Global Post-trade Working Group

Post-Trade Processing via FIX

Recommended Practices

Equities

August 1, 2017

V1.2.8

Proposal Status: Final Candidate

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Revision History

Date	Editor(s)	Description	Version
3/1/2012	D. Tolman	- Incorporated V1.0 feedback - Simplified cancel workflow diagram - Message format changes: - deleted ClOrdLinkId from message format - added missing CUSIP code to message format - settlement instruction cleanup - Additional/enhanced workflow diagrams	V1.1
December 2012	D.Tolman	Significant modifications/clarifications were made including the following areas (please refer to the Update Summary document for more details): - AllocationInstruction [cancel] - AllocationInstruction [replace] - Post affirmation modifications - Client direction - Settlement instructions - LargeTraderId - Intermediary workflow architecture	V1.2
	D. Tolman	- Added AllocationInstructionAck "pending" to diagram and message format - Added "M" mixed type to OrderCapacity(528) - Removed "regulatory status" from executing broker in Confirmation message pending better understanding. - Removed local commission type (=3) from MiscFeeType. Total commission is in Commission(12) - Clarified that Commission, fees and taxes are not included with "give-up" transactions. - Changed CCP to CSD (Central Securities Depository) - Cleaned up 'high-level' diagrams - Added diagrams for settlement parties.	V1.2.1

Date	Editor(s)	Description	Version
April 2013	D. Tolman	- SoftDollar code should be =1 not =2 - Removed Large-trader-id alternative from AllocationInstruction OrderOriginationFirm. LTI is only specified at the account-level allocation in the AllocationInstruction. - Clarified value of AllocId(70) in Confirmation [cancel] messages - Added new codes for AllocRejCode(88) and ConfirmRejReason(774) - Added Attachment component to Confirmation Message for disclosures including supported mime types, deleted use of Text(58) field for disclosures. - Added MiscFeeType usage guidelines for OMGEO® mapping. - Added proposed MiscFeeTypeID and MiscFeeName fields. The MiscFeeTypeIDs are still in the process of being developed by the working group as well as being officially approved by the FIX Trading Community. In the meantime the fee mapping guidelines should be used. - Added optional new RejectText(1328) field to AllocationInstructionAck and ConfirmationAck messages. - Clarified buy-side-calc and sell-side-calc procedures and usage. Sell-side-calc will always be used for non-US markets. Buy-side-calc may optionally be used for the US market.	V1.2.2
July 2013		- Added "PS" as valid value for SecurityType(167) in Confirmation message. - Clarified that IDs (e.g. ClOrdID, OrderID, AllocID, IndividualAllocID, ConfirmID) should be unique across time (e.g. include date stamp in the id). - Added the AFME post-trade workflow diagrams appendix. - Modified client direction to be based upon the existence of one or more of the directed firms regardless of ProcessCode (which previously =6 indicated client direction). - Noted that Give-up workflow needs further review.	V1.2.3
April 2015	D. Tolman	- Added usage, tag numbers and valid values for NoMiscFeeSubTypes.	V1.2.4

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Date	Editor(s)	Description	Version
May 2015	D. Tolman	- Updated "step-in" allocation instruction to use ProcessCode(81) = 2 (step-in)	V1.2.5
February 2016	D. Tolman	- Changed the name to Recommended Practices - Identified FIX 5.0 or later tags	V1.2.6
February 2017	D. Tolman	- Added CommissionDataGrp and AllocCommissionDataGrp to allow specification of multiple commissions. - Added SecurityIdSource valid values of 5-RIC and A-Bloomberg.	V1.2.7
August 2017	D. Tolman	- Added recommended best practices for MiFID (ii) post-trade commission unbundling and representation of research commission types in the CommissionDataGrp and the AllocCommissionDataGrp. - Removed sections on Intermediary Services, Out-source Post-trade Processing, and Execution Management Systems since they are now included in the Post-tradeViaFIX_RecommendedPractices_CommonFramework document. - Updated document links to the latest website links.	V1.2.8

1   Preface

The purpose of the FIX Trading Community Post-Trade Processing via FIX Initiative is to define industry practices for common usage of the FIX Protocol for post-trade processing, for all asset classes, between buy-sides and sell-sides that can be used bi-laterally as well as through intermediary facilities.

This document is one of a series of Recommended Practices for Post-Trade Processing via FIX specifying guidelines for industry usage of the FIX standard to facilitate parallel implementation across buy-sides, sell-sides and intermediaries.

This document assumes an understanding of the FIX Protocol and post-trade processing in general. This document is written in the context of the Common Post-trade Framework.

> *Note: While the base protocol is FIX 4.4, additional tags or additional valid values from FIX 5.0 or later have been added as needed to meet industry post-trade processing requirements. These are identified in the message format tables ("[FIX 5.0 or later]") and may require specific exception configuration for FIX engines. The FIX Global Technical Committee has approved this as accepted practice.*

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2 Introduction and Scope

This document includes the FIX Recommended Practices for the Allocation and Confirmation phases for equities.

Asset types include.

- Cash equities

- Convertible bonds

- Warrants

The basic workflow style is post-trade-allocation, including US and non-US style workflows.

Placement is outside the scope of this specification with the exception of any requirements/expectations of the placement phase.

Clearing and settlement workflows are outside the scope of this specification with the exception of data required to be passed to these phases.

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3   References

This document is one of a set of FIX Post-Trade Recommended Practices documents. The following are the associated documents that have been completed at time of distribution. Please refer to the FIX Trading Community web site links below for the current complete set.

3.1 Post-Trade via FIX Recommended Practices

https://www.fixtrading.org/recommended-practicesguidelines/

3.1.1 Asset class specific

- PostTradeViaFIX_RecommendedPractices_Equities
- PostTradeViaFIX_RecommendedPractices_Equities_ExamplesAndNotes
- PostTradeViaFIX_RecommendedPractices_EquitySwaps
- PostTradeViaFIX_RecommendedPractices_FX
- PostTradeViaFIX_RecommendedPractices_EquityOptions
- PostTradeViaFIX_RecommendedPractices_Futures

3.1.2 Cross asset special cases

- PostTradeViaFIX_RecommendedPractices_SEF
- PostTradeViaFIX_RecommendedPractices_BrokerAllege_ConfirmationRequest

3.1.3 Code Lists

- https://www.fixtrading.org/standards/codelists/Misc Fee Sub Types

3.2 Documents Used in Preparation

- FIX 4.4 Implementation Guide for Allocations, Confirmation, and Settlement Instructions, version 0.4, 17 April, 2004
- FIX Post Trade Processing, A Case for Using Financial Information eXchange (FIX), October 2005.
- FIX Protocol Standard Specifications: Version 4.2, March 1, 2000 and Version 4.4, April 30, 2003.
- FIX Allocations Working Group, Proposed Standardized Message Formats for Commission Sharing and Related Business
- ISITC, Matching Best Practice, 2011 Working Document, October 2011.
- FTP and NDM/MQ Transmission Guides, 5.24 Deliver Orders (DOI1/DOI5), Function User's Guide, The Depository Trust Company, January 2011.
- Equity Post-trade Processing via FIX, Guidelines, FIX 4.2, 4.4, V1.1, March 8, 2012.
- STP LITE – FIX and ISO15022, V.62, August 4, 2004.

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4   Workflow Overviews

4.1 U.S. Market

In post-trade processing of Depository Trust Company (DTC) cleared U.S. equities, the buy-side allocates placements among one or more accounts and communicates the allocations and fees to the sell-side. The sell-side matches the block and validates the accounts and associated data. The sell-side accepts or rejects the AllocationInstruction but does not add any additional data. Once the AllocationInstruction is accepted, there is a second account-level confirm/affirm process where the sell-side communicates "confirmation" of the trade at the account level to the buy-side. Then the buy-side "affirms" the account-level transaction. The confirm/affirm process may be handled by the investment manager or by the custodian, or outsourced. The investment manager communicates the transaction to the custodian, either before or after the confirm/affirm process depending upon which of them is responsible for the confirm/affirm process. Once the confirm/affirm process is completed successfully, the transaction is passed to the DTC for clearing and settlement. The DTC communicates the settlement information to the custodian. Finally the custodian bank reconciles the DTC data with the investment bank data.

Currently the most common process is to use an intermediary system, OASYS®, to communicate and match allocations followed by a second intermediary system, TradeSuite®, to communicate confirmations, match affirmations, and pass affirmed trades to the DTC.

The fees associated with the US market are few and well understood.

4.2 Non-U.S. Markets

In post-trade processing for non-U.S. equities, the buy-side allocates placements among one or more accounts and communicates the allocations and preliminary fees to the sell-side. The sell-side accepts or rejects the AllocationInstruction, indicating that the accounts and trades are known. After the AllocationInstruction is accepted the sell-side sends a Confirmation of the trade at the account level to the buy-side. The Confirmation message communicates the final fees back to the buy-side and the buy-side "affirms" or rejects. Once the affirmation is complete the buy-side updates their internal fee values as necessary and then transmits the transaction details to the custodian. The sell-side transmits the trade details to the appropriate CCP for clearing and settlement.

Currently, the most common process is to use an intermediary system, CTM® or OASYS GLOBAL®, to communicate and match allocations followed by communication and matching of confirmations and affirmations. Affirmed trades are then communicated to the local central clearing party by the broker/dealer or the intermediary system.

The market specific fees vary widely for each market and have historically been are handled by each broker/dealer individually.

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5 Glossary

- Order: the quantity of some security that a portfolio manager wishes to buy/sell, independent of a broker/dealer.

- Placement: the quantity of some "order" placed with a given broker/dealer (note that "placement" is defined just to avoid any confusion with the concept of "order" above)

    o A given placement has an associated set of buy-side compliance constraints (e.g. agency/principal, no cross).

    o A FIX placement uses the FIX New Order message and is identified by the buy-side ClOrdId(11) chain and sell-side OrderId(37)

- Placement-block: the set of executions from one placement.

- Allocation-block: a set of trades allocated by a given AllocationInstruction from one or more placements. The allocation-block is the traditional unit of communication between buy-sides and sell-sides (OASYS® allocation instructions specify blocks). Initial blocks are formed by aggregating executions from a given FIX placement. Typically the initial single-placement block is also the allocation-block, but in some cases placement-blocks are combined into larger allocation-blocks or split into smaller allocation-blocks. In these cases one side requests the other, for some block, to "know" the block as the combined or split quantity so that the allocation instruction will match. The allocation instruction references the aggregated block size.

    o Note that placements combined by the buy-side into a single allocation-block/ticket are assumed to comply with the same set of conformance constraints.

- "Ticket": common term used to identify allocation-blocks (e.g. start a new "ticket" for this placement).

- Allocation-block characteristics:

    o instrument, side, quantity, average price,

    o trade-date, settlement-date

- Transaction: the account-level allocation

        ▪ Account

        ▪ Instrument, side,

        ▪ Quantity, average price

        ▪ Trade-date, settlement-date

- Transaction-id

    o A buy-side generated identifier associated with each account-level allocation/transaction (account, quantity, average price, …)

- Commission, taxes, fees, net-money

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- o The final net-money for a given transaction is computed from commission, taxes, and fees for the transaction

- Settlement Instructions

  - o Each transaction has 2 sets of settlement instructions: 1 for the buy-side and 1 for the sell-side.

- Allocation instruction components

  - o Allocation block characteristics

  - o Placements to be allocated

  - o Allocations (or transactions)

- Matching: the sell-side process of identifying the placements for a given AllocationInstruction message. The matching process can be performed by an intermediary ("central-match") or bi-laterally ("local-match") with no intermediary involved.

  - o Note that since equity allocations are average priced there is no direct linkage from an allocation instruction to specific FIX execution reports, only to the aggregated executions of placements. The process can be mathematically based upon the quantity and average-price of the placement and the quantity allocated from the placement.

- Economic match: matching by characteristics - instrument, side, quantity, trade-date, total and average price. The probability is low, but with automated economic matching algorithms the buy-side and sell-side are not guaranteed to associate the same trades with the allocation. Generally, in economic matching, when the allocation-block is different from a placement-block some out-of-band communication is required to assure both sides are talking about the same set of trades.

- Exact match: matching by some identifier (i.e. ClOrdId(11)/OrderId(37)). ID-based exact matching can be automated, and then the buy-side and sell-side are assured that they are both referring to the same trades.

- Confirmation vs. Affirmation: after placements are allocated into transactions, the sell-side reiterates the final details that they know (called Confirmation) and the buy-side reviews and agrees (called Affirmation).

- Parties

  - o Order origination firm: firm placing the orders

  - o Executing broker: broker executing the trades

  - o Clearing firm: firm responsible for the clearing and settlement process

  - o Broker of credit ("commission sharing"): broker of credit is paid a portion of the commission by the executing broker but the transaction is still cleared and settled by the executing broker.

  - o Introducing broker: broker who has the relationship with client, and receives part of the commission, but does not execute the trade

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- o Correspondent clearing firm ("commission recapture"): the firm that has the commission recapture relationship with the client firm but is not the clearing firm for the transaction.

- o Step-out/step-in broker: refers to the complete transfer of a transaction from the executing broker (step-out) to another broker (step-in) for clearing and settlement.

- Step-out/give-up clearing

  - o Buy-sides may specify that one or more transactions in a given allocation instruction be cleared by a different broker. That other broker receives the commission.

- Client Direction

  - o The client may direct the broker to distribute some of the commission to another broker via the AllocationInstruction.

- Commission relationships and Client Direction

  - o Commission sharing: client, via the IM directs the broker to share some of the commission with another broker.

  - o Commission recapture: client has a relationship with a broker where the broker rebates some portion of the commission to the client. When the broker, with the commission recapture relationship with the client, is different from the clearing firm the clearing firm has a "correspondent" relationship with the other firm/broker.

    Note: no client direction is needed when the clearing firm has the commission recapture relationship with the client.

  - o Introducing broker: the client, via the IM, may identify another broker as the introducing broker

- Post-trade Outsourcing

  - o Some execution brokers outsource all their post-trade processing to another (clearing) broker.   In this case the buy-side sends the allocation instructions directly to the outsource broker.

    Note: it is also possible that a broker-dealer will outsource their post-trade processing transparently to the buy-side in which case the buy-side still sends the AllocationInstruction to the execution broker.

- Central Securities Depository (CSD), also referred to as Central Clearing Party (CCP).

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6 Objectives/Benefits and Strategies

- Increase Availability
    - No single point of failure
    - Direct communication between buy-side and sell-side
- Increase automation and processing speed – straight-through-processing
    - Allow ID-based automated allocation-block exact matching of allocation blocks and allocation
    - Substantially reduced out-of-band communication delay and cost
- Increase Accuracy, Traceability, and Footing – straight-through-processing
    - Traceable id-based linkage through complete trade/post-trade cycle of messages
        - OrderId(37) links placements
        - Transaction-id links account-level allocation/transaction messages (e.g. Confirm) through to the final client custodian bank reconciliation.
    - Electronic communication of
        - Explicit cancellations
        - Computed fields to reduce computational differences (e.g. net money)
        - All pertinent data (e.g. accrued interest)
    - Precision and tolerance specified at configuration time
- Reduce Cost
    - Utilizes existing FIX infrastructure
    - Reduced intermediary fees
    - Reduced manual intervention
- Facilitate Implementation – minimize time and cost
    - Standardization
        - FIX standard compliant
        - Detailed industry standard guidelines– everyone implements the same way
    - Phasing Support
        - Sell-sides can transition from economic matching algorithms and data processing to exact matching using FIX ids and data fields.
        - Buy-sides can implement functionality in phases by using bilateral FIX for some allocations while still continuing to use traditional means for the rest.

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7 Requirements and Constraints

7.1 Buy-side Requirements/Objectives

These are aggregated requirements from multiple buy-sides.

- Support new, replace and cancellation of allocations.

    o Allow cancellation and re-allocation up to 10 business days after trade-date.

- Support buy-side communication of the specific placement-block(s) to be allocated in a given allocation-instruction to assure that the constraints inherent in the placement (e.g. agency/principal, no inadvertent cross) are carried through to the allocation and confirmation.

- Allow the buy-side to aggregate multiple placement-blocks into a single allocation-block.

    o Note that the buy-side will only aggregate placements that conform to the same compliance constraints (e.g. agency/principal) into the same allocation block.

- Allow buy-side to allocate part of or split a placement-block. This allows

    o Fair allocation before adding new client accounts without removing a placement from the market by allocating the partially filled order.

    o Specification of different block-level characteristics (e.g. settlement dates) for different accounts by splitting the placement into two allocation instructions.

- Support optional allocation at different average prices for different accounts. This allows accounts to be equitably added or deleted during the course of filling a placement rather than having to use the techniques of either having to split a placement-block or close the placement (remove it from the market) to assure that the accounts received fair average prices.

- Support allocation of "manual" orders not submitted via FIX with or without unsolicited FIX execution reports.

- Support allocation of "manual" execution reports for a FIX order that were not transmitted via FIX due to some problem.

- Note that busts and corrections of allocated FIX executions are not supported automatically.

    o The buy-side may DK or place in an exception queue.

    o If there is a required bust (e.g. exchange bust), the sell-side must be able to identify the affected allocation instructions and communicate to the buy-side out-of-band.

- Support an optional separate FIX session for allocations that can be used for one or more placement sessions.

    o This assures that the AllocationInstruction does not impact placement performance.

    o Allows for different FIX Protocol levels to be used.

- Reduce/eliminate footing issues

    o Eliminate "penny report" where custodian reconciliations are off by a penny.

- o Match DTC aggregation of accounts so that trades will "foot" when received by the client.

- A protocol that allows counter-party independent decisions about the use of value-added intermediaries.

7.2 Sell-side Requirements/Constraints

- o Support selected modification of Confirmations, before or after affirmation.

    - o Sell-side-calc commission, taxes, fees

    - o Detailed settlement instructions

- o Sell-side allocation systems are frequently down-stream from the FIX placement databases and there may be a loss of FIX-based data:

    - o Include OrderID(37) along with the last ClOrdId(11) in the orders repeating group

        Note that these may be used as a matching aid rather than a matching requirement.

- o Support out-sourcing of post-trade processing by one broker/dealer to another firm.

    - o Separate FIX allocation sessions

    - o Executing broker specified in AllocationInstruction

- o Facilitate a phased implementation by the sell-sides

    - o Sell-sides are not required to utilize the FIX IDs provided.

    - o Buy-sides may be told at configuration time to employ traditional out-of-band block-level communication with the sell-side even though they are sending sufficient exact-matching information in the FIX messages.

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8 Assumptions

- Equity allocations are always average-priced.

- There is no change to the basic FIX placement message flow because of the FIX post-trade process.

    o Placements include any capacity constraints

- U.S.

    o Once allocation-level trades are passed to TradeSuite®/TradeMatch® the processes, normal and exception, are the same as if the allocations had been matched via OASYS®.

    o Even when OASYS® 'TradeMatch-only' is used to pass allocation-level trades to TradeSuite® the accounts and brokers still need to be defined in OASYS®.

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9 Open Issues

- Standard Order Origination Firm Identifiers:
    - No standard IdSource until LEI is available?
- SLAs need to be developed:
    - Allocation response time
    - Confirmation response time
    - Cancel response time
        - TradeDate
        - post TradeDate

10 FIX Message Summary

The following FIX messages are used in the allocation, confirmation/affirmation workflow:

Tag 35	FIX 4.2	FIX 4.4	name	Type/response
"J"	x	x	AllocationInstruction	- [new] - [replace] - [cancel]
"P"	x	x	AllocationInstructionAck	- "received" - "accepted" (successfully processed) - "rejected" (block-level)
"AK"	n/a	x	Confirmation	- [new] - [cancel]
"AU"	n/a	x	ConfirmationAck	- "received" - "affirmed" - "rejected"

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11 Key Concepts/Processes/Notes

11.1 Workflow Architecture

The post-trade workflow has two distinct stages:

1. Allocation: allocation-block identification and account identification and allocation

2. Confirm/Affirm: legal specification and affirmation of details of each transaction

These stages are architected so that there is the flexibility for Confirm/Affirm stage to utilize a protocol other than FIX (e.g. US qualified vendor).
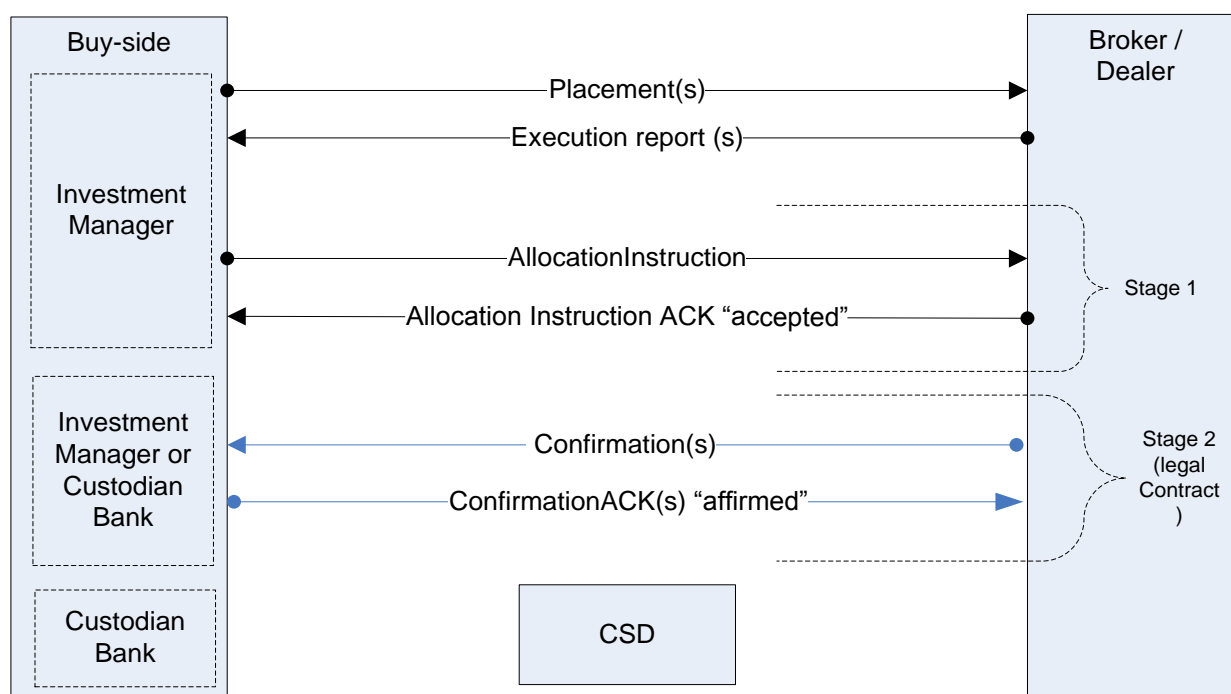
The AllocationInstructionAck "accepted" message from the sell-side is an intermediate agreement that the process can move to stage 2 and that the sell-side:

- Has identified the placements in the allocation-block
- Knows the accounts
- Has validated the quantities and prices for each account
- Has validated commissions, fees for buy-side-calc
- Has initiated the Confirmation process

> ***NOTE: this intermediate agreement is NOT legally binding – the Confirmation/ConfirmationAck is the legally binding message.***

This intermediate level of agreement is a key point of transition in the overall process because it triggers both sides to proceed on to the confirm/affirm process. If there is a problem with an AllocationInstruction after this point it is exponentially more difficult to unwind the parallel processing

of the Confirm messages (which could also be utilizing a protocol other that FIX) – it can no longer just be "rejected" it must be canceled with a separated AllocationInstruction [cancel] message. Confirmation messages can be in any of the following different states, each of which requires different processing by both sides (buy-side/sell-side) to unwind, sometimes even requiring a separate "canceling" transaction:

- pending affirmation ("reject"/expect "reject")
- affirmed (expect [cancel] / send [cancel])
- booked at the CCP (reverse)
- money has changed hands (return the money)

There is no provision in the protocol for an issue with a Confirmation to bubble back up and automatically reject/cancel the total AllocationInstruction.

This "agreement" triggers both sides to proceed with the parallel generation and processing of the Confirmation messages knowing that normal issues with the Confirmation messages (e.g. settlement instructions, fees …)

- Can be resolved through the Confirmation [cancel]/"reject" process
- Will not require "reallocation"

For buy-side-calc (see next section) it allows the buy-side the option of initiating auto-affirmation of the expected set of Confirmations if a central matching facility(e.g. TradeMatch®) is being used for the confirm/affirm process.

> *Note: there may be some sell-side **exceptions** to this rule. For example the sell-side has an issue recognizing an account identifier. Ideally the sell-side will resolve the issue quickly before "accept"ing the AllocationInstruction, however in this case the sell-side may make the decision that the delay in initiation of the Confirmation process, because of time it will take to resolve the account identification with the buy-side, outweighs the risk that the account issue will require cancellation and re-allocation. In this case the sell-side may decide to send the AllocationInstructionAck (P) "accepted" and initiate the Confirmation processing for the other accounts while resolving the issue with the specific account so as not to delay confirmation/affirmation of the other transactions. Note that this does not affect the buy-side – once the buy-side receives the "accepted" it will initiate custodian notifications.*

11.2 Buy-side-calc vs. Sell-side-calc Processes

The purpose of the buy-side-calc and sell-side calc processes is to resolve non-material computational differences between the buy-side and sell-side so that the end client reconciliation will match exactly. Note that they do not relate to which party is responsible for determining the values, just with resolving minor differences in order to facilitate reconciliation.

The following are the values sent downstream by both the buy-side and sell-side for each transaction that will be reconciled by the client, in-other-words; the goal of the procedures is to make the reconciliation of these values always match perfectly at the client/custodian:

- Gross trade amount

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- Net money
- Price
- Accrued interest
- Commission
- Total Fees

11.2.1   Buy-side-calc

When using buy-side-calc the buy-side provides the complete set of "official" fee values in the AllocationInstruction: the expectation is that the sell-side will validate, within tolerance as appropriate, but use the exact values from the AllocationInstruction to pass downstream as well as returning them to the buy-side in the Confirmation message. The buy-side will validate them and reject if not exactly what they sent.

This workflow was specified to meet the requirements of the current US post-trade workflow utilizing a qualified vendor for Confirmation/affirmation (OASYS®, TRADESUITE®) allowing the buy-sides to communicate the transaction to the custodian immediately after the AllocationInstruction is "accept"ed with the confidence that there will be no issues with the values received in the Confirmation Message.

11.2.2   Sell-side-calc

When using sell-side-calc the buy-side provides some or all of the fees in the AllocationInstruction message. The sell-side provides the complete set of the "official" values in the Confirmation message: the expectation is that the buy-side will validate but use the exact values provided in the Confirmation messages to pass downstream.

This workflow was specified to meet the requirements of the current non-US post-trade workflow (CTM®, GLOBALOASYS®)

When using sell-side-calc the buy-side is not required to provide all fees in the AllocationInstruction but it is recommended that as many of the fees as possible be provided. This gives the sell-side the opportunity to identify any disagreements as early as possible in the workflow. Sell-side validation is on a best-effort basis because some of the fee types can be easily calculated by the sell-side at the workflow-point of AllocationInstruction processing but others are based upon details of the transaction that are not determined until Confirmation preparation time. In addition the traditional sell-side system architecture has the allocation processing and Confirmation processing separated making it difficult to validate some of the fee types at the traditional workflow-point where the AllocationInstruction is to be "accepted" or "rejected" without significant delays in responding to the AllocationInstruction.

> *Note: calculation and payment of most all fees is the legal responsibility of the sell-side so they are the final arbiter of the exact value. Any validations of buy-side provided fees will typically be exact (i.e. no tolerance).*

11.3 US vs. non-US Markets - Workflows

11.3.1 Workflow for U.S. Markets

FIX Post-trade processing for U.S. Markets will be configurable in either of two ways:

1. Bi-lateral FIX for allocations and use of a separate "qualified vendor" (e.g. TradeSuite®) for the confirmation/affirmation process and communication to the DTC.

Note: Buy-side-calc is generally used in this configuration to facilitate pro-forma affirmation of transactions in TradeSuite® so that the buy-side can transmit the transaction details to the custodian immediately after the AllocationInstruction is "accepted" by the sell-side.

2. Bi-lateral FIX for allocations as well as for confirmation/affirmations, with broker/dealer communication to the DTC.

Note: Configuration 2 requires resolution of issues around bilateral FIX vs. the registered "clearing agency" or "qualified vendor" requirement of NYSE Rule 387. The issue is whether following the Guidelines for the bilateral FIX confirmation /affirmation process is sufficient to meet the goals of the "qualified vendor" requirement.

11.3.2 Workflow for Non-U.S. Markets

FIX post-trade processing for non-U.S. Equities will have only one standard configuration that uses the sell-side-calc process and includes both FIX AllocationInstruction and Confirmation messages, with communication to the local CCP by the broker/dealer according to local procedures and regulations.

Note: Only the sell-side-calc process is used for non-US markets due to a combination of complexity and timing of some fee calculations, current implementations and sell-side responsibility for paying the fees.

11.4 Workflow Types

11.4.1 Bi-lateral

In the bilateral workflow all FIX messages are exchanged directly between the buy-side and the broker (see FIX Workflow appendices for diagrams).

11.4.2 Intermediary

Intermediary facilities can conform to the Guidelines thus allowing them to be easily used by buy-sides or sell-sides for communication and value added services. See the Post-trade Common Framework section on intermediaries for further details.

11.4.3 Step-out/In

In the step-out process, one or more transactions are transferred (stepped-out) from the executing broker to another (step-in) broker for clearing and settlement. (see Step-out/in Workflow appendix)

There are multiple AllocationInstructions involved in the step-out/in process, all generated by the buy-side:

- The first AllocationInstruction is sent to the execution broker, specifying one or more transactions in the AllocGrp as "step-out" and including the step-out broker identifier for each.
- Then the buy-side sends a "step-in" AllocationInstruction to each of the step-out brokers detailing the allocation of the set of transactions being transferred to that broker/dealer.

The confirm/affirm process for the step-out/in transactions is between the buy-side and the identified step-out broker/dealer(s).

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(See Step-out appendix)

11.4.4 Client Direction for Commissions

Client direction of commissions to another broker is different from a step-out broker in that the other broker is paid a commission by the clearing firm but the transactions are not transferred to the other broker. Post-trade processing is completed between the buy-side and the clearing firm.

The Guidelines identify three types of client commission direction:

- Commission sharing where another broker just receives part of the commission.

- Commission recapture where the client receives part of the commission back.

- Introducing broker where another broker, that has the primary client relationship, receives part of the commission.

11.4.5 Post-trade Outsourcing

Some execution brokers outsource post-trade processing to another firm. In this case the FIX placement messages will be exchanged between the buy-side and the executing broker but the post-trade messages will be exchanged between the buy-side and the designated clearing firm.

In the outsourced case, the execution broker will be different from the firm at the end of separate FIX allocation session.

> Note: In FIX 4.2, the executing broker is a configuration option rather than being specified in the Parties component at the block-level as it is in FIX 4.4.

Refer to the Post-trade Common Framework section on Post-trade Outsourcing for further information.

11.5 FIX 4.2 / 4.0 Capabilities/Limitations

Use of FIX 4.2 is limited, because of fields and/or message types:

- Confirmation messages are defined in FIX 4.4, a separate FIX 4.4 session would have to be used.

- ALERT codes only since there is no provision for detailed settlement instructions in the AllocationInstruction.

- Partial allocation of placements will generally require out-of-band communication since the tags that specify the amount of the placement are not available in FIX 4.2.

- If clearing is outsourced to a different broker the execution broker in FIX 4.2 the executing broker is a configuration option rather than being specified in the AllocationInstruction. In FIX 4.4 clearing firm is specified in the parties block.

- In FIX 4.2, the broker-of-credit is specified in the BrokerOfCredit (92) field of the allocation. In FIX 4.4, it is specified in the NestedParties component.
- In FIX 4.2, the step-in execution broker is specified in the ExecBroker (76) field of the allocation. In FIX 4.4, it is specified in the NestedParties component.

- No field for transaction-id (IndividualAllocID).

o   It is recommended that the sell-side provide the transaction-id or put "[N/A]" in the field.

11.6 Allocation-block Identification

In addition to block-level characteristics (trade-date, settlement-date, instrument, side, total-quantity and average-price), AllocationInstructions identify the placements that are to be included in the Allocation-block in one of four ways depending upon how the placement was made:

1. FIX placements are identified by the FIX ClOrderID(11) and OrderID(37) associated with the placement.

2. Manual placements are identified by either:

   a. OrderID(37) if unsolicited execution reports were transmitted by the sell-side.

   b. Placement characteristics if no execution reports are available (block-characteristics, placement-quantity, capacity constraints).

3. Step-in placements are identified by quantity and step-out broker.

4. Block-id: the buy-side can define the allocation-block by including a block-id with each of the placements (ClOrdIdLink[tag583]) and then referencing the same block-id in the AllocationInstruction.

11.6.1   FIX Placements and Executions

When the placements were made via FIX, the AllocationInstruction includes block level characteristics and a list of one or more FIX placements along with the amount to be allocated from each placement.

- Block-level characteristics include trade-date, settlement-date, instrument, side, total-quantity and average-price.

- One or more placements identified by ClOrdId(11) and OrderID(37) in the orders repeating group (no execution level information is included).

   o   If the order has a chain of ClOrdId(11)s, due to replacement, the last ClOrdId(11) and OrderID(37) is listed.

- If for some reason an execution report is not received or must be adjusted manually the OrderID(37) will be set to "[MANUAL]".

11.6.2   Manual Placements with/with-out Unsolicited FIX Executions

The placement was made via phone or email:

- The ClOrdId(11) in the FIX allocation instruction is set to "[MANUAL]".

- If the sell-side is able to send unsolicited execution-reports for the order then the OrderID(37) from them is included in the AllocationInstruction, if not the OrderId(37) is set to "[MANUAL]".

- The OrderQty(38) is provided to help identify the order, along with order-capacity constraints OrderCapacity(528) if any.

11.6.3 STEP-IN AllocationInstructions

Step-in allocation instructions are a second allocation instruction sent to the step-out/give-up broker by the buy-side specifying the trades that are being stepped-out by the actual execution broker and the allocation accounts:

- The ClOrdId(11) and OrderID(37) in the FIX allocation instruction is set to "[STEPIN]".

- SecondaryAllocId (793) is included in the AllocationInstruction, linking back to the primary allocation instruction

- ProcessCode(81) is set = 2 (stepin).

- The executing broker is specified in the NestedParties component within the OrdAllocGrp component or ExecBroker(76) if FIX 4.2 is used.

- If the step-out broker is not accessible via FIX, out-of-band communication is required.

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11.6.4 Allocation-block Specification - Summary Table (not using Block-id method)

	Normal FIX placement	Manual Placement with FIX executions	FIX placement with all manual executions	Manual Placement with manual executions	Step-in
Block Characteristics					
- **TradeDate**	Req	Req	Req	Req	Req
- **SettlementDate**	Req (or default)	Req (or default)	Req (or default)	Req (or default)	Req (or default)
- **symbol/symbolId**	Req	Req	Req	Req	Req
- **side [54]**	Req	Req	Req	Req	Req
- **block-avgPx [6]**	Req	Req	Req	Req	Req
- **block-quantity [53]**	Req	Req	Req	Req	Req
Placements					
- **NoOrders(73)**	>=1	>=1	>=1	>=1	=1
-> **ClOrdId(11)**	ClOrdId	"[MANUAL]"	ClOrdId	"[MANUAL]"	"[STEPIN]"
-> **OrderId(37)**	OrderID	OrderID	"[MANUAL]"	"[MANUAL]"	"[STEPIN]"
-> **OrderQty(38) (FIX 4.4)**	<quantity at allocation>	<quantity at allocation>	<quantity at allocation>	<quantity at allocation>	= block-quantity
-> **OrderBookingQty(800) (FIX 4.4)**	<quantity of placement to be allocated>	<quantity of placement to be allocated>	<quantity of placement to be allocated>	<quantity of placement to be allocated>	= block-quantity
-> **OrderAvgPx(799) (FIX 4.4)**	<average price of quantity to be allocated>	<average price of quantity to be allocated>	<average price of quantity to be allocated>	<average price of quantity to be allocated>	= block-average price
->**NoCapacities(862) (FIX4.4)**	Opt (ignored)	Opt (ignored)	Opt (if "capacity" constraints)	Opt (if "capacity" constraints)	Opt (if "capacity" constraints)
--->**OrderCapacity(528) (FIX 4.4)**	Opt (ignored)	Opt (ignored)	(acceptable capacities)	(acceptable capacities)	(acceptable capacities)
Notes					
Matching	"exact" by OrderID	"exact" by OrderID	"economic" - symbol, side, trade-date - OrderQuantity[38] - capacity [528] if provided	"economic" - symbol, side, trade-date - OrderQuantity[38] - capacity [528] if provided	"economic" - symbol, side, trade-date - OrderQuantity[38] - OrderCapacity [528] if provided

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	Normal FIX placement	Manual Placement with FIX executions	FIX placement with all manual executions	Manual Placement with manual executions	Step-in
Scope	Placements with ClOrdId(11) and OrderID(37)	Placements with OrderID(37) but without ClOrdId(11)	Placements with ClOrdId(11) and OrderID(37)	Placements without ClOrdId	Step-in transactions from step-out broker
Exception handling	No-match > may be rejected	No-match > may be rejected	No-match>manual	No-match>manual	No-match>manual

Note:

The "Guidelines" focus on matching by FIX-id, and its benefits, but in actuality there are two basic alternative methods for sell-side processing of the proposed FIX AllocationInstructions - either can be used at the option of the sell-side – economic or FIX-id based. Regardless of the sell-side processing method the buy-side would send the same FIX messages including all required fields. This facilitates the sell-side utilizing either method as well as transitioning from economic to FIX-id based.
1. FIX-id based

    a. FIX-ids are used to identify ("exact-match") the specific FIX placements to be allocated
    b. The other block characteristics (e.g. symbol, side, ..) are validated
2. Economic
    a. The allocation-block characteristics (e.g. symbol, side, …) are used to identify ("economic-match") the placements to be allocated
    b. The FIX-id fields are used to resolve matching issues.
    c. Note: economic matching is always used for manual executions and step-ins though it is simplified because the pool of executions to match against (those without FIX ids) is small in environments where FIX placement is the norm.

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A (mostly) automatable algorithm for identifying placement-blocks using the FIX-ids in the AllocationInstruction OrdAllocGrp component.

If OrderId(37) is specified then

- "exact" match on OrderId(37)

- Scope: placements with OrderId(37)s

- Exception handling

  o May be rejected if no match

If OrderId(37) = "[MANUAL]"

- "economic" match on placement characteristics

  o Symbol, Side

  o OrderQty(38), OrderCapacity(528) (if provided)

- Scope:

  o placements without ClOrdId(11)s (i.e. not placed via FIX)

- Exception handling

  o no match > check placements with OrderId(37)s and then contact buy-side to resolve ambiguities. Execution report may not have been received or may have been adjusted manually.

  o multiple matches > pick one

If OrderId(37) = "[STEPIN]"

- "economic" match on placement characteristics

  o Symbol, Side

  o OrderQty(38), OrderCapacity(528) (if provided)

- Scope:

  o Trade blocks transferred from executing broker

- Exception handling

  o no match > contact executing broker

  o multiple matches – pick one

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11.6.5 Allocation-block Identification - Block-id Method

Placements can also be linked by using a block-id (ClOrdIdLink [tag 583]) that is included in one or more placements and in an AllocationInstruction. The purpose of this is to avoid having to specify the FIX ClOrdIDs [tag 11] and OrderIDs [tag 37] in the AllocationInstruction in situations where they are not available because of intermediary systems. If ClOrdIdLink is specified the ClOrdID and OrderID tags would be ignored/optional. The allocation-block characteristics in the AllocationInstruction must match the aggregated linked placements.

Note: this option is not included in the above matching table.

11.7 Compliance Constraints - Broker/Dealer Capacity

The buy-side may specify constraints on placements (e.g. agency only, no cross).

It is the responsibility of the sell-side to comply with these at the placement level and accurately specify "capacity" in the confirm/affirm process for the given Allocation Instruction. Accurate specification of "capacity" requires linkage between the Allocation Instruction and the placement(s) unless the sell-side only ever acts in the specified "capacities".

If more than one placement is included in a given AllocationInstruction, it is the responsibility of the buy-side to assure that all placements conform to the same compliance constraints.

If a new order is to be added to an order with open placement(s), the buy-side OMS performs compliance checks against any open placements to determine if there is a conflict requiring them to be closed. If there is not a conflict, the new order may be added without closing the placement.

Capacity restrictions are specified on the new order message:

- FIX 4.2 – Rule89A(47) = "A" (agency)

- FIX 4.4 – OrderCapacity(582) = "A" (agency)

11.8 Reconciliation and Footing

To eliminate math-based footing issues entirely or at least early in the cycle, the Guidelines have specified buy-side-calc and sell-side-calc processes (see buy-side-calc/sell-side-calc section above).

11.9 Fair Average Pricing for Orders

If a new account is added to an order with active placements, it is the responsibility of the buy-side to either allocate at that point (leaving the placement open), or close and allocate, or utilize the account-level (AllocAvgPx(153)) option.

11.10   Exception Handling

11.10.1 New Accounts

The sell-side should not reject allocation instructions with accounts that it does not know, but rather should have an additional process, that can be easily implemented, to configure the new account and proceed with the allocation without rejection.

11.10.2 Post Allocation Fills

- Post-allocation fills of closed, but not fully filled orders (DFD, canceled), are legitimate but may be handled in different ways by different buy-sides depending upon their processes:
  - DK
  - Accept them into an exception queue for special processing.
    - DK
    - Accept by unallocated/reallocate or additional allocation
- Post-allocation Fills to an open placement may be accepted as normal when the buy-side utilizes the allocation of part-filled orders.

11.10.3 Post-Allocation Busts and Corrections

- An execution report that is part of a placement, that has been allocated, cannot automatically be busted or materially corrected without first canceling the allocation. Once the allocation is canceled, execution reports may be busted/corrected by the sell-side and then the placements re-allocated by the buy-side.
  - If the buy-side DKs the sell-side must contact the buy-side to resolve.
- If it is required that a bust must be processed (e.g. an exchange bust) and the allocation cannot be canceled then it must be handled manually. Placement identifiers can be used to identify the affected allocations if there is any ambiguity.

11.11   IDs

11.11.1 Party-Identification

The following are the required and optional involved parties:

Allocation:

1. Order origination firm

2. Executing broker

3. Clearing firm [required for out-sourced clearing]

4. Step-out/in broker [optional]

5. Broker of Credit [optional]

6. Introducing broker [optional]

7. Correspondent clearing firm [optional]

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Settlement – sell-side:

1. Place of Settlement (PSET)

2. Executing Broker (SELL/ BUYR) - SWIFT DELIVER /RECEIVER}

3. Clearing Agent (REAG /DEAG)

4. Local Custodian (RECU /DECU)   [optional]

5. Intermediary 1,2 (REI1/DEI1), (REI2/DEI2) [optional]

Settlement – buy-side

1. Place of Settlement (PSET)

2. Global Custodian (SELL/ BUYR) - SWIFT RECEIVER /DELIVER}

3. Clearing Agent (REAG /DEAG)

4. Local Custodian (RECU /DECU) [optional]

5. Intermediary 1,2 (REI1/DEI1) , (REI2/DEI2) [optional]

11.11.2 ID Uniqueness

- OrderId(37)s are unique within the context of Executing Broker.

- ClOrdId(11)s are unique within the context of Order Origination Firm

- AllocId(70)s are unique within the context of Order Origination Firm. AllocId(70) must be unique across time (e.g. include date stamp in id)

- Account-ids() are unique within the context of the AccountIdSource

- Transaction-IDs (IndividualAllocID) are unique with the context of Order Origination Firm. IndividualAllocId(467) must be unique across time (e.g. include date stamp in id)

- ConfirmID(664)s are unique within the context of the Clearing Firm. ConfirmId(664) must be unique across time (e.g. include date stamp in id).

11.11.3 Large Trader-ID

When required the LargeTraderId is specified at the account-level.   This may be the LTI of the investment manager or the client, depending upon who is controlling the trade.

11.11.4 Account-id Comparison

Account identifier comparisons should be made ignoring any special characters or alphabetic character case in account identifiers (e.g. 123-ABC is equivalent to 123abC).

11.11.5 Transaction-ID

The purpose of the transaction-id is to link all account-level allocation (transaction) messages (e.g. Confirm, MTxxx ...).

The buy-side includes a transaction-id, unique with respect to the order-origination-firm. This is included in the IndividualAllocId(467) for each individual allocation. The buy-side also passes this transaction-id to the custodian banks with the transaction information.

> Note:
>
>> - if an allocation instruction is canceled and then the trades are reallocated in a new allocation instruction, new transaction-ids must be provided. This id could be a combination of a base transaction-id with a version component to reflect changes.
>>
>> - If an allocation instruction is replaced then the transaction-ids are use to identify new transactions and canceled (missing) transactions and unchanged (still there) transactions.

The sell-side returns this identifier in the Confirmation message as well as passing it along in the reference-id field of any SWIFT messages.

The SWIFT Customer Reference No. field is 16 characters so transaction identifiers should be 16 characters or less in order for it to be transmitted through to the SWIFT message.

11.12   Validations

11.12.1 Average-price Validation

When an average price is provided or computed it should utilize the precision and rounding/truncation rules agreed upon during configuration.

11.12.2 Commission and Fee Validation

Buy-side/sell-side agreement is not required on the validation tolerance. Strictness is up to the side doing the validation.

11.13   Allocation Session Scope

The FIX session used for Allocations has a scope of placements that are defined at the configuration time.

11.13.1 U.S. TradeSuite® Configuration

In the U.S./TradeSuite® configuration the FIX allocation session is configured to a single OASYS® broker-id.

11.13.2 Outsourced Post-trade Processing Configuration

If a given broker/dealer has out-sourced post-trade processing to a different broker/dealer, it is required that the allocation session (directed to the post-trade processor) be separate from the placement session. The AllocationInstruction message will show the placement broker/dealer as the executing broker in FIX 4.4. In FIX 4.2, the FIX Allocation session is restricted to a single execution broker defined at the configuration time.

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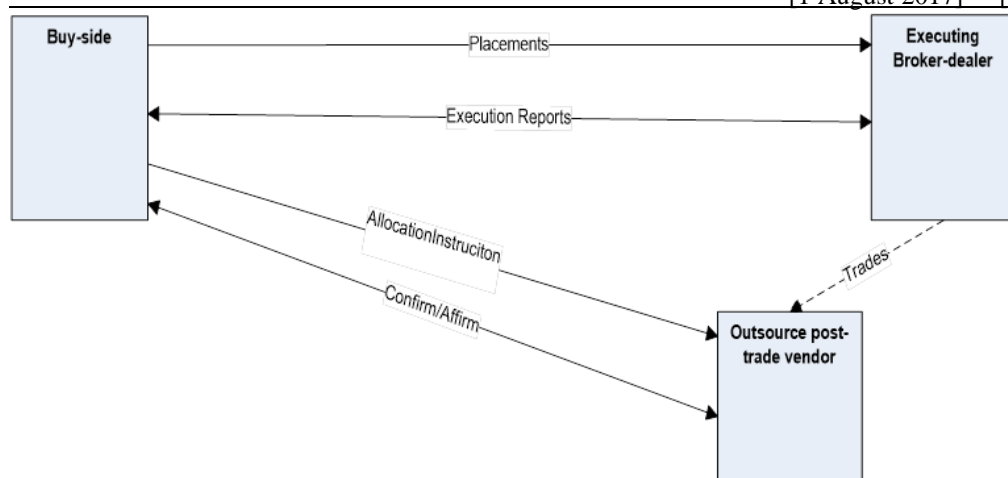
11.13.3 Allocation Restrictions for a given FIX Placement session

All placements on a given FIX placement session will be allocated via a single allocation session:

- Either FIX or not (e.g. OASYS®)
    - Note: a sell-side could decide to accept from both a FIX and non-FIX channel (e.g. FIX and OASYS®) specifying the behavior for differing processes (e.g. cancellation).
- If via FIX, using only one FIX allocation session.

11.14   Regulatory

11.14.1 10b-10 Compliance

It is believed that the FIX Confirmation messages meet the requirements of 10b-10 as well as similar MSRB and NASD requirements. Note that these are basically data requirements that have always been the responsibility of the broker/dealer to meet independent of form.

11.14.2 Rule 387 Compliance

This is an open issue, specifically the registered "clearing agency" or "qualified vendor" requirement of NYSE Rule 387. The question is whether or not conforming to the Guidelines for confirmation/affirmation will meet the goals of the requirement for an intermediary "qualified vendor" allowing direct communication with the DTC.

11.15   Settlement Instructions

The buy-side provides buy-side settlement instructions, either detailed or via a central database reference (e.g. OMGEO AlertID). The sell-side returns, in the Confirmation message, detailed sell-side settlement instructions and, ideally but optionally, the detailed buy-side settlement instructions.

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11.16   Multi-broker EMS

If a multi-broker EMS intermediary is involved the EMS must support either post-trade pass-through or a separate bi-lateral post-trade session:

- Pass-through: FIX ids must be mapped including ClOrdId, OrderID, AllocId and ConfirmID.

- Separate post-trade session: the EMS provides the executing broker with the ClOrdId and the OrderID known by the buy-side in the NewOrderSingle(D) message using the SecondaryClOrdId and SecondaryOrderId fields so that the sell-side will be able to map ids and interpret the bi-lateral buy-side AllocationInstruction appropriately.

Please refer to the Post-trade Common Framework section on Multi-broker EMS for further information.

11.17   Traceability

AllocationInstructions contain placement identifiers and account-level transaction identifiers (FIX 4.4) that can be used to trace, from the AllocationInstruction, the complete cycle of messages from FIX placements to final SWIFT transaction messages.

- Placement identifier

    o FIX OrderId(37)

    o Unique within the context of the executing broker

- Transaction identifier

    o Buy-side generated

    o Unique within the context of the order origination firm

    o Passed down stream by the sell-side

    o AllocationInstruction: IndividualAllocId (467)

    o Confirm: IndividualAllocId(467)

    o SWIFT: Customer Reference No. (<=16 characters)

**Equity Post-Trade
Traceability Data-model**
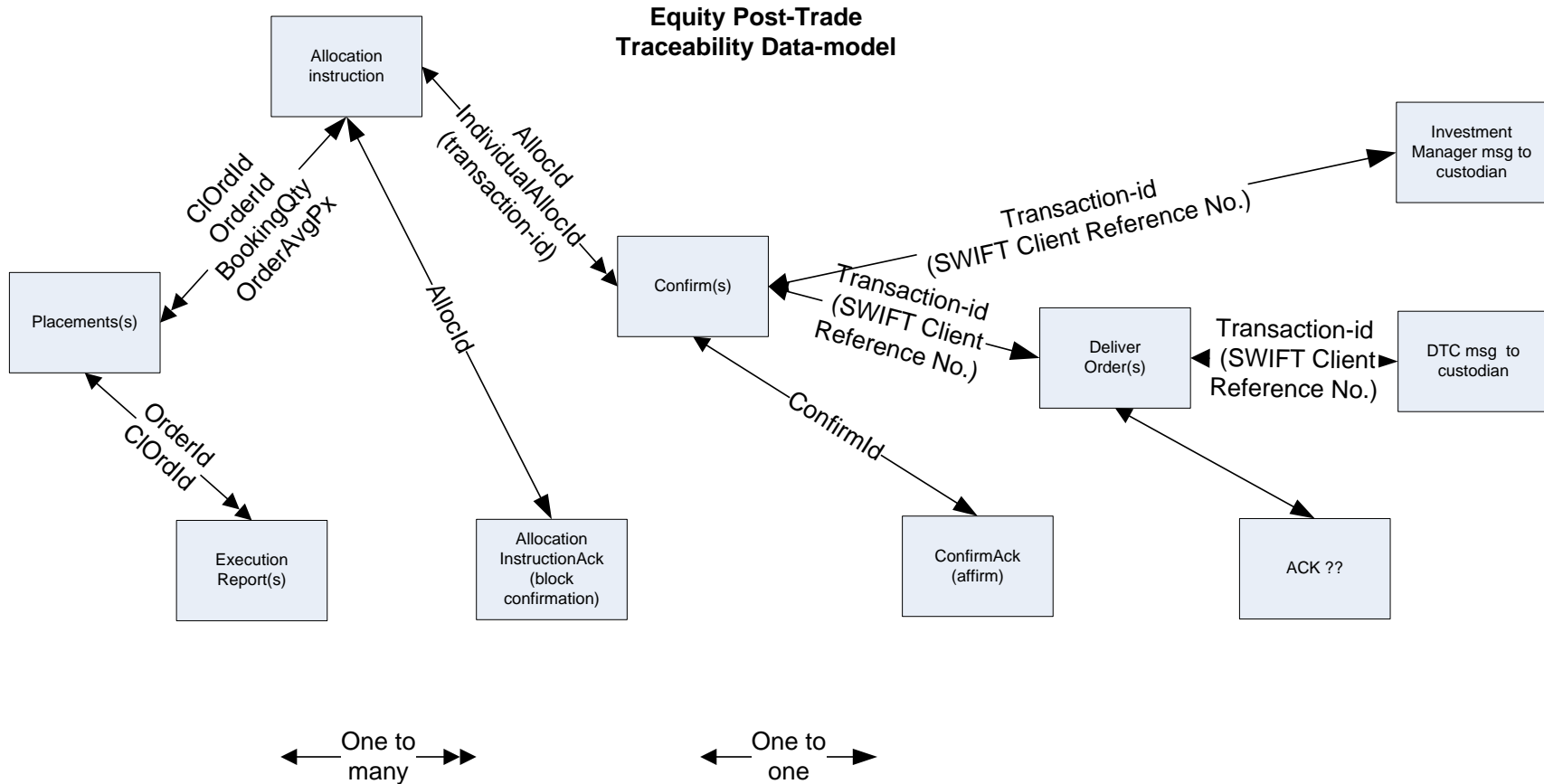
11.18 Specification of Miscellaneous Fees

There has been ambiguity in both the identification of market-specific fees as well as their representation in FIX. Generally these fees and taxes are either communicated as a total or as four generally industry-standard sub-categories:

> *the industry standard OMGEO/SWIFT aggregations of fees:*
>
> *=4 –Exchange (LOCL/FEES)*
>
> *=2 -Tax (TRAX/TTAX)*
>
> *=10 –Per Transaction (CHAR/BROK)*
>
> *=7 –Other (OTHR/MISC)*
>
> *Note: in the total-fee model, total fees are coded as 7*

Agreement between parties is generally at the total level with some tolerance.

The Guidelines provide an optional extended representation for uniquely identifying and representing market-specific fees and taxes in order to allow explicit communication and validation.

Both old and new methods of representation as well as migration from one to the other are supported.

The extended representation is the following:
- Individual codes for individual market-specific fees and taxes (MiscFeeSubType)
- Individual codes are specified in a repeating group under the MiscFeeType(139).

See Appendix for initial list of MiscFeeSubType codes.

The format and behavior of the market-specific fee-codes is the following:

- One code per market specific fee (e.g. one for the French transaction tax and a separate one for the Italian transaction tax).

- List of codes is maintained on FPL web site - https://www.fixtrading.org/packages/miscfeesubtype/

- Codes are semi-human readable, formed with a prefix of the ISO country code, followed by "-", followed by a short-name for the fee (e.g. "AR-VAT").

- Each market has an "-OTHER" code defined for it (e.g. AR-OTHER) that can be used for temporary extensibility until the official code is created. If a new country code is created the new "-OTHER" code can be created.

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- Codes must be unique within the MiscFee repeating group entry with the exception that "-OTHER" can be repeated if necessary.

  o The parent MiscFeeType(139) still represents the current categorization and can still be used by the recipient instead of the MiscFeeSubTypes.

Implementation notes:
- sell-side
  o It is expected that sell-sides will progress from either the total or the 4 category method to adding the individual fees codes as rapidly as possible.
- buy-side
  o May always use the total method regardless of whether or not the sell-side provides the detailed fees by summing the MiscFeeAmt(137).

11.19 Commissions

A requirement was identified to be able to specify multiple commission types. To that end the CommissionDataGrp has been added to the Confirmation(AK) message and the AllocCommissionDataGrp has been added to the AllocationInstruction(J).

The Commission(12) tag specifies the total commission and is required if the CommissionDataGrp and AllocCommissionDataGrp are specified in order to maintain upward compatibility and support the transition process for those who do not as yet support multiple commissions.

11.19.1   Mifid(ii) Commission Unbundling

MiFID (ii) has introduced the requirement to explicitly separate commissions into their component parts (e.g. execution, research) with focus on the specific identification of the research component of the commission. In addition MiFID(ii) has introduced the concept of a research-payment account (RPA). Previously commission payments were generally handled in the background by Commission Sharing Agreements (CSA). There may also be other commission payment types.

11.19.1.1   Requirements

- Specification of multiple commission values and their types.

- Identification of a new commission type – Research Payment

- Optional specification of research payment-type of the research payment. The types are the following:

  ▪ Research Payment Account(RPA),

  ▪ Commission Sharing Agreement (CSA), and

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- ▪ Other, a payment type other than RPA or CSA

- Upward compatibility relative to current use of the Commission (12) tag.

- Facilitate FIX usage by investment managers who trade in areas with and without MiFID(ii) requirements.

11.19.1.2   FIX Representation

Multiple commission types are represented by using the following components:
- CommissionDataGrp in Confirmation(AK) messages

- AllocCommissionDataGrp in Allocation (J) messages

The research commission type is identified using the following tags:
- ▪ CommissionAmountType(2641) and AllocCommisionAmoutType (2655) which have a valid value of "Research Payment"

- CommissionAmountSubType(2725) and AllocCommissionAmountSubType(2726) are optional fields that have three valid values that allow differentiation among research payment types:

  - ▪ Research Payment Account (RPA)

  - ▪ Commission Sharing Agreement (CSA)

  - ▪ Other (not RPA or CSA)

  Note: it is expected that the sell-side will generally know the payment-type associated with the account. If there is a conflict between the payment-type associated with the account and the payment-type specified in the FIX message this will need to be handled by exception or a previous client specific agreement.

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12 Implementation Guidelines

The following sections provide more implementation details, from various perspectives:

- **Functionality**: summarize the buy-side and sell-side expected functionality.

- **Status Values by Workflow**: the valid values of AllocStatus(87), ConfirmStatus(665), and AffirmStatus(940)

- **Buy-side Confirmation Implementation Status Transitions**: recommended implementation of transaction status transitions and actions from the buy-side perspective. Also helps sell-side understand expected behavior.

- **Confirmation Modification Workflow**: detailed steps in the bi-lateral confirmation modification workflow.

- **Validation/Modification Tables**: detailed description, for buy-side-calc, and sell-side-calc flows, as to what messages include what values, whose side is expected to use what values, and what the valid options are if something needs to be modified.

- **Functionality Checklist**: it is expected that functionally will be phased in by both sides. This checklist used to help in phased development planning and later in on-boarding to understand who supports what and what accommodations will need to be made.

- **Optimal Problem Avoidance and Traceability Checklist**: it is expected that problem avoidance measures (e.g. FIX-id based exact identification, use of initially computed values) will also be phased in by both sides. This checklist is used to help clarify development plans as well as later in on-boarding to set expectations regarding types of issues to be expected or that have been avoided.

- **Diagrams** with notes for:

    o AllocationInstruction [new]

    o AllocationInstruction [cancel]

    o AllocationInstruction [replace]

    o Confirmation Modification without re-AllocationInstruction

12.1 Buy-side OMS Functionality

12.1.1 AllocationInstruction

The buy-side OMS may utilize any or all of the following functions:

- New Allocation:

    o Select one or more, closed or open FIX placements and generate a FIX allocation instruction [new] message to the broker/dealer.

        ▪ If more than one FIX placement is included in the same allocation instruction, it is the responsibility of the buy-side to assure that these meet the same compliance constraints (e.g. agency/principal).

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- Note: the required amount of out-of band communication differs depending upon the level of functionally used by the buy-side and supported by the sell-side. More advanced functionally use by the buy-side may be supported by manual processing and out-of-band communication by the sell-side.

  o On receipt of an AllocationInstructionAck "reject" there will be a need to resolve the issue by contacting the broker/dealer if necessary, and resubmitting another AllocationInstruction [new] (modified if necessary). There is no specific linkage between a [cancel]ed AllocationInstruction and a subsequent replacement [new] AllocationInstruction, however they would both reference the same placements.

- Cancel Allocation:

  o Select and cancel an existing allocation, which will generate a FIX AllocationInstruction [cancel] message.

  o Stop or unwind any down-stream processing that is in progress (e.g. a custodian notification) and mark the transactions as having been canceled so that any sell-side Confirmation messages will be rejected.

  o Confirmations received are marked "pending cancel".

  o Notes:

    - The buy-side is NOT required to wait for a "received" or an "accepted" AllocationInstructionAck to the AllocationInstruction [new] before sending the [cancel] for that AllocationInstruction.

    - The buy-side is NOT required to wait for a "received" or "accepted" ACK to the AllocationInstruction [cancel] before proceeding with the cancellation process and re-allocating with another AllocationInstruction [new].

    - The buy-side must monitor the sell-side response to AllocationInstruction [cancel]s. If the sell-side rejects a well-formed allocation instruction [cancel] it indicates that the sell-side cannot process the [cancel] automatically and requires bi-lateral manual intervention to complete the [cancel].

- Replace Allocation:

  o Select and replace an existing allocation,

  o Edit the transactions as required, which will generate a FIX AllocationInstruction [replace] message with:

    - New transactions: New transaction-ids

    - Un changed transactions: included with same transaction-id

    - Removed transactions: not included

- o Stop or unwind any down-stream processing for removed transactions that is in progress (e.g. a custodian notification) and mark the transactions as having been canceled so that any sell-side Confirmation messages will be rejected. Initiate communication of any new transactions.

- o Confirmations received are marked "pending cancel", new transactions are marked "pending new".

- o Notes:

  - ▪ The buy-side is NOT required to wait for a "received" or an "accepted" AllocationInstructionAck to the AllocationInstruction [new] or [replace] before sending the [replace] for that AllocationInstruction.

  - ▪ The buy-side is NOT required to wait for a "received" or "accepted" ACK to the AllocationInstruction [replace] before proceeding with the cancellation and reallocation.

  - ▪ The buy-side must monitor the sell-side response to AllocationInstruction [replace]s. If the sell-side rejects a well-formed allocation instruction [replace] it indicates that the sell-side cannot process the [replace] automatically and requires bi-lateral manual intervention to complete the [replace].

- • Post allocation fills

  - o Fills received to an allocated closed placement (DFD, canceled) are, depending on buy-side functionality, either:

    - ▪ DKed

    - ▪ Placed in an exception queue for special handling (e.g. cancel allocation, process bust/correction, reallocate)

    - ▪ Accepted for subsequent allocation, if allocations of part filled placements are being used by the buy-side.

- • Post allocation bust/correction

  - o Busts and corrections may be handled differently by different buy-sides

    - ▪ DK – sell-side should contact the buy-side to resolve.

    - ▪ Place in an exception queue for special handling (manual DK or cancel allocation, process bust/correction, reallocate)

- • Exception handling functions:

  - o Override: if the sell-side is unable to properly respond via FIX to the AllocationInstruction [new] the buy-side should have the capability to override the lack of an "accepted" FIX AllocationInstructionAck message from the broker and initiate the confirm/affirm process. This deals with the case where the broker/dealer has processed (possibly manually) the AllocationInstruction, but is unable to send back an AllocationInstructionAck "accepted" via FIX.

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- o Resend: if the sell-side has resolved a problem processing a previously transmitted AllocationInstruction [new] and can now process it properly, it is desirable that the buy-side be able to resend the AllocationInstruction. This is accomplished by a [cancel] of the AllocationInstruction (even though there may have been no response from the sell-side) and then sending of another AllocationInstruction [new] (with a new AllocId). This is optional functionality and deals with the case where the broker/dealer has resolved some configuration problem and is now able to process the AllocationInstruction.

12.1.2 Confirmation/Affirmation

Once the AllocationInstruction is "accept"ed by the sell-side the confirm/affirm process begins.

12.1.2.1 Confirmation/Affirmation – buy-side-calc

- Once the sell-side "accepts" a buy-side-calc AllocationInstruction the buy-side will typically transmit the transaction to the custodian, optimistically assuming that there will be no issues during the Confirmation/Affirmation process. (Sell-side-calc process would wait until affirmation to notify the custodian since the final net monies will not be available until then.)

12.1.2.2 Confirmation/Affirmation – U.S. – TradeSuite®

In this configuration the buy-side can either:

- Pass the account-level allocations to TradeMatch® for automated matching and the affirmation of sell-side confirmations (optionally utilizing OASYS® pass-through) or

- Wait for the sell-side to enter a confirmation in TradeSuite® and then affirm the transaction.

12.1.2.3 Confirmation/Affirmation - FIX

- Wait/Receive Confirmation messages (one per account-level allocation) from the sell-side
    - o Identify the transaction by IndividualAllocID
    - o Send ConfirmationAck AffirmStatus(940) "received",
    - o Validate
        - Symbol, side, quantity, average price
        - Sell-side OrderCapacity(528)
        - Detailed settlement instructions (recommended)
            - Buy-side – against what was sent
            - Sell-side – accept with validation optional
    - o Validate (for buy-side-calc "typically U.S.)
        - Commission and fees

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- o Validate and update buy-side records with sell-side provided data (for sell-side-calc", typically non-U.S.)

  - Commission and fees

- o Send ConfirmationAck:

  - AffirmStatus(940) "affirmed"

  - AffirmStatus(940) "rejected "

    - if it is a rejection, the buy-side waits to receive a corrected [new] Confirmation message.

- Notify Custodian Bank

  - o Transaction-id, for reference.

    - If SWIFT message use Customer Reference No. field.

  - o Symbol, side, quantity, average-price, account identifier.

12.1.3 Confirmation Cancellation – "pending cancel"

- Mark the transaction as "canceled"

- no further processing since actual cancellation process already triggered by AllocationInstruction [cancel]

12.1.4 Confirmation Modification

The Confirmation Modification protocol is a Confirmation [cancel] followed by a Confirmation [new]. Please refer to the following sections for more details.

12.2 Sell-side Functionality

12.2.1 AllocationInstruction Processing

AllocationInstruction processing includes the processing of an AllocationInstruction [new], an AllocationInstruction [cancel] and an AllocationInstruction [replace].

It is expected that the sell-side will provide the following functions:

> Note: if the sell-side has a phased implementation of FIX processing it is expected that the full FIX functionality will be accepted (i.e. [new] and [cancel]) and responded to appropriately, even if processing is manual and/or does not fully utilize FIX-ids and/or requires traditional out-of-band communication.

- FIX AllocationInstruction [new] received:

1. Respond with AllocationInstructionAck "received".

2. Identify the Allocation-block (see previous Allocation-block identification section above)

3. Validate the allocation-block vs. placement-blocks

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- Block level average price, AvgPx(6), provided on the AllocationInstruction must equal the computed average price of the specified placements (within the tolerance agreed upon at on-boarding).

- OrderBookingQty (800) and OrderAvgPx (799) identify partial placement allocations (FIX4.4). If specified, OrderAvgPx (799), specifies the computed average price to be used for the allocated transactions, OrderBookingQty (800), from the placement. The OrderAvgPx(799) of subsequent partial placement allocations must equal the computed average price of the unallocated portion of the placement (within an agreed upon tolerance).

- Reject if average prices are out of tolerance or total quantities do not match.

4. Identify accounts

- If an account is unknown, contact the buy-side to see if it is a new account that can be resolved. If it cannot be resolved reject the allocation instruction.

5. Validate account-level data

- The total of the AllocGrp allocations, AllocQty(80), must total the allocation-block Quantity(53).

- Commissions and fees must equal the expected value within sell-side tolerance. Reject if not.

- If account-level average pricing is specified, AllocAvgPx (153), it should be validated that the weighted average of the specified individual average prices matches the overall average price, AvgPx(6). Reject if not. If AllocAvgPx (153) is specified for one of the accounts, it must be specified for all.

6. AllocationInstruction acceptance

- Allocation-block identified.

- Quantities and average prices match within agreed upon precision.

- Accounts are recognized

- Commissions and fees are within tolerances.

- Respond to the buy-side with an AllocationInstructionAck "accepted".

7. Allocation reject – general

- Duplicate AllocId is rejected (unless the message is accompanied with the PossResend (97) field set to Y).

- See other specific rejections above.

- Respond to buy-side with AllocationInstructionAck "BlockLevelReject".

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- Note that an "AccountLevelReject" can be used to indicate an account-level problem; however the rejection still applies to the entire AllocationInstruction.

  ▪ Return to waiting for AllocationInstruction(s).

- FIX AllocationInstruction [cancel] received:

  1. Respond with AllocationInstructionAck AllocStatus(87) "received".

  2. "Free-up" the trades for matching with subsequent AllocationInstruction [new]s even though the cancellation process may not yet have been completed for allocations that have already been forwarded down-stream.

  3. Forward the transaction "cancellation" down-stream as necessary; depending upon how far the post-trade process has progressed

      a. (In the U.S.-TradeSuite® configuration, use the same procedures as would have been used if the implicit-cancel had been communicated via OASYS®).

  4. Once the sell-side determines that all the trade confirmations have been canceled, respond to the buy-side with "accepted" AllocationInstructionAck to the [cancel]. Note that the buy-side does not have to wait for this AllocationInstructionAck before proceeding and may simply ignore it.

  5. The buy-side is expected to monitor for a "reject" of an AllocationInstruction [cancel] so in the event that a [cancel] cannot be processed the broker/dealer should send a "reject" but should also contact the buy-side to resolve the issue.

12.2.2 Confirmation Process

Once the AllocationInstruction has been "received" and "accepted" the Confirmation messages are generated. There are three cases:

1. U.S.-TradeSuite®

2. Buy-side "calculated" (U.S. market)

3. Sell-side "calculated" (non-U.S. market)

12.2.2.1 Confirmation– General

- AvgPx(6) price is the block-level average value unless individual average prices were specified in AllocAvgPx(153).

- Transmit the computed values provided in the AllocationInstruction (e.g. AllocNetMoney(154)) rather than the values computed for the within-tolerance comparison purposes. This will assure that the transactions "foot" at the point of the final client reconciliation.

- Specify OrderCapacity (528) relative to the specific placements allocated.

- Transmit the transaction-Id from the IndividualAllocId (467).

- Replace any buy-side settlement database references with the detailed settlement instructions.

- Add sell-side settlement instructions.

12.2.2.2 Confirmation– U.S. - TradeSuite®

- Forward account-level allocations to TradeSuite®, the same as if the allocation instruction had been received via OASYS®.

- No change to the confirmation/affirmation process.

12.2.2.3 Confirmation– FIX - buy-side "calculated" (U.S. market)

- Generate a FIX Confirmation message for each AllocGrp allocation

    o Include commissions/fees provided by the buy-side.

12.2.2.4 Confirmation– FIX - sell-side "calculated" (non-U.S. market)

- Generate a FIX Confirmation message for each AllocGrp allocation

    o Add/update commission and fees

12.2.2.5 Confirmation– Reject

- Resolve issue

- Generate an updated Confirmation [new] message.

12.2.3 Affirmation Process

12.2.3.1 ConfirmationAck AffirmStatus(940) "affirmed", MatchStatus(573) "matched" received

Once the ConfirmationAck "affirmed" is received the CCP must be notified:

- U.S.-TradeSuite®: TradeSuite® notifies the DTC

- U.S.-FIX: the sell-side notifies the DTC (Delivery-Order)

- Non-U.S.-FIX; the sell-side notifies the local CCP according to local rules and regulations.

12.2.3.2 Confirmation ACK "affirmed" – not received

If the ConfirmationAck is not received:

- The sell-side contacts the buy-side and attempts to resolve the issue and get an "affirmed" or "reject" ConfirmationAck so processing can proceed.

- Issue: if the buy-side cannot be reached within the specified period of the end of the trading session for the security, the sell-side may notify the CCP.

12.2.4 Confirmation Cancellation

12.2.4.1 U.S.-TradeSuite®

Current procedures are used. The exact process depends upon how far along the Confirmation to be canceled has progressed (e.g. cancel, attempt-to-cancel).

12.2.4.2 FIX

If a Confirmation needs to be canceled:

- Send a Confirmation [cancel]

- Monitor for a ConfirmationAck [cancel] "received" back, but the sell-side is not required to wait before sending another Confirmation [new].

- If the affirmed transaction was transmitted to the CCP, the CCP must be notified of the cancellation as well.

12.3 AllocationInstruction, Confirmation Workflow

12.3.1 AllocationInstruction [new]

The following diagram shows the AllocationInstruction [new] workflow.

The AllocationInstruction [new] workflow was recently updated to show more clearly how the detailed settlement instructions, included in the Confirmation messages are passed-thru to the custodians. Custodians use the sell-side instructions and validate the buy-side instructions to be sure that they are as expected.

Note that the ConfirmationAck "affirmed" message affirms ONLY the financial trade details (price, symbol, side...) and not the settlement instructions. It is the responsibility of the sell-side that the sell-side settlement instructions are accurate as provided. The detailed buy-side custodian settlement instructions requirement has been down-graded to "highly-recommended" because not all sell-sides currently have them available at the point at which the Confirmation messages are generated. It is "highly-recommended" that the buy-side and/or the buy-side custodian validate any client settlement instructions that are provided and contact the sell-side to correct them (reject the Confirmation message, phone/email). The Confirmation [replace] workflow is designed to allow electronic updates to settlement instructions.

Given that this is going to be a phased implementation - over time the buy-side may fully utilize and validate these but initially the buy-side may be totally ignoring them or just utilize them for reference for issues. Detailed settlement instructions are included in the Confirmation to facilitate improving automated processing over time as well as providing a complete record of the transaction.

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Buy-side

Front Office

1 Initiate Order
- symbol, side, quantity
- ClOrdId
- compliance (e.g. capacity)

Middle Office

3 Initiate Allocation Inst
Block
- symbol, side, quantity
Placements
- ClOrdId, OrderId, quantity
Accounts
- quantity
- account
- averagePx (optional)
- commissions and fees
{ **US** – buy-side-calc
NON-US – buy-side-prelim}
- settlement instructions (buy-side)
- transaction-id

9 Validate Confirmation
- symbol, side, quantity, avgPx
- capacity
- buy-side settlement instructions
- transaction-id

Receive and Validate
- final commissions and fees{
if **NON-US** buy-side-prelim }

10 Affirm or reject

11 Receive (detailed)
- sell-side settlement instructions
- buy-side settlement instructions

12 Notifications
- transaction-id
- broker settlement instruction
- buy-side settlement instructions

Back Office

13 Reconcile
- netMoney
- capacity

Receive & Validate
- client settlement instructions
- broker settlement instructions

Custodian

14 Settlement

Client

Sell-side

Front Office

2 Generate Executions
- quantity, price
- OrderId

Middle Office

4 Identify/match allocation-allocation block

5 Validate
- accounts
- commissions and fees are correct for the allocated placements
{if **US** buy-side-calc then accept/reject fees}

6 Receive
- buy-side settlement instructions

7 Accept or reject

8 Initiate Confirm
- settlement instructions (detailed for both buy-side and sell-side)
- pass on Transaction-id
- specify "capacity"
{if **NON-US** buy-side-prelim then add final commission and fees}
- PDF for immutability

11 Record Confirm/Affirm

12 Initiate Delivery
- pass transaction-id

Back Office

14 Settlement

Allocation Instruction [new]

Placements

Executions

Allocation Instruction [new]

AllocationInstructionAck [new] "received"

AllocationInstructionAck [new] "Pending"
(optional block-matched intermediate status)

AllocationInstructionAck [new] "Accept"/"Reject"

Confirmation [new]
(one per transaction)

ConfirmationACK [new] "affirmed" / "reject"

Confirmation status
- pending Confirm
- Affirm pending
- Affirmed
- Rejected

Settlement
Instruction issues

CSD

US only - Rule 387 compliance issue to be resolved

other   FIX

12.3.2 AI Cancellation Workflow

The following diagram shows the AllocationInstruction [cancel] workflow.

It was agreed to reframe the Confirmation [cancel] resulting from an AllocationInstruction [cancel] or [replace] as a business notification and a commitment to the cancellation process, rather than a statement of progress on the cancellation process or a trigger for action on the part of the buy-side.

Fly-by Note: since the AllocationInstruction [cancel] can arrive at any point, including post-rejection of the referenced AllocationInstruction, the sell-side must retain knowledge of rejected AllocationInstructions to always be able to link AllocationInstruction [cancel]s. Once the buy-side has sent a [cancel] any messages related to the [cancel]ed AllocationInstruction will be ignored. Once the sell-side receives a [cancel] they do not need to respond any further to the [cancel]ed AllocationInstruction.

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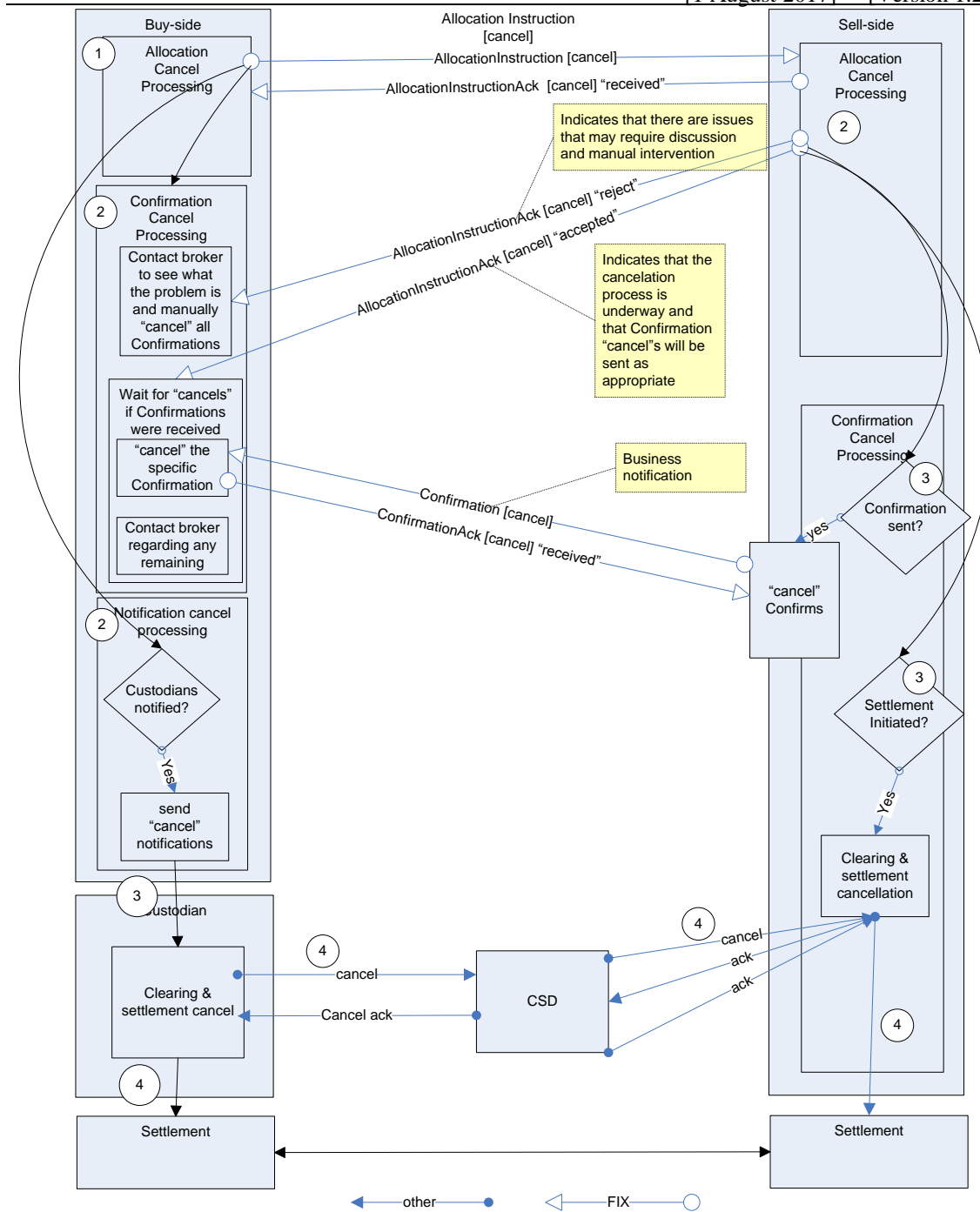
Notes:

- AllocationInstruction [cancel] flag (open issue)

There has been a request for a tag on the AllocationInstruction [cancel] message indicating that associated Confirms have been "affirmed". This will be reviewed during pilot to determine if it is necessary since it is not clear if the buy-side always knows and how to represent.

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- AllocationInstruction [replace] indicator (open issue)

There has been a request for a tag on the AllocationInstruction [new] message following an AllocationInstruction [cancel] indicating that this AllocationInstruction references one or more placements that were referenced in one or more earlier AllocationInstructions that were canceled. To be reviewed during prototyping (difficult for many current buy-side implementations).

12.3.3 AI Replace Workflow

The following diagram shows the AllocationInstruction [replace] workflow.

It was agreed to add an AllocationInstruction [replace] workflow, so that entire AllocationInstructions would not have to be unraveled if only some of the transactions changed. The replace workflow has the following characteristics:

- **Allocation-block**: none of the Allocation-block characteristics may be changed, only the allocations/transactions (i.e. AllocGrp repeating group). Changes to the allocation-block (e.g. busted execution) require use of the AllocationInstruction [cancel] and follow-up AllocationInstruction [new] workflow.
- **AllocGrp**: Any changes to the AllocGrp are allowed (e.g. new accounts, redistribution, new AllocAvgPx [153], and removal of accounts) as long as the result still totals to the allocation-block characteristics.
- **Unchanged transaction identification**: if the IndividualAllocID(467) value (i.e. transaction-id) of an AllocGrp entry (i.e. transaction) in the replaced AllocationInstruction is the same as one in the AllocationInstruction being replaced then there has been no change to this transaction and any confirmation/affirmation process that was initiated for this transaction does not have to be unwound.

	------ In AI being replaced? ------	
In AI [replace]?	**yes**	**no**
yes	no change	new
no	cancel	n/a

Fly-by Note: since the AllocationInstruction [replace] can arrive at any point, including post-rejection of the referenced AllocationInstruction, the sell-side must retain knowledge of rejected AllocationInstructions to always be able to link AllocationInstruction [replace]s. Once the buy-side has sent a [replace] any messages related to the [replace]ed AllocationInstruction will be ignored. Once the sell-side receives a [replace] they do not need to respond any further to the [replace]ed AllocationInstruction.

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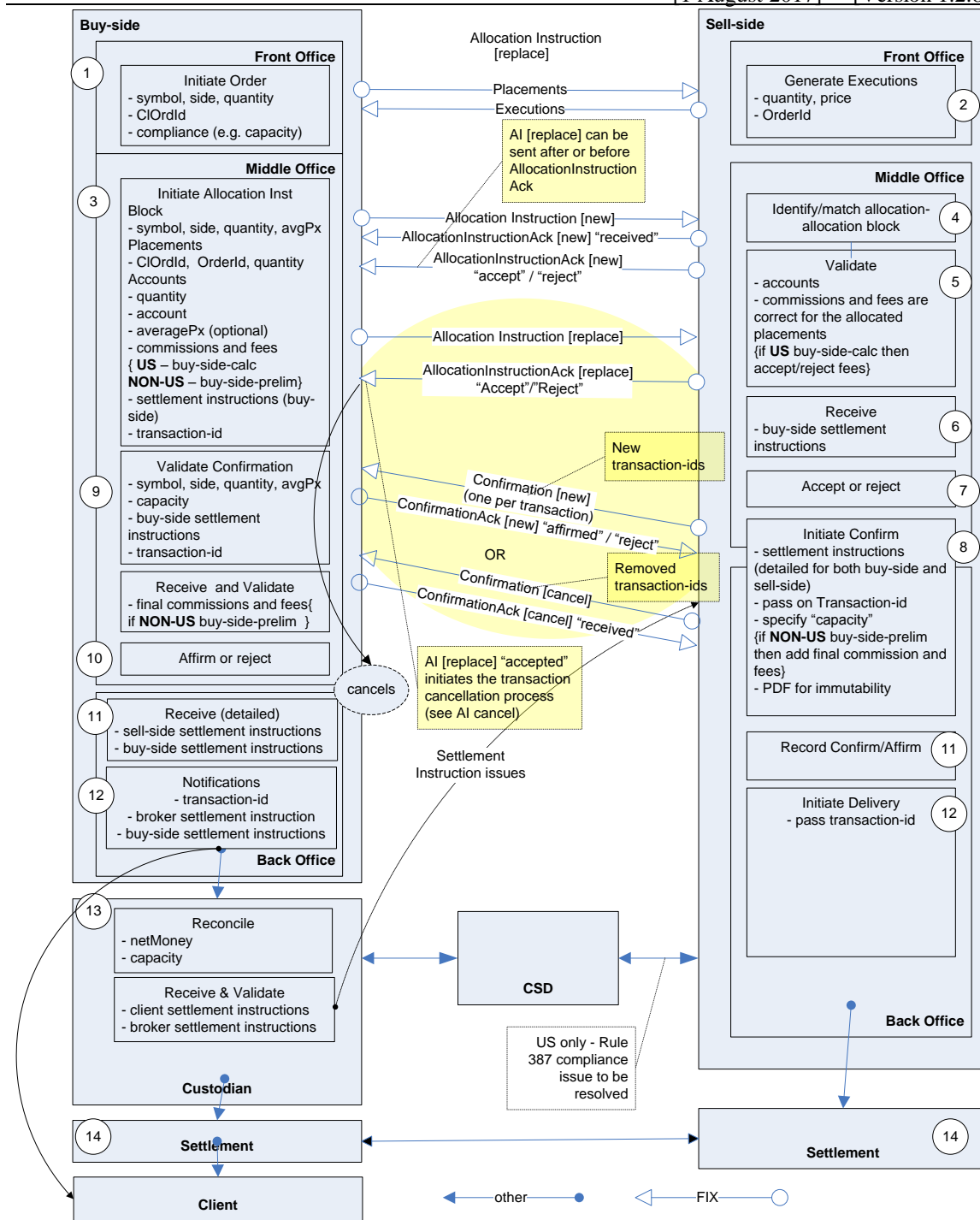
12.4 Optimal Problem Avoidance

The following is a summary of recommended principals to catch issues as early as possible in the workflow.

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Buy-side-calc workflow

- Sell side validates but should use buy-side commissions, fees, and calculated fields (e.g. NetMoney) so that reconciliation is exact

- Buy-side values should be specified as amounts rather than per-share/percent (e.g. commission) so that monies between buy-side/sell-side will reconcile exactly.

- Note: upon AllocationInstruction "accept" from the sell-side, the buy-side can pre-affirm the transaction and transmit the transaction to custodian with a very high degree of certainty that the confirmation/affirmation process will complete without any modification to the trade-data.

Sell-side calc workflow

- Buy-side should provide as many fee fields as it and the sell-side should validate these values and reject the AllocationInstruction if there is disagreement.

    o Note that a missing value is not considered a validation error rather that the buy-side does not have anything to say about it.

    o If the buy-side expects a value to be 0 they can send 0 for the value.

- Buy-side values in the AllocationInstruction can be amounts or per-share/percent.

- Values in the Confirmation message should be amounts.

- Buy-side should utilize the values from the Confirmation message to transmit to the custodian as well as record fees, taxes, commissions so that reconciliations will be exact

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12.4.1 Optimal Problem Avoidance and Traceability Checklist

	Buy-side	Sell-side
Calculations	☐ Agree upon calculation precision and truncate/round	☐ Agree upon calculation precision and truncate/round
Allocation-block Identification	☐	☐ Use placement FIX-IDs from AI for exact match

AllocationInstruction "accept" criteria	☐	☐ Validate all block characteristics provided
		
		   o Symbol
		   o Side
		   o Quantity
		   o Average price
		   o Settlement date
		   o Trade date
		   o NetMoney
		   o GrossTradeAmt
		
		☐ Validate all transaction characteristics provided
		
		   o Account identifier
		   o Sum of quantities
		   o AllocNetMoney
		   o AllocGrossTradeAmt
		   o AllocAvgPx

Buy-side-calc	☐ Use "amount" type values in AI (Commission, fees)	☐ Validate buy-side values ☐ Use buy-side values from AI used instead of locally computed values

	Buy-side	Sell-side
Sell-side-calc	☐ Provide expected values for commission, fees, taxes included in AI ☐ Use values from Confirmation	☐ Validate buy-side expected values ☐ Use "amount" type values in Confirmation
Detailed Broker settlement instructions	☐ Extract from Confirmation ☐ Transmit to custodian	☐ Provide in Confirmation
Detailed Client settlement instructions	☐ Extract from Confirmation ☐ Validate ☐ Transmit to custodian ☐ Custodian validation	☐ Provide in Confirmation
Transaction-id (IndividualAllocId)	☐ Provide in AI ☐ Transmit to Custodian	☐ Include in Confirmation ☐ Transmit to CCP/settlement bank
Confirmation "capacity"		☐ Traceable back to placement

12.5 Functionality/Configuration On-boarding Checklist

	Buy-side	Sell-side
Allocation Instruction		

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	Buy-side	Sell-side
AllocationInstruction [new]	☐ AllocAvgPx ☐ mixed settlement date placements ☐ block-id method ☐ [MANUAL]	☐ AllocAvgPx ☐ mixed settlement date placements ☐ block-id method ☐ [MANUAL]
AI [cancel]	☐ Use ☐ OASYS-style "conflicting-new" ☐ Post-trade-date cancels	☐ Support ☐ OASYS-style "conflicting-new" support ☐ Post-trade-date support
AI [replace]	☐ Use (should be optional if sell-side does not support) ☐ Post-trade-date support	☐ Support, including transaction-id optimization ☐ Post-trade-date support
Calculations	☐ Buy-side-calc precision ☐ truncate/round	☐
FIX 4.0, 4.2	☐ Order origination firm id ☐ Executing firm id ☐ Clearing firm id ☐ IndividualAllocID included	☐ Order origination firm id ☐ Executing firm id ☐ Clearing firm id ☐ IndividualAllocID default
Separate Allocation Session	☐ Required	☐ Required
AI Clearing Options		
Broker of credit	☐ Require	☐ Basic support
Introducing broker	☐ Require	☐ Basic support
Commission recapture	☐ Require	☐ Basic support
SoftDollar	☐ Require	☐ Basic support
Step-out	☐ step out communication	☐ step out communication

	Buy-side	Sell-side
Step-in notification	☐ step-in allocation instruction generation	☐ step-in allocation instruction processing
Outsourced clearing	☐	☐ Required
Post allocation executions		
Closed (DFD/CXL) order fills	☐ Accept for subsequent allocation	☐ Send ☐ Call
Busts and corrections	☐ DK ☐ Handle as exception	☐ Send ☐ Call
Confirmations - Tradesuite		
TradeSuite Confirmations	☐	☐ OASYS brokerId configuration
Confirmations - FIX		
Calculations	☐	☐ Sell-side-calc precision ☐ truncate/round
Settlement Instructions	☐ Use broker SI ☐ Validate client SI	☐ Provide detailed broker SI ☐ Provide detailed client SI
Confirmation [cancel] (AI solicited)	☐ Expected ☐ Ignored	☐ Sent ☐ Not sent
FIX 4.0, 4.2 AI	☐ Use sell-side generated IndividualAllocID	☐ IndividualAllocID generated if not provided by buy-side
Confirmation modification [cancel],[new]	☐ Support	☐ Support
Separate Confirmation Session	☐ Required	☐ Required
Multi-broker EMS Allocation/Confirmation		

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	Buy-side	Sell-side
Passthru	☐	☐ Mapping of ClOrdId, OrderID, AllocId, ConfirmID
Separate post-trade session	☐	☐ SecondaryClOrdId(526) = ClOrdId provided by buy-side to executing broker ☐ SecondaryOrderId(198) = OrderID known to buy-side to executing broker

12.6 Summary of Field Validation and Modification Alternatives

(Note: split into two tables: buy-side-calc, and sell-side-calc for greater clarity)

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12.6.1 Buy-side-calc Validation/Modification

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Buy-side-calc - Summary of Field Validation and Modification Alternatives

	"new" workflow validations				Post-affirmation Modification		
	AllocationInstruction - Confirmation				alt-1 buy-side sends	alt-2 buy-side sends	alt-3 sell-side sends Confirm "new", Confirm "cancel"
	buy-side sends	sell-side receives	sell-side sends	buy-side receives			
	AI "new"	AI "new" buy-side-calc	Conf "new"	Conf "new" buy side -calc	AI "cancel", AI "new"	AI "replace"	
Block level							(*g)
Instrument							
symbol(55)	req	V	req	V	x		
security-id(48)	req	V	req	V	x		
securityIdSource(22)	req	V	req	V	x		
side(54)	req	V	req	V	x		
Allocation-block							
quantity(53)	req	V	req	V	x		
averagePx(6)	req	VTU	(----see allocAvgPx----)		x		
netMoney(118)	req	VT	(-see allocNetMoney-)		x		
grossTradeAmt(381)	rcmd	VT	(allocGrossTradeAmt)		x		
placements	req	V	n/a	n/a	x		
trade							
tradeDate(75)	req	V	req	V	x		
settDate(64)	opt(*f)	V	req	V	x		
parties							
orderOriginationFirm	req	V	req	V	x		
executionBroker	req	V	req	V	x		
clearingBroker	opt(*e)	V	req	V	x		
largeTraderID	opt	V	req	V	x		
Transaction-level (AllocGrp entry)						(*c)	(*d)
Allocation characteristics							
accountId(79)	req	V	req	V	x	x	
allocQuantity(80)	req	V	req	V	x	x	
allocAvgPx(153)	opt	VTU	req(6)	V	x	x	
allocGrossTradeAmt(tbd)	rcmd	VTU	req(381)	V	x	x	
client direction	opt	U	n/a	n/a	x	x	
largeTraderID	opt	VU	req	V	x	x	
CFT							
commission	req	VTU	req	V(T*a)	x	x	
fees	req	VTU	req	V(T*a)	x	x	
taxes	req	VTU	req	V(T*a)	x	x	
allocNetMoney(154)	req	VTU	req(118)	V	x	x	
Settlement instructions							
buyside - detailed	opt	U	rcmd	V(rcmd)	x	x	x
sellside - detailed	n/a	n/a	req	U(rcmd)	n/a	n/a	x
Capacity							
sell-side capacity	n/a	n/a	req	V	n/a	n/a	

legend

req - included	x - may be changed from the orignial
opt - optional	T - validate within tolerance
V - validated (mismatch rejected)	U - use validated values recommended
	rcmd - recommended highly

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12.6.2 Sell-side-calc Validation/Modification

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Sell-side-calc - Summary of Field Validation and Modification Alternatives -

	"new" workflow validations				Post-affirmation Modification		
	AllocationInstruction - Confirmation				alt-1	alt-2	alt-3
	buy-side sends	sell-side receives	sell-side sends	buy-side receives	buy-side sends	buy-side sends	sell-side sends
	AI "new"	AI "new" sell-side - calc	Conf "new"	Conf "new" sell-side -calc	AI "cancel", AI "new"	AI "replace"	Confirm "new", Confirm "cancel"
Block level							(*g)
Instrument							
symbol(55)	req	V	req	V	x		
security-id(48)	req	V	req	V	x		
securityIdSource(22)	req	V	req	V	x		
side(54)	req	V	req	V	x		
Allocation-block							
quantity(53)	req	V	req	V	x		
averagePx(6)	req	VT	(----see allocAvgPx----)		x		
netMoney(118)	rcmd	VT	(-see allocNetMoney-)		x		
grossTradeAmt(381)	rcmd	VT	(allocGrossTradeAmt)		x		
placements	req	V	n/a	n/a	x		
trade							
tradeDate(75)	req	V	req	V	x		
settDate(64)	opt(*f)	V	req	V	x		
parties							
orderOriginationFirm	req	V	req	V	x		
executionBroker	req	V	req	V	x		
clearingBroker	opt(*e)	V	req	V	x		
largeTraderID	opt	V	req	V	x		
Transaction-level (AllocGrp entry)						(*c)	(*d)
Allocation characteristics							
accountId(79)	req	V	req	V	x	x	
allocQuantity(80)	req	V	req	V	x	x	
allocAvgPx(153)	opt	VT	req(6)	VTU	x	x	
allocGrossTradeAmt(tbd)	rcmd	VT	req(381)	VTU	x	x	
client direction	opt	U	n/a	n/a	x	x	
largeTraderID	opt	VU	req	V	x	x	
CFT							
commission	rcmd	VT	req	VTU			x
fees	rcmd	VT	req	VTU			x
taxes	rcmd	VT	req	VTU			x
allocNetMoney(154)	rcmd	VT	req(118)	VTU			x
Settlement instructions							
buyside - detailed	opt	U	rcmd	V(rcmd)	x	x	x
sellside - detailed	n/a	n/a	req	U(rcmd)	n/a	n/a	x
Capacity							
sell-side capacity	n/a	n/a	req	V	n/a	n/a	

legend x - may be changed from the orignial
req - included T - validate within tolerance
opt - optional U - use validated values recommended
V - validated (mismatch rejected) rcmd - recommended highly

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Notes

*a. Value received should match exactly but buy-sides may choose to allow and ignore variation within tolerance for sell-sides that are not yet using buy-side-calc values

*b

*c. Transactions/allocation changes in the AllocationInstruction [replace] are identified by changes in transaction-ids (IndividualAllocID(467)). This allows the sell-side to not have to cancel transactions that are still good. The sell-side algorithm to identify which transactions/allocations are deleted/added/unchanged requires comparing the list of transaction-ids in the AllocationInstruction [replace] against the list transaction-ids in the AllocationInstruction being replaced:

	------ **In AI being replaced?** ------	
In AI [replace]?	**yes**	**no**
yes	no change	new
no	cancel	n/a

*d. Transaction-id(IndividualAllocID(467)) is not changed by Confirmation [cancel], [new] modification workflow.

*e. If not specified the clearing firm defaults to the execution broker

*f. If not specified SettlDate(64) defaults to the standard

*g. Confirmation modification workflow is discussed in next section.

12.7 Confirmation Modification Workflow

A requirement has been identified for a workflow for modification of Confirmations after they are "affirmed" (the modification workflow before affirmation is for the buy-side to "reject" the Confirmation message). Only the following may be modified post-affirmation:

1. commissions, taxes and fees if "sell-side-calc"

2. sell-side settlement instructions

3. buy-side settlement instruction details

4. capacity

The modification workflow will use a Confirmation [cancel] message followed by a Confirmation [new] message with the following protocol.

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Confirmation [cancel], Confirmation [new] workflow

1. Sell-side sends Confirmation [cancel].
 	
    a. Generally used after ConfirmationAck "affirmed" but may be sent prior to affirmation.
 	
    b. Explanation in TEXT(58) is required
 	
    c. The transaction-id (IndividualAllocId (467)) is not changed.
 	
    d. Sell-side does not have to wait for a response

2. Buy-side receives the Confirmation [cancel]
 	
    a. Sets internal status for the Confirmation to "replace-pending"
 	
    b. Responds with ConfirmationAck "received"

3. Sell-side sends Confirmation [new] with replacement values

4. Buy-side receives Confirmation [new]
 	
    a. Evaluates the changed values to see if they can automatically be accepted (e.g. settlement instruction changes) or need user review (e.g. fee change)
 	
    b. "affirms" or "rejects" the Confirmation
 	
        i. If "affirmed" transmits [cancel] and [new] to custodian., Status set back to "affirmed"
 	
        ii. If "rejected", status is left at "pending-replace" and buy-side awaits another Confirmation [new]. Depending upon conversation with sell-side, buy-side may then reject the [cancel] causing the "pending replace" to go back to "affirmed" and a ConfirmationAck "reject" to be sent to the sell-side.
 	
        iii. Note that if a Confirmation [cancel] is received and the status is already "Pending replace" the [cancel] should be responded to with ConfirmationAck "received" but status still remains "pending replace"

5. Sell-side receives the ConfirmationAck for the Confirmation [new]
 	
    a. If "affirmed" transmit the [cancel] and [new] downstream if they have not already been sent.
 	
    b. If "rejected" talk to the buy-side and if the "reject" stands don't sent the [cancel] and [new] downstream (or unwind them if they have already been sent).

6. note: if the buy-side never receives the expected Confirmation [new] they will contact the sell-side to see what the issue is.

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Buy-side

Front Office

1 | Initiate Order
- symbol, side, quantity
- ClOrdId
- compliance (e.g. capacity)

Allocation Instruction
Confirmation Modification
Confirmation [cancel], [new]

Placements
Executions

Sell-side

Front Office

Generate Executions
- quantity, price
- OrderId | 2

Middle Office

3 | Initiate Allocation Inst
Block
- symbol, side, quantity, avgPx
Placements
- ClOrdId, OrderId, quantity
Accounts
- quantity
- account
- averagePx (optional)
- commissions and fees
{ **US** – buy-side-calc
NON-US – buy-side-prelim}
- settlement instructions (buy-side)
- transaction-id

Allocation Instruction [new]
AllocationInstructionAck [new] "received"

Note that "cancel" may
be before or after
ConfirmationAck
"affirmed"

9 | Validate Confirmation
- symbol, side, quantity, avgPx
- capacity
- buy-side settlement
instructions
- transaction-id

AllocationInstructionAck [new] Accept/Reject

Confirmation [new]
(one per transaction)

ConfirmationAck [new] "affirmed"

Receive and Validate
- final commissions and fees{
if **NON-US** buy-side-prelim }

Confirmation [cancel]
ConfirmationAck [cancel]
"received"

Confirmation "new""
ConfirmationACK [new]
"**affirmed**" / "reject"

10 | Affirm or reject

Middle Office

Identify/match allocation-
allocation block | 4

Validate
- accounts
- commissions and fees are
correct for the allocated
placements
{if **US** buy-side-calc then
accept/reject fees} | 5

Receive
- buy-side settlement
instructions | 6

Accept or reject | 7

Initiate Confirm
- settlement instructions
(detailed for both buy-side and
sell-side)
- pass on Transaction-id
- specify "capacity"
{if **NON-US** buy-side-prelim
then add final commission and
fees}
- PDF for immutability | 8

11 | Receive (detailed)
- sell-side settlement instructions
- buy-side settlement instructions

12 | Notifications
- transaction-id
- broker settlement instruction
- buy-side settlement instructions

Settlement
Instruction issues

Change only
- commission,
- tax,
- fee
- SI

Record Confirm/Affirm | 11

Initiate Delivery
- pass transaction-id | 12

Back Office

13 | Reconcile
- netMoney
- capacity

Receive & Validate
- client settlement instructions
- broker settlement instructions

CSD

US only - Rule
387 compliance
issue to be
resolved

Back Office

Custodian

14 | **Settlement**

Settlement | 14

Client

other — FIX

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12.8 Buy-side Confirmation Implementation Status Transitions:

The buy-side actions for Confirmation [cancel] depend upon their transaction status

	Confirmation [new]	Confirmation [cancel]
"Pending new"	Accept > "receivedNew", ConfirmationAck "received" • > "affirmed" (transmit transaction downstream) • > "pendingNew" (business-reject)	Reject, ConfirmationAck "reject"
"Received new"	Reject, ConfirmationAck "reject"	Accept > " pending replace", ConfirmationAck "received" • no further processing of initial Confirmation [new], • wait for replacement Confirmation [new] • There is NO ConfirmationAck "affirmed" sent.
"Affirmed"	Reject, ConfirmationAck "reject"	Accept > "pending replace", ConfirmationAck "received" • (wait for replacement Confirmation [new] before taking any action) • There is NO ConfirmationAck "affirmed" sent.
"Pending replace"	Accept > "receivedReplace", ConfirmationAck "received" • > "affirmed" (unwind replaced transaction as necessary), , ConfirmationAck "affirmed"	Accept > "pending replace", ConfirmationAck "received" • Accept this and assume that the sell-side process sent a second [cancel] but still wants to replace. This might happen after "reject" of a replacement confirmation [new] for example.

	• > "pendingReplace(business-reject)", ConfirmationAck "reject" • Give the end user the ability to manually set this back to "affirmed" if the replacement Confirmation [new] never shows up.	
"Received Replace"	Reject, ConfirmationAck "reject"	Accept > " pending replace", ConfirmationAck "received" • no further processing of previous Confirmation [new], • wait for another replacement Confirmation [new] • There is NO ConfirmationAck "affirmed" sent.
"Pending Cancel" (set by AI [cancel] or [replace]	Reject, ConfirmationAck "reject"	Accept > "canceled", ConfirmationAck "received" • This does not trigger any action – action was triggered by the AI [cancel] or [replace] • There is NO ConfirmationAck "affirmed" sent.
"Canceled"	Reject, ConfirmationAck "reject"	Reject, ConfirmationAck "reject"

Fly-by note: the buy-side can receive a [cancel] of a [new] that they have just "rejected". In this case they should treat the [cancel] as "pending-new" situation if they rejected the initial [new] or as the start of another replacement sequence ("pending replace") if they rejected a replacement [new].

12.8.1 Use cases of note:

1. Sell-side triggered placement-block modification (e.g. exchange bust).

- Sell-side notifies buy-side with execution report bust or correction, or by phone/email.

- Buy-side cancels allocation instruction and initiates a new allocation instruction for the modified placement(s).

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12.9 Status Values by Workflow

The following table shows the values for the various status tags used in the various workflows.
Note: rejection for unknown transactions or bad messages not shown.

Workflows	Alloc Status (87)	Confirm Status (665)	Affirm Status (940)
AllocationInstruction [new]			
AllocationInstruction [new]			
AllocationInstructionAck - received	received		
AllocationInstructionAck – rejected …(validation disagreement)	rejected		
AllocationInstructionAck - accepted	accepted		
Confirmation [new]		confirmed	
ConfirmationAck - received			received
ConfirmationAck – reject …(validation disagreement)			rejected
ConfirmationAck - affirmed			affirmed
AllocationInstruction [cancel]			
AllocationInstruction [cancel]			
AllocationInstructionAck - received	received		
AllocationInstructionAck – rejected ….(manual processing)	rejected		
AllocationInstructionAck - accepted	accepted		
Confirmation [cancel]		confirmed	
ConfirmationAck –received			received
ConfirmationAck –reject …(not valid at this point)			reject
AllocationInstruction [replace]			
AllocationInstruction [replace]			
AllocationInstructionAck - received	received		
AllocationInstructionAck – rejected …(manual processing)	rejected		
AllocationInstructionAck - accepted	accepted		
Confirmation [new]		confirmed	
ConfirmationAck - received			received
ConfirmationAck - affirmed			affirmed
ConfirmationAck – reject …(validation disagreement)			rejected
Confirmation [cancel]		confirmed	
ConfirmationAck – received			received

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	Alloc Status (87)	Confirm Status (665)	Affirm Status (940)
ConfirmationAck – reject ...(not valid at this point)			reject

Workflows	Alloc Status (87)	Confirm Status (665)	Affirm Status (940)
Modification via Confirmation [cancel], [new]			
Confirmation [cancel]		confirmed	
ConfirmationAck - received			received
ConfirmationAck – reject … ……(not acceptable at this point)			rejected
Confirmation [new]		confirmed	
ConfirmationAck - received			received
ConfirmationAck - reject			rejected
ConfirmationAck - affirmed			affirmed

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13 Message Formats

Legend for Required

- Y = yes

- N = no

- C = conditionally with criteria in parenthesis

- (*) = optional but recommended

Note: FIX 4.2 or FIX 4.0 tags that are required or conditionally required but not available in the protocol must be handled at on-boarding/configuration time or by borrowing the tag from FIX 4.4 and including it in the message.

13.1 AllocationInstruction

FIX tag	CTM® field - block	CTM® field - trade	OASYS® field block	OASYS® field trade	FIX tag 4.2	FIX tag 4.4	AllocationInstruction Valid values	Required
Message Definition								
MessageType					35	35	= "J"	Y
AllocID					70	70	<unique ID for Allocation Instruction>	Y
SecondaryAllocId					n/a	793	<allocID of primary Allocation Instruction>	C(stepin)
AllocTransType	BuySell Indicator				71	71	=0-new =1-replace =2-cancel	Y

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FIX tag	CTM® field - block	CTM® field - trade	OASYS® field block	OASYS® field trade	FIX tag 4.2	FIX tag 4.4	AllocationInstruction Valid values	Required
AllocType					N/A	626	=1-Calculated (default FIX 4.2) (aka buy-side-calc) =2- Preliminary (aka sell-side-calc)	Y
SecondaryAllocId					N/A	793	<AllocId(70)> (of step-out AllocationInstruction to the executing broker)	C (step-in)
RefAllocID					72	72	Required for AllocTransType cancel and replace	C (71=2)
Notes								
Text					58	58	(Special instructions or explanation – recommended for [cancel], [replace], and post-cancel allocation [new].)	N
Parties								
->NoPartyIDs					N/A	453	= 2 (order origination firm and executing firm, default clearing firm) = 3 (explicit specification of clearing firm, required for step-in and outsourced clearing)	Y
Order Origination Firm								
--->PartyID					N/A	448	<firm-id>	Y

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FIX tag	CTM® field - block	CTM® field - trade	OASYS® field block	OASYS® field trade	FIX tag 4.2	FIX tag 4.4	AllocationInstruction Valid values	Required
--->PartyIDSource					N/A	447	= "C" (generally accepted market participant identified) = "B" BIC code = "N" LEI (legal entity id) {*FIX 5.0 or later*}	Y
--->PartyRole					N/A	452	=13 - Order Origination Firm	Y
Executing Firm								
--->PartyID					N/A	448	<firm-id>	C (outsourced clearing)
--->PartyIDSource					N/A	447	= "C" (generally accepted market participant identified) ="B" BIC code	C (outsourced clearing)
--->PartyRole					N/A	452	=1 - Executing Firm (broker associated with the placement FIX session)	C (outsourced clearing)
Clearing Firm								
--->PartyID					N/A	448	<firm-id> (defaults to executing firm if not step-in or outsourced clearing)	C (outsourced clearing)
--->PartyIDSource					N/A	447	= "C" (generally accepted market participant identified) ="B" BIC code	C (outsourced clearing)
--->PartyRole					N/A	452	=4 – Clearing Firm	C (outsourced clearing)

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FIX tag	CTM® field - block	CTM® field - trade	OASYS® field block	OASYS® field trade	FIX tag 4.2	FIX tag 4.4	AllocationInstruction Valid values	Required
Placement Blocks - OrdAllocGrp								
AllocNoOrdersType					N/A	857	= 1 – Explicit List Provided	Y (FIX 4.4) N (FIX 4.2)
NoOrders					73	73	>= 1	Y
->ClOrdId					11	11	= <ClOrdId> (of the orders) *Use the last ClOrdId of a Cancel/Replace chain of ClOrdId/OrigClOrdId.* = "[MANUAL]" (if placed outside of FIX) = "[STEPIN]" (if transferred from another broker/dealer) *Note: existence of this value indicates that this is a **step-in** allocation instruction.* *Note: if one placement is "[STEPIN]" then all placements must be.*	Y
->OrderId					37	37	= <OrderID> = "[MANUAL]" if the OrderId is not available = "[STEPIN]" if transferred from another broker/dealer.	Y
->OrderQty					N/A	38	<Quantity> (of placement at allocation time (matches the quantity associated with the ClOrdId))	Y (FIX 4.4)

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FIX tag	CTM® field - block	CTM® field - trade	OASYS® field block	OASYS® field trade	FIX tag 4.2	FIX tag 4.4	AllocationInstruction Valid values	Required
->OrderBookingQty					N/A	800	<Quantity> (of this order to be allocated.)	Y (FIX 4.4)
-> OrderAveragePx					N/A	799	<Average price> (of the trades (OrderBookingQty(800)) to be allocated from this placement.)	Y (FIX 4.4)
->NoCapacities					N/A	862	<integer> (Specifies acceptable capacities if there are capacity constraints for "[MANUAL]" or "[STEPIN]" placements and if there is a possibility of ambiguity in the identification of the allocation-block.)	N
--->OrderCapacity					N/A	528	="A" - agency	N
Allocation Block								
Side					54	54	= 1-Buy = 2-sell = 5- sell short	Y
Symbol			securityId		55	55	<symbol>	Y
SecurityID					48	48	<security-id> (see SecuriityIDSource)	Y
SecurityIDSource	Numbering Agency Code/ Country Code		CUSIP		22	22	= 1-CUSIP = 2-SEDOL = 4-ISIN = 5-RIC =A-Bloomberg	Y

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FIX tag	CTM® field - block	CTM® field - trade	OASYS® field block	OASYS® field trade	FIX tag 4.2	FIX tag 4.4	AllocationInstruction Valid values	Required
SecurityType	XML COMM		Security type		167	167	= "CS" (common stock) = "PS" (preferred stock) = "CB" (convertible bond)	N(*)
SecurityDesc					107	107		N
CFIcode					N/A	461		Y (FIX 4.4)
Currency	Currency Code				15	15	<trade currency> *Note: all amounts in the AllocationInstruction must be denominated in this currency. The only exception is that SettlementCurrency(tag120) and associated fields could be different.*	Y
Quantity	Amount		Size		53	53	<total quantity> (of allocation-block)	Y
AvgPx	DealPrice		Price		6	6	< average price of all executions> (in the allocation-block_	Y
PriceType					N/A	423	= 1- percentage (e.g. percent of par) = 2- per unit (share) (default)	N
GrossTradeAmt					381	381	<amount>	N(*)
NetMoney					118	118	<amount>	Y
AccruedInterestAmt					N/A	159	<amount>	C (167="CB")
TradeDate			TradeDate		75	75	<date>	Y
Block-level Settlement Instructions								
SettlementType					63	63	=0 (regular) (default)	N

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FIX tag	CTM® field - block	CTM® field - trade	OASYS® field block	OASYS® field trade	FIX tag 4.2	FIX tag 4.4	AllocationInstruction Valid values	Required
SettlementDate	Settlement Date		Settlement date		64	64	<SettlementDate> if present overrides tag 63	N
Allocation Details - AllocGrp								
NoAllocs					78		<integer> > 0	Y
->AllocAccount				Alert code	79	79	<ClientAccountID> *Note: for step-out this field may optionally repeat the clearing firm id, leaving identification of the specific accounts to the "step-in' allocation instruction.*	Y
-> AllocAcctIDSource					N/A	661	=4 OMGEOAlertID (default) =99 Other (custom or proprietary)	N
->AllocQty	Quantity Allocated			size	80	80	<quantity>	Y
-> IndividualAllocId	Internal reference#			Internal reference #	N/A	467	<buy-side generated unique transaction-id> (included in Confirmation messages and used by buy-side for identification of referenced transaction)	Y
->AllocText					161	161	(Free format text field related to this AllocAccount(79) used for buy-side/sell-side communication. Recommended that sell-side display)	N
->AllocAvgPx					153	153	<average-price for this account> *Note: overrides avgPx [tag 6] value, allowing specification of different average prices for different accounts. If included for one must be included for all.*	C (if included for one must be for all)

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FIX tag	CTM® field - block	CTM® field - trade	OASYS® field block	OASYS® field trade	FIX tag 4.2	FIX tag 4.4	AllocationInstruction Valid values	Required
->AllocGrossTradeAmt				Principal	N/A	2300	<AvgPx or AllocAvgPx times AllocQty> {*FIX 5.0 or later*}	N(*)
->AllocNetMoney				Net amount	154	154	<amount> (Principal adjusted by commission, fees, and accrued interest.)	C (buy-side-calc)
->AllocSettlCurrAmt					119	737	<amount> (Net monies for this account expressed in SettlCurrency. Must be equal to: • NetMoney x SettlCurrFxRate IF SettlCurrFxRateCalc = M (multiply), OR • NetMoney / SettlCurrFxRate IF SettlCurrFxRateCalc = D (divide).)	C (if buy-side-calc and settlement currency is different. Default is trade currency)
->AllocSettlCurrency					120	736	<currency-code> (ISO currency code for settlement currency.)	C (if 119 specified)
->SettlCurrFxRate					155	155	<rate> (Exchange rate used to compute AllocSettlCurrAmt from Currency to SettlCurrency.)	C (if 119 specified)

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FIX tag	CTM® field - block	CTM® field - trade	OASYS® field block	OASYS® field trade	FIX tag 4.2	FIX tag 4.4	AllocationInstruction Valid values	Required
->SettlCurrFxRateCalc					156	156	(Specifies whether the SettlCurrFxRate should be multiplied or divided when converting from Currency to SettlCurrency.) ="M" – multiply ="D" – divide	C (if 119 specified)
-> Client Direction								

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FIX tag	CTM® field - block	CTM® field - trade	OASYS® field block	OASYS® field trade	FIX tag 4.2	FIX tag 4.4	AllocationInstruction Valid values	Required
->ProcessCode	*Not mapped*				81	81	= 0- Regular (default) = 1- SoftDollar *Note: credit to investment manager per agreement.* = 2 – Step-in *Note: used only in step-in AllocationInstructions* *Note: the step-in AllocationInstruction is identified by inclusion of ClOrdId = "[STEPIN]"* = 3- Step-out = 6 – client direction (see nested parties)	Y
FIX 4.2								
Executing Broker – FIX 4.2								
->ExecBroker					76	N/A	<brokerID> (required for step-in AllocationInstructions)	C (step-in)
Broker of credit – FIX4.2								

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FIX tag	CTM® field - block	CTM® field - trade	OASYS® field block	OASYS® field trade	FIX tag 4.2	FIX tag 4.4	AllocationInstruction Valid values	Required
->BrokerOfCredit	Broker of credit name			Broker of credit name	92	N/A	<brokerID> *Note: in 4.2 there is no differentiation of client direction types.*	C (81=3 or =6)
FIX4.4								
->NoNestedPartyIDs					N/A	539	= 1 (if just step-out or directed) = 1 (if just LTI required) = 2 (if both)	C (if 81= 3 or =6)
Client direction of commission								
--->NestedPartyID	PartyRole			Broker of credit name	N/A	524	See role	C (if 81 =6)
--->NestedPartyIDSource	PartyType				N/A	525	"C"	C (if 81 =6)
--->NestedPartyRole	PartyRole				N/A	538	= 2 - broker of credit (commission sharing) = 60 – Introducing Firm = 15 – correspondent clearing firm (commission recapture)	C (if 81 =6)
Step-out/give-up								
--->NestedPartyID	PartyRole				N/A	524	= <brokerID> (see Broker codes table)	C (if 81=3)
--->NestedPartyIDSource	PartyType				N/A	525	= "C" (generally accepted market participant identified)	C (if 81=3)
--->NestedPartyRole	PartyRole				N/A	538	= 14 – step-out Clearing Firm (81=3)	C (if 81=3)

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FIX tag	CTM® field - block	CTM® field - trade	OASYS® field block	OASYS® field trade	FIX tag 4.2	FIX tag 4.4	AllocationInstruction Valid values	Required
Large Trader Reportable account								
--->NestedPartyID	PartyRole				N/A	524	= <LTI>	C (if trade controlled by LT client)
--->NestedPartyIDSource	PartyType				N/A	525	= "M" *{FIX 5.0 or later}*	C
--->NestedPartyRole	PartyRole				N/A	538	= 52 [LargeTraderReportableAccount]	C
->Commission - total								
-> Commission				commission	12	12	<amount> *Note: commission is not included when 81=3(step-out). Commission value is included in the "step-in" AllocationInstruction.*	N
-> CommType	Commission Sharing Basis Indicator				13	13	=1 per unit =2 percent =3 absolute (recommended)	N
->Commission Multiple								

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FIX tag	CTM® field - block	CTM® field - trade	OASYS® field block	OASYS® field trade	FIX tag 4.2	FIX tag 4.4	AllocationInstruction Valid values	Required
->NoAllocCommissions						2653	{*FIX 5.0 or later} Total number of commissions	Opt
-->AllocCommission Amount						2654	{*FIX 5.0 or later} Total commission amount	C (NoAllocCommissions>1)
--> AllocCommission AmountType						2655	{*FIX 5.0 or later} Supported values: '0' Unspecified '1' Acceptance '2' Broker '3' Clearing broker '4' Retail '5' Sales commission '6' Local commission '7' Research Payment	C (NoAllocCommissions>1)

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FIX tag	CTM® field - block	CTM® field - trade	OASYS® field block	OASYS® field trade	FIX tag 4.2	FIX tag 4.4	AllocationInstruction Valid values	Required
--> AllocCommission AmountSubType						2726	{*FIX 5.0 or later} Supported values: '0' RPA (Research Payment Account) '1' CSA (Commission Sharing Agreement) '2' other (payment type other than RPA or CSA)	Opt
-->AllocCommissionBasis						2656	{*FIX 5.0 or later} Supported values: 1 = Per unit 2 = Percent 3 = Absolute - Recommeded	C (NoAllocCom missions>1)
->Fees								
-> NoMiscFees					136	136	<number of fees>	N
---> MiscFeeAmt				fee	137	137	<amount>	C

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FIX tag	CTM® field - block	CTM® field - trade	OASYS® field block	OASYS® field trade	FIX tag 4.2	FIX tag 4.4	AllocationInstruction Valid values	Required
---> MiscFeeCurr					138	138	*<currency code>* Note: The default for this is Currency(tag15) and if MiscFeeCurr is included it must be the same as Currency(tag15). Without an FX rate there would be no way of using in calculations.	N
---> MiscFeeType	Charge TaxType				139	139	*The Guidelines utilize these types to represent the industry standard OMGEO/SWIFT aggregations of fees:* *=4 –Exchange (LOCL/FEES)* *=2 -Tax (TRAX/TTAX)* *=10 –Per Transaction (CHAR/BROK)* *=7 –Other (OTHR/MISC)* * Note: total fees are coded as 7*	C (if 137 specified)
---> NoMiscFeeSubTypes						*2633*	*{FIX 5.0 or later}* *<number of sub types> note: if MiscFeeSubType is specified for one fee it must be specified for all*	(*)
------> MiscFeeSubType						*2634*	*{FIX 5.0 or later}* *<market specific fee code>* Semi-human readable market specific fee code. See https://www.fixtrading.org/packages/miscfeesubtype/ for latest code list. Initial code list included in appendix.*If*	C(if 2633>0)

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FIX tag	CTM® field - block	CTM® field - trade	OASYS® field block	OASYS® field trade	FIX tag 4.2	FIX tag 4.4	AllocationInstruction Valid values	Required
------> MiscFeeSubTypeAmt						2635	{FIX 5.0 or later} \<amount of specified MiscFeeSSum of all subtype amount must equal MiscFeeAmt(137) but if different these take precedence.	C(if 2633>0)
------> MiscFeeSubTypeDesc						2636	{FIX 5.0 or later} Optional human readable description of fee. Note that these are there for additional clarity if there is any confusion. In the end there should be no need for these names.	Opt
---> MiscFeeBasis	CommissionSharingBasisIndicator				N/A	891	=0 – Absolute (default, recommended) =1 – Per unit =2 – Percentage	N
->Interest								
->AllocAccruedInterestAmt					159	742	Convertible bonds \<accrued interest>	C (convertible bonds)
->Account-level Settlement Instructions								
-> AllocSettlInstType						780	=2 - fullDetailsProvided =3 - SSIDbIdsProvided (default if AllocAcctIDSource=ALERT)	C (ALERT is default if AllocAcctIdSource is ALERT)
SSIDbIdsProvided [780=3]								

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FIX tag	CTM® field - block	CTM® field - trade	OASYS® field block	OASYS® field trade	FIX tag 4.2	FIX tag 4.4	AllocationInstruction Valid values	Required
-> StandInstDbType						169	Identifies the Standing Instruction database being used to hold settlement instructions for this allocation instruction. *=0 – Other* *=1 – DTC SID* *=2 – ALERT (default if allocIdSource = ALERT)* *=3 – A Global Custodian (StandInstDbName (170) must be provided)*	C (780=3)
-> StandInstDbName					N/A	170	Identifier of the Standing Instruction database represented with StandInstDbType (169) = 3 (Global Custodian). Rather than use name or any other identifier, the global custodian's BIC code should be used here.	C (169=3)
-> StandInstDbId						171	Unique identifier used on the Standing Instructions database for the Standing Instructions to be referenced for this allocation instruction.	C (169=3)
fullDetailsProvided [780=2]								
NoDlvyInst						85	=1 - (buy-side)	C (780=2)
-> SettlInstSource						165	=2 - institution's instructions (buy-side)	C (780=2)

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FIX tag	CTM® field - block	CTM® field - trade	OASYS® field block	OASYS® field trade	FIX tag 4.2	FIX tag 4.4	AllocationInstruction Valid values	Required
-> DlvyInstType						787	="C" (cash) ="S" (securities)	C (780=2)
-> NoSettlParties						781	Refer to NoSettlParties section of Confirmation messages for specification of detailed buy-side settlement instructions using this tag and associated tags in the component.	C (780=2)

[Post-Trade Processing via FIX, Recommended Practices, Equities]
Post-tradeViaFIX_RecommendedPractices_Equities_v1.2.8.doc

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13.2 AllocationInstructionAck

FIX tag	FIX tag 4.2	FIX tag 4.4	Valid values	Required AllocAck
MessageType	35	35	=”P”	Y
AllocID	70	70	<id from AllocationInstruction>	Y
TradeDate	75	75	<date> (from AllocationInstruction)	N
TransactTime	60	60		Y
AllocStatus	87	87	=0 – accepted =1 – block-level-reject =3 - received not yet processed =6 - pending (block is matched)	Y
AllocRejCode	88	88	=0 – Unknownacct =1 - IncorrectQty =2 - IncorrectAvgPrc =3 - IncorrectBrkMnc =4 - CommDiff =5 - UnknownOrdID =7 - Other (see TEXT(58)) =8 - incorrectAllocatedQuantity =9 - calculationDifference =11 - mismatchedData =12 – unknownClOrdId =13 - Warehouse request rejected [WarehouseRequestRejected] *{Following values are FIX 5.0 or later}* =14 - Duplicate or missing IndividualAllocId(467) =15 - Trade not recognized =16 – Trade previously allocated [DuplicateTrade]	C (87=1)

[Post-Trade Processing via FIX, Recommended Practices, Equities]
Post-tradeViaFIX_RecommendedPractices_Equities_v1.2.8.doc

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FIX tag	FIX tag 4.2	FIX tag 4.4	Valid values	Required AllocAck
			=17 - Incorrect or missing instrument	
			=18 - Incorrect or missing settlement date	
			=19 - Incorrect or missing fund ID or fund name	
			=20 - Incorrect or missing settlement instructions	
			=21 - Incorrect or missing fees	
			=22 - Incorrect or missing tax	
			=23 – Unknown or missing party	
			=24 – Incorrect or missing side	
			=25 – Incorrect or missing net-money	
			=26 – Incorrect or missing trade date	
			=27 – Incorrect or missing settlement currency instructions	
			=28 – Incorrect or missing ProcessCode	
			=99 - Other [Other] (see Text(58))	
Text	58	58	<reject explanation> (or see RejectText)	C (87=1)
RejectText	N/A	1328	*{ FIX 5.0 or later}* If 87=1 the RejectText field may optionally be used for the reject reason rather than the Text(58) tag. This allows the received Text(58) to be reflected back along with the reject reason in 1328. If 1328 is included it is the reject reason.	

[Post-Trade Processing via FIX, Recommended Practices, Equities]
Post-tradeViaFIX_RecommendedPractices_Equities_v1.2.8.doc

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13.3 Confirmation Message

FIX tag	CTM® field block	CTM® field trade	Trade Suite® field	Trade Suite® field	FIX tag #	Confirmation Message Valid values	Required
Message							
MsgType					35	AK	Y
ConfirmID					664	<unique ID created by broker>	Y
ConfirmRefID					772	<id of replaced or canceled>	C (666=2)
ConfirmTransType					666	= 0 (new) = 2 (cancel)	Y
ConfirmType					773	= 2 (confirmation)	Y
LegalConfirm					650	= "Y" (indicated legal confirmation) when ConfirmTransType=0	C (666=0)
ConfirmStatus					665	= 4 (confirmed) *Note: "confirmed" means that this is the sell-side view.*	Y

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FIX tag	CTM® field block	CTM® field trade	Trade Suite® field	Trade Suite® field	FIX tag #	Confirmation Message Valid values	Required
AllocId					70	<allocId from AllocationInstruction> *Note: if ConfirmTransType = 2 (cancel) then AllocID depends upon why this [cancel] was generated:* - *A response to AllocationInstruction [cancel] has the AllocId of the AllocationInstruction [cancel]* - *A modification of a Confirmation by the sell-side has the AllocId of the current AllocationInstruction [new] or [replace]* - *A Confirmation [cancel] in response to an AllocationInstruction [replace] has the AllocId of the [replace]* *Note: if this value is not available because the allocation instruction was communicated in some other fashion than FIX use "N/A" for the value.*	Y
IndividualAllocId					467	<transaction-id> (from allocation instruction IndividualAllocId) *Note: if this value is not available because it was not provided by the buy-side it is recommended that the sell-side generate a transaction-id for use by the buy-side. If this is not possible use "N/A"*	Y
Text					58	666=2 cancel <reason for cancellation>	C (666=2)

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FIX tag	CTM® field block	CTM® field trade	Trade Suite® field	Trade Suite® field	FIX tag #	Confirmation Message Valid values	Required
NoAttachments					2104	*{FIX 5.0 or later}* <number of attached disclosures>	N
->AttachmentName					2105	*{FIX 5.0 or later}* Name of the disclosure document	C(2104>0)
->AttachmentMediaType					2106	*{FIX 5.0 or later}* The following mime types are currently part of the guidelines ="text/plain" (.txt) ="text/rtf" (.rtf) ="application/msword" (.doc) =" application/vnd.openxmlformats-officedocument.wordprocessingml.document" (.docx) = "application/pdf" (.pdf)	C(2104>0)
->AttachmentExternalURL					2108	*{FIX 5.0 or later}* Used to specify an external URL where the attachment can be obtained.	C(2104>0, either 2108 or 2112)
->AttachmentEncodingType					2109	*{FIX 5.0 or later}* The encoding type of the content provided in EncodedAttachment. Valid values: 0 = Base64 1 = Raw binary (Elaboration: Unencoded binary content.)	C(2112 exists)

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FIX tag	CTM® field block	CTM® field trade	Trade Suite® field	Trade Suite® field	FIX tag #	Confirmation Message Valid values	Required
->EncodedAttachmentLen					2111	*{FIX 5.0 or later}* Byte length of EncodedAttachment field.	C(2112 exists, must immediately proceed it)
->EncodedAttachment					2112	*{FIX 5.0 or later}* The content of the attachment in the encoding format specified in the AttachmentEncodingType field.	C(2104>0, either 2108 or 2112)
TransactTime					60	Time this message was generated	Y
Parties							
NoPartyIds					453	= 3 (executing broker, order origination firm, and clearing firm) =4 (if Large Trader Reportable account) *{FIX 5.0 or later}*	Y
Executing Broker							
->PartyID					448	<BIC code>	**Y**
->PartyIDSource					447	="B"	**Y**
->PartyRole					452	=1	**Y**
->NoPartySubIDs					802	**=2**	**Y**
--->PartySubID					523	<full legal name for executing broker>	**Y**
--->PartySubIDType					803	=5 (full legal name)	**Y**

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FIX tag	CTM® field block	CTM® field trade	Trade Suite® field	Trade Suite® field	FIX tag #	Confirmation Message Valid values	Required
--->PartySubID					523	<postal address for executing broker>	**Y**
--->PartySubIDType					803	=6 (postal address)	**Y**
Order Origination Firm							
->PartyID					448	<BIC code>	**Y**
->PartyIDSource					447	="B"	**Y**
->PartyRole					452	=13	**Y**
Clearing Firm							
->PartyID					448	<BIC code>	**Y**
->PartyIDSource					447	="B"	**Y**
->PartyRole					452	=4 (clearing firm)	**Y**
LargeTrader Reportable Account							
->PartyID					448	= <LTI>	**C**
->PartyIDSource					447	= "M"	**C**
->PartyRole					452	= 52 [LargeTraderReportableAccount] *{FIX 5.0 or later}*	**C**
Trade Identification							

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FIX tag	CTM® field block	CTM® field trade	Trade Suite® field	Trade Suite® field	FIX tag #	Confirmation Message Valid values	Required
Side					54	=1-Buy =2-sell =5-sell short	Y
Symbol					55	<symbol>	Y
SecurityIdSource					22	=1-CUSIP =2-SEDOL =4-ISIN = 5-RIC =A-Bloomberg	Y
SecurityId					48	<security-id>	Y
SecurityType					167	= "CS" (common stock) = "PS" (preferred stock) = "CB" (convertible bond)	N
SecurityDesc					107		Y
CFIcode					461		N
AllocQty					80	<quantity allocated to this account>	Y
QtyType					854	=0 - Unit (shares, par) (default) =1 - contracts	N

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FIX tag	CTM® field block	CTM® field trade	Trade Suite® field	Trade Suite® field	FIX tag #	Confirmation Message Valid values	Required
TradeDate					75	(TradeDate of the placement execution reports)	Y
NoCapacities					862	>=1	Y
->OrderCapacity					528	=”A” – Agency =”P” – Principal **** added (still pending FIX Trading Community approval at time of publication) =“M” – Mixed {FIX 5.0 or later}	Y
->Order capacity quantity					863	<Quantity> (executed in this capacity)	Y
Account Identification							
AllocAccount					79	<client account>	Y
AllocAcctIDSource					661	=4 (OMGEOAlertID) = 99 (other)	Y
AllocAccountType					798	=1 – account is carried on customer side of books (default) =2 – account is carried on non-customer side of books =3 – house trader =4 – floor trader =6 – account is carried on non-customer side of books and is cross margined =7 – account is house trader and is cross margined =8 – joint back office account (JBO)	N
Financial Detail							

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FIX tag	CTM® field block	CTM® field trade	Trade Suite® field	Trade Suite® field	FIX tag #	Confirmation Message Valid values	Required
AvgPx					6	<booking price> (of the executions allocated to this account)	Y
Currency					15	<currency code> (trade currency) *Note: all amounts in the AllocationInstruction must be denominated in this currency. The only exception is that SettlementCurrency(tag120) and associated fields could be different currency.*	Y
PriceType					423	=1 - percentage (eg. Percent of par) =2 - per unit (default)	N
GrossTradeAmt					381	<amount> (Total amount traded (e.g. AllocQty (80) * (AvgPx (6) or AllocAvgPx(153))) expressed in trade currency) *Note: if PriceType(423) is Percent of par, then this will be: AllocQty(80) * AvgPx(6) / 100.*	Y
NetMoney					118	<amount> (Total amount due as the result of the transaction (e.g. for Buy order - principal + commission + fees) reported in trade currency)	Y
SettlDate					64	<YYYYMMDD>	Y
Settlement other than trade currency							

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FIX tag	CTM® field block	CTM® field trade	Trade Suite® field	Trade Suite® field	FIX tag #	Confirmation Message Valid values	Required
SettlCurrAmt					119	<amount> (Net monies for this account expressed in SettlCurrency. Must be equal to: • NetMoney x SettlCurrFxRate IF SettlCurrFxRateCalc = M (multiply), OR • NetMoney / SettlCurrFxRate IF SettlCurrFxRateCalc = D (divide).)	C (if settlement currency is different. Default is trade currency
SettlCurrency					120	<currency code> (ISO currency code for settlement currency.)	C (if 119 specified)
SettlCurrFxRate					155	<rate> (Exchange rate used to compute SettlCurrAmount from Currency to SettlCurrency.)	C (if 119 specified)
SettlCurrFxRateCalc					156	(Specifies whether the SettlCurrFxRate should be multiplied or divided when converting from Currency to SettlCurrency.) ="M" – multiply ="D" – divide	C (if 119 specified)
Commissions-total							
Commission					12	<amount> (in trade currency)	N
CommType					13	=3 (absolute) (default)	N
Commissions-multiple							

FIX tag	CTM® field block	CTM® field trade	Trade Suite® field	Trade Suite® field	FIX tag #	Confirmation Message Valid values	Required
NoCommissions					2639	*{FIX 5.0 or later}* <Total number of commissions>	C (if included in J)
-> CommissionAmount					2640	*{FIX 5.0 or later}* <commission amount>	C (if included in J)
-> CommissionAmount Type					2641	*{FIX 5.0 or later}* Supported values: '0' Unspecified '1' Acceptance '2' Broker '3' Clearing broker '4' Retail '5' Sales commission '6' Local commission '7' Research Payment	C (if included in J)
-> CommissionAmount SubType					2725	*{FIX 5.0 or later}* Supported values: '0' RPA (Research Payment Account) '1' CSA (Commission Sharing Agreement) '2' other (payment type other than RPA or CSA)	C (if included in J)

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FIX tag	CTM® field block	CTM® field trade	Trade Suite® field	Trade Suite® field	FIX tag #	Confirmation Message Valid values	Required
-> CommissionBasis					2642	*{FIX 5.0 or later}* Supported values: 1 = Per unit 2 = Percent 3 = Absolute (recommeded)	C (if included in J)
Fees							
NoMiscFees					136	<integer> (not included if there are no fees)	N
-> MiscFeeAmt					137	<amount>	C (136 >0)
-> MiscFeeCurr					138	<currency-code> *Note: The default for this is Currency(tag15) and if MiscFeeCurr is included it must be the same as Currency(tag15). Without an FX rate there would be no way of using in calculations.*	N
-> MiscFeeType					139	*The Guidelines utilize these types to represent the industry standard OMGEO/SWIFT aggregations of fees:* *=4 –Exchange (LOCL/FEES)* *=2 -Tax (TRAX/TTAX)* *=10 –Per Transaction (CHAR/BROK)* *=7 –Other (OTHR/MISC)*	C (for each tag 137)
---> NoMiscFeeSubTypes					*2633*	*{FIX 5.0 or later}* *<number of sub types> note: if MiscFeeSubType is specified for one fee it must be specified for all*	(*)

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FIX tag	CTM® field block	CTM® field trade	Trade Suite® field	Trade Suite® field	FIX tag #	Confirmation Message Valid values	Required
------> MiscFeeSubType					*2634*	*{FIX 5.0 or later}* *<market specific fee code>* Semi-human readable market specific fee code. See https://www.fixtrading.org/packages/miscfeesubtype/ for latest code list. Initial code list included in appendix.*If*	C(if 2633>0)
------> MiscFeeSubTypeAmt					*2635*	*{FIX 5.0 or later}* *<amount of specified MiscFeeSSum of all subtype amount must equal MiscFeeAmt(137) but if different these take precedence.*	C(if 2633>0)
------> MiscFeeSubTypeDesc					*2636*	*{FIX 5.0 or later}* *Optional human readable description of fee. Note that these are there for additional clarity if there is any confusion. In the end there should be no need for these names.*	Opt
-> MiscFeeBasis					891	=0 absolute (default)	N
Interest							
AccruedInterestAmt					159	<amount> For convertible bond (currency of execution)	C (convertible bonds)
Settlement Instructions							
NoDlvyInst					85	=1 or =2, Sell-side are required, buy-side details are optional but recommended.	Y
-> SettlInstSource					165	(Used to identify whether these delivery instructions are for the buy-side or the sell-side.) =1 – broker's instructions (sell-side) =3 – Investor (buy-side)	Y

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FIX tag	CTM® field block	CTM® field trade	Trade Suite® field	Trade Suite® field	FIX tag #	Confirmation Message Valid values	Required
-> DlvyInstType					787	=C (cash) =S (securities)	Y
-> NoSettlParties					781	>=3 SMPG practice is always to populate at least 3 Settlement Parties. These are • Place of Settlement (PSET) • Buyer/Seller (BUYR/SELL) • Receiving / Delivering Agent (REAG/DEAG) Occasionally, additional Settlement Parties are required • Local Custodian (DECU/RECU) • Intermediary 1 (DEI1/REI1) • Intermediary 2 (DEI2/REI2) *Note: only one of any given type may be specified for integrity*	Y
Place of Settlement (PSET)							Y
-> SettlPartyId					782	See SettlPartyIDSource	Y
-> SettlPartyIDSource					783	="B" – BIC (Bank Identification Code) ="E" – ISO Country Code	Y
-> SettlPartyRole					784	=10 – Settlement location (ISO 15022 PSET)	Y
Buyer/Seller (BUYR/SELL)							Y
-> SettlPartyId					782	See SettlPartyIDSource	Y

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FIX tag	CTM® field block	CTM® field trade	Trade Suite® field	Trade Suite® field	FIX tag #	Confirmation Message Valid values	Required
-> SettlPartyIDSource					783	=”B” – BIC (Bank Identification Code)	Y
						=”H” – CSD participant/member code	
						Note: for "H" the settlPartyId(782) contains the DSS code for identification as well as the member code (e.g. "VPDK/1234")	
						Note: CSD code is required if required by PSET.	
						=”F” – settlement entity location (physical name and address, equivalent to SWIFT "Q")	
						settlParty(782) contains the text of the physical address (e.g. "XYZ CORPORATION VANCOUVER CA")	
-> SettlPartyRole					784	=27 – Buyer/Seller (Receiver/Deliverer - ISO 15022 BUYR/SELR) *Note: buy/sell is derived from Side (tag 54)*	Y
-> NoSettlPartySubIDs					801	(Optionally used to specify additional account information (e.g. safekeeping account))	N
---> SettlPartySubID					785	<account number>	N
---> SettlPartySubIDType					786	=10 – securities account number	N
Receiving / Delivering Agent (REAG/DEAG)							Y
-> SettlPartyId					782	See SettlPartyIDSource for valid values in parentheses.	Y

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FIX tag	CTM® field block	CTM® field trade	Trade Suite® field	Trade Suite® field	FIX tag #	Confirmation Message Valid values	Required
-> SettlPartyIDSource					783	="B" – BIC (Bank Identification Code) ="H" – CSD (participant/member code) *Note: for "H" the settlPartyId(782) contains the DSS code for identification as well as the member code (e.g. "VPDK/1234")* ="F" – settlement entity location (physical name and address, equivalent to SWIFT "Q") settlParty(782) contains the text of the physical address (e.g. "XYZ CORPORATION VANCOUVER CA")	Y
-> SettlPartyRole					784	=30 – Agent(ISO 15022 DEAG/REAG) *Note: buy/sell is derived from Side (tag 54)*	Y
-> NoSettlPartySubIDs					801	Optional safekeeping account	N
---> SettlPartySubID					785	<account number>	N
---> SettlPartySubIDType					786	=10 - securities account number	N
Local Custodian (DECU/RECU)							N
-> SettlPartyId					782	See SettlPartyIDSource	Y

FIX tag	CTM® field block	CTM® field trade	Trade Suite® field	Trade Suite® field	FIX tag #	Confirmation Message Valid values	Required
-> SettlPartyIDSource					783	="B" – BIC (Bank Identification Code) ="H" – CSD participant/member code *Note: identity of the CSD must be derived from the PSET.* ="F" – settlement entity location (physical name and address, equivalent to SWIFT "Q") settlParty(782) contains the text of the physical address (e.g. "XYZ CORPORATION VANCOUVER CA")	Y
-> SettlPartyRole					784	=28 – Custodian (ISO 15022 DECU/RECU) *Note: buy/sell is derived from Side (tag 54)*	Y
-> NoSettlPartySubIDs					801	Optionally used to specify additional account information (e.g. safekeeping account)	N
---> SettlPartySubID					785	<account number>	N
---> SettlPartySubIDType					786	=10 – securities account number	N
Intermediary (DEI1/REI1), (DEI2/REI2)							N
-> SettlPartyId					782	See SettlPartyIDSource	Y

[Post-Trade Processing via FIX, Recommended Practices, Equities]
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FIX tag	CTM® field block	CTM® field trade	Trade Suite® field	Trade Suite® field	FIX tag #	Confirmation Message Valid values	Required
-> SettlPartyIDSource					783	="B" – BIC (Bank Identification Code) ="F" – settlement entity location (physical name and address, equivalent to SWIFT "Q") settlParty(782) contains the text of the physical address (e.g. "XYZ CORPORATION VANCOUVER CA")	Y
-> SettlPartyRole					784	=29 - Intermediary 1 (DEI1/REI1) =29 - Intermediary 2 (DEI2/REI2) (second instance in repeating group) Note: buy/sell is derived from Side (tag 54)	Y
-> NoSettlPartySubIDs					801	Optionally used to specify additional account information (e.g. safekeeping account)	N
---> SettlPartySubID					785	<account number>	N
---> SettlPartySubIDType					786	=10 – securities account number	N

13.4 ConfirmationAck

FIX tag	FIX tag #	Valid values	Required
MsgType	35	="AU"	Y
ConfirmID	664	<ConfirmID being acknowledged)	Y
TradeDate	75	<YYYYMMDD> (TradeDate from AllocationInstruction)	Y
TransactTime	60		Y

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AffirmStatus	940	=1 - received,	Y
		=2 - rejected,	
		=3 - affirmed	
ConfirmRejReason	774	*{FIX 5.0 or later}*	C
		=1 - MismatchedAccount	
		=2 - MissingSettlementInstructions	
		=3 - Unknown or missing IndividualAllocId(467)	
		=4 - Transaction not recognized	
		=5 - Duplicate transaction	
		=6 - Incorrect or missing instrument	
		=7 - incorrect or missing price	
		=8 - Incorrect or missing commission	
		=9 - Incorrect or missing settlement date	
		=10 - Incorrect or missing fund ID or fund name	
		=11 - Incorrect or missing quantity	
		=12 - Incorrect or missing fees	
		=13 - Incorrect or missing tax	
		=14 – Incorrect or missing party	
		=15 – Incorrect or missing side	
		=16 – Incorrect or missing net-money	
		=17 – Incorrect or missing trade date	

		=18 – Incorrect or missing settlement currency instructions =19 – Incorrect or missing capacity =99 – Other (see Text(58))	
Text	58	<reject reason> (or mirrored text – see RejectText field usage)	C(940=2)
RejectText	1328	*{FIX 5.0 or later}* If 940=2 the rejectText field may optionally be used for the reject reason rather than the Text(58) tag. This allows the received Text(58) to be reflected back along with the reject reason in 1328. If 1328 is included it is the reject reason.	opt

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14 Settlement Chains

14.1 General

Trading/Post Trade/Settlement Processing
Based on
Business Capability

Buy-side (IM side)		Sell-Side (Broker Side)

Investment Manager (BUYR/SELL)

Front-Office Placement

—Placements→

Front-Office Execution

←Execution report(s)—

Broker (SELL/BUYR)

Middle Office Post Trade Processing (IM or Outsourcer)

Allocation Instr generation

—AllocationInstruction→

Allocation Processing

←AllocationInstructionACK—

Middle Office Post Trade Processing (Broker or Outsourcer)

Confirmation processing

←Confirmation—

Confirmation Generation

—ConfirmationAck→

Global Custodian

Clearing Broker (if Self-Clearing, act as Local Clearing Agent)

Local Custodian (RECU/DECU, If needed)

Local Custodian (DECU/RECU, If needed)

Intermediary (REI1/DEI1, If needed

Intermediary (DEI1/REI1, If needed

Local (Clearing, Receiving/ Delivering) Agent (REAG/DEAG)

←— CSD —→

Local Clearing Agent (Delivering/Receiving Agent- DEAG/REAG) If not Self-Clearing

14.2 Three Party Settlement Chain

3 Party Settlement Chain for Broker

[Post-Trade Processing via FIX, Recommended Practices, Equities]
Post-tradeViaFIX_RecommendedPractices_Equities_v1.2.8.doc

[1 August 2017] - [Version 1.2.8]
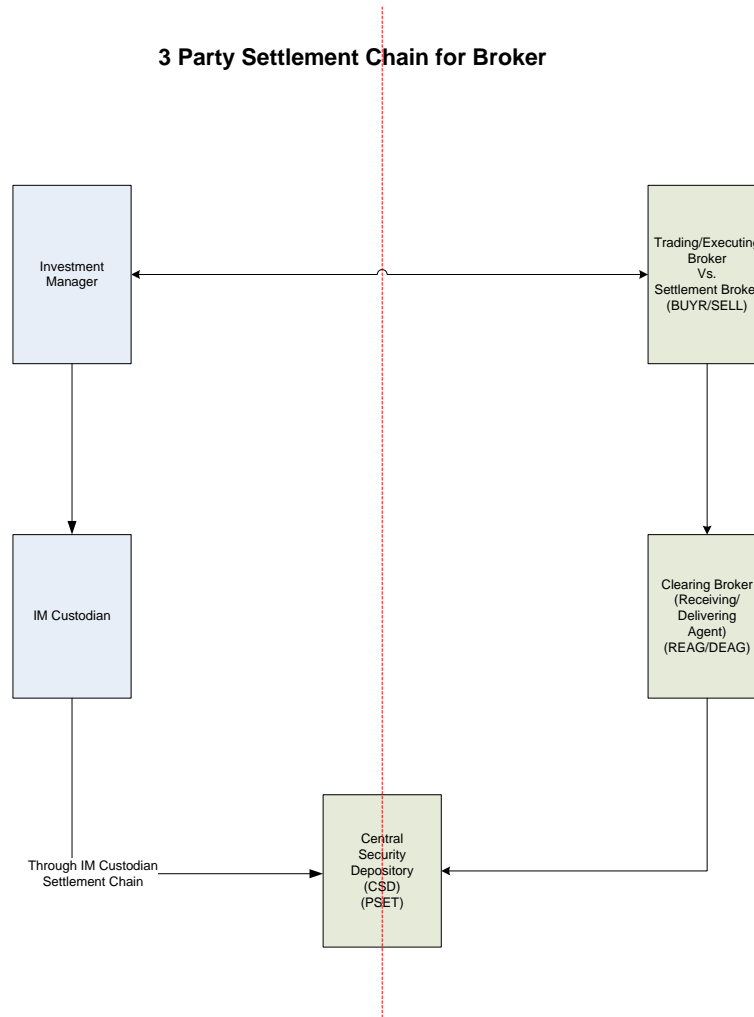
14.3 Four Party Settlement Chain

4 Party Settlement Chain for Broker

[Post-Trade Processing via FIX, Recommended Practices, Equities]
Post-tradeViaFIX_RecommendedPractices_Equities_v1.2.8.doc

[1 August 2017] - [Version 1.2.8]
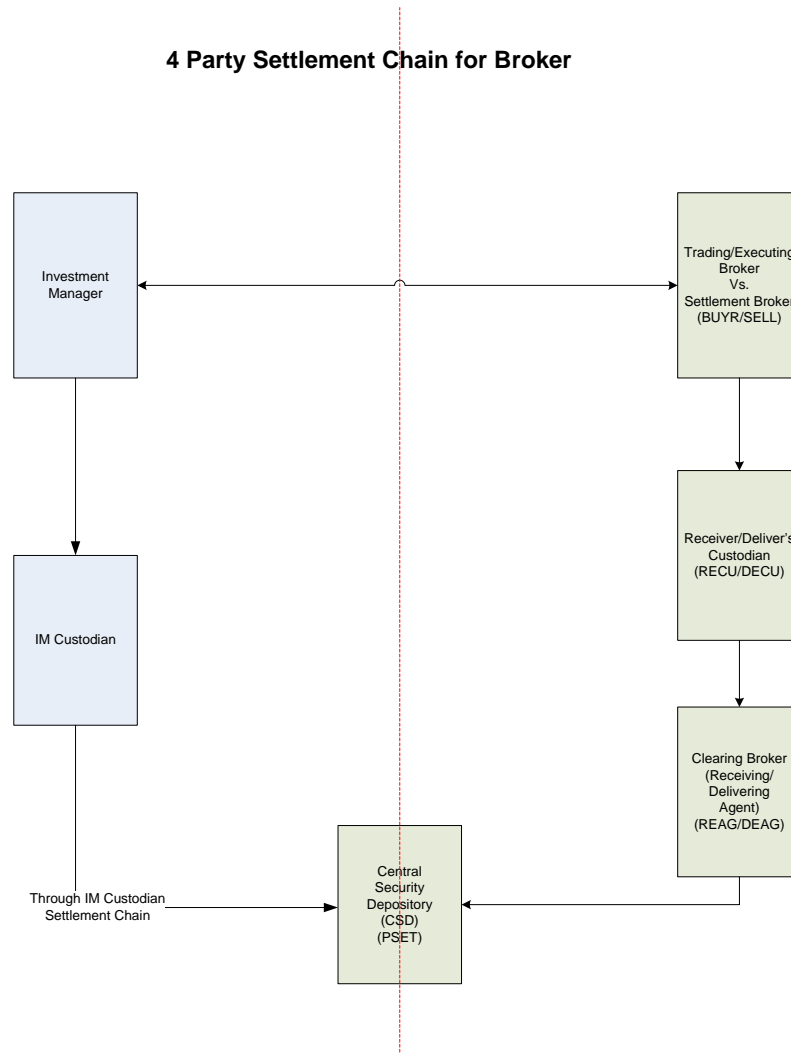
14.4 Five Party Settlement Chain

5 Party Settlement Chain for Broker

[Post-Trade Processing via FIX, Recommended Practices, Equities]
Post-tradeViaFIX_RecommendedPractices_Equities_v1.2.8.doc

[1 August 2017] - [Version 1.2.8]
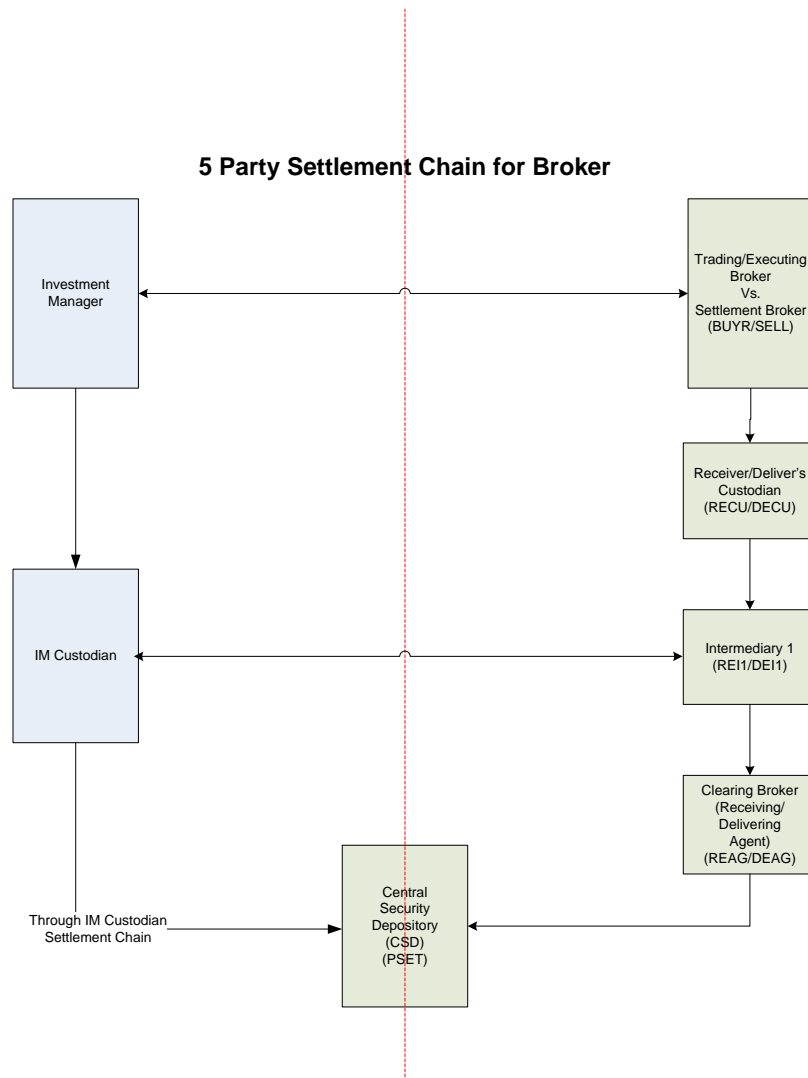
15 Step-out/in Workflow

In the step-out/in workflow, the buy-side sends an AllocationInstruction to the executing broker in which one or more of the account-level allocations is to be transferred to a different broker(s) for clearing and settlement.   The buy-side then sends a separate AllocationInstruction to each of the step-out brokers specifying the quantity being transferred to them and how it is to be allocated.

In the AllocationInstruction to the executing broker one or more transactions in the AllocGrp is identified as a step-out:

- ProcessCode(81) is set to "step-out"
- The step-out broker's identifier is included in the NestedParties component.

    Note: there may be more than one step-out broker specified in a given AllocationInstruction.

- Commission, taxes, fees are not specified for "step-out". These are specified on the "step-in" AllocationInstruction.
- Clearing account identifier is specified in AllocAccount(79)

    Note that if the buy-side does not want to include specific account identifiers in the AllocationInstruction to the execution broker AllocAccount(79) may be set to the broker-id. The buy-side then specifies the specific allocation accounts in the "step-in" AllocationInstruction.

The buy-side must send a "step-in" AllocationInstruction to each "step-in" broker identifying the executing broker/dealer and the transferred block characteristics and allocation accounts. The step-in AllocationInstruction is constructed as follows:

- ProcessCode(81) is set to "step-in"
- SecondaryAllocId(793) is required and contains the AllocID(70) of the AllocationInstruction to the execution broker.
- The executing broker identifier is required:
    - In FIX 4.2, the executing broker is specified in the AllocGrp ExecBroker(76) tag for each transaction.
    - In FIX 4.4, the executing broker is specified in the Parties component at the block-level.
- ClOrdId(11) and OrderId(37) in the AllocOrdGrp component are set to "[STEPIN]".
    - OrderCapacity(528) if included specifies the execution broker OrderCapacity for the placements
    - In FIX 4.2 "step-in" would be handled as part of the configuration process (e.g. separate session)
- The allocation-block Quantity(53) in a "step-in" AllocationInstruction is the sum of the step-out transactions for that broker/dealer from the corresponding AllocationInstruction sent to the execution broker.
- The average price, AvgPx(6), of those transactions is also required.

If the step-out broker is not accessible via a FIX allocation session the step-out broker must be notified by some other means (e.g. email).

The confirm/affirm process for the step-out/in transactions is between the buy-side and the identified step-out broker/dealer(s).

[Post-Trade Processing via FIX, Recommended Practices, Equities]
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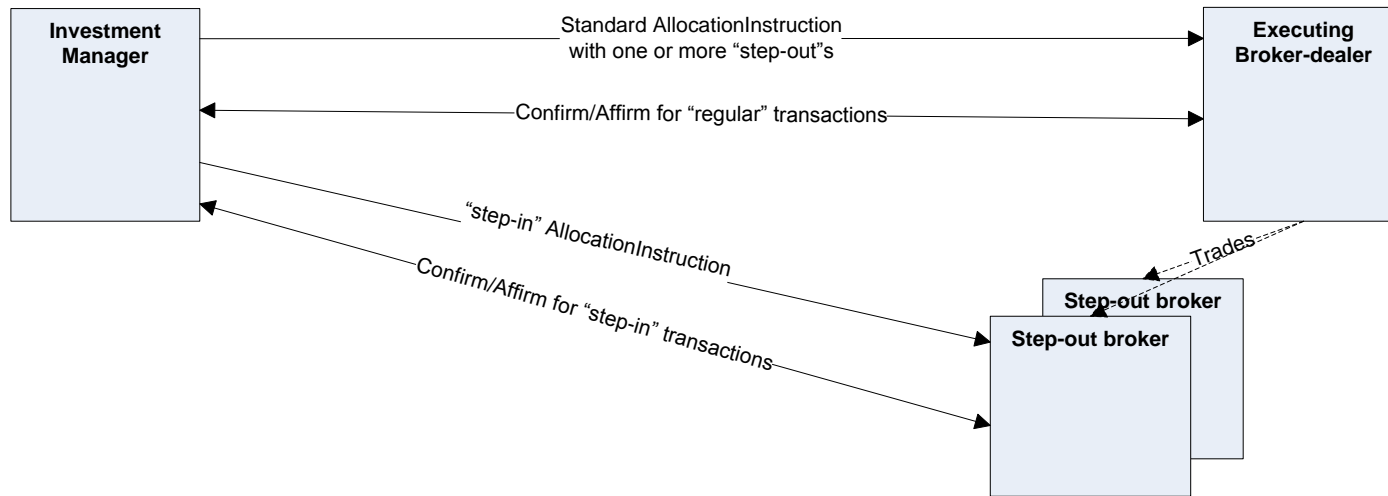
16 Appendices

16.1 High-level Workflows

[Post-Trade Processing via FIX, Recommended Practices, Equities]
Post-tradeViaFIX_RecommendedPractices_Equities_v1.2.8.doc

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16.1.1 US Post-trade Processing via OASYS® -

Buy-side

Investment Manager

OASYS®

Broker / Dealer

(1a) order(s)

(1b) Execution report (s)

(2b) Allocation Instruction

(2e) AllocationInstruction "accept"

(2c) Allocation Instruction

(2d) Allocation Instruction "accept"

Matched trades

OR

Investment Manager or Custodian Bank

(3b) Confirmation

(3c) Affirmation

TradeSuite(R)

(3a) Confirmation

(3d) Affirmation

Affirmed transactions

Client or Custodian Bank

DTC

Notes:
Allocation block ambiguities are resolved via phone or email.

[Post-Trade Processing via FIX, Recommended Practices, Equities]
Post-tradeViaFIX_RecommendedPractices_Equities_v1.2.8.doc

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16.1.2 Non-US Post-trade via CTM® –

[Post-Trade Processing via FIX, Recommended Practices, Equities]
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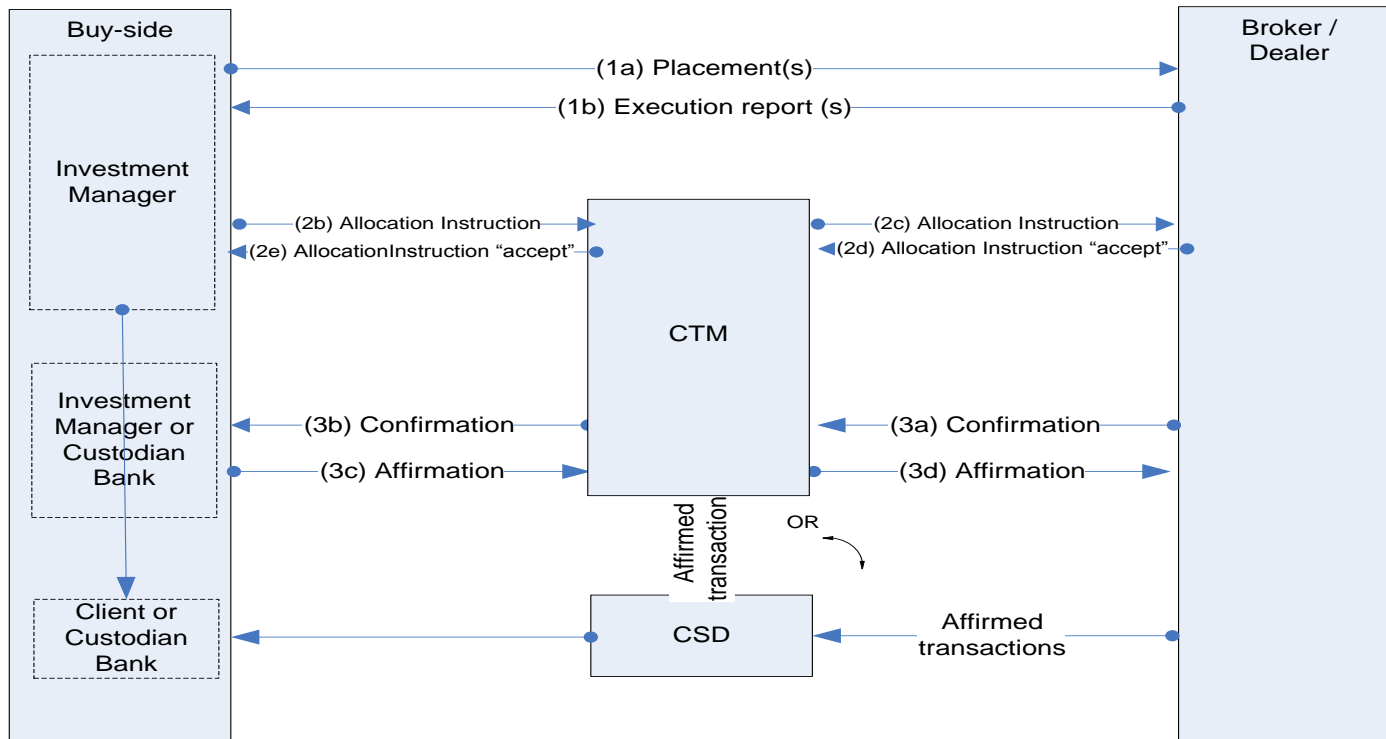
16.1.3 Non-US Post-trade, FIX Allocations, OASYS-Global® Confirmation/Affirmation
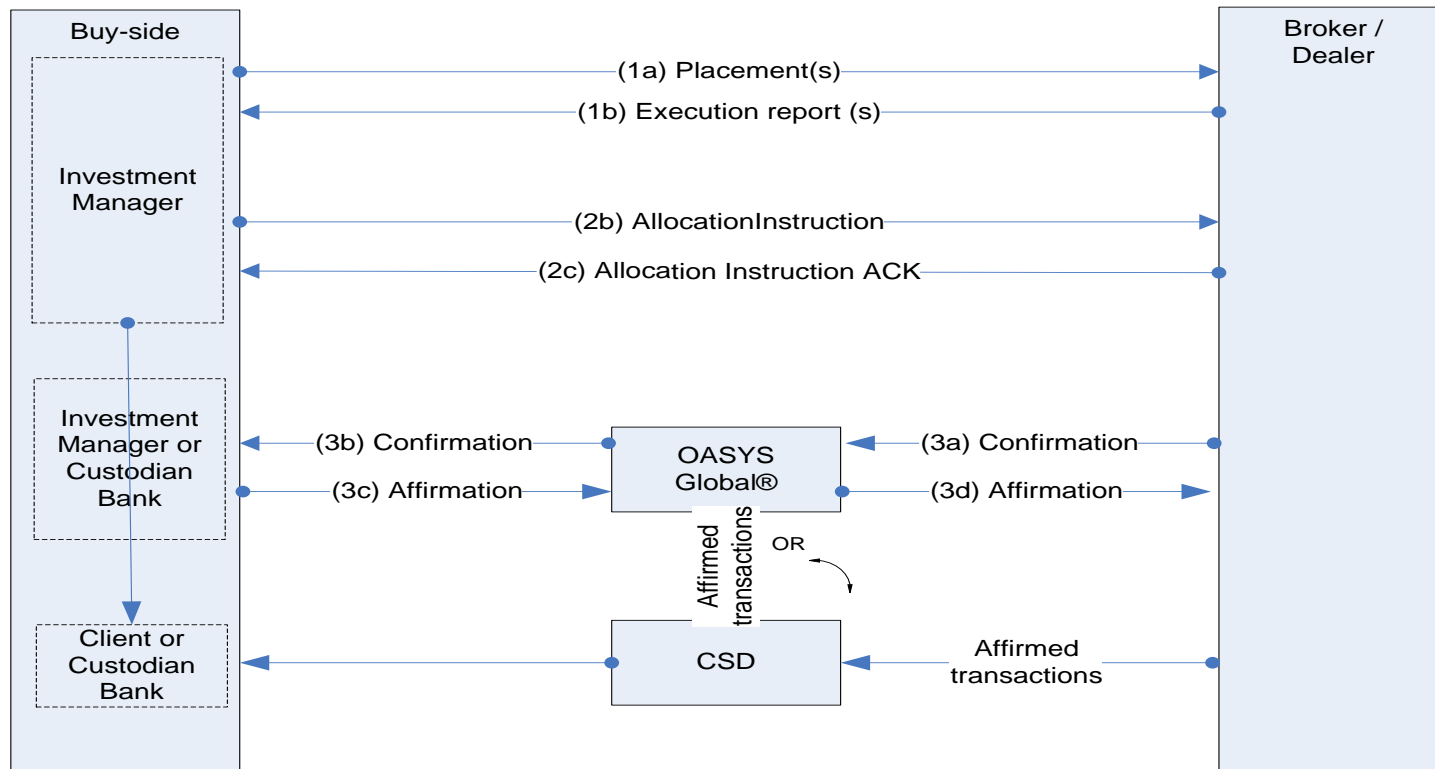
[Post-Trade Processing via FIX, Recommended Practices, Equities]
Post-tradeViaFIX_RecommendedPractices_Equities_v1.2.8.doc

[1 August 2017] - [Version 1.2.8]

[Post-Trade Processing via FIX, Recommended Practices, Equities]
Post-tradeViaFIX_RecommendedPractices_Equities_v1.2.8.doc

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16.1.4 US Post-trade, FIX Allocations, TradeSuite® Confirmation/Affirmation

[Post-Trade Processing via FIX, Recommended Practices, Equities]
Post-tradeViaFIX_RecommendedPractices_Equities_v1.2.8.doc

[1 August 2017] - [Version 1.2.8]
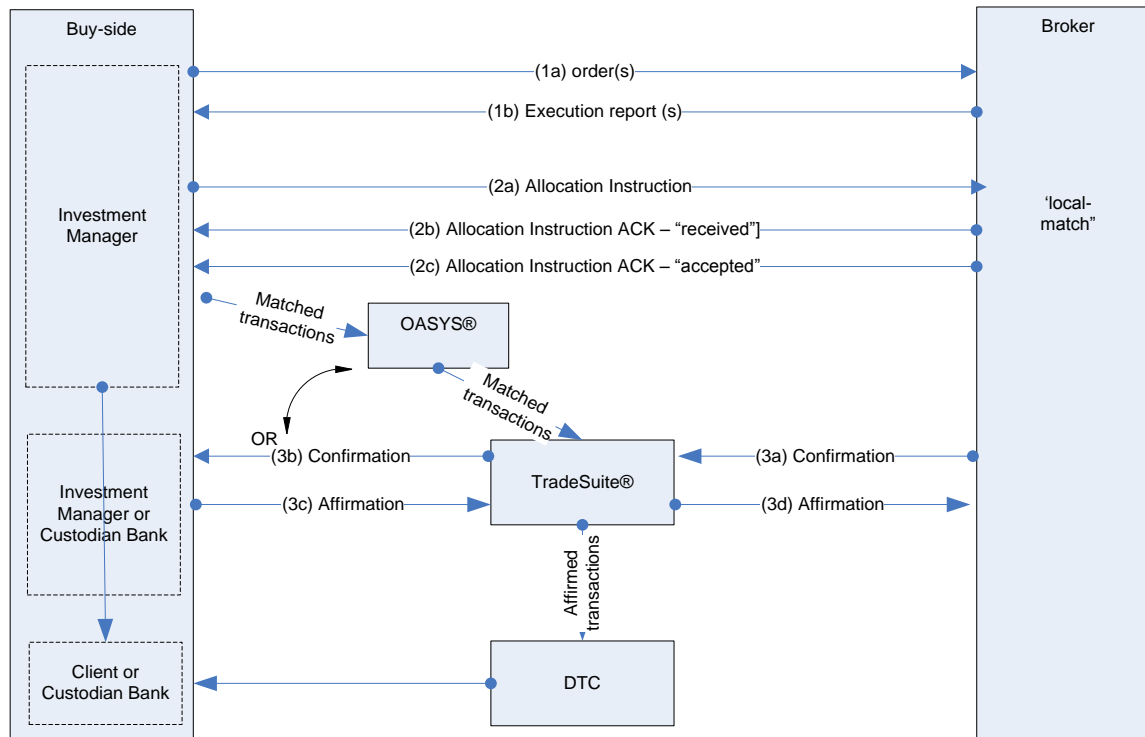
16.1.5 US – [Cancel] AllocationInstruction – FIX Allocations, TradeSuite® Confirmation/Affirmation

[Post-Trade Processing via FIX, Recommended Practices, Equities]
Post-tradeViaFIX_RecommendedPractices_Equities_v1.2.8.doc

[1 August 2017] - [Version 1.2.8]
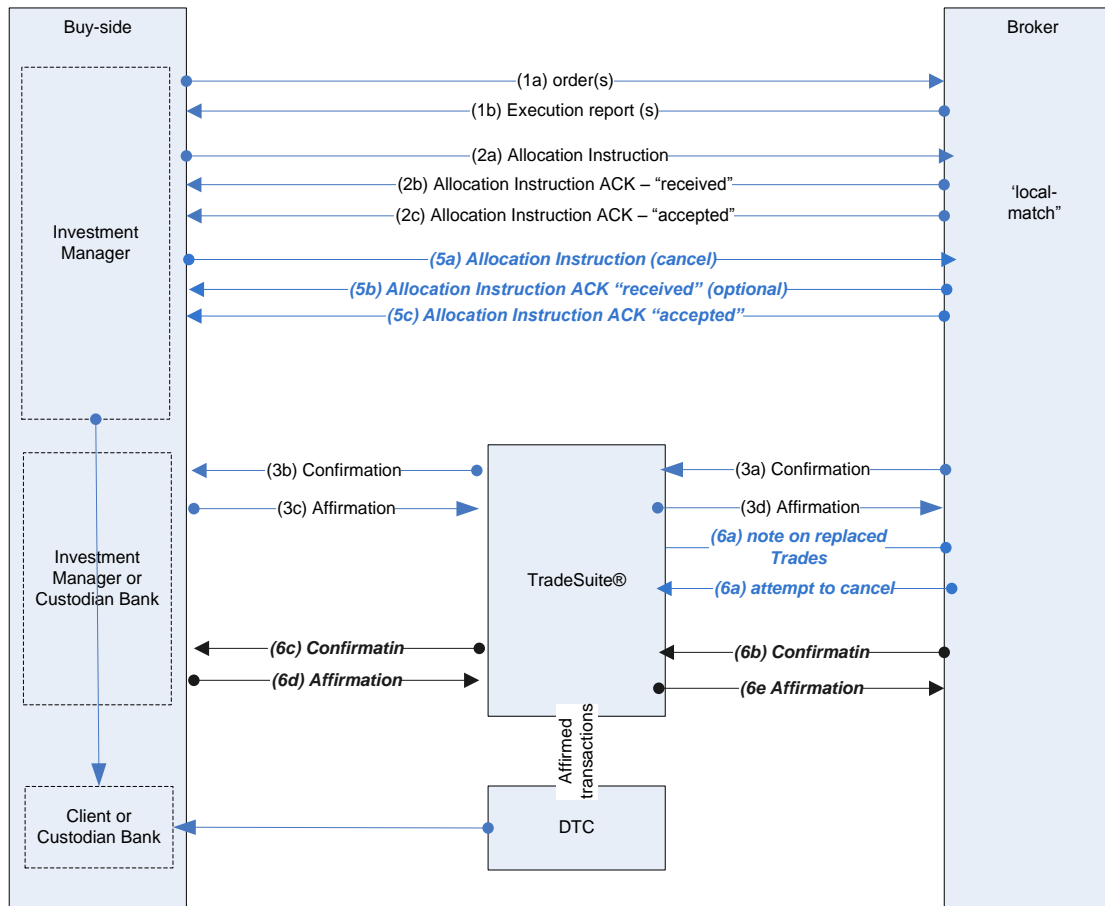
Notes:

- The allocation [cancel] does not cause anything to be transmitted to TRADESUITE® by the buy-side.

- [cancel]ed allocations may result in duplicate/overlapping allocations in TradeSuite and/or the DTC. These are resolved as in the current process.

16.1.6 US - Resend AllocationInstruction – FIX Allocation Flow – TradeSuite® Confirmation/Affirmation
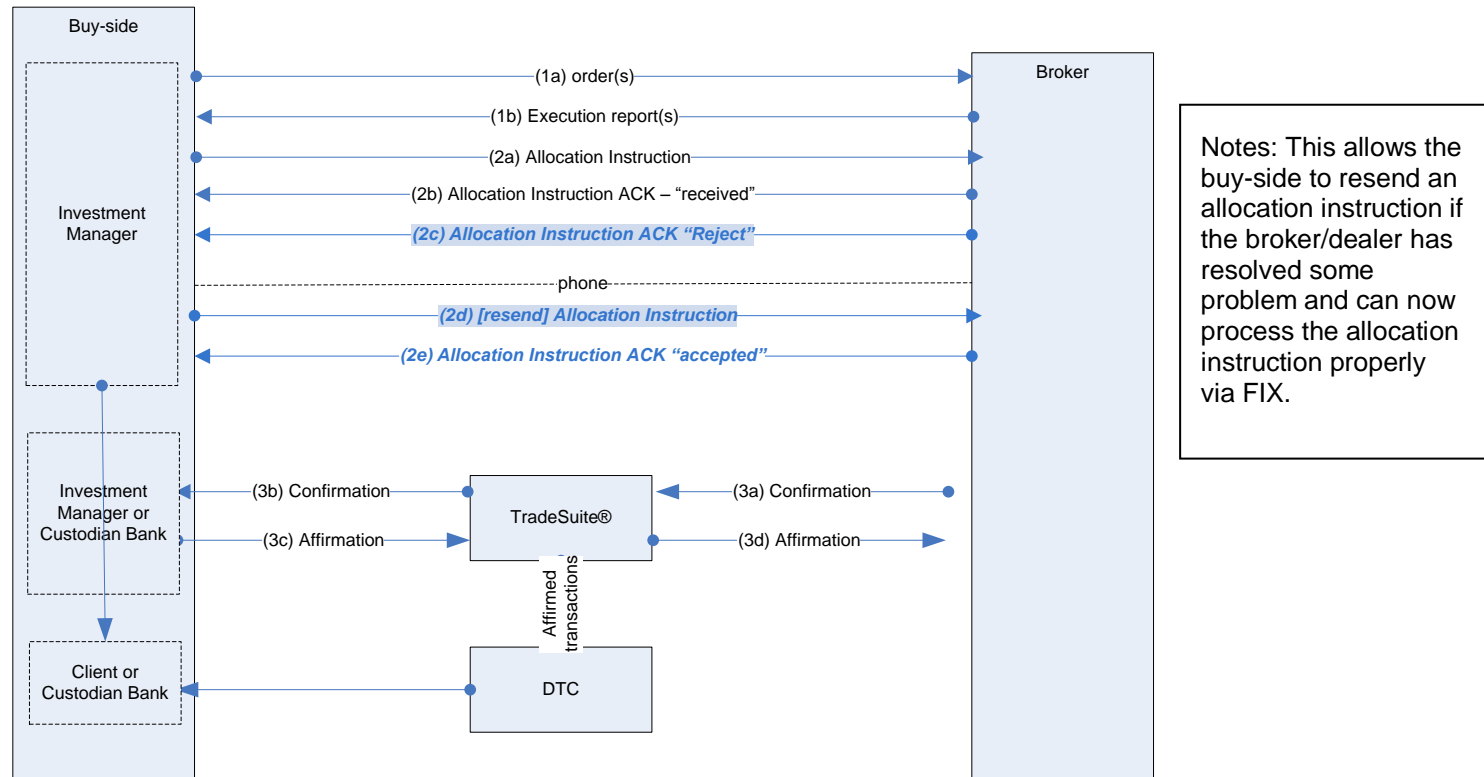
[1 August 2017] - [Version 1.2.8]

16.1.7 FIX Allocation and FIX Confirmation Flow

[Post-Trade Processing via FIX, Recommended Practices, Equities]
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Notes:

- US buy-side-"calculated"

- non-US sell-side-"calculated"
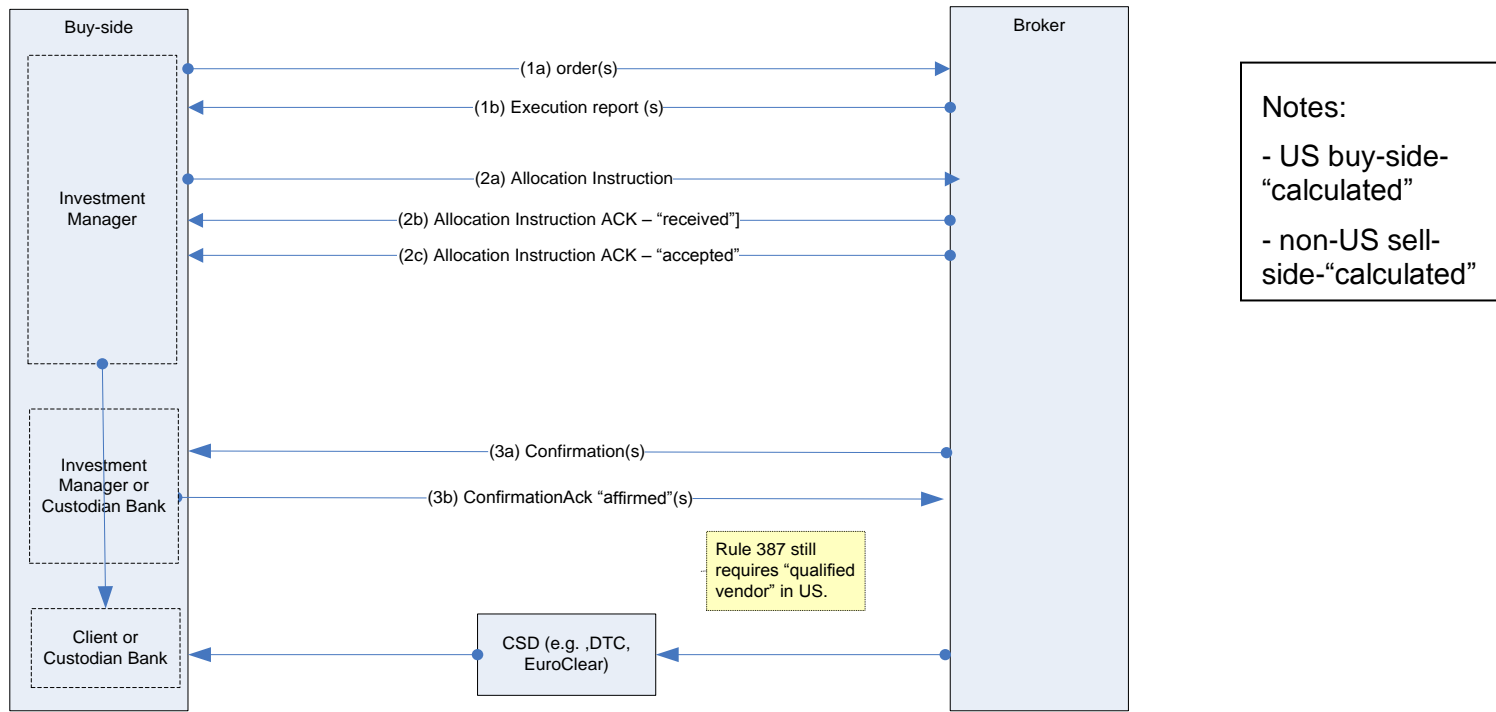
16.2 AFME FIX Allocation & Confirmation Workflow Summary

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16.2.1 OBJECTIVE

Clients and brokers have been working with "FIX Protocol" to expand FIX messaging workflow to support confirmation processing. FIX Protocol is currently used as part of the order execution process and also as a mechanism for clients to send allocations to their brokers.

The expansion of this messaging workflow will enable brokers to issues confirmations in FIX format (4.4) and for the client to either affirm or reject the confirmations electronically.

The main objective and intent of this document is to provide the following:

- Compliment the detailed FIX documentation compiled by the FIX Trading Community group
- A summary of the Vanilla front 2 back flow from execution to affirmation
- A concise high-level summary of the workflows and exception management process for FIX allocation & confirmation between buy & sell side.

- High level assumptions

This document articulates workflow at each stage of the lifecycle and highlights the exception management process from both a client and broker perspective. The flows & exception management processes that will be covered are listed below:

- Front 2 Back Fix Workflow Diagram
- FIX Messaging: Workflow And Exception Management
    - Allocation Instruction (New)
    - Allocation Instruction (Cancel)
    - Allocation Instruction (Replace)
    - Confirmation modification (Cancel) & (New)

*To avoid confusion it should be noted that the FIX guidelines remain the standard and should always be used for implementation purposes (**Equity Post-Trade Processing via FIX Recommended Guidelines FIX 4.2, 4.4, V1.2.1**).*

16.2.2 FIX Message Summary

The following FIX messages are used in the allocation, confirmation and affirmation workflow:

Tag 35	FIX 4.2	FIX 4.4	name	Type/response
"J"	x	x	AllocationInstruction	[new] [replace] [cancel]
"P"	x	x	AllocationInstructionAck	"received" "accepted" (successfully processed) "rejected" (block-level)
"AK"	n/a	x	Confirmation	[new]

				[cancel]
"AU"	n/a	x	ConfirmationAck	"received"
				"affirmed"
				"rejected"

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16.2.3 Vanilla Front 2 Back FIX Workflow

CURRENT PROCESS (FIX 4.2)				NEW PROCESS (FIX 4.4)	
Order Execution	Block Level Matching	Allocations	Confirmations	Affirmations	

Client

- FIX Type D — Place Order
- FIX Type J — Generate Allocation Instruction(s)
- FIX Type P (rejected) — Return AI Ack 'Rejected Invalid format'
- FIX Type P (received) — Receive AI Ack 'Received'
- FIX Type P (rejected) — Receive AI Ack 'Rejected Block Level Reject'
- FIX Type P (Block Match) — Receive AI Ack 'Block Match Allocation Pending'
- FIX Type P (rejected) — Receive AI Ack 'Rejected'
- FIX Type P (accept or reject) — Receive AI Ack 'Accept'
- FIX Type AK — Confirmations Received
- FIX Type AU — Accept or Reject Confirmations

If one allocation fails validation, Allocation Instruction is rejected. PROCESS STARTS AGAIN

Broker

- Execution Report
- Order Received and executed
- FIX Type J — Allocation instruction received & format validated
- Valid message format? — No → Return AI Ack 'Rejected Invalid format' (FIX Type P (rejected)); Yes →
- FIX Type P (received) — Return AI Ack 'Received'
- Block Match/ Link — No → Return AI Ack 'Rejected Block Level Reject' (FIX Type P (rejected)); Yes →
- FIX Type P (Block Match) — Return AI Ack 'Block Match Allocation Pending' *Optional Message*
- All Allocations Processed — No → Return AI Ack 'Rejected' (FIX Type P (rejected)); Yes →
- FIX Type P (accept or reject) — Return AI Ack 'Accept'
- FIX Type AK — Generate Confirmation(s)
- FIX Type AU — Confirmation Accept / Reject received

16.2.4 FIX Messaging: Workflow and Exception Management

16.2.4.1 Allocation Instruction (New)

- Buy side send an Allocation Instruction [new Type "J"] message (Contains total block and allocations details within the same message)
- Sell side send an Allocation Instruction ACK [new Type "P"] 'received' message and have the option to send a 'pending' optional block matched status.
- Sell side can send either an Allocation Instruction ACK [new Type "P"] 'accept' or 'reject' message.
- Following a Sell side Allocation Instruction ACK [new Type "P"] 'accept' message, Confirmation [new] messages are generated per transaction and sent to the Buy side.
- Buy side then either send Confirmation ACK [new Type "AU"] 'affirm' or 'reject' messages back to Sell side. If affirmed process is completed. If confirmations are rejected Sell side will need to review and contact buy side/FO to resolve.
- If there is mismatch or DK the Sell side can send an Allocation Instruction ACK [new Type "P"] 'reject' message. This 'rejects' entire message (Block and Allocations).
- Following this Sell side 'block' is unmatched internally.
- Buy side needs to submit an Allocation Instruction [new Type "J"] again to kick off matching process.

16.2.4.2 Allocation Instruction [cancel]

- Buy side initiate an Allocation Instruction [cancel Type "J"] which cancels all allocations within the message. Total block and allocations are all part of the same Allocation Instruction message.
- Sell side send an Allocation Instruction [cancel Type "P"] 'received' message.
- Sell side send either an Allocation Instruction [cancel Type "P"] 'reject' or 'accept' message.
- If the Sell side 'accepts', the allocations are cancelled internally and the Sell side 'block' is now unmatched.
- If the Sell side has already sent confirmations to the client, Confirmation [cancel Type "AK"] messages will be sent to the Buy side.
- If the Sell side cancels their trade without an Allocation Instruction [cancel Type "J"] from the buy side they will do so by sending an "execution Report" cancel.
- The buy side will review and if they agree will send an Allocation Instruction [cancel Type "J"] message
- This will trigger the sell side to cancel any confirmations sent to the client, Confirmation [cancel Type "AK"] message
- If the buy side disagree a manual process is required to determine next steps i.e. broker / client contact to resolve.

16.2.4.3 Allocation Instruction [replace]

- Buy side have the option to send an Allocation Instruction [replace Type "J"] message updating specific allocations within an original message.
- Sell side can either 'reject' or 'accept' the Allocation Instruction ACK [replace Type "P"] message.
- If Sell side 'accepts' they send a Confirmation [cancel Type "AK"] of the original and send Confirmation [new Type "AK"] for the replaced allocation.
- Buy side will send Confirmation ACK [new Type "AU"] 'affirmed' if agreed, or 'reject' if they don't and there will be a manual process to determine next steps i.e. broker/client contact to resolve.
- If Sell side 'rejects' Allocation Instruction ACK [replace Type "P"], there will be a manual process to determine next steps i.e. broker/client contact to resolve why the update is not accepted.

From an industry perspective the majority of clients and brokers utilize cancel & new messages rather than "replace". This may change at some stage as FIX messaging protocol provides the option of using the "replace" workflow.

Please refer to FIX guidelines document for a list of fields that can be amended using "replace" workflow

16.2.4.4 Confirmation modification [cancel] & [new]

- Sell side have the option to modify specific fields after a confirmation has been initiated (fees, charges, SSI's, commissions, tax).
- Sell side send Confirmation [cancel Type "AK"] of original message followed by Confirmation [new Type "AK"].
- Buy side receives the Confirmation [cancel Type "AK"]
- Buy side sets internal status for the Confirmation to "replace pending"
- Buy side responds with ConfirmationAck "received"
- Buy side send either Confirmation ACK [new Type "AU"] 'affirm' or 'reject'.
- Following a 'reject' a manual process may be required to resolve discrepancies i.e. broker/client contact

16.2.5 Assumptions

- FIX Order execution process will not change as part of this initiative
- FIX allocation process will not change as part of this initiative
- New workflow is articulated in Confirmation & Affirmation section.

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- Confirmation enrichment for local taxes, charges and fees will continue to be "sell side" calculation as per current process – Client will then validate this information and subsequently affirm or reject the confirmation.

16.3 FIX Message Workflow Examples

See Equity Post-trade Processing via FIX, Guidelines, FIX 4.2, 4.4-V1.2, Examples and Notes.

16.4 Settlement Instruction Examples

See Equity Post-trade Processing via FIX, Guidelines, FIX 4.2, 4.4-V1.2, Examples and Notes.

16.5 Certification Test Checklist

See Functional and Problem Avoidance checklists above as well as additional notes in Equity Post-trade Processing via FIX, Guidelines, FIX 4.2, 4.4-V1.2, Examples and Notes.

16.6 Roles and Responsibilities Framework

The trade cycle requires communication between different groups on the buy-side and sell-side. While sometimes these groups may be closely integrated, sometimes they are not (may even be outsourced) so the best-practices is designed with these distinct roles and responsibilities in mind. Note that though the names are the same, buy-sides and sell-side groups have different needs and responsibilities (and world-views).

	Buy-side	Sell-side
Front-office	Initiate placements that meet compliance constraints	Provide executions that meet compliance constraints Deal with post-allocation - busts and corrections - compliance audit issues
Middle-office	Allocation of placements to accounts taking into consideration fairness and compliance	Receive executions from front-office (as well as busts and corrections)

	constraints	Receive allocation instructions from the buy-side
	Provide allocation instruction and settlement instructions to sell-side	Provide a set of executions for the given instrument, side with the average price specified in the allocation instruction
	Deal with post-allocation front-office busts/corrections and/or compliance issues	validate and/or add other fees
		identify settlement instruction details
	Resolve reconciliation and compliance issues with custodians	at the end of the day the average price of the executions from the front-office must equal the average-price of the trade allocations
Back-office	affirm the trade allocations as communicated by the broker	initiate communication of the final trade details and detailed settlement instructions to the buy-side and obtaining their agreement (affirmation)
	resolve settlement instruction issues with sell-side back-office	resolve settlement instruction issues with buy-side back-office
	communicating trade details and settlement instructions to custodian	communicating the trade details to the CCP
		resolving any settlement issues with client custodian
	resolve settlement issues with custodian	
Client Custodian	reconciling trade details received from buy-side with those received from CCP	

16.7 Initial Code List for MiscFeeSubType

Granular FIX Code (MiscFeeSubType)	Example Description (MiscFeeSubTypeDesc)		Country
AR-EXCHG	ARGENTINA - EXCHANGE FEE	AR	ARGENTINA
AR-VAT	ARGENTINA - VAT	AR	ARGENTINA
AR-OTHER	ARGENTINA - OTHER	AR	ARGENTINA

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AU-GST	AUSTRALIA - GST TAX	AU	AUSTRALIA
AU-OTHER	AUSTRALIA - OTHER	AU	AUSTRALIA
BR-EXCHG	BRAZIL - EXCHANGE FEE	BR	BRAZIL
BR-OTHER	BRAZIL - OTHER	BR	BRAZIL
CN-CLEAR	CHINA - CLEARING/SETTLEMENT/TRANSFER FEE (Paid to Depository & Clearing Co)	CN	CHINA
CN-CSRC	CHINA - CSRC REGULATORY LEVY	CN	CHINA
CN-EXCHG	CHINA - EXCHANGE TRANSACTION LEVY	CN	CHINA
CN-STAMP	CHINA - STAMP DUTY	CH	CHINA
CN-OTHER	CHINA - OTHER	CN	CHINA
CO-VAT	COLOMBIA - VAT	CO	COLOMBIA
CO-OTHER	COLOMBIA - OTHER	CO	COLOMBIA
CY-REGIST	CYPRESS - REGISTRATION FEE	CY	CYPRESS
CY-STAMP	CYPRESS - COUNTRY STAMP DUTY/TAX	CY	CYPRESS
CY-OTHER	CYPRESS - OTHER	CY	CYPRESS
CZ-EXCHG	CZECH REPUBLIC - STOCK EXCHANGE CLEARING FEE	CZ	CZECH REPUBLIC
CZ-OTHER	CZECH REPUBLIC - OTHER	CZ	CZECH REPUBLIC
FR-FTT	FRANCE - FRENCH FINANCIAL TRANSACTION TAX	FR	FRANCE
FR-VAT	FRANCE - VAT	FR	FRANCE
FR-OTHER	FRANCE - OTHER	FR	FRANCE
GR-CLEAR	GREECE - STOCK EXCHANGE CLEARING FEE	GR	GREECE
GR-SALES	GREECE - STOCK EXCHANGE SALES TAX	GR	GREECE
GR-OTHER	GREECE - OTHER	GR	GREECE

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HK-EXCHG	HONG KONG - Exchange TRADING FEE	HK	HONG KONG
HK-SFC	HONG KONG - SFC TRANSACTION LEVY	HK	HONG KONG
HK-STAMP	HONG KONG - STAMP DUTY	HK	HONG KONG
HK-OTHER	HONG KONG - OTHER	HK	HONG KONG
IN-STT	INDIA - SECURITY TRANSACTION TAX (STT)	IN	INDIA
IN-OTHER	INDIA - OTHER	IN	INDIA
ID-EXCHG	INDONESIA - Exchange TRANSACTION TAX	ID	INDONESIA
ID-VAT	INDONESIA - VAT	ID	INDONESIA
ID-WITHHOLD	INDONESIA - WITHHOLDING TAX (KPEI Guarantee Fund)	ID	INDONESIA
ID-OTHER	INDONESIA - OTHER	ID	INDONESIA
IE-ITP	IRELAND - ITP LEVY	IE	IRELAND
IE-STAMP	IRELAND - STAMP DUTY	IE	IRELAND
IE-OTHER	IRELAND - OTHER	IE	IRELAND
IT-FTT	ITALY - ITALIAN FINANCIAL TRANSACTION TAX	IT	ITALY
IT-OTHER	ITALY - OTHER	IT	ITALY
JP-CONSUM	JAPAN - CONSUMPTION TAX	JP	JAPAN
JP-OTHER	JAPAN - OTHER	JP	JAPAN
KR-AGRICUL	KOREA - AGRICULTURAL TAX	KR	KOREA
KR-CAPGAIN	KOREA - CAPITAL GAINS TAX	KR	KOREA
KR-RESIDENT	KOREA - RESIDENTIAL TAX	KR	KOREA
KR-SALES	KOREA - SALES TAX	KR	KOREA
KR-OTHER	KOREA - OTHER	KR	KOREA

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MY-CLEAR	MALAYSIA - CLEARING FEE	MY	MALAYSIA
MY-STAMP	MALAYSIA - STAMP DUTY	MY	MALAYSIA
MY-OTHER	MALAYSIA - OTHER	MY	MALAYSIA
PK-CAPVAL	PAKISTAN - CAPITAL VALUE TAX	PK	PAKISTAN
PK-FEDEXC	PAKISTAN - FEDERAL EXCISE DUTY	PK	PAKISTAN
PK-OTHER	PAKISTAN - OTHER	PK	PAKISTAN
PE-CLEAR	PERU - CAVAKI (CLEARING HOUSE) FEES	PE	PERU
PE-CONASEV	PERU - CONASEV (SEC)	PE	PERU
PE-EXCHG	PERU - STOCK EXCHANGE FEE	PE	PERU
PE-GUARFND	PERU - GUARANTEED FUND FEE	PE	PERU
PE-LIQFND	PERU - LIQ. FUND (LSE)	PE	PERU
PE-SALES	PERU - IGV (SALES TAX)	PE	PERU
PE-OTHER	PERU - OTHER	PE	PERU
PH-CLEAR	PHILIPPINES - SECURITIES CLEARING CORP FEE - SCCP	PH	PHILIPPINES
PH-PCD	PHILIPPINES - PCD FEE	PH	PHILIPPINES
PH-SALES	PHILIPPINES - SALES TAX	PH	PHILIPPINES
PH-STAMP	PHILIPPINES - STAMP DUTY	PH	PHILIPPINES
PH-VAT	PHILIPPINES - VALUE ADDED TAX	PH	PHILIPPINES
PH-OTHER	PHILIPPINES - OTHER	PH	PHILIPPINES
SG-CLEAR	SINGAPORE - CLEARING FEE	SG	SINGAPORE
SG-GST	SINGAPORE - GOODS AND SERVICES TAX	SG	SINGAPORE
SG-OTHER	SINGAPORE - OTHER	SG	SINGAPORE

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ZA-INVPROT	SOUTH AFRICA - FSB Investor Protection LEVY	ZA	SOUTH AFRICA
ZA-STAMP	SOUTH AFRICA - STAMP DUTY	ZA	SOUTH AFRICA
ZA-OTHER	SOUTH AFRICA - OTHER	ZA	SOUTH AFRICA
CH-STAMP	SWITZERLAND - STAMP DUTY	CH	SWITZERLAND
CH-TURNOVR	SWITZERLAND - TURNOVER	CH	SWITZERLAND
CH-OTHER	SWITZERLAND - OTHER	CH	SWITZERLAND
TW-SALES	TAIWAN - SALES TAX	TW	TAIWAN
TW-OTHER	TAIWAN - OTHER	TW	TAIWAN
TH-VAT	THAILAND - VAT	TH	THAILAND
TH-OTHER	THAILAND - OTHER	TH	THAILAND
GB-PTM	UNITED KINGDOM - PTM LEVY	GB	UNITED KINGDOM
GB-STAMP	UNITED KINGDOM - STAMP DUTY	GB	UNITED KINGDOM
GB-OTHER	UNITED KINGDOM - OTHER	GB	UNITED KINGDOM
US-SEC	UNITED STATES - SEC FEE	US	UNITED STATES
US-OTHER	UNITED STATES - OTHER	US	UNITED STATES

16.8 FIX 5.0 and Later Tags and Valid Values

Tag	Field	Valid Values	FIX Version	EP
22	SecurityIDSource	H = Clearing Organization	5.0 SP2	119
167	SecurityType	OOF = Options on Futures	4.4	19
167	SecurityType	TRS = Total return swap ERS = Equity Return Swap FLA = Future look-alike	5.0 SP2	161
88	AllocRejectCode	=14 - Duplicate or missing IndividualAllocId(467) =15 - Trade not recognized =16 – Trade previously allocated [DuplicateTrade] =17 - Incorrect or missing instrument =18 - Incorrect or missing settlement date =19 - Incorrect or missing fund ID or fund name =20 - Incorrect or missing settlement instructions =21 - Incorrect or missing fees =22 - Incorrect or missing tax =23 – Unknown or missing party =24 – Incorrect or missing side =25 – Incorrect or missing net-money =26 – Incorrect or missing trade date =27 – Incorrect or missing settlement currency instructions =28 – Incorrect or missing ProcessCode	5.0 SP2	170
774	ConfirmRejReason	=1 - MismatchedAccount =2 - MissingSettlementInstructions	5.0 SP2	170

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Tag	Field	Valid Values	FIX Version	EP
		=3 - Unknown or missing IndividualAllocId(467)		
		=4 - Transaction not recognized		
		=5 - Duplicate transaction		
		=6 - Incorrect or missing instrument		
		=7 - incorrect or missing price		
		=8 - Incorrect or missing commission		
		=9 - Incorrect or missing settlement date		
		=10 - Incorrect or missing fund ID or fund name		
		=11 - Incorrect or missing quantity		
		=12 - Incorrect or missing fees		
		=13 - Incorrect or missing tax		
		=14 – Incorrect or missing party		
		=15 – Incorrect or missing side		
		=16 – Incorrect or missing net-money		
		=17 – Incorrect or missing trade date		
		=18 – Incorrect or missing settlement currency instructions		
		=19 – Incorrect or missing capacity		

Tag	Field	Valid Values	FIX Version	EP
1328	RejectText	N/A	5.0 SP2	EP103
447	PartyIDSource	M = CFTC reporting firm identifier	5.0 SP2	140
452	PartyRole	52 = LargeTraderReportableAccount	4.4	8
538	NestedPartyRole	52 = Large TraderReportable Account	4.4	8
447	PartyIdSource	N = Leagal Entity Identifier (ISO 17442) LEI	5.0 SP2	140
528	OrderCapacity	M = Mixed capacity	5.0 SP2	170
1031	CustOrderHandlingInst	<FIA Execution Source Code> values	5.0 SP2	133
1032	OrderHandlingInstSource	2 = FIA Execution Source Code	5.0 SP2	133
2300	AllocGrossTradeAmt	<AvgPx or AllocAvgPx times AllocQty>	5.0 SP2	170
2633	NoMiscFeeSubTypes	N/A	5.0 SP2	196
2634	MiscFeeSubType	<market specific fee code> values	5.0 SP2	196
2635	MiscFeeSubTypeAmt	N/A	5.0 SP2	196
2636	MiscFeeSubTypeDesc	N/A	5.0 SP2	196
1832	ClearedIndicator	0 = not-cleared 1 = cleared 2 = submitted 3 = rejected	5.0 SP2	196
1907	NoRegulatoryTradeIDs	<Count>	5.0 SP2	161
1903	RegulatoryTradeID	<unique ID in context of TradeIDSource> (USI or UTI)	5.0 SP2	161
1905	RegulatoryTradeIDSource	ID of reporting entity assigned by regulatory agency	5.0 SP2	161
1904	RegulatoryTradeIDEvent	Event causing origination of the ID. = 0 (Initial block trade) = 1 (allocation, or determination that the	5.0 SP2	161

Tag	Field	Valid Values	FIX Version	EP
		block trade will not be further allocated)		
		= 2 (Clearing)		
		= 3 Compression		
		= 4 Novation		
		= 5 Termination		
1906	RegulatoryTradeIDType	Position of ID in trade hierarchy.	5.0 SP2	161
		= 0 Current		
		=1 Previous(e.g. when reporting a cleared trade or novation of a previous trade)		
		= 2 Block (e.g. when reporting an allocated sub-trade)		
		= 3 Related (e.g. when reporting a mixed swap)		
2104	NoAttachments	= <number of attached disclosures>	5.0 SP2	167
2105	->AttachmentName	Name of the disclosure document	5.0 SP2	167
2106	->AttachmentMediaType	The following mime types are currently part of the guidelines ="text/plain" (.txt) ="text/rtf" (.rtf) ="application/msword" (.doc) =" application/vnd.openxmlformats-officedocument.wordprocessingml.document" (.docx) = "application/pdf" (.pdf)	5.0 SP2	167
2108	->AttachmentExternalURL	Used to specify an external URL where the attachment can be obtained.	5.0 SP2	167
2109	->AttachmentEncodingType	The encoding type of the content provided in EncodedAttachment. Valid values: 0 = Base64 1 = Raw binary (Elaboration: Unencoded binary content.)	5.0 SP2	167
2111	->EncodedAttachmentLen	Byte length of EncodedAttachment field.	5.0 SP2	167
2112	->EncodedAttachment	The content of the attachment in the encoding format specified in the	5.0 SP2	167

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Tag	Field	Valid Values	FIX Version	EP
		AttachmentEncodingType field.		
2653	->NoAllocCommissions	Total number of commissions	5.0 SP2	204
2654	-->AllocCommission Amount	Total commission amount	5.0 SP2	204
2655	--> AllocCommission AmountType	Supported values: '0' Unspecified '1' Acceptance '2' Broker '3' Clearing broker '4' Retail '5' Sales commission '6' Local commission '7' Research Payment	5.0 SP2	204, 233
2726	--> AllocCommission AmountSubType	Supported values: '0' RPA (Research Payment Account) '1' CSA (Commission Sharing Agreement) '2' other (payment type other than RPA or CSA)	5.0 SP2	233
2656	-->AllocCommissionBasis	Supported values: 1 = Per unit 2 = Percent 3 = Absolute - Recommeded	5.0 SP2	204
2639	NoCommissions	Total number of commissions	5.0 SP2	204
2640	-> CommissionAmount	Total commission amount	5.0 SP2	204
2641	-> CommissionAmount Type	Supported values: '0' Unspecified '1' Acceptance '2' Broker '3' Clearing broker	5.0 SP2	204, 233

Tag	Field	Valid Values	FIX Version	EP
		'4' Retail '5' Sales commission '6' Local commission '7' Research Payment		
2725	-> CommissionAmount SubType	Supported values: '0' RPA (Research Payment Account) '1' CSA (Commission Sharing Agreement) '2' other (payment type other than RPA or CSA)	5.0 SP2	233
2642	-> CommissionBasis	Supported values: 1 = Per unit 2 = Percent 3 = Absolute - Recommeded	5.0 SP2	204