



FIX Trading Community MiFID Transaction & Trade Reporting Working Group

MiFID II/R Implementation Guidelines for Inter- Firm Data Communication for Transaction Reporting

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Introduction

The ESMA level 3 guidance on transaction reporting, record keeping and clock synchronisation (October 2016) contains a number of examples for transaction reporting both for investment managers and brokers. From these, a number of statements can be made regarding 'market side' transaction reporting requirements for investment managers:

- The market side reports from investment managers have to correlate with client side reports from brokers. This means there should be the same number of reports and a number of fields (including timestamps, buyer/seller codes, 'venue' and OTC flags) should be the same on both firm's reports.
- When the broker is dealing in MTCH capacity, or AOTC without use of the INTC internal counterparty, then the broker will be reporting each fill individually (or to put it another way, their market side reports double up as client side reports).
- When the broker is dealing in DEAL capacity (or AOTC with the INTC internal counterparty), then reporting is at the level of 'client fill'. This would generally be an average price execution at the level of the client's order but could be at any level based on agreement between the investment manager and their broker (including, potentially, individual execution level).
- The broker will report their client-side report either using venue XOFF or their SI MIC.
- Both parties need to know the legal entity with which they are transacting.
- Firms require the ability to communicate, when selling, to identify whether they are selling long, short, short with an exemption or not disclosing whether they are long or short.

Requirements summary

Given the above, it is clear that investment managers require a certain amount of data from their brokers in order to transaction report correctly (aside from using 'assisted' reporting models and similar where the broker's data is used directly on the investment managers' reports). This has been analysed by the relevant FIX Trading Community MiFID working groups who have determined the following:

- There is a need to distinguish between notices of execution and the actual 'client execution', the former being informational and the latter being used to trigger the broker's client-side transaction report (and hence the investment manager's market-side transaction report).
- There is a need to provide the MIC as used in the transaction report 'venue' field, i.e. XOFF or an SI MIC.
- There is a need for brokers, where trading in their capacity as a systematic internaliser, to provide OTC trade flags to the client for their transaction report¹ (it should be noted that these are also required, in some cases, for trade reporting – this is covered in the Trade Reporting Guidelines document from the MiFID II Transparency Working Group). It should be noted that venue waiver flags and deferral flags do not need to be passed.
- There should be an ability (though not a mandate) to exchange LEIs during the trading process to ensure that both parties transaction report the correct LEI. In addition, where an order originates from more than one legal entity, these needs to be flagged to ensure that a) the order is flagged on trading venues appropriately (e.g. AGGR flag) and b) the order recipient is able to hold up transaction reporting pending identification of the underlying LEI split.
- There is a need to distinguish between orders (intending to purchase or sell a specific instrument) and 'requests for market data' (RFMDs) used to obtain a price in an instrument used to price a derivative.

¹ Note there is some uncertainty on this requirement and clarity is being sought from ESMA.

It should be noted that for some fields, the contents of this document apply when trading 'MiFID instruments' only. However we regard it as permissible to send these fields even on non-MiFID instruments.

It should also be noted that the above requirements, and hence the contents of this document, may need to evolve as further clarification or guidance is received from the regulatory community on this topics. Should the need arise, modified versions of this document will be issued as appropriate.

Implementation

'Client fill' vs. informational NOE

It is recommended that the **presence** of transaction reporting venue be used to denote that an execution message represents a 'client fill' and hence a transaction reportable event. Investment managers and brokers may agree between them that all execution messages be treated as client fills (as would, for example, be the case with all MTCH capacity business). The ability to distinguish between 'client fill' and informational messages (notices of execution or NOEs) is particularly relevant to trading in DEAL capacity or AOTC when used in conjunction with the INTC internal counterparty.

Dealing capacity

As per the FIX transparency working group paper on trading capacity, FIX tag 29 can be used to communicate dealing capacity on executions as follows:

- AOTC – 29 = 1 or 2
- MTCH – 29 = 3
- DEAL – 29 = 4 or 5

Transaction reporting venue

The transaction reporting venue cannot be represented in tag 30 LastMarket as the message representing a 'client fill' may itself be an execution (hence tag 30 would contain the MIC for the venue for that execution). Instead, we are to use the Parties component repeating group with PartyRole = 73 'execution venue', for example:

- NoPartyIds 453=1
- PartyID 448=XOFF
- PartyIDSource 447=G (MIC)
- PartyIDRole 452=73 (execution venue)

Firms unable to use repeating groups can instead use user defined field 20073 PartyIDExecutionVenue.

Identification of RFMDs

It is proposed that the existing FIX tag 775 Booking Type be used for this²:

- Field not populated = an order
- 0 (regular booking) = an order
- 1 (CFD) = an RFMD
- 2 (total return swap) = an RFMD

² We recognise that the distinction between 'orders' and 'RFMD' is existing practice and firms use standing instructions, other FIX tags or 775 for this purpose. Though we do recommend 775 as the standard, we are not suggesting that any existing arrangements need to be changed for MiFID compliance.

OTC trade flags

In the table below, the "FIX User Defined Details" refers to a set of user defined fields that have been reserved for replicating the various message components identified in the "FIX Standard Details" column. The latter represents the official FIX implementation, with these components being listed in the FIX repository and available on the FIX website. The former is intended for use by firms unable to support this type of message structure. These user defined fields simply contain a spec-delimited list of the values expected in the full component structure. For example, a trade with the SDIV and TNCP flags would be represented as follows:

FIX Standard form: 1838(NoTradePriceConditions) = 2; 1839(TradePriceCondition) = 13;
1839(TradePriceCondition) = 16

FIX User Defined form: 8014(TradePriceConditions) = 13 16

| Data element | FIX Standard Fields | FIX User Defined Fields |
|-----------------------------------|--|--|
| Off-Venue Trade Flags | | |
| BENC flag | SecondaryTrdType(855) - existing field from 4.4, being added to execution reports 64 -> Benchmark | As FIX Standard details |
| SDIV flag | NoTradePriceConditions component - existing from 4.4, being added to execution reports TradePriceCondition(1839) = 13 (Special dividend) | 8014 TradePriceConditions - flattened version of TradePriceConditions component |
| TNCP flag | NoTradePriceConditions component - existing from 4.4, being added to execution reports TradePriceCondition(1839) = 16 (Trade exempted from trading obligation) | 8014 TradePriceConditions - flattened version of TradePriceConditions component |
| ACTX flag | TrdSubType(829) - existing field from 4.4, being added to execution reports 37 -> Crossed trade | As FIX Standard details |
| RPRI SI flag | NoTradePriceConditions component - existing from 4.4, being added to execution reports TradePriceCondition(1839) = 14 (Price improvement) | 8014 TradePriceConditions - flattened version of TradePriceConditions component |
| ILQD SI flag (as per RTS 1) | New TrdRegPublicationGrp component with fields TrdRegPublicationType(2669) = 1 (Post-trade deferral) TrdRegPublicationReason(2670) = 4 (No public price quoted as order size is above standard market size") | 8013 TrdRegPublicationReasons - flattened version of TradeRegPublicationGrp component |
| ILQD deferral flag (as per RTS 2) | New TrdRegPublicationGrp component with fields TrdRegPublicationType(2669) = 1 (Post-trade deferral) TrdRegPublicationReason(2670) = 7 (Deferral due to "Illiquid instrument") | 8013 TrdRegPublicationReasons - flattened version of TradeRegPublicationGrp component |

| Data element | FIX Standard Fields | FIX User Defined Fields |
|-----------------------------------|--|--|
| SIZE SI flag (as per RTS 1) | New TrdRegPublicationGrp component with fields TrdRegPublicationType(2669) = 1 (Post-trade deferral) TrdRegPublicationReason(2670) = 5 (No public price quoted as order is above standard market size) | 8013 TrdRegPublicationReasons - flattened version of TradeRegPublicationGrp component |
| SIZE deferral flag (as per RTS 2) | New TrdRegPublicationGrp component with fields TrdRegPublicationType(2669) = 1 (Post-trade deferral) TrdRegPublicationReason(2670) = 8 (Deferral due to "Size specific") | 8013 TrdRegPublicationReasons - flattened version of TradeRegPublicationGrp component |
| TPAC flag | TrdType(828) - existing field from 5.0 65 -> Package trade | As FIX Standard details |
| XFPH flag | TrdType(828) - existing field from 5.0 2 -> Exchange for physical | As FIX Standard details |
| LRGS deferral flag | New TrdRegPublicationGrp component with fields TrdRegPublicationType(2669) = 1 (Post-trade deferral) TrdRegPublicationReason(2670) = 6 (Deferral due to "Large in scale") | 8013 TrdRegPublicationReasons - flattened version of TradeRegPublicationGrp component |

LEIs

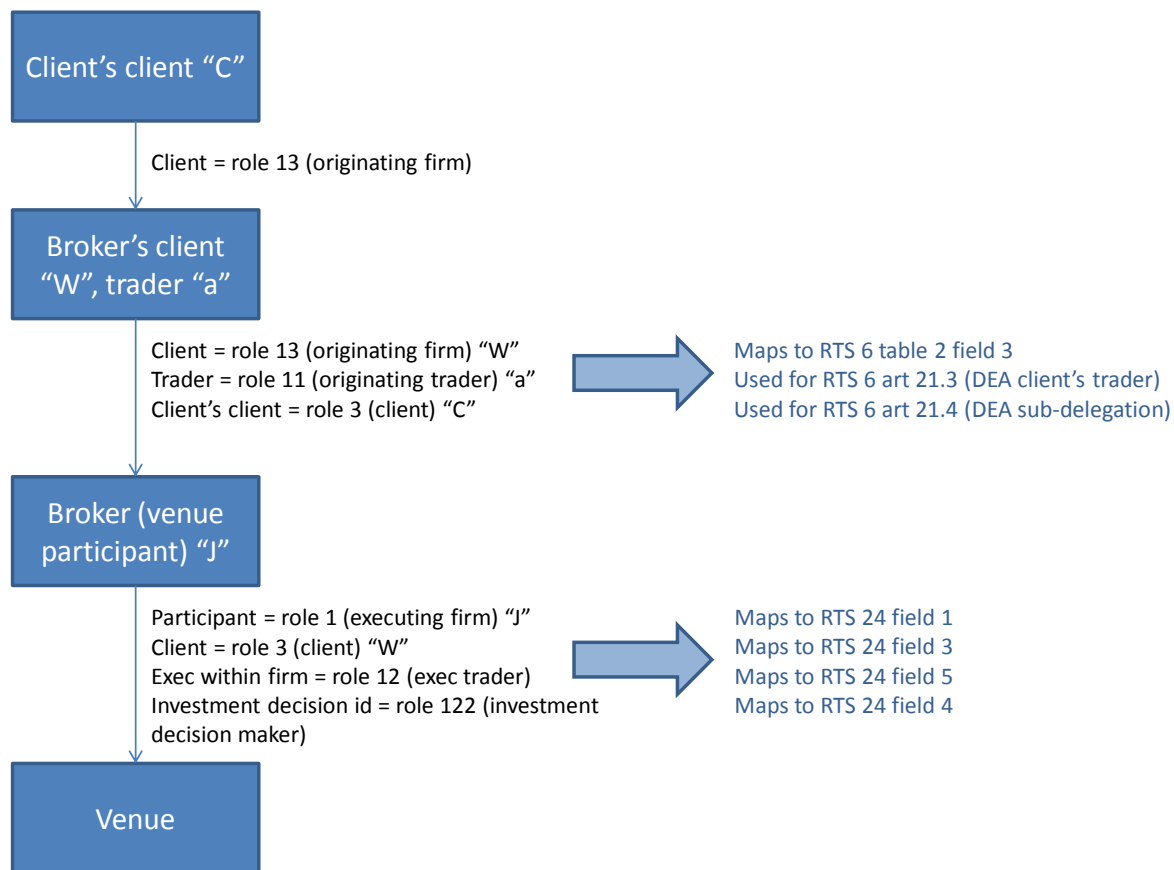
The following fields may be used to identify the LEI on an order or order acknowledgement:

| Data element | FIX Standard Details | FIX User Defined Details |
|--------------|---|--|
| Client's LEI | Parties component - existing from 4.3 with fields as follows: PartyRole(452) = 3 (Client ID) or 13 (Order origination firm) PartyIDSource(447) = N (LEI) or O (National ID) PartyID(448) = the LEI | 20003 PartyIDClientID or 20013 PartyIDOrderOriginationFirm |
| Broker's LEI | Parties component - existing from 4.3 with fields as follows: PartyRole(452) = 1 (Executing firm) PartyIDSource(447) = N (LEI) PartyID(448) = the LEI | 20001 PartyIDExecutingFirm |

Note provision of these fields is optional where there is no ambiguity as to which LEI is actually being used (e.g. the firm only has one LEI). Though the above describes usage of these fields as being on new order singles and order acknowledgements, it is permissible to send these on ALL execution report messages.

Whether to use party role 3 or party role 13 depends on the context as outlined in the following scenario diagram:

Client, trader and algorithm identifiers



Where the order originates from multiple LEIs, the above 'client LEI' needs to be replaced as follows³:

FIX Standard form: NoOrderAttributes(2593) = 1; OrderAttributeType(2594) = 0 (Aggregated order) or 1 (Pending allocations) as appropriate ; OrderAttributeValue(2595) = "Y"

FIX User Defined form: 8015(OrderAttributeTypes) = 0 or 1 as appropriate

The examples below indicate where the above requirement applies, specifically 'model 3':

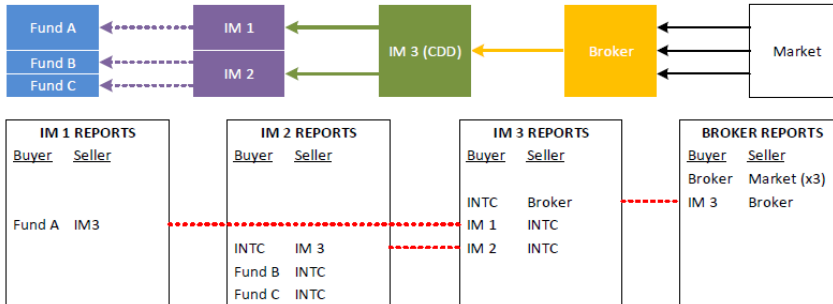
³ It is also permitted to use reserved values of party id 1 = AGGR, 2 = PNAL, in which case the 'client LEI' is used (in standard or user defined form as required) but with 452 = 1 or 2 as appropriate.

**MODEL 1
DEALING CENTRALISED THROUGH SEPARATE LEGAL ENTITY (IM 3)**

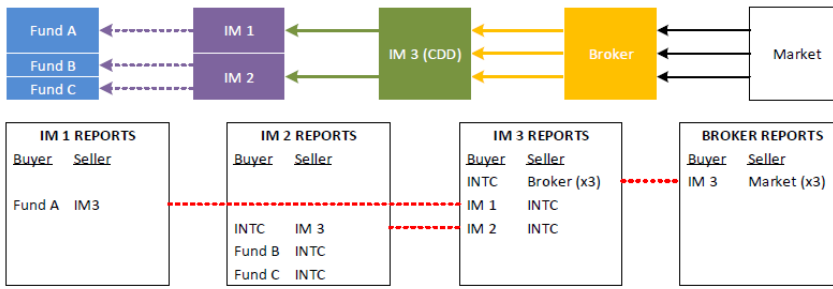
Order flow



(a) Broker aggregates market fills and executes single average price trade with IM 3



(b) Broker executes fill-by-fill with IM 3



MODEL 2
DEALING CENTRALISED THROUGH ONE OF THE PORTFOLIO MANAGERS (IM 2)

Order flow

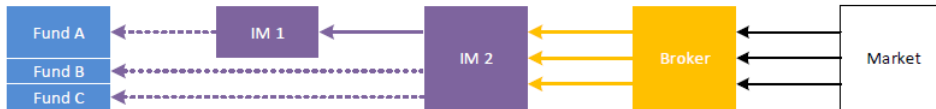


(a) Broker aggregates market fills and executes single average price trade with IM 2



| IM 1 REPORTS | | IM 2 REPORTS | | BROKER REPORTS | |
|--------------|--------|--------------|--------|----------------|-------------|
| Buyer | Seller | Buyer | Seller | Buyer | Seller |
| Fund A | IM3 | INTC | Broker | Broker | Market (x3) |
| | | IM1 | INTC | IM 2 | Broker |
| | | Fund B | INTC | | |
| | | Fund C | INTC | | |

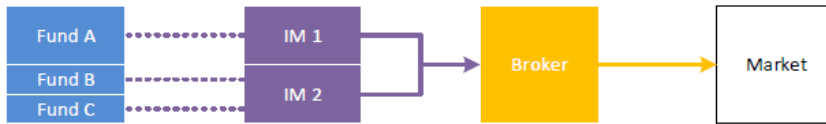
(b) Broker executes fill-by-fill with IM 2



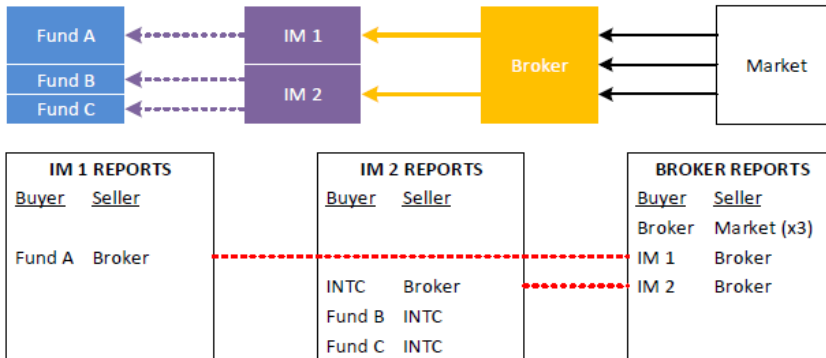
| IM 1 REPORTS | | IM 2 REPORTS | | BROKER REPORTS | |
|--------------|--------|--------------|-------------|----------------|-------------|
| Buyer | Seller | Buyer | Seller | Buyer | Seller |
| Fund A | IM 2 | INTC | Broker (x3) | IM 2 | Market (x3) |
| | | IM1 | INTC | | |
| | | Fund B | INTC | | |
| | | Fund C | INTC | | |

**MODEL 3
DEALING CENTRALISED WITH MULTI-HATTED TRADER (IM 1/2)**

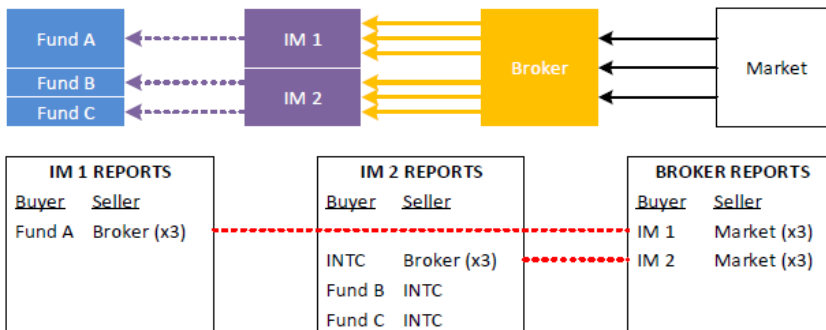
Order flow



(a) Broker aggregates market fills and executes average price trades with each of IM 1 and IM 2



(b) Broker executes fill-by-fill with IM 1 and IM 2



It should be noted that model 3 applies not just to an investment manager having multiple legal entities, but also to an investment manager facing a broker that has multiple legal entities (e.g. US funds facing a US entity, European funds facing a European entity). For example:

Consider a broker with a US legal entity (USco) and an EU legal entity (EUltd)

The broker has a client which entirely faces the EU legal entity:

- *EUltd will transaction report client-side Client vs. EUltd*
- *Client will transaction report market-side Client vs. EUltd*

The broker has a client which entirely faces the US legal entity:

- *EUltd will transaction report client-side USco vs. EUltd*
- *Client will transaction report market-side Client vs. USco*
- *USco do not transaction report (not a MiFID firm)*

The broker has a client which faces the EU legal entity for some of its business (i.e. some of its funds) and the US legal entity for the rest – they create an order that spans both EU and US funds:

- From EUltd’s perspective, the order comes partly from Client and partly from USco
- EUltd will transaction report client-side Client vs. EUltd for the EU funds
- EUltd will transaction report client-side USco vs. EUltd for the US funds
- Client will transaction report market-side Client vs. EUltd for the EU funds
- Client will transaction report market-side Client vs. USco for the US funds

Regarding the identification of the split back into the investment manager LEIs, we have identified four potential models involving FIX messaging (noting that other, non-FIX allocation mechanisms may also support this):

Option A – Separate orders, merged by broker (available in all FIX versions)

- CDD (central dealing desk) sends two orders, one each for IM1 and IM2
- Broker merges them together prior to trading, splitting fills back to the two original orders. Where the broker uses a trading venue, the Client Id on the orders will be “AGGR”.

Option B – Single order, pre-allocated at fund level (available from FIX 4.4)

- CDD sends a single order containing the PreAllocGrp component containing three allocations, one to each of the three Funds and each (optionally) identifying the associated IM LEI (there are fields in the PreAllocGrp that can do this).
- Broker trades this as a single order (as AGGR) and uses the PreAllocGrp to split out by IM LEI (not by Fund) for transaction reporting.
- CDD may optionally send allocations separately or instruct the broker to use the allocations already provided on the order.

Option C – Single order, pre-allocated at IM level (available from FIX 4.4)

- CDD sends a single order containing the PreAllocGrp component containing two allocations, one to each of the two IMs.
- Broker trades this as a single order (as AGGR) and uses the PreAllocGrp to split out by IM LEI for transaction reporting.
- CDD is then required to send fund-level allocations separately (via any method, e.g. FIX, Omgeo CTM, manual).

Option D – Single order, allocated post-trade (available in all FIX versions)

- CDD sends a single order.
- Broker trades this (as AGGR).
- CDD allocates the order separately at fund level with each allocation also identifying the relevant IM’s LEI (in theory the CDD could allocate by IM and then again by fund though this seems somewhat pointless). As for option C, the allocations need not be via FIX.

Short sell indicator

A new value for FIX tag 54 (Side) has been added to represent “undisclosed sell”.

| MiFID Value | Description | FIX Value (Side, tag 54) |
|-------------|------------------------------|--------------------------|
| SELL | No short sell | 2 Sell |
| SESH | Short sale with no exemption | 5 Sell short |
| SSEX | Short sale with exemption | 6 Sell short exempt |

| | | |
|------|---------------------------|--------------------|
| UNDI | Information not available | H Undisclosed sell |
|------|---------------------------|--------------------|

As per RTS 22 article 11, “An investment firm shall determine, on a best efforts basis, the short sales transactions in which its client is the seller”. Given the ‘best efforts’ clause, FIX messaging needs to cater for firms who do distinguish between long sells and short sells, and those who don’t. Therefore, though the recommended best practice is to use the full set of values as outlined in the table above, it is recognised that some firms may not elect (or be required to) implement the fields as above and therefore firms should confirm with each other how they are handling this field.

Other transaction reporting-related fields

Analysis of transaction reporting requirements has highlighted the following two additional fields as being required (where applicable) on transaction reports:

| Data element | FIX Standard Details | FIX User Defined Details |
|--|--|--|
| Securities financing transaction indicator | New TrdRegPublicationGrp component with fields TrdRegPublicationType(2669) = 2 (Exempted from publication) TrdRegPublicationReason(2670) = 11 (Exempted due to securities financing transaction) | 8013 TrdRegPublicationReasons - flattened version of TradeRegPublicationGrp component |
| ESCB exemption indicator | New TrdRegPublicationGrp component with fields TrdRegPublicationType(2669) = 2 (Exempted from publication) TrdRegPublicationReason(2670) = 12 (Exempted due to ESCP policy transaction) | 8013 TrdRegPublicationReasons - flattened version of TradeRegPublicationGrp component |

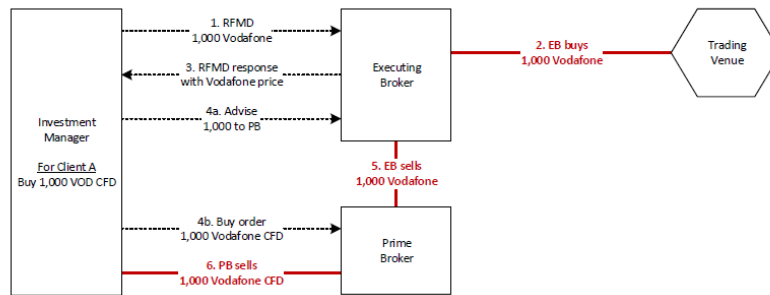
RFMDs with allocation to swap, give-up and/or cash

It is not uncommon for firms to send RFMDs to their brokers and, later in the day, provide allocation instructions requesting that the broker undertakes one or more of the following activities:

- Providing a derivative instrument such as a CFD or swap.
- Giving up a position to a third party broker so they can write a derivative (CFD or swap).
- Providing a risk execution in the underlying securities instrument (e.g. shares).

The example below shows the transaction reporting requirements for the simple case where the allocation is entirely for a derivative written by a prime broker (which may or may not be the same as the executing broker handling the RFMD).

RFMD FOR CFD ONLY



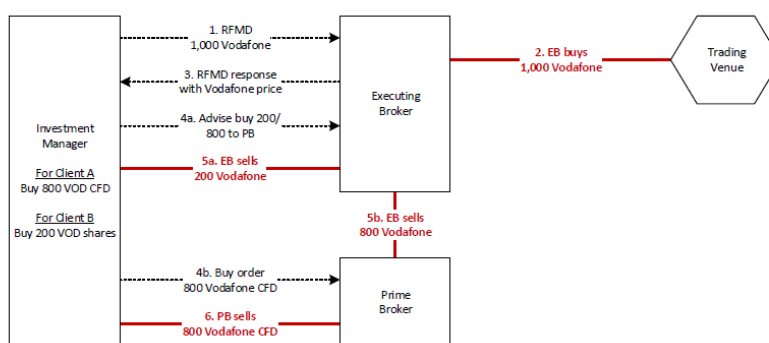
| EB reports | |
|------------|--|
| 2. | Buyer: EB Seller: Venue/CCP Qty: 1,000 Inst: Vodafone |
| 5. | Buyer: PB Seller: EB Qty: 1,000 Inst: Vodafone |

| PB reports | |
|------------|---|
| 5. | Buyer: PB Seller: EB Qty: 1,000 Inst: Vodafone |
| 6. | Buyer: IM Seller: PB Qty: 1,000 Inst: Vodafone CFD |

| IM reports | |
|------------|---|
| 6. | Buyer: Client A Seller: PB Qty: 1,000 Inst: Vodafone CFD |

This second example includes an 'allocation to cash'. From a transaction reporting perspective, this is considered as equivalent to a new order in the cash instrument to be filled by the executing broker on risk (e.g. in their capacity as an SI). The 'order' here is communicated within the allocation process. As allocation mechanisms (whether using FIX or other methods) do not include the transaction and trade reporting fields described in this document, our recommendation is to have the executing broker generate an unsolicited execution report for the cash component including these details.

RFMD FOR CFD + CASH TRADE



| EB reports |
|---|
| 2. Buyer: EB Seller: Venue/CCP Qty: 1,000 Inst: Vodafone |
| 5a. Buyer: Client B Seller: EB Qty: 200 Inst: Vodafone |
| 5b. Buyer: PB Seller: EB Qty: 800 Inst: Vodafone |

| PB reports |
|--|
| 5b. Buyer: PB Seller: EB Qty: 800 Inst: Vodafone |
| 6. Buyer: IM Seller: PB Qty: 800 Inst: Vodafone CFD |

| IM reports |
|--|
| 5a. Buyer: Client B Seller: EB Qty: 200 Inst: Vodafone |
| 6. Buyer: Client A Seller: PB Qty: 800 Inst: Vodafone CFD |

Examples

These examples are based on FIX 4.2 (being the protocol version most commonly used between buy side and sell side firms) with the inclusion of fields from later FIX versions where needed to support the MiFID requirements. All examples are based on the receipt of a new order single message in a MiFID instrument. Optional fields are shown in *blue italics*.

MTCH example (order traded on venues, transaction reporting per fill)

| Message Type | Contents | Comments |
|------------------------------|---|--|
| Order ack | 39=0; 29=3 | |
| Execution (2500 shares @ 50) | 39=1; 29=3; 30=XLON; 31=50; 32=2500; 6=50; 14=2500; 453=1; 448=XOFF; 447=G; 452=73 | This is transaction reportable - determined either by the presence of the execution venue parties component OR knowledge that this is being dealt in MTCH capacity (e.g. tag 29=3 or predefined arrangement). The group 453-448-447-452 can be replaced with 20073=XOFF. |
| Execution (1500 shares @ 60) | 39=2; 29=3; 30=BATE; 31=60; 32=1500; 6=53.75; 14=4000; 453=1; 448=XOFF; 447=G; 452=73 | This is transaction reportable as above. Note the report is for the 1500 shares from this fill. |

DEAL example (order traded on venues on a riskless principal basis, aggregated client execution)

| Message Type | Contents | Comments |
|--------------|------------|----------|
| Order ack | 39=0; 29=5 | |

| | | |
|-------------------------------------|---|---|
| Execution (2500 shares @ 50) | 39=1; 29=5; 30=XLON; 31=50; 32=2500; 6=50; 14=2500 | This is not transaction reportable - based on knowledge of this being a DEAL transaction and absence of the execution venue parties component). DEAL can be identified by 29=5. |
| Execution (1500 shares @ 60) | 39=2; 29=5; 30=BATE; 31=60; 32=1500; 6=53.75; 14=4000; 453=1; 448=XOFF; 447=G; 452=73 | This is transaction reportable (the full 4000 shares @ 53.75) – determined by the presence of the execution venue parties component. |

DEAL example (order traded on venues on a riskless principal basis, fill-by-fill client execution)

| Message Type | Contents | Comments |
|-------------------------------------|---|---|
| Order ack | 39=0; 29=5 | |
| Execution (2500 shares @ 50) | 39=2; 29=5; 30=XLON; 31=50; 32=2500; 6=50; 14=2500; 453=1; 448=XOFF; 447=G; 452=73 | This is transaction reportable (2500 shares @ 50) – like the MTCH example above, this is based either on predefined agreement (that transaction reporting takes place per fill, even for DEAL, or the presence of the execution venue parties component). |
| Execution (1500 shares @ 60) | 39=2; 29=5; 30=BATE; 31=60; 32=1500; 6=53.75; 14=4000; 453=1; 448=XOFF; 447=G; 452=73 | Same logic as for the previous execution above (1500 shares @ 60). |

DEAL example (order above SMS requested to be filled on a guaranteed VWAP basis in the firm's SI, deferred reporting)

| Message Type | Contents | Comments |
|-------------------------------------|---|--|
| Order ack | 39=0; 29=4 | |
| Execution (2000 shares @ 40) | 39=2; 29=4; 30=SI01; 31=40; 32=2000; 6=40; 14=2000; 453=1; 448=SI01; 447=G; 452=73; 855=64; 1838=1; 1839=16; 2669=2; 2670=5; 2670=6 | This is transaction reportable (based on the presence of the execution venue parties component and knowledge that this is a DEAL transaction). Note how the OTC flags are populated ⁴ : <ul style="list-style-type: none"> • BENC: 855=64 • TNCP: 1838=1; 1839=16 (or 8014=16) • SIZE: 2669=1; 2670=5; 2670=6 (or 8013=5 6) |

DEAL example (order traded on venues on a riskless principal basis, transaction reporting per order, order balance cancelled/DFDd part way through execution)

| Message Type | Contents | Comments |
|---|---|--|
| Order ack | 39=0; 29=5 | |
| Execution (2500 shares @ 50) | 39=1; 29=5; 30=XLON; 31=50; 32=2500; 6=50; 14=2500 | This is not transaction reportable - based on knowledge of this being a DEAL transaction and absence of the execution venue parties component). DEAL can be identified by 29=5. |
| Cancellation of balance of order | 39=4; 29=5; 6=50; 14=2500; 453=1; 448=XOFF; 447=G; 452=73 | This is transaction reportable – determined by the presence of the execution venue parties component. This example demonstrates that any FIX execution report message (not just those representing executions) can represent a transaction reportable client fill. |

⁴ The actual list of trade flags used here is for illustration only.

RFMD example (order message sent with 775=1 or 2 and hence representing a request for market data)

| Message Type | Contents | Comments |
|--|--|--|
| Order ack | 39=0; 29=5 | |
| Execution (2500 shares @ 50) | 39=1; 29=5; 30=XLON; 31=50; 32=2500; 6=50; 14=2500 | This is not transaction reportable - based on knowledge of this being a DEAL transaction and absence of the execution venue parties component). DEAL can be identified by 29=5. |
| Execution (1500 shares @ 60) | 39=2; 29=5; 30=BATE; 31=60; 32=1500; 6=53.75; 14=4000 | This is not transaction reportable – indeed no NOE messages for an RFMD will contain the transaction reporting venue indicator. |
| Allocation of 500 shares as ‘cash’ (i.e. the underlying security) | 39=2; 29=4; 30=SI01; 31=40; 32=2000; 6=40; 14=2000; 453=1; 448=SI01; 447=G; 452=73; 2669=2; 2670=5; 2670=6 | This is an unsolicited execution report message (there being no accompanying new order single) but with the same contents as if there had been a new order single message to buy/sell the security on risk. In this example, the cash component is traded from the executing broker’s SI (hence 448=SI01) and above SMS (hence 2669=2; 2670=5; 2670=6 for the SIZE flag). |