

**GFI Swaps Exchange, LLC.**  
**Rule Implementation Submission 2024-02**  
**November 26, 2024**

1. The texts of the amended Rules are appended as Attachment A. Any additions are underlined and any deletions are struck through.
2. The date of intended implementation for these rules is ten business days following the filing of this submission.
3. Attached, please find a certification that: (1) these rules comply with the Commodity Exchange Act (“Act”), and the Commission’s regulations thereunder; and (2) concurrent with this submission, GFI SEF posted on its website: (i) a notice of pending certification of the rule amendments with the Commission; and (ii) a copy of this submission.
4. A concise explanation and analysis of the operation, purpose, and effect of each of the amended rules appears below.
5. There were no opposing views expressed regarding these amended rules.
6. Confidential treatment is not requested.

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**CONCISE EXPLANATION AND ANALYSIS OF THE OPERATION, PURPOSE, AND EFFECT OF THE RULE AMENDMENT AND ITS COMPLIANCE WITH APPLICABLE PROVISIONS OF THE ACT, INCLUDING CORE PRINCIPLES AND THE COMMISSION’S REGULATIONS THEREUNDER**

Pursuant to Commission Rule 40.6(a)(7)(vi), the following is a concise explanation and analysis of the operation, purpose, and effect of the amended rules.

GFI is amending the terms and conditions of its Rulebook, GFI SEF Rule 1101, and Appendix A – Contract Specifications to incorporate equity index swaps, option on variance swaps, and volatility swaps, as well as additional underlying indices for equities and credit swaps listed for trading.

The following chart identifies the changed rules and notes the effect of the change and an explanation of the operation, purpose, and effect of the change.

CONCISE EXPLANATION AND ANALYSIS OF THE OPERATION, PURPOSE, AND EFFECT OF THE RULE AMENDMENT AND ITS COMPLIANCE WITH APPLICABLE PROVISIONS OF THE ACT

Rule	Rule Title	Effect
1101	Swap Specifications	Contracts updated for Credit and Equities in Appendix A

GFI has determined that the Swaps certified herein incorporate equity index swaps, option on variance swaps, and volatility swaps, as well as additional underlying indices for equities and credit swaps listed for trading. The Swaps certified herein relate to the following Core Principles:

**Core Principle 3 – Swaps Not Readily Susceptible to Manipulation**

GFI Swaps Exchange LLC has assessed that the contracts do not appear to be susceptible to manipulation based on the following reasons:

- Credit and equity markets are broadly traded and very liquid
- The reference rates selected are broad-based, track heavily traded indices, and are administered and calculated by third-party providers. Many of these providers are registered in their home jurisdiction and undergo reviews to demonstrate adherence to IOSCO Principles for Financial Benchmarks.
- Trading in the Swaps will be subject to the GFI Rulebook (the “Rules”), which prohibits abusive trading practices, including: acts detrimental to GFI (Rule 522) or that are inconsistent with just and equitable principles of trade (Rule 510), fraudulent acts (Rule 511), fictitious or noncompetitive transactions (Rule 512), market manipulation (Rule 515), disruptive trading practices (Rule 516), misstatements (Rule 521), wash sales (Rule 531) and pre-negotiated or non-competitive trades, including money passes (Rule 533). Trading in these Swaps will also be subject to Rules relating to protection of customers. See Rules 525-528.
- As with all swaps listed for trading, trading activity in the Swaps will be subject to monitoring and surveillance by GFI’s Compliance Department as well as T+1 surveillance performed by GFI’s Regulatory Services Provider, the National Futures Association. GFI has the authority to exercise its investigatory and enforcement power where potential Rule violations are identified. See Chapter 7 of the Rules.

CERTIFICATIONS PURSUANT TO SECTION 5c OF THE COMMODITY EXCHANGE ACT, 7 U.S.C. §7A-2 AND COMMODITY FUTURES TRADING COMMISSION RULE 40.6, 17 C.F.R. §40.6

I hereby certify that:

- (1) the amended Rules above comply with the Commodity Exchange Act, and the Commodity Futures Trading Commission's regulations thereunder; and
- (2) concurrent with this submission, GFI Swaps Exchange LLC. posted on its website: a notice of pending certification of the above Rules with the Commission; and (b) a copy of this submission

*Michelle Latman*

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By: Michelle Latman  
Title: Chief Compliance Officer  
Date: November 26, 2024

## CHAPTER 11 CONTRACTS

### 1101. Swap Specifications

(a) The Company will permit trading in Swaps that will be listed by the Company and submitted to the CFTC pursuant to Part 40 of the CFTC Regulations from time to time. The contract specifications for all such Swaps are attached hereto as Appendix A and incorporated by reference into these Rules. The London Interbank Offered Rate (LIBOR<sup>1</sup>) will continue to be permitted as long as CFTC No-Action Letters 21-26, 21-27 and 21-28 remain in effect.

(b) The template terms of any non-deliverable forward contract, vanilla FX option or exotic FX option recommended by the Emerging Markets Trade Association (“EMTA”) or a recognized successor (the “EMTA Template”) are incorporated by reference into the product specifications for each relevant non-deliverable forward contract, vanilla FX option or exotic FX option. If the terms of an EMTA Template conflict with terms the parties may establish through their pre-existing bilateral agreement (including, without limitation, Sections 8.1 and 8.2 of the ISDA Definitions and the FX Definitions), the terms of the EMTA Template shall prevail. As used in this paragraph (b): (i) “**ISDA Definitions**” means the definitions and provisions contained in the 2006 ISDA Definitions, as published by the International Swaps and Derivatives Association, Inc.; and (ii) “**FX Definitions**” means the 1998 FX and Currency Option Definitions (including Annex A thereto) as published by ISDA, EMTA and The Foreign Exchange Committee.



# **APPENDIX A**

## **CONTRACT SPECIFICATIONS**

## Table of Contents

<b>801.— CREDIT</b> .....	<b>A-4</b>
<b>Cleared Credit Default Swaps: iTraxx Europe Index Family</b> .....	<b>A-5</b>
<b>Cleared Credit Default Swaps: North American CDX Index Family</b> .....	<b>A-7</b>
<b>Credit Options and Exotic Options</b> .....	<b>A-9</b>
<b>iBoxx Standardized TRS Indices</b> .....	<b>A-11</b>
<b>Uncleared Credit Default Swaps: iTraxx Europe Index Family</b> .....	<b>A-12</b>
<b>Uncleared Credit Default Swaps: Mortgage Indices</b> .....	<b>A-14</b>
<b>Uncleared Credit Default Swaps: North American CDX Index Family</b> .....	<b>A-16</b>
<b>802.— ENERGY AND COMMODITIES</b> .....	<b>A-18</b>
<b>Agricultural Swaps</b> .....	<b>A-19</b>
<b>ERCOT Ancillary Services Swaps</b> .....	<b>A-21</b>
<b>European Power Swaps</b> .....	<b>A-22</b>
<b>Freight Options</b> .....	<b>A-23</b>
<b>Freight Swaps</b> .....	<b>A-24</b>
<b>Iron Ore, Coal and Fuel Oil Swaps</b> .....	<b>A-26</b>
<b>Natural Gas Options</b> .....	<b>A-27</b>
<b>Natural Gas Swaps</b> .....	<b>A-28</b>
<b>Power Options</b> .....	<b>A-29</b>
<b>NYMEX Contract List:</b> .....	<b>A-30</b>
<b>Power Swaps</b> .....	<b>A-32</b>
<b>Precious Metals Options</b> .....	<b>A-33</b>
<b>803.— EQUITY</b> .....	<b>A-</b>
<b>35—Variance Swaps: NASDAQ-100 Index</b> .....	<b>A-36</b>
<b>Variance Swaps: Russell 1000 Index</b> .....	<b>A-38</b>
<b>Variance Swaps: S&amp;P 500 Index</b> .....	<b>A-40</b>
<b>Variance Swaps: S&amp;P Toronto Stock Exchange Index</b> .....	<b>A-42</b>
<b>804.— FOREIGN EXCHANGE</b> .....	<b>A-44</b>
<b>Exotic FX Options</b> .....	<b>A-45</b>
<b>Binary Options</b> .....	<b>A-46</b>
<b>Bermuda Options</b> .....	<b>A-46</b>
<b>Barrier Options</b> .....	<b>A-46</b>

~~Non-deliverable Forwards ..... A-48~~  
~~Vanilla FX Options ..... A-51~~

~~805. INTEREST RATES~~  
~~..... A-52~~

Overnight Index Swaps: SOFR and SONIA.....	A-53
Brazilian Real Interest Rate Swap: Basis .....	A-54
Brazilian Real Interest Rate Swap: Fixed-to-Floating .....	A-55
Brazilian Real Interest Rate Swap: Forward Rate Agreement .....	A-58
Chilean Peso Inflation-Protected Interest Rate Forward.....	A-59
Chilean Peso Inflation-Protected Interest Rate Swap .....	A-60
Chilean Peso Interest Rate Swap: Basis .....	A-61
Chilean Peso Interest Rate Swap: Fixed-to-Floating.....	A-60
Chilean Peso Interest Rate Swap: Forward Rate Agreement.....	A-61
Colombian Peso Inflation-Protected Interest Rate Forward .....	A-62
Colombian Peso Inflation-Protected Interest Rate Swap .....	A-63
Colombian Peso Interest Rate Swap: Basis .....	A-64
Colombian Peso Interest Rate Swap: Fixed-to-Floating .....	A-65
Colombian Peso Interest Rate Swap: Forward Rate Agreement .....	A-66
Euro EURIBOR Interest Rate Swap: Basis .....	A-67
Euro EURIBOR Interest Rate Swap: Fixed-to-Floating.....	A-70
Euro EURIBOR Interest Rate Swap: Forward Rate Agreement .....	A-69
Euro EURIBOR Interest Rate Swap: Market Agreed Coupon.....	A-70
Euro EURIBOR Interest Rate Swap: Overnight Index.....	A-71
GBP SOFR Interest Rate Swap: Basis .....	A-72
GBP SOFR Interest Rate Swap: Fixed-to-Floating .....	A-73
GBP SOFR Interest Rate Swap: Forward Rate Agreement .....	A-74
GBP SOFR Interest Rate Swap: Market Agreed Coupon.....	A-75
GBP SOFR Interest Rate Swap: Overnight Index .....	A-76
JPY SOFR Interest Rate Swap: Basis .....	A-77
JPY SOFR Interest Rate Swap: Fixed-to-Floating .....	A-80
JPY SOFR Interest Rate Swap: Forward Rate Agreement .....	A-79
Mexican Peso Interest Rate Swap: Basis.....	A-80
Mexican Peso Interest Rate Swap: Fixed-to-Floating .....	A-81
Mexican Peso Interest Rate Swap: Forward Rate Agreement .....	A-82
Mexican Peso Unidades de Inversion Rate Swap.....	A-83
Swaptions.....	A-84
USD LIBOR <sup>1</sup> /SOFR Interest Rate Swap: Basis.....	A-85
USD LIBOR <sup>1</sup> /SOFR Interest Rate Swap: Fixed-to-Floating.....	A-86
USD LIBOR <sup>1</sup> /SOFR Interest Rate Swap: Forward Rate Agreement.....	A-87
USD LIBOR <sup>1</sup> /SOFR Interest Rate Swap: Market Agreed Coupon.....	A-88
USD LIBOR <sup>1</sup> /SOFR Interest Rate Swap: Overnight Index.....	A-89
Credit .....	C-2
Rates .....	C-4
Equity .....	C-5
Commodities .....	C-6
FX .....	C-7



## **CREDIT**

Subject to the requirements of the Rules, Swaps in the credit asset class may be effected (a) in the Order Book pursuant to Rule 505, (ii) through a Request for Quote pursuant to Rule 508, (iii) as a voice-executed trade or a Brokered Trade pursuant to Rule 509 or (iv) as a Block Trade pursuant to Rule 601.

## 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.

TABLE A: ON THE RUN INDICES

<u>Family</u>	<u>Indices</u>	<u>Description*</u>	<u>Tenors (Y)</u>	<u>Cleared Series (as of 2nd Oct 2013)</u>	<u>Swap Convention</u>	<u>Recovery(%)</u>
<u>MARKIT CDX.</u>	<u>NA.IG</u>	<u>125 investment grade</u>	<u>3,5,7,10</u>	<u>3Yr 15 to Current</u> <u>5Yr 11 to Current</u> <u>7Yr and 10Yr 8 to Current</u>	<u>Traded on Spread/Coupon 100bps</u>	<u>40</u>
<u>MARKIT CDX.</u>	<u>NA.HY</u>	<u>100 High Yield</u>	<u>5</u>	<u>12 to Current</u>	<u>Traded on Price/Coupon 500bps</u>	<u>30</u>
<u>MARKIT CDX.</u>	<u>NA.HVOL</u>	<u>30 investment grade</u>	<u>3,5,7,10</u>	<u>12 to Current</u>	<u>Traded on Spread/Coupon 100bps</u>	<u>40</u>

<a href="#"><u>MARKIT CDX</u></a>	<a href="#"><u>NA.EM</u></a>	<a href="#"><u>14 (can vary) Emerging Market Sovereign Issuers</u></a>	<a href="#"><u>5</u></a>	<a href="#"><u>14 to Current</u></a>	<a href="#"><u>Traded on Price/Coupon 500bps</u></a>	<a href="#"><u>25</u></a>
<a href="#"><u>MARKIT ITRAXX</u></a>	<a href="#"><u>EUROPE</u></a>	<a href="#"><u>125 liquid European investment grade names</u></a>	<a href="#"><u>3,5,7,10</u></a>	<a href="#"><u>5yr 10 to Current</u></a> <a href="#"><u>10yr 7 to Current</u></a>	<a href="#"><u>Traded on Spread/Coupon 100bps</u></a>	<a href="#"><u>40</u></a>
<a href="#"><u>MARKIT ITRAXX</u></a>	<a href="#"><u>EUROPE CROSSOVER</u></a>	<a href="#"><u>50 most liquid sub investment grade names</u></a>	<a href="#"><u>3,5,7,10</u></a>	<a href="#"><u>5y 10 to Current</u></a>	<a href="#"><u>Traded on Spread/Coupon 500bps</u></a>	<a href="#"><u>40</u></a>
<a href="#"><u>MARKIT ITRAXX</u></a>	<a href="#"><u>EUROPE HIVOL</u></a>	<a href="#"><u>30 widest spread non-financial credits</u></a>	<a href="#"><u>3,5,7,10</u></a>	<a href="#"><u>5y 10 to Current</u></a>	<a href="#"><u>Traded on Spread/Coupon 100bps</u></a>	<a href="#"><u>40</u></a>
<a href="#"><u>MARKIT ITRAXX</u></a>	<a href="#"><u>EUROPE SENIOR FINANCIALS</u></a>	<a href="#"><u>25 European Senior Financial Entities</u></a>	<a href="#"><u>5, 10yr</u></a>		<a href="#"><u>Traded on Spread/Coupon 100bps</u></a>	<a href="#"><u>40</u></a>
<a href="#"><u>MARKIT ITRAXX</u></a>	<a href="#"><u>EUROPE SUB FINANCIALS</u></a>	<a href="#"><u>25 European Subordinated Financial Entities</u></a>	<a href="#"><u>5, 10yr</u></a>		<a href="#"><u>Traded on Spread/Coupon 100bps</u></a>	<a href="#"><u>20</u></a>
<a href="#"><u>MARKIT ITRAXX</u></a>	<a href="#"><u>JAPAN</u></a>	<a href="#"><u>50 Japanese entities</u></a>	<a href="#"><u>5yr</u></a>		<a href="#"><u>Traded on Spread/Coupon 100bps</u></a>	<a href="#"><u>35</u></a>
<a href="#"><u>MARKIT ITRAXX</u></a>	<a href="#"><u>ASIA-EX JAPAN</u></a>	<a href="#"><u>40 Asian - ex Japan entities</u></a>	<a href="#"><u>5yr</u></a>		<a href="#"><u>Traded on Spread/Coupon 100bps</u></a>	<a href="#"><u>40</u></a>
<a href="#"><u>MARKIT ITRAXX</u></a>	<a href="#"><u>AUSTRALIA</u></a>	<a href="#"><u>25 Australian entities</u></a>	<a href="#"><u>5yr</u></a>		<a href="#"><u>Traded on Spread/Coupon 100bps</u></a>	<a href="#"><u>40</u></a>
<a href="#"><u>MARKIT CDX</u></a>	<a href="#"><u>LatAm Corp</u></a>	<a href="#"><u>20 Latin American Corporates</u></a>	<a href="#"><u>5yr</u></a>		<a href="#"><u>Traded on Price/Coupon 500bps</u></a>	<a href="#"><u>25</u></a>
<a href="#"><u>MARKIT MCDX</u></a>	<a href="#"><u>MCDX</u></a>	<a href="#"><u>50 US Municipal Issuers</u></a>	<a href="#"><u>3,5,10yr</u></a>		<a href="#"><u>Traded on Spread/Coupon 500bps</u></a>	<a href="#"><u>80</u></a>
<a href="#"><u>MARKIT ITRAXX</u></a>	<a href="#"><u>SOVX</u></a>	<a href="#"><u>Top 15 Western Europe Sovereign entities</u></a>	<a href="#"><u>5,10yrs</u></a>		<a href="#"><u>Traded on Spread/Coupon 100bps</u></a>	<a href="#"><u>40</u></a>

<u>MARKIT ITRAXX</u>	<u>SOVX EXEU</u>	<u>10 CEEMEA names ex. Europe</u>	<u>5yr</u>	<u>Current Series 10</u>	<u>Traded on Price/Coupon 100bps</u>	<u>25</u>
<u>MARKIT ITRAXX</u>	<u>CEEMEA CORPX</u>	<u>25 Corporate EM names</u>	<u>5yr</u>	<u>Current Series 20</u>	<u>Traded on Price/Coupon 100bps</u>	<u>25</u>
<u>MARKIT ITRAXX</u>	<u>MSCI ESG Screened Europe</u>	<u>Variable Number of Large and Mid-Cap Entities</u>	<u>5yr</u>		<u>Traded on Price/Coupon 100bps</u>	<u>40</u>
<u>OTHER</u>	<u>OTHER</u>	<u>Any other valid index calculated by a registered Exchange, or established index provider as applicable</u>				
	<u>SUB-INDICES</u>					
<u>MARKIT CDX</u>	<u>NA.HY.BB</u>	<u>Sub-basket MARKIT CDX.NA.HY that are BB rated</u>	<u>5yr</u>		<u>Traded on Price/Coupon 500bps</u>	<u>30</u>
<u>MARKIT CDX</u>	<u>NA.HY.B</u>	<u>Sub-basket MARKIT CDX.NA.HY that are B rated</u>	<u>5yr</u>		<u>Traded on Price/Coupon 500bps</u>	<u>30</u>
<u>MARKIT CDX</u>	<u>NA.IG.CON</u>	<u>Sub-basket MARKIT CDX.NA.IG that are Consumer</u>	<u>5yr</u>		<u>Traded on Spread/Coupon 100bps</u>	<u>40</u>
<u>MARKIT CDX</u>	<u>NA.IG.ENERG</u>	<u>Sub-basket MARKIT CDX.NA.IG that are Energy</u>	<u>5yr</u>		<u>Traded on Spread/Coupon 100bps</u>	<u>40</u>
<u>MARKIT CDX</u>	<u>NA.IG.FIN</u>	<u>Sub-basket MARKIT CDX.NA.IG that are Financials</u>	<u>5yr</u>		<u>Traded on Spread/Coupon 100bps</u>	<u>40</u>
<u>MARKIT CDX</u>	<u>NA.IG.INDU</u>	<u>Sub-basket MARKIT CDX.NA.IG that are Industrials</u>	<u>5yr</u>		<u>Traded on Spread/Coupon 100bps</u>	<u>40</u>
<u>MARKIT CDX</u>	<u>NA.IG.TMT</u>	<u>Sub-basket MARKIT CDX.NA.IG that are Telecoms, Media &amp; Technology</u>	<u>5yr</u>		<u>Traded on Spread/Coupon 100bps</u>	<u>40</u>

\* number of constituents can vary according to series.

Terms and Conditions : Credit Default Swap Index

<u>CREDIT DEFAULT SWAP INDEX</u>	
<b><u>Contract Overview</u></b>	<u>An agreement to buy or sell protection on a basket of (from Table A: Description).</u>
<b><u>Index</u></b>	<u>(Name &amp; Series)</u>
<b><u>Currency</u></b>	<u>EUR or USD dependent on Index</u>
<b><u>Quoting Convention &amp; Minimum Increment</u></b>	<u>As agreed by counterparties.</u>
<b><u>Minimum Size</u></b>	<u>As agreed by counterparties.</u>
<b><u>Trading Conventions</u></b>	<u>Buyer - the buyer of protection pays a premium to the seller in case of a credit event occurring</u> <u>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</u>
<b><u>Swap Conventions</u></b>	<u>Traded on spread or price ( see Table A Swap Convention)</u> <u>Fixed coupon payments calculated at a spread of (X bp - see Table A, Swap Conventions) and exchanged on a quarterly basis</u>
<b><u>Tenor</u></b>	<u>(As agreed by the parties—for illustrative tenors See Table A : Tenors)</u>
<b><u>Maturity Date</u></b>	<u>20<sup>th</sup> March or September of tenor years</u>
<b><u>Coupon Details</u></b>	<u>Spread: Xbps spread ( see Table A: Swap Conventions) Frequency:</u> <u>Quarterly 20 Mar/Jun/Sep/Dec</u> <u>Daycount: Act/360</u> <u>Business Day Convention: Following</u> <u>Calendar : MARKIT ITRAXX: LDN &amp; Target, MARKIT CDX NYC &amp; LDN</u>

<b><u>Credit Event</u></b>	<u>Determined pursuant to 2014 ISDA Definition : Failure to Pay.</u> <u>Government Intervention, Bankruptcy (MARKIT CDX) and also</u> <u>(Modified) Restructuring (MARKIT ITRAXX)</u>
<b><u>Recovery Rate</u></b>	<u>Index dependent - as provided in Table A</u>
<b><u>Settlement</u></b>	<u>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").</u> <u>Fixed Quarterly cash payments - reflected in basis points and paid by the protection buyer to the protection seller.</u> <u>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</u>
<b><u>Trade Types</u></b>	<u>Outright</u> <u>Rolls (a buyer of the roll is a seller of the _____ older series and a buyer of the more newly issued series)</u> <u>Spreads (a buyer of the spread is a seller of the shorter tenor and a buyer of the longer tenor)</u>
<b><u>Trading Hours and Venue</u></b>	<u>00:01 -24:00 Sunday-Friday; Eastern Time</u>
<b><u>Clearing Venue</u></b>	<u>Where applicable per Index: ICE Clear Credit, CME Clearing, LCH.Clearnet SA and ICE Clear Europe</u>
<b><u>Block Size</u></b>	<u>As set forth in Appendix F to Part 43. of the CFTC Regulations</u>

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.

## Cleared Credit Default Swaps: iTraxx Europe Index Family

### Swap Specifications Pursuant to Rule 1101

**901.** — The terms and conditions of the swap as established by the Clearing Organization in its Rules or Bylaws are incorporated by reference herein and are the terms and conditions of the Swap.

**902.** Credit Default swaps on a broad-based Index include Credit Default Swaps, by Clearing Organization, including ICE Clear Credit LLC and ICE Clear Europe Ltd, having the following characteristics:

<b>Contract Overview</b>	An agreement to buy or sell protection on a basket of liquid European-based entities with an investment grade or high yield credit rating, as applicable.
<b>Index Name</b>	iTraxx Europe / iTraxx Europe Crossover / iTraxx Europe HiVol
<b>Currency</b>	EUR
<b>Quoting Convention and Minimum Increment</b>	As agreed by the counterparties.
<b>Minimum Size</b>	As agreed by the counterparties
<b>Trading Conventions</b>	Buy = Buy Protection, the buyer of protection pays a premium to the seller in case of a credit event occurring. Credit events include Bankruptcy and Failure to Pay. Sell = Sell Protection, the seller of protection receives the premium payments from the protection buyer. The Seller owns the credit risk of the instrument. Investment grade indices are traded on spread
<b>Swap Conventions</b>	Fixed coupon payments are calculated at a spread of 100 bps and exchanged on a quarterly basis.
<b>Swap Tenor</b>	iTraxx Europe: 5Y, 10Y iTraxx Europe Crossover: 5Y iTraxx Europe HiVol: 5Y
<b>Applicable Series</b>	iTraxx Europe 5Y: Series 10 and all subsequent Series, up to and including the current series. iTraxx Europe 10Y: Series 7 and all subsequent Series, up to and including the current series. iTraxx Europe Crossover 5Y: Series 10 and all subsequent Series, up to and including the current series. iTraxx Europe HiVol 5Y: Series 10 and all subsequent Series, up to and including the current series.



<b>Effective Date</b>	<del>The date on which the counterparties begin calculating accrued</del>
	<del>obligations such as fixed payments (i.e., start date of the swap).</del>
<b>Maturity Date</b>	<del>The final date on which the obligations no longer accrue and the final payment occurs.</del>
<b>Trade Types</b>	<del>Outrights; roll trades; curve trades.</del>
<b>Settlement</b>	<del>Contingent Payment: Payments related to credit event settlement will be determined pursuant to the 2009 ISDA Credit Derivatives Determination Committees and Auction Settlement Supplement, (i.e., the Big Bang Protocol). Fixed Quarterly cash payments: reflected in basis points and paid by the protection buyer to the seller. 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.</del>
<b>Trading Hours</b>	<del>00:01-24:00 (ET), Sunday-Friday</del>
<b>Clearing Venue</b>	<del>CME or bilateral, as applicable</del>
<b>Block Size</b>	<del>As set forth in Appendix F to Part 43 of the CFTC Regulations.</del>
<b>Speculative Limits</b>	<del>As set in Part 151 of the CFTC Regulations.</del>
<b>Reportable Levels</b>	<del>As set in the CFTC Regulation 15.03.</del>

## Cleared Credit Default Swaps: North American CDX Index Family

### Swap Specifications Pursuant to Rule 1101

(a) ~~The terms and conditions of the swap as established by the Clearing Organization in its Rules or Bylaws are incorporated by reference herein and are the terms and conditions of the Swap.~~

(b) ~~Credit Default Swaps on a broad-based Index include Credit Default Swaps, by Clearing Organization, including ICE Clear Credit LLC and ICE Clear Europe Ltd, having the following characteristics:~~

<b>Contract Overview</b>	<del>An agreement to buy or sell protection on a basket of North American based entities with an investment grade or high yield credit rating, as applicable.</del>
<b>Index Name</b>	<del>CDX.NA.IG/CDX.NA.HY</del>
<b>Currency</b>	<del>USD</del>
<b>Quoting Convention and Minimum Increment</b>	<del>As agreed by the counterparties.</del>
<b>Minimum Size</b>	<del>As agreed by the counterparties</del>
<b>Trading Conventions</b>	<del>Buy = Buy Protection, the buyer of protection pays a premium to the seller in case of a credit event occurring. Credit events include Bankruptcy and Failure to Pay. Sell = Sell Protection, the seller of protection receives the premium payments from the protection buyer. The Seller owns the credit risk of the instrument. Investment grade indices are traded on spread</del>
<b>Swap Conventions</b>	<del>Fixed coupon payments are calculated at a spread of 100 bps and exchanged on a quarterly basis.</del>
<b>Swap Tenor</b>	<del>CDX.NA.IG: 3Y, 5Y, 7Y, 10Y CDX.NA.HY: 5Y</del>
<b>Applicable Series</b>	<del>CDX.NA.IG-3Y: Series 15 and all subsequent Series, up to and including the current series. CDX.NA.IG-5Y: Series 11 and all subsequent Series, up to and including the current series. CDX.NA.IG-7Y: Series 8 and all subsequent Series, up to and including the current series. CDX.NA.IG-10Y: Series 8 and all subsequent Series, up to and including the current series. CDX.NA.IG-5Y: Series 11 and all subsequent Series, up to and including the current series.</del>

<b>Effective Date</b>	The date on which the counterparties begin calculating accrued obligations such as fixed payments (i.e., start date of the swap).
<b>Maturity Date</b>	The final date on which the obligations no longer accrue and the final payment occurs.
<b>Trade Types</b>	Outrights; roll trades; curve trades.
<b>Settlement</b>	Contingent Payment: payments related to credit event settlement will be determined pursuant to the 2009 ISDA Credit Derivatives Determination Committees and Auction Settlement Supplement, (i.e., the Big Bang Protocol). Fixed Quarterly cash payments: reflected in basis points and paid by the protection buyer to the seller. 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.
<b>Trading Hours</b>	00:01-24:00 (ET), Sunday-Friday
<b>Clearing Venue</b>	CME or bilateral, as applicable
<b>Block Size</b>	As set forth in Appendix F to Part 43 of the CFTC Regulations.
<b>Speculative Limits</b>	As set in Part 151 of the CFTC Regulations.
<b>Reportable Levels</b>	As set in the CFTC Regulation 15.03.

## Credit Options and Exotic Options

### Swap Specifications Pursuant to Rule 1101

(i) Options that are not subject to mandatory clearing but which are accepted for clearing by a Clearing Organization and which are offered for trading on the SEF as Permitted Transactions may be submitted voluntarily by the parties for clearing.

(ii) Options not accepted by a Clearing Organization for clearing may be listed for trading subject to the Rules of the SEF as Permitted Transactions.

(iii) The terms and conditions of the options offered for trading as Permitted Transactions on the SEF incorporate such credit and other terms as the parties may establish through their pre-existing bi-lateral agreement.

(iv) The options listed for trading by the SEF have the following specifications:

<b>Contract Overview</b>	An agreement to buy or sell protection on a basket of North American based entities with an investment grade or high yield credit rating, as applicable.
<b>Option Trade Date</b>	As agreed by the counterparties.
<b>Option Seller</b>	As agreed by the counterparties.
<b>Option Buyer</b>	As agreed by the counterparties.
<b>Premium</b>	As agreed by the counterparties.
<b>Strike Price</b>	As agreed by the counterparties.
<b>Expiration Date</b>	As agreed by the counterparties.
<b>Underlying Index, Security or Debt, as applicable</b>	iTraxx Asia Ex Japan iTraxx Australia iTraxx Japan iTraxx SovX CDX.NA MCDX Municipal bonds Sovereign debt Corporate debt Structured credit default swaps (contingent CDS, index contingent CDS, first to default, Nth to Default, bespoke tranche)
<b>Quoting Convention and Minimum Increment</b>	As agreed by the counterparties.

<b>Minimum Size</b>	As agreed by the counterparties.
<b>Effective Date</b>	The date on which the counterparties begin calculating accrued obligations such as fixed payments (i.e., start date of the swap).
<b>Maturity Date</b>	The final date on which the obligations no longer accrue and the final payment occurs.
<b>Trade Types</b>	Outrights; roll trades; curve trades.
<b>Settlement</b>	<p>Contingent Payment - Payments related to credit event settlement will be determined pursuant to the 2009 ISDA Credit Derivatives Determination Committees and Auction Settlement Supplement, (i.e., the Big Bang Protocol).</p> <p>Fixed Quarterly cash payments - reflected in basis points and paid by the protection buyer to the 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>Trading Hours</b>	00:01-24:00 (ET), Sunday-Friday
<b>Clearing Venue</b>	CME or bilateral, as applicable
<b>Block Size</b>	As set forth in Appendix F to Part 43 of the CFTC Regulations.
<b>Speculative Limits</b>	As set in Part 151 of the CFTC Regulations.
<b>Reportable Levels</b>	As set in the CFTC Regulation 15.03.

## iBoxx Standardized TRS Indices

The terms and conditions of the iBoxx Standardized Total Return Swap indices incorporate by reference such credit and other terms as the parties may establish through pre-existing bilateral agreements. The iBoxx Standardized Total Return Swap indices have the following characteristics:

<b>Contract Overview</b>	Each contract is a total return swap where the buyer is obliged to pay a predetermined set rate, fixed or variable, to the seller in exchange for the notional-based return performance of one of the Reference Indices listed below.
<b>Reference Index</b>	Markit iBoxx EUR Corporates Markit iBoxx EUR Liquid HY Markit iBoxx GBP Corporates Markit iBoxx USD Domestic Corporates Markit iBoxx USD Liquid HY
<b>Trade Date</b>	The date on which the parties enter into the contract, which shall be prior to the Termination Date.
<b>Effective Date</b>	The first day of the term of the contract, as agreed by the parties.
<b>Quoting Convention and Minimum Increment</b>	Notional amount, as agreed by the parties.
<b>Minimum Size</b>	Notional amount, as agreed by the parties.
<b>Termination Date</b>	The date on which the contract expires, as agreed by the parties.
<b>Tenor</b>	The duration of time from the Effective Date to the Termination Date.
<b>Settlement Type</b>	Cash settlement.
<b>Settlement Terms</b>	Buyer: The buyer pays (i) a fixed rate of interest plus a differential, as agreed by the parties and (ii) the depreciation of the Reference Index, as applicable. Seller: The seller pays (i) the income of the Reference Index and (ii) the appreciation of the Reference Index, as applicable.
<b>Settlement Currency</b>	EUR, GBP or USD.
<b>Trading Hours</b>	06:00-17:00 (ET), Sunday-Friday.
<b>Speculative Limits</b>	None.
<b>Reportable Levels</b>	None.

## Uncleared Credit Default Swaps: iTraxx Europe Index Family

### Swap Specifications Pursuant to Rule 1101

<b>Contract Overview</b>	An agreement to buy or sell protection on a basket of liquid European-based entities with an investment grade or high yield credit rating, as applicable.
<b>Index Name</b>	<p>iTraxx Europe</p> <p>iTraxx Europe Tranche</p> <p>iTraxx Europe Standard Tranche</p> <p>iTraxx Japan</p> <p>iTraxx Japan Tranche</p> <p>iTraxx Asia Ex Japan</p> <p>iTraxx Asia Ex Japan Tranche</p> <p>iTraxx Australia</p> <p>iTraxx Australia Tranche</p> <p>iTraxx Blended Tranche</p> <p>iTraxx Risky Zero Tranche</p> <p>iTraxx Lev X</p> <p>iTraxx Sov X</p> <p>iTraxx SDI</p>
<b>Currency</b>	EUR
<b>Quoting Convention and Minimum Increment</b>	As agreed by the counterparties.
<b>Minimum Size</b>	As agreed by the counterparties.
<b>Trading Conventions</b>	<p>Buy = Buy Protection, the buyer of protection pays a premium to the seller in case of a credit event occurring. Credit events include Bankruptcy and Failure to Pay.</p> <p>Sell = Sell Protection, the seller of protection receives the premium payments from the protection buyer. The Seller owns the credit risk of the instrument.</p> <p>Investment grade indices are traded on spread</p>
<b>Swap Conventions</b>	Fixed coupon payments are calculated at a spread of 100 bps and exchanged on a quarterly basis.
<b>Swap Tenor</b>	<p>iTraxx Europe: 5Y, 10Y</p> <p>iTraxx Europe Crossover: 5Y</p> <p>iTraxx Europe HiVol: 5Y</p>
<b>Applicable Series</b>	iTraxx Europe 5Y: Series 10 and all subsequent Series, up to and

	<p>including the current series.</p> <p>iTraxx Europe 10Y: Series 7 and all subsequent Series, up to and including the current series.</p> <p>iTraxx Europe Crossover 5Y: Series 10 and all subsequent Series, up to and including the current series.</p> <p>iTraxx Europe HiVol 5Y: Series 10 and all subsequent Series, up to and including the current series.</p>
<b>Effective Date</b>	The date on which the counterparties begin calculating accrued obligations such as fixed payments (i.e., start date of the swap).
<b>Maturity Date</b>	The final date on which the obligations no longer accrue and the final payment occurs.
<b>Trade Types</b>	Outrights; roll trades; curve trades.
<b>Settlement</b>	<p>Contingent Payment: Payments related to credit event settlement will be determined pursuant to the 2009 ISDA Credit Derivatives Determination Committees and Auction Settlement Supplement, (i.e., the Big Bang Protocol).</p> <p>Fixed Quarterly cash payments: reflected in basis points and paid by the protection buyer to the 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>Trading Hours</b>	00:01-24:00 (ET), Sunday-Friday
<b>Clearing Venue</b>	CME or bilateral, as applicable
<b>Block Size</b>	As set forth in Appendix F to Part 43 of the CFTC Regulations.
<b>Speculative Limits</b>	As set in Part 151 of the CFTC Regulations.
<b>Reportable Levels</b>	As set in the CFTC Regulation 15.03.



## Uncleared Credit Default Swaps: Mortgage Indices

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### Swap Specifications Pursuant to Rule 1101

<b>Contract Overview</b>	An agreement to buy or sell protection on a basket of North American based entities with an investment grade or high yield credit rating, as applicable.
<b>Index Name</b>	ABX HE ABX Tranche CMBX MBX PrimeX TRX PO IOS
<b>Currency</b>	USD
<b>Quoting Convention and Minimum Increment</b>	As agreed by the counterparties.
<b>Minimum Size</b>	As agreed by the counterparties.
<b>Trading Conventions</b>	Buy = Buy Protection, the buyer of protection pays a premium to the seller in case of a credit event occurring. Credit events include Bankruptcy and Failure to Pay. Sell = Sell Protection, the seller of protection receives the premium payments from the protection buyer. The Seller owns the credit risk of the instrument. Investment grade indices are traded on spread
<b>Swap Conventions</b>	Fixed coupon payments are calculated at a spread of 100 bps and exchanged on a quarterly basis.
<b>Swap Tenor</b>	CDX.NA.IG: 3Y, 5Y, 7Y, 10Y CDX.NA.HY: 5Y
<b>Applicable Series</b>	CDX.NA.IG 3Y: Series 15 and all subsequent Series, up to and including the current series. CDX.NA.IG 5Y: Series 11 and all subsequent Series, up to and including the current series. CDX.NA.IG 7Y: Series 8 and all subsequent Series, up to and including the current series. CDX.NA.IG 10Y: Series 8 and all subsequent Series, up to and including the current series. CDX.NA.IG 5Y: Series 11 and all subsequent Series, up to and

	including the current series.
<b>Effective Date</b>	The date on which the counterparties begin calculating accrued obligations such as fixed payments (i.e., start date of the swap).
<b>Maturity Date</b>	The final date on which the obligations no longer accrue and the final payment occurs.
<b>Trade Types</b>	Outrights; roll trades; curve trades.
<b>Settlement</b>	<p>Contingent Payment: payments related to credit event settlement will be determined pursuant to the 2009 ISDA Credit Derivatives Determination Committees and Auction Settlement Supplement, (i.e., the Big Bang Protocol).</p> <p>Fixed Quarterly cash payments: reflected in basis points and paid by the protection buyer to the 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>Trading Hours</b>	00:01-24:00 (ET), Sunday-Friday
<b>Clearing Venue</b>	CME or bilateral, as applicable
<b>Block Size</b>	As set forth in Appendix F to Part 43 of the CFTC Regulations.
<b>Speculative Limits</b>	As set in Part 151 of the CFTC Regulations.
<b>Reportable Levels</b>	As set in the CFTC Regulation 15.03.

## Uncleared Credit Default Swaps: North American CDX Index Family

### Swap Specifications Pursuant to Rule 1101

<b>Contract Overview</b>	An agreement to buy or sell protection on a basket of North American-based entities with an investment grade or high yield credit rating, as applicable.
<b>Index Name</b>	<del>CDX.NA.IG CDX.NA.IG Tranche CDX.NA.IG Standard Tranche CDX.NA.HY CDX.NA.HY Tranche CDX.NA.HY Standard Tranche CDX.NA.XO CDX.NA.XO Tranche CDX.EM CDX.EM Tranche CDX.EM Diversified CDX Blended Tranche CDX Risky zero Tranche LCDX.NA LCDX.NA Tranche LCDX.NA Standard Bullet LCDX.NA Bullet Tranche MCDX.NA MCDX.NA Tranche</del>
<b>Currency</b>	USD
<b>Quoting Convention and Minimum Increment</b>	<del>As agreed by the counterparties.</del>
<b>Minimum Size</b>	<del>As agreed by the counterparties.</del>
<b>Trading Conventions</b>	<del>Buy = Buy Protection, the buyer of protection pays a premium to the seller in case of a credit event occurring. Credit events include Bankruptcy and Failure to Pay. Sell = Sell Protection, the seller of protection receives the premium payments from the protection buyer. The Seller owns the credit risk of the instrument. Investment grade indices are traded on spread</del>
<b>Swap Conventions</b>	<del>Fixed coupon payments are calculated at a spread of 100 bps and exchanged on a quarterly basis.</del>

<b>Swap Tenor</b>	<del>CDX.NA.IG: 3Y, 5Y, 7Y, 10Y</del> <del>CDX.NA.HY: 5Y</del>
<b>Applicable Series</b>	<del>CDX.NA.IG 3Y: Series 15 and all subsequent Series, up to and including the current series.</del> <del>CDX.NA.IG 5Y: Series 11 and all subsequent Series, up to and including the current series.</del> <del>CDX.NA.IG 7Y: Series 8 and all subsequent Series, up to and including the current series.</del> <del>CDX.NA.IG 10Y: Series 8 and all subsequent Series, up to and including the current series.</del> <del>CDX.NA.IG 5Y: Series 11 and all subsequent Series, up to and including the current series.</del>
<b>Effective Date</b>	<del>The date on which the counterparties begin calculating accrued obligations such as fixed payments (i.e., start date of the swap).</del>
<b>Maturity Date</b>	<del>The final date on which the obligations no longer accrue and the final payment occurs.</del>
<b>Trade Types</b>	<del>Outrights; roll trades; curve trades.</del>
<b>Settlement</b>	<del>Contingent Payment: payments related to credit event settlement will be determined pursuant to the 2009 ISDA Credit Derivatives Determination Committees and Auction Settlement Supplement, (i.e., the Big Bang Protocol).</del> <del>Fixed Quarterly cash payments: reflected in basis points and paid by the protection buyer to the seller.</del> <del>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.</del>
<b>Trading Hours</b>	<del>00:01-24:00 (ET), Sunday-Friday</del>
<b>Clearing Venue</b>	<del>CME or bilateral, as applicable</del>
<b>Block Size</b>	<del>As set forth in Appendix F to Part 43 of the CFTC Regulations.</del>
<b>Speculative Limits</b>	<del>As set in Part 151 of the CFTC Regulations.</del>
<b>Reportable Levels</b>	<del>As set in the CFTC Regulation 15.03.</del>

## **ENERGY AND COMMODITIES**

Subject to the requirements of the Rules, Swaps in the energy and commodities asset class may be effected (i) in the Order Book pursuant to Rule 505, (ii) as a voice-executed trade or a Brokered Trade pursuant to Rule 509 or (iii) as a Block Trade pursuant to Rule 601.

## Agricultural Swaps

The terms and conditions of Agricultural Swaps incorporate by reference such credit and other terms as the parties may establish through pre-existing bilateral agreements. Agricultural Swaps have the following characteristics:

<b>Contract Overview</b>	An Agricultural Swap represents an agreement to exchange a stream of cash flows by reference to the difference between (i) a fixed price agreed by the parties and a floating rate based on a specified notional amount over a specified term to maturity.
<b>Underlying Commodities</b>	Soybean Meal
<b>Trade Date</b>	As agreed by the parties.
<b>Effective Date</b>	The date on which the calculation of accrued obligations begins under the contract.
<b>Notional Amount</b>	As agreed by the parties for each relevant Underlying Commodity.
<b>Settlement Date</b>	As agreed by the parties.
<b>Termination Date</b>	As agreed by the parties.
<b>Settlement Type</b>	Cash.
<b>Price Source</b>	Fixed Price: Soybean Meal: The equivalent futures contract listed for trading on the CBOT using the daily settlement price. Floating Price: Based on the futures contract on specified settlement date as agreed to by the parties.
<b>Fixed Price Payer</b>	Party [A/B]
<b>Floating Price Payer</b>	Party [B/A]
<b>Floating Price</b>	As agreed by the parties.
<b>Minimum Price Fluctuation/Price Tick Size</b>	The minimum price increment is quoted in increments of \$0.10 per contract.
<b>Settlement Price</b>	As agreed by the parties, measured in ten cents (\$0.10) per contract.
<b>Tenor</b>	The duration of the time from the Effective Date to the Termination Date
<b>Last Trading Day</b>	Trading terminates at the close of business on the last business day of each contract month.
<b>Trade Types</b>	Outrights and Spread and Switch strategies.

<b>Payment Frequency</b>	As agreed by the parties, but either monthly, quarterly, semi-annually or annually.
<b>Holiday Calendar</b>	New York and London.
<b>Business Day Convention</b>	As agreed by the parties, but must be any valid business day on both the New York and London calendars. If not, then it shall be the next day that is a business day on both the New York and London calendars.

## ERCOT Ancillary Services Swaps

The terms and conditions of the swaps incorporate by reference such credit and other terms as the parties may establish through their pre-existing bilateral agreement. The swaps have the following characteristics:

<b>Contract Overview</b>	An agreement to exchange cash flows based on the difference between a fixed price agreed to by the parties and a floating rate based on an ancillary service over a specified term to maturity.
<b>Reference Ancillary Services</b>	ERCOT Regulation Down Service ERCOT Regulation Up Service ERCOT Responsive Reserve Service ERCOT Non-Spinning Reserve Service
<b>Trade Date</b>	As determined by the parties.
<b>Effective Date</b>	The date on which the parties begin calculating their accrued obligations under the swap.
<b>Termination Date</b>	As determined by the parties.
<b>Buyer</b>	Party [A/B]
<b>Seller</b>	Party [B/A]
<b>Fixed Price</b>	As determined by the parties.
<b>Floating Price</b>	As determined by ERCOT
<b>Determination Period</b>	Effective Date through Termination Date.
<b>Payment Date</b>	As determined by the parties.



## European Power Swaps

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The terms and conditions of the swaps incorporate by reference such credit and other terms as the parties may establish through their pre-existing bilateral agreement. The swaps have the following characteristics:

<b>Contract Overview</b>	An agreement to exchange cash flows based on the difference between the fixed price agreed by the parties and the floating price based on delivery of electricity at the applicable delivery point or grid on the specified determination date.
<b>Trade Date</b>	As determined by the parties.
<b>Effective Date</b>	The date on which the parties begin calculating their accrued obligations under the swap.
<b>Termination Date</b>	As determined by the parties.
<b>Buyer</b>	Party [A/B]
<b>Seller</b>	Party [B/A]
<b>Transaction Type</b>	[base load swap] [peak load swap] [off-peak swap]
<b>Delivery Point</b>	As specified by the parties.
<b>Fixed Price</b>	As determined by the parties.
<b>Quantity</b>	As determined by the parties.
<b>Floating Price</b>	The [base load swap] [peak load swap] [off-peak swap] for the applicable delivery point as determined by the relevant system operator.
<b>Determination Period</b>	Effective Date through Termination Date.
<b>Payment Date</b>	As determined by the parties.

## Freight Options

If the freight option is accepted for clearing by a clearing organization, the terms and conditions of the freight option incorporate by reference such terms and conditions established by the relevant clearing organization in its rules or bylaws. If the freight option is not submitted for clearing to a clearing organization, the terms and conditions of the freight option incorporate by reference such credit and other terms as the parties may establish through their pre-existing bilateral agreement. The freight option has the following characteristics:

<b>Contract Overview</b>	A freight option contract represents an option to assume a short or long position in the underlying freight swap at the strike price.
<b>Underlying Reference Routes</b>	<b>Dry Timecharter Basket Routes</b> CTO (Capesize TC Avg 4) PTO (Panamax TC Avg 4) STO (Supramax TC Avg 6) HTO (Handysize TC Avg 6)
<b>Trade Date</b>	The date on which the parties enter into the options contract.
<b>Option Style</b>	<b>European Style:</b> A European style option allows the holder to exercise only at the expiration date, i.e. a single pre-defined point in time. <b>American Style:</b> An American style option allows the owner to exercise the option at any time before the expiration date.
<b>Option Premium</b>	The premium is paid at the time of purchase.
<b>Currency</b>	USD
<b>Strike Price</b>	The price at which an investor can exercise an option.
<b>Expiration Date</b>	The date on which the option contract expires.
<b>Expiration Time</b>	The time at which the option contract expires.
<b>Settlement Date</b>	The date on which the option settles.
<b>Settlement Type</b>	[Cash settlement] [Physical settlement]

## Freight Swaps

If the freight swap is accepted for clearing by a clearing organization, the terms and conditions of the freight swap incorporate by reference such terms and conditions established by the relevant clearing organization in its rules or bylaws. If the freight swap is not submitted for clearing to a clearing organization, the terms and conditions of the freight swap incorporate by reference such credit and other terms as the parties may establish through their pre-existing bilateral agreement. The freight swap has the following characteristics:

<b>Contract Overview</b>	A freight swap is an agreement to exchange a stream of cash flows by reference to the difference between a fixed rate and a floating rate based on a specified notional amount over a specified term to maturity.
<b>Trade Date</b>	As agreed by the parties.
<b>Effective Date</b>	The date on which the calculation of accrued obligations begins under the swap.
<b>Reference Routes</b>	<p><b>Dry Timecharter Basket Routes</b>            CTC (Capesize TC Avg 4)            PTC (Panamax TC Avg 4)            STC (Supramax TC Avg 6)            HTC (Handysize TC Avg 6)</p> <p><b>Dry Voyage Routes</b>            C3E (Tubarao – Qingdao)            C4E (Richards Bay – Rotterdam)            C5E (W Australia – Qingdao)            C7E (Bolivar – Rotterdam)</p> <p><b>Day Trip Timecharter Routes</b>            P1A, P1E (Transatlantic RV)            P2A, P2E (Cont Trip Far East)            P3A, P3E (Transpacif RV)</p> <p><b>\$ per Tonne Tanker Routes</b>            Baltic TC2            Baltic TC6            Baltic TC14            Baltic TD3            Baltic TD5            Baltic TD7            Baltic TD19</p>
<b>Notional Amount</b>	As agreed by the parties for each relevant commodity.
<b>Settlement Dates</b>	As agreed by the parties.
<b>Termination Date</b>	As agreed by the parties.
<b>Fixed Price Payer</b>	Party [A/B]

<b>Fixed Price</b>	As agreed by the parties.
<b>Floating Price Payer</b>	Party [B/A]
<b>Floating Price</b>	<p><b>Dry Timecharter Basket Routes</b> In respect of daily settlement, the floating price will be the end of day price as supplied by the Baltic Exchange. In respect of final settlement, the floating price will be the mean of the daily Baltic Exchange spot price assessments for every trading day in the expiry month.</p> <p><b>Dry Voyage Routes</b> In respect of daily settlement, the floating price will be the end of day price as supplied by the Baltic Exchange. In respect of final settlement, the floating price will be the mean of the daily Baltic Exchange spot price assessments for every trading day in the expiry month.</p> <p><b>Day Trip Timecharter Routes</b> In respect of daily settlement, the floating price will be the end of day price as supplied by the Baltic Exchange. In respect of final settlement for P1A, P2A &amp; P3A, the floating price will be the mean of the last 7 Baltic Exchange spot price assessments in the expiry month. In respect of final settlement for P1E, P2E &amp; P3E, the floating price will be the mean of the daily Baltic Exchange spot price assessments for every trading day in the expiry month.</p> <p><b>\$ per Tonne Tanker Routes</b> In respect of daily settlement, the floating price will be the end of day price (in \$/t) as supplied by the Baltic Exchange. In respect of final settlement, the floating price will be a price in US\$ per mt calculated as the mean of the Baltic Exchange WS rate spot price assessments multiplied by the Flat Rate divided by 100 for each pricing date in the expiry month.</p>
<b>Price Source</b>	Baltic Exchange.
<b>Pricing Date(s)</b>	If applicable, as agreed by the parties.
<b>Method of Averaging</b>	If applicable, as agreed by the parties.

## Iron Ore, Coal and Fuel Oil Swaps

If the swap is accepted for clearing by a clearing organization, the terms and conditions of the freight swap incorporate by reference such terms and conditions established by the relevant clearing organization in its rules or bylaws. If the swap is not submitted for clearing to a clearing organization, the terms and conditions of the swap incorporate by reference such credit and other terms as the parties may establish through their pre-existing bilateral agreement. The swap has the following characteristics:

<b>Contract Overview</b>	An agreement to exchange a stream of cash flows by reference to the difference between (i) a fixed price agreed by the parties and a floating rate based on a specified notional amount over a specified term to maturity, or (ii) two floating rates based on specified notional amounts over a specified term to maturity.
<b>Trade Date</b>	As agreed by the parties.
<b>Effective Date</b>	The date on which the calculation of accrued obligations begins under the contract.
<b>Reference Commodities</b>	Iron Ore Coal Fuel Oil
<b>Notional Amount</b>	As agreed by the parties for each relevant commodity.
<b>Settlement Dates</b>	As agreed by the parties.
<b>Termination Date</b>	As agreed by the parties.
<b>Fixed Price Payer</b>	Party [A/B], if applicable.
<b>Fixed Price</b>	[currency] [amount in numerals] [per units of commodity], if applicable.
<b>Floating Price Payer</b>	Party [B/A], or both Party A and B, if applicable.
<b>Floating Price</b>	As agreed by the parties.
<b>Pricing Differential</b>	If applicable, as agreed by the parties.
<b>Specified Delivery Point</b>	If applicable, as agreed by the parties.
<b>Pricing Dates</b>	If applicable, as agreed by the parties.
<b>Method of Averaging</b>	If applicable, as agreed by the parties.

## Natural Gas Options

The terms and conditions of Natural Gas Options incorporate by reference such credit and other terms as the parties may establish through their pre-existing bilateral agreement. Natural Gas Options have the following characteristics:

<b>Contract Overview</b>	A natural gas option is a derivative financial instrument that gives one party the right, but not the obligation, to buy or sell a specific quantity of natural gas from or to another party at a specified price on a specified date.
<b>Trade Date</b>	As agreed by the parties.
<b>Effective Date</b>	The date on which the calculation of accrued obligations under the contract.
<b>Commodity</b>	Natural Gas
<b>Notional Amount</b>	As agreed by the parties.
<b>Option Style</b>	[American] [European] [Bermuda] [Asia]
<b>Option Type</b>	[Put] [Call]
<b>Buyer</b>	Party [A/B]
<b>Seller</b>	Party [A/B]
<b>Termination Date</b>	As determined by the parties.
<b>Price Source</b>	Natural Gas Intelligence, Canadian Gas Price Reporter, Inside FERC, Gas Daily, Platts/McGraw Hill or NYMEX, as determined by the parties.
<b>Settlement Type</b>	[Cash Settlement] [Physical Settlement]
<b>Specified Delivery Point</b>	If applicable, as agreed by the parties.
<b>Pricing Date(s)</b>	If applicable, as agreed by the parties.
<b>Method of Averaging</b>	If applicable, as agreed by the parties.
<b>Total Premium</b>	The amount payable by the Buyer to the Seller.
<b>Premium Payment Date(s)</b>	The date(s) agreed by the parties.
<b>Expiration Date</b>	The date agreed by the parties.
<b>Expiration Time</b>	The time agreed by the parties.

## Natural Gas Swaps

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The terms and conditions of the swaps incorporate by reference such credit and other terms as the parties may establish through their pre-existing bilateral agreement. The swaps have the following characteristics:

<b>Contract Overview:</b>	An agreement to exchange a stream of cash flows by reference to the difference between a fixed rate and a floating rate or between two floating rates based on a specified notional amount over a specified term to maturity.
<b>Trade Date:</b>	As agreed by the parties.
<b>Effective Date:</b>	The date on which the calculation of accrued obligations under the contract.
<b>Commodity:</b>	Natural Gas
<b>Notional Amount:</b>	As agreed by the parties for each relevant commodity.
<b>Settlement Dates:</b>	As agreed by the parties.
<b>Termination Date:</b>	As agreed by the parties.
<b>Fixed Price Payer:</b>	Party [A/B], if applicable.
<b>Fixed Price:</b>	[currency] [amount in numerals] [per units of commodity]
<b>Floating Price Payer:</b>	Party [A/B], or both Party A and B, if applicable.
<b>Floating Price:</b>	As agreed by the parties.
<b>Pricing Differential:</b>	If applicable, as agreed by the parties.
<b>Pricing Source:</b>	Natural Gas Intelligence, Canadian Gas Price Report, Inside FERC, or Platts/McGraw Hill, as determined by the parties.
<b>Specified Delivery Point:</b>	If applicable, as agreed by the parties.
<b>Pricing Date(s):</b>	If applicable, as agreed by the parties.
<b>Method of Averaging:</b>	If applicable, as agreed by the parties.

## Power Options

The terms and conditions of Power Options incorporate by reference such credit and other terms as the parties may establish through pre-existing bilateral agreement. Power Options have the following characteristics:

<b>Contract Overview</b>	A power option contract represents an option to assume a short or long position in the underlying New York Mercantile Exchange (“NYMEX”) contract at the strike price.
<b>Underlying Reference Routes</b>	See NYMEX Contract List below
<b>Trade Date</b>	The date on which the parties enter into the options contract.
<b>Option Style</b>	European Style: Allows the holder to exercise the option only at the expiration date. American Style: Allows the owner to exercise the option at any time before the expiration date.
<b>Option Type</b>	Call Option: The right to buy the underlying NYMEX contract on a fixed date at a fixed price. Put Option: The right to sell the underlying NYMEX contract on a fixed date at a fixed price.
<b>Strike Price</b>	The price agreed upon by the parties at which the buyer can exercise an option.
<b>Expiration Date</b>	The date at which the option contract expires.
<b>Expiration Time</b>	The time on which the option contract expires.
<b>Settlement Date</b>	The date on which the option settles.
<b>Settlement Type</b>	Cash Settlement: Requires the exchange of cash in the amount of the difference between the option strike price and the current value of the underlying NYMEX contract at the exercise date.
<b>Premium Date</b>	The date on which the premium is due.
<b>Quoting Convention and Minimum Increment</b>	Notional amount, agreed by the counterparties.
<b>Minimum Size</b>	Notional amount, agreed by the counterparties.



**NYMEX Contract List:**

ISO New England Mass Hub 5 MW Peak Calendar-Month Day-Ahead LMP Futures  
ISO New England Mass Hub Day-Ahead Off-Peak Calendar-Day 5 MW Futures  
ISO New England Mass Hub Day-Ahead Off-Peak Calendar-Month 5 MW Futures  
ISO New England Mass Hub Day-Ahead Peak Calendar-Day 5 MW Futures  
ISO New England Mass Hub Day-Ahead Peak Calendar-Month 2.5 MW Futures  
ISO New England Mass Hub Off-Peak LMP Futures  
PJM AECO Zone Off-Peak Calendar-Month Day-Ahead LMP Futures  
PJM AECO Zone Peak Calendar-Month Day-Ahead LMP Futures  
PJM AEP Dayton Hub 5MW Peak Calendar-Month Real-Time LMP Futures  
PJM AEP Dayton Hub Day-Ahead LMP Peak Calendar-Month 5 MW Futures  
PJM AEP Dayton Hub Day-Ahead Off-Peak Calendar-Day 5 MW Futures  
PJM AEP Dayton Hub Day-Ahead Off-Peak Calendar-Month 5 MW Futures  
PJM AEP Dayton Hub Day-Ahead Peak Calendar-Day 5 MW Futures  
PJM AEP Dayton Hub Off-Peak LMP Futures  
PJM AEP Dayton Hub Real-Time Off-Peak Calendar-Day 5 MW Futures  
PJM AEP Dayton Hub Real-Time Off-Peak Calendar-Month 5 MW Futures  
PJM AEP Dayton Hub Real-Time Peak Calendar-Day 5 MW Futures  
PJM AEP Dayton Hub Real-Time Peak Calendar-Month 2.5 MW Futures  
PJM APS Zone Off-Peak Calendar-Month Day-Ahead LMP Futures  
PJM APS Zone Peak Calendar-Month Day-Ahead LMP Futures  
PJM ATSI Zone 5 MW Off-Peak Calendar-Day Day-Ahead Futures  
PJM ATSI Zone 5 MW Off-Peak Calendar-Day Real-Time Futures  
PJM ATSI Zone 5 MW Off-Peak Calendar-Month Day-Ahead Futures  
PJM ATSI Zone 5 MW Off-Peak Calendar-Month Real-Time Futures  
PJM ATSI Zone 5 MW Peak Calendar-Day Day-Ahead Futures  
PJM ATSI Zone 5 MW Peak Calendar-Day Real-Time Futures  
PJM ATSI Zone 5 MW Peak Calendar-Month Day-Ahead Futures  
PJM ATSI Zone 5 MW Peak Calendar-Month Real-Time Futures  
PJM BGE Zone Off-Peak Calendar-Month Day-Ahead LMP Futures  
PJM BGE Zone Peak Calendar-Month Day-Ahead LMP Futures  
PJM ComEd Zone 5 MW Off-Peak Calendar-Month Day-Ahead LMP Futures  
PJM ComEd Zone 5 MW Peak Calendar-Month Day-Ahead LMP Futures  
PJM Daily Load Forecast Futures  
PJM DOM Zone Off-Peak Calendar-Month Day-Ahead LMP Futures  
PJM DOM Zone Peak Calendar-Month Day-Ahead LMP Futures  
PJM DPL Zone Off-Peak Calendar-Month Day-Ahead LMP Futures  
PJM DPL Zone Peak Calendar-Month Day-Ahead LMP Futures  
PJM Duquesne Zone 5 MW Off-Peak Calendar-Month Day-Ahead LMP Futures  
PJM Duquesne Zone 5 MW Peak Calendar-Month Day-Ahead LMP Futures  
PJM Eastern Hub Off-Peak Calendar-Month Day-Ahead LMP Futures  
PJM Eastern Hub Peak Calendar-Month Day-Ahead LMP Futures  
PJM JCPL Zone Off-Peak Calendar-Month Day-Ahead LMP Futures  
PJM JCPL Zone Peak Calendar-Month Day-Ahead LMP Futures  
PJM METED Zone Off-Peak Calendar-Month Day-Ahead LMP Futures  
PJM METED Zone Peak Calendar-Month Day-Ahead LMP Futures

PJM Northern Illinois Hub 5 MW Peak Calendar-Month Real-Time LMP Futures  
PJM Northern Illinois Hub Day-Ahead LMP Peak Calendar-Month 5 MW Futures  
PJM Northern Illinois Hub Day-Ahead Off-Peak Calendar-Day 5 MW Futures  
PJM Northern Illinois Hub Day-Ahead Off-Peak Calendar-Month 5 MW Futures  
PJM Northern Illinois Hub Day-Ahead Peak Calendar-Day 5 MW Futures  
PJM Northern Illinois Hub Off-Peak LMP Futures  
PJM Northern Illinois Hub Real-Time Off-Peak Calendar-Day 5 MW Futures  
PJM Northern Illinois Hub Real-Time Off-Peak Calendar-Month 5 MW Futures  
PJM Northern Illinois Hub Real-Time Peak Calendar-Day 5 MW Futures  
PJM Northern Illinois Hub Real-Time Peak Calendar-Month 2.5 MW Futures  
PJM Off-Peak Calendar-Month LMP Futures  
PJM PECO Zone 5 MW Off-Peak Calendar-Month Day-Ahead LMP Futures  
PJM PECO Zone 5 MW Peak Calendar-Month Day-Ahead LMP Futures  
PJM PENELEC Zone Off-Peak Calendar-Month Day-Ahead LMP Futures  
PJM PENELEC Zone Peak Calendar-Month Day-Ahead LMP Futures  
PJM PEPCO Zone Off-Peak Calendar-Month Day-Ahead LMP Futures  
PJM PEPCO Zone Peak Calendar-Month Day-Ahead LMP 5 MW Futures  
PJM PPL Zone Off-Peak Calendar-Month Day-Ahead LMP Futures  
PJM PPL Zone Peak Calendar-Month Day-Ahead LMP Futures  
PJM PSEG Zone Off-Peak Calendar-Month Day-Ahead LMP Futures  
PJM PSEG Zone Peak Calendar-Month Day-Ahead LMP 5 MW Futures  
PJM Western Hub 50 MW Peak Calendar-Month Real-Time LMP Futures  
PJM Western Hub Day-Ahead Off-Peak Calendar-Day 5 MW Futures  
PJM Western Hub Day-Ahead Off-Peak Calendar-Month 5 MW Futures  
PJM Western Hub Day-Ahead Peak Calendar-Day 5 MW Futures  
PJM Western Hub Day-Ahead Peak Calendar-Month 5 MW Futures  
PJM Western Hub Peak Calendar-Month Real-Time LMP Futures  
PJM Western Hub Real-Time Off-Peak Calendar-Day 5 MW Futures  
PJM Western Hub Real-Time Off-Peak Calendar-Month 5 MW Futures  
PJM Western Hub Real-Time Peak Calendar-Day 5 MW Futures  
PJM Western Hub Real-Time Peak Calendar-Month 2.5 MW Futures

## Power Swaps

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The terms and conditions of the swaps incorporate by reference such credit and other terms as the parties may establish through their pre-existing bilateral agreement. The swaps have the following characteristics:

<b>Contract Overview</b>	An agreement to exchange cash flows based on the difference between the fixed price agreed by the parties and the price of electricity or the peak load for a system as determined by the relevant system operator on the specified determination date.
<b>Trade Date</b>	As determined by the parties.
<b>Effective Date</b>	The date on which the parties begin calculating their accrued obligations under the swap.
<b>Termination Date</b>	As determined by the parties.
<b>Buyer</b>	Party [A/B]
<b>Seller</b>	Party [A/B]
<b>Transaction Type</b>	[fixed/floating swap] [peak load swap]
<b>Delivery Point</b>	[zone] [node] [hub] specified by the parties.
<b>Fixed Price</b>	As determined by the parties.
<b>Quantity</b>	[ ] MWhs
<b>Floating Price</b>	The [price] [peak load] for the applicable delivery point as determined by the relevant system operator.
<b>Determination Period</b>	Effective Date through Termination Date.
<b>Payment Date</b>	As determined by the parties.

## Precious Metals Options

The terms and conditions of the Precious Metals Options incorporate by reference such credit and other terms as the parties may establish through their pre-existing bilateral agreement. The Precious Metals Options have the following characteristics:

<b>Contract Overview</b>	A precious metals option contract represents an option to assume a short or long position in the underlying precious metals contract at the strike price.
<b>Reference Commodities</b>	Gold Silver Palladium Platinum
<b>Contracts on Reference Commodities</b>	NYMEX Palladium NYMEX Platinum COMEX Gold COMEX Silver ICE Gasoil (Monthly)
<b>Trade Date</b>	The date on which the parties enter into the options contract.
<b>Option Style</b>	<b>European Style:</b> A European style option allows the holder to exercise only at the expiration date, i.e. a single pre-defined point in time. <b>American Style:</b> An American style option allows the owner to exercise the option at any time before the expiration date.
<b>Call Currency</b>	Currency for call option.
<b>Put Currency</b>	Currency for put option.
<b>Strike Price</b>	The price at which an investor can exercise an option.
<b>Expiration Date</b>	The date on which the option contract expires.
<b>Expiration Time</b>	The time at which the option contract expires.
<b>Settlement Date</b>	The date on which the option settles.
<b>Settlement Type</b>	Cash Settlement
<b>Premium</b>	Premium amount expressed in the premium currency.
<b>Premium Currency</b>	Currency in which the option premium is expressed.
<b>Premium Date</b>	The date on which the premium amount is due.
<b>Quoting Convention and Minimum Increment</b>	Notional amount, agreed by the counterparties.
<b>Minimum Size</b>	Notional amount, agreed by the counterparties.

<b>Notional Currency</b>	Currency in which the contract size is expressed.
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## **EQUITY**

Subject to the requirements of the Rules, Swaps in the equity asset class may be effected (i) in the Order Book pursuant to Rule 505, (ii) as a voice-executed trade or a Brokered Trade pursuant to Rule 509 or (iii) as a Block Trade pursuant to Rule 601.

## 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*

<u>EQUITY INDEX SWAP</u>	
<u>Contract description</u>	<p><u>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</u></p> <p><u>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</u></p>
<u>Trading Conventions</u>	<p><u>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</u></p> <p><u>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</u></p> <p><u>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.</u></p> <p><u>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.</u></p>
<u>Currency</u>	<u>USD, EUR, JPY, SGD, HKD, CNH, CNY dependent on underlying Equity</u>
<u>Trade Date</u>	<u>Date which trade terms agreed</u>
<u>Maturity</u>	<u>As agreed by Participants – Any maturity up to 50yrs</u>
<u>Notional</u>	<u>As agreed by Participants – E.G. 5m (USD, EUR or JPY)</u>
<u>Floating Leg</u>	<p><u>Cashflow: xM LIBOR + Spread or an agreed fixed rate</u></p> <p><u>Frequency: Determined by agreed Libor (3m, 6m etc.) or agreed fixed rate frequency</u></p> <p><u>DayCount: Act/360</u></p>
<u>Equity Leg</u>	<u>Notional x (% increase of equity index over floating rate period)</u>

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

### **Underlying Equity Indices**

<b><u>Abbr</u></b>	<b><u>Name</u></b>
<u>AEX</u>	<u>Amsterdam Exchange Index</u>
<u>AS51</u>	<u>S&amp;P/ASX 200 (AEJ)</u>
<u>BEL20</u>	<u>BEL20 Index</u>
<u>CAC</u>	<u>Cotation Assistée en Continu 40</u>
<u>DAX</u>	<u>Deutscher Aktien Index</u>
<u>DIA</u>	<u>SPDR Dow Jones Industrial Average ETF Trust</u>
<u>DJINETT</u>	<u>Dow Jones InternetCompTr</u>
<u>DJITR</u>	<u>Dow Jones Industrial Average Total Return</u>
<u>DJUSRE</u>	<u>Dow Jones U.S. Real Estate Index</u>
<u>EWTRGSPC</u>	<u>REUTERS – REU - S&amp;P EW 500 INDEX</u>
<u>FTSE</u>	<u>FTSE 100</u>
<u>FTSEMIB</u>	<u>FTSE MIB Index</u>
<u>FTXIN25</u>	<u>FTSE China 50 Index</u>
<u>GDDLCA</u>	<u>MSCI Canada Index CAD Total Return (Gross Dividends)</u>
<u>GDDUCA</u>	<u>MSCI Canada Index USD Daily Total Return (Gross Dividends)</u>
<u>GDDUEAFE</u>	<u>MSCI EAFE Index Total Return (Gross Dividends)</u>
<u>GDDUNA</u>	<u>MSCI North American Index USD Total Return (Gross Dividends)</u>
<u>GDDUP</u>	<u>MSCI Daily Gross Pacific</u>
<u>GDDUUS HSCEI</u>	<u>MSCI US Index Total Return (Gross Dividends)</u>
<u>HSCEI</u>	<u>Hang Seng China Enterprises Index</u>
<u>HSI</u>	<u>Hang Seng Index</u>
<u>IBOV</u>	<u>BOVESPA Brasil Sao Paulo Stock Exchange Index</u>
<u>IXBTR</u>	<u>S&amp;P 500 Material Select Sector Total Return</u>
<u>IXCPR</u>	<u>Communication Services Select Sector Index</u>
<u>IXCTR</u>	<u>Communication Services Select Sector Index TR</u>
<u>IXETR</u>	<u>S&amp;P 500 Energy Select Sector Total Return</u>
<u>IXITR</u>	<u>S&amp;P 500 Industrials Select Sector Total Return</u>
<u>IXMTR</u>	<u>S&amp;P 500 Financials Select Sector Total Return</u>
<u>IXRTR</u>	<u>S&amp;P 500 Consumer Staples Select Sector Total Return</u>
<u>IXTTR</u>	<u>S&amp;P 500 Technology Select Sector Total Return</u>
<u>IXUTR</u>	<u>S&amp;P 500 Utilities Select Sector Total Return</u>
<u>IXVTR</u>	<u>S&amp;P 500 Health Care Select Sector Total Return</u>
<u>IXYTR</u>	<u>S&amp;P 500 Consumer Discretionary Select Sector Total Return</u>
<u>KOSPI</u>	<u>Korea Composite Stock Price Index</u>



<a href="#">MDCPSPTR</a>	<a href="#">S&amp;P MidCap 400 Total Return</a>
<a href="#">MEXBOL</a>	<a href="#">Mexican IPC index (Indice de Precios y Cotizaciones)</a>
<a href="#">MID</a>	<a href="#">S&amp;P 400</a>
<a href="#">M8CA0EN</a>	<a href="#">MSCI Canada Energy Gross Return Index</a>
<a href="#">M8CA0FN</a>	<a href="#">MSCI Canada Financials Gross Return Index</a>
<a href="#">MSLUELAN</a>	<a href="#">MSCI Emerging Markets Latin America Small Cap Index (USD) (Net Dividends)</a>
<a href="#">NDDLCA</a>	<a href="#">MSCI Canada Index CAD Total Return (Net Dividends)</a>
<a href="#">NDDUHK</a>	<a href="#">MSCI Daily Total Return Net Hong Kong</a>
<a href="#">NDDUNA</a>	<a href="#">MSCI North American Index USD Total Return (Net Dividends)</a>
<a href="#">NDDUSG</a>	<a href="#">MSCI Daily Total Return Net Singapore</a>
<a href="#">NDDUP</a>	<a href="#">MSCI Daily Total Return Net Pacific</a>
<a href="#">NDDUPXJ</a>	<a href="#">MSCI Daily Total Return Net Pacific Ex Japan</a>
<a href="#">NDDUUS</a>	<a href="#">MSCI US Index Total Return (Net Dividends)</a>
<a href="#">NDDUMAF</a>	<a href="#">MSCI Daily Total Return Net Malaysia</a>
<a href="#">NDEUBRAF</a>	<a href="#">MSCI Brazil Index USD Total Return (Net Dividends)</a>
<a href="#">NDEUCHF</a>	<a href="#">MSCI China Index Total Return (Net Dividends)</a>
<a href="#">NDEUSIA</a>	<a href="#">MSCI Emerging Markets India</a>
<a href="#">NDEUMXF</a>	<a href="#">MSCI Mexico Index USD Total Return (Net Dividends)</a>
<a href="#">NDEUPH</a>	<a href="#">MSCI Daily Total Return Net Emerging Markets Philippines</a>
<a href="#">NDEUPR</a>	<a href="#">MSCI Daily Total Return Net Emerging Markets Peru</a>
<a href="#">NDEUSCH</a>	<a href="#">MSCI Chile Index Total Return (Net Dividends)</a>
<a href="#">NDEUSCO</a>	<a href="#">MSCI Colombia Index Total Return (Net Dividends)</a>
<a href="#">NDEUSKO</a>	<a href="#">MSCI Daily Total Return Net Emerging Markets Korea</a>
<a href="#">NDEUTHF</a>	<a href="#">MSCI Daily Total Return Net Emerging Markets Thailand</a>
<a href="#">NDEUSTW</a>	<a href="#">MSCI Daily Total Return Net Emerging Markets Taiwan</a>
<a href="#">NDUEE</a>	<a href="#">MSCI Daily Total Return Net Emerging Markets Asia</a>
<a href="#">NDUEEGFL</a>	<a href="#">MSCI Emerging Markets Latin America USD</a>
<a href="#">NDX</a>	<a href="#">NASDAQ-100</a>
<a href="#">NKY</a>	<a href="#">Nikkei 225</a>
<a href="#">NSEI</a>	<a href="#">S&amp;P CNX Nifty Index</a>
<a href="#">OEXT</a>	<a href="#">S&amp;P 100 Total Return</a>
<a href="#">OMX</a>	<a href="#">Stockholm 30 Index</a>
<a href="#">RGUSFL</a>	<a href="#">Russell 1000 Financial</a>
<a href="#">RTX</a>	<a href="#">Russell 2000</a>
<a href="#">RU10GRTR</a>	<a href="#">Russell 1000 Growth Total Return</a>
<a href="#">RU10INTR</a>	<a href="#">Russell 1000 Total Return</a>
<a href="#">RU10VATR</a>	<a href="#">Russell 1000 Value Total Return</a>
<a href="#">RU20GRTR</a>	<a href="#">Russell 2000 Growth Total Return</a>
<a href="#">RU20INTR</a>	<a href="#">Russell 2000 Total Return</a>
<a href="#">RU20VATR</a>	<a href="#">Russell 2000 Value Total Return</a>
<a href="#">SIMSCI</a>	<a href="#">MSCI Singapore Free Index</a>
<a href="#">SMCPSPTR</a>	<a href="#">S&amp;P SmallCap 600 Total Return</a>
<a href="#">SMI</a>	<a href="#">Swiss Market Index</a>
<a href="#">SP5LVIT</a>	<a href="#">S&amp;P 500 Low Volatility Total Return Index</a>
<a href="#">SPDAUDT</a>	<a href="#">S&amp;P 500 Dividend Aristocrats Total Return Index</a>
<a href="#">SPSIBITR</a>	<a href="#">S&amp;P Biotechnology Select Industry Total Return Index</a>
<a href="#">SPSIOP</a>	<a href="#">S&amp;P Oil &amp; Gas Exploration &amp; Production Select Industry Index</a>
<a href="#">SPTRCOND</a>	<a href="#">S&amp;P 500 Consumer Discretionary Sector Total Return Index</a>

<a href="#"><u>SPTRCONS</u></a>	<a href="#"><u>S&amp;P 500 Consumer Staples Sector Total Return Index</u></a>
<a href="#"><u>SPTRENR</u></a>	<a href="#"><u>S&amp;P 500 Energy Sector Total Return Index</u></a>
<a href="#"><u>SPTRFINL</u></a>	<a href="#"><u>S&amp;P 500 Financials Sector Total Return Index</u></a>
<a href="#"><u>SPTRHLTH</u></a>	<a href="#"><u>S&amp;P 500 Health Care Sector Total Return Index</u></a>
<a href="#"><u>SPTRINDU</u></a>	<a href="#"><u>S&amp;P 500 Industrials Sector Total Return Index</u></a>
<a href="#"><u>SPTRINF</u></a>	<a href="#"><u>S&amp;P 500 Information Technology Sector Total Return Index</u></a>
<a href="#"><u>SPTRMATR</u></a>	<a href="#"><u>S&amp;P 500 Materials Sector Total Return Index</u></a>
<a href="#"><u>SPTRMDCP</u></a>	<a href="#"><u>S&amp;P MidCap 400 Total Return</u></a>
<a href="#"><u>SPTRRLST</u></a>	<a href="#"><u>S&amp;P 500 Real Estate Sector Total Return Index</u></a>
<a href="#"><u>SPTRSMCP</u></a>	<a href="#"><u>S&amp;P SmallCap 600 Total Return</u></a>
<a href="#"><u>SPTRSVX</u></a>	<a href="#"><u>S&amp;P 500 Value Total Return Index</u></a>
<a href="#"><u>SPTRTELS</u></a>	<a href="#"><u>S&amp;P 500 Communication Services Sector Total Return Index</u></a>
<a href="#"><u>SPTRUTIL</u></a>	<a href="#"><u>S&amp;P 500 Utilities Sector Total Return Index</u></a>
<a href="#"><u>SPX</u></a>	<a href="#"><u>S&amp;P 500 Index</u></a>
<a href="#"><u>SPXT</u></a>	<a href="#"><u>S&amp;P 500 Total Return</u></a>
<a href="#"><u>STBANKXR</u></a>	<a href="#"><u>S&amp;P/TSX Composite Banks GICS Level Industry Group Total Return Index</u></a>
<a href="#"><u>STCHEMR</u></a>	<a href="#"><u>S&amp;P/TSX Composite Index Chemicals GICS Industry Total Return</u></a>
<a href="#"><u>STELUTXR</u></a>	<a href="#"><u>S&amp;P/TSX Composite Index Electric Utilities GICS Industry Total Return Index</u></a>
<a href="#"><u>STENRS</u></a>	<a href="#"><u>S&amp;P/TSX Composite Energy Sector GICS Level 1 Index</u></a>
<a href="#"><u>STENRSR</u></a>	<a href="#"><u>S&amp;P/TSX Composite Energy Index Total Return Swap</u></a>
<a href="#"><u>STFINLR</u></a>	<a href="#"><u>S&amp;P/TSX Composite Financials GICS Level Sector Total Return Index</u></a>
<a href="#"><u>STINSUR</u></a>	<a href="#"><u>S&amp;P/TSX Composite Insurance GICS Industry Group Total Return Index</u></a>
<a href="#"><u>STLIFER</u></a>	<a href="#"><u>S&amp;P/TSX Composite Life &amp; Health Insurance Total Return Index</u></a>
<a href="#"><u>STMATR</u></a>	<a href="#"><u>S&amp;P/TSX Composite Materials GICS Level Sector Total Return Index</u></a>
<a href="#"><u>STOGSTR</u></a>	<a href="#"><u>S&amp;P/TSX Oil &amp; Gas Sector Total Return Index</u></a>
<a href="#"><u>STOILPR</u></a>	<a href="#"><u>S&amp;P/TSX Composite Oil &amp; Gas Exploration Total Return Index</u></a>
<a href="#"><u>STMEDAR</u></a>	<a href="#"><u>S&amp;P/TSX Composite Media GICS Industry Group Total Return Index</u></a>
<a href="#"><u>STMUTIXR</u></a>	<a href="#"><u>S&amp;P/TSX Multiple Utilities &amp; Energy Power Total Return Index</u></a>
<a href="#"><u>STREITSR</u></a>	<a href="#"><u>S&amp;P/TSX REIT Total Return Index</u></a>
<a href="#"><u>STTELSR</u></a>	<a href="#"><u>S&amp;P/TSX Composite Telecom Services GICS Level Sector Total Return Index</u></a>
<a href="#"><u>STTELSXR</u></a>	<a href="#"><u>S&amp;P/TSX Composite Telecom Services GSI Total Return Index</u></a>
<a href="#"><u>STUTILR</u></a>	<a href="#"><u>S&amp;P/TSX Composite Utilities GICS Level Sector Total Return Index</u></a>
<a href="#"><u>SX5E</u></a>	<a href="#"><u>Eurostoxx 50 Index</u></a>
<a href="#"><u>TAMSCI</u></a>	<a href="#"><u>MSCI Taiwan Inde</u></a>

<u>TSX69</u>	<u>S&amp;P/TSX 60 Index</u>
<u>TX60AR</u>	<u>S&amp;P/TSX 60 Total Return Index</u>
<u>TTENAR</u>	<u>S&amp;P/TSX Capped Energy Total Return Index</u>
<u>TTUTAR</u>	<u>S&amp;P/TSX Capped Utilities Total Return Index</u>
<u>TWII</u>	<u>Taiwan Weighted Exchange Capitalization Weighted Stock Index</u>
<u>UKX</u>	<u>FTSE 100 Index</u>
<u>VIX</u>	<u>CBOE Volatility Index</u>
<u>XNDX</u>	<u>NASDAQ-100 Total Return</u>
<u>XSOX</u>	<u>PHLX Semiconductor Sector Index Total Return</u>
<u>OTHER</u>	<u>Any other valid index calculated by a registered Exchange, or established index provider as applicable</u>

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

<u>OPTION ON EQUITY INDEX VARIANCE SWAP</u>	
<u>Contract description</u>	<u>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.)</u>
<u>Trading Conventions</u>	<u>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</u>  <u>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</u>
<u>Currency</u>	<u>USD, EUR or JPY dependent on Underlying Equity</u>
<u>Vega Notional</u>	<u>As agreed by Participants e.g. 100,000 (Note: the exposure (loss or gain in contract currency) per 1% change in volatility)</u>
<u>Reference Vol Strike</u>	<u>As agreed by Participants e.g. 17.90</u>

<b><u>Ref Var Strike</u></b>	<u>As agreed by Participants e.g. 320.21</u>
<b><u>Option Premium</u></b>	<u>Cents upfront of vega notional</u>
<b><u>Option Style</u></b>	<u>European</u>
<b><u>Option Type</u></b>	<u>Call or Put</u>
<b><u>Option Volatility Strike</u></b>	<u>As agreed by Participants e.g. 40</u>
<b><u>Option Variance Strike</u></b>	<u>As agreed by Participants e.g. <math>40^2 = 1600</math></u>
<b><u>Premium Payment</u></b>	<u>T + 3</u>
<b><u>Option Payoff at Final Valuation Date</u></b>	<u>Call: Variance Units X Max(0, Realized vol ^ 2 - Variance Strike) at (maturity + 3 days) of variance swap</u>  <u>Put: Variance Units X Max(0, Variance Strike - Realized vol ^ 2) at (maturity + 3 days) of variance swap</u>
<b><u>Maturity or Final Valuation Date of Variance Swap</u></b>	<u>Final Date on which observations are made (contract tenors 0 mths to 50yrs supported)</u>
<b><u>Observation Frequency</u></b>	<u>Daily</u>
<b><u>Number of Observations</u></b>	<u>n, dependent on contract maturity (NOTE: n is the number of trading days between observation start date and Maturity)</u>
<b><u>Realized Volatility (RV)</u></b>	$\sigma_{realized} = \sqrt{252} \cdot \sqrt{\frac{\sum_{i=1}^m \left( Ln \left( \frac{C_{i+1}}{C_i} \right) \right)^2}{n}} \cdot 10000$ <p><u>m equals n, unless there is a market disruption event</u></p> <p><u>C<sub>i</sub> equals the daily closing price of the Underlying Equity on the ith business day starting on the day following Trade Date (i=2), and C<sub>m</sub> shall be equal to the Closing</u></p>

	<u>Level of the Underlying Equity on the Final Valuation Date. If the Final Valuation Date is a listed option expiration date, then Cm is equal to the expiration print.</u>
	<u>Business Days per Year = 252</u>
<b><u>Business Day Convention</u></b>	<u>As agreed by Participants</u>
<b><u>Quote Convention</u></b>	<u>Variance % points</u>
<b><u>Trade Types</u></b>	<u>Outright: Long or short call or put</u> <u>Spreads: e.g. Long a lower strike call, short a higher strike call</u> <u>Straddle: Long a call and a put at same strike</u>
<b><u>Market Disruption</u></b>	<u>Refer to ISDA 2002 Equity Definitions</u>
<b><u>Tenors</u></b>	<u>As agreed by Participants, 1 day to 10 Years</u>
<b><u>Underlying Equity</u></b>	<u>Closing Price of any valid index listed on a registered Exchange</u> <u>E.g. SPX S&amp;P 500, SX5E Eurostoxx 50, RTY Russell 2000, NDX Nasdaq 100, FTSE FTSE 100, DAX Dax 30, NKYNikkei 225, VIX on S&amp;P 500, DIA Dow Jones 30, MIDS&amp;P Mid 400</u>

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><u>EQUITY INDEX VARIANCE SWAP</u></b>	
<b><u>Contract description</u></b>	<u>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.</u>

<b><u>Trading Conventions</u></b>	<p><u>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</u></p> <p><u>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</u></p>
<b><u>Currency</u></b>	<u>USD, EUR or JPY dependent on Underlying Equity</u>
<b><u>Trade Start</u></b>	<u>Immediate or forward starting determines when observations for calculation of realized volatility begin</u>
<b><u>Maturity or Final Valuation Date</u></b>	<u>Final Date on which observations are made (contract tenors &gt;0 mths to 50yrs supported)</u>
<b><u>Observation Frequency</u></b>	<u>Daily</u>
<b><u>Number of Observations</u></b>	<u>n, dependent on contract maturity (NOTE: n is the number of trading days between observation start date and Maturity)</u>
<b><u>Vega Notional</u></b>	<u>As agreed by Participants e.g. 50,000 (Note: the exposure (loss or gain in contract currency) per 1% change in volatility)</u>
<b><u>Volatility Strike</u></b>	<u>As agreed by Participants e.g. 27% (for indicative purposes as payoff is linked to variance and not volatility)</u>
<b><u>Variance Strike</u></b>	<u>As agreed by Participants e.g. 729 (volatility strike)^2</u>
<b><u>Variance (Var) Units</u></b>	<u>As agreed by Participants e.g. 925.93 Vega Notional / (2x Volatility strike)</u>
<b><u>Variance Cap</u></b>	<u>YES/NO if YES e.g. (2.5 x vol strike)^2 (Notes: limits the profit/loss to defined maximum)</u>
<b><u>Realized Volatility (RV)</u></b>	$\sigma_{realized} = \sqrt{252} \cdot \sqrt{\frac{\sum_{i=1}^m \left( L \left( \frac{C_{i+1}}{C_i} \right)^2 \right)}{n}} \cdot 10000$ <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</i></p>

	<u><i>option expiration date, then Cm is equal to the expiration print.</i></u>
	<u><i>Business Days per Year = 252</i></u>
<b><u>Settlement</u></b>	<p><u>Cash settlement of:</u></p> <p><u>For Var Buyer: Variance Units X MAX [0, Variance strike – Volatility^2]</u></p> <p><u>Var Seller: Variance Units X MAX [0, Volatility^2 - Variance strike]</u></p> <p><u>Occurs following the Final Valuation Date in accordance with underlying equity index convention</u></p>
<b><u>Business Day Convention</u></b>	<u>As agreed by Participants</u>
<b><u>Quote Convention</u></b>	<u>Volatility % points, Variance % Points</u>
<b><u>Trade Types</u></b>	<p><u>Outright: Long or short variance/volatility of an underlying index from start date to maturity</u></p> <p><u>Forward Starting: Long or short variance/volatility over a defined future period</u></p> <p><u>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</u></p>
<b><u>Market Disruption</u></b>	<u>Refer to ISDA 2002 Equity Definitions</u>
<b><u>Tenors</u></b>	<u>As agreed by Participants, 1 day to 10 Years</u>
<b><u>Underlying Equity</u></b>	<u>The available underlying indices are detailed in the table below.</u>

### **Underlying Equity Indices**

<b><u>Abbr</u></b>	<b><u>Name</u></b>
<u>AEX</u>	<u>Amsterdam Exchange Index</u>
<u>AS51</u>	<u>S&amp;P/ASX 200 (AEJ)</u>
<u>BEL20</u>	<u>BEL20 Index</u>
<u>CAC</u>	<u>Cotation Assistée en Continu 40</u>
<u>DAX</u>	<u>Deutscher Aktien Index</u>
<u>DIA</u>	<u>SPDR Dow Jones Industrial Average ETF Trust</u>
<u>DJINETT</u>	<u>Dow Jones InternetCompTr</u>
<u>DJITR</u>	<u>Dow Jones Industrial Average Total Return</u>
<u>DJUSRE</u>	<u>Dow Jones U.S. Real Estate Index</u>
<u>EWTRGSPC</u>	<u>REUTERS – REU - S&amp;P EW 500 INDEX</u>
<u>FTSE</u>	<u>FTSE 100</u>
<u>FTSEMIB</u>	<u>FTSE MIB Index</u>
<u>FTXIN25</u>	<u>FTSE China 50 Index</u>
<u>GDDLCA</u>	<u>MSCI Canada Index CAD Total Return (Gross Dividends)</u>
<u>GDDUCA</u>	<u>MSCI Canada Index USD Daily Total Return (Gross Dividends)</u>
<u>GDDUEAFE</u>	<u>MSCI EAFE Index Total Return (Gross Dividends)</u>
<u>GDDUNA</u>	<u>MSCI North American Index USD Total Return (Gross Dividends)</u>
<u>GDDUP</u>	<u>MSCI Daily Gross Pacific</u>

<a href="#">GDDUUS HSCEI</a>	<a href="#">MSCI US Index Total Return (Gross Dividends)</a>
<a href="#">HSCEI</a>	<a href="#">Hang Seng China Enterprises Index</a>
<a href="#">HSI</a>	<a href="#">Hang Seng Index</a>
<a href="#">IBOV</a>	<a href="#">BOVESPA Brasil Sao Paulo Stock Exchange Index</a>
<a href="#">IXBTR</a>	<a href="#">S&amp;P 500 Material Select Sector Total Return</a>
<a href="#">IXCPR</a>	<a href="#">Communication Services Select Sector Index</a>
<a href="#">IXCTR</a>	<a href="#">Communication Services Select Sector Index TR</a>
<a href="#">IXETR</a>	<a href="#">S&amp;P 500 Energy Select Sector Total Return</a>
<a href="#">IXITR</a>	<a href="#">S&amp;P 500 Industrials Select Sector Total Return</a>
<a href="#">IXMTR</a>	<a href="#">S&amp;P 500 Financials Select Sector Total Return</a>
<a href="#">IXRTR</a>	<a href="#">S&amp;P 500 Consumer Staples Select Sector Total Return</a>
<a href="#">IXTTR</a>	<a href="#">S&amp;P 500 Technology Select Sector Total Return</a>
<a href="#">IXUTR</a>	<a href="#">S&amp;P 500 Utilities Select Sector Total Return</a>
<a href="#">IXVTR</a>	<a href="#">S&amp;P 500 Health Care Select Sector Total Return</a>
<a href="#">IXYTR</a>	<a href="#">S&amp;P 500 Consumer Discretionary Select Sector Total Return</a>
<a href="#">KOSPI</a>	<a href="#">Korea Composite Stock Price Index</a>
<a href="#">MDCPSPTR</a>	<a href="#">S&amp;P MidCap 400 Total Return</a>
<a href="#">MEXBOL</a>	<a href="#">Mexican IPC index (Indice de Precios y Cotizaciones)</a>
<a href="#">MID</a>	<a href="#">S&amp;P 400</a>
<a href="#">M8CA0EN</a>	<a href="#">MSCI Canada Energy Gross Return Index</a>
<a href="#">M8CA0FN</a>	<a href="#">MSCI Canada Financials Gross Return Index</a>
<a href="#">MSLUELAN</a>	<a href="#">MSCI Emerging Markets Latin America Small Cap Index (USD) (Net Dividends)</a>
<a href="#">NDDLCA</a>	<a href="#">MSCI Canada Index CAD Total Return (Net Dividends)</a>
<a href="#">NDDUHK</a>	<a href="#">MSCI Daily Total Return Net Hong Kong</a>
<a href="#">NDDUNA</a>	<a href="#">MSCI North American Index USD Total Return (Net Dividends)</a>
<a href="#">NDDUSG</a>	<a href="#">MSCI Daily Total Return Net Singapore</a>
<a href="#">NDDUP</a>	<a href="#">MSCI Daily Total Return Net Pacific</a>
<a href="#">NDDUPXJ</a>	<a href="#">MSCI Daily Total Return Net Pacific Ex Japan</a>
<a href="#">NDDUUS</a>	<a href="#">MSCI US Index Total Return (Net Dividends)</a>
<a href="#">NDDUMAF</a>	<a href="#">MSCI Daily Total Return Net Malaysia</a>
<a href="#">NDEUBRAF</a>	<a href="#">MSCI Brazil Index USD Total Return (Net Dividends)</a>
<a href="#">NDEUCHF</a>	<a href="#">MSCI China Index Total Return (Net Dividends)</a>
<a href="#">NDEUSIA</a>	<a href="#">MSCI Emerging Markets India</a>
<a href="#">NDEUMXF</a>	<a href="#">MSCI Mexico Index USD Total Return (Net Dividends)</a>
<a href="#">NDEUPH</a>	<a href="#">MSCI Daily Total Return Net Emerging Markets Philippines</a>
<a href="#">NDEUPR</a>	<a href="#">MSCI Daily Total Return Net Emerging Markets Peru</a>
<a href="#">NDEUSCH</a>	<a href="#">MSCI Chile Index Total Return (Net Dividends)</a>
<a href="#">NDEUSCO</a>	<a href="#">MSCI Colombia Index Total Return (Net Dividends)</a>
<a href="#">NDEUSKO</a>	<a href="#">MSCI Daily Total Return Net Emerging Markets Korea</a>
<a href="#">NDEUTHF</a>	<a href="#">MSCI Daily Total Return Net Emerging Markets Thailand</a>
<a href="#">NDEUSTW</a>	<a href="#">MSCI Daily Total Return Net Emerging Markets Taiwan</a>
<a href="#">NDUEE</a>	<a href="#">MSCI Daily Total Return Net Emerging Markets Asia</a>
<a href="#">NDUEEGFL</a>	<a href="#">MSCI Emerging Markets Latin America USD</a>
<a href="#">NDX</a>	<a href="#">NASDAQ-100</a>
<a href="#">NKY</a>	<a href="#">Nikkei 225</a>
<a href="#">NSEI</a>	<a href="#">S&amp;P CNX Nifty Index</a>
<a href="#">OEXT</a>	<a href="#">S&amp;P 100 Total Return</a>
<a href="#">OMX</a>	<a href="#">Stockholm 30 Index</a>
<a href="#">RGUSFL</a>	<a href="#">Russell 1000 Financial</a>
<a href="#">RTX</a>	<a href="#">Russell 2000</a>
<a href="#">RU10GRTR</a>	<a href="#">Russell 1000 Growth Total Return</a>
<a href="#">RU10INTR</a>	<a href="#">Russell 1000 Total Return</a>
<a href="#">RU10VATR</a>	<a href="#">Russell 1000 Value Total Return</a>



<a href="#"><u>RU20GRTR</u></a>	<a href="#"><u>Russell 2000 Growth Total Return</u></a>
<a href="#"><u>RU20INTR</u></a>	<a href="#"><u>Russell 2000 Total Return</u></a>
<a href="#"><u>RU20VATR</u></a>	<a href="#"><u>Russell 2000 Value Total Return</u></a>
<a href="#"><u>SIMSCI</u></a>	<a href="#"><u>MSCI Singapore Free Index</u></a>
<a href="#"><u>SMCPSPTR</u></a>	<a href="#"><u>S&amp;P SmallCap 600 Total Return</u></a>
<a href="#"><u>SMI</u></a>	<a href="#"><u>Swiss Market Index</u></a>
<a href="#"><u>SP5LVIT</u></a>	<a href="#"><u>S&amp;P 500 Low Volatility Total Return Index</u></a>
<a href="#"><u>SPDAUDT</u></a>	<a href="#"><u>S&amp;P 500 Dividend Aristocrats Total Return Index</u></a>
<a href="#"><u>SPSIBITR</u></a>	<a href="#"><u>S&amp;P Biotechnology Select Industry Total Return Index</u></a>
<a href="#"><u>SPSIOP</u></a>	<a href="#"><u>S&amp;P Oil &amp; Gas Exploration &amp; Production Select Industry Index</u></a>
<a href="#"><u>SPTRCOND</u></a>	<a href="#"><u>S&amp;P 500 Consumer Discretionary Sector Total Return Index</u></a>
<a href="#"><u>SPTRCONS</u></a>	<a href="#"><u>S&amp;P 500 Consumer Staples Sector Total Return Index</u></a>
<a href="#"><u>SPTRENRS</u></a>	<a href="#"><u>S&amp;P 500 Energy Sector Total Return Index</u></a>
<a href="#"><u>SPTRFINL</u></a>	<a href="#"><u>S&amp;P 500 Financials Sector Total Return Index</u></a>
<a href="#"><u>SPTRHLTH</u></a>	<a href="#"><u>S&amp;P 500 Health Care Sector Total Return Index</u></a>
<a href="#"><u>SPTRINDU</u></a>	<a href="#"><u>S&amp;P 500 Industrials Sector Total Return Index</u></a>
<a href="#"><u>SPTRINFT</u></a>	<a href="#"><u>S&amp;P 500 Information Technology Sector Total Return Index</u></a>
<a href="#"><u>SPTRMATR</u></a>	<a href="#"><u>S&amp;P 500 Materials Sector Total Return Index</u></a>
<a href="#"><u>SPTRMDCP</u></a>	<a href="#"><u>S&amp;P MidCap 400 Total Return</u></a>
<a href="#"><u>SPTRRLST</u></a>	<a href="#"><u>S&amp;P 500 Real Estate Sector Total Return Index</u></a>
<a href="#"><u>SPTRSMCP</u></a>	<a href="#"><u>S&amp;P SmallCap 600 Total Return</u></a>
<a href="#"><u>SPTRSVX</u></a>	<a href="#"><u>S&amp;P 500 Value Total Return Index</u></a>
<a href="#"><u>SPTRTELS</u></a>	<a href="#"><u>S&amp;P 500 Communication Services Sector Total Return Index</u></a>
<a href="#"><u>SPTRUTIL</u></a>	<a href="#"><u>S&amp;P 500 Utilities Sector Total Return Index</u></a>
<a href="#"><u>SPX</u></a>	<a href="#"><u>S&amp;P 500 Index</u></a>
<a href="#"><u>SPXT</u></a>	<a href="#"><u>S&amp;P 500 Total Return</u></a>
<a href="#"><u>STBANKXR</u></a>	<a href="#"><u>S&amp;P/TSX Composite Banks GICS Level Industry Group Total Return Index</u></a>
<a href="#"><u>STCHEMR</u></a>	<a href="#"><u>S&amp;P/TSX Composite Index Chemicals GICS Industry Total Return</u></a>
<a href="#"><u>STELUTXR</u></a>	<a href="#"><u>S&amp;P/TSX Composite Index Electric Utilities GICS Industry Total Return Index</u></a>
<a href="#"><u>STENRS</u></a>	<a href="#"><u>S&amp;P/TSX Composite Energy Sector GICS Level 1 Index</u></a>
<a href="#"><u>STENRSR</u></a>	<a href="#"><u>S&amp;P/TSX Composite Energy Index Total Return Swap</u></a>
<a href="#"><u>STFINLR</u></a>	<a href="#"><u>S&amp;P/TSX Composite Financials GICS Level Sector Total Return Index</u></a>
<a href="#"><u>STINSUR</u></a>	<a href="#"><u>S&amp;P/TSX Composite Insurance GICS Industry Group Total Return Index</u></a>
<a href="#"><u>STLIFER</u></a>	<a href="#"><u>S&amp;P/TSX Composite Life &amp; Health Insurance Total Return Index</u></a>

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

*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.

## Variance Swaps: NASDAQ-100 Index

### Swap Specifications Pursuant to Rule 1101

(c) ~~Swaps that are not subject to mandatory clearing but which are accepted for clearing by a Clearing Organization and which are offered for trading on the SEF as Permitted Transactions may be submitted voluntarily by the parties for clearing.~~

(d) ~~Swaps not accepted by a Clearing Organization for clearing may be listed for trading subject to the Rules of the SEF as Permitted Transactions.~~

(e) ~~The terms and conditions of the Swaps offered for trading as Permitted Transactions on the SEF incorporate such credit and other terms as the parties may establish through their pre-existing bi-lateral agreement.~~

(f) ~~The variance swaps listed for trading by the SEF have the following specifications:~~

<del><b>Effective Date</b></del>	<del>The Observation Start Date.</del>
<del><b>Termination Date</b></del>	<del>The Cash Settlement Payment Date.</del>
<del><b>Related Exchange</b></del>	<del>The primary exchange on which futures contracts relating to the relevant index are traded, if any.</del>
<del><b>Variance Buyer</b></del>	<del>As agreed by the counterparties.</del>
<del><b>Variance Seller</b></del>	<del>As agreed by the counterparties.</del>
<del><b>Equity Amount Payer</b></del>	<del>If the Equity Amount is a positive amount, the Variance Seller shall be the Equity Amount Payer and shall pay the Variance Buyer an amount equal to the Equity Amount on the Cash Settlement Payment Date. If the Equity amount is a negative amount, the Variance Buyer shall be the Equity Amount Payer and shall pay the Variance Seller an amount equal to the absolute value of the Equity Amount on the Cash Settlement Payment Date.</del>
<del><b>Valuation Date</b></del>	<del>As agreed by the counterparties.</del>
<del><b>Valuation Time</b></del>	<del>The scheduled closing time of the relevant exchange.</del>
<del><b>Observation Start Date</b></del>	<del>As agreed by the counterparties.</del>
<del><b>Observation End Date</b></del>	<del>As agreed by the counterparties.</del>
<del><b>Observation Day</b></del>	<del>Each Scheduled Trading Day during the Observation Period.</del>
<del><b>Non-Disrupted Observation Day</b></del>	<del>An Observation Day that is not a Disrupted Day.</del>
<del><b>Observation Period</b></del>	<del>The period from, but excluding, the Observation Start Date to, but excluding, the Observation End Date.</del>

<b>Equity Amount</b>	The variance amount multiplied by the difference of (i) the square of the final realized volatility and (ii) the Variance Strike Price.
<b>Variance Strike Price</b>	As agreed by the counterparties.
<b>Settlement Currency</b>	As agreed by the counterparties.
<b>Cash Settlement Payment</b>	One settlement cycle following the Valuation Date.



## Variance Swaps: Russell 1000 Index

### Swap Specifications Pursuant to Rule 1101

(a) ~~Swaps that are not subject to mandatory clearing but which are accepted for clearing by a Clearing Organization and which are offered for trading on the SEF as Permitted Transactions may be submitted voluntarily by the parties for clearing.~~

(b) ~~Swaps not accepted by a Clearing Organization for clearing may be listed for trading subject to the Rules of the SEF as Permitted Transactions.~~

(c) ~~The terms and conditions of the Swaps offered for trading as Permitted Transactions on the SEF incorporate such credit and other terms as the parties may establish through their pre-existing bi-lateral agreement.~~

(d) ~~The variance swaps listed for trading by the SEF have the following specifications:~~

<del>Effective Date</del>	<del>The Observation Start Date.</del>
<del>Termination Date</del>	<del>The Cash Settlement Payment Date.</del>
<del>Related Exchange</del>	<del>The primary exchange on which futures contracts relating to the relevant index are traded, if any.</del>
<del>Variance Buyer</del>	<del>As agreed by the counterparties.</del>
<del>Variance Seller</del>	<del>As agreed by the counterparties.</del>
<del>Equity Amount Payer</del>	<del>If the Equity Amount is a positive amount, the Variance Seller shall be the Equity Amount Payer and shall pay the Variance Buyer an amount equal to the Equity Amount on the Cash Settlement Payment Date. If the Equity amount is a negative amount, the Variance Buyer shall be the Equity Amount Payer and shall pay the Variance Seller an amount equal to the absolute value of the Equity Amount on the Cash Settlement Payment Date.</del>
<del>Valuation Date</del>	<del>As agreed by the counterparties.</del>
<del>Valuation Time</del>	<del>The scheduled closing time of the relevant exchange.</del>
<del>Observation Start Date</del>	<del>As agreed by the counterparties.</del>
<del>Observation End Date</del>	<del>As agreed by the counterparties.</del>
<del>Observation Day</del>	<del>Each Scheduled Trading Day during the Observation Period.</del>
<del>Non-Disrupted Observation Day</del>	<del>An Observation Day that is not a Disrupted Day.</del>
<del>Observation Period</del>	<del>The period from, but excluding, the Observation Start Date to, but excluding, the Observation End Date.</del>



<b>Equity Amount</b>	The variance amount multiplied by the difference of (i) the square of the final realized volatility and (ii) the Variance Strike Price.
<b>Variance Strike Price</b>	As agreed by the counterparties.
<b>Settlement Currency</b>	As agreed by the counterparties.
<b>Cash Settlement Payment</b>	One settlement cycle following the Valuation Date.

## Variance Swaps: S&P 500 Index

### Swap Specifications Pursuant to Rule 1101

~~2. Swaps that are not subject to mandatory clearing but which are accepted for clearing by a Clearing Organization and which are offered for trading on the SEF as Permitted Transactions may be submitted voluntarily by the parties for clearing.~~

~~3. Swaps not accepted by a Clearing Organization for clearing may be listed for trading subject to the Rules of the SEF as Permitted Transactions.~~

~~4. The terms and conditions of the Swaps offered for trading as Permitted Transactions on the SEF incorporate such credit and other terms as the parties may establish through their pre-existing bi-lateral agreement.~~

~~5. The variance swaps listed for trading by the SEF have the following specifications:~~

<del>Effective Date</del>	<del>The Observation Start Date.</del>
<del>Termination Date</del>	<del>The Cash Settlement Payment Date.</del>
<del>Related Exchange</del>	<del>The primary exchange on which futures contracts relating to the relevant index are traded, if any.</del>
<del>Variance Buyer</del>	<del>As agreed by the counterparties.</del>
<del>Variance Seller</del>	<del>As agreed by the counterparties.</del>
<del>Equity Amount Payer</del>	<del>If the Equity Amount is a positive amount, the Variance Seller shall be the Equity Amount Payer and shall pay the Variance Buyer an amount equal to the Equity Amount on the Cash Settlement Payment Date. If the Equity amount is a negative amount, the Variance Buyer shall be the Equity Amount Payer and shall pay the Variance Seller an amount equal to the absolute value of the Equity Amount on the Cash Settlement Payment Date.</del>
<del>Valuation Date</del>	<del>As agreed by the counterparties.</del>
<del>Valuation Time</del>	<del>The scheduled closing time of the relevant exchange.</del>
<del>Observation Start Date</del>	<del>As agreed by the counterparties.</del>
<del>Observation End Date</del>	<del>As agreed by the counterparties.</del>
<del>Observation Day</del>	<del>Each Scheduled Trading Day during the Observation Period.</del>
<del>Non-Disrupted Observation Day</del>	<del>An Observation Day that is not a Disrupted Day.</del>
<del>Observation Period</del>	<del>The period from, but excluding, the Observation Start Date to, but excluding, the Observation End Date.</del>

<b>Equity Amount</b>	The variance amount multiplied by the difference of (i) the square of the final realized volatility and (ii) the Variance Strike Price.
<b>Variance Strike Price</b>	As agreed by the counterparties.
<b>Settlement Currency</b>	As agreed by the counterparties.
<b>Cash Settlement Payment</b>	One settlement cycle following the Valuation Date.

## Variance Swaps: S&P Toronto Stock Exchange Index

### Swap Specifications Pursuant to Rule 1101

~~(v) Swaps that are not subject to mandatory clearing but which are accepted for clearing by a Clearing Organization and which are offered for trading on the SEF as Permitted Transactions may be submitted voluntarily by the parties for clearing.~~

~~(vi) Swaps not accepted by a Clearing Organization for clearing may be listed for trading subject to the Rules of the SEF as Permitted Transactions.~~

~~(vii) The terms and conditions of the Swaps offered for trading as Permitted Transactions on the SEF incorporate such credit and other terms as the parties may establish through their pre-existing bi-lateral agreement.~~

~~(viii) — The variance swaps listed for trading by the SEF have the following specifications:~~

<del><b>Effective Date:</b></del>	<del>The Observation Start Date.</del>
<del><b>Termination Date:</b></del>	<del>The Cash Settlement Payment Date.</del>
<del><b>Related Exchange:</b></del>	<del>The primary exchange on which futures contracts relating to the relevant index are traded, if any.</del>
<del><b>Variance Buyer:</b></del>	<del>As agreed by the counterparties.</del>
<del><b>Variance Seller:</b></del>	<del>As agreed by the counterparties.</del>
<del><b>Equity Amount Payer:</b></del>	<del>If the Equity Amount is a positive amount, the Variance Seller shall be the Equity Amount Payer and shall pay the Variance Buyer an amount equal to the Equity Amount on the Cash Settlement Payment Date. If the Equity amount is a negative amount, the Variance Buyer shall be the Equity Amount Payer and shall pay the Variance Seller an amount equal to the absolute value of the Equity Amount on the Cash Settlement Payment Date.</del>
<del><b>Valuation Date:</b></del>	<del>As agreed by the counterparties.</del>
<del><b>Valuation Time:</b></del>	<del>The scheduled closing time of the relevant exchange.</del>
<del><b>Observation Start Date:</b></del>	<del>As agreed by the counterparties.</del>
<del><b>Observation End Date:</b></del>	<del>As agreed by the counterparties.</del>
<del><b>Observation Day:</b></del>	<del>Each Scheduled Trading Day during the Observation Period.</del>
<del><b>Non-Disrupted Observation Day:</b></del>	<del>An Observation Day that is not a Disrupted Day.</del>
<del><b>Observation Period:</b></del>	<del>The period from, but excluding, the Observation Start Date to, but excluding, the Observation End Date.</del>

<b>Equity Amount:</b>	The variance amount multiplied by the difference of (i) the square of the final realized volatility and (ii) the Variance Strike Price.
<b>Variance Strike Price:</b>	As agreed by the counterparties.
<b>Settlement Currency:</b>	As agreed by the counterparties.
<b>Cash Settlement Payment:</b>	One settlement cycle following the Valuation Date.

## **FOREIGN EXCHANGE**

Subject to the requirements of the Rules, Swaps in the foreign exchange asset class may be effected (i) in the Order Book pursuant to Rule 505, (ii) as a voice-executed trade or a Brokered Trade pursuant to Rule 509 or (iii) as a Block Trade pursuant to Rule 601.

## Exotic FX Options

The terms and conditions of the F/X options incorporate by reference such credit and other terms as the parties may establish through their pre-existing bilateral agreement. The F/X options have the following characteristics:

<b>Contract Overview</b>	An exotic foreign-exchange option (or F/X option) is a derivative financial instrument that gives one party the right, but not the obligation, to buy or sell a specific quantity of one currency in exchange for another currency at a pre-arranged exchange rate on a specified date, with additional features to determine price, exercisability, termination or value that may be based on any number of factors, averages, indices or time periods. A listing of major F/X options appears below.
<b>Trade Date</b>	The date on which the parties enter into the options contract.
<b>Option Style</b>	European Style: A European style option allows the holder to exercise only at the expiration date, i.e. a single pre-defined point in time. American Style: An American style option allows the owner to exercise the option at any time before the expiration date.
<b>Call Currency</b>	Currency for call option.
<b>Put Currency</b>	Currency for put option.
<b>Strike Price</b>	The price at which an investor can exercise an option.
<b>Rebate</b>	A feature of some exotic options where the premium of the option is refunded if at the time the option expires it has no value.
<b>Expiration Date</b>	The date at which the option contract expires.
<b>Expiration Time</b>	The time on which the option contract expires.
<b>Settlement Date</b>	The date on which the option settles.
<b>Premium</b>	Premium amount expressed in the premium currency.
<b>Premium Currency</b>	Currency in which the option premium is expressed.
<b>Premium Date</b>	The date on which the premium amount is due.
<b>Quoting Convention and Minimum Increment</b>	Notional amount, agreed by the counterparties.
<b>Minimum Size</b>	Notional amount, agreed by the counterparties.
<b>Notional Currency</b>	Currency in which the contract size is expressed.

### **Binary Options**

A Binary (or Digital) Option is an option that has a fixed payment at expiration if the option is in the money or nothing at all if the option expires out of the money. Binary options are usually European Style options. Below is a list of the Binary Option styles that may be listed for trading on GFI's Trading System:

- **One Touch**. A one touch option is a type of option that gives the holder a payout one the price of the underlying reaches a certain price level, similar to the Barrier Option below. However, with the One Touch Binary Option, once the barrier is reached or surpassed a predetermined fixed payout is achieved. Whereas, with the Barrier Option, it is the optionality that is triggered by the barrier being reached.
- **Double One Touch**. A double one touch is similar to the one touch option, however in this case two predetermined price levels are set which can be above and below the current price of the underlying, giving a type of straddle position. The option pays out the fixed payment if one of the predetermined price levels are reached or surpassed.
- **No Touch/Double No Touch**. The no touch and double no touch options are similar to a one touch and double one touch. With these, the payment is achieved if the underlying does not reach either a single predetermined price level or if the underlying stays within a range that is set by two price points for the underlying (the double no touch).

### **Bermuda Options**

Bermuda Options are a hybrid between an American and European style option. Unlike American style options, which can be exercised anytime and European style options, which can be exercised only upon expiration, Bermuda Options can be exercised prior to maturity, but only on certain dates.

### **Barrier Options**

Barrier Options are options that are either activated or deactivated when the price of the underlying passes through some predefined value referred to as the barrier. Below is a list of Barrier Options styles that may be listed for trading on GFI's Trading System. Any of these styles may be put or call options and may be combined to contain additional features.

- **Knock Out**. A knock out option has an additional price barrier for the underlying that, if reached, causes the option to expire with no value. This sets a limit or cap on the potential profit for the option buyer and sets a limit on the potential loss for the option writer.
- **Double Knock Out**. A double knock out option is similar to a knock out option, however with the double knock out two price barriers are set on the underlying. If either barrier is reached, the option is terminated with no value.
- **Knock In**. A knock in option is an option contract that is latent until a certain price level for the underlying is reached. The price level, or barrier, can only be reached if the option is moving out of the money. Until that price level is reached, the option is not exercisable.
- **Double Knock In**. Similar to a knock in, where two price levels for the underlying are set. If either of these price levels or barriers are reached, the option becomes exercisable.



- **Reverse Knock In**. A reverse knock in option is a European style option that becomes exercisable once a predetermined price barrier of the underlying is reached. The barrier can only be reached if the option is moving into the money (gaining value). If the price level or barrier is hit the payout is based on the underlying vanilla option.
- **Reverse Knock Out**. Similar to the reverse knock in except in this case if the price barrier is hit the option is knocked out and there is no payout. If the price barrier is not reached, the option value is based on the underlying vanilla option.
- **Knock in Knock out**. With this type of option the predetermined price barrier of the underlying must be hit to activate the underlying option. One that first barrier is hit and the option is activated, there is a second price barrier that can cause the option to be knocked out or terminated prior to expiration. If this second barrier is hit before expiration, the option is extinguished. An additional form of this type of option may be written that is based on which price barrier is hit first. If the knock in barrier is hit, the option value is based on the underlying vanilla option and the knock out barrier is no longer valid. If the knock out barrier is hit first, the option is extinguished.
- **Spot Knock Out**. A spot knock out option is one where the barrier price for the underlying is the spot price. If the barrier is hit before expiration, the option is knocked out.
- **European Knock out/Knock In**. Similar to the knock out and knock in except the barrier set on this option is only applicable at expiration. If the barrier is hit at expiration the option is either knocked out or becomes exercisable.

## Non-deliverable Forwards

The terms and conditions of the swaps incorporate by reference such credit and other terms as the parties may establish through their pre-existing bilateral agreement. The swaps have the following characteristics:

<b>Contract Overview</b>	An NDF is a forward contract in which the counterparties settle the difference between the NDF price or rate and the prevailing spot price or rate on an agreed upon notional amount.
<b>Reference Currency</b>	Non-deliverable currency: <ul style="list-style-type: none"><li>• CNY Chinese Renminbi</li><li>• IDR Indonesian Rupiah</li><li>• INR Indian Rupee</li><li>• KRW South Korean Won</li><li>• MYR Malaysian Ringgit</li><li>• PHO Philippine Peso</li><li>• TWD Taiwan Dollar</li><li>• VND Vietnamese Dong</li><li>• EGP Egyptian Pound</li><li>• RUB Russian Ruble</li><li>• KZT Kazakh Tenge</li><li>• ARS Argentine Peso</li><li>• BRL Brazilian Real</li><li>• CLP Chilean Peso</li><li>• COP Colombian Peso</li><li>• GTQ Guatemalan Quetzal</li><li>• PEN Peruvian Nuevo Sol</li><li>• UYU Uruguayan Peso</li><li>• VEB Venezuelan Bolivar</li></ul>
<b>Settlement Currency</b>	See list below.
<b>Notional Currency</b>	Currency in which the contract size is expressed.
<b>Trade Date</b>	The date on which the parties enter into the contract.
<b>Quoting Convention and Minimum Increment</b>	Notional amount, agreed by the counterparties.
<b>Minimum Size</b>	Notional amount, agreed by the counterparties.
<b>Trading Conventions</b>	Buy or Sell which refers to the contract size expressed in notional currency.

<b>Forward Rate</b>	Currency Exchange Rate expressed as the amount of Reference Currency per unit of Settlement Currency.
<b>Settlement Date</b>	The date on which the option settles.
<b>Fixing Date</b>	The date on which the difference between the prevailing market exchange rate and the agreed forward exchange rate is calculated.
<b>Settlement Procedure</b>	Bilateral settlement performed in settlement currency.

*List of currencies:*

AED UAE Dirham	IDR Indonesian Rupiah (NDF)	RON New Romanian Leu
AFN Afghanistan Afghani	ILS Israeli Shekel	RSD Serbian Dinar
ALL Albanian Lek	INR Indian Rupee (NDF)	RUB Russian Ruble (NDF)
AMD Armenia Dram	ISK Iceland Krona	RWF Rwanda Franc
ANG Neth. Ant. Guilder	JMD Jamaica Dollar	SAR Saudi Riyal
AOA Angolan Kwanza	JOD Jordanian Dinar	SBD Solomon Is. Dollar
ARS Argentine Peso (NDF)	JPY Japanese Yen	SCR Seychelles Rupee
ARS Argentine Peso	KES Kenyan Shilling	SDD Sudanese Dinar
AUD Australian Dollar	KGS Kyrgyzstan Som	SDG New Sudanese Pound
AWG Aruban Guilder	KHR Cambodia Riel	SDP Old Sudanese Pound
BAM Bosnia-Herze Convrt Mrka	KMF Comoros Franc	SEK Swedish Krona
BBD Barbados Dollar	KRW South Korean Won (NDF)	SGD Singapore Dollar
BDT Bangladesh Taka	KWD Kuwaiti Dinar	SIT Slovenia Tolar
BGN Bulgarian Lev	KYD Cayman Islands Dollar	SKK Slovakia Koruna
BHD Bahraini Dinar	KZT Kazakhstan Tenge	SLL Sierra Leone Leone
BIF Burundi Franc	LAK Laos Kip	SOS Somali Shilling
BMD Bermudian Dollar	LBP Lebanese Pound	SRD Suriname Dollar
BND Brunei Dollar	LKR Sri Lankan Rupee	SSP South Sudanese Pound
BOB Bolivian Boliviano	LTL Lithuanian Litas	STD Sao Tome Dobra
BRL Brazilian Real (NDF)	LVL Latvian Lats	SVC El Salvador Colon
BSD Bahamas Dollar	MAD Moroccan Dirham	THB Thai Baht
BWP Botswana Pula	MDL Moldova Leu	THO Thai Baht Onshore
BYR Belarus Ruble	MGA Malagascy Ariary	TJS Tajikistan Somoni
BZD Belize Dollar	MKD Macedonia Denar	TND Tunisian Dinar
CAD Canadian Dollar	MMK Myanmar Kyat	TOP Tonga Pa'Anga
CDF Congolese Franc	MNT Mongolian Togrog	TRY Turkish Lira
CHF Swiss Franc	MOP Macau Pataca	TTD Trinidad/Tobago Dol
CLF Chilean UF	MRO Mauritania Ouguiya	TWD Taiwan Dollar (NDF)
CLP Chilean Peso	MUR Mauritius Rupee	TZS Tanzanian Shilling
CNY China Renminbi (NDF)	MVR Maldives Rufiyaa	UAH Ukraine Hryvnia (NDF)
COP Colombian Peso	MWK Malawi Kwacha	UDI Mexican UDI

CRC Costa Rican Colon

MXN Mexican Peso

UGX Ugandan Shilling

CVE Cape Verde Escudo	MYR Malaysian Ringgit (NDF)	USD US Dollar
CZK Czech Koruna	MZM Mozambique Metical	UYU Uruguay Peso
DJF Djibouti Franc	MZN New Mozambique Metical	UZS Uzbekistan Sum
DKK Danish Krone	NGN Nigeria Naira (NDF)	VEE Venezuela Essential Rate
DOP Dominican Repb.	NID New Iraqi Dinar	VEF Venezuelan Bolivar
DZD Algerian Dinar	NIO Nicaragua Cordoba	VND Vietnamese Dong (NDF)
EGP Egyptian Pound (NDF)	NLG Dutch Guilder	VUV Vanuatu Vatu
ERN Eritrean Nakfa	NOK Norwegian Krone	WST Samoa (West) Tala
EUR Euro	NPR Nepalese Rupee	XAF CFA Franc Beac
FJD Fiji Dollar	NZD New Zealand Dollar	XCD East Caribbean Dollar
GBP British Pound	OMR Omani Rial	XDR Special Drawing Rights
GEL Georgia Lari	PAB Panamanian Balboa	XOF CFA Franc Bceao
GMD Gambian Dalasi	PEN Peruvian New Sol	XPF Pacific Island Franc
GNF Guinea Franc	PGK Papua N.G. Kina	XSU Sucre
GTQ Guatemala Quetzal	PHP Philippines Peso (NDF)	YER Yemeni Rial
GYD Guy Settlementana Dollar	PKR Pakistani Rupee	ZAR S. African Rand
HKD Hong Kong Dollar	PLN Polish Zloty	ZMK Zambian Kwacha
HNL Honduras Lempira	PTE Portuguese Escudo	ZMW Zambian Kwacha (NDF)
HRK Croatia Kuna	PYG Paraguay Guarani	ZWR Zimbabwe Dollar
HTG Haiti Gourde	QAR Qatari Riyal	
HUF Hungarian Forint	ROL Romanian Leu	

## Vanilla FX Options

The terms and conditions of the F/X options incorporate by reference such credit and other terms as the parties may establish through their pre-existing bilateral agreement. The F/X options have the following characteristics:

<b>Contract Overview</b>	A vanilla F/X option is a derivative financial instrument that gives one party the right, but not the obligation, to exchange money denominated in one currency into another currency at a pre-arranged exchange rate on a specified date.
<b>Trade Date</b>	The date on which the parties enter into the options contract.
<b>Option Style</b>	European Style: A European style option allows the holder to exercise only at the expiration date, i.e. a single pre-defined point in time.  American Style: An American style option allows the owner to exercise the option at any time before the expiration date.
<b>Call Currency</b>	Currency for call option.
<b>Put Currency</b>	Currency for put option.
<b>Strike Price</b>	The price at which an investor can exercise an option.
<b>Rebate</b>	A feature of some exotic options where the premium of the option is refunded if at the time the option expires it has no value.
<b>Expiration Date</b>	The date at which the option contract expires.
<b>Expiration Time</b>	The time on which the option contract expires.
<b>Settlement Date</b>	The date on which the option settles.
<b>Premium</b>	Premium amount expressed in the premium currency.
<b>Premium Currency</b>	Currency in which the option premium is expressed.
<b>Premium Date</b>	The date on which the premium amount is due.
<b>Quoting Convention and Minimum Increment</b>	Notional amount, agreed by the counterparties.
<b>Minimum Size</b>	Notional amount, agreed by the counterparties.
<b>Notional Currency</b>	Currency in which the contract size is expressed.

## INTEREST RATES

Subject to the requirements of the Rules, Swaps in the credit asset class may be effected (i) in the Order Book pursuant to Rule 505, (ii) through a Request for Quote pursuant to Rule 508, (iii) as a voice-executed trade or a Brokered Trade pursuant to Rule 509 or (iv) as a Block Trade pursuant to Rule 601.

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<sup>1</sup>, SOFR etc.
- Constant Maturity indices, e.g. 5Y IRS
- Inflation indices, e.g. UK RPI, French HICP, US CPI

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<sup>1</sup> As we transition away from LIBOR, all the swaps that reference the USD LIBOR are permitted. Listing USD LIBOR in the contract specifications allows for the settlement of pending contracts with future expiration dates. The anticipated date for LIBOR to end is September 30, 2024 which is when all the trading activity regarding LIBOR would cease.

Overnight Index Swaps: SOFR and SONIA

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
Fixed Leg			
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
Floating Leg			
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	0Day	0Days	0Days
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	kACT/365.FIXED
London/GBLO	London/GBLO
0 Day	0Day
Annual	Annual
ACT/365.FIXED	kACT/365.FIXED
London/GBLO	London/GBLO
0Days	0Days
London/GBLO	London/GBLO
0Days	0Days
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)



### **Brazilian Real Interest Rate Swap: Basis**

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The terms and conditions of the swaps incorporate by reference such credit and other terms as the parties may establish through their pre-existing bilateral agreement. The swaps have the following characteristics:

<b>Currency</b>	Brazilian Real (BRL)
<b>Floating Rate Indexes</b>	CETIP CDI Rate
<b>Stated Termination Date Range</b>	As negotiated between the parties Spot & Forward starting, and broken dates (bespoke tenors)
<b>Optionality</b>	No
<b>Dual Currencies</b>	No
<b>Conditional Notional Amounts</b>	No

## **Brazilian Real Interest Rate Swap: Fixed-to-Floating**

The terms and conditions of the swaps incorporate by reference such credit and other terms as the parties may establish through their pre-existing bilateral agreement. The swaps have the following characteristics:

<b>Currency</b>	Brazilian Real (BRL)
<b>Floating Rate Indexes</b>	CETIP CDI Rate
<b>Stated Start Date Range</b>	As negotiated between the parties Spot & Forward starting, and broken dates (bespoke tenors)
<b>Optionality</b>	No
<b>Dual Currencies</b>	No
<b>Conditional Notional Amounts</b>	No

## **Brazilian Real Interest Rate Swap: Forward Rate Agreement**

The terms and conditions of the swaps incorporate by reference such credit and other terms as the parties may establish through their pre-existing bilateral agreement. The swaps have the following characteristics:

<b>Currency</b>	Brazilian Real (BRL)
<b>Floating Rate Indexes</b>	CETIP CDI Rate
<b>Stated Termination Date Range</b>	As negotiated between the parties
<b>Optionality</b>	No
<b>Dual Currencies</b>	No
<b>Conditional Notional Amounts</b>	No

## Chilean Peso Inflation-Protected Interest Rate Forward

The terms and conditions of the swaps incorporate by reference such credit and other terms as the parties may establish through their pre-existing bilateral agreement. The swaps have the following characteristics:

<b>Currency</b>	Chilean Peso (CLP)
<b>Floating Rate Indexes</b>	Unidad de Fomento (UF)
<b>Settlement Currency</b>	U.S. Dollar (USD)
<b>Stated Termination Date Range</b>	As negotiated between the parties Spot & Forward starting, and broken dates (bespoke tenors)
<b>Optionality</b>	No
<b>Dual Currencies</b>	No
<b>Conditional Notional Amounts</b>	No

## Chilean Peso Inflation-Protected Interest Rate Swap

The terms and conditions of the swaps incorporate by reference such credit and other terms as the parties may establish through their pre-existing bilateral agreement. The swaps have the following characteristics:

<b>Currency</b>	Chilean Peso (CLP)
<b>Floating Rate Indexes</b>	Unidad de Fomento (UF)
<b>Stated Start Date Range</b>	As negotiated between the parties Spot & Forward starting, and broken dates (bespoke tenors)
<b>Optionality</b>	No
<b>Dual Currencies</b>	No
<b>Conditional Notional Amounts</b>	No

## Chilean Peso Interest Rate Swap: Basis

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The terms and conditions of the swaps incorporate by reference such credit and other terms as the parties may establish through their pre-existing bilateral agreement. The swaps have the following characteristics:

<b>Currency</b>	Chilean Peso (CLP)
<b>Floating Rate Indexes</b>	SOFR/Indice Camara Promedio
<b>Stated Termination Date Range</b>	As negotiated between the parties Spot & Forward starting, and broken dates (bespoke tenors)
<b>Optionality</b>	No
<b>Dual Currencies</b>	No
<b>Conditional Notional Amounts</b>	No

### Chilean Peso Interest Rate Swap: Fixed-to-Floating

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The terms and conditions of the swaps incorporate by reference such credit and other terms as the parties may establish through their pre-existing bilateral agreement. The swaps have the following characteristics:

<b>Currency</b>	Chilean Peso (CLP)
<b>Floating Rate Indexes</b>	Indice Camara Promedio
<b>Stated Start Date Range</b>	As negotiated between the parties Spot & Forward starting, and broken dates (bespoke tenors)
<b>Optionality</b>	No
<b>Dual Currencies</b>	No
<b>Conditional Notional Amounts</b>	No

## Chilean Peso Interest Rate Swap: Forward Rate Agreement

The terms and conditions of the swaps incorporate by reference such credit and other terms as the parties may establish through their pre-existing bilateral agreement. The swaps have the following characteristics:

<b>Currency</b>	Chilean Peso (CLP)
<b>Floating Rate Indexes</b>	Indice Camara Promedio
<b>Stated Termination Date Range</b>	As negotiated between the parties
<b>Optionality</b>	No
<b>Dual Currencies</b>	No
<b>Conditional Notional Amounts</b>	No



## Colombian Peso Inflation-Protected Interest Rate Forward

The terms and conditions of the swaps incorporate by reference such credit and other terms as the parties may establish through their pre-existing bilateral agreement. The swaps have the following characteristics:

<b>Currency</b>	Colombian Peso
<b>Floating Rate Indexes</b>	Unidad de valor real
<b>Settlement Currency</b>	U.S. Dollar (USD)
<b>Stated Termination Date Range</b>	As negotiated between the parties Spot & Forward starting, and broken dates (bespoke tenors)
<b>Optionality</b>	No
<b>Dual Currencies</b>	No
<b>Conditional Notional Amounts</b>	No

## Colombian Peso Inflation-Protected Interest Rate Swap

The terms and conditions of the swaps incorporate by reference such credit and other terms as the parties may establish through their pre-existing bilateral agreement. The swaps have the following characteristics:

<b>Currency</b>	Colombian Peso (COP)
<b>Floating Rate Indexes</b>	Unidad de valor real (UVR)
<b>Stated Start Date Range</b>	As negotiated between the parties Spot & Forward starting, and broken dates (bespoke tenors)
<b>Optionality</b>	No
<b>Dual Currencies</b>	No
<b>Conditional Notional Amounts</b>	No

## Colombian Peso Interest Rate Swap: Basis

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The terms and conditions of the swaps incorporate by reference such credit and other terms as the parties may establish through their pre-existing bilateral agreement. The swaps have the following characteristics:

<b>Currency</b>	Colombian Peso (COP)
<b>Floating Rate Indexes</b>	Tasa de cambio del peso colombiano (TRM)
<b>Stated Termination Date Range</b>	As negotiated between the parties Spot & Forward starting, and broken dates (bespoke tenors)
<b>Optionality</b>	No
<b>Dual Currencies</b>	No
<b>Conditional Notional Amounts</b>	No

### Colombian Peso Interest Rate Swap: Fixed-to-Floating

The terms and conditions of the swaps incorporate by reference such credit and other terms as the parties may establish through their pre-existing bilateral agreement. The swaps have the following characteristics:

<b>Currency</b>	Colombian Peso (COP)
<b>Floating Rate Indexes</b>	Tasa de cambio del peso colombiano (TRM)
<b>Stated Start Date Range</b>	As negotiated between the parties Spot & Forward starting, and broken dates (bespoke tenors)
<b>Optionality</b>	No
<b>Dual Currencies</b>	No
<b>Conditional Notional Amounts</b>	No

## Colombian Peso Interest Rate Swap: Forward Rate Agreement

The terms and conditions of the swaps incorporate by reference such credit and other terms as the parties may establish through their pre-existing bilateral agreement. The swaps have the following characteristics:

<b>Currency</b>	Colombian Peso (COP)
<b>Floating Rate Indexes</b>	Tasa de Cambio del peso colombiano (TRM)
<b>Stated Termination Date Range</b>	As negotiated between the parties
<b>Optionality</b>	No
<b>Dual Currencies</b>	No
<b>Conditional Notional Amounts</b>	No

## Euro EURIBOR Interest Rate Swap: Basis

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The terms and conditions of the swap as established by the DCO in its rules or bylaws are incorporated by reference herein and are the terms and conditions of the swap. The swaps have the following characteristics:

<b>Currency</b>	Euro (EUR)
<b>Floating Rate Indexes</b>	EURIBOR/EURIBOR EURIBOR/SONIAS
<b>Stated Termination Date Range</b>	28 days to 50 years Spot & Forward starting, and broken dates (bespoke tenors)
<b>Optionality</b>	No
<b>Dual Currencies</b>	No
<b>Conditional Notional Amounts</b>	No

### Euro EURIBOR Interest Rate Swap: Fixed-to-Floating

The terms and conditions of the swap as established by the DCO in its rules or bylaws are incorporated by reference herein and are the terms and conditions of the swap. The swaps have the following characteristics:

<b>Currency</b>	Euro (EUR)
<b>Floating Rate Indexes</b>	EURIBOR
<b>Stated Start Date Range</b>	28 days to 50 years Spot & Forward starting, and broken dates (bespoke tenors)
<b>Optionality</b>	No
<b>Dual Currencies</b>	No
<b>Conditional Notional Amounts</b>	No

## Euro EURIBOR Interest Rate Swap: Forward Rate Agreement

The terms and conditions of the swap as established by the DCO in its rules or bylaws are incorporated by reference herein and are the terms and conditions of the swap. The swaps have the following characteristics:

<b>Currency</b>	Euro (EUR)
<b>Floating Rate Indexes</b>	EURIBOR
<b>Stated Termination Date Range</b>	3 days to 3 years
<b>Optionality</b>	No
<b>Dual Currencies</b>	No
<b>Conditional Notional Amounts</b>	No



## Euro EURIBOR Interest Rate Swap: Market Agreed Coupon

The terms and conditions of the swap as established by the DCO in its rules or bylaws are incorporated by reference herein and are the terms and conditions of the swap. The swaps have the following characteristics:

<b>Currency</b>	Euro
<b>Fixed Coupon</b>	<a href="http://www.sifma.org/services/standard-forms-and-documentation/swaps/">http://www.sifma.org/services/standard-forms-and-documentation/swaps/</a>
<b>Floating Rate Indexes</b>	EURIBOR
<b>Tenors</b>	1y, 2yrs, 3yrs, 5yrs, 7yrs, 10yrs, 15yrs, 20yrs, 30yrs
<b>Effective Dates</b>	IMM dates (3rd Weds of March, June, September, December)

## Euro EURIBOR Interest Rate Swap: Overnight Index

The terms and conditions of the swap as established by the DCO in its rules or bylaws are incorporated by reference herein and are the terms and conditions of the swap. The swaps have the following characteristics:

<b>Currency</b>	Euro (EUR) (“EONIAS”)
<b>Floating Rate Indexes</b>	EURIBOR
<b>Stated Termination Date Range</b>	7 days to 50 years Spot & Forward starting, and broken dates (bespoke tenors)
<b>Optionality</b>	No
<b>Dual Currencies</b>	No
<b>Conditional Notional Amounts</b>	No

## GBP SOFR Interest Rate Swap: Basis

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The terms and conditions of the swap as established by the DCO in its rules or bylaws are incorporated by reference herein and are the terms and conditions of the swap. The swaps have the following characteristics:

<b>Currency</b>	Sterling (GBP)
<b>Floating Rate Indexes</b>	SOFR/SOFR SOFR/SONIAS
<b>Stated Termination Date Range</b>	28 days to 50 years Spot & Forward starting, and broken dates (bespoke tenors)
<b>Optionality</b>	No
<b>Dual Currencies</b>	No
<b>Conditional Notional Amounts</b>	No

### GBP SOFR Interest Rate Swap: Fixed-to-Floating

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The terms and conditions of the swap as established by the DCO in its rules or bylaws are incorporated by reference herein and are the terms and conditions of the swap. The swaps have the following characteristics:

<b>Currency</b>	Sterling (GBP)
<b>Floating Rate Indexes</b>	SOFR
<b>Stated Start Date Range</b>	28 days to 50 years Spot & Forward starting, and broken dates (bespoke tenors)
<b>Optionality</b>	No
<b>Dual Currencies</b>	No
<b>Conditional Notional Amounts</b>	No

## **GBP SOFR Interest Rate Swap: Forward Rate Agreement**

The terms and conditions of the swap as established by the DCO in its rules or bylaws are incorporated by reference herein and are the terms and conditions of the swap. The swaps have the following characteristics:

<b>Currency</b>	Sterling (GBP)
<b>Floating Rate Indexes</b>	SOFR
<b>Stated Termination Date Range</b>	3 days to 3 years
<b>Optionality</b>	No
<b>Dual Currencies</b>	No
<b>Conditional Notional Amounts</b>	No

## GBP SOFR Interest Rate Swap: Market Agreed Coupon

The terms and conditions of the swap as established by the DCO in its rules or bylaws are incorporated by reference herein and are the terms and conditions of the swap. The swaps have the following characteristics:

<b>Currency</b>	Sterling
<b>Fixed Coupon</b>	<a href="http://www.sifma.org/services/standard-forms-and-documentation/swaps/">http://www.sifma.org/services/standard-forms-and-documentation/swaps/</a>
<b>Floating Rate Indexes</b>	SOFR
<b>Tenors</b>	1y, 2yrs, 3yrs, 5yrs, 7yrs, 10yrs, 15yrs, 20yrs, 30yrs
<b>Effective Dates</b>	IMM dates (3rd Weds of March, June, September, December)

## GBP SOFR Interest Rate Swap: Overnight Index

The terms and conditions of the swap as established by the DCO in its rules or bylaws are incorporated by reference herein and are the terms and conditions of the swap. The swaps have the following characteristics:

<b>Currency</b>	Sterling (GBP) (“SONIAS”)
<b>Floating Rate Indexes</b>	SOFR
<b>Stated Termination Date Range</b>	7 days to 50 years Spot & Forward starting, and broken dates (bespoke tenors)
<b>Optionality</b>	No
<b>Dual Currencies</b>	No
<b>Conditional Notional Amounts</b>	No

### JPY SOFR Interest Rate Swap: Basis

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The terms and conditions of the swap as established by the DCO in its rules or bylaws are incorporated by reference herein and are the terms and conditions of the swap. The swaps have the following characteristics:

<b>Currency</b>	Yen (JPY)
<b>Floating Rate Indexes</b>	SOFR
<b>Stated Start Date Range</b>	28 days to 30 years Spot & Forward starting, and broken dates (bespoke tenors)
<b>Optionality</b>	No
<b>Dual Currencies</b>	No
<b>Conditional Notional Amounts</b>	No



### JPY SOFR Interest Rate Swap: Fixed-to-Floating

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The terms and conditions of the swap as established by the DCO in its rules or bylaws are incorporated by reference herein and are the terms and conditions of the swap. The swaps have the following characteristics:

<b>Currency</b>	Yen (JPY)
<b>Floating Rate Indexes</b>	SOFR
<b>Stated Start Date Range</b>	28 days to 30 years Spot & Forward starting, and broken dates (bespoke tenors)
<b>Optionality</b>	No
<b>Dual Currencies</b>	No
<b>Conditional Notional Amounts</b>	No

## JPY SOFR Interest Rate Swap: Forward Rate Agreement

The terms and conditions of the swap as established by the DCO in its rules or bylaws are incorporated by reference herein and are the terms and conditions of the swap. The swaps have the following characteristics:

<b>Currency</b>	Yen (JPY)
<b>Floating Rate Indexes</b>	SOFR
<b>Stated Termination Date Range</b>	3 days to 3 years
<b>Optionality</b>	No
<b>Dual Currencies</b>	No
<b>Conditional Notional Amounts</b>	No

## Mexican Peso Interest Rate Swap: Basis

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The terms and conditions of the swaps incorporate by reference such credit and other terms as the parties may establish through their pre-existing bilateral agreement. The swaps have the following characteristics:

<b>Currency</b>	Mexican Peso (MXN)
<b>Floating Rate Indexes</b>	SOFR/28 day MXN-TIIE-Banxico Index
<b>Stated Termination Date Range</b>	As negotiated between the parties Spot & Forward starting, and broken dates (bespoke tenors)
<b>Optionality</b>	No
<b>Dual Currencies</b>	No
<b>Conditional Notional Amounts</b>	No

## Mexican Peso Interest Rate Swap: Fixed-to-Floating

The terms and conditions of the swaps incorporate by reference such credit and other terms as the parties may establish through their pre-existing bilateral agreement. The swaps have the following characteristics:

<b>Currency</b>	Mexican Peso (MXN)
<b>Floating Rate Indexes</b>	28 day MXN-TIIE-Banxico Index
<b>Stated Start Date Range</b>	As negotiated between the parties Spot & Forward starting, and broken dates (bespoke tenors)
<b>Optionality</b>	No
<b>Dual Currencies</b>	No
<b>Conditional Notional Amounts</b>	No

## Mexican Peso Interest Rate Swap: Forward Rate Agreement

The terms and conditions of the swaps incorporate by reference such credit and other terms as the parties may establish through their pre-existing bilateral agreement. The swaps have the following characteristics:

<b>Currency</b>	Mexican Peso (MXN)
<b>Floating Rate Indexes</b>	28 day MXN-TIE-Banxico index
<b>Stated Termination Date Range</b>	As negotiated between the parties
<b>Optionality</b>	No
<b>Dual Currencies</b>	No
<b>Conditional Notional Amounts</b>	No

## Mexican Peso Unidades de Inversion Rate Swap

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The terms and conditions of the swaps incorporate by reference such credit and other terms as the parties may establish through their pre-existing bilateral agreement. The swaps have the following characteristics:

<b>Currency</b>	Mexican Peso (MXN)
<b>Floating Rate Indexes</b>	Unidades de Inversion (UDI)
<b>Stated Start Date Range</b>	As negotiated between the years Spot & Forward starting, and broken dates (bespoke tenors)
<b>Optionality</b>	No
<b>Dual Currencies</b>	No
<b>Conditional Notional Amounts</b>	No

## Swaptions

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The terms and conditions of the swaptions incorporate by reference such credit and other terms as the parties may establish through their pre-existing bilateral agreement. The swaptions have the following characteristics:

<b>Contract Overview</b>	A <b>swaption</b> is a derivative financial instrument that gives the owner the right but not the obligation to enter into the underlying interest rate swap
<b>Trade Date</b>	The date on which parties enter into the contract
<b>Swaption Type</b>	A <b>payer swaption</b> gives the owner of the swaption the right to enter into a swap where they pay the fixed leg and receive the floating leg A <b>receiver swaption</b> gives the owner of the swaption the right to enter into a swap in which they will receive the fixed leg, and pay the floating rate leg
<b>Payer Currency</b>	Currency for payer swaption
<b>Receiver Currency</b>	Currency for receiver swaption
<b>Strike Price</b>	The asset price at which the investor can exercise an option
<b>Expiration Date</b>	Date at which swaption contract expires
<b>Expiration Time</b>	Time at which swaption contract expires
<b>Settlement Date</b>	Settlement date of the swaption contract
<b>Premium</b>	Premium amount expressed in premium currency
<b>Premium Currency</b>	Currency in which swaption premium is expressed
<b>Premium Date</b>	Date on which premium amount is due
<b>Quoting Convention and Minimum Increment</b>	Notional amount, as agreed by counterparties
<b>Minimum Size</b>	Notional amount, as agreed by counterparties
<b>Notional Currency</b>	Currency in which contract size is expressed
<b>Settlement Procedure</b>	Bilateral settlement performed in settlement currency
<b>Trading Hours</b>	00:01 - 24:00 Sunday-Friday Eastern Time
<b>Clearing Venue</b>	Bilateral

## USD LIBOR<sup>1</sup>/SOFR Interest Rate Swap: Basis

The terms and conditions of the swap as established by the DCO in its rules or bylaws are incorporated by reference herein and are the terms and conditions of the swap. The swaps have the following characteristics:

<b>Currency</b>	U.S. Dollar
<b>Floating Rate Indexes</b>	LIBOR <sup>1</sup> /SOFR/LIBOR/SOFR LIBOR <sup>1</sup> /SOFR/Fed Funds LIBOR/SOFR/OI S Including Spread over Treasuries LIBOR <sup>1</sup> /SOFR/MXN-TIIE-Banxico (MXN IRS Benchmark)LIBOR <sup>1</sup> /SOFR/ICP (CLP IRS Benchmark)
<b>Stated Termination Date Range</b>	28 days to 50 years Spot & Forward starting, and broken dates (bespoke tenors)
<b>Optionality</b>	No
<b>Dual Currencies</b>	No
<b>Conditional Notional Amounts</b>	No



## USD LIBOR<sup>1</sup>/SOFR Interest Rate Swap: Fixed-to-Floating

The terms and conditions of the swap as established by the DCO in its rules or bylaws are incorporated by reference herein and are the terms and conditions of the swap. The swaps have the following characteristics:

<b>Currency</b>	U.S. Dollar (USD)
<b>Floating Rate Indexes</b>	LIBOR <sup>1</sup> /SOFR
<b>Stated Start Date Range</b>	28 days to 50 years Spot & Forward starting, and broken dates (bespoke tenors)
<b>Optionality</b>	No
<b>Dual Currencies</b>	No
<b>Conditional Notional Amounts</b>	No

## USD LIBOR<sup>1</sup>/SOFR Interest Rate Swap: Forward Rate Agreement

The terms and conditions of the swap as established by the DCO in its rules or bylaws are incorporated by reference herein and are the terms and conditions of the swap. The swaps have the following characteristics:

<b>Currency</b>	U.S. Dollar
<b>Floating Rate Indexes</b>	LIBOR <sup>1</sup> /SOFR
<b>Stated Termination Date Range</b>	3 days to 3 years
<b>Optionality</b>	No
<b>Dual Currencies</b>	No
<b>Conditional Notional Amounts</b>	No

## USD LIBOR<sup>1</sup>/SOFR Interest Rate Swap: Market Agreed Coupon

The terms and conditions of the swap as established by the DCO in its rules or bylaws are incorporated by reference herein and are the terms and conditions of the swap. The swaps have the following characteristics:

<b>Currency</b>	U.S. Dollar
<b>Fixed Coupon</b>	<a href="http://www.sifma.org/services/standard-forms-and-documentation/swaps/">http://www.sifma.org/services/standard-forms-and-documentation/swaps/</a>
<b>Floating Rate Indexes</b>	LIBOR <sup>1</sup> /SOFR
<b>Tenors</b>	1y, 2yrs, 3yrs, 5yrs, 7yrs, 10yrs, 15yrs, 20yrs, 30yrs
<b>Effective Dates</b>	IMM dates (3rd Weds of March, June, September, December)

## USD LIBOR<sup>1</sup>/SOFR Interest Rate Swap: Overnight Index

The terms and conditions of the swap as established by the DCO in its rules or bylaws are incorporated by reference herein and are the terms and conditions of the swap. The swaps have the following characteristics:

<b>Currency</b>	U.S. Dollar (USD) (“OIS”)
<b>Floating Rate Indexes</b>	LIBOR <sup>1</sup> /SOFR
<b>Stated Termination Date Range</b>	7 days to 50 years Spot & Forward starting, and broken dates (bespoke tenors)
<b>Optionality</b>	No
<b>Dual Currencies</b>	No
<b>Conditional Notional Amounts</b>	No

