

# UBS ATS

## *Sponsored Participant FIX Specification Including Conditional Indications*

September 2018



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## **1 Introduction**

This document is intended to be a technical supplement to the UBS Form ATS filing, available on [www.ubs.com/ats](http://www.ubs.com/ats).

## **2 Overview**

The UBS ATS facilitates interaction among orders received from a broad range of clients and market participants, including institutional clients using UBS algorithms, broker-dealers, UBS trading desks, market makers, retail brokers, and active traders (sometimes referred to as High Frequency Traders or "HFT"). Subscriber and Sponsored Participant orders that are placed in the UBS ATS will have an opportunity to interact with UBS BD's US equity order flow – liquidity that includes client agency order flow, including Direct Market Access ("DMA") and algorithmic trading, and principal order flow from UBS BD trading desks. In addition, Subscriber orders will interact with orders from other Subscribers.

Orders routed to and received by the UBS ATS are not routed out to any other market center.

### **2.1 Hours of Operation**

Please see Section 2.1 in Exhibit F of our Form ATS filing for details on Hours of Operation.

### **2.2 Eligible Stocks**

All NMS Stocks, unless otherwise specified.

UBS ATS publishes a monthly list of disabled symbols that it will not trade which can be found at [www.ubs.com/ats](http://www.ubs.com/ats). All orders in these symbols submitted to the UBS ATS will be rejected.

If you would like to be added to our distribution list for email alerts please send an email to [ats@ubs.com](mailto:ats@ubs.com).

UBS ATS will accept, but not execute, production test symbols such as ZVZZT.

## **3 Order Types**

Please see Section 2.2 in Exhibit F of our Form ATS filing for details on Order Types.

## **4 Order Entry**

### **4.1 Minimum Quantity**

Orders may be routed to the UBS ATS with a minimum quantity value specified. UBS ATS will only cross where at least this number of shares is available from a single eligible contra side order.

### **4.2 Maximum Quantity**

The UBS ATS will enforce a maximum order size equal to 50% of the stock's ADV, per order, subject to change. If 50% of the ADV is less than 500,000 shares the limit becomes 500,000 shares. All orders are subject to risk checks in compliance with SEC Rule 15c3-5.

### **4.3 Routing Restrictions**

Please see Section 3.1 in Exhibit F of our Form ATS filing for details on Routing Restrictions.

### **4.4 Crossing Restrictions**

Please see Section 3.3 in Exhibit F of our Form ATS filing for details on Crossing Restrictions.

### **4.5 Notification of Crossing Restrictions**

Please see Section 3.4 in Exhibit F of our Form ATS filing for details on Notice of Crossing Restrictions.

#### 4.6 Short Sale Orders

Please see Section 3.5 in Exhibit F of our Form ATS filing for details on Short Sale Orders.

#### 4.7 Availability

UBS reserves the right to temporarily disconnect a Sponsored Participant due to technology issues either with the UBS ATS, a Sponsored Participant, or within the UBS BD. The UBS ATS support team will seek to provide notice as soon as reasonably practicable, but in some cases the notice may not be provided until after disconnection.

#### 4.8 Cancel on Disconnect

Functionality to automatically cancel all open orders associated with a given FIX or UBP port is available on request. This functionality will activate when the client inbound TCP session to the proxy is detected to be closed.

### 5 Sponsored Participant FIX Messages

#### 5.1 Pegged Orders (Mid, Primary, Market)

FIX Tag	Field Name	Required	Description / Comment
18	ExecInst	Y	Can only be one of the following values: M (Mid-Price Peg), R (Primary Peg), P (Market Peg). Values unrelated to peg type will be ignored.
40	OrdType	Y	P (Pegged)
44	Price	N	Absolute price constraint.
54	Side	Y	1 (Buy), 2 (Sell), 5 (Sell Short), 6 (Sell Short Exempt)
59	TimeInForce	Y	0 (Day), 3(IOC)
110	MinQty	N	Minimum quantity for each execution on the order
439	MPID	N	Nasdaq Assigned MPID of the routing Broker Dealer when applicable. Clearing firm assigned MPID for BD's that are not a member of Nasdaq or FINRA. Sponsored Participants should not send this tag.
847	DMA Tactic	Y	57008 (Indicates the UBS ATS)
5301	PeggedMidpointMode	N	Valid only for MidPoint Pegged Order. How the crossing engine treats the midpoint (between the bid & ask) for a pegged order. 1 - FillToLimit: Fill to the limit price, meaning it could be away from the midpoint (default) 2 - FillToMidpoint: Executions that add liquidity will execute at the midpoint only. Executions removing liquidity may execute at a price better than the midpoint if the limit price of the order is equal to or more aggressive than the midpoint (ie. a buy order with a limit price at or above the midpoint or a sell order with a limit price at or below the midpoint)
5303	MinQuantityLeavesMode	N	If tag 110 (MinQty) is present, this tag specifies how the order is handled when the leaves quantity of an order becomes smaller than MinQty. Possible values are: 1 - No MinQty in affect when leaves < MinQty (default) 2 - MinQty becomes the leaves quantity when leaves < MinQty 3 - Remainder of order is cancelled if leaves < MinQty. An unsolicited cancel ack ("OUT") message is sent to the originator of the order and the order is removed from the book.
5700	LocateBroker	N	Required on Short Sales of 'hard to borrow' securities from non-BD Subscribers.

6884	ConditionallInviteGrade	N	Minimum Conditional Score required for a Conditional Indication to get invites from this order. 0: Do not generate any invitations to Conditional Indications (default if not sent) 1: invite all 2: invite if score is medium, high or UBS algo 3: invite if score is high or UBS algo 4: invite if score is UBS algo
9004	Crossing Restrictions	Y	1 - No restrictions 3 - Do not execute against UBS Principal orders 4 - Do not execute against own orders (e.g. do not cross two orders sent by the same source client) 5- Do not execute against UBS Principal orders or own orders S – Do not execute against Source Category 5 orders T – Do not execute against Source Category 5 or UBS Principal Orders U - Do not execute against Source Category 5 or UBS Principal or own orders V - Do not execute against Source Category 5 or own orders
9007	RoundLotOnly	N	Not supported in Sponsored Participant FIX. Supported via Subscriber FIX and UBP Only.

## 5.2 Limit Order

FIX Tag	Field Name	Required	Description / Comment
40	OrdType	Y	2 (Limit)
44	Price	Y	Limit Price of order.
54	Side	Y	1 (Buy), 2 (Sell), 5 (Sell Short), 6 (Sell Short Exempt)
59	TimeInForce	Y	0 (Day), 3(IOC)
110	MinQty	N	Minimum quantity for each execution on the order
439	MPID	N	Nasdaq Assigned MPID of the routing Broker Dealer when applicable. Clearing firm assigned MPID for BD's that are not a member of Nasdaq or FINRA. Sponsored Participants should not send this tag.
847	DMA Tactic	Y	57008 (Indicates the UBS ATS)
5303	MinQuantityLeavesMode	N	If tag 110 (MinQty) is present, this tag specifies how the order is handled when the leaves quantity of an order becomes smaller than MinQty. Possible values are: 1 - No MinQty in affect when leaves < MinQty (default) 2 - MinQty becomes the leaves quantity when leaves < MinQty 3 - Remainder of order is cancelled if leaves < MinQty. A unsolicited cancel ack ("OUT") message is sent to the originator of the order and the order is removed from the book.

6884	ConditionallInviteGrade	N	Minimum Conditional Score required for a Conditional Indication to get invites from this order. 0: Do not generate any invitations to Conditional Indications (default if not sent) 1: invite all 2: invite if score is medium, high or UBS algo 3: invite if score is high or UBS algo 4: invite if score is UBS algo
5700	LocateBroker	N	Required on Short Sales of 'hard to borrow' securities from non-BD Subscribers.
9004	Crossing Restrictions	Y	1 - No restrictions 3 - Do not execute against UBS principal orders 4 - Do not execute against own orders (e.g. do not cross two orders sent by the same source client) 5- Do not execute against UBS principal orders or own orders S – Do not execute against Source Category 5 orders T – Do not execute against Source Category 5 or UBS Principal Orders U - Do not execute against Source Category 5 or UBS Principal or own orders V - Do not execute against Source Category 5 or own orders
9007	RoundLotOnly	N	Not supported in Sponsored Participant FIX. Supported via Subscriber FIX and UBP Only.

### 5.3 Execution Message

The following tags comprise the execution messages that the ATS will send back to originating Subscribers and systems:

FIX Tag	Field Name	Required	Description / Comment
29	LastCapacity	Y	2 (Cross as Agent), 4 (Principal), or 5 (Riskless)
30	LastMkt	Y	65 (UBS ATS). Will send MIC code "UBSA" if requested.
76	ExecBroker	Y	UBSA
375	ContraBroker	Y	UBSA
851	LastLiquidityInd	Y	1 (Adding Liquidity), 2 (Removing Liquidity), Y (Add vs Conditional), Z (Remove vs Conditional)

Note: For Riskless fills, UBS has the ability to convert tag 29 from 5 to 4 for any systems that cannot support the Riskless value. Please send a request to ats@ubs.com to request this change.

### 5.4 Busted Execution Message

UBS ATS may send a bust on an execution, even if the order is already filled or cancelled. A busted execution will never cause a closed order to re-open. Busts are generally only used to comply with industry wide Clearly Erroneous rulings.

FIX Tag	Field Name	Required	Description / Comment
17	ExecId	Y	ExecId of the bust execution message
19	ExecRefId	Y	ExecId of the execution being busted.

20	ExecTransType	Y	" 1 " (Cancelled Execution)
150	ExecType	Y	" 2 " (Fill)

## 6 Overview of Conditional Indications

Please see Section 3.2 in Exhibit F of our Form ATS filing for details on Conditional Indications.

### 6.1 Initial Transmission of a Conditional Indication

Conditional Indications are sent via the FIX (v4.2) protocol. The UBS ATS will accept incoming NewSingleOrder messages (Tag 35=D) identified as Conditional Indications by setting Tag 5253='C'.

A UBS ATS participant will be able to manage the Conditional Indication's Quantity, Minimum Quantity and Price using the Order Cancel/Replace Request message (Tag 35=G). Additionally, Conditional Indications can be cancelled using the Order Cancel Request message (Tag 35=F).

### 6.2 Invite to Trade

Once an opposing side Conditional Indication or Resident Order comes into the UBS ATS with appropriate parameters such that a match could occur, the originator of the Conditional Indication will receive an Invite Message telling them a matching opportunity exists. In the event there is more than one Conditional Indication at the same price, the UBS ATS will first send Invites to Conditional Indications with the largest quantity able to satisfy the contra side order. This priority feature is intended to maximize the execution of larger orders.

The Invite Message will be sent as an Unsolicited Cancel Execution Report (Tags 35=8, 150=4, 39=4). The Client Order Id ("ClOrdID") on the execution report will reference the ClOrdID from the Conditional Indication. Additionally, the Invite message will include a unique invite identifier in Tag 6214 ("InviteID").

### 6.3 Transmission of a Firm-Up Order

To respond to an Invite Message, the originator of the Conditional Indication should send a NewOrderSingle message for a Resident Order with a reference to the Invite, by placing the InviteID received on the Unsolicited Cancel Invite Message in Tag 6214. The Firm-Up order should be received by UBS within 100 milliseconds of the invite message.

### 6.4 Fills Resulting from the Firm-Up Order

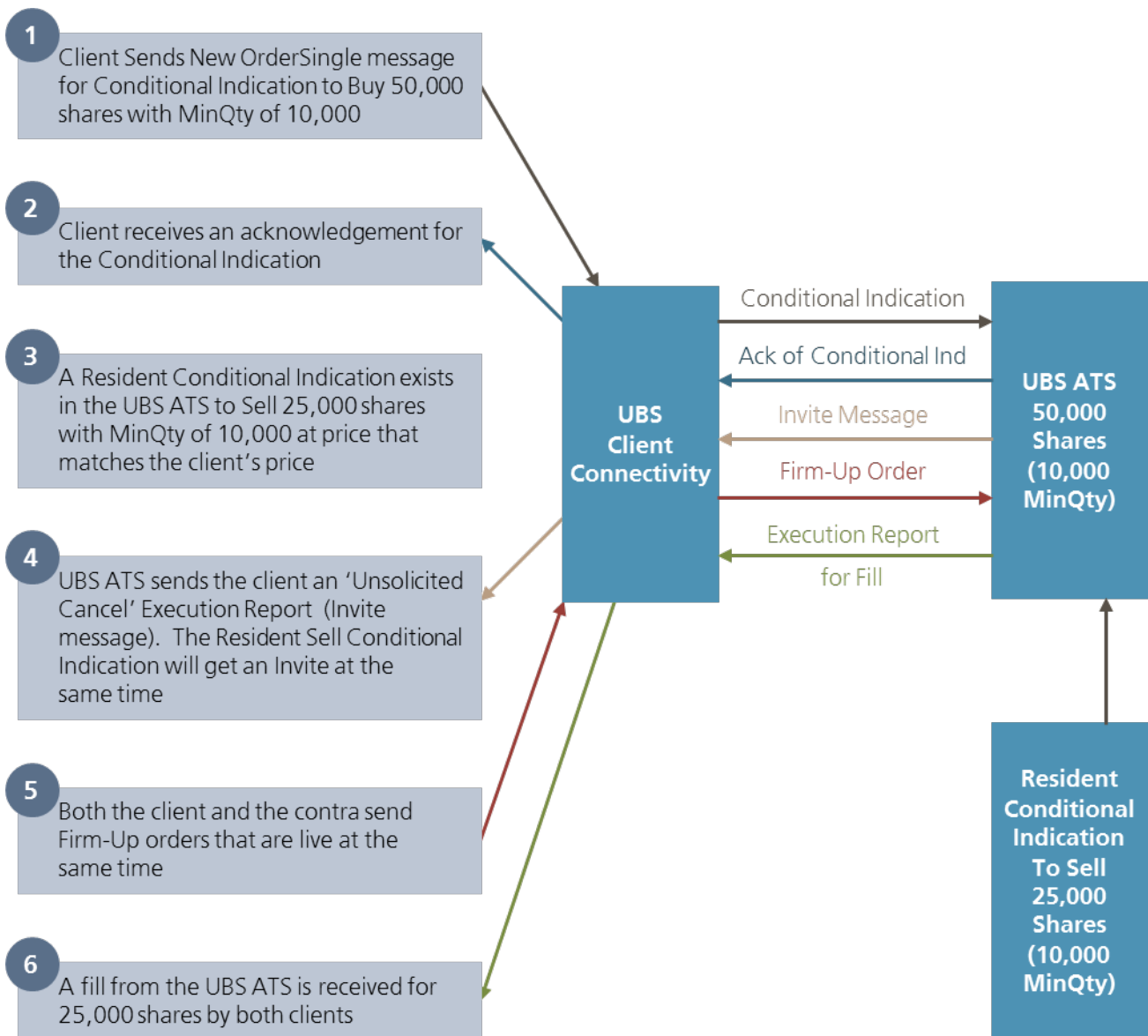
Standard execution reports identifying any fills resulting from the Firm-Up Order will be sent back to the client.

### 6.5 Quality Grade

Please see Sections 3.3 and 3.4 in Exhibit F of our Form ATS filing for details on Quality Grading of Conditional Indications.



## 7 Conditional Indication Work Flow Diagram



## 8 Conditional Indications

### 8.1 Entering a New Conditional Indication

UBS ATS Conditional Indications are sent using the NewOrderSingle (Tag 35=D) message. Conditional Indications will receive an Invite to trade when a suitable contra meeting the Conditional Indication's minimum quantity and price exists in the UBS ATS order book.

FIX Tag	Field Name	Required	Description / Comment
18	ExecInst	N	For Pegged OrdType: P (Market Peg), M (Mid-Price Peg), R (Primary Peg)
38	OrderQty	Y	Conditional Indication Quantity
40	OrdType	Y	1(Market), 2 (Limit), P(Pegged)
44	Price	Y	Limit Price

54	Side	Y	1 (Buy), 2 (Sell),5 (Sell Short), 6 (Sell Short Exempt)
59	TimeInForce	Y	0 (Day)
110	MinQty	N	Conditional Minimum quantity
847	DMA Tactic	Y	57008 (Indicates the UBS ATS)
5253	OrdTypeExt	Y	C (Conditional Indication)
6884	ConditionallInviteGrade	Y	Minimum Conditional Score required for a Conditional Indication to get invites from this order. 0: Do not generate any invitations to Conditional Indications (default if not sent) 1: invite all 2: invite if score is medium, high or UBS algo 3: invite if score is high or UBS algo 4: invite if score is UBS algo
9004	Crossing Restrictions	Y	1 - No restrictions 3 - Do not execute against UBS principal orders 4 - Do not execute against own orders (e.g. do not cross two orders sent by the same source client) 5- Do not execute against UBS principal orders or own orders S – Do not execute against Source Category 5 orders T – Do not execute against Source Category 5 or UBS Principal Orders U - Do not execute against Source Category 5 or UBS Principal or own orders V - Do not execute against Source Category 5 or own orders

## 8.2 Receiving an Invite Message

An Invite Message is represented as an UnsolicitedCancel Execution Report (Tag 35=8). The Invite is sent by the UBS ATS to notify the originator of the Conditional Indication that a suitable contra indication or order is on the UBS ATS book.

FIX Tag	Field Name	Required	Description / Comment
6	AvgPx	Y	Avg price of executions. 0 since there are no executions
11	ClOrdID	Y	Client order reference number
14	CumQty	Y	Quantity Executed. 0 since there are no executions
17	ExecID	Y	Unique ID for each Execution Report message
20	ExecTransType	Y	Value of 0 (New)
31	LastPx	Y	Value of 0
32	LastShares	Y	Value of 0
39	OrdStatus	Y	Status of the order. Value of 4 (Cancelled)
54	Side	Y	
55	Symbol	Y	
150	ExecType	Y	State of the Execution Report. Value of 4 (Cancelled)
151	LeavesQty	Y	Value of 0
6214	InviteID	Y	Unique ID to be used for reference on the Firm-Up Order

### 8.3 Responding to an Invite

The originator of the Conditional Indication is expected to respond to an Invite Message by sending a Resident Order (a "Firm-Up Order") (NewOrderSingle, Tag 35=D) message to the UBS ATS with a reference to the Conditional Indication.

Please note that Invite Grade (Tag 6884) is not supported on a Conditional Firm-Up order.

FIX Tag	Field Name	Required	Description / Comment
18	ExecInst	N	For Pegged OrdType: P (Market Peg), M (Mid-Price Peg), R (Primary Peg)
38	OrderQty	Y	Order Quantity
40	OrdType	Y	1(Market), 2 (Limit), P(Pegged)
44	Price	Y	Limit Price
54	Side	Y	1 (Buy), 2 (Sell),5 (Sell Short), 6 (Sell Short Exempt)
59	TimeInForce	Y	0 (Day)
110	MinQty	N	Minimum quantity
439	MPID	N	Nasdaq Assigned MPID of the routing Broker Dealer when applicable. Clearing firm assigned MPID for BD's that are not a member of Nasdaq or FINRA. Sponsored Participants should not send this tag.
847	DMA Tactic	Y	57008 (Indicates the UBS ATS)
5301	PeggedMidpointMode	N	How the crossing engine treats the midpoint (between the bid & ask) for a pegged order. 1 - FillToLimit: Fill to the limit price, meaning it could be away from the midpoint (default) 2 - FillToMidpoint: Executions that add liquidity will execute at the midpoint only. Executions removing liquidity may execute at a price better than the midpoint if the limit price of the order is equal to or more aggressive than the midpoint (ie. a buy order with a limit price at or above the midpoint or a sell order with a limit price at or below the midpoint)
5303	MinQuantityLeavesMode	N	If tag 110 (MinQty) is present, this tag specifies how the order is handled when the leaves quantity of an order becomes smaller than MinQty. Possible values are: 1 - No MinQty in affect when leaves < MinQty (default) 2 - MinQty becomes the leaves quantity when leaves < MinQty 3 - Remainder of order is cancelled if leaves < MinQty. An unsolicited cancel ack ("OUT") message is sent to the originator of the order and the order is removed from the book.
5700	LocateBroker	N	Required on Short Sales of 'hard to borrow' securities from non-BD Subscribers.
6214	InviteID	Y	Unique ID to reference the Invite
9004	Crossing Restrictions	Y	1 - No restrictions 3 - Do not execute against UBS principal orders 4 - Do not execute against own orders (e.g. do not cross two orders sent by the same source client) 5- Do not execute against UBS principal orders or own orders S – Do not execute against Source Category 5 orders

			T – Do not execute against Source Category 5 or UBS Principal Orders
			U - Do not execute against Source Category 5 or UBS Principal or own orders
			V - Do not execute against Source Category 5 or own orders

Note: The Firm-Up Order should not include Tag 5253 (OrdTypeExt).

## 8.4 Execution Messages for Firmed Up Orders

Fill Execution Reports (Tag 35=8) will not occur for Conditional Indications and will only be received based on Firm-Up Orders. The Fill Execution Reports are in the same format as described in the UBS ATS Rules of Engagement document.

FIX Tag	Field Name	Required	Description / Comment
29	LastCapacity	Y	2 (Cross as Agent), 4 (Principal), or 5 (Riskless)
30	LastMarket	Y	65 (UBS ATS)
375	ContraBroker	Y	UBSA
851	Liquidity	Y	1 (Adding Liquidity), 2 (Removing Liquidity), Y (Add vs Conditional), Z (Remove vs Conditional)

Note: For Riskless fills, UBS has the ability to convert tag 29 from 5 to 4 for any systems that cannot support the Riskless value. Please send a request to ats@ubs.com to request this change.

## 9 Regulatory Reporting

Once a crossing opportunity has been identified, the UBS ATS will execute and report the trade to a recognized trade reporting facility of a self-regulatory organization.

The books and records of the activity of the UBS ATS will be created and maintained by UBS BD in compliance with Rules 17a-3 and 17a-4 of the Securities Exchange Act of 1934 and Rules 302 and 303 of Regulation ATS.

For OATS and OTS reporting orders sent to UBS ATS, please use the following information, for linkage:

Item	Related To	Value
Clearing Number	DTCC	642
Executing Broker	TRF	UBSA
Sent to Firm MPID	OATS	UBSA
Destination Code	OATS	M
Recipient's Market Participant Symbol	OTS	8-22651
Recipient Type	OTS	M
Last Market (UBS ATS)	FIX	65
MIC Code	FIX	UBSA

## 10 Clearing

The UBS ATS is a system operated by the UBS BD. UBS BD is a self-clearing broker dealer, a member of DTCC and has the operational capacity to clear and settle all of the trades executed by the UBS ATS. The UBS BD maintains

controls to ensure compliance with the regulatory requirements for the clearance and settlement of trades in equities securities.

## 11 Contact Info

If you have any questions or queries, please contact [ats@ubs.com](mailto:ats@ubs.com), or contact UBS ATS Support team at (203) 719-3775.

## 12 Examples

See the UBS ATS Form ATS Exhibit F for examples of crossing scenarios.

## 13 Change History

Date	Revision	Change made by:	Synopsis of Change
October 2013	1.7	George Wolf	LULD, Document Market Peg, UBP reject messages. Conditional Orders clarifications, Clarified use of compliance related fields (MPID, Locate). Added examples. Renamed binary order entry protocol to UBP.
July 2014	1.8	George Wolf	Updated Diagram, cleanup labelling of unused fields in UBP.
September 2014	1.9	George Wolf	Removed sections redundant to Exhibit F filing (now available on UBS website). Enhanced documentation for UBP messages.
December 2016	2	Seth Slomiak	Added additional Crossing Restrictions for all eligible Participants to exclude interacting with orders in Source Category 5.
September 2017	2.1	Charles Seremetis / Seth Slomiak	Removed language that limits what Subscriber Flows may restrict interacting with Source Category 5 and other minor edits. FIX and UBP were separated in this version and Conditional Addendum incorporated into this document.
July 2018	2.2	Seth Slomiak	Added Conditional Invite Grade and new liquidity codes

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