

Appendix C to Tradition SEF Rulebook Foreign Currency Product Listing

Foreign Exchange Product Descriptions

Options:

The trading strategies allowed include, but are not limited to, all manner of Put, Call, Butterfly, Straddle, Risk Reversal, Spreads and Delta-neutral volatility trades, with a range of tenors, depending on pair, from O/N through to 1Y with long-date tenors on selected pairs from 1Y out to 30Y.

Swaps:

Volatility, correlation and variance swaps.

Non-Deliverable Forwards:

Non-deliverable forwards on major Latin American, South American and Asian currencies.

Non-Deliverable FX Options

Non-deliverable options on major Latin American, South American, Asian and other currencies.

The trading strategies allowed include, but are not limited to all manner of Put, Call, Butterfly, Straddle, Risk Reversal, Spreads, Delta-neutral volatility trades.

Clearing Availability:

Currencies					
Contract	Type	Product	Cleared Y/N	Currencies	Tenors
Asian NDF's	Currencies	NDF	Y (Partial)	Asian Currencies	All Available Tenors
Latam NDF's	Currencies	NDF	Y (Partial)	Latam Currencies	All Available Tenors
Call	Currencies	Option Strategy	N	Global Currencies	All Available Tenors
Put	Currencies	Option Strategy	N	Global Currencies	All Available Tenors
Straddle	Currencies	Option Strategy	N	Global Currencies	All Available Tenors
Strangle	Currencies	Option Strategy	N	Global Currencies	All Available Tenors
Risk Reversal	Currencies	Option Strategy	N	Global Currencies	All Available Tenors
Butterfly	Currencies	Option Strategy	N	Global Currencies	All Available Tenors
Knock-Out	Currencies	Option Strategy	N	Global Currencies	All Available Tenors
Knock-In	Currencies	Option Strategy	N	Global Currencies	All Available Tenors
Reverse Knock-Out	Currencies	Option Strategy	N	Global Currencies	All Available Tenors
Reverse Knock-In	Currencies	Option Strategy	N	Global Currencies	All Available Tenors
Double Knock-Out	Currencies	Option Strategy	N	Global Currencies	All Available Tenors
Double Knock-In	Currencies	Option Strategy	N	Global Currencies	All Available Tenors
One Touch	Currencies	Option Strategy	N	Global Currencies	All Available Tenors
Double No-Touch	Currencies	Option Strategy	N	Global Currencies	All Available Tenors
Volatility Swap	Currencies	Option Strategy	N	Global Currencies	All Available Tenors
Variance Swap	Currencies	Option Strategy	N	Global Currencies	All Available Tenors
Correlation Swap	Currencies	Option Strategy	N	Global Currencies	All Available Tenors
Forward Volatility Agreement	Currencies	Option Strategy	N	Global Currencies	All Available Tenors
Basket Option	Currencies	Option Strategy	N	Global Currencies	All Available Tenors
Worst of Option	Currencies	Option Strategy	N	Global Currencies	All Available Tenors

1) Non Deliverable Forwards

Non Deliverable Forward

An NDF is a foreign exchange forward contract on a notional amount where no physical settlement of the two currencies takes place at maturity. Instead a net cash settlement is made by one party to another based on the difference of the two FX rates. The settlement is done using a pre-determined currency, typically USD, and is determined at an agreed fixing date, typically 1 or 2 days prior to settlement, using spot fixing rates. There is no exchange of principle or upfront payments on these contracts.

NDF Convention Definitions

NDF contracts follow the Emerging Market Trade Association (EMTA) conventions: (<http://www.emta.org/template.aspx?id=2275>), and 2006 ISDA Definitions

Available Currencies

CNY Chinese Renminbi
IDR Indonesian Rupiah
INR Indian Rupee
KRW South Korean Won
MYR Malaysian Ringgit
PHP Philippine Peso
TWD Taiwan Dollar
VND Vietnamese dong
EGP Egyptian pound
RUB Russian ruble
KZT Kazakh tenge
ARS Argentine Peso
BRL Brazilian Real
CLP Chilean Peso
COP Colombian Peso
GTQ Guatemalan quetzal
PEN Peruvian nuevo sol
UYU Uruguayan peso
VEB Venezuelan bolívar
UAH Ukrainianhryvnia
AZN Azeri manta

Notional

The notional amount of the contract, which is not exchanged. No minimum or maximum contract size.

Notional Currency

The currency in which the contract size is expressed.

Settlement Currency

The currency used to settle the NDF.

List of Settlement Currencies:

USD US Dollar
AUD Australian Dollar
CAD Canadian Dollar
CHF Swiss Franc
EUR Euro

GBP British Pound
JPY Japanese Yen

Quoting Convention and Minimum Increments

Outright forward rate:

The number of currency units as valued per unit of base currency

Spread:

The difference between the Spot FX for the currency pair and the outright forward rate (as above)

Notional amount and minimum increments:

As agreed by Participants

Trade Date

The date on which the Participants enter into the contract

Fixing Date

The time, date, and location at which the Spot FX is compared to the traded NDF rate, using a particular fixing source as agreed between Participants

Holiday Calendar

Dependent upon Currencies as defined by the Emerging Market Trade Association, or as agreed between Participants

Settlement Date

Date on which the difference between the Spot FX and the traded NDF rate is paid, usually one or two business days after the Fixing Date depending on the currency, as agreed between Participants.

Settlement Procedure

As agreed between Participants for non-cleared trades

As dictated by the Clearinghouse for trades subsequently novated for clearing.

Contract Types:

Outrights

Curve (Tenor)

Spreads, Butterflies, Condors

Tenors

Listed benchmark tenors are 1d 2d 3d 1w 2w 3w 1m 2m 3m 6m 9m 12m 15m 18m 2y 2½y 3y 4y 5y.

Off the run NDF contract tenors may be between one day and 10 years, as agreed between Participants.

Non-Deliverable FX Options

A Non-Deliverable FX option (NDO) offers the right but not the obligation to buy or sell an agreed amount of one currency in exchange for an agreed amount of another currency at a specified future exchange rate (the strike price), but using a net cash settlement made by one party to another based on the difference of the two FX rates (strike price rate and fixing expiry rate). NDOs are generally "European Style", whereby the right to exercise may occur only on a single date (the expiry date) but may also be "American Style," whereby the right to exercise may occur on any date up to and including the expiration date as determined by the option buyer if agreed between Participants. Settlement of an "in-the-money" option is 1 or 2 days following the agreed expiry date, using the spot FX Fixing rate of expiry date. Settlement is cash, where participants exchange the net cash difference between the prevailing spot rate and the strike price of an exercised NDO.

Non-Deliverable FX Option (NDO)

Contract Overview

An option to enter into a non-deliverable forward (NDF) foreign exchange contract at pre-defined time(s), with its exchange rate equal to the Strike Price.

Convention Definitions

2006 ISDA Definitions as updated (<http://www.emta.org/template.aspx?id=2275>)

Underlying NDFs: Emerging Market Trade Association (<http://www.emta.org/ndfft.aspx>)

Available Currencies

CNY Chinese Renminbi
IDR Indonesian Rupiah
INR Indian Rupee
KRW South Korean Won
MYR Malaysian Ringgit
PHP Philippine Peso
TWD Taiwan Dollar
VND Vietnamese ng
EGP Egyptian pound
RUB Russian ruble
KZT Kazakh tenge
ARS Argentine Peso
BRL Brazilian Real
CLP Chilean Peso
COP Colombian Peso
GTQ Guatemalan quetzal
PEN Peruvian nuevo sol
UYU Uruguayan peso
VEB Venezuelan bolívar
UAH Ukrainianhryvnia
AZN Azeri manta

Notional

The notional amount of the NDF underlying the NDO

Notional Currency

The currency in which the option contract size is expressed, as agreed by Participants

Settlement Currency

The currency used to settle the NDO, as agreed by Participants.

USD US Dollar

EUR Euro

GBP British Pound

JPY Japanese Yen

CAD Canadian Dollar

CHF Swiss Franc

AUD Australian Dollar

Notional Amount

The notional amount of the settlement currency of the NDF pair underlying the option

Notional Currency

The base currency in which the option contract size is expressed, as agreed by Participants

OptionType

Put = Option buyer has the right to sell the NDF exchange rate (e.g. selling USD, buying a non-deliverable currency)

Call = Option buyer has the right to buy the NDF exchange rate (e.g. buying USD, selling a nondeliverable currency)

Quoting Convention

Implied Volatility: the value of volatility for the underlying instrument which returns a theoretical value equal to the current market price of the option using a Black-Scholes based pricing model. Non-Deliverable Options Contracts may be traded with an underlying delta hedge NDF or may be traded with no hedge. Bids and offers are expressed as percentage of notional (the premium payable), as agreed between Participants. Where traded as an implied volatility, NDO premiums are subsequently calculated and agreed between Participants before execution

Minimum Increments Dependent on currency pair and tenor and as agreed between participants

Strike

Rate that will be used for the underlying currency exchange at expiry.

Exercise Type

European: (options can only be exercised at expiration).

American: (any time during the life of the option) and Bermudan style options (agreed dates during the life of the option) may also be traded as agreed between participants.

Premium

The payment made by the buyer of the option and calculated based on the relationship between: Implied Volatility, Notional, the prevailing spot FX rate, Non-Deliverable Forward FX rate, Strike(s), delta and the interbank deposit rates used for each of the currencies at time of trade. Premium may be paid spot or forward upon option expiry, as agreed between Participants

Trade Date

The date on which the Participants enter into the option contract.

Expiry Date (NDO Fixing date)

The last day upon which the option may be exercised and as agreed between participants, the time, date, and location at which the Spot FX is compared to the strike price of the NDO for the purposes of ascertaining if the option expires via settlement of an underlying NDF trade at expiry, using a specific fixing source as agreed between Participants

Minimum Size

Dependent on currency pair and tenor or as agreed between participants

Holiday Calendar

Dependent upon Currencies as defined by the Emerging Market Trade Association (viewed at <http://www.emta.org/template.aspx?id=2275>), or as agreed between Participants

Settlement Procedure

As agreed between participants

Settlement Date

Date on which the spot FX trade resulting from delivery is settled or the difference between the spot FX and the strike price of the option is paid where cash settled, one or two business days after the expiry date depending on the currency, as agreed between Participants

Expiration cut-off Times:

Dependent upon Currencies as defined by the Emerging Market Trade Association (viewed at <http://www.emta.org/template.aspx?id=2275>), or as agreed between Participants.

Settlement Procedure

As agreed between Participants for non-cleared trades.

Contract Types

Each NDO traded is bespoke and agreed between Participants. All option strategies result in Call options and/or Put options executed with the following strategies commonly traded:

Vanilla:

Outright Call / Put, Straddle, Strangle, Butterfly, Risk Reversal, Calendar (tenor) spread, Cross Currency Spread, Condor, Call Spreads, Put Spreads, Delta Neutral volatility strategies, Live strategies with no delta hedge

Exotic:

Baskets, Knock ins, Knock outs, Double Knock outs, Reverse Knock ins / Knock outs, One touch, No Touch, Double No Touch, Volatility Swaps, Variance Swaps, Worst of Options, Compound Options, Forward Volatility Agreements

Tenors

As agreed between Participants, NDO contract tenors may be between 1 day and 30 years.

2) FX Currency Options – Physically Settled

An FX option offers the right but not the obligation to buy or sell an agreed amount of one currency in exchange for an agreed amount of another currency at a specified future exchange rate (the strike price). FX options are generally "European Options", whereby the right to exchange may occur only on a single date (the expiry date), although "American Options" whereby the right to exchange may occur on any date up to and including the expiration date as determined by the option buyer may also be negotiated. Settlement of an "in-the-money" option is 1 or 2 days following the agreed expiry date. Settlement is physical where a spot transaction at the strike price is executed at expiration if the option is in-the-money.

FX Option Contract

Overview

An option to enter into a foreign exchange contract at pre-defined time(s), with its exchange rate equal to the Strike.

Convention Definitions

1998 ISDA FX and Currency Option Definitions as updated

(<http://www.emta.org/WorkArea/DownloadAsset.aspx?id=7743>)

Emerging Market Trade Association <http://www.emta.org/template.aspx?id=2275>)

Available Currency Pairs:

AUD/CAD, AUD/CHF, AUD/HKD, AUD/JPY, AUD/KRW, AUD/NZD, AUD/SGD, AUD/USD, AUDUSD/NZDUSD, BRL/JPY, CAD/JPY, CAD/SGD, CHF/HUF, CHF/JPY, CHF/TRY, EUR/AUD, EUR/BRL, EUR/CAD, EUR/CHF, EUR/CLP, EUR/CNY, EUR/CZK, EUR/GBP, EURGBP/GBPCHF, EUR/HKD, EUR/HUF, EUR/ILS, EUR/JPY, EUR/KRW, EUR/MXN, EUR/MYR, EUR/NOK, EUR/NZD, EUR/PLN, EUR/RON, EUR/RUB, EUR/SEK, EUR/SGD, EUR/TRY, EUR/USD, EURUSD/USDCHF, EURUSD/USDNOK, EURUSD/USDSEK, EUR/ZAR, GBP/AUD, GBP/CAD, GBP/CHF, GBP/JPY, GBP/MXN, GBP/SGD, GBP/USD, JPY/INR, JPY/KRW, MXN/JPY, NOK/JPY, NOK/SEK, NZD/CAD, NZD/JPY, NZD/SGD, NZD/USD, SEK/JPY, SGD/JPY, TRY/JPY, TRY/ZAR, USD/AED, USD/ARS, USD/BHD, USD/BRL, USDBRL/EURBRL, USD/CAD, USD/CHF, USD/CLP, USD/CNH, USD/CNY, USDCNY/USDCNH, USD/COP, USD/CZK, USD/HKD, USD/HUF, USD/IDR, USD/ILS, USD/INR, USD/JPY, USD/KRW, USD/KWD, USD/KZT, USD/MXN, USDMXN/EURMXN, USD/MYR, USD/NOK, USD/OMR, USD/PHP, USD/PLN, USDPLN/EURPLN, USD/QAR, USD/RUB, USDRUB/EURRUB, USD/SAR, USD/SEK, USD/SGD, USD/THB, USD/TRY, USDTRY/EURTRY, USDTWD and USDZAR.

Notional Amount Denominated in the base currency of the FX pair underlying the option

Notional Currency The base currency in which the option contract size is expressed, as agreed by Participants

Option Types

Put = Option buyer has the right to sell the exchange rate (e.g. selling USD, buying a second currency)

Call = Option buyer has the right to buy the exchange rate (e.g. buying USD, selling a second currency)

Quoting Convention

FX Options are generally quoted in Implied Volatility: the value of the volatility of the underlying instrument which returns a theoretical value equal to the current market price of the option using a Black-Scholes based pricing model. Options Contracts may be traded with an underlying FX Trade delta hedge, either spot or forward dated, or may be traded with no hedge where bids and offers are expressed as percentage of notional (the premium payable), as agreed between Participants. Where traded as an implied volatility, option premiums are subsequently calculated and agreed between Participants before execution

Minimum Increments

Dependent on currency pair and tenor and as agreed between participants

Strike Price

Rate that will be used for the underlying currency exchange at expiry.

Exercise Types

European (options can only be exercised at expiration).

American (any time during the life of the option)

Premium

The payment made by the buyer of the option and calculated based on the relationship between: Implied Volatility, Notional, the prevailing spot FX rate, Forward FX, Strike(s), delta and the interbank deposit rates used for each of the currencies at time of trade. Premium may be paid spot or forward upon option expiry and is valued before trade execution.

Trade Date

The date on which the Participants enter into the option contract

Expiry Date

The last day upon which the option may be exercised and as agreed between participants, the time, date, and location at which the Spot FX is compared to the strike price of the Currency option for the purposes of the option buyer ascertaining if the option expires with creation of an underlying FX Spot trade at expiry (or cash settlement using a particular FX fixing source as agreed between Participants).

Minimum Size

Dependent on currency pair and tenor or as agreed between participants for Voice trading

Holiday Calendar

Dependent upon Currencies as agreed between Participants

Settlement

As agreed between participants:

- Physical FX trade settlement
- Cash settlement

Rebate

A feature of some exotic options where the premium of the option is refunded if at the time the option expires it has no value.

Settlement Date

Date on which the spot FX trade resulting from delivery is settled or the difference between the spot FX and the strike price of the option is paid where cash settled, one or two business days after the expiry date depending on the currency, as agreed between Participants

Expiration cut-off Times

Dependent upon Currencies and as agreed between Participants

Settlement Procedure

As agreed between Participants for non-cleared trades

Strategy Types:

Vanilla:

Outright Call / Put, Straddle, Strangle, Butterfly, Risk Reversal, Calendar (tenor) spread, Cross Currency Spread, Condor, Call Spread, Put Spread, Delta neutral packages, Live Trading with no delta hedge

Exotic: Baskets, Knock ins, Knock outs, Double Knock outs, Reverse Knock ins / Knock outs, One touch, No Touch, Double No Touch, Volatility Swaps, Variance Swaps, Correlation Swaps, Worst of Options, Compound Options, Window Options, Forward Volatility Agreements

Tenors

As agreed between Participants, Currency Option contract tenors may be between 1 day and 30 years.

Block Size

As set forth in Appendix F to Part 43 of the CFTC Regulations.

Trading Hours

7:00 pm Sunday to 5:30 pm Friday Eastern Prevailing Time

Exotic Options Descriptions:

Binary Options:

A Binary (or Digital) Option is an option that has a fixed payment at expiration if the option is in the money or nothing at all if the option expires out of the money. Binary options are usually European Style options.

One Touch. A one touch option is a type of option that gives the holder a payout once the underlying reaches a certain price level, similar to the Barrier Option below. However, with the One Touch Binary Option, once the barrier is reached or surpassed, a predetermined fixed payout is achieved. Whereas, with the Barrier Option, it is the optionality that is triggered by the barrier being reached.

No Touch/Double No Touch. The no touch and double no touch options are similar to a one touch and double one touch. With these, the payment is achieved if the underlying does not reach either a single predetermined price level or if the underlying stays within a range that is set by two price points for the underlying (the double no touch).

Barrier Options:

Barrier Options are options that are either activated or deactivated when the price of the underlying passes through some predefined value referred to as the barrier. (May be put or call options and may be combined).

Knock Out. A knock out option has a price barrier for the underlying that, if reached, causes the option to terminate with no value.

Double Knock Out. A double knock out option is similar to a knock out option, however with the double knock out two price barriers are set on the underlying. If either barrier is reached, the option is terminated with no value.

Knock In. A knock in option is an option contract that is latent until a certain price barrier for the underlying is reached. The price barrier can only be reached if the option is moving out of the money. Until the barrier is reached, the option is not exercisable.

Double Knock In. Similar to a knock in, where two price barriers for the underlying are set. If either of these price barriers are reached, the option becomes exercisable.

Reverse Knock In. A reverse knock in option is a European style option that becomes exercisable into a Vanilla option once a predetermined price barrier of the underlying is reached. The barrier can only be reached if the option is moving into the money (gaining value). If the price level or barrier is hit the payout is based on the underlying vanilla option.

Reverse Knock Out. Similar to the reverse knock in except in this case if the price barrier is hit the option is knocked out and there is no payout. If the price barrier is not reached, the option value is based on the underlying vanilla option.

Knock in Knock out. With this type of option the predetermined price barrier of the underlying must be hit to activate the underlying option. One that first barrier is hit and the option is activated, there is a second price barrier that can cause the option to be knocked out or terminated prior to expiration. If this second barrier is hit before expiration, the option is extinguished. An additional form of this type of option may be written that is based on which price barrier is hit first. If the knock in barrier is hit, the option value is based on the underlying vanilla option and the knock out barrier is no longer valid. If the knock out barrier is hit first, the option is extinguished.

European Knock out / Knock In. Similar to the knock out and knock in except the barrier set on this option is only applicable at expiration. If the barrier is hit at expiration the option is either knocked out or becomes exercisable.

Window Option. A window option is any type of barrier option where the barrier level(s) are active only for a portion of the life of the option, which may be specified as a period with a start date not before the trade date of the option, and an end date not after the expiry of the option.

3) FX Swaps:

FX Volatility Swap

A **volatility swap** (vol swap) provides pure exposure to the volatility of an asset. A Vol swap is:

- A contract for difference between the realised volatility of the underlying price and the strike price (Traded Level).
- Quoted in terms of percentage volatility.
- Traded in amounts per 1% of volatility, known as vega face amount.

At the end of the contract, the payout is determined by the difference between the traded level and the realised volatility. Thus, at the end of the contract, if the realised volatility is higher than the traded level, the buyer of the vol swap receives the difference. If the realised vol is lower, the buyer pays the difference.

Volatility Swap Specifications:

Notional Currency

The base currencies in which the swap contract size is expressed and from which volatility is calculated.

Traded Level

Agreed upon strike price

Vega Notional Amount

Quoted in 100k's of Vega

First Fix

Initial date of fixing, typically Trade Date or Trade Date +1, based on a published fixing source

Last Fix

Final date of swap calculation

Delivery

Spot date after expiration

Annualization Factor

252 or as agreed by counterparts

Total Fixes

Number of observations

Public Fixing Sources

G11 currency pairs: 4 pm London WM/Reuters Forward and NDF Rates (WMR fix), or as otherwise agreed by Participants

Non-G11 currency pairs: ECB, EMTA, SAEC, TAIFX, KFTC18, ABSIRFIX01, PDSPESO, RBIB and HKDFIX, or as otherwise agreed by Participants.

FX Correlation Swap

A **Correlation Swap** (corr swap) provides pure exposure to the correlation between two assets. A corr swap is:

- A contract for difference between the realised correlation between two currency pairs.

At the end of the contract, the payout is determined by the difference between the realised correlation between two currency pairs and the traded level agreed in the swap. Thus, at the end of the contract, if the correlation is higher than the traded level, the buyer of the corr swap receives the difference from the seller. If the correlation is lower, the buyer pays the seller the difference.

Correlation Swap Specifications

Currency Pair 1

The currency pair from which the correlation with Currency Pair 2 is calculated.

Currency Pair 2

The currency pair from which correlation is calculated in comparison to Currency Pair 1.

Notional Amount

USD 100k per %

First Fix

Initial date of fixing, typically Trade Date or Trade Date +1, based on a published fixing source

Last Fix

Final date of swap calculation

Delivery

Spot date following expiration

Traded Level

Agreed upon trading price

Annualization Factor

252 or as agreed by counterparts.

Total Fixes

Number of observations

Public Fixing Sources

G11 currency pairs: 4 pm London WMR fix, or as otherwise agreed by Participants

Non-G11 currency pairs: ECB, EMTA, SAEC, TAIFX, KFTC18, ABSIRFIX01, PDSPEO, RBIB and HKDFIX, or as otherwise agreed by Participants..

Calculation Agent

As agreed by participants

FX Variance Swap

An FX **Variance Swap** (var swap) provides pure exposure to the variance (square of realised volatility) of an asset. A var swap is:

- A contract for difference between the realised variance of the underlying price and the strike price (Traded Level) of the swap.
- Quoted in terms of percentage volatility.
- Traded in amounts per 1% of volatility, known as vega face amount.

At the end of the contract, the payout is determined by the difference between the traded level and the realised variance. Thus, at the end of the contract, if the realised variance is higher than the traded level, the buyer of the var swap receives the difference. If the realised var is lower, the buyer pays the difference.

Variance Swap Specifications

Notional Currency The base currency in which the swap contract size is expressed and from which variance is calculated.

Traded Level

Agreed upon strike price

Vega Notional Amount

Quoted in 100k's of Vega

First Fix

Initial date of fixing, typically Trade Date or Trade Date +1, based on a published fixing source

Last Fix

Final date of swap calculation

Delivery

Spot date after expiration

Annualization Factor

252 or as agreed by counterparts.

Total Fixes

Number of observations

Public Fixing Sources

G11 currency pairs: 4 pm London WMR fix, or as otherwise agreed by Participants

Non-G11 currency pairs: ECB, EMTA, SAEC, TAIFX, KFTC18, ABSIRFIX01, PDSPESO, RBIB and HKDFIX, or as otherwise agreed by Participants..

Forward Volatility Agreement

A **Forward Volatility Agreement (FVA)** is an agreement to buy an option for a specified tenor at a specified price and time in the future. For example, it may be quoted as a 6M in 3M FVA. This would mean the buyer would, in 3 months' time, buy a 6M option from the seller at a pre-agreed volatility. The options are almost always At-The-Money straddles. In this example, in 3mths time, the participants would agree to trade an At-The –Money straddle, in the agreed amount at the agreed volatility. Market parameters at the time, such as spot and forward rates would be set by the calculation agent.