The Credit Event Process

Credit Event Process

- Determinations Committee will decide whether a CDS auction will be held following a Credit Event (except for Restructuring)
  - Simple majority vote
  - Replaces need for existing CDS Auction Protocols
- Auction Terms Documentation Structure
  - Auction methodology contained in main section of document designed to remain largely consistent from Auction to Auction
    - Amendments to Auction methodology can only occur by a Supermajority and after a public comment period
  - Deliverable Obligation Terms (i.e., to what sort of CDS does this Auction apply?) are determined by majority vote
    - Additional Deliverable Obligation Terms (e.g., off-the-run standard trading terms) may be added by agreement of 80% supermajority

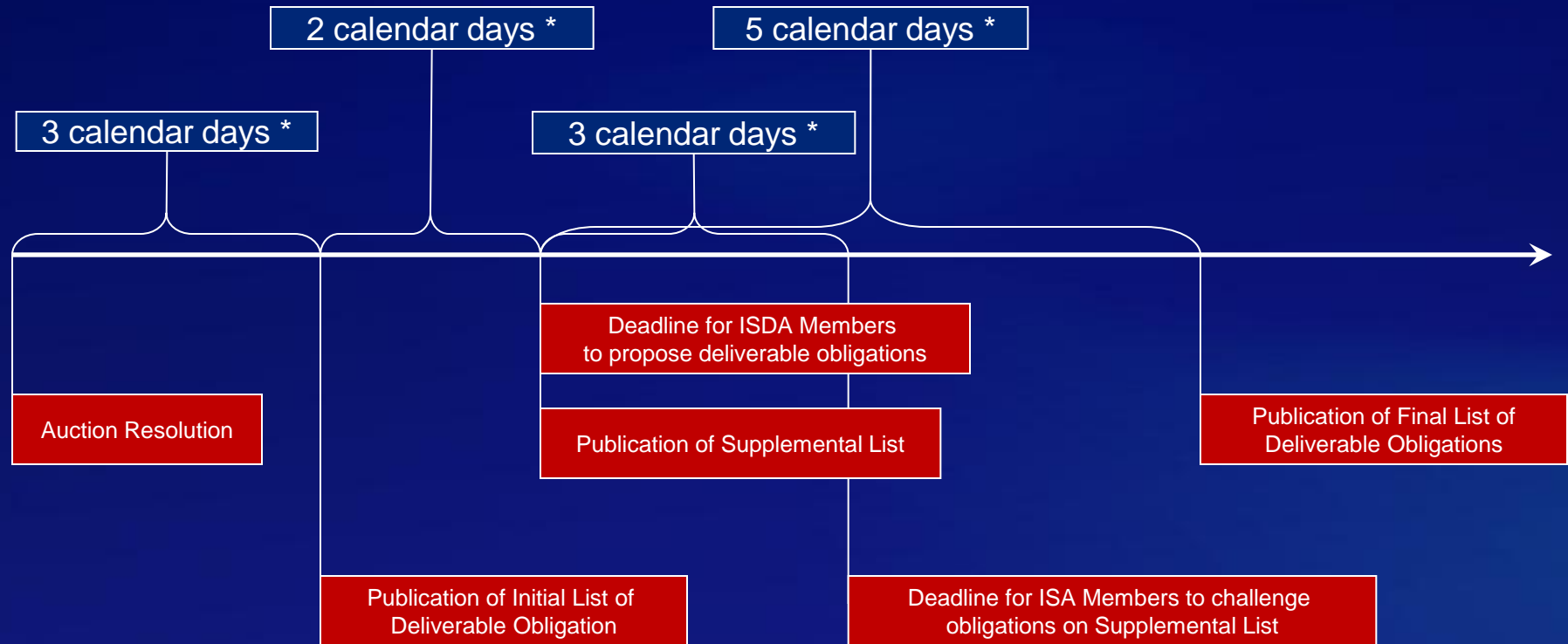**ISDA**®

Credit Event Process

- Auction Terms Documentation Structure (cont.)
  - Auction-specific terms in Schedule 1 – determined by majority vote:
    - Auction Date
    - Initial Bidding Information Publication Time
    - Subsequent Bidding Information Publication Time
    - Inside Market Quotation Amount
    - Maximum Inside Market Bid-Offer Spread
    - Minimum Number of Valid Inside Market Submissions
  - Deliverable Obligations
    - Will be determined by the Determinations Committee for each Auction (by 50% vote if unchallenged; by 80% vote or External Review if challenged)

ISDA ®

Credit Event Process

- Development of the Final List of Deliverable Obligations

  – Step 1 - within three calendar days of an Auction resolution, the Determinations Committee will publish the initial list of Deliverable Obligations (determined by simple majority vote of Determinations Committee)

  – Step 2 - ISDA members then have two calendar days (subject to Business Day adjustment) to add additional Deliverable Obligations to the list; the expanded list is then published

  – Step 3 - ISDA members then have a further three calendar days (subject to Business Day adjustment) to challenge any Deliverable Obligation on the list

    - Any Deliverable Obligation that is challenged is subject to vote by the Determinations Committee (requires 80% supermajority vote to be included/excluded for the Final List of Deliverable Obligations)

    - If 80% supermajority resolution is not achieved, the External Review panel will decide whether the relevant obligation qualifies as a Deliverable Obligation

ISDA®

Timelines

Deliverable Obligations Resolutions

* If the day is not a Local Business Day, the following Local Business Day.

Timeline subject to amendment by 80% vote.

ISDA®

Credit Event Backstop Date

- **Credit Event Resolution Request Date**
  - ~ the first date on which (a) notice asking ISDA to convene the DC to determine the occurrence and date of a Credit Event was effective and (b) the DC was in possession of Publicly Available Information for the determinations under clause (a)

- **Credit Event Backstop Date**
  - ~ 60 calendar days prior to Credit Event Resolution Request Date; or
  - ~ 60 calendar days prior to earlier of the first date on which the Credit Event Notice and Publicly Available Information (if applicable) are delivered and are effective during the Notice Delivery Period

- **Notice Delivery Period**
  - ~ the period from, and including, the Trade Date to, and including, the date that is fourteen calendar days after the latest of (a) the Scheduled Termination Date, (b) the Grace Period Extension Date (if applicable) and (c) the Repudiation/Moratorium Evaluation Date (if applicable)

ISDA®

The Credit Event Process

- Determinations Committee Resolutions will be binding on all transactions that are governed by the Supplement
  - However, Determinations Committee Resolutions will not have retroactive effect to alter an event that has already settled
  - If the Determinations Committee declines to determine a Credit Event, parties will need to settle as normal, including delivery of bilateral CENs.

ISDA®

Event Determination Date

[1] We assume that Auction Settlement is specified as the Settlement Method, that the Trade Date occurs on or prior to the Auction Final Price Determination Date, and that the Credit Event occurred after the the relevant Credit Event Backstop Date.

Has the Notifying Party delivered the Credit Event Notice (and Notice of Publicly Available Information, if applicable)?[1]

Was the Credit Event Notice (and Notice of Publicly Available Information, if applicable) delivered (i) within the Notice Delivery Period, (ii) between the date on which ISDA publicly announces that the DC Resolved not to determine whether a Credit Event has occurred and the date 14 calendar days thereafter, or (iii) between the date on which ISDA publicly announces that the DC Resolved that a Credit Event has occurred and the date 14 calendar days thereafter?

Has a notice been delivered to ISDA in accordance with the Rules requesting that a DC be convened to Resolve whether a Credit Event has occurred?

Has such notice been delivered to ISDA before the final day of the Notice Delivery Period?

Has a notice been delivered to ISDA in accordance with the Rules requesting that a DC be convened to Resolve whether a Credit Event has occurred?

Has such notice been delivered to ISDA before the final day of the Notice Delivery Period?

There is no Event Determination Date because notice to ISDA was not delivered within the Notice Delivery Period.

There is not yet any Event Determination Date because notice has not been delivered.

Did a Physical Settlement Date or Termination Date occur before ISDA publicly announced that the DC Resolved that a Credit Event has occurred (or not occurred)?

Did a Valuation Date or Delivery Date occur with respect to a portion of the Floating Rate Payer Calculation Amount before ISDA publicly announced that the DC Resolved that a Credit Event has occurred (or not occurred)?

What did the DC Resolve?

The Event Determination Date is the first day when the delivered Credit Event Notice (and Notice of Publicly Available Information, if applicable) is effective.[2]

What did the DC Resolve?

A Non-Restructuring Credit Event has occurred.

A Credit Event has not occurred.

A Restructuring Credit Event has occurred.

The DC Resolved not to determine whether a Credit Event has occurred.

With respect to the portion for which a Valuation Date or Delivery Date has occurred, the Event Determination Date is the first day when the delivered Credit Event Notice (and Notice of Publicly Available Information, if applicable) is effective.[2]

A Non-Restructuring Credit Event has occurred.

A Restructuring Credit Event has occurred.

The DC Resolved not to determine whether a Credit Event has occurred.

A Credit Event has not occurred.

Was the Notifying Party specified to be "Buyer" only or "Seller" only?

Was the Notifying Party specified to be "Buyer" only or "Seller" only?

Did the DC Resolve that an Auction will be held?

Was an effective Credit Event Notice with respect to a prior Restructuring already delivered?

The Event Determination Date is the Credit Event Resolution Request Date.

There is no Event Determination Date because the DC Resolved that a Credit Event has not occurred.

Yes / No (flow connectors throughout)

[2] If prior to the Physical Settlement Date or Termination Date (or Valuation Date or Delivery Date, as applicable), the DC is Convened to Resolve whether a Credit Event has occurred, and the DC Resolves that a Credit Event has occurred or Resolves not to determine whether a Credit Event has occurred, timing requirements with respect to settlement will toll during the period when the DC is Convened until such DC Resolution, and parties will not be entitled to take any action in connection with settlement of the relevant Credit Derivative Transaction.

ISDA®

Event Determination Date (cont'd)

[1] We assume that Auction Settlement is specified as the Settlement Method, that the Trade Date occurs on or prior to the Auction Final Price Determination Date, and that the Credit Event occurred after the the relevant Credit Event Backstop Date.
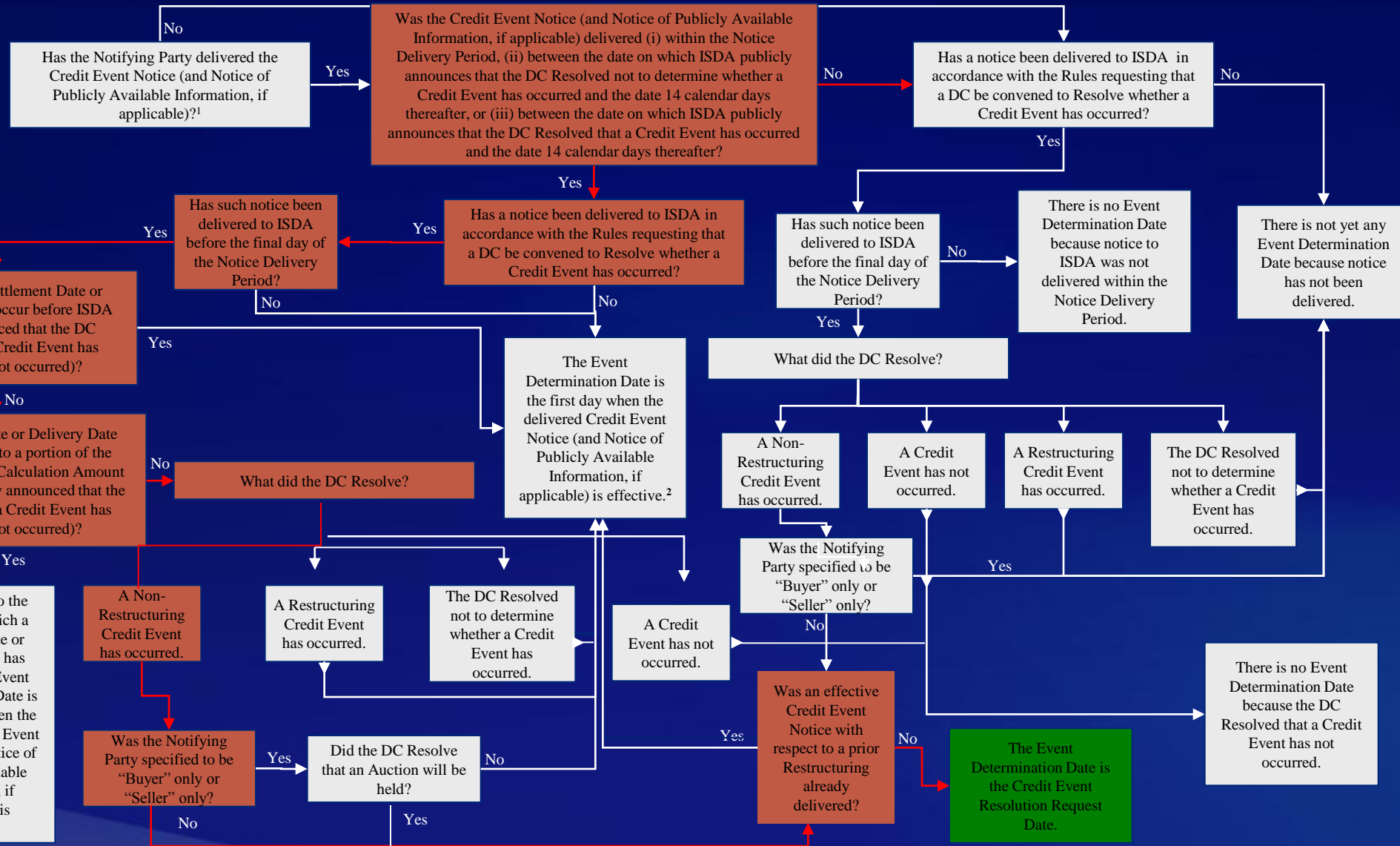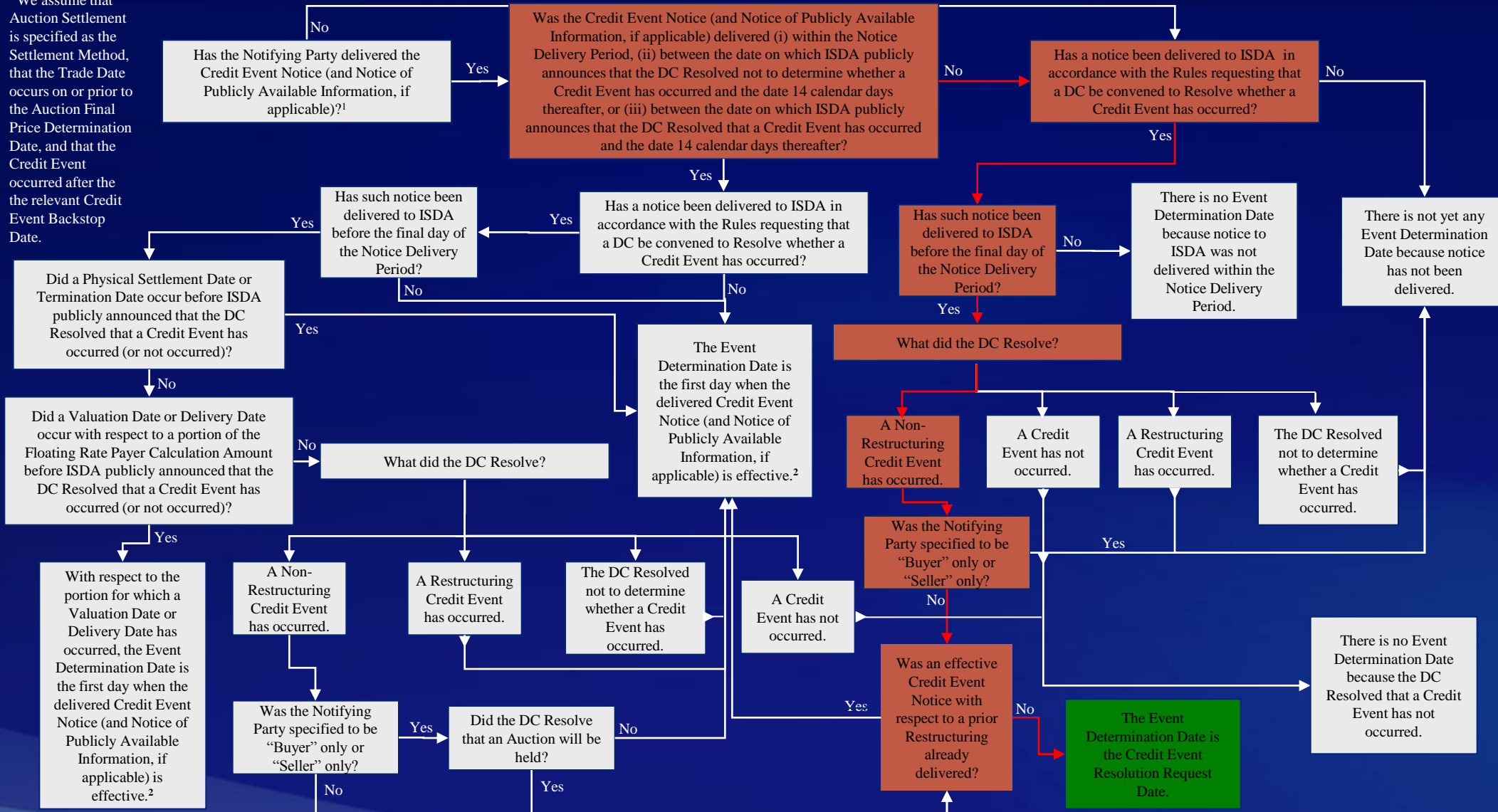
Has the Notifying Party delivered the Credit Event Notice (and Notice of Publicly Available Information, if applicable)?[1]

No → Was the Credit Event Notice (and Notice of Publicly Available Information, if applicable) delivered (i) within the Notice Delivery Period, (ii) between the date on which ISDA publicly announces that the DC Resolved not to determine whether a Credit Event has occurred and the date 14 calendar days thereafter, or (iii) between the date on which ISDA publicly announces that the DC Resolved that a Credit Event has occurred and the date 14 calendar days thereafter?

Yes →

No → Has a notice been delivered to ISDA in accordance with the Rules requesting that a DC be convened to Resolve whether a Credit Event has occurred?

No → There is not yet any Event Determination Date because notice has not been delivered.

Yes → Has such notice been delivered to ISDA before the final day of the Notice Delivery Period?

No → There is no Event Determination Date because notice to ISDA was not delivered within the Notice Delivery Period.

Yes → What did the DC Resolve?

Yes (from Credit Event Notice box) → Has a notice been delivered to ISDA in accordance with the Rules requesting that a DC be convened to Resolve whether a Credit Event has occurred?

Yes → Has such notice been delivered to ISDA before the final day of the Notice Delivery Period?

Yes → Did a Physical Settlement Date or Termination Date occur before ISDA publicly announced that the DC Resolved that a Credit Event has occurred (or not occurred)?

No → Did a Valuation Date or Delivery Date occur with respect to a portion of the Floating Rate Payer Calculation Amount before ISDA publicly announced that the DC Resolved that a Credit Event has occurred (or not occurred)?

Yes → With respect to the portion for which a Valuation Date or Delivery Date has occurred, the Event Determination Date is the first day when the delivered Credit Event Notice (and Notice of Publicly Available Information, if applicable) is effective.[2]

No → What did the DC Resolve?

(From Valuation Date box – What did the DC Resolve?)
- A Non-Restructuring Credit Event has occurred.
- A Restructuring Credit Event has occurred.
- The DC Resolved not to determine whether a Credit Event has occurred.
- A Credit Event has not occurred.

A Non-Restructuring Credit Event has occurred. → Was the Notifying Party specified to be "Buyer" only or "Seller" only?

Yes → Did the DC Resolve that an Auction will be held?

No → (to The Event Determination Date is effective)

Yes → (to Event Determination Date is the Credit Event Resolution Request Date)

The Event Determination Date is the first day when the delivered Credit Event Notice (and Notice of Publicly Available Information, if applicable) is effective.[2]

(What did the DC Resolve? – right branch)
- A Non-Restructuring Credit Event has occurred.
- A Credit Event has not occurred.
- A Restructuring Credit Event has occurred.
- The DC Resolved not to determine whether a Credit Event has occurred.

A Non-Restructuring Credit Event has occurred → Was the Notifying Party specified to be "Buyer" only or "Seller" only?

Yes →

No → Was an effective Credit Event Notice with respect to a prior Restructuring already delivered?

No → The Event Determination Date is the Credit Event Resolution Request Date.

A Credit Event has not occurred. → There is no Event Determination Date because the DC Resolved that a Credit Event has not occurred.

A Restructuring Credit Event has occurred → Yes

The DC Resolved not to determine whether a Credit Event has occurred.

[2] If prior to the Physical Settlement Date or Termination Date (or Valuation Date or Delivery Date, as applicable), the DC is Convened to Resolve whether a Credit Event has occurred, and the DC Resolves that a Credit Event has occurred or Resolves not to determine whether a Credit Event has occurred, timing requirements with respect to settlement will toll during the period when the DC is Convened until such DC Resolution, and parties will not be entitled to take any action in connection with settlement of the relevant Credit Derivative Transaction.

ISDA®

Event Determination Date (cont'd)

[1] We assume that Auction Settlement is specified as the Settlement Method, that the Trade Date occurs on or prior to the Auction Final Price Determination Date, and that the Credit Event occurred after the the relevant Credit Event Backstop Date.

Has the Notifying Party delivered the Credit Event Notice (and Notice of Publicly Available Information, if applicable)?[1]

No → **Was the Credit Event Notice (and Notice of Publicly Available Information, if applicable) delivered (i) within the Notice Delivery Period, (ii) between the date on which ISDA publicly announces that the DC Resolved not to determine whether a Credit Event has occurred and the date 14 calendar days thereafter, or (iii) between the date on which ISDA publicly announces that the DC Resolved that a Credit Event has occurred and the date 14 calendar days thereafter?**

Yes →

No → **Has a notice been delivered to ISDA in accordance with the Rules requesting that a DC be convened to Resolve whether a Credit Event has occurred?**

No → **There is not yet any Event Determination Date because notice has not been delivered.**

Yes ↓

Has such notice been delivered to ISDA before the final day of the Notice Delivery Period?

No → **There is no Event Determination Date because notice to ISDA was not delivered within the Notice Delivery Period.**

Yes ↓

Yes → **Has such notice been delivered to ISDA before the final day of the Notice Delivery Period?**

Yes ← **Has a notice been delivered to ISDA in accordance with the Rules requesting that a DC be convened to Resolve whether a Credit Event has occurred?**

No ↓

Did a Physical Settlement Date or Termination Date occur before ISDA publicly announced that the DC Resolved that a Credit Event has occurred (or not occurred)?

No ↓

Yes →

Did a Valuation Date or Delivery Date occur with respect to a portion of the Floating Rate Payer Calculation Amount before ISDA publicly announced that the DC Resolved that a Credit Event has occurred (or not occurred)?

Yes ↓

No → **What did the DC Resolve?**

With respect to the portion for which a Valuation Date or Delivery Date has occurred, the Event Determination Date is the first day when the delivered Credit Event Notice (and Notice of Publicly Available Information, if applicable) is effective.[2]

A Non-Restructuring Credit Event has occurred.

A Restructuring Credit Event has occurred.

The DC Resolved not to determine whether a Credit Event has occurred.

A Credit Event has not occurred.

Was the Notifying Party specified to be "Buyer" only or "Seller" only?

Yes → **Did the DC Resolve that an Auction will be held?**

No →

Yes →

The Event Determination Date is the first day when the delivered Credit Event Notice (and Notice of Publicly Available Information, if applicable) is effective.[2]

What did the DC Resolve?

A Non-Restructuring Credit Event has occurred.

A Credit Event has not occurred.

A Restructuring Credit Event has occurred.

The DC Resolved not to determine whether a Credit Event has occurred.

Yes →

Was the Notifying Party specified to be "Buyer" only or "Seller" only?

No ↓

Was an effective Credit Event Notice with respect to a prior Restructuring already delivered?

No → **The Event Determination Date is the Credit Event Resolution Request Date.**

Yes →

There is no Event Determination Date because the DC Resolved that a Credit Event has not occurred.

[2] If prior to the Physical Settlement Date or Termination Date (or Valuation Date or Delivery Date, as applicable), the DC is Convened to Resolve whether a Credit Event has occurred, and the DC Resolves that a Credit Event has occurred or Resolves not to determine whether a Credit Event has occurred, timing requirements with respect to settlement will toll during the period when the DC is Convened until such DC Resolution, and parties will not be entitled to take any action in connection with settlement of the relevant Credit Derivative Transaction.

ISDA®

The Auction

ISDA®

Auction Settlement Terms

➢ **Auction Settlement Terms will be published for each Auction the DC determines should be held**

➢ **Auction-specific terms set by the DC by majority vote**
  ~ Auction Date
  ~ Initial and Subsequent Bidding Periods
  ~ Inside Market Quotation Amount
  ~ Maximum Inside Market Bid-Offer Spread
  ~ Minimum Number of Valid Inside Market Submissions

➢ **Deliverable Obligations**
  ~ Will be determined by the DC for each Auction (by 50% vote if unchallenged; by 80% vote or External Review if challenged)

ISDA®

Primary Goals of Auctions

- Allows efficient settlement at a single Final Price for all adhering parties
- Ensure that Final Price is reflective of market value of the defaulted entity's obligations, taking into account CDS parties' net physical settlement requirements
- Allow bonds and loans to be traded to permit physical settlement at Final Price
  - Bonds and loans can be bought or sold in the auction to allow participants to finish with same net bond or loan position they would have had under physical settlement
  - Ensures resulting position from original settlement mechanism is effectively preserved for those who desire it

Prevents price and settlement distortions that could result where CDS exposure to a particular entity is disproportionately larger than the amount of actual obligations of such entity

ISDA®

Timeline

- **Post Auction**
  - Transactions covered by the Auction cash settle at the Final Price on the Cash Settlement Date.
  - Trades formed in the Auction are matched and notified by Administrators and settled by the relevant participants directly.
    - The effective "Buyer" will need to deliver a Notice of Physical Settlement specifying the Deliverable Obligation(s) it proposes to deliver.
    - The effective "Seller" will pay the Final Price for such Deliverable Obligations.

ISDA®

What does the auction do?

- Determines the Inside Market Midpoint

  – First indication of Final Price, and used to set limits on Final Price
  – Market participants penalized for trades which touch or cross by requiring a cash payment of Adjustment Amount (calculated by reference to Inside Market Midpoint)

- Determines the Open Interest

  – For market participants that still want to physically settle or where dealers/customers want to be able to buy/sell the Deliverable Obligations at the Final Price
  – Open Interest is the net imbalance between buy and sell orders

- Matches Limit Orders to create live trades to buy and sell Deliverable Obligations at the Final Price

- Determines Final Price

ISDA®

Calculating the Inside Market Mid-point

- Dealers submit pairs of Inside Market Bids/Offers (typically 2% of par apart) in a representative size (*$2m*)

  - Inside Market Bid – commitment to enter as Seller (obligation buyer) into RAST
  - Inside Market Offer – commitment to enter as Buyer (obligation seller) into RAST
  - *RAST*: Representative Auction-Settled Transaction (effectively a bond purchase agreement, but with CDS buy-in rules – see later)

- Pairs separated and sorted in:

  - Inside Market Bids – Descending Order
  - Inside Market Offers – Ascending Order

- 'Touching' or 'Crossing' pairs discarded for these purposes

- Identify the 'Best Half' i.e. the rounded up half of Bid/Offer pairs with tightest spreads (e.g. if there are 11 pairs, the best half is the 6 tightest pairs)

- The Bid and Offer pairs in the Best Half are then averaged to calculate Inside Market Midpoint

- Inside Market Midpoint as modified by the Cap will serve as a limit on Final Price

ISDA®

Calculating the Inside Market Mid-point

Dura Auction

"Crossing" →

"Best Half"

Dealer	Bid	Offer	Dealer
UBS	4.5	2.5	Goldman
Barclays	4	4.25	Morgan Stanley
BOA	3.75	4.5	Bear Stearns
Merrill	3.625	4.75	Deutsche
Lehman	3.5	4.75	JPMorgan
Credit Suisse	3.5	5.25	Citi
Citi	3.25	5.5	Lehman
Deutsche	2.75	5.5	Credit Suisse
JP Morgan	2.75	5.625	Merrill
Bear Stearns	2.5	5.75	BOA
Morgan Stanley	2.25	6	Barclays
Goldman	0.5	6.5	UBS

Inside Market Mid-point = 4.25 (average of Best Half bids and offers)

ISDA®

Touching or Crossing Bid/Offer Pairs

- If a Bid is equal to or higher than an Offer

  - In earlier Auctions the parties were required to trade with each other
  - Now, one party is required to pay an Adjustment Amount reflecting difference between Bid/Offer and the Inside Market Midpoint
  - If Open Interest is an offer to sell, Bidder pays; if Open Interest is an offer to buy, Seller pays
  - Adjustment Amount paid to ISDA and to Participating Bidders to defray costs of auction
  - Operates as a penalty for perceived off-market quotes

ISDA®

Calculating the Open Interest

- Participating Bidders submit Physical Settlement Buy/Sell Requests: orders to trade bonds of a stated size at the Final Price (as ultimately determined in Auction)
  - Physical Settlement Buy Request: Firm commitment to enter as Seller (obligation buyer) into Representative Auction-Settled Transaction (*RAST*)
  - Physical Settlement Sell Request: Firm commitment to enter as Buyer (obligation seller) into RAST

- Physical Settlement Buy/Sell Requests must be in same "direction" as and not in excess of Participating Bidder's or customer's Market Position
  - Participant that has purchased a net $100m in protection can only sell up to $100M in Deliverable Obligations
  - Conversely, a participant that has sold a net of $100M in protection can only buy up to $100M in Deliverable Obligations

- *RAST* is a credit default swap, but on terms such that it takes effect as a bond sale and purchase of cheapest to deliver Deliverable Obligations, at Final Price, and with standard CDS non-delivery fall-backs.

ISDA®

Calculating the Open Interest

- Customers submit requests through dealer counterparties. Participating Bidder may limit a customer to submitting requests no larger than its position with such Participating Bidder

- Difference between the sum of all Quotation Amounts specified in all Physical Settlement Buy vs. Physical Settlement Sell Requests is "Open Interest"

- NB Terminology:
    - Bid Requests ≈ position as Seller under RAST / CDS
    - Offer Request ≈ position as Buyer under RAST / CDS

ISDA®

Calculating the Open Interest

- Allows participants to maintain same cash position after auction as if they had physically settled

  - *e.g. assume notional of $100 and Final Price of 40%*
    - Seller under Physically Settled CDS would pay $100 and receive $100 of Obligations worth $40
    - Under Auction Seller will pay $60 and, by placing Limit Orders, buy $100 of Obligations for $40

- If Open Interest is an offer to sell, it implies that, of the market participants wishing physical settlement, there are more net buyers of protection (since they would be the ones receiving Deliverable Obligations under a physically settled CDS)

- If Open Interest is an bid to purchase, it implies that, of the market participants wishing physical settlement, there are more net sellers of protection (since they would be the ones delivering Deliverable Obligations under a physically settled CDS)

- Value of Limit Orders is far below aggregate notional of CDS
  - Vast majority of covered transactions do not trigger Physical Settlement Requests and are not reflected in Open Interest

ISDA®

Calculating the Final Price

- Where Limit Order book is greater than Open Interest, IMM serves as a limit on Final Price
  - match Unmatched Limit Orders until Open Interest closed or limit book runs out (depending on which is larger)

    - **If Open Interest is bid, match all Limit Offers in ascending order**
      - Highest Limit Offer so matched is **Final Price**
      - If Highest Limit Offer is below IMM minus Cap Amount, **Final Price = IMM minus Cap Amount**

    - If Open Interest is offer, match all Limit Bids in descending order
      - Lowest Limit Bid so matched is **Final Price**
      - If Lowest Limit Bid is above IMM plus Cap Amount, **Final Price = IMM plus Cap Amount**

- Where Open Interest is greater than Limit Order book, Final Price is:
  - If Open Interest is offer, **zero**
  - If Open Interest is a bid,
    - (a) for purposes of settling covered CDS trades, Final Price is **par** and
    - (b) for purposes of settling trades formed in the auction, Final Price is the highest offer received

ISDA®

Calculating the Final Price - example

Dura auction sorted data

Open Interest = 77

Dealer	Bid	USD Million
UBS	4.25	10
Barclays	4	10
BOA	3.75	10
Credit Suisse	3.75	20
Merrill	3.625	10
BOA	3.625	2
Credit Suisse	3.5	10
Lehman	3.5	10

Σ Bids = 62

Σ Bids = 82

FINAL PRICE = 3.5

ISDA®
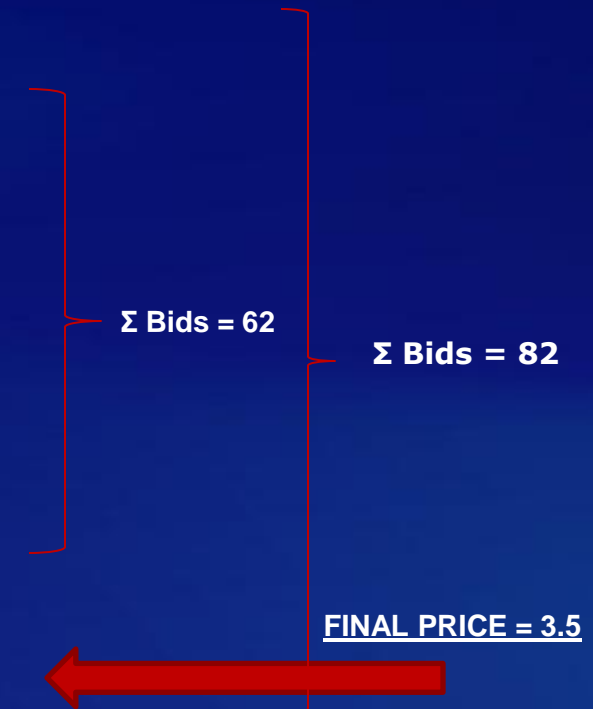
Changes to Currency Rate Definition

➢ As set forth in Section 8.10 of the 2003 Credit Derivative Definitions, the Currency Rate is set on the date on which the NOPS is effective (or if the NOPS is changed on or prior to the Physical Settlement Date, on the date notice of that last change is effective). The current mechanism creates multiple issues

➢ The Auction Supplement will rectify many of these issues as follows:

    ~ The Currency Rate will be fixed on the Business Day (or two Business Days) prior to the Auction Date by reference to the WM/Reuters 4pm London mid-point rate.

    ~ FX risk will be minimized by requiring the NOPS to be delivered on the Business Day following the Auction Date.

    ~ The Buyer will now bear the cost of currency fluctuations when it exercises its option to amend its NOPS. Upon Buyer amendment of its NOPS, the Revised Currency Rate for the new Deliverable Obligation is determined by reference to the spot rate between the currency of the removed Deliverable Obligation and that of the new Deliverable Obligation, as published on the following Business Day by WM/Reuters at 4pm London time. This calculation is only made in respect of a Deliverable Obligation being replaced (and hence any other Deliverable Obligation that remains in the NOPS shall be unaffected).

ISDA®

Changes to Loan Settlement

➢ Loan settlement is a difficult, time consuming process, exacerbated in the auction settlement protocols by the resultant chains of delivery that are often created between customers and Participating Bidders, where the same loan must be settled multiple times to reach the ultimate Seller of protection.

➢ The Auction Supplement will allow for a revised, more efficient process:

　~ Voluntary compression

　~ For any links in the chain where Delivery of the Loan fails, Cash Settlement pursuant to a revised version of Section 9.3 (Partial Cash Settlement Terms) will apply.

➢ Documentation for Loan Settlement – the Determinations Committee can approve a Market Advisory. If approved, the terms of the Advisory will be binding and incorporated into the settlement of loans under the relevant auction.

ISDA®