | 15              | 1M, 3M, 6M, 12M                 | 3M                                | 3M, 6M, 12M                     | 3M                            | 1W, 2W, 1M-12M               |
| <u>HUF</u> | HUF-BUBOR-REUTERS | IRS          | 2                          | -2                 | Standard, IMM, EOM, None | HUBU  | HUBU   | 10              | 1M, 3M, 6M, 12M                 | 6M                                | 6M, 12M                         | 6M                            | 1W, 2W, 1-12M                |
| <u>JPY</u> | JPY-LIBOR-BBA     | IRS          | 2                          | -2                 | Standard, IMM, EOM, None | GBLO  | JPTO, GBLO   | 30              | 1M, 3M, 6M, 12M                 | 1M, 3M, 6M, 12M                   | 1M, 3M, 6M, 12M                 | 1M, 3M, 6M                    | 1W, 1M, 2M, 3M, 6M, 12M      |

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**Compactions ("PTC") on The SEF Trading System.**

**Holiday Business Day**  
**Convention**

**CME**

| Currency   | Float Rate Index | Product Type | Start Date (Spot Starting) | Fixing Date Offset | Roll Types               | Holiday Business Centers - Float Fixing Dates | Holiday Business Centers - Effective and Payment Dates | Max Tenor (yrs) | Valid Fixed Payment Frequencies | Valid Float Designated Maturities | Valid Float Payment Frequencies | Valid Float Reset Frequencies | Valid Stub Index Frequencies |
|------------|------------------|--------------|----------------------------|--------------------|--------------------------|---|--|-----------------|---------------------------------|-----------------------------------|---------------------------------|-------------------------------|------------------------------|
| <u>MXN</u> | MXN-TIE-Banxico  | IRS          | 2                          | -2                 | None                     | MXMC  | MXMC   | 21              | 28D                             | 28D                               | 28D                             | 28D                           | 28D                          |
| <u>NOK</u> | NOK-NIBOR-NIBR   | IRS          | 2                          | -2                 | Standard, IMM, EOM, None | NOOS  | NOOS   | 30              | 1M, 3M, 6M, 12M                 | 6M                                | 6M, 12M                         | 6M                            | 1W, 2W, 1M-6M, 9m, 12M       |
| <u>NZD</u> | NZD-BBR-FRA      | IRS          | 2                          | 0                  | Standard, IMM, EOM, None | NZWE  | NZWE, NZAU   | 15              | 1M, 3M, 6M, 12M                 | 3M                                | 3M, 6M, 12M                     | 3M                            | 1M-6M                        |

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**CME**

| Currency   | Float Rate Index | Product Type | Start Date (Spot Starting) | Fixing Date Offset | Roll Types               | Holiday Business Centers - Float Fixing Dates | Holiday Business Centers - Effective and Payment Dates | Max Tenor (yrs) | Valid Fixed Payment Frequencies | Valid Float Designated Maturities | Valid Float Payment Frequencies | Valid Float Reset Frequencies | Valid Stub Index Frequencies |
|------------|------------------|--------------|----------------------------|--------------------|--------------------------|---|--|-----------------|---------------------------------|-----------------------------------|---------------------------------|-------------------------------|------------------------------|
| <u>PLN</u> | PLN-WIBOR-WIBO   | IRS          | 2                          | -2                 | Standard, IMM, EOM, None | PLWA  | PLWA   | 10              | 1M, 3M, 6M, 12M                 | 6M                                | 6M, 12M                         | 6M                            | 1W, 2W, 1M, 3M, 6M, 9M, 12M  |
| <u>SEK</u> | SEK-STIBOR-SIDE  | IRS          | 2                          | -2                 | Standard, IMM, EOM, None | SEST  | SEST   | 30              | 1M, 3M, 6M, 12M                 | 3M                                | 3M, 6M, 12M                     | 3M                            | 1W, 1M, 2M, 3M, 6M           |
| <u>SGD</u> | SGD-SOR-REUTERS  | IRS          | 2                          | -2                 | Standard, IMM, EOM, None | SGSI  | SGSI   | 15              | 1M, 3M, 6M, 12M                 | 6M                                | 6M, 12M                         | 6M                            | 1W, 1M, 2M, 3M, 6M, 9M, 12M  |



**Schedule 1001**  
**IRS Fixed for Floating Swaps eligible for Portfolio Terminations and**  
**Compactions ("PTC") on The SEF Trading System.**

**Holiday Business Day**  
**Convention**

**CME**

| Currency   | Float Rate Index | Product Type | Start Date (Spot Starting) | Fixing Date Offset | Roll Types               | Holiday Business Centers - Float Fixing Dates | Holiday Business Centers - Effective and Payment Dates | Max Tenor (yrs) | Valid Fixed Payment Frequencies | Valid Float Designated Maturities | Valid Float Payment Frequencies | Valid Float Reset Frequencies | Valid Stub Index Frequencies |
|------------|------------------|--------------|----------------------------|--------------------|--------------------------|---|--|-----------------|---------------------------------|-----------------------------------|---------------------------------|-------------------------------|------------------------------|
| <u>USD</u> | USD-LIBOR-BBA    | IRS          | 2                          | -2                 | Standard, IMM, EOM, None | GBLO  | USNY, GBLO   | 50              | 1M, 3M, 6M, 12M, 1T             | 1M, 3M, 6M, 12M                   | 1M, 3M, 6M, 12M, 1T             | 1M, 3M, 6M                    | 1W, 1M, 2M, 3M, 6M, 12M      |
| <u>ZAR</u> | ZAR-JIBAR-SAFEX  | IRS          | 0                          | 0                  | Standard, IMM, EOM, None | ZAJ0  | ZAJ0   | 10              | 1M, 3M, 6M, 12M                 | 3M                                | 3M, 6M, 12M                     | 3M                            | 1M, 3M, 6M, 9M, 12M          |

|   |   | LCH             |                                 |                                   |                                 |                               |                              |                     |   | UNC             |                                 |                                   |                                 |
|---|---|-----------------|---------------------------------|-----------------------------------|---------------------------------|-------------------------------|------------------------------|---------------------|---|-----------------|---------------------------------|-----------------------------------|---------------------------------|
| Float Leg Day Count   | Fixed Leg Day Count   | Max Tenor (yrs) | Valid Fixed Payment Frequencies | Valid Float Designated Maturities | Valid Float Payment Frequencies | Valid Float Reset Frequencies | Valid Stub Index Frequencies | Float Leg Day Count | Fixed Leg Day Count   | Max Tenor (yrs) | Valid Fixed Payment Frequencies | Valid Float Designated Maturities | Valid Float Payment Frequencies |
| 30/360<br>ACT/360<br>ACT/365.FIXED<br>ACT/ACT.ISDA<br>30E/360<br>30E/360.ISDA | 30/360<br>ACT/360<br>ACT/365.FIXED<br>ACT/ACT.ISDA<br>30E/360<br>30E/360.ISDA | 30              | 1M, 3M, 6M,<br>12M, 1T          | 1M, 3M, 6M                        | 1M, 3M, 6M,<br>12M, 1T          | 1M, 3M,<br>6M                 | 1M, 2M, 3M, 4M,<br>5M, 6M    | ACT/365.FIXED       | 30/360<br>30E/360<br>ACT/360<br>ACT/365.Fixed<br>ACT/365.ISDA<br>ACT/ACT.ISMA<br>ACT/ACT.ISDA<br>30E/360.ISDA<br>ACT/ACT.ICMA | <u>30</u>       | <u>1M, 3M, 6M,<br/>12M</u>      | <u>1M, 3M, 6M,<br/>12M</u>        | <u>1M, 3M, 6M, 12M</u>          |
| BUS/252   | BUS/252   | n/a             | n/a                             | n/a                               | n/a                             | n/a                           | n/a                          | n/a                 | n/a   | <u>10</u>       | <u>1T</u>                       | <u>1D</u>                         | <u>1T</u>                       |
| 30/360<br>ACT/360<br>ACT/365.FIXED<br>ACT/ACT.ISDA<br>30E/360<br>30E/360.ISDA | 30/360<br>ACT/360<br>ACT/365.FIXED<br>ACT/ACT.ISDA<br>30E/360<br>30E/360.ISDA | 30              | 1M, 3M, 6M,<br>12M, 1T          | 1M, 3M, 6M,<br>12M                | 1M, 3M, 6M,<br>12M, 1T          | 1M, 3M,<br>6M, 12M            | 1M, 2M, 3M, 6M,<br>12M       | ACT/365.FIXED       | 30/360<br>30E/360<br>ACT/360<br>ACT/365.Fixed<br>ACT/365.ISDA<br>ACT/ACT.ISMA<br>ACT/ACT.ISDA<br>30E/360.ISDA<br>ACT/ACT.ICMA | <u>30</u>       | <u>1M, 3M, 6M,<br/>12M 1T</u>   | <u>1M, 3M, 6M,<br/>12M</u>        | <u>1M, 3M, 6M, 12M<br/>1T</u>   |

|   |   | LCH             |                                 |                                   |                                 |                               |                                    |                     |   | UNC             |                                 |                                   |                                 |
|---|---|-----------------|---------------------------------|-----------------------------------|---------------------------------|-------------------------------|------------------------------------|---------------------|---|-----------------|---------------------------------|-----------------------------------|---------------------------------|
| Float Leg Day Count   | Fixed Leg Day Count   | Max Tenor (yrs) | Valid Fixed Payment Frequencies | Valid Float Designated Maturities | Valid Float Payment Frequencies | Valid Float Reset Frequencies | Valid Stub Index Frequencies       | Float Leg Day Count | Fixed Leg Day Count   | Max Tenor (yrs) | Valid Fixed Payment Frequencies | Valid Float Designated Maturities | Valid Float Payment Frequencies |
| 30/360<br>ACT/360<br>ACT/365.FIXED<br>ACT/ACT.ISDA<br>30E/360<br>30E/360.ISDA                 | 30/360<br>ACT/360<br>ACT/365.FIXED<br>ACT/ACT.ISDA<br>30E/360<br>30E/360.ISDA                 | 30              | 1M, 3M, 6M,<br>12M, 1T          | 1M, 3M, 6M,<br>12M                | 1M, 3M, 6M,<br>12M, 1T          | 1M, 3M,<br>6M, 12M            | 1W, 1M, 2M, 3M,<br>6M, 12M         | ACT/360             | 30/360<br>30E/360<br>ACT/360<br>ACT/365.Fixed<br>ACT/365.ISDA<br>ACT/ACT.ISMA<br>ACT/ACT.ISDA<br>30E/360.ISDA<br>ACT/ACT.ICMA | <u>31</u>       | <u>1M, 3M, 6M,<br/>12M, 1T</u>  | <u>1M, 3M, 6M,<br/>12M</u>        | <u>1M, 3M, 6M,<br/>12M, 1T</u>  |
| n/a   | n/a   | n/a             | n/a                             | n/a                               | n/a                             | n/a                           | n/a                                | n/a                 | n/a   | 50              | 1M, 3M, 6M,<br>12M, 1T          | 1D                                | 1M, 3M, 6M,<br>12M, 1T          |
| 30/360<br>ACT/360<br>ACT/365.FIXED<br>ACT/ACT.ISDA<br>ACT/ACT.ICMA<br>30E/360<br>30E/360.ISDA | 30/360<br>ACT/360<br>ACT/365.FIXED<br>ACT/ACT.ISDA<br>ACT/ACT.ICMA<br>30E/360<br>30E/360.ISDA | 10              | 1M, 3M, 6M,<br>12M, 1T          | 1M, 3M, 6M,<br>12M                | 1M, 3M, 6M,<br>12M, 1T          | 1M, 3M,<br>6M, 12M            | 1W, 2W, 1M, 2M,<br>3M, 6M, 9M, 12M | ACT/360             | 30/360<br>30E/360<br>ACT/360<br>ACT/365.Fixed<br>ACT/365.ISDA<br>ACT/ACT.ISMA<br>ACT/ACT.ISDA<br>30E/360.ISDA<br>ACT/ACT.ICMA | <u>50</u>       | <u>1M, 3M, 6M,<br/>12M, 1T</u>  | <u>1M, 3M, 6M,<br/>12M</u>        | <u>1M, 3M, 6M,<br/>12M, 1T</u>  |

|   |   | LCH             |                                 |                                   |                                 |                               |   |                     |   | UNC             |                                 |                                   |                                 |
|---|---|-----------------|---------------------------------|-----------------------------------|---------------------------------|-------------------------------|---|---------------------|---|-----------------|---------------------------------|-----------------------------------|---------------------------------|
| Float Leg Day Count   | Fixed Leg Day Count   | Max Tenor (yrs) | Valid Fixed Payment Frequencies | Valid Float Designated Maturities | Valid Float Payment Frequencies | Valid Float Reset Frequencies | Valid Stub Index Frequencies  | Float Leg Day Count | Fixed Leg Day Count   | Max Tenor (yrs) | Valid Fixed Payment Frequencies | Valid Float Designated Maturities | Valid Float Payment Frequencies |
| 30/360<br>ACT/360<br>ACT/365.FIXED<br>ACT/ACT.ISDA<br>30E/360<br>30E/360.ISDA | 30/360<br>ACT/360<br>ACT/365.FIXED<br>ACT/ACT.ISDA<br>30E/360<br>30E/360.ISDA | 10              | 1M, 3M, 6M,<br>12M, 1T          | 1M, 3M, 6M,<br>12M                | 1M, 3M, 6M,<br>12M, 1T          | 1M, 3M,<br>6M, 12M            | 1W, 1M, 2M, 3M,<br>4M, 5M, 6M, 9M,<br>12M   | ACT/360             | 30/360<br>30E/360<br>ACT/360<br>ACT/365.Fixed<br>ACT/365.ISDA<br>ACT/ACT.ISMA<br>ACT/ACT.ISDA<br>30E/360.ISDA<br>ACT/ACT.ICMA | <u>30</u>       | <u>1M, 3M, 6M,<br/>12M, 1T</u>  | <u>1M, 3M, 6M,<br/>12M</u>        | <u>1M, 3M, 6M,<br/>12M, 1T</u>  |
| 30/360<br>ACT/360<br>ACT/365.FIXED<br>ACT/ACT.ISDA<br>30E/360<br>30E/360.ISDA | 30/360<br>ACT/360<br>ACT/365.FIXED<br>ACT/ACT.ISDA<br>30E/360<br>30E/360.ISDA | 50              | 1M, 3M, 6M,<br>12M, 1T          | 1M, 3M, 6M,<br>12M                | 1M, 3M, 6M,<br>12M 1T           | 1M, 3M,<br>6M, 12M            | EURIBOR:<br>1W, 2W, 1M, 2M,<br>3M, 6M, 9M, 12M<br>LIBOR: 1W, 1M,<br>2M, 3M, 6M, 12M | ACT/360             | 30/360<br>30E/360<br>ACT/360<br>ACT/365.Fixed<br>ACT/365.ISDA<br>ACT/ACT.ISMA<br>ACT/ACT.ISDA<br>30E/360.ISDA<br>ACT/ACT.ICMA | <u>50</u>       | <u>1M, 3M, 6M,<br/>12M, 1T</u>  | <u>1M, 3M, 6M,<br/>12M</u>        | <u>1M, 3M, 6M,<br/>12M, 1T</u>  |
| 30/360<br>ACT/360<br>ACT/365.FIXED<br>ACT/ACT.ISDA<br>30E/360<br>30E/360.ISDA | 30/360<br>ACT/360<br>ACT/365.FIXED<br>ACT/ACT.ISDA<br>30E/360<br>30E/360.ISDA | 50              | 1M, 3M, 6M,<br>12M, 1T          | 1M, 3M, 6M,<br>12M                | 1M, 3M, 6M,<br>12M, 1T          | 1M, 3M,<br>6M, 12M            | 1W, 1M, 2M, 3M,<br>6M, 12M  | ACT/365.FIX<br>ED   | 30/360<br>30E/360<br>ACT/360<br>ACT/365.Fixed<br>ACT/365.ISDA<br>ACT/ACT.ISMA<br>ACT/ACT.ISDA<br>30E/360.ISDA<br>ACT/ACT.ICMA | <u>50</u>       | <u>1M, 3M, 6M,<br/>12M, 1T</u>  | <u>1M, 3M, 6M,<br/>12M</u>        | <u>1M, 3M, 6M,<br/>12M, 1T</u>  |

|   |   | LCH             |                                 |                                   |                                 |                               |                              |                     |   | UNC             |                                 |                                   |                                 |
|---|---|-----------------|---------------------------------|-----------------------------------|---------------------------------|-------------------------------|------------------------------|---------------------|---|-----------------|---------------------------------|-----------------------------------|---------------------------------|
| Float Leg Day Count   | Fixed Leg Day Count   | Max Tenor (yrs) | Valid Fixed Payment Frequencies | Valid Float Designated Maturities | Valid Float Payment Frequencies | Valid Float Reset Frequencies | Valid Stub Index Frequencies | Float Leg Day Count | Fixed Leg Day Count   | Max Tenor (yrs) | Valid Fixed Payment Frequencies | Valid Float Designated Maturities | Valid Float Payment Frequencies |
| 30/360<br>ACT/360<br>ACT/365.FIXED<br>ACT/ACT.ISDA<br>30E/360<br>30E/360.ISDA | 30/360<br>ACT/360<br>ACT/365.FIXED<br>ACT/ACT.ISDA<br>30E/360<br>30E/360.ISDA | 10              | 1M, 3M, 6M,<br>12M, 1T          | 1M, 3M, 6M,<br>12M                | 1M, 3M, 6M,<br>12M, 1T          | 1M, 3M,<br>6M, 12M            | 1M-12M                       | ACT/365.FIXED       | 30/360<br>30E/360<br>ACT/360<br>ACT/365.Fixed<br>ACT/365.ISDA<br>ACT/ACT.ISMA<br>ACT/ACT.ISDA<br>30E/360.ISDA<br>ACT/ACT.ICMA | <u>15</u>       | <u>1M, 3M, 6M,<br/>12M, 1T</u>  | <u>1M, 3M, 6M,<br/>12M</u>        | <u>1M, 3M, 6M,<br/>12M, 1T</u>  |
| 30/360<br>ACT/360<br>ACT/365.FIXED<br>ACT/ACT.ISDA<br>30E/360<br>30E/360.ISDA | 30/360<br>ACT/360<br>ACT/365.FIXED<br>ACT/ACT.ISDA<br>30E/360<br>30E/360.ISDA | 10              | 1M, 3M, 6M,<br>12M, 1T          | 1M, 3M, 6M,<br>12M                | 1M, 3M, 6M,<br>12M, 1T          | 1M, 3M,<br>6M, 12M            | 1W, 2W, 1M- 12M              | ACT/360             | 30/360<br>30E/360<br>ACT/360<br>ACT/365.Fixed<br>ACT/365.ISDA<br>ACT/ACT.ISMA<br>ACT/ACT.ISDA<br>30E/360.ISDA<br>ACT/ACT.ICMA | <u>50</u>       | <u>1M, 3M, 6M,<br/>12M, 1T</u>  | <u>1M, 3M, 6M,<br/>12M</u>        | <u>1M, 3M, 6M,<br/>12M, 1T</u>  |
| 30/360<br>ACT/360<br>ACT/365.FIXED<br>ACT/ACT.ISDA<br>30E/360<br>30E/360.ISDA | 30/360<br>ACT/360<br>ACT/365.FIXED<br>ACT/ACT.ISDA<br>30E/360<br>30E/360.ISDA | 40*             | 1M, 3M, 6M,<br>12M, 1T          | 1M, 3M, 6M,<br>12M                | 1M, 3M, 6M,<br>12M, 1T          | 1M, 3M,<br>6M, 12M            | 1W, 1M, 2M, 3M,<br>6M, 12M   | ACT/360             | 30/360<br>30E/360<br>ACT/360<br>ACT/365.Fixed<br>ACT/365.ISDA<br>ACT/ACT.ISMA<br>ACT/ACT.ISDA<br>30E/360.ISDA<br>ACT/ACT.ICMA | <u>30</u>       | <u>1M, 3M, 6M,<br/>12M, 1T</u>  | <u>1M, 3M, 6M,<br/>12M</u>        | <u>1M, 3M, 6M,<br/>12M, 1T</u>  |

|   |   | LCH             |                                 |                                   |                                 |                               |   |                     |   | UNO             |                                 |                                   |                                 |
|---|---|-----------------|---------------------------------|-----------------------------------|---------------------------------|-------------------------------|---|---------------------|---|-----------------|---------------------------------|-----------------------------------|---------------------------------|
| Float Leg Day Count   | Fixed Leg Day Count   | Max Tenor (yrs) | Valid Fixed Payment Frequencies | Valid Float Designated Maturities | Valid Float Payment Frequencies | Valid Float Reset Frequencies | Valid Stub Index Frequencies                  | Float Leg Day Count | Fixed Leg Day Count   | Max Tenor (yrs) | Valid Fixed Payment Frequencies | Valid Float Designated Maturities | Valid Float Payment Frequencies |
| 30/360<br>ACT/360<br>ACT/365.FIXED<br>ACT/ACT.ISDA<br>30E/360<br>30E/360.ISDA<br>ACT/ACT.ICMA | 30/360<br>ACT/360<br>ACT/365.FIXED<br>ACT/ACT.ISDA<br>30E/360<br>30E/360.ISDA<br>ACT/ACT.ICMA | 10.5            | 28D                             | 28D                               | 28D                             | 28D                           | 28D   | ACT/360             | 30/360<br>30E/360<br>ACT/360<br>ACT/365.Fixed<br>ACT/ACT.ISDA<br>30E/360.ISDA<br>ACT/ACT.ICMA                                 | <u>21</u>       | <u>28D</u>                      | <u>28D</u>                        | <u>28D</u>                      |
| 30/360<br>ACT/360<br>ACT/365.FIXED<br>ACT/ACT.ISDA<br>30E/360<br>30E/360.ISDA                 | 30/360<br>ACT/360<br>ACT/365.FIXED<br>ACT/ACT.ISDA<br>30E/360<br>30E/360.ISDA                 | 10              | 1M, 3M, 6M,<br>12M, 1T          | 1M, 3M, 6M,<br>12M                | 1M, 3M, 6M,<br>12M, 1T          | 1M, 3M,<br>6M, 12M            | 1W, 2W, 1M, 2M,<br>3M, 4M, 5M, 6M,<br>9M, 12M | ACT/360             | 30/360<br>30E/360<br>ACT/360<br>ACT/365.Fixed<br>ACT/365.ISDA<br>ACT/ACT.ISMA<br>ACT/ACT.ISDA<br>30E/360.ISDA<br>ACT/ACT.ICMA | <u>50</u>       | <u>1M, 3M, 6M,<br/>12M, 1T</u>  | <u>1M, 3M, 6M,<br/>12M</u>        | <u>1M, 3M, 6M,<br/>12M, 1T</u>  |
| 30/360<br>ACT/360<br>ACT/365.FIXED<br>ACT/ACT.ISDA<br>30E/360<br>30E/360.ISDA                 | 30/360<br>ACT/360<br>ACT/365.FIXED<br>ACT/ACT.ISDA<br>30E/360<br>30E/360.ISDA                 | 15              | 1M, 3M, 6M,<br>12M, 1T          | 1M, 3M, 6M                        | 1M, 3M, 6M,<br>12M, 1T          | 1M, 3M,<br>6M                 | 1M, 2M, 3M, 4M,<br>5M, 6M                     | ACT/365.FIXED       | 30/360<br>30E/360<br>ACT/360<br>ACT/365.Fixed<br>ACT/365.ISDA<br>ACT/ACT.ISMA<br>ACT/ACT.ISDA<br>30E/360.ISDA<br>ACT/ACT.ICMA | <u>15.5</u>     | <u>1M, 3M, 6M,<br/>12M, 1T</u>  | <u>1M, 3M, 6M,<br/>12M</u>        | <u>1M, 3M, 6M,<br/>12M, 1T</u>  |

|   |   | LCH             |                                 |                                   |                                 |                               |                                |                     |   | UNO             |                                 |                                   |                                 |
|---|---|-----------------|---------------------------------|-----------------------------------|---------------------------------|-------------------------------|--------------------------------|---------------------|---|-----------------|---------------------------------|-----------------------------------|---------------------------------|
| Float Leg Day Count   | Fixed Leg Day Count   | Max Tenor (yrs) | Valid Fixed Payment Frequencies | Valid Float Designated Maturities | Valid Float Payment Frequencies | Valid Float Reset Frequencies | Valid Stub Index Frequencies   | Float Leg Day Count | Fixed Leg Day Count   | Max Tenor (yrs) | Valid Fixed Payment Frequencies | Valid Float Designated Maturities | Valid Float Payment Frequencies |
| 30/360<br>ACT/360<br>ACT/365.FIXED<br>ACT/ACT.ISDA<br>30E/360<br>30E/360.ISDA | 30/360<br>ACT/360<br>ACT/365.FIXED<br>ACT/ACT.ISDA<br>30E/360<br>30E/360.ISDA | 10              | 1M, 3M, 6M,<br>12M, 1T          | 1M, 3M, 6M,<br>12M                | 1M, 3M, 6M,<br>12M, 1T          | 1M, 3M,<br>6M, 12M            | 1W, 2W, 1M, 3M,<br>6M, 9M, 12M | ACT/365.FIXED       | 30/360<br>30E/360<br>ACT/360<br>ACT/365.Fixed<br>ACT/365.ISDA<br>ACT/ACT.ISMA<br>ACT/ACT.ISDA<br>30E/360.ISDA<br>ACT/ACT.ICMA | <u>50</u>       | <u>1M, 3M, 6M,<br/>12M, 1T</u>  | <u>1M, 3M, 6M,<br/>12M</u>        | <u>1M, 3M, 6M,<br/>12M, 1T</u>  |
| 30/360<br>ACT/360<br>ACT/365.FIXED<br>ACT/ACT.ISDA<br>30E/360<br>30E/360.ISDA | 30/360<br>ACT/360<br>ACT/365.FIXED<br>ACT/ACT.ISDA<br>30E/360<br>30E/360.ISDA | 30              | 1M, 3M, 6M,<br>12M, 1T          | 1M, 3M, 6M,<br>12M                | 1M, 3M, 6M,<br>12M, 1T          | 1M, 3M,<br>6M, 12M            | 1W, 1M, 2M, 3M,<br>6M, 9M, 12M | ACT/360             | 30/360<br>30E/360<br>ACT/360<br>ACT/365.Fixed<br>ACT/365.ISDA<br>ACT/ACT.ISMA<br>ACT/ACT.ISDA<br>30E/360.ISDA<br>ACT/ACT.ICMA | <u>50</u>       | <u>1M, 3M, 6M,<br/>12M, 1T</u>  | <u>1M, 3M, 6M,<br/>12M</u>        | <u>1M, 3M, 6M,<br/>12M, 1T</u>  |
| 30/360<br>ACT/360<br>ACT/365.FIXED<br>ACT/ACT.ISDA<br>30E/360<br>30E/360.ISDA | 30/360<br>ACT/360<br>ACT/365.FIXED<br>ACT/ACT.ISDA<br>30E/360<br>30E/360.ISDA | 10              | 1M, 3M, 6M,<br>12M, 1T          | 1M, 3M, 6M,<br>12M                | 1M, 3M, 6M,<br>12M, 1T          | 1M, 3M,<br>6M, 12M            | 1W, 1M, 2M, 3M,<br>6M, 9M, 12M | ACT/365.FIXED       | 30/360<br>30E/360<br>ACT/360<br>ACT/365.Fixed<br>ACT/365.ISDA<br>ACT/ACT.ISDA<br>30E/360.ISDA<br>ACT/ACT.ICMA                 | <u>15</u>       | <u>1M, 3M, 6M,<br/>12M, 1T</u>  | <u>1M, 3M, 6M,<br/>12M</u>        | <u>1M, 3M, 6M,<br/>12M, 1T</u>  |

|   |   | LCH             |                                 |                                   |                                 |                               |                              |                     |   | UNO             |                                 |                                   |                                 |
|---|---|-----------------|---------------------------------|-----------------------------------|---------------------------------|-------------------------------|------------------------------|---------------------|---|-----------------|---------------------------------|-----------------------------------|---------------------------------|
| Float Leg Day Count   | Fixed Leg Day Count   | Max Tenor (yrs) | Valid Fixed Payment Frequencies | Valid Float Designated Maturities | Valid Float Payment Frequencies | Valid Float Reset Frequencies | Valid Stub Index Frequencies | Float Leg Day Count | Fixed Leg Day Count   | Max Tenor (yrs) | Valid Fixed Payment Frequencies | Valid Float Designated Maturities | Valid Float Payment Frequencies |
| 30/360<br>ACT/360<br>ACT/365.FIXED<br>ACT/ACT.ISDA<br>30E/360<br>30E/360.ISDA | 30/360<br>ACT/360<br>ACT/365.FIXED<br>ACT/ACT.ISDA<br>30E/360<br>30E/360.ISDA | 50              | 1M, 3M, 6M,<br>12M, 1T          | 1M, 3M, 6M,<br>12M                | 1M, 3M, 6M,<br>12M, 1T          | 1M, 3M,<br>6M, 12M            | 1W, 1M, 2M, 3M,<br>6M, 12M   | ACT/360             | 30/360<br>30E/360<br>ACT/360<br>ACT/365.Fixed<br>ACT/365.ISDA<br>ACT/ACT.ISMA<br>ACT/ACT.ISDA<br>30E/360.ISDA<br>ACT/ACT.ICMA | <u>50</u>       | <u>1M, 3M, 6M,<br/>12M, 1T</u>  | <u>1M, 3M, 6M,<br/>12M</u>        | <u>1M, 3M, 6M,<br/>12M, 1T</u>  |
| 30/360<br>ACT/360<br>ACT/365.FIXED<br>ACT/ACT.ISDA<br>30E/360<br>30E/360.ISDA | 30/360<br>ACT/360<br>ACT/365.FIXED<br>ACT/ACT.ISDA<br>30E/360<br>30E/360.ISDA | 10              | 1M, 3M, 6M,<br>12M, 1T          | 1M, 3M, 6M,<br>12M                | 1M, 3M, 6M,<br>12M, 1T          | 1M, 3M,<br>6M, 12M            | 1M, 3M, 6M, 9M,<br>12M       | ACT/365.FIXED       | 30/360<br>30E/360<br>ACT/360<br>ACT/365.Fixed<br>ACT/365.ISDA<br>ACT/ACT.ISMA<br>ACT/ACT.ISDA<br>30E/360.ISDA<br>ACT/ACT.ICMA | <u>50</u>       | <u>1M, 3M, 6M,<br/>12M, 1T</u>  | <u>1M, 3M, 6M,<br/>12M</u>        | <u>1M, 3M, 6M,<br/>12M, 1T</u>  |



CLEARED

| Valid Float Reset Frequencies       | Valid Stub Index Frequencies                          | Float Leg Day Count  | Fixed Leg Day Count  |
|-------------------------------------|---|--|--|
| <u>1M, 3M, 6M, 12M</u>              | <u>1D, 1M, 2M,</u><br><u>3M, 4M, 5M,</u><br><u>6M</u> | <u>30/360</u><br><u>30E/360</u><br><u>ACT/360</u><br><u>ACT/365.Fixed</u><br><u>ACT/365.ISDA</u><br><u>ACT/ACT.ISMA</u><br><u>ACT/ACT.ISDA</u><br><u>30E/360.ISDA</u><br><u>ACT/ACT.ICMA</u> | <u>30/360</u><br><u>30E/360</u><br><u>ACT/360</u><br><u>ACT/365.Fixed</u><br><u>ACT/365.ISDA</u><br><u>ACT/ACT.ISMA</u><br><u>ACT/ACT.ISDA</u><br><u>30E/360.ISDA</u><br><u>ACT/ACT.ICMA</u> |
| <u>1D</u>                           | <u>n/a</u>  | <u>BUS/252</u>   | <u>BUS/252</u>   |
| <u>1M, 3M, 6M, 12M</u><br><u>1T</u> | <u>1M, 2M, 3M,</u><br><u>6M, 12M</u>                  | <u>30/360</u><br><u>30E/360</u><br><u>ACT/360</u><br><u>ACT/365.Fixed</u><br><u>ACT/365.ISDA</u><br><u>ACT/ACT.ISMA</u><br><u>ACT/ACT.ISDA</u><br><u>30E/360.ISDA</u><br><u>ACT/ACT.ICMA</u> | <u>30/360</u><br><u>30E/360</u><br><u>ACT/360</u><br><u>ACT/365.Fixed</u><br><u>ACT/365.ISDA</u><br><u>ACT/ACT.ISMA</u><br><u>ACT/ACT.ISDA</u><br><u>30E/360.ISDA</u><br><u>ACT/ACT.ICMA</u> |

CLEARED

| Valid Float Reset Frequencies        | Valid Stub Index Frequencies                               | Float Leg Day Count  | Fixed Leg Day Count  |
|--------------------------------------|--|--|--|
| <u>1M, 3M, 6M, 12M,</u><br><u>1T</u> | <u>1W, 1M, 2M,</u><br><u>3M, 6M, 12M</u>                   | <u>30/360</u><br><u>30E/360</u><br><u>ACT/360</u><br><u>ACT/365.Fixed</u><br><u>ACT/365.ISDA</u><br><u>ACT/ACT.ISMA</u><br><u>ACT/ACT.ISDA</u><br><u>30E/360.ISDA</u><br><u>ACT/ACT.ICMA</u> | <u>30/360</u><br><u>30E/360</u><br><u>ACT/360</u><br><u>ACT/365.Fixed</u><br><u>ACT/365.ISDA</u><br><u>ACT/ACT.ISMA</u><br><u>ACT/ACT.ISDA</u><br><u>30E/360.ISDA</u><br><u>ACT/ACT.ICMA</u> |
| 1M, 3M, 6M, 12M,<br>1T               | 1M, 2M, 3M,<br>6M, 12M                                     | 30/360<br>30E/360<br>30E/360.ISDA<br>ACT/360<br>ACT/365.Fixed<br>ACT/ACT.ISDA<br>ACT/ACT.ICMA  | 30/360<br>30E/360<br>30E/360.ISDA<br>ACT/360<br>ACT/365.Fixed<br>ACT/ACT.ISDA<br>ACT/ACT.ICMA  |
| <u>1M, 3M, 6M, 12M,</u><br><u>1T</u> | <u>1W, 2W, 1M,</u><br><u>2M, 3M, 6M,</u><br><u>9M, 12M</u> | <u>30/360</u><br><u>30E/360</u><br><u>ACT/360</u><br><u>ACT/365.Fixed</u><br><u>ACT/365.ISDA</u><br><u>ACT/ACT.ISDA</u><br><u>30E/360.ISDA</u><br><u>ACT/ACT.ICMA</u>                        | <u>30/360</u><br><u>30E/360</u><br><u>ACT/360</u><br><u>ACT/365.Fixed</u><br><u>ACT/365.ISDA</u><br><u>ACT/ACT.ISDA</u><br><u>30E/360.ISDA</u><br><u>ACT/ACT.ICMA</u>                        |

CLEARED

| Valid Float Reset Frequencies        | Valid Stub Index Frequencies                                   | Float Leg Day Count  | Fixed Leg Day Count  |
|--------------------------------------|--|--|--|
| <u>1M, 3M, 6M, 12M,</u><br><u>1T</u> | <u>1W, 1M, 2M,</u><br><u>3M, 4M, 5M,</u><br><u>6M, 9M, 12M</u> | <u>30/360</u><br><u>30E/360</u><br><u>30E/360.ISDA</u><br><u>ACT/360</u><br><u>ACT/365.Fixed</u><br><u>ACT/ACT.ISDA</u><br><u>ACT/ACT.ICMA</u> | <u>30/360</u><br><u>30E/360</u><br><u>30E/360.ISDA</u><br><u>ACT/360</u><br><u>ACT/365.Fixed</u><br><u>ACT/ACT.ISDA</u><br><u>ACT/ACT.ICMA</u> |
| <u>1M, 3M, 6M, 12M,</u><br><u>1T</u> | <u>1W, 2W, 1M,</u><br><u>2M, 3M, 6M,</u><br><u>9M, 12M</u>     | <u>30/360</u><br><u>30E/360</u><br><u>30E/360.ISDA</u><br><u>ACT/360</u><br><u>ACT/365.Fixed</u><br><u>ACT/ACT.ISDA</u><br><u>ACT/ACT.ICMA</u> | <u>30/360</u><br><u>30E/360</u><br><u>30E/360.ISDA</u><br><u>ACT/360</u><br><u>ACT/365.Fixed</u><br><u>ACT/ACT.ISDA</u><br><u>ACT/ACT.ICMA</u> |
| <u>1M, 3M, 6M, 12M,</u><br><u>1T</u> | <u>1W, 1M, 2M,</u><br><u>3M, 6M, 12M</u>                       | <u>30/360</u><br><u>30E/360</u><br><u>30E/360.ISDA</u><br><u>ACT/360</u><br><u>ACT/365.Fixed</u><br><u>ACT/ACT.ISDA</u><br><u>ACT/ACT.ICMA</u> | <u>30/360</u><br><u>30E/360</u><br><u>30E/360.ISDA</u><br><u>ACT/360</u><br><u>ACT/365.Fixed</u><br><u>ACT/ACT.ISDA</u><br><u>ACT/ACT.ICMA</u> |

CLEARED

| Valid Float Reset Frequencies        | Valid Stub Index Frequencies   | Float Leg Day Count  | Fixed Leg Day Count  |
|--------------------------------------|--|--|--|
| <u>1M, 3M, 6M, 12M,</u><br><u>1T</u> | <u>1W, 2W, 1M,</u><br><u>2M, 3M, 4M,</u><br><u>5M, 6M, 7M,</u><br><u>8M, 9M, 10M,</u><br><u>11M, 12M</u> | <u>30/360</u><br><u>30E/360</u><br><u>30E/360.ISDA</u><br><u>ACT/360</u><br><u>ACT/365.Fixed</u><br><u>ACT/ACT.ISDA</u><br><u>ACT/ACT.ICMA</u> | <u>30/360</u><br><u>30E/360</u><br><u>30E/360.ISDA</u><br><u>ACT/360</u><br><u>ACT/365.Fixed</u><br><u>ACT/ACT.ISDA</u><br><u>ACT/ACT.ICMA</u> |
| <u>1M, 3M, 6M, 12M,</u><br><u>1T</u> | <u>1W, 2W, 1M,</u><br><u>2M, 3M, 6M,</u><br><u>9M, 12M</u>   | <u>30/360</u><br><u>30E/360</u><br><u>ACT/360</u><br><u>ACT/365.Fixed</u><br><u>ACT/ACT.ISDA</u><br><u>30E/360.ISDA</u><br><u>ACT/ACT.ICMA</u> | <u>30/360</u><br><u>30E/360</u><br><u>ACT/360</u><br><u>ACT/365.Fixed</u><br><u>ACT/ACT.ISDA</u><br><u>30E/360.ISDA</u><br><u>ACT/ACT.ICMA</u> |
| <u>1M, 3M, 6M, 12M,</u><br><u>1T</u> | <u>1W, 1M, 2M,</u><br><u>3M, 6M, 12M</u>   | <u>30/360</u><br><u>30E/360</u><br><u>30E/360.ISDA</u><br><u>ACT/360</u><br><u>ACT/365.Fixed</u><br><u>ACT/ACT.ISDA</u><br><u>ACT/ACT.ICMA</u> | <u>30/360</u><br><u>30E/360</u><br><u>30E/360.ISDA</u><br><u>ACT/360</u><br><u>ACT/365.Fixed</u><br><u>ACT/ACT.ISDA</u><br><u>ACT/ACT.ICMA</u> |

CLEARED

| Valid Float Reset Frequencies | Valid Stub Index Frequencies      | Float Leg Day Count  | Fixed Leg Day Count  |
|-------------------------------|-----------------------------------|--|--|
| <u>28D</u>                    | <u>28D</u>                        | <u>30/360</u><br><u>30E/360</u><br><u>ACT/360</u><br><u>ACT/365.Fixed</u><br><u>ACT/365.ISDA</u><br><u>ACT/ACT.ISMA</u><br><u>ACT/ACT.ISDA</u><br><u>30E/360.ISDA</u><br><u>ACT/ACT.ICMA</u> | <u>30/360</u><br><u>30E/360</u><br><u>ACT/360</u><br><u>ACT/365.Fixed</u><br><u>ACT/365.ISDA</u><br><u>ACT/ACT.ISMA</u><br><u>ACT/ACT.ISDA</u><br><u>30E/360.ISDA</u><br><u>ACT/ACT.ICMA</u> |
| <u>1M, 3M, 6M, 1T</u>         | <u>1W, 1M, 2M, 3M, 6M</u>         | <u>30/360</u><br><u>30E/360</u><br><u>ACT/360</u><br><u>ACT/365.Fixed</u><br><u>ACT/365.ISDA</u><br><u>ACT/ACT.ISMA</u><br><u>ACT/ACT.ISDA</u><br><u>30E/360.ISDA</u><br><u>ACT/ACT.ICMA</u> | <u>30/360</u><br><u>30E/360</u><br><u>ACT/360</u><br><u>ACT/365.Fixed</u><br><u>ACT/365.ISDA</u><br><u>ACT/ACT.ISMA</u><br><u>ACT/ACT.ISDA</u><br><u>30E/360.ISDA</u><br><u>ACT/ACT.ICMA</u> |
| <u>1M, 3M, 6M, 12M, 1T</u>    | <u>1D, 1M, 2M, 3M, 4M, 5M, 6M</u> | <u>30/360</u><br><u>30E/360</u><br><u>ACT/360</u><br><u>ACT/365.Fixed</u><br><u>ACT/365.ISDA</u><br><u>ACT/ACT.ISMA</u><br><u>ACT/ACT.ISDA</u><br><u>30E/360.ISDA</u><br><u>ACT/ACT.ICMA</u> | <u>30/360</u><br><u>30E/360</u><br><u>ACT/360</u><br><u>ACT/365.Fixed</u><br><u>ACT/365.ISDA</u><br><u>ACT/ACT.ISMA</u><br><u>ACT/ACT.ISDA</u><br><u>30E/360.ISDA</u><br><u>ACT/ACT.ICMA</u> |

CLEARED

| Valid Float Reset Frequencies        | Valid Stub Index Frequencies                           | Float Leg Day Count  | Fixed Leg Day Count  |
|--------------------------------------|--|--|--|
| <u>1M, 3M, 6M, 12M,</u><br><u>1T</u> | <u>1W, 2W, 1M,</u><br><u>3M, 6M, 9M,</u><br><u>12M</u> | <u>30/360</u><br><u>30E/360</u><br><u>ACT/360</u><br><u>ACT/365.Fixed</u><br><u>ACT/365.ISDA</u><br><u>ACT/ACT.ISMA</u><br><u>ACT/ACT.ISDA</u><br><u>30E/360.ISDA</u><br><u>ACT/ACT.ICMA</u> | <u>30/360</u><br><u>30E/360</u><br><u>ACT/360</u><br><u>ACT/365.Fixed</u><br><u>ACT/365.ISDA</u><br><u>ACT/ACT.ISMA</u><br><u>ACT/ACT.ISDA</u><br><u>30E/360.ISDA</u><br><u>ACT/ACT.ICMA</u> |
| <u>1M, 3M, 6M, 12M,</u><br><u>1T</u> | <u>1W, 1M, 2M,</u><br><u>3M, 6M, 9M,</u><br><u>12M</u> | <u>30/360</u><br><u>30E/360</u><br><u>ACT/360</u><br><u>ACT/365.Fixed</u><br><u>ACT/365.ISDA</u><br><u>ACT/ACT.ISMA</u><br><u>ACT/ACT.ISDA</u><br><u>30E/360.ISDA</u><br><u>ACT/ACT.ICMA</u> | <u>30/360</u><br><u>30E/360</u><br><u>ACT/360</u><br><u>ACT/365.Fixed</u><br><u>ACT/365.ISDA</u><br><u>ACT/ACT.ISMA</u><br><u>ACT/ACT.ISDA</u><br><u>30E/360.ISDA</u><br><u>ACT/ACT.ICMA</u> |
| <u>1M, 3M, 6M, 12M,</u><br><u>1T</u> | <u>1W, 1M, 2M,</u><br><u>3M, 6M, 9M,</u><br><u>12M</u> | <u>30/360</u><br><u>30E/360</u><br><u>ACT/360</u><br><u>ACT/365.Fixed</u><br><u>ACT/365.ISDA</u><br><u>ACT/ACT.ISMA</u><br><u>ACT/ACT.ISDA</u><br><u>30E/360.ISDA</u><br><u>ACT/ACT.ICMA</u> | <u>30/360</u><br><u>30E/360</u><br><u>ACT/360</u><br><u>ACT/365.Fixed</u><br><u>ACT/365.ISDA</u><br><u>ACT/ACT.ISMA</u><br><u>ACT/ACT.ISDA</u><br><u>30E/360.ISDA</u><br><u>ACT/ACT.ICMA</u> |

CLEARED

| Valid Float Reset Frequencies        | Valid Stub Index Frequencies             | Float Leg Day Count  | Fixed Leg Day Count  |
|--------------------------------------|--|--|--|
| <u>1M, 3M, 6M, 12M,</u><br><u>1T</u> | <u>1W, 1M, 2M,</u><br><u>3M, 6M, 12M</u> | <u>30/360</u><br><u>30E/360</u><br><u>ACT/360</u><br><u>ACT/365.Fixed</u><br><u>ACT/365.ISDA</u><br><u>ACT/ACT.ISMA</u><br><u>ACT/ACT.ISDA</u><br><u>30E/360.ISDA</u><br><u>ACT/ACT.ICMA</u> | <u>30/360</u><br><u>30E/360</u><br><u>ACT/360</u><br><u>ACT/365.Fixed</u><br><u>ACT/365.ISDA</u><br><u>ACT/ACT.ISMA</u><br><u>ACT/ACT.ISDA</u><br><u>30E/360.ISDA</u><br><u>ACT/ACT.ICMA</u> |
| <u>1M, 3M, 6M, 12M,</u><br><u>1T</u> | <u>1M, 3M, 6M,</u><br><u>12M</u>         | <u>30/360</u><br><u>30E/360</u><br><u>ACT/360</u><br><u>ACT/365.Fixed</u><br><u>ACT/365.ISDA</u><br><u>ACT/ACT.ISMA</u><br><u>ACT/ACT.ISDA</u><br><u>30E/360.ISDA</u><br><u>ACT/ACT.ICMA</u> | <u>30/360</u><br><u>30E/360</u><br><u>ACT/360</u><br><u>ACT/365.Fixed</u><br><u>ACT/365.ISDA</u><br><u>ACT/ACT.ISMA</u><br><u>ACT/ACT.ISDA</u><br><u>30E/360.ISDA</u><br><u>ACT/ACT.ICMA</u> |