

FIF/FIX Regulatory Reporting Working Group &

FIX Execution Venue Working Group

Liquidity Indicator Extension Proposal

September 10, 2019

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Proposal Status: GTC Gov Vote

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# Document History

| **Revision** | **Date** | **Author** | **Revision Comments** |
| --- | --- | --- | --- |
| 0.1 | May 1, 2019 | Chris Bok, FIF Hanno Klein, FIX GTC | Initial draft |
| 0.2 | May 21, 2019 | Hanno Klein, FIX GTC | Minor updates |
| 0.3 | May 29, 2019 | Hanno Klein, FIX GTC | Added requirements from the FIX Execution Venue Working Group for additional liquidity indicators related to orders requiring a firm order commit prior to execution. |
| 0.4 | June 19, 2019 | Hanno Klein, FIX GTC | Minor changes to the wording used for orders requiring a firm order commit prior to execution. |
| 0.5 | Sep 10, 2019 | Hanno Klein, FIX GTC | Disposition of public comments |
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The above document history section, including date, author, and comments, is required to track editing changes to the document. List revisions in **ascending order**. Please insert additional rows in the table as needed.

Template version information:

r2: 2010-11-13 Revised to support abbreviations, inlined component references

r3: 2011-12-02 Revised to add additional usage clarification

r3.1: 2013-01-04 Revised Copyright year, changed template to Office 2013 .docx version, updated font to Calibri for cleaner look. Added additional template usage clarification.

R3.2 2016-05-23 – revised the copyright date, corrected document references and replaced the FIX logo with the most current graphic.

2016-09-14 – Removed blue highlighting from hidden text content, removed ICR column from 5.1 and 6.1 tables and added “FIX Spec” to the Comments column header of table 6.1 and revised notation of optional elaboration for fields and enums in the data dictionary.

# Introduction

This extension proposal combines independent requirements related to the FIX field LastLiquidity(851) from FIX working groups in the US and Europe. They are combined in this single document for efficiency.

## FIF/FIX Regulatory Reporting Working Group

During November 2018, the US Securities and Exchange Commission (SEC) adopted amendments to SEC Rule 606. Pursuant to these amendments, broker-dealers must provide additional information to customers relating to their handling and execution of customer orders. For broker-dealers to provide this information to customers, exchanges and other execution venues will need to provide additional information to their customers. More particularly, for a broker to fulfill its reporting requirements, each execution venue must provide the broker, that the venue received an order from, with information pertaining to each executed order, including whether the order provided liquidity, removed liquidity, or neither provided nor removed liquidity. Currently the FIX field LastLiquidity(851) provides values for reporting that an order provided liquidity or removed liquidity. To meet this SEC reporting requirement we are proposing to add a new value to LastLiquidity(851) to report that an order neither provided nor removed liquidity.

## FIX Execution Venue Working Group

In October 2014, Turquoise (part of LSE Group) launched the Turquoise Plato Block DiscoveryTM service. It offers additional distinctions to indicate liquidity beyond simply adding or removing it. The business requirements were submitted to the GTC and led to the Extension Pack 198 “Indicative Execution Extension” in early 2015 (see <https://www.fixtrading.org/packages/ep198/> for details). The purpose was to identify the execution of an order that had only been indicative and required a confirmation by the submitter to become executable, often with the same quantity, but also sometimes with a greater or lower quantity.

The FIX field MatchType(574) was extended with the values 10 and 11 for this purpose, representing two flavors of existing values. The field offers different categories of execution. The term “last look” was used for the two new values to express the need for confirmation, a concept well-known for workflows related to fixed income.

The semantics of “last look” are about a confirmation of a match and not about the confirmation of an individual order to change from indicative to non-indicative aka tradeable (an attribute that FIX reserves for quotes). Turquoise had implemented their requirements with a non-standard extension of the FIX field LastLiquidity(851) and did not use MatchType(574). The working group would like to propose a standard solution with a focus on liquidity (not on the execution) that also minimises the need for a change of existing implementations.

# Business Requirements

## Neutral Liquidity Indicator

This is the link to the SEC’s adopting release for the rule amendment: <https://www.sec.gov/rules/final/2018/34-84528.pdf>.

As set forth on pages 330-332 of the SEC’s adopting release, a broker-dealer must report “total shares executed.” A broker-dealer also most report “total number of shares executed of orders providing liquidity” and “total number of shares executed of orders removing liquidity.” The SEC staff have advised members of the Financial Information Forum that it is acceptable to classify an order as “neither providing nor removing liquidity.” In this scenario, the execution must be included under “total shares executed” but not under either of the other two categories.

The SEC has issued a Technical Specifications document that includes this reporting obligation: <https://www.sec.gov/files/Order_Handling_Data_Technical_Specification_20190331.pdf>. In particular, please refer to pages 10-12.

The SEC staff have advised members of the Financial Information Forum that it is acceptable to classify orders as neither providing nor removing liquidity. For example, for an alternative trading system (ATS) that provides functionality where participants can negotiate trades directly with each other on a one-to-one basis, the SEC staff have advised that it would be acceptable to classify the negotiation orders as neither providing nor removing liquidity.

Accordingly, it would be desirable to provide a means whereby an execution venue could report to a routing broker for each execution whether the order provided liquidity, removed liquidity, or neither provided nor removed liquidity.

There are several FIX fields that indicate liquidity. All applicable FIX fields use the valid values defined for the FIX field LastLiquidityInd(851). There are currently two generic values 1 = Added Liquidity and 2 = Removed Liquidity and a number of values for specific use cases, e.g. 3 = Liquidity Routed Out and 4 = Auction. The existing values “3” and “4” refer to specific situations where liquidity is neither added nor removed. A generic value does not exist for the required use case without an implied reason why liquidity was neither added nor removed. We propose to add one as follows:

TBD[[1]](#footnote-1) = Neither Added nor Removed Liquidity (and no other values apply).

The reason for specifying that “no other values apply” is to address a scenario such as an auction order where the order neither provides nor removes liquidity. In this scenario, participants must report the specific value “4” for an auction unless the recipient (e.g. a regulator) does not permit specific values and wants the generic value to be used instead.

While this SEC rule refers to “providing liquidity”, we consider this to be the equivalent to “adding liquidity”, as used in the FIX field LastLiquidityInd(851).

## Liquidity from Orders Requiring a Confirmation

Orders requiring a confirmation are used as part of the regular matching process. However, they are conditional in the sense that they cannot be matched immediately. A potential match triggers a request to the order submitter to confirm the order, whereby he can also change or remove it. The confirmation means that the order now becomes a “normal” order and no longer requires a confirmation. From then on, it participates in the matching process just like any other order. In the case of the Turquoise Plato Block DiscoveryTM service this means that the order may or may not execute against the order that established a potential match and triggered the request for confirmation.

A potential match can occur during an auction or during continuous trading. The requirement is to distinguish the two use cases.

* An aggressive order requiring confirmation during continuous trading is similar to an IOC order removing liquidity which is covered by LastLiquidity(851) = 2 (Removed liquidity). Turquoise Block DiscoveryTM does not have a use case where an order requiring confirmation rests on the book after having been confirmed. A new value is proposed as follows:  
    
  TBD[[2]](#footnote-2) = Removed liquidity after firm order commitment
* An auction order requiring confirmation is similar to a normal auction order which is covered by LastLiquidity(851) = 4 (Auction). A new value is proposed as follows:  
    
  TBD[[3]](#footnote-3) = Auction execution after firm order commitment

The references to existing values were made to show a mapping to more generic values typically required by regulators.

# Issues and Discussion Points

The information in this section can be presented in table or numbered list format or sub-sections of descriptive text. Include issues and important discussion points that arose during the sub-committee or working group's effort to develop the gap analysis proposal. Also include resolutions of the issues and discussion points. The items will aid in understanding the thought process and tracks for the decisions made.

## Field Omission

One alternative would be for broker-dealers to not provide this FIX field when an order neither provides nor removes liquidity. The concern with this approach is that a party receiving this FIX message might identify this scenario as an error where the sender failed to provide a valid last liquidity code, as opposed to interpreting this as a default value of “neither adding nor removing liquidity”. It would provide greater clarity to industry participants to include “neither adding nor removing liquidity” as an explicit value for this FIX field. It would also reduce unintended errors.

## Explicit Value per Use Case

A second alternative would be to provide a distinct value for each scenario where an order neither provides nor removes liquidity. The concern with this approach is that it would be difficult to identify each scenario that involves neither providing nor removing liquidity. It might also require ongoing updates to this FIX field as new scenarios are identified.

# Proposed Message Flow

*There are no changes to existing FIX message flows.*

# FIX Message Tables

*There are no changes to existing FIX message tables.*

# FIX Component Blocks

*There are no changes to existing FIX component blocks.*

# Category Changes

*There are no changes to existing categories.*

# Appendix A - Data DictionaryThe Data Dictionary table must be filled in for all new fields being proposed and all existing fields where changes are being proposed. Each row, representing a field, must identify the requested action of “new”, "add", "change", or "deprecate" for each field.

For new fields provide the data type for each field, the field definition, along with any enumerations related to the field. New fields will use "TBD" in the Tag column. For existing fields, document the proposed additions and changes and highlighting the change (e.g. to the description, new enumerations being added, etc.).

List new fields at the top of the table, followed by fields to be deprecated, and then fields to be changed.

* **Tag** - Order all new fields at the top of the table. The "Tag" column should be "TBD" for the new fields. For existing fields include the official tag number.
* **FieldName** – Field name – required for all fields including existing fields being changed and proposed.
* **Action** - indicates whether the field is to be added, changed, or deprecated in the data dictionary:

**NEW** - A new proposed field. Use "TBD" in Tag column. Identified in the "Add to/ Deprecate from Message type or Component block" column the message or component the new field is to be added to.

**ADD** - An existing field to be added to the component or message type identified in the "Add to/ Deprecate from Message type or Component block" column.

**DEPRECATE** - An existing field to be deprecated. If the deprecation is message specific (as oppose to deprecating the field from the entire specification), identify in the "Add to/ Deprecate from Message type or Component block" column the component or message from which the field is to be deprecated.

**CHANGE** - An existing field to be modified – modifications are limited to changing the Data Dictionary description or changing or adding new enumerations. A data type change requires strong business requirements justification to be documented as part of the proposal and will be reviewed in detail by the GTC.

* **Datatype** - The data type, e.g. int, Price, Boolean, etc. (See FIXimate for the complete list of FIX datatypes). Required for new fields; not required for existing fields, unless the proposal is to change the data type. See the list of data types in Volume 1 of the FIX Protocol specification.
* **Description -** A definition of the field. The description of the field should be sufficiently descriptive and meaningful but should be generic enough that the field can be reused. For specific message or component context based usage rules these should be described as field usage text within the message or component in which the field is included.

**Enumerations** - When a field requires enumerations, these are included within the **Description** column of the Data Dictionary table. When enumerations are to be defined for a new field, the field should be of *int* data type and the enumerated values be integers starting at 0 (zero). If the field is to have a default enumeration value that is implied by the omission of the field, the default value must be assigned the value 0 (zero). All enumerations must have a short description included that provides sufficient meaning for the enumeration value. A longer elaboration or description for the enumeration may also be included.

* **FIXML Abbreviation** - The abbreviation for the field when used in FIXML Schema. The submitter is not required to supply the abbreviation, but it will need to be entered in conjunction with the GTC before ratification of the proposal. If the submitter is familiar with the abbreviation rules or convention, the submitter is encouraged to supply a proposed FIXML abbreviation; however, this is subject to review and change by the GTC. If new terms require abbreviation, propose the abbreviation for the new term(s) in Appendix C.
* **Add to / Deprecate from Message type or Component block** - Identify the message types or component blocks in which to apply the Action for the field.

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| --- | --- | --- | --- | --- | --- | --- |
| **Tag** | **FieldName** | **Action** | **Data-type** | **Description** | **FIXML Abbreviation** | **Add to / Deprecate from Message type or Component block** |
| 851 | LastLiquidityInd | CHANGE | int | Indicator to identify whether this fill was a result of a liquidity provider providing or liquidity taker taking the liquidity.  Valid values:  1 = Added Liquidity  2 = Removed Liquidity  3 = Liquidity Routed Out  4 = Auction Execution  …  TBD = Neither Added nor Removed Liquidity  [Elaboration: Subject to bilateral agreement, this value can only be used if none of the specific values apply.]  TBD = Removed liquidity after firm order commitment  [Elaboration: An order that was submitted for continuous trading that required a firm order commit prior to execution. “Conditional order” is an alternate term used for such orders.]  TBD = Auction execution after firm order commitment  [Elaboration: An order that was submitted for auction trading that required a firm order commit prior to execution. “Conditional order” is an alternate term used for such orders.] | @LastLqdtyInd |  |

# Appendix B - Glossary EntriesThis section, if included, should contain a table with terminology to be included in the FIX specification Glossary in Volume 1. These are usually business terms that are defined to help readers understand the relevant space for the proposal.

* **Term** - The business term.
* **Definition** - The definition of the term. If a term has different definitions in different contexts or for different asset types, include and identify fully these differing definitions. If the definition is copied or paraphrased from a source, identify the source in parentheses after the definition.
* **Field where used** - Identifies the FIX field name for the field where this term is used.

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| **Term** | **Definition** | **Field where used** |
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# Appendix C - Abbreviations

When new fields, components, and messages are added to the FIX Specification, an abbreviated name that is primarily used for FIXML (at this time) must be created for them. Abbreviations are standardized within the FIX Specification. A list of abbreviations is maintained in the FIX Repository. You can access the current list of abbreviations via FIXimate on the FPL website. If abbreviations do not exist, use this table to define additional abbreviations required for your proposal. New abbreviations are subject to final approval of and may be changed by the GTC.

If you are not comfortable proposing new abbreviations, the "Proposed Abbreviations" can be omitted and the GTC will assign new abbreviations.

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| --- | --- | --- |
| **Term** | **Proposed Abbreviation** | **Proposed Messages, Components, Fields where used** |
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# Appendix D - Usage Examples

This is an optional section where the sub-committee or working group can provide whole or fragments of example FIX messages with actual or dummy data. These examples are useful for illustrating usage or rules specific to the business domain covered in the proposal.

# Appendix E – Disposition of Public Comments

This is an optional section where the sub-committee or working group provides the resolution to issues raised during the public review period.

Public comments from Marc Tortorello, <company>:

Thank you for the opportunity to comment on the Liquidity Indicator Extension Proposal.

* I assume, in the U.S., the proposed ‘Neither Added nor Removed Liquidity (and no other values apply)’ value would include both executions generated from conditional orders and some executions that are not generated from conditional orders. We believe identifying conditional executions separately with a unique value provides meaningful information. Would it be possible to add a ‘Conditional’ FIX value solely for conditional executions? Section 3.2 states it would be difficult to identify each scenario that involves neither providing nor removing liquidity but conditionals are a very common scenario and a significant portion of activity on some venues. In addition, after looking at our data and speaking to brokers, ‘8’ seems to be the industry standard value to report an execution generated from a conditional order in the U.S. although it is a non-standard FIX value.  
    
  **Resolution**: The semantic focus of LiquidityIndicator(851) is on the assessment of liquidity in general and for specific use cases. The use case where liquidity is neither added nor removed should only exist once and be agnostic of the type of order being executed or the type of execution. The distinction between conditional and other types of orders is useful when it is about removing or adding liquidity. These use cases have been addressed with the two new values (see also the resolution of the next bullet).  
    
  **Action**: None
* Section 2.2 indicates ‘8’ may be used for ‘Removed liquidity after firm order commitment’ but, as mentioned above, ‘8’ is being used in a non-standard way by many brokers in the U.S. to report executions generated from conditional orders. This dual usage is further motivation to create a standard unique value for executions generated from conditional orders.  
    
  **Resolution**: The generic term “firm order commitment” was used for the FIX standard to express the fact that immediate matching does not occur but requires further interaction between the order submitter and the venue. This is intended to include “conditional orders”, i.e. there is no difference in semantics, just wording. The purpose of the proposal was to acknowledge the existing usage of the non-standard values 8 and 9 and add them to the standard in a generic way. Implementations may differ in the way an order is confirmed, e.g. by sending in a normal order with a reference to a conditional order or resending the original order with a confirmation indicator.  
    
  **Action**: Add the term “conditional order” to the elaboration as an example for an alternate term for an order requiring a firm order commitment.
* We suggest using a value other than ‘0’ for ‘Neither Added nor Removed Liquidity (and no other values apply)’. In our data, ‘0’ is one of the most-received invalid values and including a valid ‘0’ value may lead to misreporting.  
    
  **Resolution**: FIX uses the value ‘0’ for many valid value lists. Valid value lists for new FIX fields are started with ‘0’ since quite some time now and there have never been any issued raised by the FIX community so far. ‘0’ should not be used to indicate an empty number field. The FIX tag=value encoding foresees the omission of a field in the wire format whenever it is empty of ‘null’.  
    
  **Action**: None

1. We propose to use a value of zero (0) as it seems to be a good fit for the intended semantics. [↑](#footnote-ref-1)
2. We propose to use a value of eight (8) to avoid breaking existing implementations [↑](#footnote-ref-2)
3. We propose to use a value of nine (9) to avoid breaking existing implementations [↑](#footnote-ref-3)