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## Market Notice #13-M03: Modifying Notional Value to \$100,000 for Eris Exchange Contracts

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TO: Eris Exchange Market Participants  
FROM: Eris Exchange Control Center  
NOTICE: #13-M03  
DATE: April 4, 2013  
SUBJECT: Modifying Notional Value to \$100,000 for Eris Exchange Contracts

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### Background

This Market Notice serves to notify Participants of Eris Exchange, LLC (“Eris Exchange” or “Exchange”) that, pending all relevant regulatory review periods, the Exchange will change the definition of all Eris Exchange futures contracts (Eris Flexes and Eris Standards) from \$1,000,000 notional per contract to \$100,000 notional per contract.

Eris Exchange and CME Clearing are currently targeting the weekend of Saturday, June 1 to perform system changes to support a first trading day of Monday, June 3, 2013.

To allow firms to test the changes in advance of the launch, the Eris SwapBook DEMO, Eris BlockBox DEMO and CME New Release environments will reflect the \$100,000 notional contract changes effective Thursday, April 25, 2013.

### Project Milestones

Milestone	Target Date
Firm Testing Commences	Thursday, April 25, 2013
Launch	Monday, June 3, 2013

### Description of Change

Upon launch, the notional value of all existing Eris Exchange contracts (including contracts with open interest) will change from US \$1,000,000 to US \$100,000. To accomplish this change, Eris Exchange and CME Clearing are executing a “hard cutover” of existing contract codes. Consequently, the change will not result in the creation of new contract codes. Additionally, at the time of the change, existing open interest will be modified by CME Clearing (in coordination with Clearing Firms) to reflect the new notional value.

Trading in Eris Standards and off-coupon Eris Flexes will continue to be negotiated in terms of NPV per contract, and the futures price for all products will continue to be stated in per-contract terms, using an index of 100. Accordingly, a change in price from 100.0000 to 101.0000, which currently represents a

change in value of \$10,000 per contract in favor of the buyer, will represent a \$1,000 change in value per contract in favor of the buyer.

### **Rationale for Change**

Eris Exchange is enacting this change in response to numerous requests from existing and prospective market participants. Asset Managers, in particular, have expressed that a \$100,000 notional value will give them greater flexibility to trade on behalf of accounts that are not suitable for the existing \$1,000,000 notional value.

### **Anticipated Impacts**

#### *Eris SwapBook electronic trading platform*

- **Market Data Changes:** ISVs/Quoters will need to make changes to calculate properly the translation from notional value to contract size, effectively dividing notional values by \$100,000 instead of \$1,000,000 as is currently required.
  - At this point Eris Exchange does not foresee making any changes to FIX tags.
  - Firms receiving Eris Exchange market data via CME MDP will be required to make similar changes; please contact your CME account manager for more information.
- **Testing:** April 25, 2013 is the target date for the Eris SwapBook DEMO environment to be available for firms to test these changes. The Eris Control Center will facilitate an optional mock trading session in the Eris SwapBook DEMO environment for firms and ISVs to test the \$100,000 notional value change, on a date to be announced.

#### *CME Clearing*

- **Implementation of Change:** CME will enact a hard cutover the weekend of June 1, 2013, in which all changes associated with this change will be applied to CME production systems, to support a first trading day of June 3, 2013.
- **Impact to Instrument Codes:** CME Clearing will not modify existing instrument codes, and will not create any new instrument codes.
- **One-Time Adjustment to Open Positions:** CME Clearing will adjust open positions to reflect the modified notional values for Eris Standards and Eris Flexes contracts (multiplying each open position by ten) in the CME Position application on Sunday evening, June 2, 2013. Clearing Firms have the option of logging into the CME Position application via the CME Portal to review their updated positions after 10 pm CT that evening to verify the manual position adjustment. Clearing Firms are required to make all necessary adjustments within their back office systems to conform to the revised open interest levels and to reflect correctly the open interest modification on customer statements.
- **Margin Considerations:** CME Clearing will adjust margin levels applied to Eris Standards and Eris Flexes instruments to conform to the new contract size, with new levels at or near one-tenth the size of existing margins.
- **Spread credits:** CME Clearing will adjust Spread credit ratios to conform to the new contract size.
- **Testing:** April 25, 2013 is the target date for the CME New Release environment to be available for firms to test these changes.

## Other Impacts

- Minimum Block Size:** The current Minimum Block Size requirements are expressed in notional terms in Eris Exchange Rule 601, *and will remain unchanged*. The number of contracts required to meet the Minimum Block Size will increase by a factor of ten, commensurate with the reduction in contract size. For example, whereas currently the \$50,000,000 Minimum Block Size for a 2-year Eris Standard is equivalent to 50 contracts, following the change the Minimum Block Size will be equivalent to 500 contracts.

Remaining Tenor	Minimum Block Size – Notional (Unchanged)	Existing Minimum Block Size – Contracts	New Minimum Block Size – Contracts
Less than 5 years	\$50 million	50	500
5 years or more	\$25 million	25	250

- Large Position Reporting Levels:** The Large Position Reporting levels for Eris Exchange futures are being increased to conform to the new contract size, effective on the date of the contract modification. Clearing Firms must adjust the reportable levels in their back office systems to reflect the new levels per the below table.

Contract Name	Commodity Code	Tenor of each discrete Commodity Code	Rule	Reportable Futures Level for each discrete Commodity Code	Position Accountability for each discrete Commodity Code	Position Limit for each discrete Commodity Code
Interest Rate Swap Futures Contract	Annnn	Less than or equal to 2 years	1101	<del>300</del> 3000	<del>600</del> 6000	N/A
Interest Rate Swap Futures Contract	Bnnnn	Greater than 2 years and less than or equal to 5 years	1101	<del>300</del> 3000	<del>600</del> 6000	N/A
Interest Rate Swap Futures Contract	Cnnnn	Greater than 5 years and less than or equal to 10 years	1101	<del>300</del> 3000	<del>600</del> 6000	N/A
Interest Rate Swap Futures Contract	Dnnnn	Greater than 10 years	1101	<del>300</del> 3000	<del>600</del> 6000	N/A

- Minimum Tick Size:** The minimum tick size of all Eris futures will be reduced in proportion to the change in the contract size. The new tick sizes are set forth in the table below.

Lesser of Remaining Tenor/Underlying Tenor	Existing Minimum Tick Size	New Minimum Tick Size (Target Date June 3 <sup>rd</sup> , 2013)
Less than 1 Year	\$10	\$1
1 to <2 Years	\$10	\$1
2 to <3 Years	\$25	\$2
3 to <4 Years	\$25	\$2
4 to <5 Years	\$50	\$5
5 to <6 Years	\$50	\$5

6 to <7 Years	\$50	\$5
7 to <8 Years	\$100	\$10
8 to <9 Years	\$100	\$10
9 to <10 Years	\$100	\$10
10 to <12 Years	\$100	\$10
12 to <15 Years	\$100	\$10
15 to <20 Years	\$100	\$10
20+ Years	\$200	\$20

- **Futures Price Denomination:** Futures price value is being scaled proportionally with the change in notional value. A one point movement in futures price (e.g., from 100.0000 to 101.0000), which currently represents a \$10,000 change in value in the \$1,000,000 notional size contract, will represent a \$1,000 change in value in the new \$100,000 notional size contract.
- **Historical Data**
  - *Historical Price Data* – Due to the commensurate scaling of futures price denomination described above, all historical futures prices (including trade, open, high, low, close and settlement prices) will remain unchanged from this contract modification. For example, a settlement price of 101.5000 reflects the same intrinsic value prior to and following the notional value modification.
  - *Historical Volume and Open Interest Data* – Following the launch, Eris Exchange and CME Clearing will retroactively modify all historical volume and open interest data to reflect the new contract size, to facilitate comparison with then-current volume and open interest data.
  - *Historical Trade Data* – Eris Exchange and CME Clearing will retain data on individual historical trades in the quantity as originally traded, and will not adjust this data to reflect the new contract size. The trade log in Eris BlockBox will visually distinguish these trades to highlight the change in notional value, but will leave the quantity unchanged.
- **Back Office Service Providers:** Clearing Firms should contact their back office service providers (e.g., Sungard, ION Trading, FFastFill, etc.) to confirm steps required to support this product change.
- **Exchange Fees:** Clearing Firms and other market participants should contact Eris Exchange to receive the fee schedule revised to conform to the new contract size.

## Eris Interest Rate Swap Futures: 2Y Standard Contract Specifications

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<b>Trading Hours</b>	Eris Exchange electronic platform trading hours are currently 8:20 AM to 4:30 PM Eastern Time.
<b>Contract Structure</b>	\$100,000 notional principal whose value is based upon the difference between a stream of semi-annual fixed interest payments and a stream of quarterly floating interest payments based on 3 month US Dollar LIBOR, over a term to maturity.
<b>Underlying Swap Tenor</b>	2 Years
<b>Fixed Rate</b>	Pre-determined rate set by Eris Exchange which will remain static throughout the life of the contract <ul style="list-style-type: none"> <li>• Determined just prior to quarterly listing</li> <li>• Multiple fixed rates may be pre-determined</li> </ul>
<b>Contract Size</b>	1 Contract = 1 lot = \$100,000 face
<b>Trading Conventions</b>	Buy = Pay Fixed Sell = Receive Fixed
<b>Swap Futures Leg Conventions</b>	<p><b>Fixed Leg</b></p> <ul style="list-style-type: none"> <li>• Reset Frequency: Semi-Annual</li> <li>• Day Count Convention: 30/360</li> <li>• Currency: USD</li> <li>• Holiday Calendar(s): New York, London</li> <li>• Business Day Convention: Modified Following with adjustment to period end dates</li> </ul> <p><b>Floating Leg</b></p> <ul style="list-style-type: none"> <li>• Reset Frequency: Quarterly</li> <li>• Day Count Convention: Actual/360</li> <li>• Currency: USD</li> <li>• Holiday Calendar(s): New York, London</li> <li>• Business Day Convention: Modified Following with adjustment to period end dates</li> </ul>
<b>Effective Dates</b>	Quarterly IMM Dates (3 <sup>rd</sup> Wednesday of each March, June, September, December) <ul style="list-style-type: none"> <li>• Potential to move to monthly dates</li> </ul>

<b>Cash Flow Alignment Date (“CFAD”)</b>	<p>The date used for aligning all fixed and floating Reset Dates, and for determination of the Maturity Date.</p> <p>CFAD can be derived by adding 2 Years to the Effective Date.</p> <p>For example, an Eris Interest Rate Swap Future with an Effective Date of 09/19/2012 and a tenor of 2 years implies a Cash Flow Alignment Date of 09/19/2014. Note that the Cash Flow Alignment Date may fall on any calendar day, including weekends and holidays. The CFAD is used to determine the Maturity Date, but the two terms are distinct, as the Maturity Date must fall on a valid business day from the joint holiday calendar.</p>
<b>Maturity Date</b>	<p>The final date to which fixed and floating amounts accrue. The last date of the contract.</p> <p>Maturity Date is determined by applying the Modified Following rule to the Cash Flow Alignment Date. If the Cash Flow Alignment Date is a non-business day in either NY or London, go forward to the next day that is a business day in both NY and London. If the next valid business day is in the following month, the preceding valid business day on both the NY and London holiday calendars will be the Maturity Date.</p> <p>Eris PAI<sup>TM</sup> accrues up to and including the Maturity Date.</p> <p>The Maturity Date may also be referred to as Termination Date.</p>
<b>Underlying Tenor</b>	<p>The duration of time from the Effective Date to the Cash Flow Alignment Date.</p>
<b>Remaining Tenor</b>	<p>The duration of time from today to the Cash Flow Alignment Date.</p>
<b>Reset Dates</b>	<p>Dates utilized to determine fixed and floating amounts throughout the life of the Contract. Reset Dates define the beginning and end of fixed and floating interest accrual periods. Floating Rate Reset Dates facilitate the determination of the LIBOR Fixing Dates.</p> <p>The Cash Flow Alignment Date will be used as the basis for determining Reset Dates. Each Reset Date is subject to adjustment based on Modified Following convention.</p> <ul style="list-style-type: none"> <li>For example, if the CFAD is 09/19/2014, the Reset Dates will be on the 19<sup>th</sup> of December, March, June and September, subject to the Modified Following convention.</li> </ul>

<b>Last Trading Day</b>	The last day on which the Contract can be traded is the NY business day preceding the Maturity Date.
<b>First LIBOR Fixing Date</b>	2 London business days prior to the Effective Date.
<b>Other LIBOR Fixing Dates</b>	For all periods other than the first floating rate period, the LIBOR Fixing Date is 2 London business days prior to each Reset Date.
<b>Floating Rate Index</b>	3 Month USD LIBOR announced by the British Bankers' Association.
<b>Daily Settlement Price (Futures-Style Price)</b>	<p>Eris Interest Rate Swap Futures are priced on a basis of 100, similar to market practice for bonds and other futures contracts.</p> <p>The settlement value for each Contract is defined as:</p> $S_t = 100 + A_t + B_t - C_t$ <p> <math>S_t</math> = settlement price at time t  <math>A_t</math> = net present value of the future cash flows at time t, based on OIS discounting  <math>B_t</math> = value of the historical fixed and floating amounts since contract inception  <math>C_t</math> = Eris Price Alignment Interest (or Eris PAI™).         </p> <p>Eris Exchange and CME Clearing calculate Daily Settlement Price to 4 decimals of precision (e.g., 100.1234).</p> <p>Eris PAI™ is a cumulative value calculated daily by applying the overnight Fed Funds effective rate to the contract's NPV, using an Actual/360 daycount convention. Eris PAI™ will start accruing on the first listing date.</p>
<b>Final Settlement Price</b>	$S_{final} = 100 + B_{final} - C_{final}$ <p> <math>S_{final}</math> = Settlement price at maturity  <math>B_{final}</math> = Historical fixed and floating amounts since contract inception through maturity  <math>C_{final}</math> = Eris PAI™, at maturity         </p>
<b>Quoting Convention</b>	<p>Net Present Value (NPV) per Contract will be used for trade execution.</p> <p>NPV is expressed in per contract terms for the Buyer (fixed rate payer).</p>

	<p>Each Swap Future negotiated in NPV terms has an implicit futures-style trade price of</p> $\text{Trade Price} = 100 + A_{\text{negotiated}} + B_t - C_t$ <p>where <math>A_{\text{negotiated}}</math> is the NPV per Contract agreed upon between the counterparties (divided by 1,000 to normalize units to \$100 face amount), <math>B_t</math> is the value of the historical fixed and floating amounts, and <math>C_t</math> is Eris PAI™ at time t.</p> <p>The B and C components are calculated once daily and applied by the Exchange, and are not subject to negotiation by the counterparties.</p> <p>The NPV per Contract can be negotiated in the following increments/tick sizes:</p> <ul style="list-style-type: none"> <li>• \$1 for Contracts where the lesser of Remaining Tenor/Underlying Tenor is less than two years.</li> <li>• \$2 for Contracts where the lesser of Remaining Tenor/Underlying Tenor is greater than or equal to two years and less than 4 years.</li> </ul>
<b>Listed Spreads</b>	<p>Listed Spreads (or Discrete Spreads), composed of Standard Contracts, may be traded using the SwapBook Discrete Spread functionality.</p>
<b>Block Trades</b>	<p>Eris Interest Rate Swap Futures are eligible to be traded as privately negotiated, off-exchange Block Trades and reported to Eris Exchange.</p> <p>Block Trades must be executed and reported pursuant to Rule 601 in the Eris Exchange Rulebook.</p> <p>Current block trade thresholds are as follows and are subject to change:</p> <ul style="list-style-type: none"> <li>• For Contracts with a Remaining Tenor of less than 5 years from trade date, the minimum quantity threshold is 500 Contracts (\$50M notional).</li> <li>• For Contracts with a Remaining Tenor of 5 years or more from trade date, the minimum quantity threshold is 250 Contracts (\$25M notional).</li> <li>• A multiple leg Block Trade is permitted as long as the sum notional of the legs that are transacted simultaneously meets the minimum quantity threshold for the leg with the shortest Remaining Tenor.</li> </ul> <p>All Block Trades must be reported to the Exchange within 15 minutes of trade execution. All block trades must be submitted for clearing by the end of the trading day (4:35pm ET).</p>



	Eris Exchange will publicly report all Block Trades (instrument, price, quantity) immediately upon successful receipt of the trade details from the party reporting the trade.
<b>Exchange of Derivatives for Related Positions</b>	<p>Eris Interest Rate Swap Futures are eligible to be traded as privately negotiated, off-exchange Exchange of Derivatives for Related Positions (EDRPs) and reported to Eris Exchange.</p> <p>EDRPs must be executed and reported pursuant to Rule 602 in the Eris Exchange Rulebook.</p> <p>There are no minimum quantity thresholds required for EDRPs.</p> <p>Eris Exchange does not report EDRPs publicly during the trading day; however, activity from EDRPs is reflected in the Exchange volume and open interest values published at the end of each trading day.</p>
<b>Ticker Symbol Convention</b>	<p>Maturity Code (Period Code) will be YYYYMMDD</p> <p>Product Code: ZA9102; initial contract fixed rate Product Code: ZA9202; secondary contract fixed rate</p> <p>For example, the 2Y contract with Product Code of ZA9102 and Maturity Date of 12/19/14 will have a ticker symbol of ZA910220141219</p>

Certain elements of the contract design and pricing construct are patent-pending.

## Eris Interest Rate Swap Futures: 5Y Standard Contract Specifications

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<b>Trading Hours</b>	Eris Exchange electronic platform trading hours are currently 8:20 AM to 4:30 PM Eastern Time.
<b>Contract Structure</b>	\$100,000 notional principal whose value is based upon the difference between a stream of semi-annual fixed interest payments and a stream of quarterly floating interest payments based on 3 month US Dollar LIBOR, over a term to maturity.
<b>Underlying Swap Tenor</b>	5 Years
<b>Fixed Rate</b>	Pre-determined rate set by Eris Exchange which will remain static throughout the life of the contract <ul style="list-style-type: none"> <li>• Determined just prior to quarterly listing</li> <li>• Multiple fixed rates may be pre-determined</li> </ul>
<b>Contract Size</b>	1 Contract = 1 lot = \$100,000 face
<b>Trading Conventions</b>	Buy = Pay Fixed Sell = Receive Fixed
<b>Swap Futures Leg Conventions</b>	<p><b>Fixed Leg</b></p> <ul style="list-style-type: none"> <li>• Reset Frequency: Semi-Annual</li> <li>• Day Count Convention: 30/360</li> <li>• Currency: USD</li> <li>• Holiday Calendar(s): New York, London</li> <li>• Business Day Convention: Modified Following with adjustment to period end dates</li> </ul> <p><b>Floating Leg</b></p> <ul style="list-style-type: none"> <li>• Reset Frequency: Quarterly</li> <li>• Day Count Convention: Actual/360</li> <li>• Currency: USD</li> <li>• Holiday Calendar(s): New York, London</li> <li>• Business Day Convention: Modified Following with adjustment to period end dates</li> </ul>
<b>Effective Dates</b>	Quarterly IMM Dates (3 <sup>rd</sup> Wednesday of each March, June, September, December) <ul style="list-style-type: none"> <li>• Potential to move to monthly dates</li> </ul>

<b>Cash Flow Alignment Date (“CFAD”)</b>	<p>The date used for aligning all fixed and floating Reset Dates, and for determination of the Maturity Date.</p> <p>CFAD can be derived by adding 5 Years to the Effective Date.</p> <p>For example, an Eris Interest Rate Swap Future with an Effective Date of 09/19/2012 and a tenor of 5 years implies a Cash Flow Alignment Date of 09/19/2017. Note that the Cash Flow Alignment Date may fall on any calendar day, including weekends and holidays. The CFAD is used to determine the Maturity Date, but the two terms are distinct, as the Maturity Date must fall on a valid business day from the joint holiday calendar.</p>
<b>Maturity Date</b>	<p>The final date to which fixed and floating amounts accrue. The last date of the contract.</p> <p>Maturity Date is determined by applying the Modified Following rule to the Cash Flow Alignment Date. If the Cash Flow Alignment Date is a non-business day in either NY or London, go forward to the next day that is a business day in both NY and London. If the next valid business day is in the following month, the preceding valid business day on both the NY and London holiday calendars will be the Maturity Date.</p> <p>Eris PAI<sup>TM</sup> accrues up to and including the Maturity Date.</p> <p>The Maturity Date may also be referred to as Termination Date.</p>
<b>Underlying Tenor</b>	<p>The duration of time from the Effective Date to the Cash Flow Alignment Date.</p>
<b>Remaining Tenor</b>	<p>The duration of time from today to the Cash Flow Alignment Date.</p>
<b>Reset Dates</b>	<p>Dates utilized to determine fixed and floating amounts throughout the life of the Contract. Reset Dates define the beginning and end of fixed and floating interest accrual periods. Floating Rate Reset Dates facilitate the determination of the LIBOR Fixing Dates.</p> <p>The Cash Flow Alignment Date will be used as the basis for determining Reset Dates. Each Reset Date is subject to adjustment based on Modified Following convention.</p> <ul style="list-style-type: none"> <li>For example, if the CFAD is 09/19/2017, the Reset Dates will be on the 19<sup>th</sup> of December, March, June and September, subject to the Modified Following convention.</li> </ul>

<b>Last Trading Day</b>	The last day on which the Contract can be traded is the NY business day preceding the Maturity Date.
<b>First LIBOR Fixing Date</b>	2 London business days prior to the Effective Date.
<b>Other LIBOR Fixing Dates</b>	For all periods other than the first floating rate period, the LIBOR Fixing Date is 2 London business days prior to each Reset Date.
<b>Floating Rate Index</b>	3 Month USD LIBOR announced by the British Bankers' Association.
<b>Daily Settlement Price (Futures-Style Price)</b>	<p>Eris Interest Rate Swap Futures are priced on a basis of 100, similar to market practice for bonds and other futures contracts.</p> <p>The settlement value for each Contract is defined as:</p> $S_t = 100 + A_t + B_t - C_t$ <p> <math>S_t</math> = settlement price at time t  <math>A_t</math> = net present value of the future cash flows at time t, based on OIS discounting  <math>B_t</math> = value of the historical fixed and floating amounts since contract inception  <math>C_t</math> = Eris Price Alignment Interest (or Eris PAI<sup>TM</sup>).         </p> <p>Eris Exchange and CME Clearing calculate Daily Settlement Price to 4 decimals of precision (e.g., 100.1234).</p> <p>Eris PAI<sup>TM</sup> is a cumulative value calculated daily by applying the overnight Fed Funds effective rate to the contract's NPV, using an Actual/360 daycount convention. Eris PAI<sup>TM</sup> will start accruing on the first listing date.</p>
<b>Final Settlement Price</b>	$S_{final} = 100 + B_{final} - C_{final}$ <p> <math>S_{final}</math> = Settlement price at maturity  <math>B_{final}</math> = Historical fixed and floating amounts since contract inception through maturity  <math>C_{final}</math> = Eris PAI<sup>TM</sup>, at maturity         </p>

<b>Quoting Convention</b>	<p>Net Present Value (NPV) per Contract will be used for trade execution.</p> <p>NPV is expressed in per contract terms for the Buyer (fixed rate payer).</p> <p>Each Swap Future negotiated in NPV terms has an implicit futures-style trade price of</p> $\text{Trade Price} = 100 + A_{\text{negotiated}} + B_t - C_t$ <p>where <math>A_{\text{negotiated}}</math> is the NPV per Contract agreed upon between the counterparties (divided by 1,000 to normalize units to \$100 face amount), <math>B_t</math> is the value of the historical fixed and floating amounts, and <math>C_t</math> is Eris PAI<sup>TM</sup> at time <math>t</math>.</p> <p>The B and C components are calculated once daily and applied by the Exchange, and are not subject to negotiation by the counterparties.</p> <p>The NPV per Contract can be negotiated in the following increments/tick sizes:</p> <ul style="list-style-type: none"> <li>• \$1 for Contracts where the lesser of Remaining Tenor/Underlying Tenor is less than two years.</li> <li>• \$2 for Contracts where the lesser of Remaining Tenor/Underlying Tenor is greater than or equal to two years and less than 4 years.</li> <li>• \$5 for Contracts where the lesser of Remaining Tenor/Underlying Tenor is greater than or equal to four years and less than 7 years.</li> </ul>
<b>Listed Spreads</b>	<p>Listed Spreads (or Discrete Spreads), composed of Standard Contracts, may be traded using the SwapBook Discrete Spread functionality.</p>
<b>Block Trades</b>	<p>Eris Interest Rate Swap Futures are eligible to be traded as privately negotiated, off-exchange Block Trades and reported to Eris Exchange.</p> <p>Block Trades must be executed and reported pursuant to Rule 601 in the Eris Exchange Rulebook.</p> <p>Current block trade thresholds are as follows and are subject to change:</p> <ul style="list-style-type: none"> <li>• For Contracts with a Remaining Tenor of less than 5 years from trade date, the minimum quantity threshold is 500 Contracts (\$50M notional).</li> <li>• For Contracts with a Remaining Tenor of 5 years or more from trade date, the minimum quantity threshold is</li> </ul>

	<p>250 Contracts (\$25M notional).</p> <ul style="list-style-type: none"> <li>A multiple leg Block Trade is permitted as long as the sum notional of the legs that are transacted simultaneously meets the minimum quantity threshold for the leg with the shortest Remaining Tenor.</li> </ul> <p>All Block Trades must be reported to the Exchange within 15 minutes of trade execution. All block trades must be submitted for clearing by the end of the trading day (4:35pm ET).</p> <p>Eris Exchange will publicly report all Block Trades (instrument, price, quantity) immediately upon successful receipt of the trade details from the party reporting the trade.</p>
<b>Exchange of Derivatives for Related Positions</b>	<p>Eris Interest Rate Swap Futures are eligible to be traded as privately negotiated, off-exchange Exchange of Derivatives for Related Positions (EDRPs) and reported to Eris Exchange.</p> <p>EDRPs must be executed and reported pursuant to Rule 602 in the Eris Exchange Rulebook.</p> <p>There are no minimum quantity thresholds required for EDRPs.</p> <p>Eris Exchange does not report EDRPs publicly during the trading day; however, activity from EDRPs is reflected in the Exchange volume and open interest values published at the end of each trading day.</p>
<b>Ticker Symbol Convention</b>	<p>Maturity Code (Period Code) will be YYYYMMDD</p> <p>Product Code: ZB9105; initial contract fixed rate Product Code: ZB9205; secondary contract fixed rate</p> <p>For example, the 5Y contract with Product Code of ZB9105 and Maturity Date of 12/19/17 will have a ticker symbol of ZB910520171219</p>

Certain elements of the contract design and pricing construct are patent-pending.

## Eris Interest Rate Swap Futures: 10Y Standard Contract Specifications

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<b>Trading Hours</b>	Eris Exchange electronic platform trading hours are currently 8:20 AM to 4:30 PM Eastern Time.
<b>Contract Structure</b>	\$100,000 notional principal whose value is based upon the difference between a stream of semi-annual fixed interest payments and a stream of quarterly floating interest payments based on 3 month US Dollar LIBOR, over a term to maturity.
<b>Underlying Swap Tenor</b>	10 Years
<b>Fixed Rate</b>	Pre-determined rate set by Eris Exchange which will remain static throughout the life of the contract <ul style="list-style-type: none"> <li>• Determined just prior to quarterly listing</li> <li>• Multiple fixed rates may be pre-determined</li> </ul>
<b>Contract Size</b>	1 Contract = 1 lot = \$100,000 face
<b>Trading Conventions</b>	Buy = Pay Fixed Sell = Receive Fixed
<b>Swap Futures Leg Conventions</b>	<p><b>Fixed Leg</b></p> <ul style="list-style-type: none"> <li>• Reset Frequency: Semi-Annual</li> <li>• Day Count Convention: 30/360</li> <li>• Currency: USD</li> <li>• Holiday Calendar(s): New York, London</li> <li>• Business Day Convention: Modified Following with adjustment to period end dates</li> </ul> <p><b>Floating Leg</b></p> <ul style="list-style-type: none"> <li>• Reset Frequency: Quarterly</li> <li>• Day Count Convention: Actual/360</li> <li>• Currency: USD</li> <li>• Holiday Calendar(s): New York, London</li> <li>• Business Day Convention: Modified Following with adjustment to period end dates</li> </ul>
<b>Effective Dates</b>	Quarterly IMM Dates (3 <sup>rd</sup> Wednesday of each March, June, September, December) <ul style="list-style-type: none"> <li>• Potential to move to monthly dates</li> </ul>

<b>Cash Flow Alignment Date (“CFAD”)</b>	<p>The date used for aligning all fixed and floating Reset Dates, and for determination of the Maturity Date.</p> <p>CFAD can be derived by adding 10 Years to the Effective Date.</p> <p>For example, an Eris Interest Rate Swap Future with an Effective Date of 09/19/2012 and a tenor of 10 years implies a Cash Flow Alignment Date of 09/19/2022. Note that the Cash Flow Alignment Date may fall on any calendar day, including weekends and holidays. The CFAD is used to determine the Maturity Date, but the two terms are distinct, as the Maturity Date must fall on a valid business day from the joint holiday calendar.</p>
<b>Maturity Date</b>	<p>The final date to which fixed and floating amounts accrue. The last date of the contract.</p> <p>Maturity Date is determined by applying the Modified Following rule to the Cash Flow Alignment Date. If the Cash Flow Alignment Date is a non-business day in either NY or London, go forward to the next day that is a business day in both NY and London. If the next valid business day is in the following month, the preceding valid business day on both the NY and London holiday calendars will be the Maturity Date.</p> <p>Eris PAI<sup>TM</sup> accrues up to and including the Maturity Date.</p> <p>The Maturity Date may also be referred to as Termination Date.</p>
<b>Underlying Tenor</b>	<p>The duration of time from the Effective Date to the Cash Flow Alignment Date.</p>
<b>Remaining Tenor</b>	<p>The duration of time from today to the Cash Flow Alignment Date.</p>
<b>Reset Dates</b>	<p>Dates utilized to determine fixed and floating amounts throughout the life of the Contract. Reset Dates define the beginning and end of fixed and floating interest accrual periods. Floating Rate Reset Dates facilitate the determination of the LIBOR Fixing Dates.</p> <p>The Cash Flow Alignment Date will be used as the basis for determining Reset Dates. Each Reset Date is subject to adjustment based on Modified Following convention.</p> <ul style="list-style-type: none"> <li>For example, if the CFAD is 09/19/2022, the Reset Dates will be on the 19<sup>th</sup> of December, March, June and September, subject to the Modified Following convention.</li> </ul>



<b>Last Trading Day</b>	The last day on which the Contract can be traded is the NY business day preceding the Maturity Date.
<b>First LIBOR Fixing Date</b>	2 London business days prior to the Effective Date.
<b>Other LIBOR Fixing Dates</b>	For all periods other than the first floating rate period, the LIBOR Fixing Date is 2 London business days prior to each Reset Date.
<b>Floating Rate Index</b>	3 Month USD LIBOR announced by the British Bankers' Association.
<b>Daily Settlement Price (Futures-Style Price)</b>	<p>Eris Interest Rate Swap Futures are priced on a basis of 100, similar to market practice for bonds and other futures contracts.</p> <p>The settlement value for each Contract is defined as:</p> $S_t = 100 + A_t + B_t - C_t$ <p> <math>S_t</math> = settlement price at time t  <math>A_t</math> = net present value of the future cash flows at time t, based on OIS discounting  <math>B_t</math> = value of the historical fixed and floating amounts since contract inception  <math>C_t</math> = Eris Price Alignment Interest (or Eris PAI™).         </p> <p>Eris Exchange and CME Clearing calculate Daily Settlement Price to 4 decimals of precision (e.g., 100.1234).</p> <p>Eris PAI™ is a cumulative value calculated daily by applying the overnight Fed Funds effective rate to the contract's NPV, using an Actual/360 daycount convention. Eris PAI™ will start accruing on the first listing date.</p>
<b>Final Settlement Price</b>	$S_{final} = 100 + B_{final} - C_{final}$ <p> <math>S_{final}</math> = Settlement price at maturity  <math>B_{final}</math> = Historical fixed and floating amounts since contract inception through maturity  <math>C_{final}</math> = Eris PAI™, at maturity         </p>
<b>Quoting Convention</b>	<p>Net Present Value (NPV) per Contract will be used for trade execution.</p> <p>NPV is expressed in per contract terms for the Buyer (fixed rate payer).</p>

	<p>Each Swap Future negotiated in NPV terms has an implicit futures-style trade price of</p> $\text{Trade Price} = 100 + A_{\text{negotiated}} + B_t - C_t$ <p>where <math>A_{\text{negotiated}}</math> is the NPV per Contract agreed upon between the counterparties (divided by 1,000 to normalize units to \$100 face amount), <math>B_t</math> is the value of the historical fixed and floating amounts, and <math>C_t</math> is Eris PAI™ at time <math>t</math>.</p> <p>The B and C components are calculated once daily and applied by the Exchange, and are not subject to negotiation by the counterparties.</p> <p>The NPV per Contract can be negotiated in the following increments/tick sizes:</p> <ul style="list-style-type: none"> <li>• \$1 for Contracts where the lesser of Remaining Tenor/Underlying Tenor is less than two years.</li> <li>• \$2 for Contracts where the lesser of Remaining Tenor/Underlying Tenor is greater than or equal to two years and less than 4 years.</li> <li>• \$5 for Contracts where the lesser of Remaining Tenor/Underlying Tenor is greater than or equal to four years and less than 7 years.</li> <li>• \$10 for Contracts where the lesser of Remaining Tenor/Underlying Tenor is greater than or equal to seven years and less than 20 years.</li> </ul>
<b>Listed Spreads</b>	<p>Listed Spreads (or Discrete Spreads), composed of Standard Contracts, may be traded using the SwapBook Discrete Spread functionality.</p>
<b>Block Trades</b>	<p>Eris Interest Rate Swap Futures are eligible to be traded as privately negotiated, off-exchange Block Trades and reported to Eris Exchange.</p> <p>Block Trades must be executed and reported pursuant to Rule 601 in the Eris Exchange Rulebook.</p> <p>Current block trade thresholds are as follows and are subject to change:</p> <ul style="list-style-type: none"> <li>• For Contracts with a Remaining Tenor of less than 5 years from trade date, the minimum quantity threshold is 500 Contracts (\$50M notional).</li> <li>• For Contracts with a Remaining Tenor of 5 years or more from trade date, the minimum quantity threshold is</li> </ul>

	<p>250 Contracts (\$25M notional).</p> <ul style="list-style-type: none"> <li>A multiple leg Block Trade is permitted as long as the sum notional of the legs that are transacted simultaneously meets the minimum quantity threshold for the leg with the shortest Remaining Tenor.</li> </ul> <p>All Block Trades must be reported to the Exchange within 15 minutes of trade execution. All block trades must be submitted for clearing by the end of the trading day (4:35pm ET).</p> <p>Eris Exchange will publicly report all Block Trades (instrument, price, quantity) immediately upon successful receipt of the trade details from the party reporting the trade.</p>
<b>Exchange of Derivatives for Related Positions</b>	<p>Eris Interest Rate Swap Futures are eligible to be traded as privately negotiated, off-exchange Exchange of Derivatives for Related Positions (EDRPs) and reported to Eris Exchange.</p> <p>EDRPs must be executed and reported pursuant to Rule 602 in the Eris Exchange Rulebook.</p> <p>There are no minimum quantity thresholds required for EDRPs.</p> <p>Eris Exchange does not report EDRPs publicly during the trading day; however, activity from EDRPs is reflected in the Exchange volume and open interest values published at the end of each trading day.</p>
<b>Ticker Symbol Convention</b>	<p>Maturity Code (Period Code) will be YYYYMMDD</p> <p>Product Code: ZC9110; initial contract fixed rate Product Code: ZC9210; secondary contract fixed rate</p> <p>For example, the 10Y contract with Product Code of ZC9110 and Maturity Date of 12/19/22 will have a ticker symbol of ZC911020221219</p>

Certain elements of the contract design and pricing construct are patent-pending.

## Eris Interest Rate Swap Futures: 30Y Standard Contract Specifications

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<b>Trading Hours</b>	Eris Exchange electronic platform trading hours are currently 8:20 AM to 4:30 PM Eastern Time.
<b>Contract Structure</b>	\$100,000 notional principal whose value is based upon the difference between a stream of semi-annual fixed interest payments and a stream of quarterly floating interest payments based on 3 month US Dollar LIBOR, over a term to maturity.
<b>Underlying Swap Tenor</b>	30 Years
<b>Fixed Rate</b>	Pre-determined rate set by Eris Exchange which will remain static throughout the life of the contract <ul style="list-style-type: none"> <li>• Determined just prior to quarterly listing</li> <li>• Multiple fixed rates may be pre-determined</li> </ul>
<b>Contract Size</b>	1 Contract = 1 lot = \$100,000 face
<b>Trading Conventions</b>	Buy = Pay Fixed Sell = Receive Fixed
<b>Swap Futures Leg Conventions</b>	<p><b>Fixed Leg</b></p> <ul style="list-style-type: none"> <li>• Reset Frequency: Semi-Annual</li> <li>• Day Count Convention: 30/360</li> <li>• Currency: USD</li> <li>• Holiday Calendar(s): New York, London</li> <li>• Business Day Convention: Modified Following with adjustment to period end dates</li> </ul> <p><b>Floating Leg</b></p> <ul style="list-style-type: none"> <li>• Reset Frequency: Quarterly</li> <li>• Day Count Convention: Actual/360</li> <li>• Currency: USD</li> <li>• Holiday Calendar(s): New York, London</li> <li>• Business Day Convention: Modified Following with adjustment to period end dates</li> </ul>
<b>Effective Dates</b>	Quarterly IMM Dates (3 <sup>rd</sup> Wednesday of each March, June, September, December) <ul style="list-style-type: none"> <li>• Potential to move to monthly dates</li> </ul>

<b>Cash Flow Alignment Date (“CFAD”)</b>	<p>The date used for aligning all fixed and floating Reset Dates, and for determination of the Maturity Date.</p> <p>CFAD can be derived by adding 30 Years to the Effective Date.</p> <p>For example, an Eris Interest Rate Swap Future with an Effective Date of 09/19/2012 and a tenor of 30 years implies a Cash Flow Alignment Date of 09/19/2042. Note that the Cash Flow Alignment Date may fall on any calendar day, including weekends and holidays. The CFAD is used to determine the Maturity Date, but the two terms are distinct, as the Maturity Date must fall on a valid business day from the joint holiday calendar.</p>
<b>Maturity Date</b>	<p>The final date to which fixed and floating amounts accrue. The last date of the contract.</p> <p>Maturity Date is determined by applying the Modified Following rule to the Cash Flow Alignment Date. If the Cash Flow Alignment Date is a non-business day in either NY or London, go forward to the next day that is a business day in both NY and London. If the next valid business day is in the following month, the preceding valid business day on both the NY and London holiday calendars will be the Maturity Date.</p> <p>Eris PAI<sup>TM</sup> accrues up to and including the Maturity Date.</p> <p>The Maturity Date may also be referred to as Termination Date.</p>
<b>Underlying Tenor</b>	<p>The duration of time from the Effective Date to the Cash Flow Alignment Date.</p>
<b>Remaining Tenor</b>	<p>The duration of time from today to the Cash Flow Alignment Date.</p>
<b>Reset Dates</b>	<p>Dates utilized to determine fixed and floating amounts throughout the life of the Contract. Reset Dates define the beginning and end of fixed and floating interest accrual periods. Floating Rate Reset Dates facilitate the determination of the LIBOR Fixing Dates.</p> <p>The Cash Flow Alignment Date will be used as the basis for determining Reset Dates. Each Reset Date is subject to adjustment based on Modified Following convention.</p> <ul style="list-style-type: none"> <li>For example, if the CFAD is 09/19/2042, the Reset Dates will be on the 19<sup>th</sup> of December, March, June and September, subject to the Modified Following convention.</li> </ul>

<b>Last Trading Day</b>	The last day on which the Contract can be traded is the NY business day preceding the Maturity Date.
<b>First LIBOR Fixing Date</b>	2 London business days prior to the Effective Date.
<b>Other LIBOR Fixing Dates</b>	For all periods other than the first floating rate period, the LIBOR Fixing Date is 2 London business days prior to each Reset Date.
<b>Floating Rate Index</b>	3 Month USD LIBOR announced by the British Bankers' Association.
<b>Daily Settlement Price (Futures-Style Price)</b>	<p>Eris Interest Rate Swap Futures are priced on a basis of 100, similar to market practice for bonds and other futures contracts.</p> <p>The settlement value for each Contract is defined as:</p> $S_t = 100 + A_t + B_t - C_t$ <p> <math>S_t</math> = settlement price at time t  <math>A_t</math> = net present value of the future cash flows at time t, based on OIS discounting  <math>B_t</math> = value of the historical fixed and floating amounts since contract inception  <math>C_t</math> = Eris Price Alignment Interest (or Eris PAI™).         </p> <p>Eris Exchange and CME Clearing calculate Daily Settlement Price to 4 decimals of precision (e.g., 100.1234).</p> <p>Eris PAI™ is a cumulative value calculated daily by applying the overnight Fed Funds effective rate to the contract's NPV, using an Actual/360 daycount convention. Eris PAI™ will start accruing on the first listing date.</p>
<b>Final Settlement Price</b>	$S_{final} = 100 + B_{final} - C_{final}$ <p> <math>S_{final}</math> = Settlement price at maturity  <math>B_{final}</math> = Historical fixed and floating amounts since contract inception through maturity  <math>C_{final}</math> = Eris PAI™, at maturity         </p>
<b>Quoting Convention</b>	<p>Net Present Value (NPV) per Contract will be used for trade execution.</p> <p>NPV is expressed in per contract terms for the Buyer (fixed rate payer).</p>

	<p>Each Swap Future negotiated in NPV terms has an implicit futures-style trade price of</p> $\text{Trade Price} = 100 + A_{\text{negotiated}} + B_t - C_t$ <p>where <math>A_{\text{negotiated}}</math> is the NPV per Contract agreed upon between the counterparties (divided by 1,000 to normalize units to \$100 face amount), <math>B_t</math> is the value of the historical fixed and floating amounts, and <math>C_t</math> is Eris PAI™ at time <math>t</math>.</p> <p>The B and C components are calculated once daily and applied by the Exchange, and are not subject to negotiation by the counterparties.</p> <p>The NPV per Contract can be negotiated in the following increments/tick sizes:</p> <ul style="list-style-type: none"> <li>• \$1 for Contracts where the lesser of Remaining Tenor/Underlying Tenor is less than two years.</li> <li>• \$2 for Contracts where the lesser of Remaining Tenor/Underlying Tenor is greater than or equal to two years and less than 4 years.</li> <li>• \$5 for Contracts where the lesser of Remaining Tenor/Underlying Tenor is greater than or equal to four years and less than 7 years.</li> <li>• \$10 for Contracts where the lesser of Remaining Tenor/Underlying Tenor is greater than or equal to seven years and less than 20 years.</li> <li>• \$20 for Contracts where the lesser of Remaining Tenor/Underlying Tenor is greater than or equal to 20 years.</li> </ul>
<b>Listed Spreads</b>	<p>Listed Spreads (or Discrete Spreads), composed of Standard Contracts, may be traded using the SwapBook Discrete Spread functionality.</p>
<b>Block Trades</b>	<p>Eris Interest Rate Swap Futures are eligible to be traded as privately negotiated, off-exchange Block Trades and reported to Eris Exchange.</p> <p>Block Trades must be executed and reported pursuant to Rule 601 in the Eris Exchange Rulebook.</p> <p>Current block trade thresholds are as follows and are subject to change:</p> <ul style="list-style-type: none"> <li>• For Contracts with a Remaining Tenor of less than 5 years from trade date, the minimum quantity threshold is 500 Contracts (\$50M notional).</li> <li>• For Contracts with a Remaining Tenor of 5 years or</li> </ul>

	<p>more from trade date, the minimum quantity threshold is 250 Contracts (\$25M notional).</p> <ul style="list-style-type: none"> <li>• A multiple leg Block Trade is permitted as long as the sum notional of the legs that are transacted simultaneously meets the minimum quantity threshold for the leg with the shortest Remaining Tenor.</li> </ul> <p>All Block Trades must be reported to the Exchange within 15 minutes of trade execution. All block trades must be submitted for clearing by the end of the trading day (4:35pm ET).</p> <p>Eris Exchange will publicly report all Block Trades (instrument, price, quantity) immediately upon successful receipt of the trade details from the party reporting the trade.</p>
<b>Exchange of Derivatives for Related Positions</b>	<p>Eris Interest Rate Swap Futures are eligible to be traded as privately negotiated, off-exchange Exchange of Derivatives for Related Positions (EDRPs) and reported to Eris Exchange.</p> <p>EDRPs must be executed and reported pursuant to Rule 602 in the Eris Exchange Rulebook.</p> <p>There are no minimum quantity thresholds required for EDRPs.</p> <p>Eris Exchange does not report EDRPs publicly during the trading day; however, activity from EDRPs is reflected in the Exchange volume and open interest values published at the end of each trading day.</p>
<b>Ticker Symbol Convention</b>	<p>Maturity Code (Period Code) will be YYYYMMDD</p> <p>Product Code: ZD9130; initial contract fixed rate Product Code: ZD9230; secondary contract fixed rate</p> <p>For example, the 30Y contract with Product Code of ZD9130 and Maturity Date of 12/19/42 will have a ticker symbol of ZD913020421219</p>

Certain elements of the contract design and pricing construct are patent-pending.



## Eris Interest Rate Swap Futures: Flex Contract Specifications

<b>Trading Hours</b>	Eris Exchange electronic platform trading hours are currently 8:20 AM to 4:30 PM Eastern Time.
<b>Contract Structure</b>	\$100,000 notional principal whose value is based upon the difference between a stream of semi-annual fixed interest payments and a stream of quarterly floating interest payments based on 3 month US Dollar LIBOR, over a term to maturity.
<b>Contract Size</b>	1 Contract = 1 lot = \$100,000 face
<b>Trading Conventions</b>	Buy = Pay Fixed Sell = Receive Fixed
<b>Swap Futures Leg Conventions</b>	<p><b>Fixed Leg</b></p> <ul style="list-style-type: none"> <li>Reset Frequency: Semi-Annual</li> <li>Day Count Convention: 30/360</li> <li>Currency: USD</li> <li>Holiday Calendar(s): New York, London</li> <li>Business Day Convention: Modified Following with adjustment to period end dates</li> </ul> <p><b>Floating Leg</b></p> <ul style="list-style-type: none"> <li>Reset Frequency: Quarterly</li> <li>Day Count Convention: Actual/360</li> <li>Currency: USD</li> <li>Holiday Calendar(s): New York, London</li> <li>Business Day Convention: Modified Following with adjustment to period end dates</li> </ul>
<b>Effective Date</b>	<p>The first date from which fixed and floating interest amounts accrue.</p> <ul style="list-style-type: none"> <li>To determine the Effective Date of a spot-starting Eris Interest Rate Swap Future, move two business days forward from the trade date in the London calendar, and then check the NY Fed Calendar. If that day is a valid NY business day, then that is the Effective Date. If that day is a NY holiday, then continue to move forward to the next day that is a valid business day on both the LN and NY calendars.</li> </ul>

<b>Cash Flow Alignment Date (“CFAD”)</b>	<p>The date used for aligning all fixed and floating Reset Dates, and for determination of the Maturity Date.</p> <p>The Cash Flow Alignment Date can be defined as any date up to 30 years following the Effective Date. CFAD can be derived, if necessary, by adding the tenor to the Effective Date.</p> <p>For example, an Eris Interest Rate Swap Future with an Effective Date of 12/30/2010 and a tenor of three years implies a Cash Flow Alignment Date of 12/30/2013. Note that the Cash Flow Alignment Date may fall on any calendar day, including weekends and holidays. The CFAD is used to determine the Maturity Date, but the two terms are distinct, as the Maturity Date must fall on a valid business day from the joint holiday calendar.</p>
<b>Maturity Date</b>	<p>The final date to which fixed and floating amounts accrue. The last date of the contract.</p> <p>Maturity Date is determined by applying the Modified Following rule to the Cash Flow Alignment Date. If the Cash Flow Alignment Date is a non-business day in either NY or London, go forward to the next day that is a business day in both NY and London. If the next valid business day is in the following month, the preceding valid business day on both the NY and London holiday calendars will be the Maturity Date.</p> <p>Eris PAI<sup>TM</sup> accrues up to and including the Maturity Date.</p> <p>The Maturity Date may also be referred to as Termination Date.</p>
<b>Trading Period Type</b>	<p>Spot:</p> <ul style="list-style-type: none"> <li>• A new contract or one that was created on a prior date, in which the Effective Date is the same as a spot starting contract traded on that day.</li> </ul> <p>Forward:</p> <ul style="list-style-type: none"> <li>• A new contract or one that was created on a prior date, in which the Effective Date is after the Effective Date of a spot starting contract traded on that day. The maximum possible time between the Effective Date of a spot starting contract and the Effective Date of a forward starting contract is 10 years.</li> </ul> <p>Seasoned:</p> <ul style="list-style-type: none"> <li>• A new contract or one that was created on a prior date, in which the Effective Date is before the Effective Date of a spot starting contract traded on that day.</li> </ul>

	The Ticker Symbol remains the same as it transitions throughout period types.
<b>Underlying Tenor</b>	<p>The duration of time from the Effective Date to the Cash Flow Alignment Date.</p> <p>A Contract can have an Underlying Tenor as long dated as 30 years, with precision down to each valid business day.</p>
<b>Remaining Tenor</b>	<p>The duration of time from today to the Cash Flow Alignment Date.</p> <p>A Contract can have a Remaining Tenor as long dated as 40 years, with precision down to each valid business day.</p>
<b>Reset Dates</b>	<p>Dates utilized to determine fixed and floating amounts throughout the life of the Contract. Reset Dates define the beginning and end of fixed and floating interest accrual periods. Floating Rate Reset Dates facilitate the determination of the LIBOR Fixing Dates.</p> <p>The Cash Flow Alignment Date will be used as the basis for determining Reset Dates. Each Reset Date is subject to adjustment based on Modified Following convention.</p> <ul style="list-style-type: none"> <li>For example, if the CFAD is 12/15/2030, the Reset Dates will be on the 15<sup>th</sup> of March, June, September and December, subject to the Modified Following convention.</li> </ul>
<b>Last Trading Day</b>	The last day on which the Contract can be traded is the NY business day preceding the Maturity Date.
<b>First LIBOR Fixing Date</b>	<p>For spot starting contracts, the first LIBOR Fixing Date is the trade date.</p> <p>For forward starting contracts, the first LIBOR Fixing Date is 2 London business days prior to the Effective Date.</p>
<b>Other LIBOR Fixing Date</b>	For all periods other than the first floating rate period, the LIBOR Fixing Date is 2 London business days prior to each Reset Date.
<b>Floating Rate Index: First Period</b>	<p>3 Month USD LIBOR for all contracts with standard first floating rate period (i.e., length of period is 3 months, adjusted for Modified Following).</p> <p>For both Spot Starting and Forward Starting Contracts with non-standard tenors, a short front stub period of less than 3 months</p>

	<p>may occur between the Effective Date and the first Reset Date. In these cases, the first LIBOR Fixing Rate is determined using linear interpolation based on the two LIBOR indices that surround the Stub Period on the first LIBOR Fixing Date.</p> <ul style="list-style-type: none"> <li>The following USD LIBOR indices will be used to determine the fixing rate for a stub period: Overnight, 1 Week, 1 Month, 2 Month and 3 Month.</li> <li>For example, the first LIBOR fixing rate for a contract with a stub period of 45 days will be interpolated between the 1 month and 2 month LIBOR rates.</li> </ul>
<b>Floating Rate Index: Subsequent Periods</b>	3 Month USD LIBOR announced by the British Bankers' Association.
<b>Daily Settlement Price (Futures-Style Price)</b>	<p>Eris Interest Rate Swap Futures are priced on a basis of 100, similar to market practice for bonds and other futures contracts.</p> <p>The settlement value for each Contract is defined as:</p> $S_t = 100 + A_t + B_t - C_t$ <p> <math>S_t</math> = settlement price at time t  <math>A_t</math> = net present value of the future cash flows at time t, based on OIS discounting  <math>B_t</math> = value of the historical fixed and floating amounts since contract inception  <math>C_t</math> = Eris Price Alignment Interest (or Eris PAI<sup>TM</sup>).         </p> <p>Eris Exchange and CME Clearing calculate Daily Settlement Price to 4 decimals of precision (e.g., 100.1234).</p> <p>Eris PAI is a cumulative value calculated daily by applying the overnight Fed Funds effective rate to the contract's NPV, using an Actual/360 daycount convention. Eris PAI<sup>TM</sup> will start accruing on the first trade date.</p>
<b>Final Settlement Price</b>	$S_{final} = 100 + B_{final} - C_{final}$ <p> <math>S_{final}</math> = Settlement price at maturity  <math>B_{final}</math> = Historical fixed and floating amounts since contract inception through maturity  <math>C_{final}</math> = Eris PAI<sup>TM</sup>, at maturity         </p>
<b>Quoting Convention: Par Swap Futures</b>	During the Forward and Spot Periods, market participants can trade Par Swap Futures by negotiating the par fixed rate for a given Effective Date and Cash Flow Alignment Date.

	<p>Each Par Swap Future negotiated in fixed rate terms carries an implicit futures-style price of 100.0000.</p> <p>For Par Swap Futures the fixed rate can be negotiated in increments of one-tenth of one basis point, from 0.000% to 9.999%.</p>
<b>Quoting Convention: Off-Market Swap Futures</b>	<p>During the Spot, Forward and Seasoned periods of a given Contract, market participants can negotiate the Net Present Value (NPV) per Contract.</p> <p>NPV is expressed in per contract terms for the Buyer (fixed rate payer).</p> <p>Each Off-Market Swap Future negotiated in NPV terms has an implicit futures-style trade price of</p> $\text{Trade Price} = 100 + A_{\text{negotiated}} + B_t - C_t$ <p>where <math>A_{\text{negotiated}}</math> is the NPV per Contract agreed upon between the counterparties (divided by 1,000 to normalize units to \$100 face amount), <math>B_t</math> is the value of the historical fixed and floating amounts, and <math>C_t</math> is Eris PAI™ at time t.</p> <p>The B and C components are calculated once daily and applied by the Exchange, and are not subject to negotiation by the counterparties.</p> <p>The NPV per Contract can be negotiated in the following increments/tick sizes:</p> <ul style="list-style-type: none"> <li>• \$1 for Contracts where the lesser of Remaining Tenor/Underlying Tenor is less than two years.</li> <li>• \$2 for Contracts where the lesser of Remaining Tenor/Underlying Tenor is greater than or equal to two years and less than 4 years.</li> <li>• \$5 for Contracts where the lesser of Remaining Tenor/Underlying Tenor is greater than or equal to four years and less than 7 years.</li> <li>• \$10 for Contracts where the lesser of Remaining Tenor/Underlying Tenor is greater than or equal to seven years and less than 20 years.</li> <li>• \$20 for Contracts where the lesser of Remaining Tenor/Underlying Tenor is greater than or equal to 20</li> </ul>

	years.
<b>Block Trades</b>	<p>Eris Interest Rate Swap Futures are eligible to be traded as privately negotiated, off-exchange Block Trades and reported to Eris Exchange.</p> <p>Block Trades must be executed and reported pursuant to Rule 601 in the Eris Exchange Rulebook.</p> <p>Current block trade thresholds are as follows and are subject to change:</p> <ul style="list-style-type: none"> <li>• For Contracts with a Remaining Tenor of less than 5 years from trade date, the minimum quantity threshold is 500 Contracts (\$50M notional).</li> <li>• For Contracts with a Remaining Tenor of 5 years or more from trade date, the minimum quantity threshold is 250 Contracts (\$25M notional).</li> <li>• A multiple leg Block Trade is permitted as long as the sum notional of the legs that are transacted simultaneously meets the minimum quantity threshold for the leg with the shortest Remaining Tenor.</li> </ul> <p>All Block Trades must be reported to the Exchange within 15 minutes of trade execution. All block trades must be submitted for clearing by the end of the trading day (4:35pm ET).</p> <p>Eris Exchange will publicly report all Block Trades (instrument, price, quantity) immediately upon successful receipt of the trade details from the party reporting the trade.</p>
<b>Exchange of Derivatives for Related Positions</b>	<p>Eris Interest Rate Swap Futures are eligible to be traded as privately negotiated, off-exchange Exchange of Derivatives for Related Positions (EDRPs) and reported to Eris Exchange.</p> <p>EDRPs must be executed and reported pursuant to Rule 602 in the Eris Exchange Rulebook.</p> <p>There are no minimum quantity thresholds required for EDRPs.</p> <p>All EDRPs must be reported to Eris Exchange by 4:35 pm (Eastern Time) on the trading day on which they are executed.</p> <p>Eris Exchange does not report EDRPs publicly during the trading day; however, activity from EDRPs is reflected in the Exchange volume and open interest values published at the end of each trading day.</p>

<b>Ticker Symbol Convention</b>	<p><b>Product Family + Tenor + Maturity</b></p> <p>The first new trade for a given Maturity Date will be issued (by Eris Exchange systems) a ticker symbol comprised of Clearing Code 'Z(tenor category)0001', concatenated with the Period representing the Maturity Date in YYYYMMDD format.</p> <p>A contract's Tenor is defined as the difference between the contract's Effective Date and its Cash Flow Alignment Date.</p> <p>Tenor category are as follows:          ZA = Tenors greater than zero and less than or equal to two years          ZB = Tenors greater than two years and less than or equal to five years          ZC = Tenors greater than five years and less than or equal to ten years          ZD = Tenors greater than ten years</p> <p>The first Contract that trades with a particular maturity is assigned Product Family Z(A)0001. The next Contract that trades with the same maturity, but with a different start date or coupon, is assigned Product Family Z(A)0002.</p> <p>For Example, assume that the trade is a 10-year swap future initiated on 16-Dec-2010 with settlement date of 20-Dec-2020 and coupon of 0.710. As the first trade that carries the Maturity Date 20-Dec-2020, it will be issued ticker symbol ZC000120201220. The C denotes that this is in the 5+ to 10 years tenor category.</p>
<b>Listed Spreads</b>	<p>Listed Spreads (or Discrete Spreads), composed of featured Contracts, may be traded using the SwapBook Discrete Spread functionality.</p>

Certain elements of the contract design and pricing construct are patent-pending.

For more information, please contact the Eris Control Center.

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