Equity Representative Orders Deep Dive

8/13/19

CAT NMS Plan Requirement

The CAT NMS Plan (Appendix D) requires that the Plan Processor be able to link customer orders to "representative" orders

The CAT NMS Plan (Appendix D) also requires linkage of a customer execution via the allocation of shares from a pre-existing principal order (i.e. Manning Fill)

Representative Orders FAQ F1

What is a representative order?

A representative order is defined as **an order originated in a firm owned or controlled account, including principal, agency average price and omnibus accounts, by an Industry Member for the purpose of working one or more customer or client orders.**

Representative Order Linkages

Appendix C of the IM Tech Spec includes detailed information regarding representative order linkage requirements including:

- Linkage Fields
- representativeInd and FulfillmentLinkType values
- Requirements for linkage and marking of representative orders

- ✓ Linkages are required between the customer/client order and the representative order for both executed and unexecuted orders.
- ✓ Executed orders must also have a link between the Order Fulfillment Event for the customer/client order and the representative order from which the fill came.

Section 2.3 of the IM Reporting Scenarios document includes detailed reporting requirements for Representative Order scenarios.

Linkage Fields

The following fields are used in the representative order linkage process:

▸ At the Order Level:

  ◦ *representativeInd* indicates if an order was originated to represent a customer/client order

  ◦ *aggregatedOrders* specifies the original order IDs and quantities being consolidated in the representative order

▸ At the Order Fulfillment Level

  ◦ *orderID* contains the firm side order that was used to fill the customer order

  ◦ *fulfillmentLinkType* indicates whether there is order level and trade level linkage, only trade level linkage (e.g., fill from the pre-existing customer order), or why the firm side details are not present

  ◦ FDID contains the firm account that was used to fill the customer order (only applicable when a fulfillmentLinkType of YE is populated)

  ◦ Linkage on the Order Fulfillment is indicated by the *fulfillmentLinkType*

Order Level Linkage

representativeInd Values for Representative Orders

Value	Definition
Y	Representative order, linkage required
YS	Representative order, linkage required; details in supplement event
YF	Representative order, linkage required in future phase
YP	Representative order, pricing guarantee, no linkage required
YE	Representative eligible - Order eligible for customer fills via an unlinked system (unlinked OMS-EMS or position fill workflow)
N	Not a representative order, linkage is not applicable

Order Level Linkage

The *aggregatedOrders* field is defined in the IM Tech Spec as a Multi-Dimensional Array inclusive of the following fields:

- o *orderID* (required for each aggregated order)

- o *orderKeyDate* (required for each aggregated order)

- o *quantity* (required when a partial quantity of the order is being represented)

- o *originatingIMID* (required in instances of a merger or acquisition to support linkage to an event that was reported with a different CATReporterIMID)

Fulfillment Level Linkage

fulfillmentLinkType Values for Order Fulfillments

Value	Definition
Y	Representative order, linkage required
YF	Representative order, linkage required in future phase
YP	Fill from pre-existing Principal order, linkage required
YE	Representative eligible - Order eligible for customer fills via an unlinked system (unlinked OMS-EMS or position fill workflow)

Phase 2a Linkage Requirements

In Phase 2a, Linkage is required between the representative street side order and the order being represented when the representative order was originated specifically to represent a single order (received either from a customer or another broker-dealer) and there is:

1) an existing direct electronic link in the firm's system between the order being represented and the representative order, and

2) any resulting executions are immediately and automatically applied to the represented order in the firm's system

Examples include:

◦ Single customer/client order worked on a riskless principal basis

◦ Single Customer/Client Order Executed on a Riskless Principal Basis from a Pre-Existing Principal Order (e.g., Manning Fill) – linkage at fulfillment level only

◦ Single customer/client order worked via an average price account with a single fill or print for print fills

Example of a Riskless Principal Transaction

1. Customer submits an order to buy 500 shares of XYZ.
2. Broker-Dealer creates a representative proprietary order to buy 500 shares of XYZ.
3. Broker-Dealer routes the proprietary order to an exchange.
4. Upon execution of the proprietary order, the Broker-Dealer sells the shares to the customer <u>at the same price</u> it purchased the shares on the exchange.

Refer to Scenario 2.3.1 of v2.2 of the Industry Member Reporting Scenarios Document

What is Reportable?

Industry Member Broker 1 is required to report:

- The receipt of the customer order (New Order event)
- The generation of a representative order (New Order event)
- The route of the representative order to the exchange (Order Route event)
- The fill of the customer order on a Riskless Principal basis (Order Fulfillment Event)

Refer to Scenario 2.3.1 of v2.2 of the Industry Member Reporting Scenarios Document

Linkages in Phase 2a

Event Description	type	CATReporterIMID	symbol	quantity	price	side	orderID	FDID	accountHolderType	representativeInd	aggregatedOrders	routedOrderID	session	fulfillmentID	capacity	fulfillmentLinkType	clientDetails orderID	clientDetails side	firmDetails orderID	firmDetails side
1. Customer submits order	MENO	FRMA	XYZ	500	9.97	B	O12345	C12345	I	N										
2. BD creates a representative proprietary order	MENO	FRMA	XYZ	500	9.97	B	O12347	C00005	P	Y	O12345									
3. BD routes representative proprietary order to an exchange	MEOR	FRMA	XYZ	500	9.97	B	O12347					ABCDXYZ555	SESS-1							
4. BD sells the shares to the customer at the same price	MEOF	FRMA	XYZ	500	9.97		O12345							F12348	R	Y	O12345	B	O12347	SL

In phase 2a, explicit linkage between the customer order and the representative order is required.

- FRMA must report a *representativeInd* value of "Y" in its MENO for the representative order, and the *aggregatedOrders* field must be populated (as shown on *aggregatedOrders* slide).
- FRMA must populate a *fulfillmentLinkType* value of "Y" in the customer MEOF, and the firmDetails must be populated.

Refer to Scenario 2.3.1 of v2.2 of the Industry Member Reporting Scenarios Document

Example of a Fill From a Pre–Existing Principal Order

1. Broker-Dealer initiates a principal order to buy 500 shares of XYZ at 9.99 for its market making account.
2. Broker-Dealer routes the order to an exchange.
3. Customer submits an order to buy 100 shares of XYZ at 9.99.
4. Principal order receives a full execution, and the Broker-Dealer must then execute the customer order to satisfy its Manning obligations.

Refer to Scenario 2.3.5 of v2.2 of the Industry Member Reporting Scenarios Document

What is Reportable?

Industry Member Broker 1 is required to report:

- The origination of the principal order (New Order event)
- The route of the principal order to an exchange (Order Route event)
- The receipt of the customer order (New Order event)
- The fill of the customer order on a Riskless Principal basis (Order Fulfillment event)

Refer to Scenario 2.3.5 of v2.2 of the Industry Member Reporting Scenarios Document

Linkages in Phase 2a

Event Description	type	CATReporterIMID	symbol	quantity	price	side	orderID	FDID	accountHolderType	representativeInd	aggregatedOrders	routedOrderID	session	fulfillmentID	capacity	fulfillmentLinkType	clientDetail orderID	side	firmDetails orderID	side
1. BD originates a proprietary order	MENO	FRMA	XYZ	500	9.97	B	O12347	C00005	P	N										
2. BD routes proprietary order to an exchange	MEOR	FRMA	XYZ	500	9.97	B	O12347					ABCDXYZ555	SESS-1							
3. Customer 1 submits order	MENO	FRMA	XYZ	100	9.97	B	O12345	C12345	I	N										
4. BD sells fills the customer order with the shares acquired from the proprietary order	MEOF	FRMA	XYZ	100	9.97		O12345							F12348	P	YP	O12345	B	O12347	SL

In phase 2a, explicit linkage between the customer order and the representative order is required.

- FRMA must FRMA must populate a *fulfillmentLinkType* value of "YP" in the customer MEOF, and the firmDetails must be populated.

Refer to Scenario 2.3.5 of v2.2 of the Industry Member Reporting Scenarios Document

Other Riskless Principal Guidance

No linkage between CAT Order Fulfillment Report and TRF non-media report is required.

CAT FAQ F2:

When an order is executed on a riskless principal basis, is the non-media riskless principal TRF report required to be linked to the related CAT Order Fulfillment Event?

No. Unlike OATS, the CAT Order Fulfillment report is **not** required to be linked to any related non-media riskless principal regulatory report.

Scenarios Requiring Linkage in 2c

Any scenario that does not meet the definition of Phase 2a representative order is required to be linked in Phase 2c.

Examples include:

- ◦ Aggregated Orders
- ◦ Net Trading (including price improvement)
- ◦ Average Price Fills
- ◦ Disconnected OMS-EMS – Using FDID

In Phase 2c, linkage between customer orders and representative orders for disconnected OMS-EMS scenarios and other workflows where no order level linkage ever exists at the firm (fills from positions) is created using the FDID of the firm owned/controlled account used to fill the customer orders.

NOTE: In 2a, the representative orders in the above scenarios have to be marked as a representative order although it is not mandatory to link the to underlying orders via the *aggregatedOrders* field until Phase 2c.

Example of an Aggregated Order
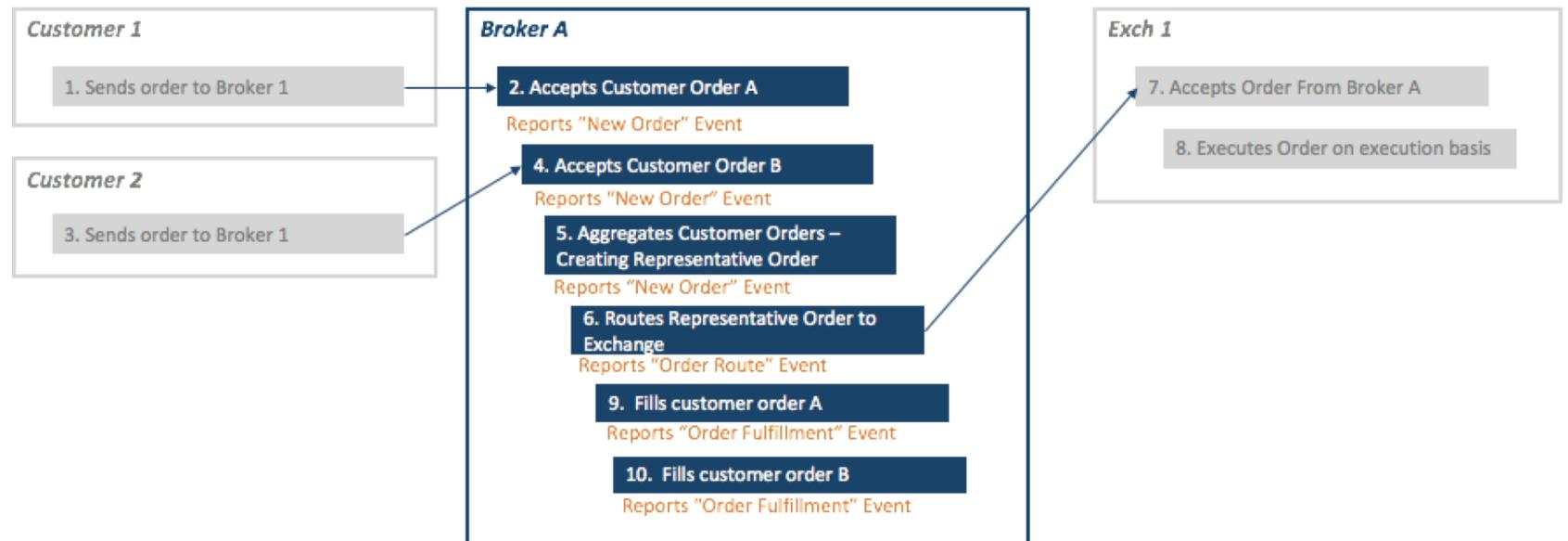
1. Broker 1 receives two customer orders to buy 500 shares each of XYZ.
2. Broker-Dealer creates one representative proprietary order to buy 1000 shares of XYZ.
3. Broker-Dealer routes the proprietary order to an exchange.
4. Upon execution of the proprietary order, the Broker-Dealer sells the shares to the customers <u>at the same price </u>it purchased the shares on the exchange.

Refer to Scenario 2.3.2 of v2.2 of the Industry Member Reporting Scenarios Document

What is Reportable?
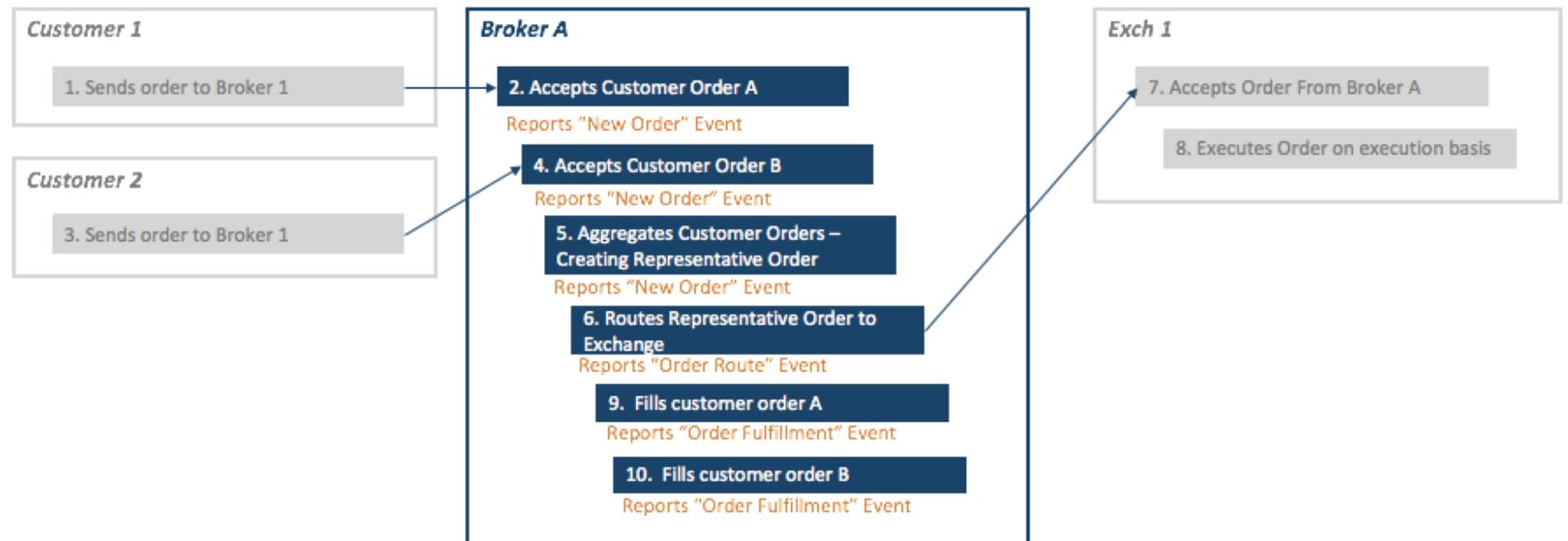
Industry Member Broker 1 is required to report:

- The receipt of each customer order (New Order events)
- The generation of a representative order (New Order event)
- The route of the representative order to the exchange (Order Route event)
- The fill of each customer order on a Riskless Principal basis (Order Fulfillment events)

Refer to Scenario 2.3.2 of v2.2 of the Industry Member Reporting Scenarios Document

Linkages in Phase 2a

Event Description	type	CATReporterIMID	symbol	quantity	price	side	orderID	FDID	accountHolderType	representativeInd	aggregatedOrders	routedOrderID	session	fulfillmentID	capacity	fulfillmentLinkType	clientDetail orderID	clientDetail side	firmDetails orderID	firmDetails side
1. Customer 1 submits order	MENO	FRMA	XYZ	500	9.97	B	O12345	C12345	I	N										
2. Customer 2 submits order	MENO	FRMA	XYZ	500	9.97	B	O12346	C12346	I	N										
3. BD creates a representative proprietary order	MENO	FRMA	XYZ	1,000	9.97	B	O12347	C00005	P	YF										
4. BD routes representative proprietary order to an exchange	MEOR	FRMA	XYZ	1,000	9.97	B	O12347					ABCDXYZ555	SESS-1							
5. BD sells the shares to customer 1 at the same price	MEOF	FRMA	XYZ	500	9.97		O12345							F12348	R	YF	O12345	B		
6. BD sells the shares to customer 2 at the same price	MEOF	FRMA	XYZ	500	9.97		O12346							F12349	R	YF	O12346	B		

In phase 2a, explicit linkage between the customer order and the representative order is **NOT** required.

- FRMA must report a *representativeInd* value of "YF" in its MENO for the representative order, and the *aggregatedOrders* field must be blank.
- FRMA must populate a *fulfillmentLinkType* value of "YF" in the customer MEOF, and the firmDetails must be blank.

Refer to Scenario 2.3.2 of v2.2 of the Industry Member Reporting Scenarios Document

Linkages in Phase 2c

Event Description	type	CATReporterIMID	symbol	quantity	price	side	orderID	FDID	accountHolderType	representativeInd	aggregatedOrders	routedOrderID	session	fulfillmentID	capacity	fulfillmentLinkType	clientDetail orderID	side	firmDetails orderID	side
1. Customer 1 submits order	MENO	FRMA	XYZ	500	9.97	B	O12345	C12345	I	N										
2. Customer 2 submits order	MENO	FRMA	XYZ	500	9.97	B	O12346	C12346	I	N										
3. BD creates a representative proprietary order	MENO	FRMA	XYZ	1,000	9.97	B	O12347	C00005	P	Y	O12345, O12346									
4. BD routes representative proprietary order to an exchange	MEOR	FRMA	XYZ	1,000	9.97	B	O12347					ABCDXYZ555	SESS-1							
5. BD sells the shares to customer 1 at the same price	MEOF	FRMA	XYZ	500	9.97		O12345							F12348	R	Y	O12345	B	O12347	SL
6. BD sells the shares to customer 2 at the same price	MEOF	FRMA	XYZ	500	9.97		O12346							F12349	R	Y	O12346	B	O12347	SL

In phase 2c, explicit linkage between the customer order and the representative order is required.

- FRMA must report a *representativeInd* value of "Y" in its MENO for the representative order, and the *aggregatedOrders* field must be populated (as shown on *aggregatedOrders* slide).
- FRMA must populate a *fulfillmentLinkType* value of "Y" in the customer MEOF, and the firmDetails must be populated.

Refer to Scenario 2.3.1 of v2.2 of the Industry Member Reporting Scenarios Document

Example of a Net Trade

1. Broker 1 receives a customer orders to buy 500 shares of XYZ @9.97.
2. Broker-Dealer creates a representative proprietary order to buy 500 shares of XYZ.
3. Broker-Dealer routes the proprietary order to an exchange.
4. Upon execution of the proprietary order, the Broker-Dealer sells the shares to the customers <u>at a different price</u> it purchased the shares on the exchange.

Refer to Scenario 2.3.6 of v2.2 of the Industry Member Reporting Scenarios Document

What is Reportable?

Customer 1	Broker 1	Exch 1
1. Sends order to Broker 1	2. Accepts customer order	5. Accepts the Order from Broker 1
	Reports "New Order" Event	6. Executes the order @ 9.97
	3. Generates representative order	
	Reports "New Order" Event	
	4. Routes representative order to an Exchange	
	Reports "Order Route" Event	
	7. Fills the customer order @9.99	
	Reports "Order Trade" Event	

Industry Member Broker 1 is required to report:

- The receipt of the customer order (New Order event)
- The generation of the representative order (New Order event)
- The route of the representative order to an exchange (Order Route event)
- The execution of the customer order at a net price (Order Trade event)

Refer to Scenario 2.3.6 of v2.2 of the Industry Member Reporting Scenarios Document

Linkages in Phase 2a

Event Description	type	CATReporterIMID	symbol	quantity	price	side	orderID	FDID	accountHolderType	representativeInd	aggregatedOrders	routedOrderID	session	tradeID	tapeTradeID	capacity	buyDetails orderID	buyDetails side	sellDetails orderID	sellDetails side
1. Customer submits order	MENO	FRMA	XYZ	500	9.97	B	O12345	C12345	I	N										
2. BD creates a representative proprietary order	MENO	FRMA	XYZ	500	9.97	B	O12347	C00005	P	YF										
3. BD routes representative proprietary order to an exchange	MEOR	FRMA	XYZ	500	9.97	B	O12347					ABCDXYZ555	SESS-1							
4. BD sells the shares to the customer at a different price	MEOT	FRMA	XYZ	500	9.99		O12345							F12348	TRF123	P	O12345	B	O12347	SL

In phase 2a, explicit linkage between the customer order and the representative order is **NOT** required.

- FRMA must report a *representativeInd* value of "YF" in its MENO for the representative order, and the *aggregatedOrders* field must be blank.
- On the MEOT, FRMA may populate the FDID and accountHolderType of the proprietary account on the sell/firm side, if direct electronic linkage to the Firm representative order is not available.

Refer to Scenario 2.3.6 of v2.2 of the Industry Member Reporting Scenarios Document
Note: There is currently an error in the scenario which reflects linkage as required in Phase 2a. Linkage is not required until Phase 2c, and the scenarios document will be updated.

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Linkages in Phase 2c

Event Description	type	CATReporterIMID	symbol	quantity	price	side	orderID	FDID	accountHolderType	representativeInd	aggregatedOrders	routedOrderID	session	tradeID	tapeTradeID	capacity	buyDetails orderID	side	sellDetails orderID	side
1. Customer submits order	MENO	FRMA	XYZ	500	9.97	B	O12345	C12345	I	N										
2. BD creates a representative proprietary order	MENO	FRMA	XYZ	500	9.97	B	O12347	C00005	P	Y	O12345									
3. BD routes representative proprietary order to an exchange	MEOR	FRMA	XYZ	500	9.97	B	O12347					ABCDXYZ555	SESS-1							
4. BD sells the shares to the customer at a different price	MEOT	FRMA	XYZ	500	9.99		O12345							F12348	TRF123	P	O12345	B	O12347	SL

In phase 2c, explicit linkage between the customer order and the representative order is required.

- FRMA must report a *representativeInd* value of "Y" in its MENO for the representative order, and the *aggregatedOrders* field must be populated (as shown on *aggregatedOrders* slide).

Refer to Scenario 2.3.6 of v2.2 of the Industry Member Reporting Scenarios Document
Note: There is currently an error in the scenario which reflects linkage as required in Phase 2a.
  Linkage is not required until Phase 2c, and the scenarios document will be updated.

Example of an Average Price Trade
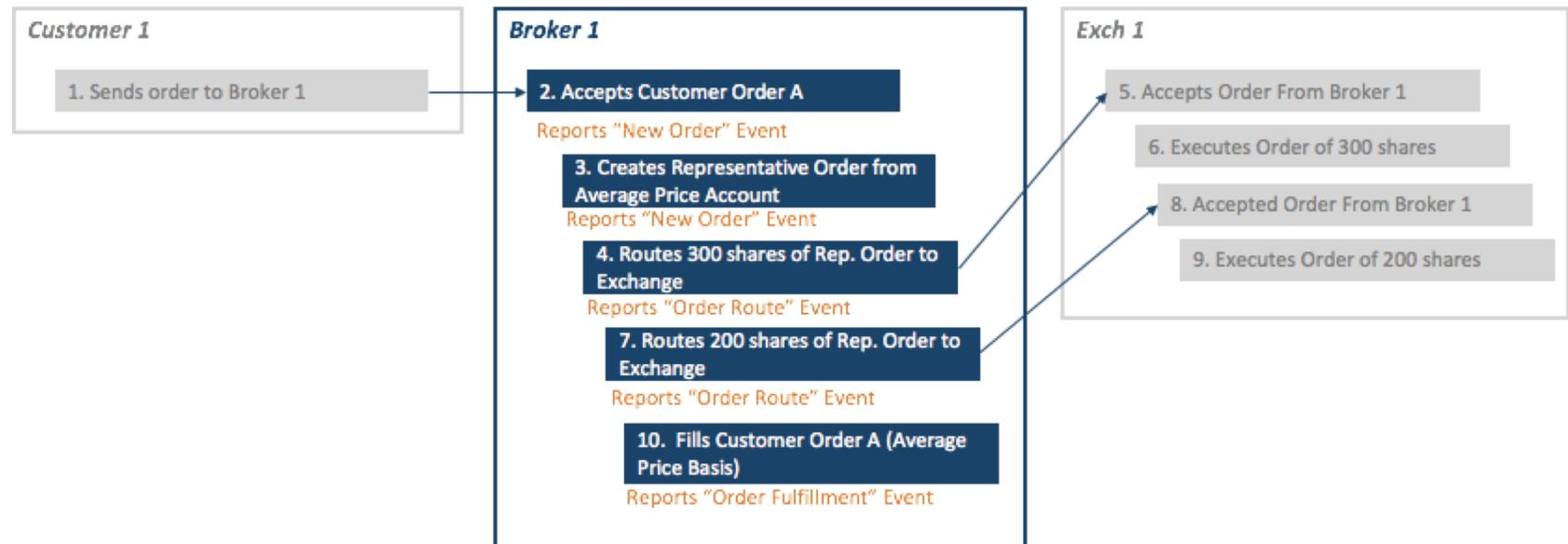
Customer 1

1. Sends order to Broker 1

Broker 1

2. Accepts Customer Order A
Reports "New Order" Event

3. Creates Representative Order from Average Price Account
Reports "New Order" Event

4. Routes 300 shares of Rep. Order to Exchange
Reports "Order Route" Event

7. Routes 200 shares of Rep. Order to Exchange
Reports "Order Route" Event

10. Fills Customer Order A (Average Price Basis)
Reports "Order Fulfillment" Event

Exch 1

5. Accepts Order From Broker 1

6. Executes Order of 300 shares

8. Accepted Order From Broker 1

9. Executes Order of 200 shares

1. Customer submits an order to buy 500 shares of XYZ.
2. Broker-Dealer creates a representative proprietary order to buy 500 shares of XYZ.
3. Broker-Dealer routes the proprietary order to an exchange.
4. The exchange executes the order at multiple prices. The Broker-Dealer sells the shares to the customer <u>at the average price.</u>

Refer to Scenario 2.3.4 of v2.2 of the Industry Member Reporting Scenarios Document

What is Reportable?

Customer 1

1. Sends order to Broker 1

Broker 1

2. Accepts Customer Order A
Reports "New Order" Event

3. Creates Representative Order from Average Price Account
Reports "New Order" Event

4. Routes 300 shares of Rep. Order to Exchange
Reports "Order Route" Event

7. Routes 200 shares of Rep. Order to Exchange
Reports "Order Route" Event

10. Fills Customer Order A (Average Price Basis)
Reports "Order Fulfillment" Event

Exch 1

5. Accepts Order From Broker 1

6. Executes Order of 300 shares

8. Accepted Order From Broker 1

9. Executes Order of 200 shares
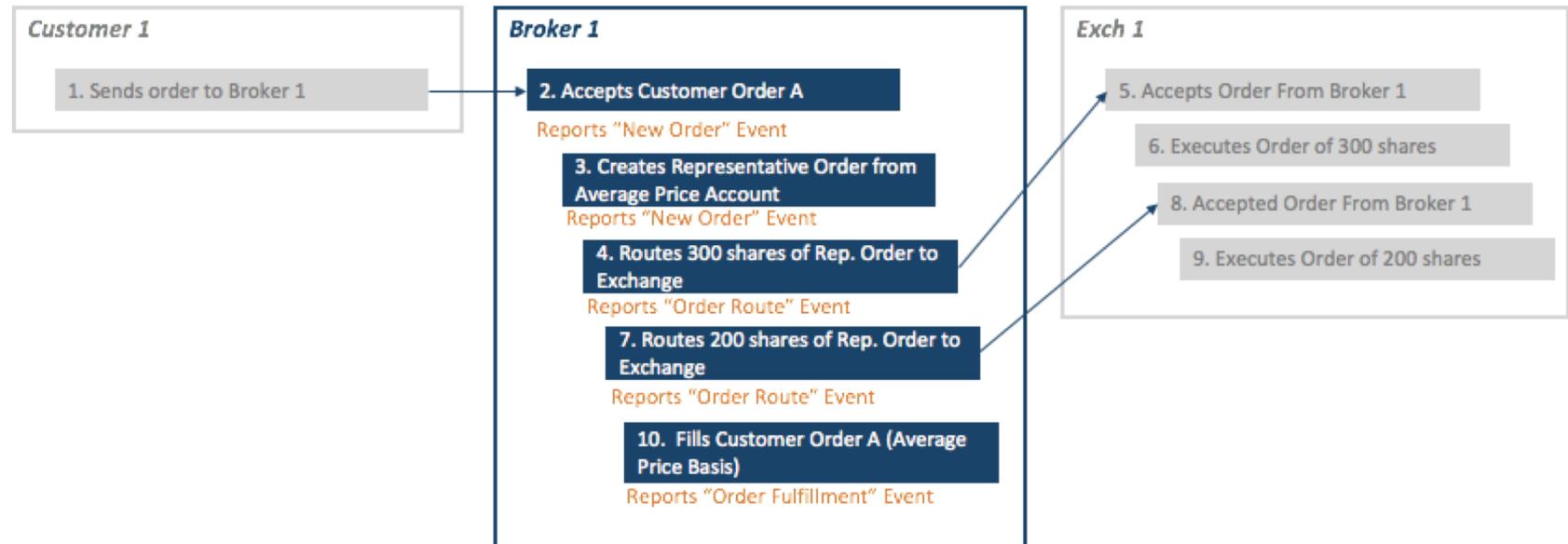
Industry Member Broker 1 is required to report:

- The receipt of the customer order (New Order event)
- The generation of a representative order in an average price account (New Order event)
- Each route of the representative order (Order Route events)
- The fill of the customer order at an average price (Order Fulfillment event)

Refer to Scenario 2.3.4 of v2.2 of the Industry Member Reporting Scenarios Document

Linkages in Phase 2a

Event Description	type	CATReporterIMID	symbol	quantity	price	side	orderID	FDID	accountHolderType	representativeInd	aggregatedOrders	routedOrderID	session	fulfillmentID	capacity	fulfillmentLinkType	clientDetails orderID	clientDetails side	firmDetails orderID	firmDetails side
1. Customer 1 submits order	MENO	FRMA	XYZ	500	9.97	B	O12345	C12345	I	N										
2. BD creates a representative proprietary order	MENO	FRMA	XYZ	500	9.97	B	O12347	C00005	V	YF										
3. BD routes representative proprietary order to an exchange	MEOR	FRMA	XYZ	300	9.97	B	O12347					ABCDXYZ555	SESS-1							
4. BD routes representative proprietary order to an exchange	MEOR	FRMA	XYZ	200	9.97	B	O12347					ABCDXYZ560	SESS-2							
5. BD sells the shares to customer 1 at the same price	MEOF	FRMA	XYZ	500	9.97		O12345							F12348	A	YF	O12345	B		

In phase 2a, explicit linkage between the customer order and the representative order is **NOT** required.

- FRMA must report a *representativeInd* value of "YF" in its MENO for the representative order, and the *aggregatedOrders* field must be blank.
- FRMA must populate a *fulfillmentLinkType* value of "YF" in the customer MEOF, and the firmDetails must be blank.

Refer to Scenario 2.3.4 of v2.2 of the Industry Member Reporting Scenarios Document

Linkages in Phase 2c

																		clientDetails		firmDetails	
Event Description	type	CATReporterIMID	symbol	quantity	price	side	orderID	FDID	accountHolderType	representativeInd	aggregatedOrders	routedOrderID	session	fulfillmentID	capacity	fulfillmentLinkType	orderID	side	orderID	side
1. Customer 1 submits order	MENO	FRMA	XYZ	500	9.97	B	O12345	C12345	I	N										
2. BD creates a representative proprietary order	MENO	FRMA	XYZ	500	9.97	B	O12347	C00005	V	Y	O12345									
3. BD routes representative proprietary order to an exchange	MEOR	FRMA	XYZ	300	9.97	B	O12347					ABCDXYZ555	SESS-1							
4. BD routes representative proprietary order to an exchange	MEOR	FRMA	XYZ	200	9.97	B	O12347					ABCDXYZ560	SESS-2							
5. BD sells the shares to customer 1 at the same price	MEOF	FRMA	XYZ	500	9.97		O12345							F12348	A	Y	O12345	B	O12347	SL

In phase 2c, explicit linkage between the customer order and the representative order is required.

- FRMA must report a *representativeInd* value of "Y" in its MENO for the representative order, and the *aggregatedOrders* field must be populated (as shown on *aggregatedOrders* slide).
- FRMA must populate a *fulfillmentLinkType* value of "Y" in the customer MEOF, and the firmDetails must be populated.

Refer to Scenario 2.3.4 of v2.2 of the Industry Member Reporting Scenarios Document

QUESTIONS?