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# BGC Derivative Markets, L.P. Contract Specifications

## Product Descriptions

**Mandatorily Cleared CEA 2(h)(1) Products as of 5<sup>th</sup> August 2023,**

## BGC Derivative Markets, L.P. Contract Specifications

### Product Descriptions

#### Mandatorily Cleared Products

*The following list of Products required to be cleared under Commodity Futures Trading Commission rules is included here for the convenience of the reader.*

Mandatorily Cleared Spot starting, Forward Starting and IMM dated Interest Rate Swaps by Clearing Organization, including LCH.Clearnet Ltd., LCH.Clearnet LLC, and CME, Inc., having the following characteristics:

Specification	Fixed-to-floating swap class					
1. Currency	Australian Dollar (AUD)	Canadian Dollar (CAD)	Euro (EUR)	Hong Kong Dollar (HKD)	Mexican Peso (MXN)	Norwegian Krone (NOK).
2. Floating Rate Indexes	BBSW	CDOR	EURIBOR	HIBOR	TIIE-BANXICO	NIBOR
3. Stated Termination Date Range	28 days to 30 years	28 days to 30 years	28 days to 50 years	28 days to 10 years	28 days to 21 years	28 days to 10 years.
4. Optionality	No	No	No	No	No	No
5. Dual Currencies	No	No	No	No	No	No
6. Conditional Notional Amounts	No	No	No	No	No	No

Specification	Fixed-to-floating swap class	
1. Currency	Polish Zloty (PLN)	Swedish Krona (SEK)
2. Floating Rate Indexes	WIBOR	STIBOR
3. Stated Termination Date Range	28 days to 10 years	28 days to 15 years

4. Optionality	No	No
5. Dual Currencies	No	No
6. Conditional Notional Amounts	No	No

Specification	Basis swap class	
1. Currency	Australian Dollar (AUD)	Euro (EUR)
2. Floating Rate Indexes	BBSW	EURIBOR
3. Stated Termination Date Range	28 days to 30 years	28 days to 50 years
4. Optionality	No	No
5. Dual Currencies	No	No
6. Conditional Notional Amounts	No	No

Specification	Forward rate agreement class			
1. Currency	Euro (EUR)	Polish Zloty (PLN)	Norwegian Krone (NOK)	Swedish Krona (SEK)
2. Floating Rate Indexes	EURIBOR	WIBOR	NIBOR	STIBOR
3. Stated Termination Date Range	3 days to 3 years	3 days to 2 years	3 days to 2 years	3 days to 3 years
4. Optionality	No	No	No	No
5. Dual Currencies	No	No	No	No
6. Conditional Notional Amounts	No	No	No	No

Specification	Overnight index swap class								
1. Currency	Australian Dollar (AUD)	Canadian Dollar (CAD)	Euro (EUR)	Singapore Dollar (SGD)	Sterling (GBP)	Swiss Franc (CHF)	U.S. Dollar (USD)	U.S. Dollar (USD)	Yen (JPY)
2. Floating Rate Indexes	AONIA-OIS	CORRA - OIS	€STR	SORA	SONIA	SARON	FedFunds	SOFR	TONA
3. Stated Termination Date Range	7 days to 2 years	7 days to 2 years	7 days to 3 years	7 days to 10 years	7 days to 50 years	7 days to 30 years	7 days to 3 years	7 days to 50 years	7 days to 30 years
4. Optionality	No	No	No	No	No	No	No	No	No
5. Dual Currencies	No	No	No	No	No	No	No	No	No
6. Conditional Notional Amounts	No	No	No	No	No	No	No	No	No

<b>Specification</b>	<b>North American Untranch CDS Indices Class</b>
1. Reference Entities	Corporate
2. Region	North America
3. Indices	MARKIT CDX.NA.IG MARKIT CDX.NA.HY
4. Tenor	MARKIT CDX.NA.IG: 3Y, 5Y, 7Y, 10Y MARKIT CDX.NA.HY: 5Y
5. Applicable Series	MARKIT CDX.NA.IG 3Y: Series 15 and all subsequent Series, up to and including the current Series MARKIT CDX.NA.IG 5Y: Series 11 and all subsequent Series, up to and including the current Series MARKIT CDX.NA.IG 7Y: Series 8 and all subsequent Series, up to and including the current Series MARKIT CDX.NA.IG 10Y: Series 8 and all subsequent Series, up to and including the current Series MARKIT CDX.NA.HY 5Y: Series 11 and all subsequent Series, up to and including the current Series
6. Tranch	No

Credit Default Swaps on a broad-based Index on the Facility are Credit Default Swap Indices by Clearing Organization, including ICE Clear Credit LLC, CME, Inc., and LCH.Clearnet SA, having the following characteristics:

<b>Specification</b>	<b>European Untranching CDS Indices Class</b>
1. Reference Entities	Corporate
2. Region	Europe
3. Indices	MARKIT ITRAXX EUROPE MARKIT ITRAXX EUROPE CROSSOVER MARKIT ITRAXX EUROPE HIVOL
4. Tenor	MARKIT ITRAXX EUROPE : 5Y, 10Y MARKIT ITRAXX EUROPE CROSSOVER : 5Y MARKIT ITRAXX EUROPE HIVOL: 5Y
5. Applicable Series	MARKIT ITRAXX EUROPE 5Y: Series 10 and all subsequent Series, up to and including the current Series MARKIT ITRAXX EUROPE 10Y: Series 7 and all subsequent Series, up to and including the current Series MARKIT ITRAXX EUROPE CROSSOVER 5Y: Series 10 and all subsequent Series, up to and including the current Series MARKIT ITRAXX EUROPE HIVOL 5Y: Series 10 and all subsequent Series, up to and including the current Series
6. Tranching	No

## Made Available to Trade CEA 2(h)(8) Products

Under a Commodity Futures Trading Commission notice, and pursuant to these Swap contract specifications, the following products in less than block trade size are Made Available to Trade on the Facility.

Specification	Overnight Index Swaps (OIS)		
Currency	U.S. Dollar (USD)	U.S. Dollar (USD)	U.S. Dollar (USD)
Floating Rate Indices	Secured Overnight Financing Rate (SOFR)	Secured Overnight Financing Rate (SOFR)	Secured Overnight Financing Rate (SOFR)
Trade Start Type	Spot Starting (T+2)	IMM Start Date (next two IMM dates)	IMM Start Date (next two IMM dates)
Optionality	No	No	No
<b>Fixed Leg</b>			
Payment Frequency	Annual	Annual	Annual
Day Count Convention	ACT/360	ACT/360	ACT/360
Business Calendars	New York/USNY	New York/USNY	New York/USNY
Payment Lag	2 Days	2 Days	2 Days
<b>Floating Leg</b>			
Payment/Reset Frequency	Annual	Annual	Annual
Day Count Convention	ACT/360	ACT/360	ACT/360
Business Calendars	New York/USNY	New York/USNY	New York/USNY
Payment Lag	2 Days	2 Days	2 Days
Fixing Calendars	US Government Securities/USGS	US Government Securities/USGS	US Government Securities/USGS
Fixing Offset	0 day	0 Days	0 Days
Dual Currencies	No	No	No
Notional	Fixed Notional	Fixed Notional	Fixed Notional
Fixed Rate	Par	Par	Standard Coupon
Tenors	2, 3, 4, 5, 6, 7, 10, 12, 15, 20, 30 Years	2, 3, 4, 5, 6, 7, 10, 12, 15, 20, 30 Years (Standard and IMM end/roll date convention)	1, 2, 3, 4, 5, 7, 10, 15, 20, 30 Years (Standard end/roll date conventions)

Overnight Index Swaps (OIS)	
Sterling (GBP)	Sterling (GBP)
Sterling Overnight Index Average (SONIA)	Sterling Overnight Index Average (SONIA)
Spot Starting (T+0)	IMM Start Date (next two IMM dates)
No	No
Annual	Annual
ACT/365.FIXED	ACT/365.FIXED
London/GBLO	London/GBLO
0 Day	0 Day
Annual	Annual
ACT/365.FIXED	ACT/365.FIXED
London/GBLO	London/GBLO
0 Days	0 Days
London/GBLO	London/GBLO
0 Days	0 Days
No	No
Fixed Notional	Fixed Notional
Par	Par
1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 15, 20, 25, 30 Years	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 15, 20, 25, 30 Years (Standard and IMM end/roll date convention)

<b>Specification</b>	<b>Fixed-to-Floating Interest Rate Swaps (EUR)</b>
Currency	Euro (EUR)
Floating Rate Indexes	EURIBOR
Trade Start Type	Spot Starting (T+2)
Optionality	No
Fixed Leg	
Payment Frequency	Semi-Annual, Annual
Day Count Convention	30/360, Actual/360
Floating Leg	
Reset Frequency	Quarterly, Semi-Annual
Day Count Convention	Actual/360
Dual Currencies	No
Notional	Fixed Notional
Fixed Rate	Par
Tenors	2, 3, 4, 5, 6, 7, 10, 15, 20, 30 years

<b>Specification</b>	<b>Untranching Credit Default Swap Indices</b>	
Reference Entities	Corporate	Corporate
Region	North America	Europe
Indices	MARKIT CDX.NA.IG MARKIT CDX.NA.HY	MARKIT ITRAXX EUROPE MARKIT ITRAXX EUROPE CROSSOVER
Tenor	MARKIT CDX.NA.IG 5Y MARKIT CDX.NA.HY 5Y	MARKIT ITRAXX EUROPE 5Y MARKIT ITRAXX EUROPE CROSSOVER 5Y
Applicable Series	At any time, the then-current on-the-run series and the preceding series that was replaced by the current one	

# Interest Rate Swaps

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## Interest Rate Swaps

### Overview

An instrument in which two parties agree to exchange cash flows in the same or two different currencies, based on a notional amount, from fixed to floating or from one floating rate to another. The fixed rate is typically reset monthly, quarterly, semi-annually or annually though in some cases such as zero coupon Inflation Swaps, there is only one exchange of cash flows at maturity. The fixed rate may also be an off-market level whereupon payer and receiver agree an upfront payment to accommodate such, such as in ISDA Market Agreed Coupon swaps. In general, the floating rate can be almost any kind of index fixed asset price, but in the OTC markets we focus on interest rate instruments only, including but not limited to:

- Deposit indices such as Euribor, Libor, SOFR etc.
- Constant Maturity indices, e.g. 5Y IRS
- Inflation indices, e.g. UK RPI, French HICP, US CPI

Note: We expect Fixed-to-Floating IRS vs LIBOR to be removed from the list of products on September 30, 2024, when Swaps referencing and/or trading in USD LIBOR has permanently ceased. While the number of trades executed using LIBOR as a benchmark has significantly decreased to a level almost non-existent, the contracts will still remain listed as a permitted product of the facility as an accommodation to customers until the permanent cessation of LIBOR.

General Definitions	
<b>Swap Transaction</b>	Any transaction which is a rate swap, basis swap, forward rate agreement, currency swap, cross-currency swap or similar transaction (and any combination thereof)
<b>Currency</b>	As agreed between Participants (Super-Major, Major & Non-Major Currencies)
<b>Fixed Rate Payer</b>	In respect of a Swap Transaction, a party obligated to make payments calculated by reference to a fixed rate
<b>Floating Rate Payer</b>	In respect of a Swap Transaction, a party obligated to make payments calculated by reference to a floating rate index
<b>Floating Rate Index</b>	Dependent on Currency and as agreed between Participants. A comprehensive list of indices can be found <a href="#">here</a> and with calculations in <a href="#">Articles 6 &amp; 7 of the 2006 ISDA Definitions</a> and the 2008 ISDA Inflation Derivatives Definitions.
<b>Up Front Payment Amount</b>	In respect of a Market Agreed Coupon Swap Transaction, the Upfront Amount Payment the Upfront Amount Payer will pay to the other Party

<b>Quoting Convention and Minimum Increment</b>	Dependent on Currency, Index, Tenor and Par or Market Agreed Coupon type for electronic Central Limit Order Books or as agreed by Participants for Voice Trading Facility trades.
<b>Minimum Size</b>	Dependent on Currency, Index, Tenor and Par or Market Agreed Coupon type for electronic Central Limit Order Books or as agreed by Participants for Voice Trading Facility trades.
<b>Confirmation</b>	Documents or other confirming evidence exchanged between the counterparties which confirm all of the terms of the Swap Transaction
<b>Business Day</b>	A day on which banks settle payments
<b>Date Convention</b>	The convention used for adjusting any relevant date that would otherwise fall on a non-Business Day (see conventions list)
<b>Term (Tenor)</b>	The total period of the Swap Transaction, starting on the Effective Date and ending on the Termination Date
<b>Effective (Start) Date</b>	The first date of the Term of the Swap Transaction, Spot or Forward starting, subject to the agreed Date Convention.
<b>Termination Date</b>	The last day of the Term of the Swap Transaction
<b>Maturity Date</b>	Start Date + Term (Tenor)
<b>First Fixing Date</b>	The first Index Fixing Date is zero, one or two business days (dependent on that Currency's market standard and according to agreed Holiday calendars) prior to the Start Date of the Swap.
<b>Trade Types</b>	The following swap types may be executed: <ul style="list-style-type: none"> <li>• Outright (Spot and Forward starting), Curve (tenor) Spreads, Butterflies, Spreads between different floating Indices, Spreads to Futures, Spreads to Treasuries and combinations thereof.</li> </ul>
<b>Trade Start Types</b>	<ul style="list-style-type: none"> <li>• <b>Spot:</b> A swap where the Effective Date is T+0 (e.g. GBP), T+1 (e.g. AUD), T+2 (e.g. USD, EUR, CHF, JPL) from the trade date, depending on Currency and floating Index market standard.</li> <li>• <b>Forward:</b> A swap where the Effective Date is after the Effective Date for a Spot Starting swap of that Currency and floating Index.</li> </ul>
<b>Settlement Procedure</b>	As determined by the Clearing Venue, provided above or as agreed between Participants for non-cleared trades
<b>Trading Hours</b>	7:00 pm to 5:30 pm EST, Sunday to Friday
<b>Block Size</b>	By Currency and Tenor as set forth in <a href="#">Appendix F to Part 43</a> of the CFTC Regulations

## Rate Index Swaps

### Interest Rate Swap (IRS), Fixed/Float

<b>Contract Definition</b>	An agreement to exchange a stream of cash flows by applying a fixed and floating interest rate to a specified notional over a term to maturity.
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<b>IRS Types</b>	Fixed Rate v Floating Rate (X)ibor Index, SOFR (e.g. 3m Libor, 6m Euribor), BSBY
<b>Trading Conventions</b>	<ul style="list-style-type: none"> <li>• Buy/Pay = Pay Fixed, Receive Floating (X)ibor Index</li> <li>• Sell/Receive = Receive Fixed, Pay Floating (X)ibor Index</li> <li>• Swap Price quoted as an outright percentage rate in increments of fractions or decimals of a basis point (see Appendix D).</li> <li>• Swap Price of a Market Agreed Coupon swap quoted as either CCY price for the swap or percent of par of face value</li> </ul>
<b>Specific Trade Types</b>	The following swap types may be executed: Outright (Spot and Forward starting), Curve (tenor) Spreads, Butterflies, Spreads between different floating Indices, Spreads to Futures, Spreads to Treasuries and combinations thereof.
<b>Swap Term (Tenor)</b>	As agreed by the Participants. A contract can have a Tenor from 7 days to 60 years.
<b>Swap Conventions</b>	<p><b>Fixed Leg:</b></p> <ul style="list-style-type: none"> <li>• <b>Payment:</b> Annual, Semi-Annual, Quarterly or as agreed by Participants.</li> <li>• <b>Day Count Conventions:</b> as agreed by Participants and suitable to the Currency's market standards, e.g. 30/360, Act/365 etc. (see Appendix C)</li> <li>• <b>Holiday Calendar:</b> as agreed by Participants and suitable to the Currency's market standards</li> <li>• <b>Business Day Conventions:</b> Modified Following with adjustment to period end dates or as agreed by Participants and suitable to the Currency's market standards</li> </ul>
	<p><b>Floating Leg</b></p> <ul style="list-style-type: none"> <li>• <b>Index:</b> As agreed by participants and suitable to the Currency's market standards (e.g. Libor, SOFR, Euribor, BSBY etc.)</li> <li>• <b>Payment/Resets:</b> Semi-Annual, Quarterly, Monthly, Daily or as agreed by Participants.</li> <li>• <b>Day Count Conventions:</b> As dictated by Market Standard for the Floating Index, e.g. Act/360, Act/365 etc. (see Appendix C)</li> <li>• <b>Holiday Calendar:</b> As agreed by participants and suitable to the Currency's market standards.</li> <li>• <b>Fixing Calendar:</b> As agreed by participants and suitable to the Currency's market standards.</li> <li>• <b>Business Day Conventions:</b> Modified Following with adjustment to period end dates or as agreed by Participants and suitable to the Currency's market standards.</li> </ul>
<b>Periodic Settlement</b>	<p><b>Payment and Resets:</b></p> <ul style="list-style-type: none"> <li>• <b>Fixed Leg:</b> The payment amount of the Fixed Leg is based on: Notional, Payment Frequency, Day Count Convention and Fixed Interest Rate.</li> <li>• <b>Floating Leg:</b> The payment amount of the Floating Leg is based on: Notional, Payment Frequency, Day Count Convention, Floating Interest Rate Index and Floating Reset Dates.</li> </ul> <p>Payments are settled in accordance with the payment frequency of the swap.</p>

### Overnight Index Swap (OIS), Fixed/Float

<b>Contract Definition</b>	<b>An agreement to exchange a stream of cash flows by applying a fixed and floating interest rate to a specified notional over a term to maturity.</b>
<b>IRS Types</b>	Fixed Rate v Floating Rate OIS Index (e.g. Sonia, Ronia, Eonia, FedFunds, SOFR)

<b>Trading Conventions</b>	<ul style="list-style-type: none"> <li>• Buy/Pay = Pay Fixed, Receive Floating OIS Index</li> <li>• Sell/Receive = Receive Fixed, Pay Floating OIS Index</li> <li>• Swap Price quoted as an outright percentage rate in increments of fractions or decimals of a basis point (see Appendix D).</li> </ul>
<b>Specific Trade Types</b>	The following swap types may be executed: Outright (Spot and Forward starting), Curve (tenor) Spreads, Butterflies, Spreads between different floating Indices, Spreads to Futures, Spreads to Treasuries and combinations thereof.
<b>Swap Term (Tenor)</b>	As agreed by the Participants. A contract can have a Tenor from 1 day to 60 years.
<b>Swap Conventions</b>	<p><b>Fixed Leg:</b></p> <ul style="list-style-type: none"> <li>• <b>Payment:</b> Annual or as agreed by Participants.</li> <li>• <b>Day Count Conventions:</b> as agreed by Participants and suitable to the Currency's market standards, e.g. Act/360, Act/365 etc. (see Appendix C)</li> <li>• <b>Holiday Calendar:</b> as agreed by Participants and suitable to the Currency's market standards</li> <li>• <b>Business Day Conventions:</b> Modified Following with adjustment to period end dates or as agreed by Participants and suitable to the Currency's market standards</li> </ul>
	<p><b>Floating Leg</b></p> <ul style="list-style-type: none"> <li>• <b>Index:</b> As agreed by participants and suitable to the Currency's market standards(e.g. Sonia, Ronia, Eonia, FedFunds, SOFR - see Appendix E)</li> <li>• <b>Payment/Resets:</b> Daily resets, compounded daily and paid on an annualised basis, or as agreed by Participants.</li> <li>• <b>Day Count Conventions:</b> As dictated by Market Standard for the Floating Index, e.g. Act/360, Act/365 etc. (see Appendix C)</li> <li>• <b>Holiday Calendar:</b> As agreed by participants and suitable to the Currency's market standards.</li> <li>• <b>Fixing Calendar:</b> As agreed by participants and suitable to the Currency's market standards.</li> <li>• <b>Business Day Conventions:</b> Modified Following with adjustment to period end dates or as agreed by Participants and suitable to the Currency's market standards.</li> </ul>
<b>Periodic Settlement</b>	<p><b>Payment and Resets:</b></p> <ul style="list-style-type: none"> <li>• <b>Fixed Leg:</b> The payment amount of the Fixed Leg is based on: Notional, Payment Frequency, Day Count Convention and Fixed Interest Rate.</li> <li>• <b>Floating Leg:</b> The payment amount of the Floating Leg is based on: Notional, Payment Frequency, Day Count Convention, Floating Interest Rate Index and Floating Reset Dates.</li> </ul> <p>Payments are settled in accordance with the payment frequency of the swap.</p>

### Currency Basis Swap, Float/Float

<b>Contract Definition</b>	<b>An agreement to exchange two streams of floating cash flows on a specified notional over a term to maturity.</b>
<b>Basis Spread</b>	A spread between two Floating Rate Indices (e.g. 3m Libor, 6m Libor, OIS Index, SOFR Index, BSBY - See Appendix E) of the same currency (Super-Major, Major & Non-Major Currencies - see Appendix B).

<b>Basis Swap Types</b>	"Fra/Ois" (3m vs daily compounded OIS), 3v1, 3v6 or 6v3, 3v12, 6v12 or other combinations of floating indices as agreed by Participants.
<b>Specific Trade Types</b>	The following swap types may be executed: Outrights (Spot and Forward starting), Curve (tenor) Spreads, Butterflies
<b>Trading Conventions</b>	<ul style="list-style-type: none"> <li>• Buy/Pay = Pay Floating (X)ibor Index Index 1 Flat, Receive Floating (X)ibor Index Index 2 + Basis Spread</li> <li>• Sell/Receive = Receive Floating (X)ibor Index Index 1 Flat, Pay Floating (X)ibor Index Index 2 + Basis Spread</li> <li>• Basis Spread Price quoted in increments of fractions or decimals of a basis point (see Appendix D).</li> <li>• Leg 1 is usually the longer underlying index tenor, e.g. 3v1 rather than 1v3. Thus the 3m index is paid flat and the spread is added to the 1m index. The shorter index can be compounded, i.e. Q/Q = 3m index vs 1 quarterly payment consisting of 3 compounded 1m index settings OR the shorter index can be 3 separate monthly payments.</li> </ul>
<b>Swap Term (Tenor)</b>	As agreed by the Participants. A contract can have a Tenor from 3 months to 60 years.
<b>Swap Conventions</b>	<p><b>Floating Legs 1 &amp; 2:</b></p> <ul style="list-style-type: none"> <li>• <b>Index:</b> As agreed by participants and suitable to the Currency's market standards(e.g. 3m Libor, 6m Libor, OIS Index, SOFR Index, BSBY - See Appendix E)</li> <li>• <b>Payment/Resets:</b> Annual, Semi-Annual, Quarterly, Monthly, Daily or as agreed by Participants.</li> <li>• <b>Day Count Conventions:</b> As dictated by Market Standard for each Index, e.g. Act/360, Act/365 etc. (see Appendix C)</li> <li>• <b>Holiday Calendar:</b> As agreed by participants and suitable to the Currency's market standards.</li> <li>• <b>Fixing Calendar:</b> As agreed by participants and suitable to the Currency's market standards.</li> <li>• <b>Business Day Conventions:</b> Modified Following with adjustment to period end dates or as agreed by Participants and suitable to each Currency's market standards.</li> </ul>
<b>Periodic Settlement</b>	<p><b>Payment and Resets:</b></p> <ul style="list-style-type: none"> <li>• <b>Floating Legs 1 &amp; 2:</b> The payment amount of the Floating Leg is based on: Notional, Payment Frequency, Day Count Convention, Floating Interest Rate Index and Floating Reset Dates. Payments are settled in accordance with the payment frequency of the swap.</li> </ul>

### Cross-Currency Basis Swap, Float/Float

<b>Contract Definition</b>	<b>An agreement to exchange a stream of cash flows by applying a floating interest rate on leg 1 and a floating interest rate on leg 2 to a specified notional over a term to maturity.</b>
<b>Basis Spread</b>	A spread between the Floating Rate Indices (e.g. 3m Libor, 6m Libor, OIS Index, SOFR Index - See Appendix
<b>Basis Swap Types</b>	Floating Rate (X)ibor Index (e.g. 3m Libor) v Floating Rate (X)ibor Index (e.g. 3m Euribor), usually with the same Payment frequency, e.g. Q/Q Floating Rate OIS Index (e.g. Eonia) v Floating Rate OIS Index (e.g. FedFunds, SOFR, BSBY), usually with the same Payment frequency, e.g. Q/Q

<b>Specific Trade Types</b>	The following swap types may be executed: Outrights (Spot and Forward starting), Curve (tenor) Spreads, Butterflies
<b>Trading Conventions</b>	<ul style="list-style-type: none"> <li>• Buy/Pay = Pay Floating Index Currency 1 Flat, Receive Floating Index Currency 2 + Basis Spread</li> <li>• Sell/Receive = Receive Floating Index Currency 1 Flat, Pay Floating Index Currency 2 + Basis Spread</li> <li>• Basis Spread Price quoted in increments of fractions or decimals of a basis point (see <a href="#">Appendix D</a>).</li> <li>• Notional amount set in Currency 1, e.g. 100m USD, payments Leg 1 in USD, payments Leg 2 in Currency 2</li> </ul>
<b>Swap Term (Tenor)</b>	As agreed by the Participants. A contract can have a Tenor from 3 months to 60 years.
<b>Swap Conventions</b>	<p><b>Floating Legs 1 &amp; 2</b></p> <ul style="list-style-type: none"> <li>• <b>Indices:</b> As agreed by participants and suitable to each Currency's market standards (e.g. 3m Libor, 6m Libor, OIS Index, SOFR Index, BSBY – See Appendix E)</li> <li>• <b>Payment/Resets:</b> Semi-Annual, Quarterly, Monthly or as agreed by Participants.</li> <li>• <b>Day Count Conventions:</b> As dictated by Market Standard for each Index, e.g. Act/360, Act/365 (see Appendix C)</li> <li>• <b>Holiday Calendar:</b> As agreed by participants and suitable to the Currency's market standards.</li> <li>• <b>Fixing Calendar:</b> As agreed by participants and suitable to the Currency's market standards.</li> <li>• <b>Business Day Conventions:</b> Modified Following with adjustment to period end dates or as agreed by Participants and suitable to each Currency's market standards.</li> </ul>
<b>Periodic Settlement</b>	<p><b>Payment and Resets:</b></p> <ul style="list-style-type: none"> <li>• <b>Floating Legs 1 &amp; 2:</b> The payment amount of the Floating Leg is based on: Notional, Payment Frequency, Day Count Convention, Floating Interest Rate Index and Floating Reset Dates. Payments are settled in accordance with the payment frequency of either leg 1 or leg 2 as agreed between Participants. Cross Currency Basis Swaps are traded with an exchange of principle FX'd at both start date and maturity and may also be traded with intra-swap FX exchanges as required.</li> </ul>

### Cross-Currency Swap, Fixed/Fixed

<b>Contract Definition</b>	<b>An agreement to exchange a stream of cash flows by applying a fixed interest rate on leg 1 and fixed interest rate on leg 2 to a specified notional over a term to maturity.</b>
<b>Spread</b>	A spread between the fixed rates of two different currencies (Super-Major, Major & Non-Major Currencies – see Appendix B)
<b>Swap Types</b>	Fixed Rate v Fixed Rate, usually with the same Payment frequency, e.g. A/A, S/S, Q/Q
<b>Specific Trade Types</b>	The following swap types may be executed: Outrights (Spot and Forward starting), Curve (tenor) Spreads, Butterflies

<b>Trading Conventions</b>	<ul style="list-style-type: none"> <li>Buy/Pay = Pay Fixed Leg Currency 1 Flat, Receive Fixed Leg Currency 2 + Spread</li> <li>Sell/Receive = Receive Fixed Leg Currency 1 Flat, Pay Fixed Leg Currency 2 + Spread</li> <li>Spread Price quoted in increments of fractions or decimals of a basis point (see Appendix D).</li> <li>Notional amount set in Currency 1, e.g. 100m USD, payments Leg 1 in USD, payments Leg 2 in Currency 2</li> </ul>
<b>Swap Term (Tenor)</b>	As agreed by the Participants. A contract can have a Tenor from 7 days to 60 years.
<b>Swap Conventions</b>	<p><b>Fixed Legs 1 &amp; 2:</b></p> <ul style="list-style-type: none"> <li><b>Payment:</b> Annual, Semi-Annual, Quarterly or as agreed by Participants</li> <li><b>Day Count Conventions:</b> as agreed by Participants and suitable to each Currency's market standards, e.g. 30/360, Act/365 etc. (see Appendix C)</li> <li><b>Holiday Calendar:</b> as agreed by Participants and suitable to each Currency's market standards</li> <li><b>Business Day Conventions:</b> Modified Following with adjustment to period end dates or as agreed by Participants and suitable to each Currency's market standards</li> </ul>
<b>Periodic Settlement</b>	<p><b>Payment and Resets:</b></p> <ul style="list-style-type: none"> <li><b>Fixed Legs 1 &amp; 2:</b> The payment amount of the Fixed Legs are based on: Notional, Payment Frequency, Day Count Convention and Fixed Interest Rate. Payments are settled in accordance with the payment frequency of either leg 1 or leg 2 as agreed between Participants. Cross Currency Swaps may be traded with an exchange of principle FX'd at both start date and maturity and may also be traded with intra-swap FX exchanges as required and as agreed between Participants.</li> </ul>

### Cross-Currency Swap, Fixed/Float

<b>Contract Definition</b>	<b>An agreement to exchange a stream of cash flows by applying a fixed interest rate on leg 1 and a floating interest rate on leg 2 to a specified notional over a term to maturity.</b>
<b>Spread</b>	A spread between the fixed rate of one currency and the Floating Rate Index (e.g. 3m Libor, 6m Libor, OIS Index, SOFR Index, BSBY – See Appendix E) of a second currency (Super-Major, Major & Non-Major Currencies – see Appendix B)
<b>Swap Types</b>	Fixed Rate v Floating Index Rate
<b>Specific Trade Types</b>	The following swap types may be executed: Outrights (Spot and Forward starting), Curve (tenor) Spreads, Butterflies
<b>Trading Conventions</b>	<ul style="list-style-type: none"> <li>Buy/Pay = Pay Fixed Currency 1 Flat, Receive Floating Index Currency 2 + Spread</li> <li>Sell/Receive = Receive Fixed Currency 1 Flat, Pay Floating Index Currency 2 + Spread</li> <li>Spread Price quoted as an outright percentage rate in increments of fractions or decimals of a basis point (see Appendix D).</li> <li>Notional amount set in Currency 1, e.g. 100m USD, payments Leg 1 in USD, payments Leg 2 in Currency 2</li> </ul>
<b>Swap Term (Tenor)</b>	As agreed by the Participants. A contract can have a Tenor from 3 months to 60 years.

Swap Conventions	<p><b>Fixed Leg, Currency 1</b></p> <ul style="list-style-type: none"> <li>• <b>Payment:</b> Annual, Semi-Annual, Quarterly or as agreed by Participants</li> <li>• <b>Day Count Conventions:</b> as agreed by Participants and suitable to the Currency's market standards, e.g. 30/360, Act/365 etc. (see Appendix C)</li> <li>• <b>Holiday Calendar:</b> as agreed by Participants and suitable to the Currency's market standards</li> <li>• <b>Business Day Conventions:</b> Modified Following with adjustment to period end dates or as agreed by Participants and suitable to the Currency's market standards</li> </ul>
	<p><b>Floating Leg, Currency 2</b></p> <ul style="list-style-type: none"> <li>• <b>Index:</b> As agreed by participants and suitable to the Currency's market standards(e.g. 3m Libor, 6m Libor, OIS Index, SOFR Index, BSBY - See Appendix E)</li> <li>• <b>Payment/Resets:</b> Annual, Semi-Annual, Quarterly, Monthly, Daily or as agreed by Participants.</li> <li>• <b>Day Count Conventions:</b> As dictated by Market Standard for the Floating Index, e.g. Act/360, Act/365 etc. (see Appendix C)</li> <li>• <b>Holiday Calendar:</b> As agreed by participants and suitable to the Currency's market standards.</li> <li>• <b>Fixing Calendar:</b> As agreed by participants and suitable to the Currency's market standards.</li> <li>• <b>Business Day Conventions:</b> Modified Following with adjustment to period end dates or as agreed by Participants and suitable to the Currency's market standards.</li> </ul>
Periodic Settlement	<p><b>Payment and Resets:</b></p> <ul style="list-style-type: none"> <li>• <b>Fixed Leg:</b> The payment amount of the Fixed Leg is based on: Notional, Payment Frequency, Day Count Convention and Fixed Interest Rate.</li> <li>• <b>Floating Leg:</b> The payment amount of the Floating Leg is based on: Notional, Payment Frequency, Day Count Convention, Floating Interest Rate Index and Floating Reset Dates.</li> </ul> <p>Payments are settled in accordance with the payment frequency of either leg 1 or leg 2 as agreed between Participants. Cross Currency Swaps may be traded with an exchange of principle FX'd at both start date and maturity and may also be traded with intra-swap FX exchanges as required as agreed between Participants.</p>

#### Non-Deliverable IRS, Fixed/Float

Contract Definition	<p>As above for <a href="#">Fixed/Float IRS</a>, an agreement to exchange a stream of cash flows by applying a fixed and floating interest rate to a specified notional over a term to maturity but where settlement value of each cash flow is paid in a second Currency (typically USD), converted at the spot FX Fixing rate for the Notional Currency traded.</p> <p>This type of swap is common among Asian and Latin American currencies.</p>
Spread	A spread between a Fixed Rate and a Floating Rate Index ( <a href="#">see list</a> ) of an offshore non-deliverable currency.
Swap Types	Fixed Rate v Floating Index Rate
Specific Trade Types	The following swap types may be executed: Outrights (Spot and Forward starting), Curve (tenor) Spreads, Butterflies

<b>Trading Conventions</b>	<ul style="list-style-type: none"> <li>• Buy/Pay = Pay Fixed Currency 1, Receive Floating Index Currency 1, netted and payable in Currency 2</li> <li>• Sell/Receive = Receive Fixed Currency 1, Pay Floating Index Currency 1, netted and payable in Currency 2</li> <li>• Swap Price quoted as an outright percentage rate in increments of fractions or decimals of a basis point (see Appendix D).</li> <li>• Notional amount set in Currency 2, e.g. 100m USD, payments Leg 1 in Currency 2, payments Leg 2 in Currency 2</li> </ul>
<b>Swap Term (Tenor)</b>	<p>As agreed by the Participants. A contract can have a Tenor from 3 months to 60 years.</p>
<b>Swap Conventions</b>	<p><b>Fixed Leg, Currency 1</b></p> <ul style="list-style-type: none"> <li>• <b>Payment:</b> Annual, Semi-Annual, Quarterly or as agreed by Participants</li> <li>• <b>Day Count Conventions:</b> as agreed by Participants and suitable to the Currency's market standards, e.g. 30/360, Act/365 etc. (see Appendix C)</li> <li>• <b>Holiday Calendar:</b> as agreed by Participants and suitable to the Currency's market standards</li> <li>• <b>Business Day Conventions:</b> Modified Following with adjustment to period end dates or as agreed by Participants and suitable to the Currency's market standards</li> </ul> <hr/> <p><b>Floating Leg, Currency 2</b></p> <ul style="list-style-type: none"> <li>• <b>Index:</b> As agreed by participants and suitable to the Currency's market standards(e.g. 3m Libor, 6m Libor, OIS Index, SOFR Index, BSBY - See Appendix E)</li> <li>• <b>Payment/Resets:</b> Annual, Semi-Annual, Quarterly, Monthly, Daily or as agreed by Participants.</li> <li>• <b>Day Count Conventions:</b> As dictated by Market Standard for the Floating Index, e.g. Act/360, Act/365 etc. (see Appendix C)</li> <li>• <b>Holiday Calendar:</b> As agreed by participants and suitable to the Currency's market standards.</li> <li>• <b>Fixing Calendar:</b> As agreed by participants and suitable to the Currency's market standards.</li> <li>• <b>Business Day Conventions:</b> Modified Following with adjustment to period end dates or as agreed by Participants and suitable to the Currency's market standards.</li> </ul>
<b>Periodic Settlement</b>	<p><b>Payment and Resets:</b></p> <ul style="list-style-type: none"> <li>• <b>Fixed Leg:</b> The payment amount of the Fixed Leg is based on: Notional, Payment Frequency, Day Count Convention and Fixed Interest Rate.</li> <li>• <b>Floating Leg:</b> The payment amount of the Floating Leg is based on: Notional, Payment Frequency, Day Count Convention, Floating Interest Rate Index and Floating Reset Dates.</li> </ul> <p>Payments are settled in accordance with the payment frequency of either leg 1 or leg 2 as agreed between Participants. Non-Deliverable IRS are traded with an exchange of principle FX'd at both start date and maturity and may also be traded with intra- swap FX exchanges as required.</p>

## Inflation Swaps

<b>Inflation Swap, Fixed/Float</b>	
<b>Contract Definition</b>	<p><b>An agreement to exchange a stream of cash flows by applying a fixed rate and a floating Inflation Index rate to a specified notional over a term to maturity.</b></p>

<b>IRS Types</b>	<p>Fixed Rate vs. Floating Inflation Index Rate, e.g. CPI, HICP, RPI etc. or based on an Inflation based instrument, e.g. Mexico UDI</p> <p>Floating Inflation Rate vs. Floating Index Rate plus or minus a spread, e.g. Mexico UDI vs. Mexico TIIE or Mexico UDI vs. USD Libor (cross currency)</p>
<b>Trading Conventions</b>	<ul style="list-style-type: none"> <li>• Buy/Pay = Pay Fixed, Receive Floating Inflation Index</li> <li>• Sell/Receive = Receive Fixed, Pay Floating Inflation Index</li> <li>• Swap Price quoted in increments of fractions of a basis point (percentage rate * 100) (see Appendix D).</li> </ul>
<b>Specific Trade Types</b>	<p>The following swap types may be executed: Outrights (Spot and Forward starting), Curve (tenor) Spreads, Butterflies, Spreads between different Inflation Indices.</p>
<b>Swap Term (Tenor)</b>	<p>As agreed by the Participants. A contract can have a Tenor from 7 days to 60 years.</p>
<b>Swap Conventions</b>	<p><b>Fixed Leg:</b></p> <ul style="list-style-type: none"> <li>• <b>Payment:</b> Zero Coupon (ZC) with payments at Maturity or Annual Year-on-Year (YoY) payments.</li> <li>• <b>Day Count Conventions:</b> as agreed by Participants and suitable to the Currency's market standards, e.g. 30/360, Act/Act etc. (see Appendix C)</li> <li>• <b>Holiday Calendar:</b> as agreed by Participants and suitable to the Currency's market standards</li> <li>• <b>Business Day Conventions:</b> Modified Following with adjustment to period end dates or as agreed by Participants and suitable to the Currency's market standards</li> </ul> <p><b>Floating Leg</b></p> <ul style="list-style-type: none"> <li>• <b>Index:</b> As agreed by participants and suitable to the Currency's market standards, e.g. CPI, HICP, RPI etc.</li> <li>• <b>Payment/Resets:</b> Zero Coupon (ZC) with payments at Maturity or Annual Year-on-Year (YoY) payments.</li> <li>• <b>Day Count Conventions:</b> As dictated by Market Standard for the Floating Index, e.g. 30/360, Act/Act etc. (see Appendix C)</li> <li>• <b>Holiday Calendar:</b> As agreed by participants and suitable to the Currency's market standards.</li> <li>• <b>Fixing Calendar:</b> As agreed by participants and suitable to the Currency's market standards.</li> <li>• <b>Business Day Conventions:</b> Modified Following with adjustment to period end dates or as agreed by Participants and suitable to the Currency's market standards.</li> </ul>

<b>Periodic Settlement</b>	<p><b>Payment and Resets:</b></p> <p><b>Fixed Leg:</b> The payment amount of the Fixed Leg is based on: Notional, Payment Frequency, Day Count Convention and Fixed Interest Rate:</p> <ul style="list-style-type: none"> <li>• Zero Coupon (ZC) = <math>\text{Notional} * ((1 + X\%)^T - 1)</math></li> <li>• Year-on-Year (YoY) = <math>\text{Notional} * X\%</math></li> </ul> <p>where T is the tenor in Years, X is the Fixed Price.</p> <p><b>Floating Leg:</b> The payment amount of the Floating Leg is based on: Notional, Payment Frequency, Day Count Convention, Inflation Index and Floating Reset Dates:</p> <ul style="list-style-type: none"> <li>• <math>\text{ZC} = \text{Notional} * ((\text{Inflation Index at Maturity} / \text{Inflation Index at Start}) - 1)</math></li> <li>• <math>\text{YoY} = \text{Notional} * \text{DayFrac} * ((\text{Inflation Index}(n) / \text{Inflation Index}(n-1)) - 1)</math>,</li> </ul> <p>where <b>DayFrac</b> is the DayFraction for the interval (n-1) to n.</p> <p>Payments are settled in accordance with the payment frequency of the swap.</p>
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### Inflation-Linked Swap vs Floating

<b>Contract Definition</b>	An agreement to exchange an inflation-linked bond, with an agreement for one party to pay the equivalent cash flows of the bond and the other party to pay a floating rate
<b>Asset Swap Types</b>	Proceeds-Equivalent, par-par
<b>Trading Conventions</b>	<p>Buy/Pay = Buy Inflation-Linked Bond, pay equivalent cash flows and receive Floating Rate +/- spread in bps</p> <p>Sell/Receive = Sell Inflation-Linked Bond, receive equivalent cash flows and pay Floating Rate +/- spread in bps</p>
<b>Specific Trade Types</b>	The following swap types may be executed: Outright Asset Swap, Asset Swap Switch and Asset Swap Butterflies.
<b>Asset Swap Term (Tenor)</b>	The term of the underlying asset.

<b>Swap Conventions</b>	<ul style="list-style-type: none"> <li>• <b>Index:</b> As agreed by participants and suitable to the Currency's market standards, e.g. CPI, HICP, RPI, USD Libor, SOFR, BSBY, etc.</li> <li>• <b>Payment/Resets:</b> As dictated by Market Standard for the Floating Index</li> <li>• <b>Day Count Conventions:</b> As dictated by Market Standard for the Floating Index, e.g. 30/360, Act/Act etc. (see Appendix C)</li> <li>• <b>Holiday Calendar:</b> As agreed by participants and suitable to the Currency's market standards.</li> <li>• <b>Fixing Calendar:</b> As agreed by participants and suitable to the Currency's market standards.</li> <li>• <b>Business Day Conventions:</b> Modified Following with adjustment to period end dates or as agreed by Participants and suitable to the Currency's market standards.</li> </ul>
<b>Periodic Settlement</b>	<p>Payment and Resets:</p> <p>Floating Leg: The payment amount of the Floating Leg is based on: Notional, Payment Frequency, Day Count Convention, Inflation Index and Floating Reset Dates:</p> <p>Payments are settled in accordance with the payment frequency of the swap.</p>

## Constant Maturity Swaps

<b>Constant Maturity Swap (CMS), Float/Float</b>	
<b>Contract Definition</b>	<p>An agreement to exchange two streams of floating cash flows on a specified notional over a term to maturity. The first floating rate is referred to as a Constant Maturity because the underlying asset is the daily fixing of a medium-term <a href="#">Interest Rate Swap</a>, typically 2Y, 5Y or 10Y. The second floating rate is a deposit index such as Libor.</p>
<b>CMS Spread</b>	<p>The spread between two floating rate indices of the same currency (Super-Major, Major &amp; Non-Major Currencies - see Appendix B)</p>
<b>CMS Types</b>	<p>Floating ISDA Fix Constant Maturity (e.g. 5y IRS) vs Floating Rate (X)ibor Index (e.g. 3m Libor, 6m Euribor - See Appendix E) + spread</p>
<b>Specific Trade Types</b>	<p>The following swap types may be executed: Outrights (Spot and Forward starting), Curve (tenor) Spreads, Butterflies</p>
<b>Trading Conventions</b>	<p>Buy/Pay = Pays Floating (X)ibor Index + Spread, receives Floating CMS Index Flat  Sell/Receive = Receive Floating (X)ibor Index + Spread, pays Floating CMS Index Flat  Basis Spread Price quoted in increments of fractions or decimals of a basis point (see Appendix D).</p>
<b>Swap Term (Tenor)</b>	<p>As agreed by the Participants. A contract can have a Tenor from 1 year to 60 years.</p>

<b>Swap Conventions</b>	<p><b>Floating Leg 1</b></p> <ul style="list-style-type: none"> <li>• <b>CMS Index:</b> As agreed by participants and suitable to the Currency's market standards, e.g. ISDA Fix CMS Index.</li> <li>• <b>Payment/Resets:</b> Annual, Semi-Annual, Quarterly or as agreed by Participants.</li> <li>• <b>Day Count Conventions:</b> As dictated by Market Standard for each Index, e.g. 30/360, Act/365 etc. (see Appendix C)</li> <li>• <b>Holiday Calendar:</b> As agreed by participants and suitable to the Currency's market standards.</li> <li>• <b>Fixing Calendar:</b> As agreed by participants and suitable to the Currency's market standards.</li> <li>• <b>Business Day Conventions:</b> Modified Following with adjustment to period end dates or as agreed by Participants and suitable to each Currency's market standards.</li> </ul>
	<p><b>Floating Leg 2</b></p> <ul style="list-style-type: none"> <li>• <b>Index:</b> As agreed by participants and suitable to the Currency's market standards e.g. Libor, Euribor etc. - See Appendix E</li> <li>• <b>Payment/Resets:</b> Semi-Annual, Quarterly, Monthly or as agreed by Participants.</li> <li>• <b>Day Count Conventions:</b> As dictated by Market Standard for the Floating Index, e.g. Act/360, Act/365 etc. (see Appendix C)</li> <li>• <b>Holiday Calendar:</b> As agreed by participants and suitable to the Currency's market standards.</li> <li>• <b>Fixing Calendar:</b> As agreed by participants and suitable to the Currency's market standards.</li> <li>• <b>Business Day Conventions:</b> Modified Following with adjustment to period end dates or as agreed by Participants and suitable to the Currency's market standards.</li> </ul>
<b>Periodic Settlement</b>	<p><b>Payment and Resets:</b></p> <ul style="list-style-type: none"> <li>• <b>Floating Legs 1 &amp; 2:</b> The payment amount of the Floating Leg is based on: Notional, Payment Frequency, Day Count Convention, Floating Interest Rate Index and Floating Reset Dates. Payments are settled in accordance with the payment frequency of the swap.</li> </ul>

### Constant Maturity Swap, Fixed/Float

<b>Contract Definition</b>	<p>An agreement to exchange a stream of cash flows by applying a fixed and floating interest rate to a specified notional over a term to maturity. The floating rate in this case is referred to as a Constant Maturity because the underlying asset is the daily fixing of a medium-term <a href="#">Interest Rate Swap</a>, typically 2Y, 5Y or 10Y</p>
<b>IRS Types</b>	<p>Fixed Rate vs Floating ISDA Fix Constant Maturity (CMS) Rate</p>
<b>Trading Conventions</b>	<ul style="list-style-type: none"> <li>• Buy/Pay = Pay Fixed, Receive Floating CMS</li> <li>• Sell/Receive = Receive Fixed, Pay Floating CMS</li> <li>• Swap Price quoted as an outright percentage rate in increments of fractions or decimals of a basis point (see Appendix D).</li> </ul>
<b>Specific Trade Types</b>	<p>The following swap types may be executed: Outright (Spot and Forward starting), Curve (tenor) Spreads, Butterflies.</p>
<b>Swap Term (Tenor)</b>	<p>As agreed by the Participants. A contract can have a Tenor from 1 year to 60 years.</p>

Swap Conventions	<p><b>Fixed Leg:</b></p> <ul style="list-style-type: none"> <li>• <b>Payment:</b> Annual, Semi-Annual, Quarterly or as agreed by Participants.</li> <li>• <b>Day Count Conventions:</b> as agreed by Participants and suitable to the Currency's market standards, e.g. 30/360, Act/365 etc. (see Appendix C)</li> <li>• <b>Holiday Calendar:</b> as agreed by Participants and suitable to the Currency's market standards</li> <li>• <b>Business Day Conventions:</b> Modified Following with adjustment to period end dates or as agreed by Participants and suitable to the Currency's market standards</li> </ul>
	<p><b>Floating Leg</b></p> <ul style="list-style-type: none"> <li>• <b>CMS Index:</b> As agreed by participants and suitable to the Currency's market standards, e.g. IS DA Fix CMS Index.</li> <li>• <b>Payment/Resets:</b> Annual, Semi-Annual, Quarterly or as agreed by Participants.</li> <li>• <b>Day Count Conventions:</b> As dictated by Market Standard for the Floating Swap Index, e.g. Act/360, Act/365 etc. (see Appendix C)</li> <li>• <b>Holiday Calendar:</b> As agreed by participants and suitable to the Currency's market standards.</li> <li>• <b>Fixing Calendar:</b> As agreed by participants and suitable to the Currency's market standards.</li> <li>• <b>Business Day Conventions:</b> Modified Following with adjustment to period end dates or as agreed by Participants and suitable to the Currency's market standards.</li> </ul>
Periodic Settlement	<p><b>Payment and Resets:</b></p> <ul style="list-style-type: none"> <li>• <b>Fixed Leg:</b> The payment amount of the Fixed Leg is based on: Notional, Payment Frequency, Day Count Convention and Fixed Interest Rate.</li> <li>• <b>Floating Leg:</b> The payment amount of the Floating Leg is based on: Notional, Payment Frequency, Day Count Convention, CMS Index Floating Interest Rate and Floating Reset Dates.</li> </ul> <p>Payments are settled in accordance with the payment frequency of the swap.</p>

## Forward Rate Agreements

Forward Rate Agreement (FRA)	
Contract Definition	An agreement to exchange a cash flow by applying a fixed interest rate to a specified notional over a term to maturity and paying/receiving the difference according to valuation of an Index at FRA settlement date.
Trading Conventions	<ul style="list-style-type: none"> <li>• Buy/Pay = Pay Fixed, Receive Floating (X)ibor Index on settlement date, cash settled, i.e. pay [ Fixed - Floating ]</li> <li>• Sell/Receive = Receive Fixed, Pay Floating (X)ibor Index on settlement date, cash settled, i.e. receive [Fixed – Floating ]</li> <li>• FRA Price quoted as an outright percentage rate in increments of fractions or decimals of a basis point (see Appendix D).</li> </ul>
Specific Trade Types	The following FRA types may be executed: Outrights (Forward starting), Spreads, Butterflies, Spreads between different Floating Indices, Spreads to Futures and combinations thereof.
FRA Term (Tenor)	As agreed by the Participants. A FRA contract can have a forward starting Tenor from 1 month to 36 months.

<b>FRA Conventions</b>	<ul style="list-style-type: none"> <li>• <b>Start Date (Effective Date):</b> Forward Settlement as agreed by the Participants</li> <li>• <b>Maturity Date:</b> Forward Start Date + FRA Index Tenor</li> <li>• <b>Settlement:</b> Cash settled on Forward Settlement Date as Traded Rate minus Index Fixing rate [ Fixed - Floating ]</li> <li>• <b>Day Count Conventions:</b> as agreed by Participants and suitable to the Currency's market standards, e.g. 30/360, Act/365 etc. (see Appendix C)</li> <li>• <b>Holiday Calendar:</b> as agreed by Participants and suitable to the Currency's market standards</li> <li>• <b>Business Day Conventions:</b> Modified Following with adjustment to period end dates or as agreed by Participants and suitable to the Currency's market standards</li> </ul>
<b>Periodic Settlement</b>	<p><b>Payment and Resets:</b></p> <ul style="list-style-type: none"> <li>• <b>Fixed Leg:</b> The payment amount of the Fixed Leg is based on: Notional, Payment Frequency, Day Count Convention and Fixed Interest Rate.</li> <li>• <b>Floating Leg:</b> The payment amount of the Floating Leg is based on: Notional, Payment Frequency, Day Count Convention, Floating Interest Rate Index and Floating Reset Dates.</li> </ul> <p>Payments are cash settled on Forward Settlement Date as Traded Rate minus Index Fixing rate</p>

### DTCC GCF Repo Swaps, Fixed/Float

<b>Contract Definition</b>	<b>An agreement to exchange a stream of cash flows by applying a fixed and floating interest rate to a specified notional over a term to maturity.</b>
<b>IRS Types</b>	Fixed Rate v Depository Trust & Clearing Corp (DTCC) General Collateral Finance (GCF) Repurchase Agreement Index
<b>Trading Conventions</b>	<ul style="list-style-type: none"> <li>• Buy/Pay = Pay Fixed, Receive DTCC GCF Repo Index</li> <li>• Sell/Receive = Receive Fixed, Pay DTCC GCF Repo Index</li> <li>• Swap Price quoted as an outright percentage rate in increments of fractions or decimals of a basis point (see Appendix D).</li> </ul>
<b>Specific Trade Types</b>	The following swap types may be executed: Outright (Spot and Forward starting), Curve (tenor) Spreads, Butterflies
<b>Swap Term (Tenor)</b>	As agreed by the Participants. A contract can have a Tenor from 7 days to 5 years.
<b>Swap Conventions</b>	<p><b>Fixed Leg:</b></p> <ul style="list-style-type: none"> <li>• <b>Payment:</b> Annual (or term if &lt; 1 year)</li> <li>• <b>Day Count Conventions:</b> Act/360</li> <li>• <b>Holiday Calendar:</b> New York</li> <li>• <b>Business Day Conventions:</b> Modified Following with adjustment to period end dates, or as agreed between participants for more bespoke swaps</li> </ul> <p><b>Floating Leg</b></p> <ul style="list-style-type: none"> <li>• <b>Index:</b> DTCC GCF Repo Index, Daily reset</li> <li>• <b>Payment:</b> Daily</li> <li>• <b>Day Count Conventions:</b> Act/360</li> <li>• <b>Holiday Calendar:</b> New York</li> <li>• <b>Fixing Calendar:</b> New York</li> <li>• <b>Business Day Conventions:</b> Modified Following with adjustment to period end dates, or as agreed between participants for more bespoke swaps</li> </ul>

<b>Periodic Settlement</b>	<p><b>Payment and Resets:</b></p> <ul style="list-style-type: none"> <li>• <b>Fixed Leg:</b> The payment amount of the Fixed Leg is based on: Notional, Payment Frequency, Day Count Convention and Fixed Interest Rate.</li> <li>• <b>Floating Leg:</b> The payment amount of the Floating Leg is based on: Notional, Payment Frequency, Day Count Convention, Floating Interest Rate Index and Floating Reset Dates.</li> </ul> <p>Payments are settled in accordance with the payment frequency of the swap.</p>
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## Interest Rate Options

### Overview

An interest rate option grants the buyer the right, but not the obligation, to either enter into an underlying instrument (payers or receivers swaption - usually cash settled at expiry) or a series of pay-offs based upon future index fixings (cap/floor). Exercise of this option is dependent upon the strike price agreed at the time of the original contract being "in the money" at expiry, i.e. higher than the fixing rate for a receivers swaption or floor (puts), lower for a payers swaption or cap (calls).

### Swap Options

Interest Rate Swaption	
<b>Contract Overview</b>	An option to enter into an Interest Rate Swap contract ('Underlying Swap') at pre-defined time(s), typically a <a href="#">Fixed/Float IRS</a> with its Fixed Rate equal to the Strike.
<b>Type</b>	Payer = Correspond to paying the fixed rate in the Underlying Swap. Receiver = Correspond to receiving the fixed rate in the Underlying Swap.
<b>Trade Convention</b>	Buy = Buy the right to exercise the option. Sell = Sell the right to exercise the option.
<b>Trade Currency</b>	Available currencies as defined in 'Appendix B'.
<b>Trade Date</b>	Date on which the trade is conducted.
<b>Price Quote Convention</b>	Spot or Forward Option Premium quoted in increments of fractions or decimals of a basis point (see Appendix D).

<b>Premium Amount</b>	( Notional * Price )
<b>Premium Payment Date</b>	Date on which the Premium is paid by the Buyer to the Seller. Spot – Premium paid agreed number of business days after the Trade Date. Forward – Premium paid agreed number of business days after the Expiry Date.
<b>Strike</b>	Rate that will be used for the Underlying Swap on its inception.
<b>Minimum Notional</b>	As agreed by the participants, depending upon Currency, Expiry Date and Tenor
<b>Exercise Type</b>	European American Bermudan
<b>Expiry Date</b>	Exercise date(s) of the option. 1 day to 50 years from Trade Date.  <b>European</b> Exercise only on the Expiry Date and Time specified.  <b>American</b> Exercise is allowed at any time up to the Expiry Date specified.  <b>Bermudan</b> One or more pre-defined exercise times within a range of dates agreed between participants.
<b>Tenor</b>	Term of the underlying swap, 3 months to 50 years from Expiry Date.
<b>Settlement Type</b>	Cash Physical Cleared Physical Dates and conventions as defined by 'ISDA 2006 Definitions'.
<b>Payment Amount</b>	As defined by 'ISDA 2006 Definitions' according to Settlement Type.
<b>Underlying Swap Effective Date</b>	Number of business days after the option is exercised, as agreed by the participants.
<b>Definition of Underlying Swap</b>	<a href="#">Fixed/Floating Interest Rate Swap</a>
<b>Trade Strategies</b>	Payers/Receivers

<b>ISDA OTC Taxonomy</b>	
<b>Asset Class</b>	Interest Rate
<b>Base Product</b>	IR Swap
<b>Sub-Product</b>	Swaption
<b>Included Definitions</b>	2006 ISDA Definitions

<b>Cancellable Swap</b>	
<b>Contract Overview</b>	<b>An option to exit an Interest Rate Swap contract ('Underlying Swap') at pre-defined time(s), typically a <u>Fixed/Float IRS</u> with its Fixed Rate equal to the Strike.</b>
<b>Type</b>	Payer = Correspond to paying the fixed rate in the Underlying Swap. Receiver = Correspond to receiving the fixed rate in the Underlying Swap.
<b>Trade Convention</b>	Buy = Buy the right to exercise the option. Sell = Sell the right to exercise the option.
<b>Trade Currency</b>	Available currencies as defined in 'Appendix B'.
<b>Trade Date</b>	Date on which the trade is conducted.
<b>Price Quote Convention</b>	Spot or Forward Option Premium quoted in increments of fractions or decimals of a basis point (see Appendix D).
<b>Premium Amount</b>	( Notional * Price )
<b>Premium Payment Date</b>	Date on which the Premium is paid by the Buyer to the Seller. Spot – Premium paid agreed number of business days after the Trade Date. Forward – Premium paid agreed number of business days after the Expiry Date.
<b>Strike</b>	Rate that will be used for the Underlying Swap on its inception.
<b>Minimum Notional</b>	As agreed by the participants, depending upon Currency, Expiry Date and Tenor
<b>Exercise Type</b>	European American Bermudan

<b>Expiry Date</b>	<p>Exercise date(s) of the option. 1 day to 50 years from Trade Date.</p> <p><b>European</b> Exercise only on the Expiry Date and Time specified.</p> <p><b>American</b> Exercise is allowed at any time up to the Expiry Date specified.</p> <p><b>Bermudan</b> One or more pre-defined exercise times within a range of dates agreed between participants.</p>
<b>Tenor</b>	Term of the underlying swap, 3 months to 50 years from Expiry Date.
<b>Settlement Type</b>	<p>Cash Physical Cleared Physical Dates and conventions as defined by 'ISDA 2006 Definitions'.</p>
<b>Payment Amount</b>	As defined by 'ISDA 2006 Definitions' according to Settlement Type.
<b>Underlying Swap Effective Date</b>	As agreed by the participants.
<b>Underlying Swap Termination/Maturity Date</b>	Number of business days after the option is exercised.
<b>Definition of Underlying Swap</b>	<a href="#">Fixed/Floating Interest Rate Swap</a>
<b>Trade Strategies</b>	Payers/Receivers
<b>ISDA OTC Taxonomy</b>	
<b>Asset Class</b>	Interest Rate
<b>Base Product</b>	IR Swap
<b>Sub-Product</b>	Swaption
<b>Included Definitions</b>	2006 ISDA Definitions

## Other Options

Interest Rate Option	
<b>Contract Definition</b>	<b>An agreement to exchange a stream of cash flows of an option leg and either a fixed or floating interest rate leg to a specified notional over a term to maturity.</b>
<b>Trading Conventions</b>	Buy = Receive option leg, pay fix/floating interest rate leg Sell = Pay option leg, receive fix/floating interest rate leg
<b>Trade Currency</b>	Available currencies as defined in 'Appendix B'.
<b>Trade Date</b>	Date on which the trade is conducted.
<b>Price Quote Convention</b>	Quoted in BP Spot or Forward.
<b>Specific Option Types</b>	Cap, Floor, CMS Spread Option, Exotic
<b>Swap Term (Tenor)</b>	As agreed by the Participants. A contract can have a Tenor from 7 days to 60 years
<b>Swap Conventions</b>	<p><b>Option Leg:</b></p> <ul style="list-style-type: none"> <li>• <b>Index:</b> As agreed by participants and suitable to the Currency's market standards { Interest Rate Indices (as per ISDA 2006 or agreed by Participants), Inflation Indices (as per ISDA 2008), and spreads of the aforementioned }</li> <li>• <b>Rate:</b> A function of the index including caps and floors</li> <li>• <b>Payment/Resets:</b> As per ISDA 2006</li> <li>• <b>Day Count Conventions:</b> As per Interest Swap for the trade Currency by default, or as per Appendix A</li> <li>• <b>Holiday Calendar:</b> As agreed by Participants and suitable to the Currency's market standards</li> <li>• <b>Fixing Calendar:</b> As agreed by Participants and suitable to the Currency's market standards</li> <li>• <b>Business Day Conventions:</b> As agreed by Participants</li> </ul>
	<p><b>Floating / Fixed Leg</b></p> <ul style="list-style-type: none"> <li>• <b>Index or Fixed Rate:</b> As agreed by Participants</li> <li>• <b>Payment/Resets:</b> As per ISDA 2006</li> <li>• <b>Day Count Conventions:</b> As per Interest Swap for the trade Currency by default, or as per Appendix A</li> <li>• <b>Holiday Calendar:</b> As agreed by participants and suitable to the Currency's market standards</li> <li>• <b>Fixing Calendar:</b> As agreed by participants and suitable to the Currency's market standards</li> <li>• <b>Business Day Conventions:</b> As agreed by Participants</li> </ul>

<b>Periodic Settlement</b>	<p><b>Payment and Resets:</b></p> <ul style="list-style-type: none"> <li>• <b>Fixed Leg:</b> The payment amount of the Fixed Leg is based on: Notional, Payment Frequency, Day Count Convention and Fixed Interest Rate.</li> <li>• <b>Floating Leg:</b> The payment amount of the Floating Leg is based on: Notional, Payment Frequency, Day Count Convention, Floating Interest Rate Index and Floating Reset Dates.</li> </ul> <p>Payments are settled in accordance with the payment frequency of the swap.</p>
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<b>Interest Rate Option - IR/Inflation Cap/Floor</b>	
<b>Price Quote Convention</b>	Quoted in BP Spot – Value of option leg to be paid upfront. Basis Points Running – Premium divided into a spread paid each period of the option leg.
<b>Swap Conventions</b>	<p><b>Option Leg (only leg of structure):</b></p> <ul style="list-style-type: none"> <li>• <b>Index:</b> <ul style="list-style-type: none"> <li>• IR = Interest Rate Indices as per ISDA 2006 or as agreed by participants.</li> <li>• Inflation = Inflation Indices as per ISDA 2008 or as agreed by participants, expressed as an annualised rate.</li> </ul> </li> <li>• <b>Rate:</b> <ul style="list-style-type: none"> <li>• <math>Cap = \text{Max}(\text{Index}(T_i) - \text{Strike}, 0)</math></li> <li>• <math>Floor = \text{Max}(\text{Strike} - \text{Index}(T_i), 0)</math></li> </ul> </li> </ul>
<b>Tenors</b>	1 day to 60 years
<b>Strategies</b>	Straddle, Strangle, Collar

## Commodities

Product Name	Metal Options
<b>Description</b>	<p>A metal option represents the purchase or sale of the right to buy or sell metal, rather than an outright purchase or sale. The metal that is the subject of the option is referred to as the underlying asset.</p> <p>An option therefore is the right but not the obligation to buy from, or to sell to, the seller (or grantor) of the option, an agreed quantity of the underlying asset at an agreed price (the strike price) up to or on an agreed date in the future (the expiration date). The buyer of the option may exercise his rights under the option up to that date. In the case where the seller of the option sells, or grants, the buyer of the option the right to buy the underlying asset, the option is termed a call option. If the seller of the option grants the buyer of the option the right to sell to him the underlying asset, it is termed a put option.</p> <p>Depending on Participants, a Metal Option may be a Commodity Trade Option and treated as per CFTC Rule 32.3.</p>
<b>Underlying metal</b>	<p><b>Precious metals</b></p> <ul style="list-style-type: none"> <li>• Gold: the minimum acceptable fineness is 995.0 parts per thousand fine gold</li> <li>• Silver: 999.0 parts per thousand silver</li> <li>• Platinum: At least 99.95% Platinum</li> <li>• Palladium: At least 99.95% Palladium</li> </ul> <p><b>Base metals</b></p> <ul style="list-style-type: none"> <li>• Aluminium: Primary aluminium with impurities no greater than the chemical composition of one of the registered designations: <ul style="list-style-type: none"> <li>• P1020A in the North American and International Registration Record entitled “International Designations and Chemical Composition Limits for Unalloyed Aluminium” (revised March 2007)</li> <li>• Al99.70 in the GB/T 1196-2008 Standard entitled “Unalloyed aluminium ingots for remelting”</li> </ul> </li> <li>• Aluminium Alloy: A380.1, 226 or AD12.1 aluminium alloy</li> <li>• NASAAC: Aluminium alloy conforming to the LME NA380.1 specification</li> <li>• Copper: Grade A copper must conform to the chemical composition of one of the following standards: <ul style="list-style-type: none"> <li>• BS EN 1978:1998 - Cu-CATH-1</li> <li>• GB/T 467-2010 - Cu-CATH-1</li> <li>• ASTM B115-10 - cathode Grade 1</li> </ul> </li> <li>• Lead: Lead of 99.97% purity (minimum) must conform to the chemical composition one of the following standards: <ul style="list-style-type: none"> <li>• BS EN 12659:1999 - Permitted grades: material numbers PB970R, PB985R and PB990R</li> <li>• GB/T 469/2005 - Permitted grades: 99.970%, 99.985%, 99.990% and 99.994%</li> <li>• ASTM B29-03 (2009) - Permitted grades: 99.97% and 99.995%</li> </ul> </li> <li>• Nickel: Ni 99.8% purity conforming to B39-79 (2008)</li> <li>• Tin: Tin of 99.85% purity (minimum) conforming to BS EN 610:1996</li> <li>• Zinc: Special high-grade zinc of 99.995% purity (minimum) must conform to the chemical composition of one of the following standards: <ul style="list-style-type: none"> <li>• BS EN 1179:2003 - 99.995% grade</li> <li>• ISO 752:2004 - ZN-1 grade</li> <li>• ASTM B6-12 - LME grade</li> <li>• GB/T 470-2008 - Zn99.995 grade</li> </ul> </li> </ul>

<p><b>Lot size</b></p>	<p><b>Precious metals</b></p> <ul style="list-style-type: none"> <li>• Gold: 1 Troy Ounce</li> <li>• Silver: 1 Troy Ounce</li> <li>• Platinum: 1 Troy Ounce</li> <li>• Palladium: 1 Troy Ounce</li> </ul> <p><b>Base metals</b></p> <ul style="list-style-type: none"> <li>• Aluminium: 25 tonnes</li> <li>• Aluminium Alloy: 20 tonnes</li> <li>• NASAAC: 20 tonnes</li> <li>• Copper: 25 tonnes</li> <li>• Lead: 25 tonnes</li> <li>• Nickel: 6 tonnes</li> <li>• Tin: 5 tonnes</li> <li>• Zinc: 25 tonnes</li> </ul>
<p><b>Tenors</b></p>	<p><b>Precious metals</b></p> <ul style="list-style-type: none"> <li>• Gold: up to 10 years</li> <li>• Silver: up to 10 years</li> <li>• Platinum: up to 10 years</li> <li>• Palladium: up to 10 years</li> </ul> <p><b>Base metals</b></p> <ul style="list-style-type: none"> <li>• Aluminium: Monthly out to 63 months</li> <li>• Aluminium Alloy: Monthly out to 27 months</li> <li>• NASAAC: Monthly out to 27 months</li> <li>• Copper: Monthly out to 63 months</li> <li>• Lead: Monthly out to 15 months</li> <li>• Nickel: Monthly out to 27 months</li> <li>• Tin: Monthly out to 15 months</li> <li>• Zinc: Monthly out to 27 months</li> </ul>
<p><b>Price Quote Convention</b></p>	<p><b>Precious metals</b></p> <ul style="list-style-type: none"> <li>• Gold: tenths of US Dollar cents per Troy Ounce</li> <li>• Silver: thousandths of US Dollar cents per Troy Ounce</li> <li>• Platinum: tenths of US Dollar cents per Troy Ounce</li> <li>• Palladium: tenths of US Dollar cents per Troy Ounce</li> </ul> <p><b>Base metals</b></p> <ul style="list-style-type: none"> <li>• Aluminium: US dollars per tonne</li> <li>• Aluminium Alloy: US dollars per tonne</li> <li>• NASAAC: US dollars per tonne</li> <li>• Copper: US dollars per tonne</li> <li>• Lead: US dollars per tonne</li> <li>• Nickel: US dollars per tonne</li> <li>• Tin: US dollars per tonne</li> <li>• Zinc: US dollars per tonne</li> </ul>

<b>Minimum price fluctuation (tick size)</b>	<p><b>Precious metals</b></p> <ul style="list-style-type: none"> <li>• Gold: \$0.001/oz t</li> <li>• Silver: \$0.00001/oz t</li> <li>• Platinum: \$0.001/oz t</li> <li>• Palladium: \$0.001/oz t</li> </ul> <p><b>Base metals</b></p> <ul style="list-style-type: none"> <li>• Aluminium: \$0.01 per tonne</li> <li>• Aluminium Alloy: \$0.01 per tonne</li> <li>• NASAAC: \$0.01 per tonne</li> <li>• Copper: \$0.01 per tonne</li> <li>• Lead: \$0.01 per tonne</li> <li>• Nickel: \$0.01 per tonne</li> <li>• Tin: \$0.01 per tonne</li> <li>• Zinc: \$0.01 per tonne</li> </ul>
<b>Trade Types</b>	<ul style="list-style-type: none"> <li>• Call</li> <li>• Put</li> </ul>
<b>Option Premium</b>	As agreed by Participants - Currency style option premiums must be exchanged within 2 business days of the transaction being executed. Option Premium to be quoted and exchanged in US Dollars
<b>Option style</b>	As agreed by Participants <ul style="list-style-type: none"> <li>• European</li> <li>• American</li> </ul>
<b>Option expiry</b>	As agreed by Participants: the option expiry date is agreed as part of the contract at point of execution. Value date is T+2, based on the modified following business day convention.
<b>Settlement Type</b>	Physical
<b>Holiday Calendar</b>	As per LBMA (London Bullion Market Association) or as agreed between Participants
<b>Block Size</b>	As set forth in Appendix F to Part 43 of the CFTC Regulations

#### References:

Good gold and silver delivery:

<http://www.lbma.org.uk/good-delivery-explained>

Good platinum and palladium delivery:

<http://www.lppm.com/display.aspx?type=gooddelivery>

<http://www.lppm.com/LPPMRulesCLEANVersionSeptember2012.pdf>

<http://www.lppm.com/otcguide.pdf>

Good base metal delivery:

<http://www.lme.com/metals/non-ferrous/>

# Credit Derivatives

## Credit Derivative Product Details and Contract Specifications

### Products

- Credit Default Swap Indices
- Credit Index Swaptions

### Overview:

Credit derivatives provide an opportunity to hedge or acquire credit exposure on an underlying reference credit entity. In the event of a credit “event” such as default of the entity, a “buyer” of credit protection will be compensated for losses whilst a “seller” of credit protection will be liable for the compensation amount. The underlying entity can be:

- a) a portfolio of single credits assembled as a standardized reference index
- b) a single credit (e.g. BMW)
- c) a “tranche” of credit risk based on an index portfolio. e.g. exposure to a defined proportion of the loss distribution associated with an index For example exposure to up to the first 3% of losses on an index.

### Basic Credit Derivative contracts

Credit exposure to the underlying reference entity can be achieved in two principal ways:

- a) via a "Credit Default Swap"

A credit default swap is a contract between two participants - “*Protection Buyer*” and a “*Protection Seller*”. Under the contract, the buyer pays a regular “*premium*” to the seller who in exchange agrees to compensate the buyer for losses if a “*Credit Event*” occurs (the definition of a credit event is specified under ISDA 2003 or ISDA 2014 definitions), at which point the contract terminates and a cash “*settlement*” is made to the buyer in accordance with ISDA CDS credit event auction guidelines. Versions of these are Credit Default Swap Indices based upon a standard reference index of underlying CDS (see below).

- b) via "Credit Default Swap Option (Swaption)"

A credit default swaption gives the gives the buyer of the option, the right but not the obligation to enter into a credit default swap (as in a) above) i.e. “exercise” the option at the specified option “*expiry date*”. Option exercise is generally restricted to the expiry date – “*European style*” or less commonly may be executed at any time up to expiry – “*American Style*”. The most liquid contract is a Credit Default Index Swaption

## Credit Default Swap Indices

### Product Description:

In 2004, *standardized* credit indices were introduced which are credit default swaps based upon rule-based portfolios of equally-weighted underlying credits from specific market sectors. There are two main index families based on geographical location: a) MARKIT CDX indices : comprising single credits from North America and Emerging Markets, and b) MARKIT ITRAXX indices comprising single credits from Europe, Asia and the Rest of the World. The generic MARKIT CDX and MARKIT ITRAXX indices are subdivided according to the number and credit characteristics of their underlying constituents: both indices are serially issued every 6 months, rolling in Mar and September (generally on the 20th of the Month except for High Yield on 27th) with changes to portfolio constituents determined by polling of a group of investment banks. There is a standard set of tenors depending upon the portfolio (3, 5, 7 & 10yrs). A new series will have an associated *standard coupon rate* (premium) based upon the credit spreads of the underlying constituents – this is generally fixed (and displayed on SEF systems) at either 100bps or 500bps (though can be 25

or 1000bps in exceptional situations) depending upon the credit quality of the underlying entities, with an upfront payment offsetting the difference between this rate and the average spread of the portfolio. On issue date, the new series of an index comprising new portfolio and coupon is published. New series issuance and portfolio characteristics is administered by Markit Partners - see [www.Markit.com](http://www.Markit.com) and indices adhere to ISDA standard protocols - see [www.isda.org](http://www.isda.org). Credit event(s) on single names within a portfolio will result in a proportional erosion of its par value. CDX, MCDX and iTraxx Marks used in these Contract Specifications are marks of Markit North America, Inc. and Markit Indices Limited and have been licensed for use by BGC Derivative Markets, L.P.

**TABLE A: ON THE RUN INDICES**

Family	Indices	Description*	Tenors (Y)	Cleared Series (as of 2nd Oct 2013)	Swap Convention	Recovery(%)
MARKIT CDX.	NA.IG	125 investment grade	3,5,7,10	3Yr 15 to Current  5Yr 11 to Current  7Yr and 10Yr 8 to Current	Traded on Spread/Coupon 100bps	40
MARKIT CDX.	NA.HY	100 High Yield	5	12 to Current	Traded on Price/Coupon 500bps	30
MARKIT CDX.	NA.HVOL	30 investment grade	3,5,7,10	12 to Current	Traded on Spread/Coupon 100bps	40
MARKIT CDX.	NA.EM	14 (can vary) Emerging Market Sovereign Issuers	5	14 to Current	Traded on Price/Coupon 500bps	25
MARKIT ITRAXX	EUROPE	125 liquid European investment grade names	3,5,7,10	5yr 10 to Current  10yr 7 to Current	Traded on Spread/Coupon 100bps	40
MARKIT ITRAXX	EUROPE CROSSOVER	50 most liquid sub investment grade names	3,5,7,10	5y 10 to Current	Traded on Spread/Coupon 500bps	40
MARKIT ITRAXX	EUROPE HIVOL	30 widest spread non-financial credits	3,5,7,10	5y 10 to Current	Traded on Spread/Coupon 100bps	40
MARKIT ITRAXX	EUROPE SENIOR FINANCIALS	25 European Senior Financial Entities	5, 10yr		Traded on Spread/Coupon 100bps	40

MARKIT ITRAXX	EUROPE SUB FINANCIALS	25 European Subordinated Financial Entities	5, 10yr		Traded on Spread/Coupon 100bps	20
MARKIT ITRAXX	JAPAN	50 Japanese entities	5yr		Traded on Spread/Coupon 100bps	35
MARKIT ITRAXX	ASIA-EX JAPAN	40 Asian - ex Japan entities	5yr		Traded on Spread/Coupon 100bps	40
MARKIT ITRAXX	AUSTRALIA	25 Australian entities	5yr		Traded on Spread/Coupon 100bps	40
MARKIT CDX	LatAm Corp	20 Latin American Corporates	5yr		Traded on Price/Coupon 500bps	25
MARKIT MCDX	MCDX	50 US Municipal Issuers	3,5,10yr		Traded on Spread/Coupon 500bps	80
MARKIT ITRAXX	SOVX	Top 15 Western Europe Sovereign entities	5,10yrs		Traded on Spread/Coupon 100bps	40
MARKIT ITRAXX	SOVX EXEU	10 CEEMEA names ex. Europe	5yr	Current Series 10	Traded on Price/Coupon 100bps	25
MARKIT ITRAXX	CEEMEA CORPX	25 Corporate EM names	5yr	Current Series 20	Traded on Price/Coupon 100bps	25
MARKIT ITRAXX	MSCI ESG Screened Europe	Variable Number of Large and Mid-Cap Entities	5yr		Traded on Price/Coupon 100bps	40
OTHER	OTHER	Any other valid index calculated by a registered Exchange, or established index provider as applicable				
	<b>SUB-INDICES</b>					
MARKIT CDX	NA.HY.BB	Sub-basket MARKIT CDX.NA.HY that are BB rated	5yr		Traded on Price/Coupon 500bps	30
MARKIT CDX	NA.HY.B	Sub-basket MARKIT CDX.NA.HY that are B rated	5yr		Traded on Price/Coupon 500bps	30
MARKIT CDX	NA.IG.CON	Sub-basket MARKIT CDX.NA.IG that are Consumer	5yr		Traded on Spread/ Coupon 100bps	40

MARKIT CDX	NA.IG.ENRG	Sub-basket MARKIT CDX.NA.IG that are Energy	5yr		Traded on Spread/Coupon 100bps	40
MARKIT CDX	NA.IG.FIN	Sub-basket MARKIT CDX.NA.IG that are Financials	5yr		Traded on Spread/Coupon 100bps	40
MARKIT CDX	NA.IG.INDU	Sub-basket MARKIT CDX.NA.IG that are Industrials	5yr		Traded on Spread/Coupon 100bps	40
MARKIT CDX	NA.IG.TMT	Sub-basket MARKIT CDX.NA.IG that are Telecoms, Media & Technology	5yr		Traded on Spread/Coupon 100bps	40

\* number of constituents can vary according to series.

### Terms and Conditions : Credit Default Swap Index

CREDIT DEFAULT SWAP INDEX	
<b>Contract Overview</b>	An agreement to buy or sell protection on a basket of (from Table A: Description).
<b>Index</b>	(Name & Series)
<b>Currency</b>	EUR or USD dependent on Index
<b>Quoting Convention &amp; Minimum Increment</b>	As agreed by counterparties.
<b>Minimum Size</b>	As agreed by counterparties.
<b>Trading Conventions</b>	<p>Buyer - the buyer of protection pays a premium to the seller in case of a credit event occurring</p> <p>Seller - the seller of protection receives the premium payments from the protection buyer but is liable to make good losses to buyer in credit event</p>
<b>Swap Conventions</b>	<p>Traded on spread or price (see Table A Swap Convention)</p> <p>Fixed coupon payments calculated at a spread of (X bp - see Table A, Swap Conventions) and exchanged on a quarterly basis</p>
<b>Tenor</b>	(As agreed by the parties—for illustrative tenors See Table A : Tenors)
<b>Maturity Date</b>	20 <sup>th</sup> March or September of tenor years

<b>Coupon Details</b>	<p><i>Spread: Xbps spread (see Table A: Swap Conventions)</i></p> <p><i>Frequency: Quarterly 20 Mar/Jun/Sep/Dec</i></p> <p><i>Daycount: Act/360</i></p> <p><i>Business Day Convention: Following</i></p> <p><i>Calendar : MARKIT ITRAXX: LDN &amp; Target, MARKIT CDX NYC &amp; LDN</i></p>
<b>Credit Event</b>	<p>Determined pursuant to 2014 ISDA Definition : Failure to Pay, Government Intervention, Bankruptcy (MARKIT CDX) and also (Modified) Restructuring (MARKIT ITRAXX)</p>
<b>Recovery Rate</b>	Index dependent - as provided in Table A
<b>Settlement</b>	<p>Contingent payment - Payments related to credit event settlement will be determined pursuant to the 2014 ISDA Credit Derivatives Determination Committees and Auction Settlement Supplement, (the "Big Bang Protocol").</p> <p>Fixed Quarterly cash payments - reflected in basis points and paid by the protection buyer to the protection seller.</p> <p>Upfront fee payment - The upfront fee is a portion of the payments, expressed in percentage points of the notional, which is present valued and paid immediately to the seller</p>
<b>Trade Types</b>	<p>Outright</p> <p>Rolls (a buyer of the roll is a seller of the older series and a buyer of the more newly issued series)</p> <p>Spreads (a buyer of the spread is a seller of the shorter tenor and a buyer of the longer tenor)</p>
<b>Trading Hours and Venue</b>	00:01 -24:00 Sunday-Friday; Eastern Time
<b>Clearing Venue</b>	Where applicable per Index: ICE Clear Credit, CME Clearing, LCH.Clearnet SA and ICE Clear Europe
<b>Block Size</b>	As set forth in Appendix F to Part 43. of the CFTC Regulations

*Credit Swap Indices and their construction, issuance and maintenance are administered by a 3rd party, Markit Partners, to ensure full standardization and maximum liquidity in the products. Principal features of the products as outlined by Markit Partners are Trade Efficiency, Liquidity, Transparency and Data Integrity. These features apply to the CDX and ITRAXX families of indices and serve to mitigate issues of price manipulation.*

#### Credit Index Swaptions

#### Product Description

A CDS option is an option to buy (payer swaption) or sell (receiver swaption) CDS protection on a specified reference entity at a fixed spread on a future date. Index swaptions are generally European with exercise at the expiry date of the option only. They are mainly traded on the main benchmark indices above and may be traded outright or against other swaptions or with the underlying index as a delta hedge. A delta hedged swaption effectively provides exposure to the volatility of the underlying index.

## Terms & Conditions: MARKIT CDX and MARKIT ITRAXX Swaption

CREDIT INDEX SWAPTION	
<b>Contract Overview</b>	A credit index swaption gives the buyer the right but not the obligation to sell or buy credit protection on credit index at a specified strike spread. On exercise, the buyer of a payer option will enter an index swap, paying the credit spread (long protection) and buyer of receiver swaption will enter an index swap, receiving the credit spread (short protection)
<b>Trading Conventions</b>	Buyer (payer). The buyer has the right but not the obligation to pay on an index swap at a specified strike spread on a specified date. Seller (Receiver). The seller has the obligation to receive an index swap at a specified strike spread on a specified date.
<b>Underlying Index</b>	Any index under the MARKIT CDX and MARKIT ITRAXX families listed in Table A above.
<b>Option Style</b>	European
<b>Strike Price</b>	Agreed as a spread
<b>Premium</b>	Cents upfront
<b>Premium Payment Date</b>	Trade Date + 3 days
<b>Expiration Date/Time</b>	Standard expiries of 20 Mar/Jun/Sep & Dec 11am NY, 4pm London
<b>Settlement</b>	Physical, into the underlying Index
<b>Settlement Terms</b>	Expiry + 1 day
<b>Credit Event</b>	Determined pursuant to 2014 ISDA Definition: Failure to Pay, Government Intervention, Bankruptcy (MARKIT CDX) and also (Modified) Restructuring (MARKIT ITRAXX)
<b>Knockout</b>	Single name swaptions extinguish (knockout) on a credit event whereas index swaptions do not
<b>Settlement</b>	Physical: On exercise the buyer enters the underlying contract

<b>Settlement Amount</b>	<p>a) No Credit Event : Buy or sell the index at strike at expiry</p> <p>b) One or More credit events : Buy or sell the index at strike at expiry Protection buyer will then trigger the underlying contract under credit events</p>
<b>Trade Types</b>	<p>Outright: Payer or Receiver</p> <p>Payer or receiver spread (quoted with or without delta) - buy a low strike payer , sell a higher strike payer</p> <p>Straddle (quoted with or without delta) - buy a payer and receiver at the same strike</p>
<b>Minimum Size</b>	As agreed by Participants
<b>Clearing</b>	The options are not cleared, the underlying may be cleared at ICE Clear Credit, CME Clearing, LCH.Clearnet SA and ICE Clear Europe as directed by CEA 2(h)1 or as agreed between Participants

*Credit Swap Indices and their construction, issuance and maintenance are administered by a 3rd party, Markit Partners, to ensure full standardization and maximum liquidity in the products. Principle features of the products as described by Markit Partners are Trade Efficiency, Liquidity, Transparency and Data Integrity. These features apply to the MARKIT CDX and MARKIT ITRAXX families of indices and serve to mitigate issues of price manipulation. As Credit Index Swaptions are based upon such indices and the contractual features of a swaption are well defined prior to transaction, these products also, by their nature are resilient to price manipulation.*

# Equity Derivatives

## Broad Market Index Equity Derivative Product Details and Contract Specifications

### Equity Index Swaps

#### Product Description:

An equity swap is a product which allows the ability to gain exposure to the returns of an equity ("equity leg") in exchange for payment or receipt of regular fixed or floating payments ("floating leg") usually interest based plus a spread. Equity index swaps, for example, provide the opportunity to hedge exposure to a cash portfolio of index members without the physical sale of assets.

#### Example Terms and Conditions

<b>EQUITY INDEX SWAP</b>	
<b>Contract description</b>	<p>A contract to pay or receive regular fixed or floating interest payments on a notional amount in exchange for a notional based return performance of an equity index</p> <p>An Equity Swap may be either a Total Return Swap whereupon the return performance of an equity index includes a dividend stream or Price Return Swap whereupon the return performance of an equity index excludes a dividend stream</p>
<b>Trading Conventions</b>	<p>An equity swap buyer pays a rate of interest plus a spread on a notional amount in return for any appreciation/depreciation of the equity index on the notional amount</p> <p>An equity swap seller receives a rate of interest plus a spread on a notional amount and pay any appreciation/depreciation of the equity index on the notional amount</p> <p>Where the Equity Swap is structured as a Total Return Swap, the appreciation/depreciation includes returns due (e.g. dividends) from the underlying index over the swap period.</p> <p>Where the Equity Swap is structured as a Price Return Swap, the appreciation/depreciation excludes returns due from the underlying index over the swap period.</p>
<b>Currency</b>	USD, EUR, JPY, SGD, HKD, CNH, CNY dependent on underlying Equity
<b>Trade Date</b>	Date which trade terms agreed
<b>Maturity</b>	As agreed by Participants – Any maturity up to 50yrs
<b>Notional</b>	As agreed by Participants – E.G. 5m (USD, EUR or JPY)
<b>Floating Leg</b>	<p>Cashflow: xM LIBOR + Spread or an agreed fixed rate</p> <p>Frequency: Determined by agreed Libor (3m, 6m etc.) or agreed fixed rate frequency</p> <p>DayCount: Act/360</p>
<b>Equity Leg</b>	Notional x (% increase of equity index over floating rate period)
<b>Settlement</b>	Cash settlement as per floating rate schedule
<b>Business Day Convention</b>	As agreed by Participants

<b>Quote Convention</b>	Quoted in bps as a spread or fixed rate
<b>Trade Types</b>	Outright Spread: Equity swap in one index versus an equity swap in another
<b>Tenors</b>	As agreed by Participants, 1 day to 50 Years
<b>Underlying Equity</b>	The available underlying indices are detailed in the table below.

### Underlying Equity Indices

<b>Abbr</b>	<b>Name</b>
AEX	Amsterdam Exchange Index
AS51	S&P/ASX 200 (AEJ)
BEL20	BEL20 Index
CAC	Cotation Assistée en Continu 40
DAX	Deutscher Aktien Index
DIA	SPDR Dow Jones Industrial Average ETF Trust
DJINETT	Dow Jones InternetCompTr
DJITR	Dow Jones Industrial Average Total Return
DJUSRE	Dow Jones U.S. Real Estate Index
EWTRGSPC	REUTERS – REU - S&P EW 500 INDEX
FTSE	FTSE 100
FTSEMIB	FTSE MIB Index
FTXIN25	FTSE China 50 Index
GDDLCA	MSCI Canada Index CAD Total Return (Gross Dividends)
GDDUCA	MSCI Canada Index USD Daily Total Return (Gross Dividends)
GDDUEAFE	MSCI EAFE Index Total Return (Gross Dividends)
GDDUNA	MSCI North American Index USD Total Return (Gross Dividends)
GDDUP	MSCI Daily Gross Pacific
GDDUUS HSCEI	MSCI US Index Total Return (Gross Dividends)
HSCEI	Hang Seng China Enterprises Index
HSI	Hang Seng Index
IBOV	BOVESPA Brasil Sao Paulo Stock Exchange Index
IXBTR	S&P 500 Material Select Sector Total Return
IXCPR	Communication Services Select Sector Index
IXCTR	Communication Services Select Sector Index TR
IXETR	S&P 500 Energy Select Sector Total Return
IXITR	S&P 500 Industrials Select Sector Total Return
IXMTR	S&P 500 Financials Select Sector Total Return
IXRTR	S&P 500 Consumer Staples Select Sector Total Return
IXTTR	S&P 500 Technology Select Sector Total Return
IXUTR	S&P 500 Utilities Select Sector Total Return
IXVTR	S&P 500 Health Care Select Sector Total Return
IXYTR	S&P 500 Consumer Discretionary Select Sector Total Return
KOSPI	Korea Composite Stock Price Index
MDCSPTR	S&P MidCap 400 Total Return
MEXBOL	Mexican IPC index (Indice de Precios y Cotizaciones)
MID	S&P 400
M8CA0EN	MSCI Canada Energy Gross Return Index
M8CA0FN	MSCI Canada Financials Gross Return Index
MSLUELAN	MSCI Emerging Markets Latin America Small Cap Index (USD) (Net Dividends)
NDDLCA	MSCI Canada Index CAD Total Return (Net Dividends)
NDDUHK	MSCI Daily Total Return Net Hong Kong
NDDUNA	MSCI North American Index USD Total Return (Net Dividends)
NDDUSG	MSCI Daily Total Return Net Singapore
NDDUP	MSCI Daily Total Return Net Pacific

NDDUPXJ	MSCI Daily Total Return Net Pacific Ex Japan
NDDUUS	MSCI US Index Total Return (Net Dividends)
NDDUMAF	MSCI Daily Total Return Net Malaysia
NDEUBRAF	MSCI Brazil Index USD Total Return (Net Dividends)
NDEUCHF	MSCI China Index Total Return (Net Dividends)
NDEUSIA	MSCI Emerging Markets India
NDEUMXF	MSCI Mexico Index USD Total Return (Net Dividends)
NDEUPH	MSCI Daily Total Return Net Emerging Markets Philippines
NDEUPR	MSCI Daily Total Return Net Emerging Markets Peru
NDEUSCH	MSCI Chile Index Total Return (Net Dividends)
NDEUSCO	MSCI Colombia Index Total Return (Net Dividends)
NDEUSKO	MSCI Daily Total Return Net Emerging Markets Korea
NDEUTHF	MSCI Daily Total Return Net Emerging Markets Thailand
NDEUSTW	MSCI Daily Total Return Net Emerging Markets Taiwan
NDUEE	MSCI Daily Total Return Net Emerging Markets Asia
NDUEEGFL	MSCI Emerging Markets Latin America USD
NDX	NASDAQ-100
NKY	Nikkei 225
NSEI	S&P CNX Nifty Index
OEXT	S&P 100 Total Return
OMX	Stockholm 30 Index
RGUSFL	Russell 1000 Financial
RTX	Russell 2000
RU10GRTR	Russell 1000 Growth Total Return
RU10INTR	Russell 1000 Total Return
RU10VATR	Russell 1000 Value Total Return
RU20GRTR	Russell 2000 Growth Total Return
RU20INTR	Russell 2000 Total Return
RU20VATR	Russell 2000 Value Total Return
SIMSCI	MSCI Singapore Free Index
SMCPSPTR	S&P SmallCap 600 Total Return
SMI	Swiss Market Index
SP5LVIT	S&P 500 Low Volatility Total Return Index
SPDAUDT	S&P 500 Dividend Aristocrats Total Return Index
SPSIBITR	S&P Biotechnology Select Industry Total Return Index
SPSIOP	S&P Oil & Gas Exploration & Production Select Industry Index
SPTRCOND	S&P 500 Consumer Discretionary Sector Total Return Index
SPTRCONS	S&P 500 Consumer Staples Sector Total Return Index
SPTRENRS	S&P 500 Energy Sector Total Return Index
SPTRFINL	S&P 500 Financials Sector Total Return Index
SPTRHLTH	S&P 500 Health Care Sector Total Return Index
SPTRINDU	S&P 500 Industrials Sector Total Return Index
SPTRINFT	S&P 500 Information Technology Sector Total Return Index
SPTRMATR	S&P 500 Materials Sector Total Return Index
SPTRMDCP	S&P MidCap 400 Total Return
SPTRRLST	S&P 500 Real Estate Sector Total Return Index
SPTRSMCP	S&P SmallCap 600 Total Return

SPTRSVX	S&P 500 Value Total Return Index
SPTRTELS	S&P 500 Communication Services Sector Total Return Index
SPTRUTIL	S&P 500 Utilities Sector Total Return Index
SPX	S&P 500 Index
SPXT	S&P 500 Total Return
STBANKXR	S&P/TSX Composite Banks GICS Level Industry Group Total Return Index
STCHEMR	S&P/TSX Composite Index Chemicals GICS Industry Total Return
STELUTXR	S&P/TSX Composite Index Electric Utilities GICS Industry Total Return Index
STENRS	S&P/TSX Composite Energy Sector GICS Level 1 Index
STENRSR	S&P/TSX Composite Energy Index Total Return Swap
STFINLR	S&P/TSX Composite Financials GICS Level Sector Total Return Index
STINSUR	S&P/TSX Composite Insurance GICS Industry Group Total Return Index
STLIFER	S&P/TSX Composite Life & Health Insurance Total Return Index
STMATRR	S&P/TSX Composite Materials GICS Level Sector Total Return Index
STOGSTR	S&P/TSX Oil & Gas Sector Total Return Index
STOILPR	S&P/TSX Composite Oil & Gas Exploration Total Return Index
STMEDAR	S&P/TSX Composite Media GICS Industry Group Total Return Index
STMUTIXR	S&P/TSX Multiple Utilities & Energy Power Total Return Index
STREITSR	S&P/TSX REIT Total Return Index
STTELSR	S&P/TSX Composite Telecom Services GICS Level Sector Total Return Index
STTELSXR	S&P/TSX Composite Telecom Services GSI Total Return Index
STUTILR	S&P/TSX Composite Utilities GICS Level Sector Total Return Index
SX5E	Eurostoxx 50 Index
TAMSCI	MSCI Taiwan Inde
TSX69	S&P/TSX 60 Index
TX60AR	S&P/TSX 60 Total Return Index
TTENAR	S&P/TSX Capped Energy Total Return Index
TTUTAR	S&P/TSX Capped Utilities Total Return Index
TWII	Taiwan Weighted Exchange Capitalization Weighted Stock Index
UKX	FTSE 100 Index
VIX	CBOE Volatility Index
XNDX	NASDAQ-100 Total Return
XSOX	PHLX Semiconductor Sector Index Total Return
OTHER	Any other valid index calculated by a registered Exchange, or established index provider as applicable

**Equity index swaps are based upon highly liquid and transparent underlying indices with well-defined and accepted closing prices for the calculation of the equity leg. The terms of the contract and the payoff profiles are very well defined prior to a transaction so making the product resilient to price manipulation.**

## Option on Variance Swaps

### Product Description:

An option on variance swap allows the ability obtain exposure to the volatility of an underlying equity index via buying or selling the right, but not the obligation to enter a variance swap (see above) on the underlying index at expiration of the option.

### Example Terms and Conditions

<b>OPTION ON EQUITY INDEX VARIANCE SWAP</b>	
<b>Contract description</b>	A contract that enables the ability hedge or take a view on the future direction of volatility of an underlying equity index by buying or selling the right, but not the obligation to enter a variance swap (paying or receiving the difference between actual realized variance of an index over the life of the contract and a variance "strike" agreed at contract inception.)
<b>Trading Conventions</b>	Buyer – The buyer of a variance option pays premium in exchange for the right to exercise the option and enter a variance swap at an agreed strike at expiry  Seller -The seller of a variance option receives a premium in exchange for the obligation to fulfill the option buyer's right to exercise at expiry
<b>Currency</b>	USD, EUR or JPY dependent on Underlying Equity
<b>Vega Notional</b>	As agreed by Participants e.g. 100,000 (Note: the exposure (loss or gain in contract currency) per 1% change in volatility)
<b>Reference Vol Strike</b>	As agreed by Participants e.g. 17.90
<b>Ref Var Strike</b>	As agreed by Participants e.g. 320.21
<b>Option Premium</b>	Cents upfront of vega notional
<b>Option Style</b>	European
<b>Option Type</b>	Call or Put
<b>Option Volatility Strike</b>	As agreed by Participants e.g. 40
<b>Option Variance Strike</b>	As agreed by Participants e.g. $40^2 = 1600$
<b>Premium Payment</b>	T + 3

<b>Option Payoff at Final Valuation Date</b>	Call: Variance Units X Max(0, Realized vol ^ 2 - Variance Strike) at (maturity + 3 days) of variance swap  Put: Variance Units X Max(0, Variance Strike - Realized vol ^ 2) at (maturity + 3 days) of variance swap
<b>Maturity or Final Valuation Date of Variance Swap</b>	Final Date on which observations are made (contract tenors 0 mths to 50yrs supported)
<b>Observation Frequency</b>	Daily
<b>Number of Observations</b>	n, dependent on contract maturity (NOTE: n is the number of trading days between observation start date and Maturity)
<b>Realized Volatility (RV)</b>	$\sigma_{realized} = \sqrt{252} \cdot \sqrt{\frac{\sum_{i=1}^m \left( LN \left( \frac{C_{i+1}}{C_i} \right)^2 \right)}{n}} \cdot 10000$ <p><i>m equals n, unless there is a market disruption event</i></p> <p><i>C<sub>i</sub> equals the daily closing price of the Underlying Equity on the i<sup>th</sup> business day starting on the day following Trade Date (i=2), and C<sub>m</sub> shall be equal to the Closing Level of the Underlying Equity on the Final Valuation Date. If the Final Valuation Date is a listed option expiration date, then C<sub>m</sub> is equal to the expiration print.</i></p> <p><i>Business Days per Year = 252</i></p>
<b>Business Day Convention</b>	As agreed by Participants
<b>Quote Convention</b>	Variance % points
<b>Trade Types</b>	Outright: Long or short call or put Spreads: e.g. Long a lower strike call, short a higher strike call Straddle: Long a call and a put at same strike
<b>Market Disruption</b>	Refer to ISDA 2002 Equity Definitions
<b>Tenors</b>	As agreed by Participants, 1 day to 10 Years
<b>Underlying Equity</b>	Closing Price of any valid index listed on a registered Exchange E.g. SPX S&P 500, SX5E Eurostoxx 50, RTY Russell 2000, NDX Nasdaq 100, FTSE FTSE 100, DAX Dax 30, NKYNikkei 225, VIX on S&P 500, DIA Dow Jones 30, MIDS&P Mid 400

**Options on Variance swaps are based upon highly liquid and transparent underlying indices with well-defined and accepted closing prices for the calculation of volatility and consequently the payoff of volatility/variance swap. The terms of the contract and the calculation algorithm are very well**

defined prior to a transaction so making the product resilient to price manipulation.

## Variance & Volatility Swaps

### Product Description:

A variance swap allows the ability take a direct exposure to the volatility of an underlying equity index over the length of the swap. Taking a "long volatility" view entails buying volatility via a variance or volatility swap at a predetermined strike. If the realized vol is greater than the strike, there will be a profit and vice versa. Note that volatility and variance swaps differ simply as the name suggests in exposure to volatility and volatility<sup>2</sup> (variance) respectively. In addition to speculative applications, variance/ volatility swaps serve an important purpose in providing an opportunity to hedge or protect against times of market crisis when invariably asset volatility rises substantially.

### Example Terms and Conditions

<b>EQUITY INDEX VARIANCE SWAP</b>	
<b>Contract description</b>	A contract that enables the ability hedge or take a view on the future direction of volatility of an underlying equity index by paying or receiving the difference between actual realized variance of an index over the life of the contract and a variance "strike" agreed at contract inception.
<b>Trading Conventions</b>	Buyer – The buyer of a variance swap pays a fixed rate (the Variance Strike) in exchange for a payout based on the daily realised variance  Seller - The seller of a variance swap receives a fixed rate (the Variance Strike) in exchange for a payout based on the daily realised variance
<b>Currency</b>	USD, EUR or JPY dependent on Underlying Equity
<b>Trade Start</b>	Immediate or forward starting determines when observations for calculation of realized volatility begin
<b>Maturity or Final Valuation Date</b>	Final Date on which observations are made (contract tenors >0 mths to 50yrs supported)
<b>Observation Frequency</b>	Daily
<b>Number of Observations</b>	n, dependent on contract maturity (NOTE: n is the number of trading days between observation start date and Maturity)
<b>Vega Notional</b>	As agreed by Participants e.g. 50,000 (Note: the exposure (loss or gain in contract currency) per 1% change in volatility)
<b>Volatility Strike</b>	As agreed by Participants e.g. 27% (for indicative purposes as payoff is linked to variance and not volatility)
<b>Variance Strike</b>	As agreed by Participants e.g. 729 (volatility strike) <sup>2</sup>
<b>Variance (Var) Units</b>	As agreed by Participants e.g. 925.93 Vega Notional / (2x Volatility strike)

<b>Variance Cap</b>	YES/NO if YES e.g. (2.5 x vol strike)^2 (Notes: limits the profit/loss to defined maximum)
<b>Realized Volatility (RV)</b>	$\sigma_{realized} = \sqrt{252} \cdot \sqrt{\frac{\sum_{i=1}^m \left( \frac{C_{i+1}}{C_i} \right)^2}{n}} \cdot 10000$ <p><i>m equals n, unless there is a market disruption event</i></p> <p><i>C<sub>i</sub> equals the daily closing price of the Underlying Equity on the i<sup>th</sup> business day starting on the day following Trade Date (i=2), and C<sub>m</sub> shall be equal to the Closing Level of the Underlying Equity on the Final Valuation Date. If the Final Valuation Date is a listed option expiration date, then C<sub>m</sub> is equal to the expiration print.</i></p> <p><i>Business Days per Year = 252</i></p>
<b>Settlement</b>	<p>Cash settlement of:</p> <p>For Var Buyer: Variance Units X MAX [0, Variance strike – Volatility^2]</p> <p>Var Seller: Variance Units X MAX [0, Volatility^2 - Variance strike]</p> <p>Occurs following the Final Valuation Date in accordance with underlying equity index convention</p>
<b>Business Day Convention</b>	As agreed by Participants
<b>Quote Convention</b>	Volatility % points, Variance % Points
<b>Trade Types</b>	<p>Outright: Long or short variance/volatility of an underlying index from start date to maturity</p> <p>Forward Starting: Long or short variance/volatility over a defined future period</p> <p>Spreads: Take a view on the variance/volatility difference between two indices by buying variance/volatility on one index and selling variance/volatility on the other, either spot or forward starting</p>
<b>Market Disruption</b>	Refer to ISDA 2002 Equity Definitions
<b>Tenors</b>	As agreed by Participants, 1 day to 10 Years
<b>Underlying Equity</b>	The available underlying indices are detailed in the table below.

### Underlying Equity Indices

Abbr	Name
AEX	Amsterdam Exchange Index
AS51	S&P/ASX 200 (AEJ)
BEL20	BEL20 Index
CAC	Cotation Assistée en Continu 40

DAX	Deutscher Aktien Index
DIA	SPDR Dow Jones Industrial Average ETF Trust
DJINETT	Dow Jones InternetCompTr
DJITR	Dow Jones Industrial Average Total Return
DJUSRE	Dow Jones U.S. Real Estate Index
EWTRGSPC	REUTERS – REU - S&P EW 500 INDEX
FTSE	FTSE 100
FTSEMIB	FTSE MIB Index
FTXIN25	FTSE China 50 Index
GDDLCA	MSCI Canada Index CAD Total Return (Gross Dividends)
GDDUCA	MSCI Canada Index USD Daily Total Return (Gross Dividends)
GDDUEAFE	MSCI EAFE Index Total Return (Gross Dividends)
GDDUNA	MSCI North American Index USD Total Return (Gross Dividends)
GDDUP	MSCI Daily Gross Pacific
GDDUUS HSCEI	MSCI US Index Total Return (Gross Dividends)
HSCEI	Hang Seng China Enterprises Index
HSI	Hang Seng Index
IBOV	BOVESPA Brasil Sao Paulo Stock Exchange Index
IXBTR	S&P 500 Material Select Sector Total Return
IXCPR	Communication Services Select Sector Index
IXCTR	Communication Services Select Sector Index TR
IXETR	S&P 500 Energy Select Sector Total Return
IXITR	S&P 500 Industrials Select Sector Total Return
IXMTR	S&P 500 Financials Select Sector Total Return
IXRTR	S&P 500 Consumer Staples Select Sector Total Return
IXTTR	S&P 500 Technology Select Sector Total Return
IXUTR	S&P 500 Utilities Select Sector Total Return
IXVTR	S&P 500 Health Care Select Sector Total Return
IXYTR	S&P 500 Consumer Discretionary Select Sector Total Return
KOSPI	Korea Composite Stock Price Index
MDCPSPTR	S&P MidCap 400 Total Return
MEXBOL	Mexican IPC index (Indice de Precios y Cotizaciones)
MID	S&P 400
M8CA0EN	MSCI Canada Energy Gross Return Index
M8CA0FN	MSCI Canada Financials Gross Return Index
MSLUELAN	MSCI Emerging Markets Latin America Small Cap Index (USD) (Net Dividends)
NDDLCA	MSCI Canada Index CAD Total Return (Net Dividends)
NDDUHK	MSCI Daily Total Return Net Hong Kong
NDDUNA	MSCI North American Index USD Total Return (Net Dividends)
NDDUSG	MSCI Daily Total Return Net Singapore
NDDUP	MSCI Daily Total Return Net Pacific
NDDUPXJ	MSCI Daily Total Return Net Pacific Ex Japan
NDDUUS	MSCI US Index Total Return (Net Dividends)
NDDUMAF	MSCI Daily Total Return Net Malaysia
NDEUBRAF	MSCI Brazil Index USD Total Return (Net Dividends)
NDEUCHF	MSCI China Index Total Return (Net Dividends)
NDEUSIA	MSCI Emerging Markets India
NDEUMXF	MSCI Mexico Index USD Total Return (Net Dividends)
NDEUPH	MSCI Daily Total Return Net Emerging Markets Philippines
NDEUPR	MSCI Daily Total Return Net Emerging Markets Peru
NDEUSCH	MSCI Chile Index Total Return (Net Dividends)
NDEUSCO	MSCI Colombia Index Total Return (Net Dividends)
NDEUSKO	MSCI Daily Total Return Net Emerging Markets Korea
NDEUTHF	MSCI Daily Total Return Net Emerging Markets Thailand
NDEUSTW	MSCI Daily Total Return Net Emerging Markets Taiwan
NDUEE	MSCI Daily Total Return Net Emerging Markets Asia
NDUEEGFL	MSCI Emerging Markets Latin America USD
NDX	NASDAQ-100
NKY	Nikkei 225

NSEI	S&P CNX Nifty Index
OEXT	S&P 100 Total Return
OMX	Stockholm 30 Index
RGUSFL	Russell 1000 Financial
RTX	Russell 2000
RU10GRTR	Russell 1000 Growth Total Return
RU10INTR	Russell 1000 Total Return
RU10VATR	Russell 1000 Value Total Return
RU20GRTR	Russell 2000 Growth Total Return
RU20INTR	Russell 2000 Total Return
RU20VATR	Russell 2000 Value Total Return
SIMSCI	MSCI Singapore Free Index
SMCPSPTR	S&P SmallCap 600 Total Return
SMI	Swiss Market Index
SP5LVIT	S&P 500 Low Volatility Total Return Index
SPDAUDT	S&P 500 Dividend Aristocrats Total Return Index
SPSIBITR	S&P Biotechnology Select Industry Total Return Index
SPSIOP	S&P Oil & Gas Exploration & Production Select Industry Index
SPTRCOND	S&P 500 Consumer Discretionary Sector Total Return Index
SPTRCONS	S&P 500 Consumer Staples Sector Total Return Index
SPTRENRS	S&P 500 Energy Sector Total Return Index
SPTRFINL	S&P 500 Financials Sector Total Return Index
SPTRHLTH	S&P 500 Health Care Sector Total Return Index
SPTRINDU	S&P 500 Industrials Sector Total Return Index
SPTRINFT	S&P 500 Information Technology Sector Total Return Index
SPTRMATR	S&P 500 Materials Sector Total Return Index
SPTRMDCP	S&P MidCap 400 Total Return
SPTRRLST	S&P 500 Real Estate Sector Total Return Index
SPTRSMCP	S&P SmallCap 600 Total Return
SPTRSVX	S&P 500 Value Total Return Index
SPTRTELS	S&P 500 Communication Services Sector Total Return Index
SPTRUTIL	S&P 500 Utilities Sector Total Return Index
SPX	S&P 500 Index
SPXT	S&P 500 Total Return
STBANKXR	S&P/TSX Composite Banks GICS Level Industry Group Total Return Index
STCHEMR	S&P/TSX Composite Index Chemicals GICS Industry Total Return
STELUTXR	S&P/TSX Composite Index Electric Utilities GICS Industry Total Return Index
STENRS	S&P/TSX Composite Energy Sector GICS Level 1 Index
STENRSR	S&P/TSX Composite Energy Index Total Return Swap
STFINLR	S&P/TSX Composite Financials GICS Level Sector Total Return Index
STINSUR	S&P/TSX Composite Insurance GICS Industry Group Total Return Index

STLIFER	S&P/TSX Composite Life & Health Insurance Total Return Index
STMATRR	S&P/TSX Composite Materials GICS Level Sector Total Return Index
STOGSTR	S&P/TSX Oil & Gas Sector Total Return Index
STOILPR	S&P/TSX Composite Oil & Gas Exploration Total Return Index
STMEDAR	S&P/TSX Composite Media GICS Industry Group Total Return Index
STMUTIXR	S&P/TSX Multiple Utilities & Energy Power Total Return Index
STREITSR	S&P/TSX REIT Total Return Index
STTELSR	S&P/TSX Composite Telecom Services GICS Level Sector Total Return Index
STTELSXR	S&P/TSX Composite Telecom Services GSI Total Return Index
STUTILR	S&P/TSX Composite Utilities GICS Level Sector Total Return Index
SX5E	Eurostoxx 50 Index
TAMSCI	MSCI Taiwan Inde
TSX69	S&P/TSX 60 Index
TX60AR	S&P/TSX 60 Total Return Index
TTENAR	S&P/TSX Capped Energy Total Return Index
TTUTAR	S&P/TSX Capped Utilities Total Return Index
TWII	Taiwan Weighted Exchange Capitalization Weighted Stock Index
UKX	FTSE 100 Index
VIX	CBOE Volatility Index
XNDX	NASDAQ-100 Total Return
XSOX	PHLX Semiconductor Sector Index Total Return
OTHER	Any other valid index calculated by a registered Exchange, or established index provider as applicable

*Volatility and variance swaps are based upon highly liquid and transparent underlying indices with well-defined and accepted closing prices for the calculation of volatility and consequently the payoff of volatility/variance swap. The terms of the contract and the calculation algorithm are very well defined prior to a transaction so making the product resilient to price manipulation.*

#### Index Descriptions

#### Dow Jones Indices:

##### **SPDR Dow Jones Industrial Average ETF Trust (DIA)**

The SPDR Dow Jones Industrial Average ETF Trust (DIA) is an exchange-traded fund (ETF) that aims to replicate the performance of the Dow Jones Industrial Average (DJIA). The DJIA includes 30 of the largest publicly traded companies in the U.S., spanning diverse industries. The ETF allows investors to gain exposure to this index with the liquidity and flexibility of trading like a stock.

##### **Dow Jones Internet Composite Total Return Index**

The Dow Jones Internet Composite Total Return Index measures the performance of publicly traded companies that generate the majority of their revenues from the internet. This includes sectors such as e-commerce, social media, and online advertising. The total return version accounts for both capital gains and dividends, providing a comprehensive view of the internet sector's performance.

##### **Dow Jones Industrial Average Total Return**

The Dow Jones Industrial Average Total Return Index tracks the performance of 30 major U.S. companies and includes both price appreciation and dividends paid. This index is often used as a benchmark for the overall U.S. stock market and reflects the performance of various sectors, such as technology, healthcare, and consumer goods.

## **Dow Jones U.S. Real Estate Index**

The Dow Jones U.S. Real Estate Index represents publicly traded real estate companies and Real Estate Investment Trusts (REITs) in the U.S. market. It provides investors with exposure to the real estate sector and reflects trends in property values and rental income. The index is weighted by market capitalization and includes various subsectors like residential, commercial, and industrial real estate.

## **S&P & S&P-Based Indices:**

### **S&P/ASX 200 (AEJ)**

The S&P/ASX 200 Index represents the top 200 companies listed on the Australian Securities Exchange (ASX) by market capitalization. It serves as a key benchmark for Australian equity performance and includes a diverse range of sectors such as financials, materials, and healthcare. The index is widely used by investors to gauge the overall health of the Australian economy and as a basis for various financial products.

### **S&P 500 Materials Select Sector Total Return**

The S&P 500 Materials Select Sector Total Return Index focuses specifically on the materials sector of the S&P 500, which includes companies involved in the production of materials such as metals, chemicals, and paper. This total return index accounts for both price appreciation and dividends, providing investors with insights into the performance of the materials sector within the broader U.S. market.

### **S&P 500 Energy Select Sector Total Return**

The S&P 500 Energy Select Sector Total Return Index focuses specifically on the energy sector of the S&P 500, which includes companies involved in oil, gas, and energy-related services. This total return index accounts for both price appreciation and dividends, providing a comprehensive view of the performance of energy companies within the broader U.S. market.

### **S&P 500 Industrials Select Sector Total Return**

The S&P 500 Industrials Select Sector Total Return Index tracks the performance of companies within the industrials sector of the S&P 500. This includes firms involved in manufacturing, transportation, and aerospace, among others. The total return version includes both capital gains and dividends, making it a useful benchmark for investors focused on the industrial sector's performance.

### **S&P 500 Financials Select Sector Total Return**

The S&P 500 Financials Select Sector Total Return Index measures the performance of financial companies within the S&P 500, including banks, insurance companies, and investment firms. This index reflects both price changes and dividends, providing a thorough perspective on the financial sector's performance in the U.S. economy.

### **S&P 500 Consumer Staples Select Sector Total Return**

The S&P 500 Consumer Staples Select Sector Total Return Index represents companies in the consumer staples sector, which includes firms that produce essential goods such as food, beverages, and household products. The total return index accounts for price movements and dividends, making it a key benchmark for investors interested in stable and essential consumer products.

### **S&P 500 Technology Select Sector Total Return**

The S&P 500 Technology Select Sector Total Return Index focuses on technology companies within the S&P 500, covering sectors like software, hardware, and IT services. This index reflects both price appreciation and reinvested dividends, providing insights into the performance of the tech sector, which is a significant driver of market growth.

### **S&P 500 Utilities Select Sector Total Return**

The S&P 500 Utilities Select Sector Total Return Index tracks the performance of companies in the utilities sector, including those providing electricity, gas, and water. This index includes both capital gains and dividends, offering a comprehensive measure of the utilities sector's performance, which is often characterized by stable earnings and dividends.

### **S&P 500 Health Care Select Sector Total Return**

The S&P 500 Health Care Select Sector Total Return Index includes companies in the healthcare sector, such as pharmaceuticals, biotechnology, and medical devices. This index accounts for price changes and dividends, making it a useful benchmark for investors interested in the health and performance of the healthcare industry.

### **S&P 500 Consumer Discretionary Select Sector Total Return**

The S&P 500 Consumer Discretionary Select Sector Total Return Index represents companies in the consumer

discretionary sector, which includes goods and services that are non-essential, such as automobiles, entertainment, and retail. The total return version includes both price appreciation and dividends, reflecting the performance dynamics of consumer spending trends.

### **S&P CNX Nifty Index**

The S&P CNX Nifty Index, commonly referred to as the Nifty 50, is a benchmark Indian stock market index that includes 50 of the largest and most liquid companies on the National Stock Exchange of India. It reflects the performance of various sectors and serves as a gauge for the overall health of the Indian economy.

### **S&P 100 Total Return**

The S&P 100 Total Return Index tracks the performance of 100 major U.S. companies, including those from various sectors such as technology, finance, and healthcare. This index accounts for both capital gains and dividends, providing a comprehensive view of the performance of large-cap stocks in the U.S. market.

### **S&P SmallCap 600 Total Return**

The S&P SmallCap 600 Total Return Index tracks the performance of 600 small-cap U.S. companies, accounting for both price changes and dividends. This index serves as a key benchmark for small-cap stocks and reflects the performance of companies that are often more volatile than their larger counterparts.

### **S&P 500 Low Volatility Total Return Index**

The S&P 500 Low Volatility Total Return Index focuses on the least volatile stocks within the S&P 500. It seeks to provide exposure to companies that have historically shown lower price fluctuations, while accounting for price changes and reinvested dividends. This index is often used by investors looking for more stable returns.

### **S&P 500 Dividend Aristocrats Total Return Index**

The S&P 500 Dividend Aristocrats Total Return Index includes companies in the S&P 500 that have consistently increased their dividends for at least 25 consecutive years. This total return index accounts for price changes and reinvested dividends, making it a benchmark for investors seeking reliable income through dividends.

### **S&P Biotechnology Select Industry Total Return Index**

The S&P Biotechnology Select Industry Total Return Index measures the performance of biotechnology companies within the broader S&P market. It accounts for both price appreciation and reinvested dividends, providing insights into the biotechnology sector, which is known for innovation and growth potential.

### **S&P Oil & Gas Exploration & Production Select Industry Index**

The S&P Oil & Gas Exploration & Production Select Industry Index tracks the performance of companies engaged in the exploration and production of oil and gas. This index reflects price changes and dividends, offering insights into the dynamics of the energy sector, particularly related to upstream activities.

### **S&P 500 Consumer Discretionary Sector Total Return Index**

The S&P 500 Consumer Discretionary Sector Total Return Index focuses on companies within the consumer discretionary sector of the S&P 500, including retail, automobiles, and leisure. It accounts for both price movements and reinvested dividends, serving as a benchmark for consumer spending trends.

### **S&P 500 Consumer Staples Sector Total Return Index**

The S&P 500 Consumer Staples Sector Total Return Index measures the performance of consumer staples companies in the S&P 500, which produce essential goods such as food and household products. This index reflects price changes and dividends, providing insights into the stability and growth of essential consumer goods.

### **S&P 500 Energy Sector Total Return Index**

The S&P 500 Energy Sector Total Return Index tracks the performance of energy companies within the S&P 500, including oil, gas, and renewable energy firms. It includes price changes and reinvested dividends, reflecting the performance of the energy sector.

### **S&P 500 Financials Sector Total Return Index**

The S&P 500 Financials Sector Total Return Index measures the performance of financial companies in the S&P 500, such as banks, insurance firms, and investment companies. This index accounts for both capital gains and dividends, providing insights into the financial sector's performance.

### **S&P 500 Health Care Sector Total Return Index**

The S&P 500 Health Care Sector Total Return Index tracks the performance of healthcare companies within the

S&P 500, including pharmaceuticals, biotechnology, and healthcare providers. It accounts for price changes and reinvested dividends, serving as a benchmark for the healthcare industry.

#### **S&P 500 Industrials Sector Total Return Index**

The S&P 500 Industrials Sector Total Return Index focuses on companies within the industrials sector of the S&P 500, covering manufacturing, transportation, and infrastructure. This index accounts for price movements and dividends, reflecting the performance of a critical sector in the economy.

#### **S&P 500 Information Technology Sector Total Return Index**

The S&P 500 Information Technology Sector Total Return Index measures the performance of technology companies within the S&P 500. It includes firms in software, hardware, and IT services, accounting for both price changes and reinvested dividends, highlighting the tech sector's influence on market performance.

#### **S&P 500 Materials Sector Total Return Index**

The S&P 500 Materials Sector Total Return Index tracks the performance of companies in the materials sector, including those involved in mining, chemicals, and construction. This index reflects price changes and dividends, offering insights into the performance of materials-focused companies.

#### **S&P MidCap 400 Total Return**

The S&P MidCap 400 Total Return Index measures the performance of mid-cap U.S. companies, accounting for price changes and reinvested dividends. It serves as a benchmark for mid-cap stocks, which are often seen as a barometer for economic growth.

#### **S&P 500 Real Estate Sector Total Return Index**

The S&P 500 Real Estate Sector Total Return Index tracks the performance of real estate companies in the S&P 500, including REITs and property management firms. This index includes both price appreciation and reinvested dividends, providing insights into the real estate sector's performance.

#### **S&P SmallCap 600 Total Return**

The S&P SmallCap 600 Total Return Index measures the performance of 600 small-cap U.S. companies, accounting for both price changes and dividends. This index serves as a key benchmark for small-cap stocks and reflects their performance in the market.

#### **S&P 500 Value Total Return Index**

The S&P 500 Value Total Return Index focuses on value-oriented companies within the S&P 500, which are considered undervalued relative to their fundamentals. This index accounts for both capital gains and reinvested dividends, providing insights into the performance of value stocks.

#### **S&P 500 Communication Services Sector Total Return Index**

The S&P 500 Communication Services Sector Total Return Index tracks the performance of communication services companies in the S&P 500, including telecommunications, media, and entertainment firms. This index reflects price changes and dividends, providing insights into the evolving communication landscape.

#### **S&P 500 Utilities Sector Total Return Index**

The S&P 500 Utilities Sector Total Return Index measures the performance of utility companies in the S&P 500, which provide essential services like electricity, water, and gas. This index accounts for both price changes and reinvested dividends, highlighting the stability and performance of the utilities sector.

#### **S&P 500 Index**

The S&P 500 Index is a widely followed benchmark that tracks the performance of 500 of the largest publicly traded companies in the U.S. It represents a diverse range of sectors and is market-capitalization weighted, serving as a key indicator of the overall health of the U.S. stock market.

#### **S&P 500 Total Return**

The S&P 500 Total Return Index reflects the performance of 500 of the largest publicly traded companies in the U.S., accounting for both price changes and reinvested dividends. This index provides a comprehensive view of the overall performance of the U.S. equity market, making it a key benchmark for investors.

#### **S&P/TSX Composite Banks GICS Level Industry Group Total Return Index**

This index tracks the performance of banks within the S&P/TSX Composite Index, following the Global Industry Classification Standard (GICS). It accounts for price changes and dividends, providing insights into the performance

of the banking sector in Canada.

#### **S&P/TSX Composite Index Chemicals GICS Industry Total Return**

The S&P/TSX Composite Index Chemicals GICS Industry Total Return Index measures the performance of chemical companies within the S&P/TSX Composite Index. This index reflects price movements and reinvested dividends, offering insights into the chemicals sector in the Canadian market.

#### **S&P/TSX Composite Index Electric Utilities GICS Industry Total Return Index**

The S&P/TSX Composite Index Electric Utilities GICS Industry Total Return Index measures the performance of electric utility companies in Canada. It includes both price changes and dividends, providing insights into the performance of this essential sector.

#### **S&P/TSX Composite Energy Sector GICS Level 1 Index**

This index tracks the overall performance of the energy sector within the S&P/TSX Composite Index. It includes companies involved in oil, gas, and renewable energy, and reflects price changes and dividends, serving as a benchmark for the Canadian energy market.

#### **S&P/TSX Composite Energy Index Total Return Swap**

The S&P/TSX Composite Energy Index Total Return Swap represents the performance of the Canadian energy sector through a total return swap mechanism. This index accounts for price changes and dividends, offering a synthetic way to gain exposure to energy companies in Canada.

#### **S&P/TSX Composite Financials GICS Level Sector Total Return Index**

This index measures the performance of financial companies within the S&P/TSX Composite Index, following the GICS classification. It accounts for both price changes and reinvested dividends, providing insights into the Canadian financial sector's performance.

#### **S&P/TSX Composite Insurance GICS Industry Group Total Return Index**

The S&P/TSX Composite Insurance GICS Industry Group Total Return Index tracks the performance of insurance companies in the S&P/TSX Composite Index. It reflects price changes and dividends, serving as a benchmark for the Canadian insurance market.

#### **S&P/TSX Composite Life & Health Insurance Total Return Index**

The S&P/TSX Composite Life & Health Insurance Total Return Index tracks the performance of life and health insurance companies in Canada. This index includes price movements and dividends, providing insights into this specific segment of the insurance market.

#### **S&P/TSX Composite Materials GICS Level Sector Total Return Index**

This index measures the performance of materials companies within the S&P/TSX Composite Index. It accounts for price changes and reinvested dividends, serving as a benchmark for sectors involved in mining, metals, and other materials.

#### **S&P/TSX Oil & Gas Sector Total Return Index**

The S&P/TSX Oil & Gas Sector Total Return Index tracks the performance of oil and gas companies within the S&P/TSX Composite Index, incorporating price changes and reinvested dividends. It provides insights into the performance of this critical sector in Canada.

#### **S&P/TSX Composite Oil & Gas Exploration Total Return Index**

The S&P/TSX Composite Oil & Gas Exploration Total Return Index tracks companies involved in oil and gas exploration in Canada. This index accounts for price changes and reinvested dividends, providing insights into exploration activities within the sector.

#### **S&P/TSX Composite Media GICS Industry Group Total Return Index**

This index measures the performance of media companies in the S&P/TSX Composite Index, accounting for price changes and reinvested dividends. It serves as a benchmark for the media sector in Canada.

#### **S&P/TSX Multiple Utilities & Energy Power Total Return Index**

The S&P/TSX Multiple Utilities & Energy Power Total Return Index tracks the performance of companies involved in utilities and energy generation. It includes price changes and reinvested dividends, providing insights into this combined sector.

### **S&P/TSX REIT Total Return Index**

This index measures the performance of Real Estate Investment Trusts (REITs) in the S&P/TSX Composite Index, accounting for price changes and reinvested dividends. It provides insights into the Canadian real estate market through the performance of publicly traded REITs.

### **S&P/TSX Composite Telecom Services GICS Level Sector Total Return Index**

The S&P/TSX Composite Telecom Services GICS Level Sector Total Return Index tracks the performance of telecommunications companies within the S&P/TSX Composite Index. It accounts for both price changes and reinvested dividends, providing a benchmark for the telecom sector.

### **S&P/TSX Composite Telecom Services GSI Total Return Index**

This index measures the performance of telecom services companies in the S&P/TSX Composite Index, accounting for price changes and dividends. It offers insights into the performance of telecommunications in the Canadian market.

### **S&P/TSX Composite Utilities GICS Level Sector Total Return Index**

The S&P/TSX Composite Utilities GICS Level Sector Total Return Index tracks the performance of utility companies in Canada, incorporating price changes and reinvested dividends. This index provides a benchmark for the utility sector's performance.

### **S&P/TSX 60 Index**

The S&P/TSX 60 Index comprises 60 of the largest and most liquid companies listed on the Toronto Stock Exchange. It serves as a key benchmark for the Canadian equity market, reflecting the performance of major sectors.

### **S&P/TSX 60 Total Return Index**

The S&P/TSX 60 Total Return Index tracks the performance of the S&P/TSX 60 Index, incorporating price changes and reinvested dividends. This total return version provides a comprehensive view of the returns from investing in the largest Canadian companies.

### **S&P/TSX Capped Energy Total Return Index**

This index measures the performance of energy companies within the S&P/TSX Composite Index, applying a cap on individual stock weightings to limit concentration. It accounts for both price changes and reinvested dividends.

### **S&P/TSX Capped Utilities Total Return Index**

The S&P/TSX Capped Utilities Total Return Index tracks the performance of utility companies in Canada, with a cap on individual stock weightings. This index incorporates price changes and reinvested dividends, providing insights into the utilities sector.

### **S&P MidCap 400 Total Return**

The S&P MidCap 400 Total Return Index tracks the performance of 400 mid-cap companies in the U.S. market. This index includes both price changes and reinvested dividends, providing insights into the mid-cap segment, which is often viewed as a barometer for economic growth and corporate performance in the middle market.

### **S&P 400**

The S&P 400 Index, also known as the S&P MidCap 400, measures the performance of mid-cap companies in the U.S. It serves as a benchmark for the mid-cap segment of the equity market and includes a diverse range of sectors, providing insights into the performance of medium-sized companies that are often seen as a driver of economic growth.

## **MSCI Indices:**

### **MSCI Canada Energy Gross Return Index**

The MSCI Canada Energy Gross Return Index measures the performance of companies in the energy sector within the Canadian equity market. This index includes price changes and gross dividends, offering a comprehensive view of how energy companies—such as those involved in oil, gas, and renewable energy—perform in Canada.

### **MSCI Canada Financials Gross Return Index**

The MSCI Canada Financials Gross Return Index tracks the performance of the financial sector in Canada, including banks, insurance companies, and investment firms. The index reflects both price movements and gross dividends, providing a detailed perspective on the performance of financial institutions in the Canadian economy.

### **MSCI Emerging Markets Latin America Small Cap Index (USD) (Net Dividends)**

The MSCI Emerging Markets Latin America Small Cap Index measures the performance of small-cap companies in Latin American emerging markets. It accounts for price changes and net dividends, allowing investors to gauge the performance of smaller companies in the region, which can offer growth potential and diversification.

### **MSCI Canada Index CAD Total Return (Net Dividends)**

The MSCI Canada Index CAD Total Return (Net Dividends) reflects the performance of large and mid-cap Canadian companies, accounting for price changes and net dividends in Canadian dollars. This index provides a comprehensive view of the Canadian equity market's performance, including the impact of dividend distributions.

### **MSCI Daily Total Return Net Hong Kong**

The MSCI Daily Total Return Net Hong Kong Index tracks the performance of large and mid-cap companies listed in Hong Kong, reflecting daily price changes and net dividends. This index provides insights into the performance of the Hong Kong equity market, which is a significant financial hub in Asia.

### **MSCI North American Index USD Total Return (Net Dividends)**

The MSCI North American Index USD Total Return measures the performance of large and mid-cap companies in the U.S. and Canada, accounting for price changes and net dividends in U.S. dollars. This index offers a comprehensive view of North American equities and their performance dynamics.

### **MSCI Daily Total Return Net Singapore**

The MSCI Daily Total Return Net Singapore Index tracks the performance of large and mid-cap companies listed on the Singapore Exchange. This index accounts for daily price movements and net dividends, providing a snapshot of the Singapore equity market's performance.

### **MSCI Daily Total Return Net Pacific**

The MSCI Daily Total Return Net Pacific Index measures the performance of large and mid-cap companies across the Pacific region, including countries like Australia, New Zealand, and select Asian markets. The index accounts for price changes and net dividends, offering insights into the equity markets of this dynamic region.

### **MSCI Daily Total Return Net Pacific Ex Japan**

The MSCI Daily Total Return Net Pacific Ex Japan Index focuses on large and mid-cap companies in the Pacific region, excluding Japan. This index reflects daily price changes and net dividends, providing insights into the performance of Pacific equities outside of the Japanese market.

### **MSCI US Index Total Return (Net Dividends)**

The MSCI US Index Total Return (Net Dividends) tracks the performance of large and mid-cap U.S. companies, incorporating both price changes and net dividends. This index serves as a comprehensive benchmark for the U.S. equity market, reflecting its performance across various sectors.

### **MSCI Daily Total Return Net Malaysia**

The MSCI Daily Total Return Net Malaysia Index measures the performance of large and mid-cap companies listed in Malaysia. The index accounts for daily price movements and net dividends, offering insights into the Malaysian equity market's performance.

### **MSCI Brazil Index USD Total Return (Net Dividends)**

The MSCI Brazil Index USD Total Return (Net Dividends) tracks the performance of large and mid-cap Brazilian companies, accounting for price changes and net dividends in U.S. dollars. This index provides a comprehensive view of the Brazilian equity market, reflecting its dynamics and investment opportunities.

### **MSCI China Index Total Return (Net Dividends)**

The MSCI China Index Total Return (Net Dividends) measures the performance of large and mid-cap companies in China, incorporating both price changes and net dividends. This index reflects the performance of the Chinese equity market, providing insights into the rapidly growing economy.

### **MSCI Emerging Markets India**

The MSCI Emerging Markets India Index tracks the performance of large and mid-cap companies in India. This index reflects the growth potential of the Indian market, accounting for price changes and serving as a benchmark for investors interested in Indian equities.

### **MSCI Mexico Index USD Total Return (Net Dividends)**

The MSCI Mexico Index USD Total Return (Net Dividends) measures the performance of large and mid-cap Mexican companies, incorporating price changes and net dividends in U.S. dollars. This index provides insights into the Mexican equity market and its investment landscape.

### **MSCI Daily Total Return Net Emerging Markets Philippines**

The MSCI Daily Total Return Net Emerging Markets Philippines Index tracks the performance of large and mid-cap companies in the Philippines, accounting for daily price movements and net dividends. This index offers a view of the Philippine equity market's performance.

### **MSCI Daily Total Return Net Emerging Markets Peru**

The MSCI Daily Total Return Net Emerging Markets Peru Index measures the performance of large and mid-cap companies in Peru, incorporating daily price changes and net dividends. This index provides insights into the Peruvian equity market.

### **MSCI Chile Index Total Return (Net Dividends)**

The MSCI Chile Index Total Return (Net Dividends) tracks the performance of large and mid-cap Chilean companies, accounting for both price changes and net dividends. This index offers a comprehensive view of the Chilean equity market's dynamics.

### **MSCI Colombia Index Total Return (Net Dividends)**

The MSCI Colombia Index Total Return (Net Dividends) measures the performance of large and mid-cap companies in Colombia, incorporating price changes and net dividends. This index provides insights into the Colombian equity market.

### **MSCI Daily Total Return Net Emerging Markets Korea**

The MSCI Daily Total Return Net Emerging Markets Korea Index tracks the performance of large and mid-cap companies in South Korea, reflecting daily price changes and net dividends. This index provides insights into the South Korean equity market.

### **MSCI Daily Total Return Net Emerging Markets Thailand**

The MSCI Daily Total Return Net Emerging Markets Thailand Index measures the performance of large and mid-cap companies in Thailand, accounting for daily price movements and net dividends. This index offers a view of the Thai equity market.

### **MSCI Daily Total Return Net Emerging Markets Taiwan**

The MSCI Daily Total Return Net Emerging Markets Taiwan Index tracks the performance of large and mid-cap companies in Taiwan, reflecting daily price changes and net dividends. This index provides insights into the Taiwanese equity market.

### **MSCI Daily Total Return Net Emerging Markets Asia**

The MSCI Daily Total Return Net Emerging Markets Asia Index measures the performance of large and mid-cap companies across various Asian emerging markets, accounting for daily price movements and net dividends. This index offers a broad perspective on the Asian equity landscape.

### **MSCI Emerging Markets Latin America USD**

The MSCI Emerging Markets Latin America Index tracks the performance of large and mid-cap companies in Latin American emerging markets, reflecting price changes and net dividends in U.S. dollars. This index provides a comprehensive view of investment opportunities across the region.

### **MSCI Singapore Free Index**

The MSCI Singapore Free Index represents the performance of large and mid-cap companies in Singapore, focusing on those that are freely tradable in the market. This index provides a comprehensive view of the Singapore equity market and is widely used as a benchmark for investment in Singaporean stocks.

### **MSCI Canada Index CAD Total Return (Gross Dividends)**

The MSCI Canada Index CAD Total Return measures the performance of large and mid-cap companies in Canada, accounting for price changes and reinvested dividends in Canadian dollars. This index covers various sectors, such as energy, financials, and materials, providing a comprehensive view of the Canadian equity market.

### **MSCI Canada Index USD Daily Total Return (Gross Dividends)**

Similar to its CAD counterpart, the MSCI Canada Index USD Daily Total Return measures the performance of large and mid-cap Canadian companies, but it is expressed in U.S. dollars. This index also includes reinvested dividends, allowing U.S.-based investors to assess the performance of Canadian equities while accounting for currency fluctuations.

#### **MSCI EAFE Index Total Return (Gross Dividends)**

The MSCI EAFE Index Total Return tracks the performance of large and mid-cap companies across developed markets outside of North America, including Europe, Australasia, and the Far East. This index incorporates price movements and reinvested dividends, providing a comprehensive measure of international equity performance.

#### **MSCI North American Index USD Total Return (Gross Dividends)**

The MSCI North American Index USD Total Return measures the performance of large and mid-cap companies in the U.S. and Canada, reflecting price changes and reinvested dividends in U.S. dollars. This index provides investors with a broad view of the North American equity market and its performance dynamics.

#### **MSCI Daily Gross Pacific**

The MSCI Daily Gross Pacific Index focuses on the performance of large and mid-cap companies in the Pacific region, including Australia, New Zealand, and several Asian markets. This index accounts for price appreciation and reinvested dividends, providing investors with insights into the performance of the Pacific equity markets.

#### **MSCI US Index Total Return (Gross Dividends)**

The MSCI US Index Total Return tracks the performance of large and mid-cap U.S. companies, incorporating both price changes and reinvested dividends. This index serves as a comprehensive benchmark for the U.S. equity market, reflecting various sectors and industries.

### **FTSE Russell and Russell-Based Indices:**

#### **FTSE 100**

The FTSE 100 Index consists of the 100 largest companies listed on the London Stock Exchange by market capitalization. It serves as a key indicator of the performance of the UK stock market and includes a diverse range of sectors, such as finance, energy, and consumer goods. The FTSE 100 is commonly used by investors to gauge the economic health of the UK and is a benchmark for various investment products.

#### **FTSE 100 Index**

The FTSE 100 Index represents the 100 largest companies listed on the London Stock Exchange. It is a market-capitalization weighted index and serves as a key indicator of the performance of the UK stock market.

#### **FTSE MIB Index**

The FTSE MIB Index is the primary benchmark for the Italian stock market, comprising the 40 largest and most liquid companies listed on the Borsa Italiana. It includes major sectors such as finance, industrials, and consumer goods. The index is weighted by market capitalization and serves as a key indicator of the Italian economy, reflecting the performance of its largest companies.

#### **FTSE China 50 Index**

The FTSE China 50 Index represents the 50 largest and most liquid Chinese stocks listed on the Hong Kong Stock Exchange. It provides exposure to major sectors of the Chinese economy, including finance, technology, and consumer goods. The index is designed to reflect the performance of large-cap Chinese companies and serves as a benchmark for investors looking to access Chinese equities.

#### **Russell 1000 Financial**

The Russell 1000 Financial Index tracks the performance of financial sector companies within the Russell 1000 Index, which includes the largest U.S. companies by market capitalization. This index focuses on banks, insurance companies, and other financial institutions, providing insights into the health of the financial sector.

#### **Russell 2000**

The Russell 2000 Index represents the performance of the smallest 2,000 companies in the Russell 3000 Index, capturing the small-cap segment of the U.S. equity market. This index is widely used as a benchmark for small-cap performance and reflects the dynamics of smaller companies.

#### **Russell 1000 Growth Total Return**

The Russell 1000 Growth Total Return Index measures the performance of growth-oriented companies within the

Russell 1000 Index, focusing on those expected to grow at an above-average rate. This total return version includes price appreciation and reinvested dividends.

#### **Russell 1000 Total Return**

The Russell 1000 Total Return Index tracks the performance of the largest 1,000 U.S. companies by market capitalization, incorporating both price changes and dividends. This index serves as a comprehensive benchmark for large-cap U.S. stocks.

#### **Russell 1000 Value Total Return**

The Russell 1000 Value Total Return Index focuses on value-oriented companies within the Russell 1000 Index, which are perceived to be undervalued relative to their fundamentals. This total return version includes capital gains and reinvested dividends.

#### **Russell 2000 Growth Total Return**

The Russell 2000 Growth Total Return Index measures the performance of growth-oriented companies within the Russell 2000 Index. This index accounts for price changes and reinvested dividends, reflecting the dynamics of small-cap growth stocks.

#### **Russell 2000 Total Return**

The Russell 2000 Total Return Index tracks the performance of the smallest 2,000 companies in the Russell 3000 Index, including price changes and dividends. It provides insights into the overall performance of small-cap stocks.

#### **Russell 2000 Value Total Return**

The Russell 2000 Value Total Return Index measures the performance of small-cap value stocks within the Russell 2000 Index. It includes both capital gains and reinvested dividends, reflecting the characteristics of small-cap companies perceived as undervalued.

### **Other US-Based Indices:**

#### **CBOE Volatility Index**

The CBOE Volatility Index (VIX) measures the market's expectations of future volatility based on S&P 500 index options. Often referred to as the "fear index," it reflects investor sentiment and market uncertainty.

#### **Communication Services Select Sector Index**

The Communication Services Select Sector Index is a subset of the S&P 500, representing companies involved in telecommunications, media, and entertainment. This index provides exposure to key players in the communication sector, reflecting the evolving landscape of media consumption and communication technologies.

#### **Communication Services Select Sector Index TR**

The Communication Services Select Sector Index Total Return incorporates both price movements and dividends of the constituent companies within the communication services sector of the S&P 500. This index provides a comprehensive measure of the sector's performance, useful for investors looking for income and growth potential.

#### **PHLX Semiconductor Sector Index Total Return**

The PHLX Semiconductor Sector Index Total Return tracks the performance of companies involved in the semiconductor industry. It includes price changes and reinvested dividends, providing insights into the performance of semiconductor firms.

#### **NASDAQ-100**

The NASDAQ-100 Index comprises 100 of the largest non-financial companies listed on the NASDAQ stock exchange. It includes major sectors like technology, consumer services, and healthcare. This index is widely followed as a benchmark for growth-oriented stocks and is known for its significant representation of tech giants.

#### **NASDAQ-100 Total Return**

The NASDAQ-100 Total Return Index measures the performance of the largest non-financial companies listed on the NASDAQ, accounting for price changes and reinvested dividends. This index provides a comprehensive view of growth-oriented stocks.

#### **REUTERS – REU - S&P EW 500 INDEX**

The REUTERS S&P Equal Weight 500 Index is designed to measure the performance of 500 large-cap U.S. companies, with each company having an equal weight in the index. This approach differs from traditional market-

cap weighted indices, allowing for greater representation of smaller companies within the index. The equal weight methodology can lead to different performance characteristics compared to traditional indices.

## Foreign-Based Indices:

### **Amsterdam Exchange Index (AEX)**

The Amsterdam Exchange Index (AEX) is a stock index made up of the 25 most actively traded securities on the exchange. The index is made up of Dutch companies and is one of the main national indices in Europe promoting a more reliable market that offers increased opportunities by bringing together buyers and sellers.

### **BEL20 Index**

The BEL20 Index is a stock market index that includes the 20 largest and most liquid companies listed on the Euronext Brussels exchange in Belgium. It is considered a key indicator of the performance of the Belgian stock market and reflects the overall economic health of the country. The index covers various sectors, including consumer goods, financial services, and industrials.

### **BOVESPA Brasil Sao Paulo Stock Exchange Index**

The BOVESPA Index, or Ibovespa, is the main stock market index in Brazil, tracking the performance of the most traded stocks on the B3 exchange in São Paulo. It includes a diverse range of sectors such as financials, energy, and consumer goods. The index is market-capitalization weighted and is often used as a benchmark for the Brazilian equity market.

### **Cotation Assistée en Continu 40 (CAC 40)**

The Cotation Assistée en Continu 40, or CAC 40, is a benchmark French stock market index that comprises 40 of the largest and most actively traded companies listed on Euronext Paris. It serves as a barometer for the French economy and includes major firms from sectors like finance, technology, and consumer products. The index is weighted by free-float market capitalization.

### **Deutscher Aktien Index (DAX)**

The Deutscher Aktien Index, commonly known as the DAX, is a stock market index that tracks the 30 largest and most liquid German companies listed on the Frankfurt Stock Exchange. It is one of the most important indices in Europe and represents key sectors of the German economy, such as automotive, manufacturing, and technology. The DAX is a total return index, meaning it accounts for dividends paid by the constituent companies.

### **Eurostoxx 50 Index**

The Eurostoxx 50 Index is a stock market index that represents 50 of the largest and most liquid companies in the Eurozone. It covers multiple sectors and serves as a key benchmark for European equities, reflecting the performance of major companies in the region.

### **Hang Seng China Enterprises Index**

The Hang Seng China Enterprises Index (HSCEI) measures the performance of large Chinese companies listed on the Hong Kong Stock Exchange, specifically those incorporated in mainland China. This index provides exposure to the Chinese market and is often used by investors to assess the performance of state-owned enterprises and other large corporations in China.

### **Hang Seng Index**

The Hang Seng Index is a key benchmark for the Hong Kong stock market, consisting of the 50 largest and most liquid companies listed on the Hong Kong Stock Exchange. It reflects the performance of various sectors, including finance, utilities, and consumer goods, and is widely regarded as a barometer for the overall health of the Hong Kong economy.

### **Korea Composite Stock Price Index (KOSPI)**

The Korea Composite Stock Price Index, or KOSPI, is the main stock market index in South Korea, representing all common stocks traded on the Korea Exchange. The index is market-capitalization weighted and includes a diverse range of sectors, reflecting the overall performance of the South Korean economy.

### **Mexican IPC Index (Índice de Precios y Cotizaciones)**

The Mexican IPC Index, or Índice de Precios y Cotizaciones, is the primary benchmark for the Mexican stock market, consisting of the 35 most liquid and largest companies listed on the Mexican Stock Exchange (BMV). It includes various sectors such as finance, telecommunications, and consumer goods, reflecting the overall performance of the Mexican economy.

**Nikkei 225**

The Nikkei 225 is a stock market index for the Tokyo Stock Exchange, representing 225 of the largest and most liquid companies in Japan. It is price-weighted, meaning that companies with higher stock prices have a greater impact on the index's movement. The Nikkei 225 is a key indicator of the Japanese economy and investor sentiment.

**Stockholm 30 Index**

The Stockholm 30 Index, also known as the OMX Stockholm 30 Index, measures the performance of the 30 most traded stocks on the Stockholm Stock Exchange. It includes companies from various sectors, serving as a key indicator of the Swedish equity market.

**Swiss Market Index**

The Swiss Market Index (SMI) is the primary stock market index in Switzerland, consisting of the 20 largest and most liquid companies listed on the SIX Swiss Exchange. The index is market-capitalization weighted and provides a gauge for the performance of the Swiss equity market.

**Taiwan Weighted Exchange Capitalization Weighted Stock Index**

This index measures the performance of stocks listed on the Taiwan Stock Exchange, weighted by market capitalization. It reflects the overall performance of the Taiwanese equity market, capturing large, mid, and small-cap companies.

# 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																																											
<b>Convention Definitions</b>	Emerging Market Trade Association ( <a href="http://www.emta.org/template.aspx?id=2275">http://www.emta.org/template.aspx?id=2275</a> ), 2006 ISDA Definitions																																										
<b>Currencies</b>	<p>One of the following currencies, as agreed by Participants:</p> <table border="1"> <tbody> <tr><td>CNY</td><td>Chinese Renminbi</td></tr> <tr><td>IDR</td><td>Indonesian Rupiah</td></tr> <tr><td>INR</td><td>Indian Rupee</td></tr> <tr><td>KRW</td><td>South Korean Won</td></tr> <tr><td>MYR</td><td>Malaysian Ringgit</td></tr> <tr><td>PHP</td><td>Philippine Peso</td></tr> <tr><td>TWD</td><td>Taiwan Dollar</td></tr> <tr><td>VND</td><td>Vietnamese ng</td></tr> <tr><td>EGP</td><td>Egyptian pound</td></tr> <tr><td>RUB</td><td>Russian ruble</td></tr> <tr><td>KZT</td><td>Kazakh tenge</td></tr> <tr><td>ARS</td><td>Argentine Peso</td></tr> <tr><td>BRL</td><td>Brazilian Real</td></tr> <tr><td>CLP</td><td>Chilean Peso</td></tr> <tr><td>COP</td><td>Colombian Peso</td></tr> <tr><td>GTQ</td><td>Guatemalan quetzal</td></tr> <tr><td>PEN</td><td>Peruvian nuevo sol</td></tr> <tr><td>UYU</td><td>Uruguayan peso</td></tr> <tr><td>VEB</td><td>Venezuelan bolívar</td></tr> <tr><td>UAH</td><td>Ukranian hryvnia</td></tr> <tr><td>AZN</td><td>Azeri manta</td></tr> </tbody> </table>	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	Ukranian hryvnia	AZN	Azeri manta
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<b>Notional</b>	The notional amount of the contract, which is not exchanged														
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<b>Settlement Currency</b>	<p>The currency used to settle the NDF, as agreed by Participants.</p> <table border="1"> <tr> <td>USD</td> <td>US Dollar</td> </tr> <tr> <td>AUD</td> <td>Australian Dollar</td> </tr> <tr> <td>CAD</td> <td>Canadian Dollar</td> </tr> <tr> <td>CHF</td> <td>Swiss Franc</td> </tr> <tr> <td>EUR</td> <td>Euro</td> </tr> <tr> <td>GBP</td> <td>British Pound</td> </tr> <tr> <td>JPY</td> <td>Japanese Yen</td> </tr> </table>	USD	US Dollar	AUD	Australian Dollar	CAD	Canadian Dollar	CHF	Swiss Franc	EUR	Euro	GBP	British Pound	JPY	Japanese Yen
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<b>Quoting Convention and Minimum Increment</b>	<ul style="list-style-type: none"> <li>• Outright forward rate: the number of currency units as valued per unit of base currency</li> <li>• Spread: the difference between the Spot FX for the currency pair and the outright forward rate (as above)</li> <li>• Notional amount and minimum increment as agreed by Participants</li> </ul>														
<b>Trade Date</b>	The date on which the Participants enter into the contract														
<b>Fixing Date</b>	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														
<b>Holiday Calendar</b>	Dependent upon Currencies as defined by the Emerging Market Trade Association, or as agreed between Participants														
<b>Settlement Date</b>	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														
<b>Settlement Procedure</b>	<ul style="list-style-type: none"> <li>• As agreed between Participants for non-cleared trades</li> <li>• As dictated by the Clearinghouse for trades subsequently novated for clearing</li> </ul>														
<b>Contract Types:</b>	<ul style="list-style-type: none"> <li>• Outrights</li> <li>• Curve (Tenor)</li> <li>• Spreads, Butterflies, Condors</li> </ul>														
<b>Tenors</b>	<ul style="list-style-type: none"> <li>• Listed benchmark tenors are 1d 2d 3d 1w 2w 3w 1m 2m 3m 6m 9m 12m 15m 18m 2y2 ½y 3y 4y 5y</li> <li>• As agreed between Participants, off the run NDF contract tenors may be between 1 day and 10 years.</li> </ul>														
<b>Block Size</b>	As set forth in Appendix F to Part 43 of the CFTC Regulations.														
<b>Trading Hours</b>	7:00 pm to 5:30 pm EST, Sunday to Friday														
<b>Disruption Events:</b>	As set forth in the EMTA TEMPLATE TERMS for Non-Deliverable Forward FX Transactions applicable to the Reference Currency <a href="http://www.emta.org/ndfft.aspx">http://www.emta.org/ndfft.aspx</a>														

<b>Disruption Fallbacks:</b>	As set forth in the EMTA TEMPLATE TERMS for Non-Deliverable Forward FX Transactions applicable to the Reference Currency <a href="http://www.emta.org/ndfft.aspx">http://www.emta.org/ndfft.aspx</a>
<b>Other Terms:</b>	As set forth in the EMTA TEMPLATE TERMS for Non-Deliverable Forward FX Transactions applicable to the Reference Currency <a href="http://www.emta.org/ndfft.aspx">http://www.emta.org/ndfft.aspx</a>

## Currency Options

### FX Currency Options

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). An FX option may be either "European", whereby the right to exchange may occur only on a single date (the expiry date) or "American" whereby the right to exchange may occur on any date up to and including the expiration date as determined by the option buyer. Settlement of an "in-the-money" option is typically 1 or 2 days following the agreed expiry date. Settlement may be physical where a spot transaction at the strike price is executed or also cash, where participants exchange the net cash difference between the prevailing spot rate and the strike price.

FX Option															
<b>Contract Overview</b>	<b>An option to enter into a foreign exchange contract at pre-defined time(s), with its exchange rate equal to the Strike.</b>														
<b>Convention Definitions</b>	<ul style="list-style-type: none"> <li>1998 ISDA FX and Currency Option Definitions as updated (<a href="https://www.emta.org/documentation/emta-standard-documentation/fx-and-currency-derivatives-documentation/">https://www.emta.org/documentation/emta-standard-documentation/fx-and-currency-derivatives-documentation/</a>)</li> <li>Emerging Market Trade Association (<a href="http://www.emta.org/template.aspx?id=2275">http://www.emta.org/template.aspx?id=2275</a>)</li> </ul>														
<b>Currencies</b>	FX Rates between any two currencies as agreed between participants and listed in Appendix B but mostly including: <table border="1" data-bbox="318 1234 630 1766"> <tbody> <tr> <td>USD</td> <td>US Dollar</td> </tr> <tr> <td>EUR</td> <td>Euro</td> </tr> <tr> <td>GBP</td> <td>British Pound</td> </tr> <tr> <td>JPY</td> <td>Japanese Yen</td> </tr> <tr> <td>CAD</td> <td>Canadian Dollar</td> </tr> <tr> <td>CHF</td> <td>Swiss Franc</td> </tr> <tr> <td>AUD</td> <td>Australian Dollar</td> </tr> </tbody> </table>	USD	US Dollar	EUR	Euro	GBP	British Pound	JPY	Japanese Yen	CAD	Canadian Dollar	CHF	Swiss Franc	AUD	Australian Dollar
USD	US Dollar														
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JPY	Japanese Yen														
CAD	Canadian Dollar														
CHF	Swiss Franc														
AUD	Australian Dollar														
<b>Notional Amount</b>	The notional amount of the base currency of the FX pair underlying the option														

<b>Notional Currency</b>	The base currency in which the option contract size is expressed, as agreed by Participants
<b>Option Type</b>	<ul style="list-style-type: none"> <li>• Put = Option buyer has the right to sell the exchange rate (e.g. selling USD, buying a second currency)</li> <li>• Call = Option buyer has the right to buy the exchange rate (e.g. buying USD, selling a second currency)</li> </ul>
<b>Quoting Convention and Minimum Increment:</b>	<ul style="list-style-type: none"> <li>• 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 Garman Kohlhagen adjusted Black-Scholes pricing model</li> <li>• 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.</li> <li>• Where traded as an implied volatility, option premiums are subsequently calculated and agreed between Participants before execution</li> <li>• Minimum Increments Dependent on currency pair and tenor and as agreed between participants</li> </ul>
<b>Strike</b>	Rate that will be used for the underlying currency exchange at expiry.
<b>Exercise Type</b>	<ul style="list-style-type: none"> <li>• European (options can only be exercised at expiration).</li> <li>• 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.</li> </ul>
<b>Premium</b>	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 and agreed between Participants
<b>Trade Date</b>	The date on which the Participants enter into the option contract
<b>Expiry Date</b>	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).
<b>Minimum Size</b>	Dependent on currency pair and tenor or as agreed between participants for Voice trading
<b>Holiday Calendar</b>	Dependent upon Currencies as agreed between Participants
<b>Settlement</b>	<ul style="list-style-type: none"> <li>• As agreed between participants</li> <li>• Physical FX trade settlement</li> <li>• Cash settlement</li> </ul>

<b>Settlement Date</b>	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
<b>Settlement Procedure</b>	As agreed between Participants for non-cleared trades
<b>Contract Types</b>	<p>Each Currency Option traded is bespoke and agreed between Participants. All option strategies result in Call options and/or Put options executed with the following strategies traded as agreed between Participants:</p> <p><b>Vanilla:</b> Outright Call / Put, Straddle, Strangle, Butterfly, Risk Reversal, Calendar (tenor) spread, Cross Currency Spread, Condor, Call Spread, Put Spread, Live Trading with no delta hedge</p> <p><b>Exotic:</b> Also traded are different bespoke put/call structures agreed between Participants such as Barriers, Baskets, Digitals, Knockins, Knockouts, Reverse Knockins/Knockouts, No Touch, Double No Touch, Average Price, Volatility Swaps, Variance Swaps, Worst of Options, Compound Options, Forward Volatility Agreements: trades may be with or without delta hedges and some structures may also be bilaterally negotiated with additional options as part of the package to form a vega hedge</p>
<b>Tenors</b>	As agreed between Participants, Currency Option contract tenors may be between 1 day and 30 years.
<b>Block Size</b>	As set forth in Appendix F to Part 43 of the CFTC Regulations.
<b>Trading Hours</b>	7:00 pm to 5:30 pm EST, Sunday to Friday

## Non-Deliverable FX Options

### Overview

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). An NDO is typically "European", whereby the right to exercise may occur only on a single date (the expiry date) but may also be "American" as agreed between Participants whereby the right to exercise may occur on any date up to and including the expiration date as determined by the option buyer. Settlement of an "in-the-money" option is typically 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)

<b>Contract Overview</b>	<b>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.</b>
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**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>)

**Currencies**

One of the following currencies from Appendix B, as agreed by Participants

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	Ukranian hryvnia
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<b>Notional</b>	The notional amount of the NDF underlying the NDO														
<b>Notional Currency</b>	The currency in which the option contract size is expressed, as agreed by Participants														
<b>Settlement Currency</b>	<p>The currency used to settle the NDO, as agreed by Participants.</p> <table border="1"> <tr> <td>USD</td> <td>US Dollar</td> </tr> <tr> <td>EUR</td> <td>Euro</td> </tr> <tr> <td>GBP</td> <td>British Pound</td> </tr> <tr> <td>JPY</td> <td>Japanese Yen</td> </tr> <tr> <td>CAD</td> <td>Canadian Dollar</td> </tr> <tr> <td>CHF</td> <td>Swiss Franc</td> </tr> <tr> <td>AUD</td> <td>Australian Dollar</td> </tr> </table>	USD	US Dollar	EUR	Euro	GBP	British Pound	JPY	Japanese Yen	CAD	Canadian Dollar	CHF	Swiss Franc	AUD	Australian Dollar
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JPY	Japanese Yen														
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<b>Notional Amount</b>	The notional amount of the settlement currency of the NDF pair underlying the option														
<b>Notional Currency</b>	The base currency in which the option contract size is expressed, as agreed by Participants														
<b>Option Type</b>	<ul style="list-style-type: none"> <li>Put = Option buyer has the right to sell the NDF exchange rate (e.g. selling USD, buying a non-deliverable currency)</li> <li>Call = Option buyer has the right to buy the NDF exchange rate (e.g. buying USD, selling a non-deliverable currency)</li> </ul>														
<b>Quoting Convention and Minimum Increment</b>	<ul style="list-style-type: none"> <li>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 Garman Kohlhagen adjusted Black-Scholes pricing model</li> <li>Non-Deliverable Options Contracts may be traded with an underlying delta hedge NDF or may be traded with no hedge where bids and offers are expressed as percentage of notional (the premium payable), as agreed between Participants</li> <li>Where traded as an implied volatility, NDO premiums are subsequently calculated and agreed between Participants before execution</li> <li>Minimum Increments Dependent on currency pair and tenor and as agreed between participants</li> </ul>														
<b>Strike</b>	Rate that will be used for the underlying currency exchange at expiry.														
<b>Exercise Type</b>	<ul style="list-style-type: none"> <li>European (options can only be exercised at expiration).</li> <li>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.</li> </ul>														

<b>Premium</b>	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
<b>Trade Date</b>	The date on which the Participants enter into the option contract
<b>Expiry Date (NDO Fixing date)</b>	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 particular fixing source as agreed between Participants
<b>Minimum Size</b>	Dependent on currency pair and tenor or as agreed between participants
<b>Holiday Calendar</b>	Dependent upon Currencies as defined by the Emerging Market Trade Association (viewed at <a href="http://www.emta.org/template.aspx?id=2275">http://www.emta.org/template.aspx?id=2275</a> ), or as agreed between Participants
<b>Settlement Procedure</b>	As agreed between participants
<b>Settlement Date</b>	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
<b>Settlement Procedure</b>	As agreed between Participants for non-cleared trades
<b>Contract Types</b>	<p>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:</p> <p><b>Vanilla:</b> Outright Call / Put, Straddle, Strangle, Butterfly, Risk Reversal, Calendar (tenor) spread, Cross Currency Spread, Condor, Call Spread, Put Spread, Live Trading with no delta hedge</p> <p><b>Exotic:</b> Also traded are different bespoke put/call structures agreed between Participants such as Barriers, Baskets, Digitals, Knockins, Knockouts, Reverse Knockins/Knockouts, No Touch, Double No Touch, Average Price, Volatility Swaps, Variance Swaps, Worst of Options, Compound Options, Forward Volatility Agreements: trades may be with or without delta hedges and some structures may also be bilaterally negotiated with additional options as part of the package to form a vega hedge</p>
<b>Tenors</b>	As agreed between Participants, NDO contract tenors may be between 1 day and 30 years.
<b>Block Size</b>	As set forth in Appendix F to Part 43 of the CFTC Regulations.
<b>Trading Hours</b>	7:00 pm to 5:30 pm EST, Sunday to Friday
<b>Additional Terms:</b>	Applicable Non-Deliverable Currency Option Transactions covered by recommended EMTA TEMPLATE TERMS:-

<b>Disruption Events:</b>	As set forth in the EMTA TEMPLATE TERMS for Non-Deliverable Currency Option Transactions applicable to the Reference Currency: <a href="http://www.emta.org/ndfft.aspx">http://www.emta.org/ndfft.aspx</a>
<b>Disruption Fallbacks:</b>	As set forth in the EMTA TEMPLATE TERMS for Non-Deliverable Currency Option Transactions applicable to the Reference Currency: <a href="http://www.emta.org/ndfft.aspx">http://www.emta.org/ndfft.aspx</a>
<b>Other Terms:</b>	As set forth in the EMTA TEMPLATE TERMS for Non-Deliverable Currency Option Transactions applicable to the Reference Currency: <a href="http://www.emta.org/ndfft.aspx">http://www.emta.org/ndfft.aspx</a>

## Appendices

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### Appendix A - Business Day (Date) Conventions

Business Day (Date) Conventions	
Following	The first following day that is a good Business Day
Modified Following	The first following day that is a good Business Day unless that day falls in the next calendar month, in which case the first preceding good Business Day
Preceding	The first preceding day that is a good Business Day
End/End	If the Start (Effective) Date falls on the last calendar day of the month, then each successive roll date shall also fall on the last day of the relevant month, subject to Modified Following convention.

### Appendix B - Currencies and Holiday Centers

As per the CFTC definitions, the following currencies are listed by product group:

Currency Group	Currencies - Interest Rate Swaps
<b>Super-Major</b>	United States dollar (USD), European Union Euro Area euro (EUR), United Kingdom pound sterling (GBP) and Japan yen (JPY).
<b>Major</b>	Australia dollar (AUD), Switzerland franc (CHF), Canada dollar (CAD), Republic of South Africa rand (ZAR), Republic of Korea won (KRW), Kingdom of Sweden krona (SEK), New Zealand dollar (NZD), Kingdom of Norway krone (NOK), and Denmark krone (DKK)
<b>Non-Major</b>	All other currencies.

**i** For Interest Rate Swaps, all Super-Major or Major currency Spot (Effective) Dates are T+2 except for: GBP (T+0), CAD (T+0) and AUD (T+1)

<b>Currency Code</b>	<b>Description</b>	<b>Financial Centre</b>
AED	<b>Emirati Dirham</b> and "AED" each refer to the legal currency of the United Emirates	Abu Dhabi
AFN	<b>Afghani Afghani</b> and "AFN" each refer to the legal currency of Afghanistan	Kabul
AMD	<b>Armenian Dram</b> and "AMD" each refer to the legal currency of Armenia	Yerevan
AZN	<b>Azeri Manta</b> and "AZN" each refer to the legal currency of the Azerbaijan Republic	Baku
ANG	<b>Netherlands Antilies Guilder</b> and "ANG" each refer to the legal currency of the Netherlands Antilies	Willemstad
ARS	<b>Argentine Peso</b> and "ARS" each refer to the legal currency of the Argentine Republic.	Buenos Aires
AUD	<b>Australian Dollar</b> , "A\$" and "AUD" each refer to the legal currency of Australia.	Sydney
AWG	<b>Aruban Guilder</b> and "AWG" each refer to the legal currency of Aruba	Oranjestad
BGN	<b>Bulgarian Lev</b> and "BGN" each refer to the legal currency of Bulgaria	Sofia
BHD	<b>Bahraini Dinar</b> and "BHD" each refer to the legal currency of Bahrain	Al Manamah
BIF	<b>Burundian Franc</b> and "BIF" each refer to the legal currency of Burundi	Bujumbura
BND	<b>Bruneian Dollar</b> and "BND" each refer to the legal currency of Brunei	Bander Seri Begawan
BRL	<b>Brazilian Real</b> , "Brazilian Reais" and "BRL" each refer to the legal currency of the Federative Republic of Brazil.	São Paulo
CAD	<b>Canadian Dollar</b> , "C\$" and "CAD" each refer to the legal currency of Canada.	Toronto
CHF	<b>Swiss Franc</b> , "Sfr", "CHF" and "SWF" each refer to the legal currency of Switzerland.	Zürich
CLP	<b>Chilean Peso</b> and "CLP" each refer to the legal currency of the Republic of Chile.	Santiago
CNY	<b>Chinese Renminbi (Yuan)</b> , "CNY" and "RMB" each refer to the legal currency of the People's Republic of China.	Beijing
CNH	<b>Hong Kong Delivered Chinese Renminbi (Yuan)</b> , CNH each refer to the legal currency of the People's Republic of China.	Hong Kong
COP	<b>Columbian Peso</b> and "COP" each refer to the legal currency of Colombia	Bogotá
CRC	<b>Costa Rican Colon</b> and "CRC" each refer to the legal currency of Costa Rica	San Jose
CUP	<b>Cuban Peso</b> and "CUP" each refer to the legal currency of Cuba	Havana
CZK	<b>Czech Koruna</b> and "CZK" each refer to the legal currency of the Czech Republic.	Prague

DKK	<b>Danish Krone</b> , "DKr" and "DKK" each refer to the legal currency of the Kingdom of Denmark.	Copenhagen
EUR	<b>Euro</b> , "euro", "€" and "EUR" each refer to the legal currency of the member states of the European Union that have adopted the single currency in accordance with the EC Treaty.	TARGET
EGP	<b>Egyptian Pound</b> and "EGP" each refer to the legal currency of the Arab Republic of Egypt	Cairo
GEL	Georgian Lari and "GEL" each refer to the legal currency of Georgia	Tbilisi
GTQ	<b>Guatemalan Quetzal</b> and "GTQ" each refer to the legal currency of the Republic of Guatemala	Guatemala City
GBP	<b>Sterling</b> , "£", "GBP" and "STG" each refer to the legal currency of the United Kingdom.	London
HKD	<b>Hong Kong Dollar</b> , "HK\$" and "HKD" each refer to the legal currency of Hong Kong.	Hong Kong
HUF	<b>Hungarian Forint</b> and "HUF" each refer to the legal currency of the Republic of Hungary.	Budapest
INR	<b>Indian Rupee</b> and "INR" each refer to the legal currency of India.	Mumbai
IDR	<b>Indonesian Rupiah</b> and "IDR" each refer to the legal currency of the Republic of Indonesia.	Jakarta
ILS	<b>Israeli Shekel</b> and "ILS" each refer to the legal currency of the State of Israel.	Tel Aviv
ISK	<b>Icelandic Krona</b> and "ISK" each refer to the legal currency of Iceland	Reykjavik
JPY	<b>Japanese Yen</b> , "Yen", "¥" and "JPY" each refer to the legal currency of Japan.	Tokyo
KRW	<b>Korean Won</b> and "KRW" each refer to the legal currency of the Republic of Korea.	Seoul
KWD	<b>Kuwaiti Dinar</b> and "KWD" each refer to the legal currency of the State of Kuwait	Kuwait City
LBP	<b>Lebanese Pound</b> and "LBP" each refer to the legal currency of the Republic of Lebanon.	Beirut
LKR	<b>Sri Lankan Rupee</b> and "LKR" each refer to the legal currency of the Democratic Socialist Republic of Sri Lanka.	Colombo
KZT	<b>Kazakhstani Tenge</b> and "KZT" each refer to the legal currency of Kazakhstan	Almaty
MXN	<b>Mexican Peso</b> , "MXN" and "MXP" each refer to the legal currency of the United Mexican States.	Mexico City
MYR	<b>Malaysian Ringgit</b> and "MYR" each refer to the legal currency of the Federation of Malaysia.	Kuala Lumpur

NOK	<b>Norwegian Krone</b> , “Nkr” and “NOK” each refer to the legal currency of the Kingdom of Norway.	Oslo
NZD	<b>New Zealand Dollar</b> , “NZ\$” and “NZD” each refer to the legal currency of New Zealand.	Wellington & Auckland
PEN	<b>Peruvian Nuevo Sol</b> and "PEN" each refer to the legal currency of Peru	Lima
PHP	<b>Philippine Peso</b> and “PHP” each refer to the legal currency of the Republic of the Philippines.	Manila
PKR	<b>Pakistani Rupee</b> and “PKR” each refer to the legal currency of the Islamic Republic of Pakistan.	Karachi
PLN	<b>Polish Zloty</b> and “PLN” each refer to the legal currency of the Republic of Poland.	Warsaw
QAR	<b>Qatari Riyal</b> and "QAR" each refer to the legal currency of the State of Qatar.	Doha
RON	<b>Romanian Leu</b> . “Romanian Leu” and “RON” each refer to the legal currency of Romania.	Bucharest
RUB	<b>Russian Ruble</b> . “Russian Ruble”, “Russian Rouble”, “RUR” and “RUB” each refer to the legal currency of the Russian Federation.	Moscow
SAR	<b>Saudi Arabian Riyal</b> . “Saudi Arabian Riyal”, “Saudi Riyal”, “Saudi Arabian Rial”, “SAR” and “Riyal” refer to the legal currency of the Kingdom of Saudi Arabia.	Riyadh
SEK	<b>Swedish Krona</b> . “Swedish Krona”, “SKr” and “SEK” each refer to the legal currency of the Kingdom of Sweden.	Stockholm
SGD	<b>Singapore Dollar</b> . “Singapore Dollar”, “S\$” and “SGD” each refer to the legal currency of the Republic of Singapore.	Singapore
SKK	<b>Slovak Koruna</b> . “Slovak Koruna” and “SKK” each refer to the legal currency of the Slovak Republic.	Bratislava
THB	<b>Thai Baht</b> . “Thai Baht” and “THB” each refer to the legal currency of the Kingdom of Thailand.	Bangkok
TND	<b>Tunisian Dinar</b> and "TND" each refer to the legal currency of Tunisia	Tunis
TRY	<b>Turkish Lira</b> . “Turkish Lira” and “TRY” each refer to the legal currency of the Republic of Turkey. “New Turkish Lira” means, in respect of a Swap Transaction with a Trade Date prior to the date upon which the Republic of Turkey ceases officially to use the prefix “New” in relation to the currency introduced on 1 January 2005, the legal currency of the Republic of Turkey.	Istanbul

TWD	<b>Taiwanese Dollar.</b> "Taiwanese Dollar", "New Taiwanese Dollar" and "TWD" each refer to the legal currency of the Republic of China.	Taipei
UAH	<b>Ukrainian Hryvnia</b> and "UAH" each refer to the legal currency of the REpublic of Ukraine	Kiev
UYU	<b>Uruguayan Peso</b> and "UYU" each refer to the legal currency of the Eastern Republic of Uruguay	Montevideo
USD	<b>U.S. Dollar.</b> "U.S. Dollar", "Dollar", "U.S.\$", "\$" and "USD" each refer to the legal currency of the United States of America.	New York
UZS	<b>Uzbekistani Som</b> and "UZS" each refer to the legal currency of the legal currency of Uzbekistan	Tashkent
VND	<b>Vietnamese Dong.</b> "Vietnamese Dong" and "VND" each refer to the legal currency of the Socialist Republic of Vietnam.	Hanoi
ZAR	<b>South African Rand.</b> "South African Rand", "Rand", "R" and "ZAR" each refer to the legal currency of the Republic of South Africa.	Johannesburg

## Appendix C - Conventions Used

### Day Count Convention

- ACT360
- ACT365F
- ACTACT\_ISMA
- ACTACT\_BOND
- ACTACT\_ISDA
- ACTACT\_HISTORICAL
- ACTACT\_ACTUAL365,
- ACTACT\_AFB,
- ACTACT\_EURO
- BUSINESS252
- ONE
- SIMPLE
- THIRTY360\_USA
- THIRTY360\_BONDBASIS
- THIRTY360\_EUROPEAN
- THIRTY360\_EUROBONDBASIS
- THIRTY360\_ITALIAN
- NOADJUSTMENT

## Appendix D - General Definitions

### General Definitions

Basis point - 1 bp = 0.01%

## Appendix E - Market Fixing Indices

<i>Interbank Indices</i>	Description	Currencies	Day Count	Fixings Calendar
BBA LIBOR	London Interbank Offered Rate	USD JPY CHF GBP EUR	Act/360 Act/360 Act/360 Act/365 Act/365	London London London London London
EURIBOR	Euro Interbank Offered Rate	EUR	Act/360	TARGET
SOFR	Secured Overnight Financing Rate	USD	Act/360	New York
BSBY	Bloomberg Short-Term Yield Index	USD	Act/360	New York
MUNIPSA	SIFMA Municipal Swap Index Yield	USD	Act/Act	New York
CDOR	Canada Bankers Acceptances	CAD	Act/365	Toronto
TIBOR	Euro Yen Tibor Fixing Rates	JPY	Act/365	Tokyo
STIBOR	Stockholm Interbank Offered Rates	SEK	Act/360	Stockholm
EIBOR	Emirates Interbank Offer Rate	AED	Act/360	Abu Dhabi
APDRC	ARS Deposit	ARS	Act/360	Buenos Aries

ADBB	AUD Bank Bills	AUD	Act/365	Sydney
SOFIBOR	Bulgaria SOFIBOR	BGN	Act/360	Sofia
BHIBOR	Bahrain Association of Banks BHIBOR Rate - ASK	BHD	Act/360	Al Manamah
CLICP	Sinacofi Chile Interbank Rate Avg (CAMARA)	CLP	Act/360	Santiago
CNRR	China Fixing Repo Rates	CNY	Act/365	Beijing
DTF RATE	Colombia DTF Rate	COP	Act/360	Bogotá
PRIBOR	Czech Interbank Offered Rates	CZK	Act/360	Prague
CIBO	Copenhagen Interbank Offered Rates	DKK	Act/360	Copenhagen
HIBOR	HKAB Hong Kong Interbank Offered Rates	HKD	Act/365	Hong Kong
BUBOR	Budapest Interbank Offered Rates	HUF	Act/360	Budapest
BITD	Bank Indonesia Term Deposit	IDR	Act/360	Jakarta
TELBOR	Tel Aviv Interbank Offered Rate	ILS	Act/365	Tel Aviv
REIBOR	Central Bank of Iceland ISK REIBOR Interest Rates Fixing	ISK	Act/360	Reykjavik
KWCDC	KRW Certificate of Deposit	KRW	Act/365	Seoul
KIBOR	Kuwait Interbank Rate	KWD	Act/365	Kuwait City
MXIBTIE	Mexico Interbank TIE 28 Day	MXN	Act/360	Mexico City
KLIB	Klibor Interbank Offered Rate Fixing	MYR	Act/365	Kuala Lumpur
NIBOR	Norway Interbank Offered Rate Fixing	NOK	Act/360	Oslo
NDBB	NZD Bank Bill	NZD	Act/365	Wellington and Auckland
PHIREF	Philippines Interbank Reference Rate PHIREF at 1130am	PHP	Act/360	Manila
PKDP	State Bank of Pakistan KIBOR Fixing	PKR	Act/365	Karachi
WIBR	Warsaw Interbank Offered Rates.	PLN	Act/365	Warsaw
QRIFR	QIBOR Fixing 3 Month Rate	QAR	Act/360	Doha
BUBR	Romania ROBOR	RON	Act/360	Bucharest
MOSKP	MosPrime Rate	RUB	Act/Act	Moscow
SAIB	Saudi Riyal Interbank Average Offered Rate	SAR	Act/360	Riyadh
SORF	Association of Banks in Singapore Swap Offer Rate Fixing	SGD	Act/365	Singapore
THFX	Bloomberg Thailand Fixing Rate	THB	Act/365	Bankok
TRLIB	Bank Association of Turkey TRLIBOR Rates	TRY	Act/360	Istanbul

TDSF	TDCC Taiwan Depository & Clearing Corp Secondary Mkt	TWD	Act/365	Taipei
VIFOR	Bloomberg Vietnam Onshore Forward Fixings 3 Month	TWD	Act/360	Hanoi
JIBA	South Africa Johannesburg Interbank Agreed Rate	ZAR	Act/365	Johannesburg
<i>OIS Indices</i>	Description	Currencies	Day Count	Fixings Calendar
SONIO/A	Sterling Overnight Index Average	GBP	Act/365	London
RONIA	GBP Repo Overnight Index Average	GBP	Act/365	London
EONIA	Effective Overnight Index Average Eonia	EUR	Act/360	TARGET
FEDFUNDS	Federal Funds Effective Rate US	USD	Act/360	Fed Reserve
SOFR	Secured Overnight Financing Rate	USD	Act/360	New York
DTCC GCF Repo	Depository Trust & Clearing Corp (DTCC) General Collateral Finance (GCF) Repurchase Agreement Index	USD	Act/360	New York
CAONREPO	Bank of Canada Overnight Repo Rate (CORRA)soni	CAD	Act/365	Toronto
TOIS	Fixing Rate on CHF Tomnext Offered Indexed Swaps	CHF	Act/360	Xurich
MUTSCALM	Bank of Japan Estimate Unsecured Overnight Call Rate	JPY	Act/365	Tokyo
STIB1D	Stockholm Interbank Offered Rate T/N	SEK	Act/360	Stockholm
APDR1T	ARS Overnight Deposit	ARS	Act/360	Buenos Aries
RBACOR	RBA Cash Rate Overnight	AUD	Act/365	Sydney
SOBRON	Bulgaria SOFIBOR Rates	BGN	Act/360	Sofia
BHIBORON	Bahrain Association of Banks Overnight BHIBOR Rate	BHD	Act/360	Al Manamah
HICNHON	ON CNH Hong Kong Interbank Offered Rate (CNH Hiber) Fixing	CNH	Act/360	Hong Kong
SHIFON	Shanghai Interbank Offered Rate Fixing - O/N	CNY	Act/360	Shanghai
COOVIBR	Colombia IBR Overnight Interbank Reference Rate	COP	Act/360	Bogota
PRIBOVN	Czech Interbank Offered Rates O/N	CZK	Act/360	Prague
DETNT/N	Denmark Tomorrow/Next	DKK	Act/360	Copenhagen
H\$ONWGHT	HKFEDBA Hong Kong Overnight Index Swap Reference Rate	HKD	Act/365	Hong Kong
BUBORON	Budapest Interbank Offered Rates Overnight Index	HUF	Act/360	Budapest
JSORON	Jakarta Swap Offer Rate Overnight	IDR	Act/360	Jakarta
NSERO	India National Stock Exchange NSE Interbank Offer Rate	INR	Act/365	Mumbai
SEDAONRE	Central Bank of Iceland ISK REIBOR O/N Interest Rate Fixing	ISK	Act/360	Reykjavik

IWARWAOV	Bank Negara Malaysia Interbank Weighted Avg Rates Overnight	MYR	Act/365	Kuala Lumpur
NOBRON	Norway Overnight Lending Rate Effective Rate	NOK	Act/360	Oslo
NZOCRS	New Zealand Official Cash Daily Rate	NZD	Act/365	Wellington and Auckland
PZCFPLNI	Polonia Fixing	PLN	Act/365	Warsaw
QRIFROVN	QIBOR Overnight Fixing Rate	QAR	Act/360	Doha
BUBRON	Romania ROBOR Overnight	RON	Act/360	Bucharest
RUONIA	Ruble OverNight Index Average	RUB	Act/Act	Moscow
SORF1D	Association of Banks in Singapore Swap Offer Rate Fixing 1 Day	SGD	Act/365	Singapore
NTON	Taiwan New Taiwan Dollar Overnight Rate Weighted Avg	TWD	Act/365	Taipei
SAONBOR	South Africa Benchmark Overnight Rate on deposits (Sabor)	ZAR	Act/365	Johannesburg

[ [Interbank Indices](#) ] [ [OIS Indices](#) ]

## Appendix F - Interest Rate Swap & Option Tenors (Super-Major Currencies)

- [Vanilla Interest Rate Swaps \(IRS\)](#)
- [Vanilla Overnight Index Swaps \(OIS\)](#)
- [Vanilla Cross-Currency Currency Basis Swaps](#)
- [Forward Rate Agreements \(FRAs\)](#)
- [Interest Rate Swaptions](#)
- [Interest Rate Caps & Floors](#)
- [Inflation Swaps](#)
- [Inflation Caps & Floors](#)

Vanilla Interest Rate Swaps (IRS)			
Currency	Day Count Conventions	Standard Tenors	Non-Standard Tenors

GBP 1w-21m Short-Term	<ul style="list-style-type: none"> <li>Fixed: Annual Act/365</li> <li>Float: Quarterly Act/365</li> <li>Index: 3m Libor/SOFR (Also A/M 1m Libor)</li> </ul>	3m 6m 9m 12m 15m 18m 21m, 2y, 2½y, 3y, IMM Dates N.B 1m Libor swaps are also traded usually up to no more than 2y in 1m intervals.	1d-60y Any start / end date. As agreed by participants.
GBP 6m-60y Medium-Term	<ul style="list-style-type: none"> <li>Fixed: Semi Act/365</li> <li>Float: Semi Act/365</li> <li>Index: 6m Libor/SOFR (Also Q/Q 3m Libor)</li> </ul>	6m 1y 18m 2y 2½y 3y 4y 5y 6y 7y 8y 9y 10y 11y 12y 13y 14y 15y 20y 25y 30y 35y 40y 45y 50y Spreads (e.g. 2x10), Butterflies (e.g. 2x5x10), Forwards (e.g. 5y/5y). IMM dates. N.B. S/Q v 3m Libor swaps also trade, though infrequently.	1d-60y Any start / end date. As agreed by participants.
GBP Basis	3vSonia (Fra/Ois), 3v1, 6v3	3m 6m 9m 12m 15m 18m 2y 2½y 3y 4y 5y 6y 7y 8y 9y 10y 12y 15y 20y 25y 30y 35y 40y 45y 50y IMM dates to 3Y	1d-60y Any start / end date. As agreed by participants.
USD 3m-21m Short-Term	<ul style="list-style-type: none"> <li>Fixed: Annual Act/360</li> <li>Float: Quarterly Act/360</li> <li>Index: 3m Libor/SOFR</li> </ul>	3m 6m 9m 12m 15m 18m 21m, IMM Dates (including serials) N.B 1m Libor swaps are also traded usually up to no more than 2y in 1m intervals.	1d-60y Any start / end date. As agreed by participants.
USD 1y-60y Medium-Term	<ul style="list-style-type: none"> <li>Fixed: Semi 30I/360</li> <li>Float: Quarterly Act /360</li> <li>Index: 3m Libor/SOFR</li> </ul>	1y 18m 2y 2½y 3y 4y 5y 6y 7y 8y 9y 10y 11y 12y 13y 14y 15y 20y 25y 30y 35y 40y 45y 50y Spreads (e.g. 2x10), Butterflies (e.g. 2x5x10), Forwards (e.g. 5y/5y)	1d-60y Any start / end date. As agreed by participants.
USD Basis	3vOIS (Fra/Ois), 3v1, 6v3	3m 6m 9m 12m 15m 18m 2y 2½y 3y 4y 5y 6y 7y 8y 9y 10y 12y 15y 20y 25y 30y 35y 40y 45y 50y IMM dates to 3Y	1d-60y Any start / end date. As agreed by participants.

EUR 1m-24m Short-Term	<ul style="list-style-type: none"> <li>Fixed: Annual Act/360</li> <li>Float: Monthly Act/360</li> <li>Index: 1m Euribor</li> </ul>	1m 2m 3m 4m 5m 6m 7m 8m 9m 10m 11m 12m 15m 18m 21m 2y IMM Dates	1d-3y Any start / end date. As agreed by participants.
EUR 3m-60y Medium-Term	<ul style="list-style-type: none"> <li>Fixed: Annual 30U/360</li> <li>Float: Semi Act/360</li> <li>Index: 6m Euribor (Also A/Q 3m Euribor)</li> </ul>	6m 1y 18m 2y 2½y 3y 4y 5y 6y 7y 8y 9y 10y 11y 12y 13y 14y 15y 20y 25y 30y 35y 40y 45y 50y Spreads (e.g. 2x10), Butterflies (e.g. 2x5x10), Forwards (e.g. 5y/5y) N.B. 6m EuroLibor A/365 swaps are also traded, though less frequently. N.B. 6m Euribor swaps are predominant over 3m the longer the maturity beyond 3y.	1d-60y Any start / end date. As agreed by participants.
EUR Basis	3vEonia (Fra/Ois), 3v1, 6v3	3m 6m 9m 12m 15m 18m 2y 2½y 3y 4y 5y 6y 7y 8y 9y 10y 12y 15y 20y 25y 30y 35y 40y 45y 50y IMM dates to 3Y	1d-60y Any start / end date. As agreed by participants.
JPY 1m-2y Short-Term	<ul style="list-style-type: none"> <li>Fixed: Annual Act/360</li> <li>Float: Monthly Act/360</li> <li>Index: 1m Libor/SOFR</li> </ul>	1m 2m 3m 4m 5m 6m 7m 8m 9m 10m 11m 12m IMM Dates	1d-2y Any start / end date. As agreed by participants.
JPY 3m-30y Medium-Term	<ul style="list-style-type: none"> <li>Fixed: Semi Act/365</li> <li>Float: Semi Act/360</li> <li>Index: 6m Libor/SOFR</li> </ul>	3m 6m 9m 1y 18m 2y 2½y 3y 4y 5y 6y 7y 8y 9y 10y 12y 15y 20y 25y 30y Spreads (e.g. 2x10), Butterflies (e.g. 2x5x10), Forwards (e.g. 5y/5y)	1d-30y Any start / end date. As agreed by participants.
JPY Basis	3vTonar (Fra/Ois), 3v1, 6v3	3m 6m 9m 12m 15m 18m 2y 2½y 3y 4y 5y 6y 7y 8y 9y 10y 12y 15y 20y 25y 30y IMM dates to 3Y	1d-30y Any start / end date. As agreed by participants.

### Vanilla Overnight Index Swaps (OIS)

Currency	Day_Count_Conventions	Standard Tenors	Non_Standard_Tenors
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GBP	<ul style="list-style-type: none"> <li>Fixed: _Annual_Act/365</li> <li>Floating: _Annual_Act/365</li> <li>Index: Sonia</li> </ul>	1w 2w 3w 1m 2m 3m 4m 5m 6m 7m 8m 9m 10m 11m 12m 15m 18m 21m 2y 2½y 3y 4y 5y 6y 7y 8y 9y 10y 11y 12y 13y 14y 15y 20y 25y 30y 35y 40y 45y 50y, Quarterly IMM dates, MPC (BoE Monetary Policy Committee) meeting dates.	1d-60y Any start / end date. As agreed by participants.
USD	<ul style="list-style-type: none"> <li>Fixed: _Annual_Act/360</li> <li>Floating: _Annual_Act/360</li> <li>Index: FedFunds</li> </ul>	1w 2w 3w 1m 2m 3m 4m 5m 6m 7m 8m 9m 10m 11m 12m 15m 18m 21m 2y 2½y 3y 4y 5y 6y 7y 8y 9y 10y 11y 12y 13y 14y 15y 20y 25y 30y 35y 40y 45y 50y, Quarterly IMM dates, FOMC (Federal Oversight Monetary Committee) meeting dates, FedFunds Futures expiry dates.	1d-60y Any start / end date. As agreed by participants.
EUR	<ul style="list-style-type: none"> <li>Fixed: _Annual_Act/360</li> <li>Floating: _Annual_Act/360</li> <li>Index: Eonia</li> </ul>	1w 2w 3w 1m 2m 3m 4m 5m 6m 7m 8m 9m 10m 11m 12m 15m 18m 21m 2y 2½y 3y 4y 5y 6y 7y 8y 9y 10y 11y 12y 13y 14y 15y 20y 25y 30y 35y 40y 45y 50y, Quarterly IMM dates, ECB (Euro Central Bank Governing Council) meeting dates.	1d-60y Any start / end date. As agreed by participants.
JPY	<ul style="list-style-type: none"> <li>Fixed: _Annual_Act/365</li> <li>Floating: _Annual_Act/365</li> <li>Index: Tonar</li> </ul>	1w 2w 3w 1m 2m 3m 4m 5m 6m 7m 8m 9m 10m 11m 12m 15m 18m 21m 2y 2½y 3y 4y 5y 6y 7y 8y 9y 10y 12y 15y 20y 25y 30y, Quarterly IMM dates, BoJ (Bank of Japan Monetary Policy) meeting dates.	1d-60y Any start / end date. As agreed by participants.

#### Vanilla Cross-Currency Currency Basis Swaps

Currency	Day_Count_Conventions	Standard Tenors	Non Standard Tenors
USD/EUR Q/Q	USD = 3m Libor/SOFR Act/360 EUR = 3m Euribor Act/360	3m 6m 9m 12m 18m 2y 3y 4y 5y 6y 7y 8y 9y 10y 11y 12y 13y 14y 15y 20y 25y 30y 40y 50y	3m-60y Any start / end date. As agreed by participants.
USD/EUR Q/Q	USD = FedFunds Act/360 EUR = Eonia Act/360	3m 6m 9m 12m 18m 2y 3y 4y 5y 6y 7y 8y 9y 10y 12y 15y 20y 25y 30y	3m-60y Any start / end date. As agreed by participants.
USD/JPY Q/Q	USD = 3m Libor/SOFR Act/360 JPY = 3m Libor/SOFR Act/360	3m 6m 9m 12m 18m 2y 3y 4y 5y 6y 7y 8y 9y 10y 11y 12y 13y 14y 15y 20y 25y 30y 35y 40y 50y	3m-60y Any start / end date. As agreed by participants.

USD/JPY Q/Q	USD = FedFunds Act/360 JPY = Tonar Act/360	3m 6m 9m 12m 18m 2y 3y 4y 5y 6y 7y 8y 9y 10y 12y 15y 20y 25y 30y	3m-60y Any start / end date. As agreed by participants.
USD/GBP Q/Q	USD = 3m Libor/SOFR Act/360 GBP = 3m Libor/SOFR Act/365	3m 6m 9m 12m 18m 2y 3y 4y 5y 6y 7y 8y 9y 10y 11y 12y 13y 14y 15y 20y 25y 30y 40y 50y	3m-60y Any start / end date. As agreed by participants.
USD/GBP Q/Q	USD = FedFunds Act/360 GBP = Sonia Act/365	3m 6m 9m 12m 18m 2y 3y 4y 5y 6y 7y 8y 9y 10y 12y 15y 20y 25y 30y	3m-60y Any start / end date. As agreed by participants.
GBP/EUR Q/Q	GBP = 3m Libor/SOFR Act/365 EUR = 3m Euribor Act/360	3m 6m 9m 12m 2y 3y 4y 5y 6y 7y 8y 9y 10y 11y 12y 13y 14y 15y 20y 25y 30y	3m-60y Any start / end date. As agreed by participants.
JPY/EUR Q/Q	JPY = 3m Libor/SOFR Act/360 EUR = 3m Euribor Act/360	1y 2y 3y 4y 5y 6y 7y 8y 9y 10y 12y 15y 20y 25y 30y	3m-60y Any start / end date. As agreed by participants.

### Forward Rate Agreements (FRAs)

Currency	Day Count Conventions	Standard Tenors	Non-Standard Tenors
GBP USD EUR JPY	<ul style="list-style-type: none"> <li>• Annual Act/365</li> <li>• Annual Act/360</li> <li>• Annual Act/360</li> <li>• Annual Act/365</li> </ul>	Spot Start: 0x1 1x2 2x3 ... 35x36 Spot Start: 0x3 1x4 2x5 ... 33x36 Spot Start: 0x6 1x7 2x8 ... 30x36 *JPY Max end date = 24m	IMM Dates, End of month Turns Any date chosen by the trade originator, e.g. "1x4 over the 9th"

### Interest Rate Swaptions

Currency	IRS Day Count Conventions	Standard Tenors	Off-The-Run Tenors

GBP	Up to 18m - Annual/3s 2y+ - Semi/6s	Option Expiries: 1d 2d 1w 2w 1m 2m 3m 6m 9m 1y 18m 2y 3y 4y 5y 6y 7y 8y 9y 10y 12y 15y 20y 25y 30y Underlying Swaps: 1y 18m 2y 3y 4y 5y 6y 7y 8y 9y 10y 12y 15y 20y 25y 30y 40y 50y 60y	1d-50y Any expiry date. As agreed by participants.
USD	Up to 18m - Annual/3s 2y+ - Semi/3s	Option Expiries: 1d 2d 1w 2w 1m 2m 3m 6m 9m 1y 18m 2y 3y 4y 5y 6y 7y 8y 9y 10y 12y 15y 20y 25y 30y Underlying Swaps: 1y 18m 2y 3y 4y 5y 6y 7y 8y 9y 10y 12y 15y 20y 25y 30y 40y 50y 60y	1d-50y Any expiry date. As agreed by participants.
EUR	Up to 18m - Annual/3s 2y+ - Annual/6s	Option Expiries: 1d 2d 1w 2w 1m 2m 3m 6m 9m 1y 18m 2y 3y 4y 5y 6y 7y 8y 9y 10y 12y 15y 20y 25y 30y Underlying Swaps: 1y 18m 2y 3y 4y 5y 6y 7y 8y 9y 10y 12y 15y 20y 25y 30y 40y 50y 60y	1d-50y Any expiry date. As agreed by participants.
JPY	Up to 18m - Annual/3s 2y+ - Semi/6s	Option Expiries: 1d 2d 1w 2w 1m 2m 3m 6m 9m 1y 18m 2y 3y 4y 5y 6y 7y 8y 9y 10y 12y 15y 20y 25y 30y Underlying Swaps: 1y 18m 2y 3y 4y 5y 6y 7y 8y 9y 10y 12y 15y 20y 25y 30y	1d-30y Any expiry date. As agreed by participants.

### Interest Rate Caps & Floors

Currency	Underlying Index	Standard Tenors	Off-The-Run Tenors
GBP	Up to 18m - 3m Libor 2y+ - 6m Libor/SOFR	Option Tenors: 1y 18m 2y 3y 4y 5y 6y 7y 8y 9y 10y 12y 15y 20y 25y 30y, IMM Expiries Strikes from -1% to +20%	3m-60y any expiry. As agreed by participants
USD	All Tenors - 3m Libor/SOFR	Option Tenors: 1y 18m 2y 3y 4y 5y 6y 7y 8y 9y 10y 12y 15y 20y 25y 30y, IMM Expiries Strikes from -1% to +20%	3m-60y any expiry. As agreed by participants
EUR	Up to 18m - 3m Euribor 2y+ - 6m Euribor	Option Tenors: 1y 18m 2y 3y 4y 5y 6y 7y 8y 9y 10y 12y 15y 20y 25y 30y, IMM Expiries Strikes from -1% to +20%	3m-60y any expiry. As agreed by participants
JPY	Up to 18m - 3m Libor/SOFR 2y+ - 6m Libor/SOFR	Option Tenors: 1y 18m 2y 3y 4y 5y 6y 7y 8y 9y 10y 12y 15y 20y 25y 30y, IMM Expiries Strikes from -1% to +20%	3m-30y any expiry. As agreed by participants

### Inflation Swaps

Currency	Underlying Index	Standard Tenors	Non-Standard Tenors
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GBP	UK RPI 2m Lag Act/Act ZC & YoY T+0	Vanilla Swaps: 1y 18m 2y 3y 4y 5y 6y 7y 8y 9y 10y 12y 15y 20y 25y 30y 35y 40y 45y 50y 55y 60y 70y Fixing Swaps: Previous 12m YoY monthly RPI fixings CPI Swaps also traded 30/360 Daycount.	1d-70y Any start / end date. As agreed by participants
USD	US CPI 3m Lag Act/Act ZC & YoY T+2	Vanilla Swaps: 1y 18m 2y 3y 4y 5y 6y 7y 8y 9y 10y 12y 15y 20y 25y 30y 35y 40y 45y	1d-60y Any start / end date. As agreed by participants
EUR	EUR HICPxT 3m Lag 30/360 ZC & YoY T+2	Vanilla Swaps: 1y 18m 2y 3y 4y 5y 6y 7y 8y 9y 10y 12y 15y 20y 25y 30y 40y 50y Fixing Swaps: Previous 12m YoY monthly HICPxT fixings	1d-60y Any start / end date. As agreed by participants
France (Euro)	Fr CPI 3m Lag 30/360 ZC & YoY T+2	Vanilla Swaps: 1y 18m 2y 3y 4y 5y 6y 7y 8y 9y 10y 12y 15y 20y 25y 30y 40y 50y 55y	1d-60y Any start / end date. As agreed by participants
JPY	Yen CPI 3m Lag 30/360 ZC T+2	Vanilla Swaps: 1y 18m 2y 3y 4y 5y 6y 7y 8y 9y 10y 12y 15y 20y 25y 30y	1d-30y Any start / end date. As agreed by participants

### Inflation Caps & Floors

Currency	Underlying Index	Standard Tenors & Strikes	Non-Standard Tenors & Strikes
GBP	UK RPI ZC & YoY	Option Tenors: 1y 2y 3y 4y 5y 6y 7y 8y 9y 10y 12y 15y 20y 25y 30y Cap Strikes: 1.0% 1.5% 2.0% 2.5% 3.0% 3.5% 4.0% 4.5% 5.0% 6.0% Floor Strikes: -3.0% -2.0% -1.0% -0.5% 0.0% 0.5%  1.0% 1.5% 2.0% 3.0%	3m-50y any expiry date, Any strike from -5% - +15%, As agreed by participants
USD	US CPI ZC & YoY	Option Tenors: 1y 2y 3y 4y 5y 6y 7y 8y 9y 10y 12y 15y 20y 25y 30y Cap Strikes: 1.0% 1.5% 2.0% 2.5% 3.0% 3.5% 4.0% 4.5% 5.0% 6.0% Floor Strikes: -3.0% -2.0% -1.0% -0.5% 0.0% 0.5%  1.0% 1.5% 2.0% 3.0%	3m-50y any expiry date, Any strike from -5% - +15%, As agreed by participants
EUR	EUR HICPxT ZC & YoY	Option Tenors: 1y 2y 3y 4y 5y 6y 7y 8y 9y 10y 12y 15y 20y 25y 30y Cap Strikes: 1.0% 1.5% 2.0% 2.5% 3.0% 3.5% 4.0% 4.5% 5.0% 6.0% Floor Strikes: -3.0% -2.0% -1.0% -0.5% 0.0% 0.5%  1.0% 1.5% 2.0% 3.0%	3m-50y any expiry date, Any strike from -5% - +15%, As agreed by participants

France	Fr CPI ZC & YoY	Option Tenors: 1y 2y 3y 4y 5y 6y 7y 8y 9y 10y 12y 15y 20y 25y 30y Cap Strikes: 1.0% 1.5% 2.0% 2.5% 3.0% 3.5% 4.0% 4.5% 5.0% 6.0% Floor Strikes: -2.0% -1.0% -0.5% 0.0% 0.5% 1.0% 1.5% 2.0% 3.0%	3m-50y any expiry date, Any strike from -5% - +15%, As agreed by participants
JPY	Yen CPI	N/A	