FIA Post Trade Working Group

Post-Trade Credit Limit Check Extensions

May 13, 2013

Revision 0.3

Proposal Status: ~~Public comment~~Approved

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Document History

Revision	Date	Author	Revision Comments
0.1	3/5/2013	Ryan Pierce, CME Group	Initial draft.
0.2	3/6/2013	Ryan Pierce, CME Group	Made revisions based on comments received during the 3/6/13 FIA PTWG meeting: - Changed enums for two proposed fields, renumbering and adding 4 new enums. - Made conforming change to proposal text and diagram. - Added example flow where a clearing firm accepts a trade that failed a credit check.
0.3	5/13/2013	Ryan Pierce, CME Group	Made revisions based on comments received during the 3/21/13 GTC meeting: - Added text clarifications. - Added Pending to RiskLimitCheckStatus. - Added integration with RiskLimitID as a discussion point.
ASBUILT	Jul. 31, 2013	Lisa T.	Created ASBUILT.

1 Introduction

This gap analysis defines extensions and message flows for credit limit checks that occur post-trade.

CFTC Regulation 1.74 requires FCMs to coordinate with each derivatives clearing organization ("DCO") to allow the FCM or the DCO to accept or reject each trade submitted to the DCO as quickly as would be technologically practicable if automated systems were used.

Today, FIX supports a method for a DCO (clearing house) to notify an FCM (clearing firm) of an alleged OTC trade, and for the clearing firm to send a message to the clearing house accepting or declining the trade. Alternately, a clearing firm could opt to provide the clearing house with limits or rules, and the clearing house could enforce these rules automatically to accept or reject each alleged trade.

However, the FIX message used to notify clearing firms of alleged trades does not differentiate between trades that have satisfied a limit or rule and trades that require a positive or negative response from the clearing firm. This gap analysis defines an extension that clarifies this distinction. Additionally, following approval or rejection, this extension enables the clearing house to report the cause for the approval or rejection.

1.1 Summary of Proposed Changes

- Add new field RiskLimitCheckStatus(2343tbd) to TradeCaptureReport(35=AE) and TradeCaptureReportAck(35=AR) to indicate trade-level status of risk limit checking.
- Add new field SideRiskLimitCheckStatus(2344tbd) to TradeCaptureReport(35=AE) and TradeCaptureReportAck(35=AR) to indicate side-level status of risk limit checking.

2 Business Requirements

Clearing firms may handle risk for trading firms in one of three ways:

1. Pre-defined limits. A clearing firm can inform the clearing house of risk limits for a particular trading firm's accounts, either using the PartyRiskLimitsDefinitionRequest(35=CS) or an out of band method. The clearing house then monitors and enforces these limits, and will automatically accept trades submitted by the trading firm in these accounts that will clear through the clearing firm if the limits are not exceeded. If limits are exceeded, then either:

   a. The clearing house may reject the trade, or

   b. The clearing house may present the trade to the clearing firm for approval via the claim model.

   Whichever of these two actions are taken shall be an implementation decision for the clearing house.

2. Auto-accept or auto-reject rules. A clearing firm can inform the clearing house of automatic accept or reject rules for a specific trading firm's accounts. These are similar to the pre-defined limit above, except that the decision to accept or reject the trade depends upon the identity of

the trading party or parties, and not on a quantitative risk model. In other words, a clearing firm could designate trusted trading firm accounts for these auto-accept rules.

3. Claim model. Utilized when neither of the above apply. When the trading firm submits a trade for clearing to the clearing house, the clearing house will notify the clearing firm of the alleged trade. [TradeReportTransTyp(487)=0 (New), TradeReportType(856)=1 (Alleged), MatchStatus(573)=1 (Unmatched)] Then either:

   a. The clearing firm will verify that the trade does not create undue risk and send a message to the clearing house to claim the alleged trade. [TradeReportTransTyp(487)=2 (Replace), TradeReportType(856)=2 (Accept)], or

   b. The clearing firm sees that the trade will create undue risk, and sends a message to the clearing house to decline the alleged trade. [TradeReportTransTyp(487)=2 (Replace), TradeReportType(856)=3 (Decline)]

Note that both sides of the trade must be validated using one of the described methods above. The method for each side does not have to be the same. E.g. the buyer may pass a pre-defined risk limit check while the seller's clearing firm claims the trade, or the buyer may be auto-accepted while the seller passes a pre-defined risk limit check.

This gap analysis proposes the addition of a field to indicate the status of the risk check process to the clearing firms for alleged trades. The clearing house sends it to clearing firms when notifying them of alleged trades to indicate whether a pre-defined risk limit passed or failed, or whether an auto-accept or auto-reject rule was applied (which do not require action on the clearing firm's part), or whether the clearing firm must take action to claim the alleged trade. Note that this field is used only for messages from the clearing house to the clearing firm; clearing firms do not set this field.

This field can be specified at the side level, seeing as the credit check status of each side can differ. For cases where a single value applies to both sides of a trade, this field could be specified instead at the root message level. Additionally, the value at the root message level could contain an overall summary of the sides, e.g. if one side is Accepted and the other side is Pending, the status overall would be Pending.

This field can also persist throughout the post-trade lifecycle to indicate how a trade was accepted or rejected, e.g. whether a rule or limit the clearing house enforced, or an explicit accept or reject from the clearing firm, resulted in the acceptance or rejection of the trade.

3 Issues and Discussion Points

3.1 Pre-trade use of these fields

Although this gap analysis focuses on credit checks as they pertain to post-trade clearing, these fields conceivably could be used pre-trade. As such, this gap analysis includes the more generic values "Accepted" and "Rejected" to facilitate such use. The post-trade workflows mentioned here will instead use the more specific fields defined.

3.2 Integration with Risk Limits

During GTC review, adding RiskLimitID (1670) and RiskLimitCheckID (2319)TBD, (added in the Pre-Trade Credit Check Gap Analysis) were suggested so that the relevant risk limit resulting in approval or rejection could be identified, and to provide an identifier for the specific risk limit check. These would be added to the side level (e.g. TrdCapRptSideGrp and TrdCapRptAckSideGrp) only, not the root level of the messages. However, RiskLimitID(1670) originally was intended only for use within risk-related repeating groups, so it has a FIXML abbreviation of @ID. @ID is too generic to add to a component like TrdCapRptSideGrp. Options considered include:

A. Use Repository functionality to give RiskLimitID(1670) a longer abbreviation (e.g. @RiskLmtID) outside of the "PartiesReferenceData" cagegory, but use @ID inside that category.
B. Create a new repeating group to hold a list of RiskLimitID fields. This more accurately models the business scenario, as several risk limits may apply for a given side of a trade, and it resolves the FIXML abbreviation issue as @ID would appear within its own repeating group.
C. Use another field such as RefRiskLimitID (currently abbreviated @RefRiskLmtID but the Pre-Trade Credit Check Gap Analysis is not finalized at present) which would have a more specific abbreviation.

Given the issue at hand, and recognizing that no firm has an immediate or planned need for this functionality, this issue shall be deferred.

4 Proposed Message Flow

This flow illustrates the case where one side has a pre-defined limit, and the other side uses the claim model.

Figure 1: Message flow showing both a pre-defined limit and the claim model
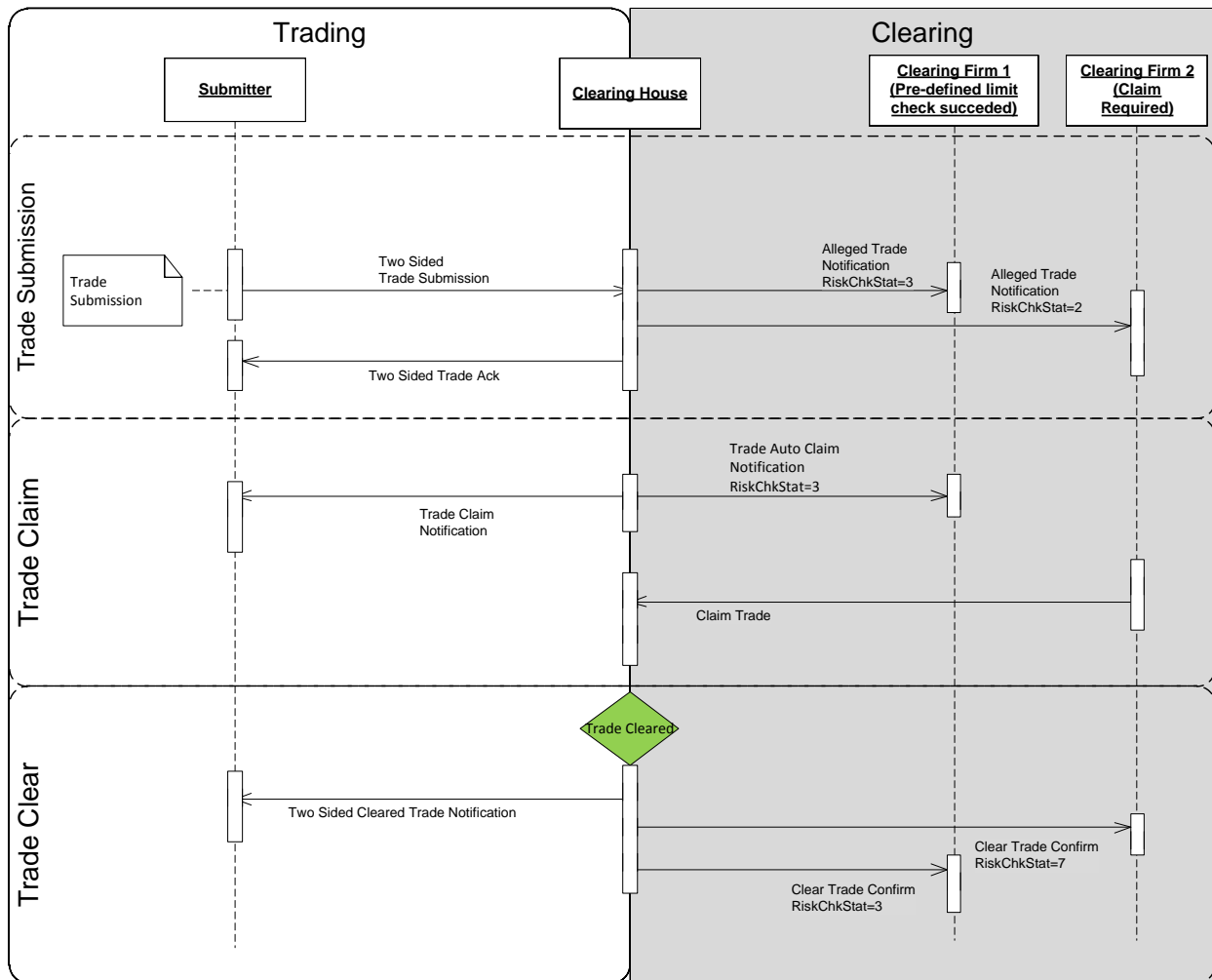
Legend:

RiskChkStat: 2 = Claim required, 3 = Pre-defined limit check succeeded, 7 = Accepted by clearing firm.

In the following flow, the rules of engagement for the clearing house require that trades failing credit checks be presented to the clearing firm for a final decision to claim or reject the alleged trade. Therefore the alleged trade notification to Clearing Firm 2 indicates that the credit check failed. Clearing Firm 2 still claims the trade.

Figure 2: Message flow showing a failed credit check that the clearing firm accepts
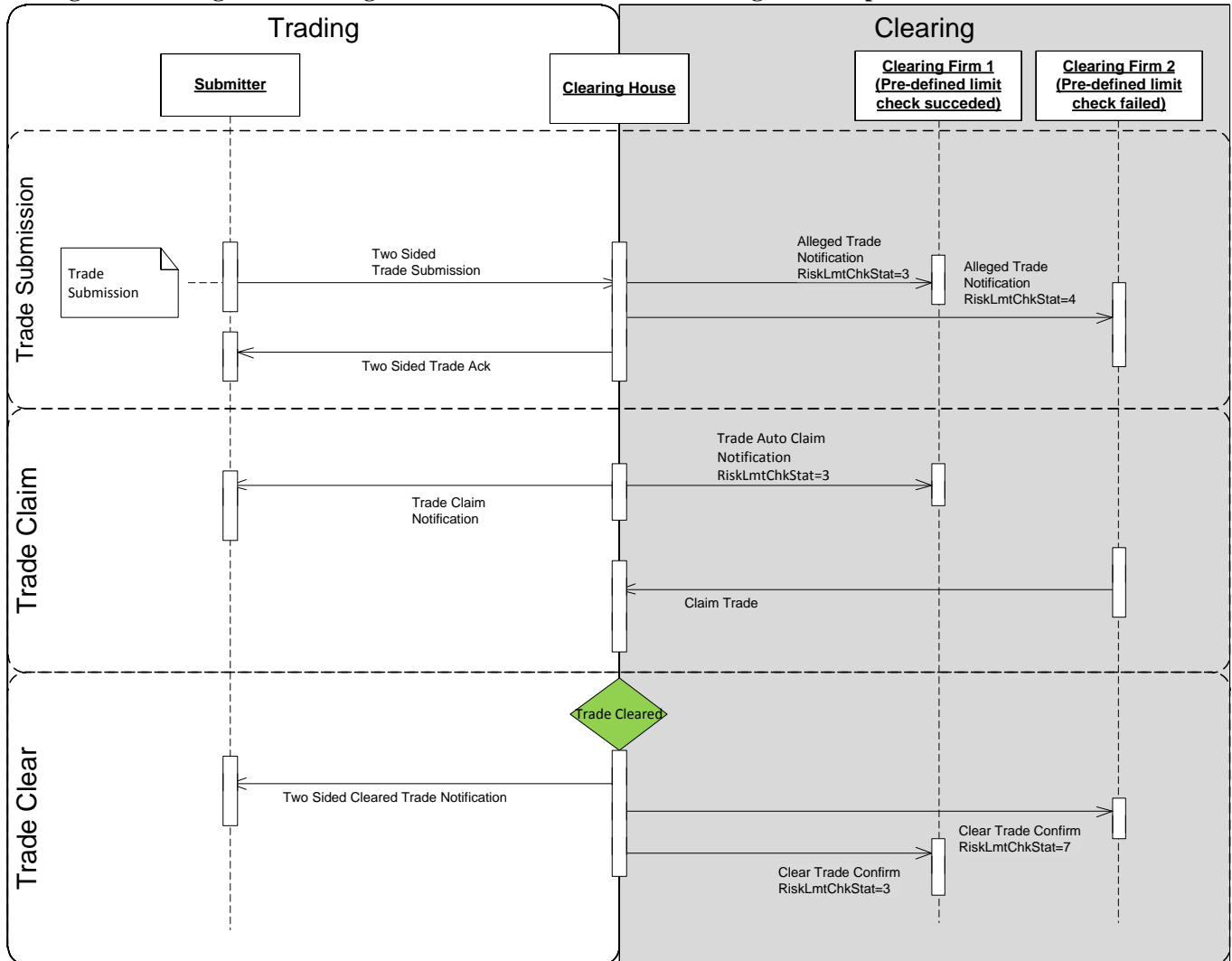
Legend:

@RiskLmtChkStat: 3 = Pre-defined limit check succeeded, 4 = Pre-defined limit check failed, 7 = Accepted by clearing firm.

5 FIX Message Tables

5.1 FIX Message Trade Capture Report

To be completed at the time of the proposal – all information provided will be stored in the repository	
Message Name	Trade Capture Report
Message Abbreviated Name (for FIXML)	TrdCaptRpt
Category	TradeCapture
Action	__New X_Change
Message Synopsis	
Message Elaboration	
To be finalized by FPL Technical Office	
(MsgType(tag 35) Enumeration	
Repository Component ID	

Tag	Field Name	Req'd	ICR	Action	Mappings and Usage Comments	FIX Spec Comments
	Standard Header	Y	■			MsgType = AE
<...truncated...>						
2343 TBD	RiskLimitCheckStatus	N		NEW		
	Standard Trailer	Y	■			

5.2 FIX Message Trade Capture Report Ack

To be completed at the time of the proposal – all information provided will be stored in the repository	
Message Name	Trade Capture Report Ack
Message Abbreviated Name (for FIXML)	TrdCaptRptAck

Category	TradeCapture
Action	__New X_Change
Message Synopsis	
Message Elaboration	
To be finalized by FPL Technical Office	
(MsgType(tag 35) Enumeration	
Repository Component ID	

Tag	Field Name	Req'd	ICR	Action	*Mappings and Usage Comments*	*FIX Spec Comments*
	Standard Header	Y	⬛			MsgType = AR
<...truncated...>						
2343 TBD	RiskLimitCheckStatus	N		NEW		
	Standard Trailer	Y	⬛			

6 FIX Component Blocks

6.1 Component TrdCapRptSideGrp

To be completed at the time of the proposal – all information provided will be included in the repository	
Component Name	TrdCapRptSideGrp
Component Abbreviated Name (for FIXML)	RptSide
Component Type	_X_ Block Repeating ___ Block
Category	TradeCapture
Action	__New X_Change
Component Synopsis	
Component Elaboration	

To be finalized by FPL Technical Office	
Repository Component ID	

omponent FIXML Abbreviation: <TrdCapRptSideGrp>					
Tag	Field Name	Req'd	ICR	Action	Mappings and Usage Comments	Comments
552	NoSides	***				
<...truncated...>						
➔	2344 ~~TBD~~	SideRiskLimitCheckStatus	N		NEW		
</TrdCapRptSideGrp>					

6.2 Component TrdCapRptAckSideGrp

To be completed at the time of the proposal – all information provided will be included in the repository	
Component Name	TrdCapRptAckSideGrp
Component Abbreviated Name (for FIXML)	RptSide
Component Type	_X_ Block Repeating ___ Block
Category	TradeCapture
Action	__New X_Change
Component Synopsis	
Component Elaboration	

To be finalized by FPL Technical Office	
Repository Component ID	

omponent FIXML Abbreviation: <TrdCapRptAckSideGrp>

Tag	Field Name	Req'd	ICR	Action	Mappings and Usage Comments	Comments
552	NoSides	***				
<...truncated...>						
➔	2344 TBD SideRiskLimitCheckStatus	N		NEW		
</TrdCapRptAckSideGrp>						

Appendix A - Data Dictionary

Tag	FieldName	Action	Datatype	Description	FIXML Abbreviation	Add to / Deprecate from Message type or Component block
2343 TBD	RiskLimitCheckStatus	NEW	int	Indicates the status of the risk limit check performed on a trade. 0 = Accepted [Elaboration: For use when none of the more specific status enumerations apply.] 1 = Rejected [Elaboration: For use when none of the more specific status enumerations apply.] 2 = Claim required. [Elaboration: Indicates that the clearing firm is required to accept or decline the trade.] 3 = Pre-defined limit check succeeded. [Elaboration: Indicates a check enforced automatically by the clearing house.] 4 = Pre-defined limit check failed. [Elaboration: Indicates a check enforced automatically by the clearing house.] 5 = Pre-defined auto-accept rule invoked. [Elaboration: Indicates that the clearing firm is required to accept or decline the trade because no limit or rule applies.] 6 = Pre-defined auto-reject rule invoked. [Elaboration: Indicates a check enforced automatically by the clearing house. Note that clearing house rules of engagement	@RiskLmtChkStat	Trade Capture Report Trade Capture Report Ack

				may still require a clearing firm accept or reject the trade.] 7 = Accepted by clearing firm. [Elaboration: Indicates that explicit action by the clearing firm, and not an automatic check by the clearing house, was the basis for accepting the trade.] 8 = Rejected by clearing firm. [Elaboration: Indicates that explicit action by the clearing firm, and not an automatic check by the clearing house, was the basis for rejecting the trade.] 9 = Pending [Elaboration: Indicates that one or more side level risk checks are in progress.]		
2344 TBD	SideRiskLimitCheckStatus	NEW	int	Indicates the status of the risk limit check performed on the side of a trade. Uses enums from RiskLimitCheckStatus(2343TBD).	@RiskLmtChkStat	TrdCapRptSideGrp TrdCapRptAckSideGrp

Appendix B - Glossary Entries

Term	Definition	Field where used

Appendix C - Abbreviations

Term	Proposed Abbreviation	Proposed Messages, Components, Fields where used

Appendix D - Usage Examples