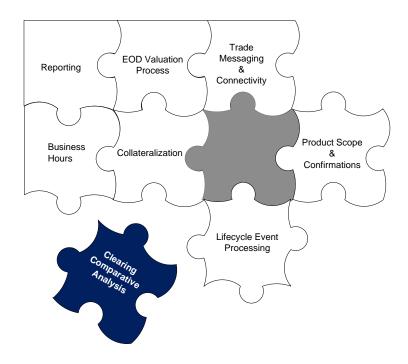


CIG | Clearing sub-group

CCP Snap-Shot Matrices

(Addendum to the Credit Clearing Comparative Analysis)

Version: 1.0







Foreword

This document contains a consolidated snap-shot of the survey responses from the 4 Central Clearing Counterparties ("CCPs") that completed the Credit Clearing Comparative Analysis Survey circulated at the end of March 2011:

- CME Group Inc. ("CME")
- IntercontinentalExchange, Inc. ("ICE Clear Europe" & "ICE Trust US")
- LCH.Clearnet S.A. ("LCH").

The content received from CCPs was used to determine the divergences detailed within the Credit Clearing Comparative Analysis publication. This document provides a useful reference point for those wishing to gain a deeper understanding of the divergences identified and should be read as an Addendum to the Credit Clearing Comparative Analysis publication.

The following content is based on information provided by the CCPs and is restricted to information which they considered not to be proprietary or confidential. The information presented is based on CCP responses to the survey that was circulated at the end of March 2011 and the additional requests for clarification that followed. ISDA has not undertaken to review the accuracy of the information presented and does not assume any responsibility for any use to which the information may be put.

The document is divided by work stream and each section provides a snap-shot matrix (example below) with the CCP summarised responses for each sub-module question and the associated divergence ratings. Divergence ratings assigned indicate: **1** = **No divergence in CCP process**; **2** = **Minor divergence in CCP process and 3** = **Major divergence in CCP process**. Additional information has been provided under each of the tables where additional clarification is required for the recorded divergence and to identify where CCP content may have been unavailable. Further guidance is provided in the diagram below.

| | Work stream module | CCP Model | ССР | Name | | | | Average divergen rating for module | | Divergence ra sub module q | U |
|-----|---|---|---|---|--|--|--|--|---|---|----------------|
| | | | ICET | Trust | | | ICE Clear | | LCH | CME | N. Contraction |
| 1.1 | Live Products | D2D Current | D2D Future | D2C Current | D2C Future | D2D Current | D2D Future | D2C Future | Current/Future | Current/Future | Divergence |
| Α | Which products does the service currently support? | NA Indices and Single Names | European Indices and Single Names | European Indices and Single Names | European Indices and Single Names | European Indices | North American Indices | 2 |
| | What is the methodology to add a new product / index / tenor / currency to the service? | Approved by Trader Advisory Committee (TAC) and Risk Working Group | Approved by Trader Advisory Committee (TAC) and Risk Working Group | Approved by Trader Advisory Committee (TAC) and Risk Working Group | Approved by: Trader Advisory Committee (TAC) and Risk Working Group | Approved by Risk and Member Meeting (RMM) | Approved by CDS Advisory Group and CDS Risk Committee | 3 |

Additional Information on Divergences

A - CME CDX IG Index, Series 12 through 16, 5 year tenor / LCH: European Indices: iTraxx Main, HiVol, XOver; Series 5+; 3, 5, 7, 10 year tenors / ICE Trust - 41 NA Indices & 109 Single Names / ICE Clear - 34 European Indices and 111 Single Names.

B - There are major differences amongst the CCP models. Greater clarity is required on how new names are proposed for both LCH & CME.

CCP Pending/Missing Feedback

B - LCH & CME - To provide clarity on their criteria for liquidity to determine if a name should be clearing eligible. For example, if a Risk Committee wanted to propose a new name what specific criteria and procedures would need to be followed and adhered to for that change to occur.

Additional information on divergences Powered by Sapient[®] Global Markets

The real 2



1) Product Scope & Confirmations [Divergence Rating 2 = Minor Divergence]

| | | | ICE 1 | Trust | | | ICE Clear | | Ľ | CH | CME | |
|-----|---|---|---|---|---|---|---|---|---|--------------------------------------|---|------------|
| 1.1 | Live Products | D2D Current | D2D Future | D2C Current | D2C Future | D2D Current | D2D Future | D2C Future | Current | Future | Current/Future | Divergence |
| А | Which products does the service currently support? | NA Indices and Single Names | European Indices and Single Names | European Indices and Single Names | European Indices and Single Names | European Indices (and Single Names incase of Restructuring) | European Indices and Single Names | North American Indices | 2 |
| в | What is the methodology to add a new product / index / tenor / currency to the service? | Approved by Risk Committee and Board | Approved by Risk and Member Meeting (RMM) | Approved by Risk and | Approved by CDS Advisory Group and CDS Risk Committee | 3 |
| _ | | | | | | | | | | Agreed Module Divergence | e | 3 |

Additional Information on Divergences

A - CME CDX IG Index, Series 12 through 16, 5 year tenor / LCH: European Indices: iTraxx Main, HiVol, XOver; Series 5+; 3, 5, 7, 10 year tenors / ICE Trust - 41 NA Indices & 109 Single Names / ICE Clear - 34 European Indices and 111 Single Names.

B - There are major differences amongst the CCP models. Greater clarity is required on how new names are proposed for both LCH & CME.

CCP Pending/Missing Feedback

B - LCH & CME - To provide clarity on their criteria for liquidity to determine if a name should be clearing eligible. For example, if a Risk Committee wanted to propose a new name what specific criteria and procedures would need to be followed and adhered to for that change to occur.

| 4 - | Products Active & Under Development | | ICE T | rust | | | ICE Clear | | L | СН | CME | D |
|-----|---|-------------|--|-------------|--|-------------|--|---|-------------------------------------|--|---|------------|
| 1.4 | Products Active & Under Development | D2D Current | D2D Future | D2C Current | D2C Future | D2D Current | D2D Future | D2C Future | Current | Future | Current/Future | Divergence |
| А | Which products are currently under development (include proposed launch dates)? | N/A | Single Names - HY & Financial; Non-Western Sovereigns; | N/A | Single Name - NA IG, HY and Financial; Non- Western Sovereigns | N/A | Single Names - HY & Financial; Western Sovereigns; | Single Names - EUR IG, HY & Financial; European Indices; Western Sovereigns; | N/A | Single Names (for IG iTraxx, HiVol & CrossOver constituents) | NA Single Names (for CDX IG & HY); Additional NA Indices (CDX: HY s11 to current & IG s10 to current) | |
| | Single Names (IG) | N/A | Completed | N/A | Q4 - 2011 | N/A | Completed | | N/A | Q1-2012 | Q2/Q3 2011 | 2 |
| | Single Names (HY & Financial) | N/A | Q3/Q4-2011 | N/A | Q4 - 2011 | N/A | Q3/Q4-2011 | | N/A | Q1-2012 | Q3/Q4 2011 | |
| | European Indices | N/A | - | N/A | - | Live | - | | N/A | - | - | |
| | North American Indices | Live | - | Live | Q3-2011 | N/A | - | | N/A | - | Q2-2011 | |
| | Sovereigns | N/A | Q3/Q4-2011 | N/A | Q4-2011 | N/A | Q3/Q4-2011 | | N/A | - | - | |
| | Tranche | N/A | - | N/A | - | N/A | - | | N/A | - | - | |
| в | How are members notified of new products added to the service? | N/A | Public Circular | N/A | Public Circular | N/A | Public Circular | Public Circular | Email notification & website notice | Email notification & website notice | Email notification & Advisory website notice | 1 |
| | - | | • | | | | • | | | Agreed Module Divergence | P | 2 |

Additional Information on Divergences

 A - CCPs are going live with different products at varying times, current product coverage varies. LCH will offer Client Clearing Q1 2012.
B - No divergence as all CCPs notify members. Slight divergence exists amongst the CCPs models with regard to the specific detail they have provided. However their methodologies are broadly similar; with regard to the fact they all notify CMs, be it via email, circular or alert once a new product has completed testing and is active.

CCP Pending/Missing Feedback

A - Clarifications are need from the CCPs on the below; ICE Trust - To clarify for D2D Current & D2C Current why these questions were deemed N/A. ICE Clear - To clarify for D2D Current why these questions were deemed N/A.





| 1 | | | ICE 1 | Trust | | | ICE Clear | | L | CH | CME | |
|---|--|----------------------------|--|---|-------------------|---|---|---|---|--|--|------------|
| 1 | 3 Confirmations | D2D Current | D2D Future | D2C Current | D2C Future | D2D Current | D2D Future | D2C Future | Current | Future | Current/Future | Divergence |
| | Does DTCC DS Match representation provide legally binding confirmation, if not, where is the legal confirmation stored? | at CCP upon trade | Legal confirmation occurs at CCP upon trade acceptance and contracts also registered in TIW | at CCP upon trade | at CCP upon trade | at CCP upon trade | at CCP upon trade | at CCP upon trade | Original transaction confirmation occurs through DSMatch, legal novation occurs at LCH | Original transaction Confirmation when CCP accepts the Original transaction for clearing and legal novation occurs at LCH | Legal confirmation occurs at CME upon trade acceptance by each counterparty's CMs | 1 |
| | How is trade confirmation and registration within the DTCC Warehouse (TIW) supported (assume support of Gol Records unless otherwise stated)? | sources (e.g. ICE Link) FB | Via ANT submission mechanism (from 18-July) | Via trusted affirmation sources (e.g. ICE Link). EB & DCM submit own legs | ° | Via trusted affirmation sources (e.g. ICE Link). EB & DCM submit own legs | ICE will move to ANT messages for all D2D flows (no timescale available) | ICE will move to ANT messages for all D2C flows (no timescale available) | CCP updates DTCC TIW via messages (MQ) | | Enhanced Copper records are delivered to DTCC TIW | 3 |
| | | | * ANT = Automated New T | rade | | | | | | Agreed Module Divergence | e | 2 |

A - There is consistency across the CCP models with all maintaining the legal record in-house. There is a major divergence with regard to the extent

the CCPs utilize the DTCC Warehouse (TIW).

B - CME process to deliver Copper Records to the TIW is the main outlier amongst the CCP models

| | | | ICE 1 | Trust | | | ICE Clear | | L | СН | CME | |
|-----|--|---|---|--|--|---|--|---|--|--|--|------------|
| 1.4 | Fallbacks | D2D Current | D2D Future | D2C Current | D2C Future | D2D Current | D2D Future | D2C Future | Current | Future | Current/Future | Divergence |
| A | What fallbacks are in place for when a trade does not clear prior to the cut-off time? | A trade matched whilst clearing house open including on T +1 will be submitted for clearing. Otherwise booked bilaterally. | Subject to change under Dodd-Frank | The trade can be submitted to the CCP on T+1. | Subject to change under Dodd-Frank | A trade matched whilst clearing house open including on T +1 will be submitted for cleairng. Otherwise booked bilaterally. | Sugject to change under regulatory requirements. | The trade can be submitted to the CCP on T+1. | Trade is rejected, can be represented the following Open Day | Trade is rejected, can be represented the following Open Day | Trades are pending until 19:45 EST T+1. If claimed settle T+2 / Unclaimed go to CP negotiated fallbacks | 2 |
| в | By what time on T+1 is election of a fallback option required? | A trade matched whilst clearing house open including on T +1 will be submitted for cleairng. Otherwise booked bilaterally. | Subject to change under Dodd-Frank | EB can elect fallback on T+1 after 18:00 EST | EB can elect fallback on T+1 after 18:00 EST Subject to change under Dodd-Frank | A trade matched whilst clearing house open including on T +1 will be submitted for cleairng. Otherwise booked bilaterally. | Sugject to change under regulatory requirements. | EB can elect fallback on T+1 after 18:00 GMT | LCH operates T+1 daily batch novation model, as such the fallback option does not apply | Trades uncleared when Clearing House closes will be rejected. Such trades can be represented the following day | 20:00 EST on T+1 (Future model will be 19:00 EST on T+1) | 2 |
| с | Where a transaction has been partially cleared do fallbacks apply to the portion of the trade uncleared? | N/A | N/A | Fallbacks do apply for partially cleared trades | Fallbacks do apply for partially cleared trades. Subject to change under Dodd-Frank | N/A | N/A | Fallbacks do apply for partially cleared trades | LCH does not envisage enabling partial clearing | LCH does not envisage enabling partial clearing | Fallbacks do apply for partially cleared trades (handled same way as full block uncleared trades) | 2 |
| D | Can fallbacks be executed outside of CCP operating hours provided the clearing deadline has passed? | Fallbacks can be executed outside of CCP operating hours | Yes, subject to any changes under Dodd- Frank | Fallbacks can be executed outside of CCP operating hours | Yes, subject to any changes under Dodd- Frank | | Fallbacks can be executed outside of CCP operating hours | | | | | 1 |
| | • | | | | - | • | • | • | • | Agreed Module Divergend | e | 3 |

Additional Information on Divergences

ICE - If any trades are not accepted by 18:30 they are rejected. Trades subsequently processed on T+1 have a trade date of T. CPs have agreed a protocol whereby for CP-CP trade date clearing, a trade matched whilst the Clearing House is closed is submitted to the TIW as a bilateral trade.





2) Collateralization [Divergence Rating 3 = Major Divergence]

| | | | ICE 1 | ſrust | | | ICE Clear | | L | CH | CME | |
|-----|---|---|---|---|---|---|---|---|--|--|--|------------|
| 2.1 | Variation Margin (VM) or equivalent including pricing method and data sources | D2D Current | D2D Future | D2C Current | D2C Future | D2D Current | D2D Future | D2C Future | Current | Future | Current/Future | Divergence |
| A | What mechanism is used to communicate intra day margin calls? | Feedback Pending | Feedback Pending | Feedback Pending | Feedback Pending | Feedback Pending | Feedback Pending | Feedback Pending | Intra-margin calls are not applicable | The move to T+0 novation will result in intra-day calls. Reports are pushed to eCCW client area and ftp server | Intra-margin calls are not applicable | TBC |
| В | How frequently is variation margin calculated? | Intra-day | Intra-day | Intra-day | Intra-day | Intra-day | Intra-day | Intra-day | Daily | Intra-day | Daily (see additional comments below) | 3 |
| с | How often and through what process is margin collected? | Daily / Intra-day A SWIFT message is sent to the CMs Account | Daily / Intra-day A SWIFT message is sent to the CMs Account | Daily / Intra-day A SWIFT message is sent to the CMs Account | Daily / Intra-day A SWIFT message is sent to the CMs Account | Daily / Intra-day A SWIFT message is sent to the CMs Account | Daily / Intra-day A SWIFT message is sent to the CMs Account | Daily / Intra-day A SWIFT message is sent to the CMs Account | Once per day cash is collected via TARGET 2 | Up to 3 times per day cash will be collected via TARGET 2 | At 08:30 EST margin is collected through the banking cycle | 2 |
| D | What pricing and data sources are utilized? | CM pricing data points | CM pricing data points | CM pricing data points | CM pricing data points | Markit same day prices | CM pricing data points | CM pricing data points, secondary sources if necessary | 3 |
| E | How is interest calculated and settled on collateral held/posted? | Initial Margin (IM) and Guarantee Fund (GF): CM receive Fed Funds minus 1 bps Settled monthly Interest on VM: Calculated daily - daily effective Fed Funds x ACT/360 Accrues daily settles monthly | Initial Margin (IM) and Guarantee Fund (GF): CM receive Fed Funds minus 1 bps Settled monthly Interest on VM: Calculated daily - daily effective Fed Funds x ACT/360 Accrues daily settles monthly | Initial Margin (IM) and Guarantee Fund (GF): CM receive Fed Funds minus 1 bps Settled monthly Interest on VM: Calculated daily - daily effective Fed Funds x ACT/360 Accrues daily settles monthly | Initial Margin (IM) and Guarantee Fund (GF): CM receive Fed Funds minus 1 bps Settled monthly Interest on VM: Calculated daily - daily effective Fed Funds x ACT/360 Accrues daily settles monthly | Rate Reported daily via an ICE report and settled monthly Interest on VM: Calculated daily - Daily Eonia flat rate x ACT/360 | Initial Margin (IM) and Guarantee Fund (GF): CM receives ICE Deposit Rate Reported daily via an ICE report and settled monthly Interest on VM: Calculated daily - Daily Eonia flat rate x ACT/360 Accrues daily and settles monthly | Initial Margin (IM) and Guarantee Fund (GF): CM receives ICE Deposit Rate Reported dally via an ICE report and settled monthly Interest on VM: Calculated daily - Daily Eonia flat rate x ACT/360 Accrues daily and settles monthly | Interest on IM is calculated daily: EONIA - 25bp on EUR GBP LIBOR - 25bp on USD LIBOR - 25bp on USD Interest on Default Fund is flat EONIA, GBP LIBOR & USD LIBOR respectively Interest on VM calculated and exchanged daily: - NPV x Eonia flat x (day count)/360 | is flat EONIA, GBP LIBOR & USD LIBOR respectively Interest on VM calculated and | Initial Margin (IM): CMs may elect to participate in one of CME's Interest Earning Facility (IEF) programs Interest on VM: For USD products the Fed Funds effective rate at 09:00 EST rate is used and annualized via the Actual/360 convention covering the number of calendar days since the prior clearing processing day | 2 |
| | | | - | | | - | - | - | - | Agreed Module Divergen | | 3 |

Agreed Module Divergence

Additional Information on Divergences

B & C - Currently LCH do not administer intra-day margin calls. Only ICE currently issue intra day margin calls. CME has the capability to calculate and collect both intra-day and end-of-day margins. Currently, CME only collects end-of-day margin, however it runs intra-day calculations for internal purposes. As clearing volume ramps up, CME will re-evaluate whether or not to implement the collection of intra-day margin.

D - LCH use pricing provided by Markit for MTM calculations all other CCPs use a member bids/offers to derive a settlement price which LCH will implement in their target model.

E - LCH and CME settle interest on VM with the daily movement of VM. ICE calculate interest on VM daily but settle monthly.

CCP Pending/Missing Feedback:

A - Divergence marked as "TBC" as not all CCPs advised the method of communication for margin calls (via phone / e-mail / fax).

C - CME to provide further information as to what the "banking cycle" involves.





| | | | ICE | Trust | | | ICE Clear | | | .CH | CME | |
|-----|--|-------------|------------|---|---|-------------|------------|---|---------|--|--|------------|
| 2.2 | Buy side segregation | D2D Current | D2D Future | D2C Current | D2C Future | D2D Current | D2D Future | D2C Future | Current | Future | Current/Future | Divergence |
| A | Is segregation of collateral supported for Clearing Members (CMS) and their clients and what are the requirements? | N/A | N/A | Client Omnibus account fully segregated from a CMs House account | Client Omnibus account fully segregated from a CMs House account. Subject to change under Dodd-Frank. | N/A | N/A | Client collateral is held in a client omnibus account fully segregated from a CMs House account | N/A | LCH will offer an account structure that allows clients to segregate their collateral from other clients collateral A client omnibus solution will also be proposed that would involve comingling the collateral for all clients managed through the omnibus account | Client positions and collateral are segregated from that of the CM's house (or proprietary) positions and collateral in a sequestered account | 1 |
| в | Is buy-side collateral for positions segregated by the CM in separate accounts or commingled with the assets of the CM or other customers collateral? | N/A | N/A | There is one client omnibus account per CM. The client omnibus account comingles customer collateral for that CM. Individual customer positions are registered at the clearing house on an anonymous basis | There is one client omnibus account per CM. The client omnibus account comingles customer collateral for that CM. Individual customer positions are registered at the clearing house on an anonymous basis. Subject to change under Dodd-Frank. | N/A | N/A | There is one client omnibus account per CM. The client omnibus account comingles customer collateral for that CM. Individual customer positions are registered at the clearing house on an anonymous basis | N/A | LCH will offer an account structure that allows clients to segregate their collateral from other clients collateral A client omnibus solution will also be proposed that would involve comingling the collateral for all clients managed through the omnibus account | Separate accounting and segregation of customer positions and monies. Buy-side collateral is co- mingled with other customer's collateral but separate from CM collateral | 1 |
| c | Provide details of the type of account used for this purpose (omnibus/registered customer account or other) | N/A | N/A | There is one client omnibus account per CM. The client omnibus account comingles customer collateral for that CM. Individual customer positions are registered at the clearing house on an anonymous basis | ICE will hold margin for both indices and Single Names in a CFTC OTC Cleared Account Class (known as the 4(d)(f) account) | N/A | N/A | There is one client omnibus account per CM. The client omnibus account comingles customer collateral for that CM. Individual customer positions are registered at the clearing house on an anonymous basis | N/A | LCH will offer an account structure that allows clients to segregate their collateral from other clients collateral A client omnibus solution will also be proposed that would involve comingling the collateral for all clients managed through the omnibus account | Margin is held in CFTC COTC Account Class | 1 |
| | | | | | | | | | | Agreed Module Divergen | ce | 1 |

No divergences found

Pending/Missing Feedback:

LCH are still defining their D2C offering so were unable to provide detailed information relating to the structure of asset segregation





3) Trade Messaging & Connectivity [Divergence Rating 3 = Major Divergence]

| | | | | ICE ' | Trust | | | ICE Clear | | LC | СН | CME | |
|-----|--|--|------------------|---------------------------|------------------|------------------|------------------|----------------------------------|------------------|--|--|-----------------------------------|------------|
| 3.1 | for Trade Submission, Clea | ns and mechanisms for connectivity per vendor aring Approval, Post Trade Messaging, other functions and Portability. | D2D Current | D2D Future | D2C Current | D2C Future | D2D Current | D2D Future | D2C Future | Current | Future | Current/Future | Divergence |
| | | | ' | s listed below is via ICE | Bloomberg VCON | Bloomberg VCON | | s listed below is via ICE nk: | Bloomberg VCON | | | CME ClearPort | |
| | | | BGC | BGC | MarketAxess | MarketAxess | BGC | BGC | MarketAxess | 1 | | Bloomberg VCON | |
| | | | Creditex | Creditex | MarkitSERV | MarkitSERV | Creditex | Creditex | MarkitSERV | No direct connectivity | Connectivity to IDBs | MarkitSERV | |
| | Trade submission | CCD to list such individual warden they are an | Phoenix Partners | Phoenix Partners | Tradeweb | Tradeweb | Phoenix Partners | Phoenix Partners | Tradeweb | agnostic to upstream | through MarkitSERV: | Tradeweb | |
| Α | (including manual entry / | CCP to list each individual vendor they are or will be connected to | Tullet Prebon | Tullet Prebon | ICE Link | ICE Link | Tullet Prebon | Tullet Prebon | ICE Link | platforms. Submission | GFI, ICAP, Tullet | CME FEC | 3 |
| | SEF submission / voice) | will be connected to | Tradition | Tradition | - | - | Tradition | Tradition | - | based on LCH flag in | Prebon, Vyapar CM | MarketAxess | |
| | | | Vyapar CM | Vyapar CM | - | - | Vyapar CM | Vyapar CM | - | SuperID field in DTCC | Prebon, vyapar civi | Other IDBs pending | |
| | | | GFI (Q2) | GFI (Q2) | - | - | GFI (Q2) | GFI (Q2) | - | 1 | | ICE Link (Q3) | |
| | | | ICAP (Q2) | ICAP (Q2) | - | - | ICAP (Q2) | ICAP (Q2) | - | 1 | | - | |
| | | | ICE Link | ICE Link | - | - | ICE Link | ICE Link | - | 1 | | - | |
| | | | BGC | BGC | Bloomberg VCON | Bloomberg VCON | BGC | BGC | Bloomberg VCON | | | CME ClearPort | |
| | | | Creditex | Creditex | ICE Link | ICE Link | Creditex | Creditex | ICE Link | 1 | | Bloomberg VCON | |
| | | | Phoenix Partners | Phoenix Partners | MarketAxess | MarketAxess | Phoenix Partners | Phoenix Partners | MarketAxess | No direct connectivity. | | MarkitSERV | |
| | | | Tullet Prebon | Tullet Prebon | MarkitSERV | MarkitSERV | Tullet Prebon | Tullet Prebon | MarkitSERV | Agnostic to affirmation | ' | Tradeweb | |
| в | Clearing approval | CCP to list each individual Affirmation provider | Tradition | Tradition | Tradeweb | Tradeweb | Tradition | Tradition | Tradeweb | platforms under | on Connectivity to IDBs through MarkitSERV: ce GFI, ICAP, Tullet | CME FEC | 3 |
| _ | | they are or will be connected to | Vyapar CM | Vyapar CM | - | - | Vyapar CM | Vyapar CM | - | current model (source | | MarketAxess | - |
| | | | GFI (Q2) | GFI (Q2) | - | - | GFI (Q2) | GFI (Q2) | - | trades directly from | Prebon, Vyapar CM | Other IDBs pending | |
| | | | ICAP (Q2) | ICAP (Q2) | - | - | ICAP (Q2) | ICAP (Q2) | - | TIW) | | ICE Link (Q3) | |
| | | | ICE Link | ICE Link | - | - | ICE Link | ICE Link | - | 1 | | - | |
| с | Post trade messaging | CCP to list each Valuation / Reporting provider they are or will be connected to | Feedback Pending | Feedback Pending | Feedback Pending | Feedback Pending | Feedback Pending | Feedback Pending | Feedback Pending | DTCC | DTCC | CME Trade Processing Module | 3 |
| D | Backloading | CCP to list backloading providers | ICE Link & DTCC | ICE Link & DTCC | ICE Link | ICE Link | ICE Link & DTCC | ICE Link & DTCC | ICE Link | DTCC | DTCC | CME Migration Utility | 3 |
| E | Netting | CCP to list netting platforms | ICE Trust Weekly | ICE Trust Daily | ICE Link | ICE Link | ICE Clear Weekly | ICE Clear Daily | ICE Link | LCH compression on demand | LCH compression on demand | CME Position Management Module | 3 |
| F | Portability - Please advise the workflow and messaging expected in relation to: | Portability between DCMs or FCMs | N/A | N/A | ICE Link | ICE Link | N/A | N/A | ICE Link | Portability not available until D2C offering supported | Portability not available until D2C offering supported | CME Front End Clearing (FEC) | 3 |
| G | Portability - Please advise the workflow and messaging expected in relation to: | Fund to fund transfer portability | N/A | N/A | ICE Link | ICE Link | N/A | N/A | ICE Link | Portability not available until D2C offering supported | Portability not available until D2C offering supported | CME Front End Clearing (FEC) | 3 |
| | | • | • | • | • | • | • | • | | • | Agreed Module Diverg | ence | 3 |

Additional Information on Divergences

CCP Pending/Missing Feedback

See "Feedback Pending" cells above.

A & B - Connectivity for Trade Submission and Clearing Approval varied between direct connectivity or indirect connectivity via Middleware platforms. C - It was not possible to accurately analyze this module due to the varying levels of information provided.





| | | | | ICE 1 | Trust | | 1 | ICE Clear | | L | СН | CME | |
|-----|------------------------------------|--|------------------------------------|------------------------------------|------------------|------------------|------------------------------------|------------------------------------|------------------|---|---|---|------------|
| 3.2 | | ion available on the following; Trade Submission, Clearing oading, Netting and other functions and Portability? If no ailable? | D2D Current | D2D Future | D2C Current | D2C Future | D2D Current | D2D Future | D2C Future | Current | Future | Current/Future | Divergence |
| | | BGC | Yes | Yes | N/A | N/A | Yes | Yes | N/A | No | No | Launch Pending | |
| | | Creditex | Yes | Yes | N/A | N/A | Yes | Yes | N/A | No | No | Launch Pending | 1 |
| | | Phoenix Partners | Yes | Yes | N/A | N/A | Yes | Yes | N/A | No | No | Launch Pending | 1 |
| | | Tullet Prebon | Yes | Yes | N/A | N/A | Yes | Yes | N/A | No | Yes | | 1 |
| | | GFI (Q2) | Yes | Yes | N/A | N/A | Yes | Yes | N/A | No | Yes | Launch Pending | 1 |
| | | ICAP (Q2) | Yes | Yes | N/A | N/A | Yes | Yes | N/A | No | Yes | - | 1 |
| | | Tradition | Yes | Yes | N/A | N/A | Yes | Yes | N/A | No | No | Launch Pending | - |
| | Trade submission (including manual | Vyapar CM | Yes | Yes | N/A | N/A | Yes | Yes | N/A N/A | No | Yes | Launch Pending | 1 |
| Α | entry / SEF submission / voice) | ICE Link | Agnostic API | Agnostic API | Agnostic API | Agnostic API | Agnostic API | Agnostic API | Agnostic API | No | No | Planned Q3 | 3 |
| | | Bloomberg VCON | N/A | N/A | Yes | Yes | N/A | N/A | Yes | No | No | Yes- via API | - |
| | | MarketAxess | N/A | N/A | Yes | Yes | N/A | N/A | Yes | No | No | Launch Pending | 1 |
| | | MarkitSERV | N/A | N/A | Yes | Yes | N/A | N/A | Yes | No | Agnostic API | Yes- via API | ł |
| | | Tradeweb | N/A | N/A | Yes | Yes | N/A | N/A | Yes | No | No | Yes- via API | - |
| | | CME ClearPort | N/A N/A | N/A N/A | N/A | N/A | N/A N/A | N/A N/A | N/A | No | No | Yes- via API | ł |
| | | | | | | | | | | | | | + |
| | | CME FEC | N/A | N/A | N/A | N/A | N/A | N/A | N/A | No | No | Yes- via API | ł |
| | | DTCC | N/A | N/A | N/A | N/A | N/A | N/A | N/A | No - csv and MQ | Yes | N/A | - |
| | | BGC | Feedback Pending | Feedback Pending | N/A | N/A | Feedback Pending | Feedback Pending | N/A | | N/A | Launch Pending | 1 |
| | | Creditex | Feedback Pending | Feedback Pending | N/A | N/A | Feedback Pending | Feedback Pending | N/A | | N/A | Launch Pending | ļ |
| | | Phoenix Partners | Feedback Pending | Feedback Pending | N/A | N/A | Feedback Pending | Feedback Pending | N/A | | N/A | Launch Pending | |
| | | Tullet Prebon | Feedback Pending | Feedback Pending | N/A | N/A | Feedback Pending | Feedback Pending | N/A | | Feedback Pending | - | |
| | | GFI | Feedback Pending | Feedback Pending | N/A | N/A | Feedback Pending | Feedback Pending | N/A | | Feedback Pending | Launch Pending | |
| | | ICAP | Feedback Pending | Feedback Pending | N/A | N/A | Feedback Pending | Feedback Pending | N/A | LCH send reports post | Feedback Pending | - | Ĩ |
| | | Tradition | Feedback Pending | Feedback Pending | N/A | N/A | Feedback Pending | Feedback Pending | N/A | novation to CMs. These | N/A | Launch Pending | 1 |
| _ | | Vyapar CM | Feedback Pending | Feedback Pending | N/A | N/A | Feedback Pending | Feedback Pending | N/A | reports can be | Feedback Pending | Launch Pending | 1 _ |
| в | Clearing approval | ICE Link | Yes | Yes | Yes | Yes | Yes | Yes | Yes | integrated into dealer | N/A | Planned Q3 | 3 |
| | | Bloomberg VCON | N/A | N/A | Yes | Yes | N/A | N/A | Yes | systems but not currently a full STP | N/A | Yes- via API | 1 |
| | | MarketAxess | N/A | N/A | Yes | Yes | N/A | N/A | Yes | solution. | N/A | Launch Pending | 1 |
| | | MarkitSERV | N/A | N/A | Yes | Yes | N/A | N/A | Yes | | Yes | Yes- via API | 1 |
| | | Tradeweb | N/A | N/A | Yes | Yes | N/A | N/A | Yes | | N/A | Yes- via API | 1 |
| | | CME ClearPort | N/A | N/A | N/A | N/A | N/A | N/A | N/A | | N/A | Yes- via API | - |
| | | CME FEC | N/A | N/A | N/A | N/A | N/A | N/A | N/A N/A | | N/A N/A | Yes- via API | 1 |
| | | DTCC | N/A N/A | N/A N/A | N/A N/A | N/A N/A | N/A N/A | N/A N/A | N/A N/A | | Yes | N/A | 4 |
| | | Dicc | N/A | N/A | IN/A | IN/A | N/A | IN/A | IN/A | 5766/1 116 | | IN/A | - |
| с | Post trade messaging | CCP to list each Valuation / Reporting provider that has STP | Feedback Pending | Feedback Pending | Feedback Pending | Feedback Pending | Feedback Pending | Feedback Pending | Feedback Pending | DTCC (inc. MQ messages) & LCH reports - not STP | DTCC (inc. MQ messages) & LCH reports - not STP | CME's Trade Processing Module | 3 |
| D | Backloading | CCP to advise backloading providers with STP | ICE Link | ICE Link | ICE Link | ICE Link | ICE Link | ICE Link | ICE Link | DTCC TIW | DTCC TIW | CME Migration Utility | 3 |
| E | Netting | CCP to advise netting platforms with STP | ICE Trust with STP via ICE Link | ICE Trust with STP via ICE Link | ICE Link | ICE Link | ICE Clear with STP via ICE Link | ICE Clear with STP via ICE Link | ICE Link | LCH upon request. Not currently STP but planned in future release | STP - file exchange with LCH system | CME Position Management Module | 3 |
| F | Portability | STP solutions for Portability between DCMs or FCMs | N/A | N/A | Feedback Pending | Feedback Pending | N/A | N/A | Feedback Pending | Portability not available until D2C offering supported | Will be supported when D2C launched | Upon request from client to CM using CME Front End Clearing (FEC) | 3 |
| G | Portability | STP solutions for fund to fund transfer portability | N/A | N/A | Feedback Pending | Feedback Pending | N/A | N/A | Feedback Pending | Portability not available until D2C offering supported | Will be supported when D2C launched | Upon request from client to CM using CME Front End Clearing (FEC) | 3 |
| | - | | · | | | - | - | - | - | - | Agreed Module Divergen | ce | 3 |

It was not possible for the work stream to accurately analyze this module due to the varying levels of information provided for the Clearing Approval, Post Trade Messaging & Portability.

CCP Pending/Missing Feedback See "Feedback Pending" cells above.





| | What contingency plans exist | for failures in the STP process for; Trade | | ICE | Trust | | | ICE Clear | | L | СН | CME | |
|----|---|--|---------------------|---------------------|------------------|------------------|---------------------|---------------------|------------------|--|-----------------------|---|------------|
| .3 | | al, Post Trade Messaging, Backloading, | D2D Current | D2D Future | D2C Current | D2C Future | D2D Current | D2D Future | D2C Future | Current | Future | Current/Future | Divergence |
| | Trade submission (including | BGC | Feedback Pending | Feedback Pending | N/A | N/A | Feedback Pending | Feedback Pending | N/A | | | | |
| | manual entry / SEF submission / voice) | n Creditex | Feedback Pending | Feedback Pending | N/A | N/A | Feedback Pending | Feedback Pending | N/A | - | | | |
| | / voice) | Phoenix Partners | Feedback Pending | Feedback Pending | N/A | N/A | Feedback Pending | Feedback Pending | N/A | - | | Under CME's BCP there | |
| | | Tullet Prebon | Feedback Pending | Feedback Pending | N/A | N/A | Feedback Pending | Feedback Pending | N/A | | | are 3 backup data | |
| | | GFI (Q2) | Feedback Pending | Feedback Pending | N/A | N/A | Feedback Pending | Feedback Pending | N/A | | | centre's these will | |
| | | ICAP (Q2) | Feedback Pending | Feedback Pending | N/A | N/A | Feedback Pending | Feedback Pending | N/A | - | | utilized for both upstream and | |
| | | Tradition | Feedback Pending | Feedback Pending | N/A | N/A | Feedback Pending | Feedback Pending | N/A | DTCC ensures within its | | downstream platforms. | |
| | | Vyapar CM | Feedback Pending | Feedback Pending | N/A | N/A | Feedback Pending | Feedback Pending | N/A | BCP availability of STP | | These are mirrored in | |
| Α | | ICE Link | N/A | N/A | Via ICE Link GUI | Via ICE Link GUI | N/A | N/A | Via ICE Link GUI | within 2 hrs. This would enable processing of | Feedback Pending | real time between redundant data centers. | 3 |
| | | Bloomberg VCON | N/A | N/A | Via ICE Link GUI | Via ICE Link GUI | N/A | N/A | Via ICE Link GUI | DTCC data overnight | | Each IDB and SEF will be | |
| | | MarketAxess | N/A | N/A | Via ICE Link GUI | Via ICE Link GUI | N/A | N/A | Via ICE Link GUI | | | directed to specific | |
| | | MarkitSERV | N/A | N/A | Via ICE Link GUI | Via ICE Link GUI | N/A | N/A | Via ICE Link GUI | - | | backup systems, IP address and API. For | |
| | | Tradeweb | N/A | N/A | Via ICE Link GUI | Via ICE Link GUI | N/A | N/A | Via ICE Link GUI | | | CME's FEC system | |
| | | CME ClearPort | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 1 | | recovery is immediate | |
| | | CME FEC | N/A | N/A | N/A | N/A | N/A | N/A | N/A | | | | |
| | | DTCC | N/A | N/A | N/A | N/A | N/A | N/A | N/A | - | | | |
| | Clearing approval | BGC | Affirmation via GUI | Affirmation via GUI | N/A | N/A | Affirmation via GUI | Affirmation via GUI | N/A | | | | |
| | | Creditex | Affirmation via GUI | Affirmation via GUI | N/A | N/A | Affirmation via GUI | Affirmation via GUI | N/A | 1 | | | |
| | | Phoenix Partners | Affirmation via GUI | Affirmation via GUI | N/A | N/A | Affirmation via GUI | Affirmation via GUI | N/A | | | Under CME's BCP there | |
| | | Tullet Prebon | Affirmation via GUI | Affirmation via GUI | N/A | N/A | Affirmation via GUI | Affirmation via GUI | N/A | | | are 3 backup data | |
| | | GFI (Q2) | Affirmation via GUI | Affirmation via GUI | N/A | N/A | Affirmation via GUI | Affirmation via GUI | N/A | | | centers these will | |
| | | ICAP (Q2) | Affirmation via GUI | Affirmation via GUI | N/A | N/A | Affirmation via GUI | Affirmation via GUI | N/A | - | | utilized for both upstream and | |
| | | Tradition | Affirmation via GUI | Affirmation via GUI | N/A | N/A | Affirmation via GUI | Affirmation via GUI | N/A | The 2 hour BCP with | | downstream platforms. | |
| | | Vyapar CM | Affirmation via GUI | Affirmation via GUI | N/A | N/A | Affirmation via GUI | Affirmation via GUI | N/A | DTCC will allow update | | These are mirrored in | |
| в | | Bloomberg VCON | N/A | N/A | ICE Link GUI | ICE Link GUI | N/A | N/A | ICE Link GUI | of the TIW post novation | Feedback Pending | real time between | 2 |
| | | ICE Link | N/A | N/A | ICE Link GUI | ICE Link GUI | N/A | N/A | ICE Link GUI | to be completed in a timely manner | | redundant data centers. Each IDB and SEF will be | |
| | | MarketAxess | N/A | N/A | ICE Link GUI | ICE Link GUI | N/A | N/A | ICE Link GUI | - | | directed to specific | |
| | | MarkitSERV | N/A | N/A | ICE Link GUI | ICE Link GUI | N/A | N/A | ICE Link GUI | - | | backup systems, IP | |
| | | Tradeweb | N/A | N/A | ICE Link GUI | ICE Link GUI | N/A | N/A | ICE Link GUI | - | | address and API. For CME's FEC system | |
| | | CME ClearPort | N/A | N/A | N/A | N/A | N/A | N/A | N/A | - | | recovery is immediate | |
| | | CME FEC | N/A | N/A | N/A N/A | N/A | N/A | N/A N/A | N/A N/A | - | | | |
| | | DTCC | N/A N/A | N/A | N/A N/A | N/A | N/A | N/A N/A | N/A N/A | - | | | |
| с | Post trade messaging | Dicc | Feedback Pending | Feedback Pending | Feedback Pending | Feedback Pending | Feedback Pending | Feedback Pending | Feedback Pending | 2hr BCP with DTCC overnight processing | Feedback Pending | CME BCP (see above) | 3 |
| D | Backloading | | Feedback Pending | Feedback Pending | Feedback Pending | Feedback Pending | Feedback Pending | Feedback Pending | Feedback Pending | 2hr BCP with DTCC overnight processing | Feedback Pending | CME BCP (see above) | 3 |
| E | Netting | | Feedback Pending | Feedback Pending | Feedback Pending | Feedback Pending | Feedback Pending | Feedback Pending | Feedback Pending | 2hr BCP with DTCC overnight processing | Feedback Pending | CME BCP (see above) | 3 |
| F | Portability | Portability between DCMs or FCMs | N/A | N/A | Feedback Pending | Feedback Pending | N/A | N/A | Feedback Pending | N/A | Feedback Pending | CME BCP (see above) | 3 |
| G | Portability | Fund to fund transfer portability | N/A | N/A | Feedback Pending | Feedback Pending | N/A | N/A | Feedback Pending | N/A | Feedback Pending | CME BCP (see above) | 3 |
| | | • | * | | | | | | | | Agreed Module Diverge | · · · · · · | 3 |

CCP Pending/Missing Feedback

It was not possible for the work stream to accurately analyze this module due to the varying levels of information provided for the Trade Submission, Clearing Approval, Post Trade Messaging, Backloading, Netting, & Portability.

See "Feedback Pending" cells above.





| | | | ICE 1 | Trust | | | ICE Clear | | Ŀ | СН | CME | |
|-----|--|------------------|------------------|------------------|------------------|------------------|------------------|------------------|--|--|--|------------|
| 3.4 | Do you envisage any differences to any of the above questions for Dealer to Dealer versus Client Clearing models and (ii) Is there any expectations to alter any of the above workflows in future, to your knowledge? | D2D Current | D2D Future | D2C Current | D2C Future | D2D Current | D2D Future | D2C Future | Current | Future | Current/Future | Divergence |
| A | Do you envisage any differences to any of the above questions for Dealer to Dealer versus Client Clearing models and (ii) Is there any expectations to alter any of the above workflows in future, to your knowledge? | Feedback Pending | No major differences expected. Portability functionality will be added with D2C model. Compression to be automated in future release | No major differences expected. Portability functionality will be added with D2C model. Compression to be automated in future release | No changes and no difference between D2D and D2C | 3 |
| | | | | | | | | • | | Agreed Module Diverger | ice | 3 |

It was not possible for the work stream to accurately analyze this module due to the varying levels of information provided.

CCP Pending/Missing Feedback

No changes were noted by any of the CCPs that responded to this module. Not all have responded so an effective comparison at this point cannot be made.





4) Business Hours & Timing [Divergence Rating 2 = Minor Divergence]

| | | | ICE 1 | Trust | | | ICE Clear | | Ŀ | CH | CME | |
|-----|---|---|---|---|---|---|---|--|--|--|---|------------|
| 4.1 | Business Hours | D2D Current | D2D Future | D2C Current | D2C Future | D2D Current | D2D Future | D2C Future | Current | Future | Current/Future | Divergence |
| A | What are the platforms current business/operating hours? | 08:00 - 18:00 EST | Intention to support 24- hr clearing | 08:00 - 18:00 EST | Intention to support 24- hr clearing | 08:00 - 18:00 GMT | Intention to support 24 hour clearing | Intention to support 24 hour clearing | 08:00 - 19:00 CET | Opening hours extendable depending on client demand | 19:00 Sunday to 20:00 Friday EST | 2 |
| в | Is 24 hour support available for queuing trades post CCP close? | No, post 18:30 EST no trades will be pending | Yes, but only once ICE move to support 24hr Operating model | No, post 18:30 EST no trades will be pending | Yes, but only once ICE move to support 24hr Operating model | No, post 18:30 GMT no trades will be pending | Yes, but only once ICE move to support 24hr Operating model | Yes, but only once ICE move to support 24hr Operating model | N/A as all trades are backloaded directly from DTCC TIW | Depends on workflow managed with matching platform. No trades will be queued by LCH | Yes 24 hours Sunday - Friday | 2 |
| с | Is a unique message type allocated to trades submitted for clearing after CCP business hours? | No | No | No | No | No | No | No | N/A | Depends on matching platform | No | 1 |
| D | | Not from CCP, reports available from affirmation platforms post 18:00 EST | Not from CCP currently (available once ICE move to 24hr Clearing) | Not from CCP, reports available from affirmation platforms post 18:00 EST | | Not from CCP, reports available from affirmation platforms post 18:00 GMT | Not from CCP currently (available once ICE move to 24hr Clearing) | Not from CCP, reports available from affirmation platforms post 18:00 GMT | No, LCH does not track trades after CCP business Hours | Not from LCH as LCH does not track trades after CCP business Hours. Matching platform may provide this kind of report | No reports, but CMs may view a list of real-time queued trades via Front End Clearing (FEC) | 1 |
| E | Is a clear protocol in place for correcting trades that are pending clearing post CCP close? | Yes. Cancel & rebook protocol in place | Yes. Cancel & rebook protocol in place | Yes. Cancel & rebook protocol in place | Yes. Cancel & rebook protocol in place | Yes. Cancel & rebook protocol in place | Yes. Cancel & rebook protocol in place | Yes. Cancel & rebook protocol in place | No | No | Yes withdraw workflow to correct and resubmit pending trades | 3 |
| F | Can trades be queued and remain in pending status until 17:00 local time the next business day? | A trade matched whilst clearing house open including on T +1 will be submitted for clearing. Otherwise booked bilaterally. | Subject to change under Dodd-Frank | Yes, per existing fallback rules (subject to change under Dodd-Frank) | Yes, per existing fallback rules (subject to change under Dodd-Frank) | A trade matched whilst clearing house open including on T +1 will be submitted for clearing. Otherwise booked bilaterally. | Subject to change under regulatory requirements | Yes, per existing fallback rules | No, will reject trades not accepted on CCP close | Yes, Trades can remain pending during opening hours, and will only be rejected if not accepted on CCP close | Yes affirmed trades submitted before 19:45 EST can remain pending until 20:00 the next day | 1 |
| | | | | | | | | | | Agreed Module Divergen | CP | 2 |

Additional Information on Divergences

A - At least 1hr earlier close for both ICE Trust & ICE Clear.

C - No CCP currently generates unique messages or provides reports on queued trades submitted after CCP closing hours. Although no divergence exists on either of these points, if either unique messages or reporting should be required both would need to be implemented across all offerings considered.

D - ICE Trust & ICE Clear currently do not track trades affirmed post 18:00. LCH does not track trades after CCP Business Hours. CME provides a realtime list of queued trades via Front End Clearing ("FEC") but no standalone reporting.

E - CME allows for trades that are pending to be amended. ICE rely on cancel & rebook process. Although most CCPs have a clear protocol in place levels of automation vary across CCPs.





5) End of Day Valuation Process [Divergence Rating 2 = Minor Divergence]

| | Pricing & Product Reference Data | | ICE Trust | | | ICE Clear | | | L | ЭН | CME | |
|----|--|-------------|------------|-------------|------------|-------------|------------|------------|-----------|------------------------|----------------|------------|
| 51 | | D2D Current | D2D Future | D2C Current | D2C Future | D2D Current | D2D Future | D2C Future | Current | Future | Current/Future | Divergence |
| А | What product reference data sources are utilized? | MarkitRED | MarkitRED | MarkitRED | MarkitRED | MarkitRED | MarkitRED | MarkitRED | MarkitRED | MarkitRED | MarkitRED | 1 |
| | | | | | | | | | | Agreed Module Divergen | ce | 1 |

Additional Information on Divergences

No divergences found

| | | | ICE | Trust | | | ICE Clear | | L | CH | CME | |
|-----|--|---|---|---|---|---|---|---|--|---|---|------------|
| 5.2 | Pricing Process | D2D Current | D2D Future | D2C Current | D2C Future | D2D Current | D2D Future | D2C Future | Current | Future | Current/Future | Divergence |
| А | Where are settlement prices published and who are they made available to? | ICE website and Markit | SPAN file published on client web portal and client FTP server | SPAN file published on client web portal and client FTP server | CME Website and publication via FTP | 2 |
| B | At what time does the clearing platform distribute prices? | 17:30 EST | 17:30 EST | 17:30 EST | 17:30 EST | 17:30 GMT | 17:30 GMT | 17:30 GMT | 21:00 CET | 21:00 CET | 17:00 EST | 2 |
| C | Are Clearing Members (CMs) required to submit prices? | Yes | No | Yes | Yes | 3 |
| D | What is the process and timeframe for submitting prices? | Report generated and CMs to submit price to the CCP by 16:30-16:35 EST | Report generated and CMs to submit price to the CCP by 16:30-16:35 EST | Report generated and CMs to submit price to the CCP by 16:30-16:35 EST | Report generated and CMs to submit price to the CCP by 16:30-16:35 EST | Report generated and CMs to submit price to the CCP by 16:30-16:35 GMT | Report generated and CMs to submit price to the CCP by 16:30-16:35 GMT | Report generated and CMs to submit price to the CCP by 16:30-16:35 GMT | N/A | Report generated and CMs to submit price to the CCP by 16:30-16:35 GMT | Report generated and CMs to submit price to the CCP by 16:30-16:35 EST | 3 |
| E | What information is provided to Clearing Members (CM) in order to reconcile MTM positions? | Daily Reports (position) | Daily Reports (trade by trade & position) | Daily Reports (trade by trade & position) | Daily Reports (trade by trade & position) | 2 |
| | | | | | | | | | | Agreed Module Divergen | ce | 2 |

Additional Information on Divergences

B - Geographical time differences. LCH is later in the day than other CCPs.

Additional Background Questions

CME, LCH & ICE to advise in the case of only one or two dealers how the price would be constructed for a non liquid underlying.

c - ICE Clear, ICE Trust and CME require members to submit prices, LCH does not currently require submission, however their future model will.

E - ICE Clear and ICE Trust use position level for their MTM CM reports and LCH and CME use trade by trade and position level.





6) Lifecycle Event Processing [Divergence Rating 3 = Major Divergence]

| | | | ICE | Trust | | | ICE Clear | | L | СН | CME | |
|-----|---|-------------|----------------|------------------------|----------------|-------------|----------------|----------------|-----------------------|---------------------------------------|----------------|------------|
| 6.1 | Trade netting approach and effect on novations | D2D Current | D2D Future | D2C Current | D2C Future | D2D Current | D2D Future | D2C Future | Current | Future | Current/Future | Divergence |
| A | Please describe the representation of a trade vs. positions within a CCP? | Trade | Trade/Position | Trade | Trade/Position | Trade | Trade/Position | Trade/Position | Trade/Position | Trade/Position | Trade/Position | 2 |
| В | What type of netting approach is applied? | Cyclical | Cyclical | Adhoc | Cyclical | Cyclical | Cyclical | Cyclical | Adhoc | Systematic & Adhoc | Cyclical | 2 |
| с | Is automatic netting available? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | 1 |
| D | How frequently does netting occur? | Weekly | Daily/Weekly | Adhoc available weekly | Daily/Weekly | Weekly | Daily/Weekly | Daily/Weekly | Adhoc available daily | Systematic on frequency defined by CM | Daily | 3 |
| | | | | | | | | | | | e | 2 |

| | | | ICE | Trust | | | ICE Clear | | L | СН | CME | |
|-----|--|--|--|--|--|--|--|--|--|--|---|------------|
| 6.2 | Trade servicing, such as Post Trade Events (PTE's) support (Credit Events, Succession Events, Renames, Book changes)* | D2D Current | D2D Future | D2C Current | D2C Future | D2D Current | D2D Future | D2C Future | Current | Future | Current/Future | Divergence |
| A | How are Post Trade Events (PTE) handled? Are they automated via the platform or processed within the TIW? | DTCC TIW | DTCC TIW | CME | 2 |
| в | Are bilateral amendments possible? | No | No | Feedback Pending | 1 |
| c | State explicitly any PTE's which are not currently supported and whether there are any plans to implement them at a later date. | Amendments supported through cancel and rebook. | Amendments supported through cancel and rebook | Work arounds in place for events unavailable on current platforms; Unwinds, Amendments, Novations | Work arounds in place for events unavailable on current platforms; Unwinds, Amendments, Novations | Work arounds in place for events unavailable on current platforms; Unwinds, Amendments, Novations | 1 |
| D | Do participants have the option to de-clear a trade? If so list the different scenarios where this would be considered permissible? | No, however there is support for a misclear workflow - see below | No, however there is support for a misclear workflow - see below | No, however there is support for a misclear workflow - see below | No, however there is support for a misclear workflow - see below | No, however there is support for a misclear workflow - see below | No, however there is support for a misclear workflow - see below | No, however there is support for a misclear workflow - see below | No, Dealers should agree a back-to-back trade and then clear the reverse trade and finally net with trade to be de-cleared | No, Dealers should agree a back-to-back trade and then clear the reverse trade and finally net with trade to be de-cleared | No | 1 |
| E | Are any pre-conditions necessary to be in place to allow participants to de-clear transactions? | N/A | N/A | N/A | N/A |
| F | How are book changes reflected? | Desk ID Transfer Form | | Dealers can amend the DeskID in DTCC TIW which will automatically update LCH systems | Front End Clearing (FEC) transfer | 2 |
| | * Credit Event, Succession Events and renames are covered in detail in 6.5 & 6.6 | | | | | | | | | | e | 2 |

Additional Information on Divergences

A - CME uses there own platform for PTEs. All other CCPs use DTCC TIW.

D - Workarounds for de-clearing:

ICE Trust & ICE Clear: can initiate a De-clearing/Mis-clear via the affirmation platform. This creates an equally offsetting trade and flattens the position at the CCP.

LCH: Dealers should agree a back-to-back trade and then clear the reverse trade and finally net with trade to be de-cleared.

CME - If both parties agree the trade should be de-cleared, then they both submit the equal and offsetting trade for clearing.

CCP Pending/Missing Feedback

F - ICE Clear to advise if, their Desk ID transfer form amends the Desk Id in the DTCC TIW?





| | | | ICE | Trust | | | ICE Clear | | L | CH | CME | |
|-----|--|---|---|---|---|---|---|---|---------------------------------------|---|--|------------|
| 6.3 | Settlement Infrastructure | D2D Current | D2D Future | D2C Current | D2C Future | D2D Current | D2D Future | D2C Future | Current | Future | Current/Future | Divergence |
| A | How are coupons, fees and final cash settlements processed (central settlement process or other)? | Continuous Linked Settlement (CLS) | ICE Trust Payment Structure | Continuous Linked Settlement (CLS) | ICE Trust Payment Structure | Continuous Linked Settlement (CLS) | ICE Clear Payment Structure | ICE Clear Payment Structure | Continuous Linked Settlement (CLS) | Target2 subject to wider market discussion | Direct settlement with CME approved Settlement Banks | 3 |
| в | Please provide the relevant timeframes for the settlement of cash flows. | Daily: 09:00 EST for margin requirements | Daily 08:30 -09:00 CET | Daily 08:30 -09:00 CET | Daily 08:30 EST | 2 |
| с | Do you support the netting of cash flows and margin requirements? If so please describe the process? | No | Yes | No | Yes | No | Yes | Yes | No | Yes (if all cash flows move to Target2) | Yes | 2 |
| D | Please advise whether clearing is performed T+1 vs. T+3 for the relevant Clearing models. | T+3 | T+1 | T+3 | T+1 | T+3 | TBD | TBD | T+3 | T+3/T+1 subject to wider market discussion | T+1 | 3 |
| | | | | | | | | | | Agreed Module Divergenc | e | 3 |

B - Time differences due to geographical locations. Slight variation on timings, but within 1hr of each other.

- For ICE Trust and ICE Clear Current – The product cash flows for ICE (coupons, fees etc.) are not settled as part of the margin call. Both clearing houses utilize CLS for product cash flows and settle margin directly with CPs. ICE Trust Future (as of July 18th) - Product cash flows for ICE (coupons, fees etc.) are settled as part of the margin call and will be netted as ICE Trust is intermalizing all money movements. ICE Clear Future will do the same but timing to be determined.

C - CME net cash flows and margin. For ICE Clear, ICE Trust and LCH cash flow and margin are treated separately. For future ICE Clear, ICE Trust and LCH (if assumedly they moved to Target2) cash flows and margins will be netted.

D - CME follows a NY business day calendar for processing USD denominated contracts for settlements versus the NY/London calendar applied in the bilateral market. In either market, whether upfront is settled on T+1 or T+3, the actual settlement can occur on a day other than T+1 or T+3 as a result of a holiday.

The business day that CME variation margin settles, which includes the upfront, is T+1 provided that T+1 is a NY Business Day. If T+1 is not a NY business day, then the next available NY business day would apply. In the CME model, mark-to-market and upfront are netted together as a single settlement variation.





| | | | ICE | Trust | | | ICE Clear | | L | СН | CME | |
|-----|--|--|--|--|--|--|--|--|---|---|---|------------|
| 6.4 | Backloading & Compression | D2D Current | D2D Future | D2C Current | D2C Future | D2D Current | D2D Future | D2C Future | Current | Future | Current/Future | Divergence |
| | Please describe the process for backloading including frequency and preconditions to a backloading request: i. Process | CM upload | CM upload | Client initiate via affirmation platform (ICE Link) | CM upload | CM upload | CM upload | Client initiate via affirmation platform (ICE Link) | Bilaterally in DTCC | Bilaterally in DTCC | Bilaterally in CME migration utility tool | |
| А | ii. Frequency | Weekly | Daily | Daily | Daily | 2 |
| | iii. Preconditions | Trade has to be Certain in the Warehouse and be eligible for Clearing | Trade has to be Certain in the Warehouse and be eligible for Clearing | Trade has to be Certain in the Warehouse and be eligible for Clearing | Trade has to be Certain in the Warehouse and be eligible for Clearing | Trade has to be Certain in the Warehouse and be eligible for Clearing | Trade has to be Certain in the Warehouse and be eligible for Clearing | Trade has to be Certain in the Warehouse and be eligible for Clearing | Trade has to be Certain in the Warehouse and be eligible for Clearing | Trade has to be Certain in the Warehouse and be eligible for Clearing | Trade has to be Certain in the Warehouse and be eligible for Clearing | |
| В | Please provide any information provided to members with regards to reconciliations, completeness and accuracy tests. | Clearing instruction files are generated | Clearing instruction files are generated | Clearing instruction files are generated | General Reports available for Reconciliation | General Reports available for Reconciliation | General Reports available for Reconciliation | 3 |
| с | Is Dealer-Dealer (D2D) backloading segregated from Client (D2C) backloading? | Yes | N/A | Feedback Pending | Feedback Pending | 2 |
| D | Is compression of Dealer-Dealer (D2D) and Client (D2C) trades segregated? | Yes | N/A | Yes | Feedback Pending | 2 |
| E | What processing timeframes are in place around backloading cycles (from allege to processing)? | 5 days | 1 day | 1 day | 1 day (CME offers the ability to run backloading daily) | 3 |
| - | Are terminations and the new trades created facing the CH linked for audit purposes? | Yes, weekly audit instruction. The notional of the terminated trades equals the notional of the new trades | Yes, weekly audit instruction. The notional of the terminated trades equals the notional of the new trades | Yes, weekly audit instruction. The notional of the terminated trades equals the notional of the new trades | Yes, weekly audit instruction. The notional of the terminated trades equals the notional of the new trades | Yes, weekly audit instruction. The notional of the terminated trades equals the notional of the new trades | Yes, weekly audit instruction. The notional of the terminated trades equals the notional of the new trades | Yes, weekly audit instruction. The notional of the terminated trades equals the notional of the new trades | Yes- Audit available | Yes- Audit available | Yes- Audit available | 2 |
| G | What facilities are in place to monitor the affected bulk positions? | Clearing House and ICE Link web interface /reports | ECCW platform & client FTP service | ECCW platform & client FTP service | CME Migration Utility | 3 |
| н | Are trades consumed via an API or batch file or other process? If other, please provide details. | Both API and batch | Both API and batch | Both API and batch | API / and also provide an exit file to upload to DTCC | 1 |
| | Where a Succession Event is pending ISDA DC determination or yet to be processed within the TIW under what name would the trade be back loaded into the CH (Old/New name)? | Pre or not yet DC decided use Old Name | Pre or not yet DC decided use Old Name | Pre or not yet DC decided use Old Name | Pre or not yet DC decided use Old Name | Pre or not yet DC decided use Old Name | Pre or not yet DC decided use Old Name | Pre or not yet DC decided use Old Name | Pre or not yet DC decided use Old Name | Pre or not yet DC decided use Old Name | Pre or not yet DC decided use Old Name | 1 |
| | | | | | | • | 1 | | | Agreed Module Divergence | e | 3 |

A - Frequency for backloading for ICE Trust and ICE Clear is weekly and for LCH and CME is daily. Preconditions for backloading across the CCPs are consistent, but processing

arrangements vary across CCPs.

B - ICE Clear and ICE Trust have dedicated reports and instruction files for reconciliations. CME and LCH use reports already produced for other CCP processes for reconciliation.

E - ICE Trust and ICE Clear use a 5 day cycle for backloading and CME and LCH have a 1 day process.

F - Audit on terminations and new trades is available across all the CCPs however their processes differ.

G - Each CCP uses their own platform to monitor bulk affected positions. They all use different platforms resulting in a major divergence.



ISDA Safe, Efficient Markets

| 6.5 | Credit Events approach | ICE Trust | ICE Clear | LCH | СМЕ | Divergence |
|-----|---|-----------|-------------|---|------|------------|
| А | Do you subscribe to or support the triggering and management of Strategic Restructuring Credit Events? | N/A | Yes | Yes | N/A | 3 |
| В | To what extent do you use industry infrastructure to support this process? | N/A | DTCC TIW | DTCC TIW | N/A | 3 |
| с | In the event of no DC Determination do you have a process where you or dealers can bilaterally or unilaterally trigger a Credit Event or Succession Event? | Yes | Yes | No, with expectation that DC rule change will be sufficient to remove necessity of backup DC | Yes | 3 |
| D | Are both default Cash Settlement and Physical delivery supported via the auction process? | Yes | Yes | Yes | Yes | 1 |
| E | Is the process in place ISDA Protocol compliant? | ISDA | ISDA | ISDA | ISDA | 1 |
| F | Can Old Restructuring Events currently be supported for both Clearing Members (CMs) and non-Clearing Members? | N/A | Yes for CMs | No | N/A | 3 |
| | • | | | Agreed Module Divergen | ce | 3 |

Additional Information on Divergences

A - ICE Trust and CME do not support Restructuring as they do not clear trades with Restructuring (as such they are marked N/A).

A - ICE Trust plan to clear trades with Old Restructuring in the future.

B - LCH and ICE Clear use the DTCC TIW platform for triggering Restructuring events, CME and ICE Trust do not clear trades with Restructuring.

C - It is currently being discussed within the CSC forum if the DC should always rule on cleared names. It should also be noted that although the divergence has been marked as 1,

LCH do not currently have in place the ability to determine an event if the DC does not make a ruling.

Additionally CCP internal processes may not always ensure a uniformed outcome across CCPs on individual events.

F - The industry as a whole is looking for a Client Clearing solution for Restructuring. No solution currently exists.

| 6.6 | Corporate Actions - Succession Events and Renames | ICE Trust | ICE Clear | LCH | СМЕ | Divergence |
|-----|--|------------------------|-----------|----------|-----|------------|
| Δ | Are the ISDA Determination Committees the recognized authority for determining both Successor Events and Credit Events? | Yes | Yes | Yes | Yes | 1 |
| В | Are Successor Events and Rename processing fully supported? | Yes | Yes | Yes | Yes | 1 |
| с | In what platform are these events processed? | DTCC TIW | DTCC TIW | DTCC TIW | CME | 2 |
| | | Agreed Module Divergen | ce | 2 | | |

Additional Information on Divergences

C - ICE Trust, ICE Clear and LCH use DTCC TIW. CME uses there own platform.

General - Timings in relation to the processing of Succession Events by each CCP are not always consistent.





7) Reporting [Divergence Rating 1 = No Divergence]

| | | | ICE 1 | Trust | | | ICE Clear | | LC | H | CME | |
|-----|--|---|---|---|--|---|---|--|--|---|--|------------|
| 7.1 | Reporting | D2D Current | D2D Future | D2C Current | D2C Future | D2D Current | D2D Future | D2C Future | Current | Future | Current/Future | Divergence |
| А | Please provide details of the reports you currently provide to Clearing Members & clients and the associated data dictionary along with the distribution mechanism and frequency of the reports? | reports for reconciliation - Client level reports for positions and transactions | positions and transactions Reports are accessible via | - Client level reports for | reports for reconciliation - Client level reports for positions and transactions Reports are accessible via | Reports are accessible via | - Client level reports for | Daily reports available: - Initial Margin (IM), Variation Margin (VM) - Transaction and position reports for reconciliation - Client level reports for positions and transactions Reports are accessible via web reports and CSV files | | Daily reports available: - Public files (market data) - Private files (dealer trades - Treasury flows, margin requirements; Credit and Succession Events) Some reports published multiple times during the day | Daily reports available: - Trade management, - Clearing, and settlement. Reports are accessible via: CME's Document Direct application | 1 |
| В | Do Participants (CPs) have the options to customize the reporting? | Yes, Requests are submitted to Operations Working Group and if agreed, are incorporated for all CPs | Yes, Requests are submitted to Operations Working Group and if agreed, are incorporated for all CPs | Yes, Requests are submitted to Operations Working Group and if agreed, are incorporated for all CPs | Yes, Requests are submitted to Operations Working Group and if agreed, are incorporated for all CPs | Yes, Requests are submitted to Operations Working Group and if agreed, are incorporated for all CPs | Yes, Requests are submitted to Operations Working Group and if agreed, are incorporated for all CPs | | Yes, Requests are submitted to Operational User Group and if agreed, are incorporated for all CPs. | Yes, Requests are submitted to Operational User Group and if agreed, are incorporated for all CPs. | No, CME reports are standardized. Reports are available via XML feeds; which can be integrated into CPs reporting systems | 1 |

Additional Information on Divergences

No divergences found.

CCP Pending/Missing Feedback

B - CCPs were asked to clarify whether they offer daily margin reports daily position reports; daily cash flow reports and Credit and Succession Event reports for both D2D trades; D2C trades at both trade and position level.