ENCORE Data Distribution Services (DDS) Guide Developer Reference II Proprietary Transmissions

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Reasonable measures are taken by OCC to ensure the accuracy of the information it distributes in its DDS program. This information is produced from data received from a number of different sources, which are believed to be reliable. However, due to the number of sources for such data, the possibility of human error, and the risks inherent in electronic distribution, there may be omissions or inaccuracies in such information and delays or interruptions in providing it. Accordingly, OCC disclaims all express or implied warranties with respect to the information distributed in its DDS program, including any warranty of merchantability or fitness for a particular purpose. Further, information sent on a real time basis should not be considered final until OCC issues an end of day message advising no additional transmissions will be made on a particular business day.

To read DDS FIXML messages, OCC recommends using an XML parser that adheres to the W3C[1] 1.0 and 1.1 XML recommendations and not the byte-by-byte method typically used for "flat file" parsing. In order to support new future business needs, OCC reserves the right to add at any time previously unused tags, which are already part of the FIXML schema, to the DDS FIXML messages. If the parsing mechanism recommended above is used, the addition of new tags will have no impact on the programs that read in the DDS FIXML messages.

For the following cases:

- Addition of new tags which are not part of the FIXML schema.
- Addition of new enumerations which are not part of the FIXML schema.
- Addition of previously unused enumerations which are part of the FIXML schema.
- Decommission/removal of existing required tags.

OCC will notify designated contacts in advance of their implementation. When needed, updated schemas will be made available, in advance, on the OCC website.

If you have questions or comments, please contact your Member Services representative or the OCC Help Desk at one of the following:

800-621-6072 or 800-544-6091 (U.S.)
800-424-7320 (Canada)
memberservices@theocc.com

[1] The World Wide Web Consortium (W3C) is an international consortium where Member organizations, a full-time staff, and the public work together to develop Web standards.

Contents

Document Organization

This document is one of a set of three intended to provide a detailed description of all aspects of the OCC Data Distribution Services (DDS) system. The guides are available on at https://www.theocc.com/clearance-and-settlement/data-distribution-service-reference.

Part One: ***ENCORE DDS Guide – Overview***. This section is intended for a reader that needs to understand the DDS system design concepts and the data delivery services.

Part Two: ***ENCORE DDS Guide – Developer Reference I – Non-Proprietary Transmissions***. This section is a non-proprietary transmission mapping reference for FIXML developers. This part of the guide includes FIXML elements, transmission layouts, message structures, and sample messages for each transmission.

Part Three: ***ENCORE DDS Guide – Developer Reference II – Proprietary Transmissions***. This section is a proprietary transmission mapping reference for FIXML developers. This part of the guide includes FIXML elements, transmission layouts, message structures, and sample messages for each transmission.

Glossary of Terms

You should be familiar with the following terms prior to reading this guide.

Batch – In a computer, a batch job is a program that is assigned to the computer to run without further user interaction. In larger commercial computers or servers, batch jobs are usually initiated by a system user. Some are defined to run automatically at a certain time.

DDS (Data Distribution Services) – The DDS system supports both batch and real-time data delivery and utilizes the FIXML data formatting standard.

ENCORE – The clearing system utilized within OCC.

Event Driven Processing – A business event is a meaningful change in the state of the enterprise, such as the opening of a new customer account, clearing a trade, or the matching of a transfer. Event driven processing is system behavior that is initiated by these business events rather than system events – such as time-based scheduling. Event driven systems possess the following attributes: 1) Individual treatment of transactions; 2) Push delivery systems; and 3) Electronic notification.

FIXML (Financial Information eXchange Markup Language) – The XML derived grammar of the FIX protocol. A FIXML implementation includes message format validation, a clean, expressive structure, and leverages existing standards. The goal is to provide the ability to embed FIXML messages within traditional FIX headers and trailers.

Messaging – There are two major messaging server models: the point-to-point model and the publish/subscribe model. Messaging allows programs to share common message-handling code, to isolate resources and interdependencies, and to easily handle an increase in message volume. Messaging also makes it easier for programs to communicate across different programming environments (languages, compilers, and operating systems) since the only thing that each environment needs to understand is the common messaging format and protocol.

Package – A package is a collection of DDS transmissions that are grouped together based on selections made when the subscription was created.

Pull Delivery Model – In a pull information delivery model, the observer – or client – requests information from the information owner. An example of the pull delivery model is the download of a document from a web page.

Push Delivery Model – In a push information delivery model, the information owner distributes the data to the observer as it deems appropriate. An example of push delivery is the sending and delivery of an email message.

Real Time – A level of computer responsiveness that a user senses as sufficiently immediate or that enables the computer to keep up with some external process (for example, to present trade data as trades are executed and cleared).

Recipient – The entity (Clearing Member Organization, Exchange, Regulatory Agency or Service Bureau) that owns the systems where DDS delivers data for processing or retransmission.

STP – (Straight-Through-Processing) – The seamless integration of systems and processes to automate the trade process from end-to-end--trade execution, confirmation and settlement -- without the need for manual intervention or the re-keying of data.

Subscriber – The entity (a Clearing Member Organization, Exchange, or Regulatory Agency) that requests a package of transmissions and owns the data that is transmitted to recipients.

XML – (eXtensible Markup Language) – A simple and flexible text format derived from SGML (ISO 8879). Originally designed to meet the challenges of large-scale electronic publishing, XML also plays an important role in the exchange of a wide variety of data on the Web and elsewhere. Special purpose XML languages and standards are commonly developed with several hundred already adopted since XML 1.0 was released in February 1998.

CFI Code Default Values

To reduce the size of the document, the standard mapping and data values for the CFI code tag are presented below and not repeated throughout the document. Only in situations where the CFI code values differ from the default values below are the CFI code values detailed in the document.

OCC attempts to provide as much product information as possible through the CFI code. However, since this field is part of an ISO standard, OCC must limit the amount of information provided to the confines of the standard.

CFI Code Mapping and Data Values

CFI code mapping and data values for options, warrants, and futures appear below.

Options

CHAR1 = O
CHAR2 = Put/Call Code
CHAR3 = Exercise Style Code (A = AMERICAN, E = EUROPEAN)
CHAR4 = Classification (S = EQUITY, I = INDEX, O = OPTION, F= FUTURE, D = DEBT)
CHAR5 = Settlement Method (P = PHYSICAL, C = CASH)
CHAR6 = Sub-Classification Standard / Non-Standard Settlement Designation (S = STD SETTLEMENT or N = NON-STD SETTLEMENT)

Warrants

CHAR1 = R
CHAR2 = W
CHAR3 = X
CHAR4 = X
CHAR5 = Put/Call Code
CHAR6 = X

Futures

CHAR1 = F
CHAR2 = F
CHAR3 = Classification (S = EQUITY, D = DEBT, I = INDEX)
CHAR4 = Settlement Method (P = PHYSICAL, C = CASH)
CHAR5 = Standard / Non-Standard Settlement Designation (S = STD SETTLEMENT or N = NON-STD SETTLEMENT)
CHAR6 = X

Note: As shown above, an X is used when a particular CFI code attribute does not apply to the use or context within a message.

Sample CFI Codes

Derivative Type	Classification	Sample CFI Code
Futures	Equity	FFSPSX
Futures	Index	FFICSX
Futures	Debt	FFDCSX
Option	Equity	OXASPS
Option	Index	OXEICS
Option	Futures	OXAFPS

Market Identifier Code Values

As of FIX 4.3, exchange codes used in FIX are those defined in the ISO 10383 standard: Market Identifier Code (MIC). A MIC value is used whenever exchange information is included in a message. The official standard and set of values are maintained by the ISO 10383 standard and any discrepancies below should be considered typographical errors. Always refer to the ISO 10383 standard for the correct set of values. As of the time of this publication the website link to view a current list of MIC values is: https://www.iso20022.org/market-identifier-codes.

Note: Refer to the current ISO 10383 standard for the complete list. The following list is a subset of the complete list and is designed primarily to support exchanges that interact with OCC.

Each of the following exchange names and their related exchange acronyms are mapped to a MIC.

Exchange/MIC Mapping

Exchange Name	Exchange Acronym	MIC
BOX Exchange, LLC	BOX	XBOX
Cboe BZX Options Exchange	BATS	BATO
Cboe C2 Options Exchange	C2	C2OX
Cboe EDGX Options Exchange	EDGX	EDGO
Cboe Futures Exchange	CFE	XCBF
Cboe Options Exchange	CBOE	XCBO
MEMX LLC	MEMX	MXOP
MIAX Emerald, LLC	EMLD	EMLD
MIAX Options Exchange	MIAX	XMIO
MIAX PEARL, LLC	MPRL	MPRL
MIAX Sapphire, LLC	SPHR	SPHR
Nasdaq BX Options	NOBO	XBXO
Nasdaq GEMX	GEM	GMNI
Nasdaq ISE	ISE	XISX
Nasdaq MRX	MCRY	MCRY
Nasdaq Options Market	NSDQ	XNDQ
Nasdaq PHLX, LLC	PHLX	XPHO
NYSE American Options	AMEX	XASE
NYSE Arca Options	ARCA	XPSE
Small Exchange, Inc.	SML	SMFE

Transmissions Overview

This section provides the FIXML elements, transmission layouts, message structures, samples, and Data Service mappings for each transmission.

This document defines the following proprietary ENCORE transmissions:

Layout Formatting

Layouts in this document use arrows to indicate component block levels.

Message Layout Legend – Component Block Level Examples	
➔ **Pty**	One arrow precedes a component block that is one level down.
➔ ➔ **Sub**	Two arrows precede a component block that is two levels down.

Trades

FIX Message:	Trade Capture Report
Subscription Options:	Equity/Index Options
	Commodity Options
	Options on Futures
	Futures
	Pended Options *Trade Sources Only
	Pended Futures *Trade Sources Only
	Rejected Options
	Rejected Futures
Delivery Options:	Real Time
	Batch File

Overview

Trade activity is included in the Trade Capture Report. Messages are created as they are added, busted, backed out, or rejected.

Clearing Members

A message is created for each trade and is sent to all Clearing Members involved, including executing and give-up Clearing Members in the case of a CMTA trade. The message includes both buy side and sell side information.** When the message is received, the subscribing Clearing Member account information always appears first in the message regardless of if they are on the buy or sell side. For example, if the subscribing Clearing Member is on the buy side of a trade, their account appears first followed by the sell side information. Likewise, if subscribing Clearing Member is on the sell side of a trade their information appears first followed by the buy side information.

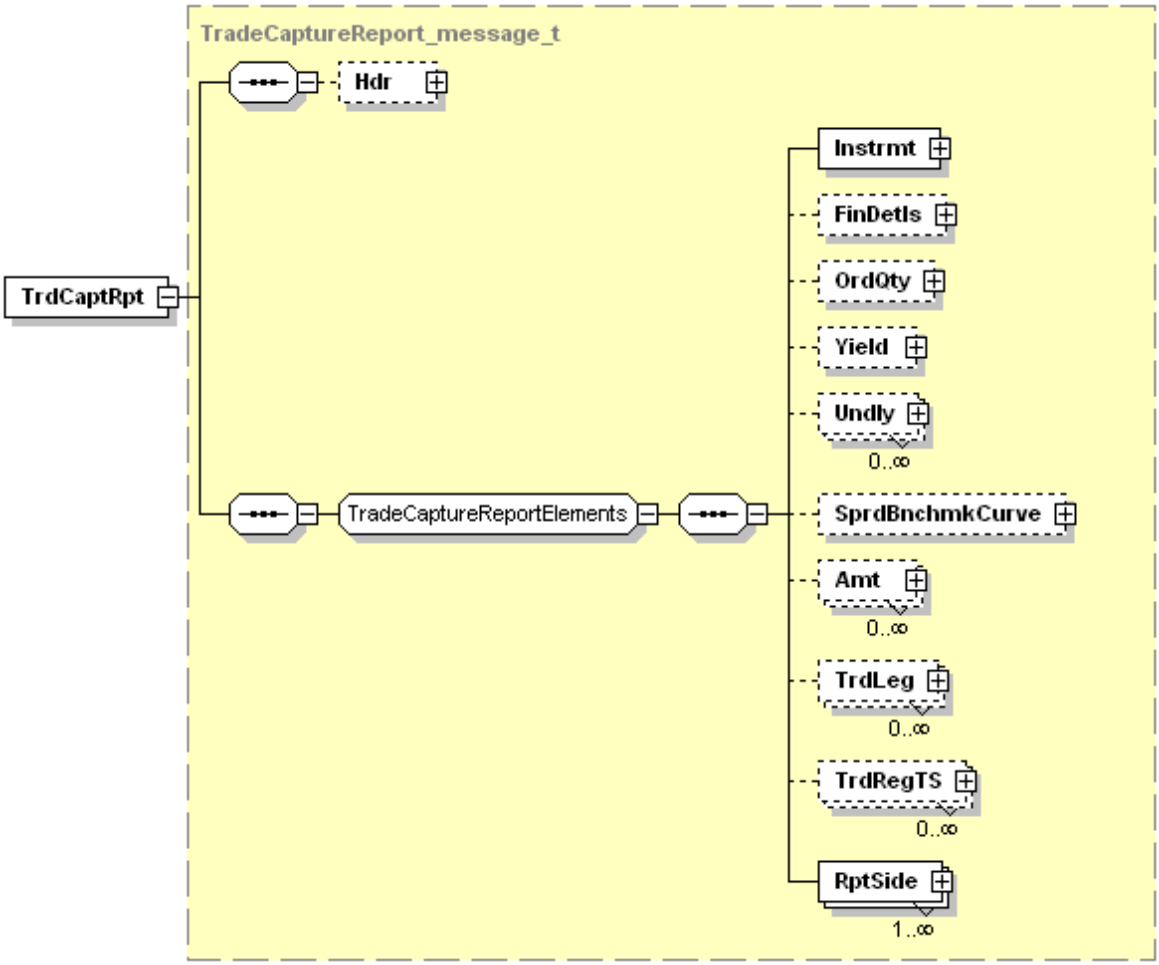
Trade Sources and Regulatory Agencies

Two messages are created for each trade and are sent to all trade sources and regulatory agencies where the financial instrument is listed or regulated, respectively. The first message contains the buy side information followed by the sell side information. The second message contains the sell side information followed by the buy side information.**

Note: Exchanges receive only one message for rejected and pended trades.

**** Note:** For Exchanges that are designated as anonymous, the second report side, which contains contra Clearing Member information, is not disseminated.

Message Structure



Message Layout – Trade Capture Report – Option Trades

Trade Capture Report – Option Trades								
FIX Mapping						Data	Data Type	Sample Data
Tag #	Report Block	Component Block	Sub Component Block	Sub Sub Component Block	Fields			
	TrdCaptRpt							
571					RptID	Unique Identifier for the Trade	String	450391670
570					PrevlyRpted	Y/N	Boolean	N
32					LastQty	Quantity	Qty	1
31					LastPx	Premium	Price	5.6
75					TrdDt	As Of Date	LocalMkt Date	2004-07-20
487					TransTyp	Trade Report Transaction Type 0 = New 1 = Cancel (Bust) 4 = Cancel (Backout)	Int	0
856					RptTyp (only applies to the first report side listed)	Trade Report Type 2 = Accept 8 = Defaulted 9 = Invalid CMTA	Int	2
828					TrdTyp	Trade Type 0 = Regular Trade 1 = Block Trade 20 = Cabinet Trade	Int	0
829					TrdSubTyp (only applies to the first report side listed)	Trade Sub Type 0 = CMTA Trade 3 = Reject for Submitting Side 4 = Advisory for Contra Side *If not applicable, tag is dropped.*	Int	0
880					MtchID	Trade Source CSN	String	0009307
715					BizDt	Clearing Business Date	LocalMkt Date	2004-07-20
573					MtchStat	Match Status 0 = Matched	Char	0
	➔	Instrmt						
55					Sym	Symbol	String	QUR

Trade Capture Report – Option Trades								
FIX Mapping						Data	Data Type	Sample Data
Tag #	Report Block	Component Block	Sub Component Block	Sub Sub Component Block	Fields			
461					CFI	Default Values (refer to page 3)	String	OPASPS
200					MMY	Series/Contract Year, Month, Date	MonthYear	20040821 (4 for year, 2 for month, 2 for day)
541					MatDt	Expiration Date	LocalMkt Date	2004-08-21
202					StrkPx	Strike Price (decimal format)	Price	37.5
47					StrkCcy	Strike Currency	Currency	USD
967					StrkMult	Strike Multiplier	Float	1
968					StrkValu	Strike Value	Float	100
231					Mult	Multiplier	Float	100
207					Exch	Trade Source (MIC)	Exchange	XASE
	➔	/Instrmt						
	➔	Amt						
707					Typ	Amount Type PREM = Premium Amount	String	PREM
708					Amt	Extended Premium	Amt	560
	➔	/Amt						
	➔	RptSide						
54					Side	1 = Buy 2 = Sell	Char	1
579					InptDev	Input Device MR = Machine Readable MQ = MQ	String	MQ
15					Ccy	Premium Currency	Currency	USD
77					PosEfct	Open Close Code O = Open C = Close	Char	O
58					Txt	Clearing Member Optional Data	String	NAM2659
11					ClOrdID	Order ID	String	98765
582					CustCpcty	CTI Code	Char	1
1139					ExchSpeclInstr	Exchange Optional Data	String	123XYZ

Trade Capture Report – Option Trades								
FIX Mapping						Data	Data Type	Sample Data
Tag #	Report Block	Component Block	Sub Component Block	Sub Sub Component Block	Fields			
528					Cpcty	Linkage Trade Type P = Principal Linkage Trade R = Satisfaction Linkage Trade W = Principal Acting as Agent Linkage Trades	String	P
821					OrdInptDev	Linkage Originating Exchange	MIC	XCBO
752					MLegRptTyp	Spread Indicator 1 = Outright Non-Spread Trade 2 = Individual Leg of a Multi-Leg Trade	Char	1
1003					TrdID	Exchange Assigned Trade ID	String	S1DF1234567890P
CUST					TrdCode	Trade Code	String	31
	→	→	Pty					
448					ID	Clearing Group Name	String	OCC
452					R	Party Role 21 = Clearing Organization	Int	21
	→	→	/Pty					
	→	→	Pty					
448					ID	Clearing Member Number	String	00608
452					R	Party Role 1 = Executing Clearing Firm	Int	1
	→	→	→	Sub				
523					ID	Account Type (C/F/M)	String	C
803					Typ	26 = Position Account Type	Int	26
	→	→	→	/Sub				
	→	→	/Pty					
	→	→	Pty					
448					ID	Sub Account	String	ZZZ
452					R	Party Role 38 = Position Account	Int	38
	→	→	/Pty					
	→	→	Pty					
448					ID	Give Up Clearing Member Number	String	00792

Trade Capture Report – Option Trades								
FIX Mapping						Data	Data Type	Sample Data
Tag #	Report Block	Component Block	Sub Component Block	Sub Sub Component Block	Fields			
452					R	Party Role 14 = Give Up Clearing Firm	Int	14
	➔	➔	/Pty					
	➔	➔	Pty					
448					ID	Executing Broker	String	811F
452					R	Party Role 2 = Executing Broker	Int	2
	➔	➔	/Pty					
	➔	➔	Pty					
448					ID	Customer Account Number	String	DF6312
452					R	Party Role 24 = Customer Account Number	Int	24
	➔	➔	/Pty					
	➔	➔	TrdRegTS					
769					TS	Buy Side Execution Time – utilizes a YYYY-MM-DDTHH:MM:SS:000 format, where the YYYY-MM-DD is the same as the BizDt.	Timestamp	2004-07-20T07:01:11.000
770					Typ	1 = Regular Timestamp Value	Char	1
	➔	➔	/TrdRegTS					
	➔	/RptSide						
	➔	RptSide						
54					Side	1 = Buy 2 = Sell	Char	2
579					InptDev	Input Device MR = Machine Readable MQ = MQ	String	MQ
15					Ccy	Premium Currency	Currency	USD
77					PosEfct	Open Close Code O = Open C = Close	Char	O
58					Txt	Clearing Member Optional Data	String	P6X836V4
11					ClOrdID	Order Id	String	98765

Trade Capture Report – Option Trades								
FIX Mapping						Data	Data Type	Sample Data
Tag #	Report Block	Component Block	Sub Component Block	Sub Sub Component Block	Fields			
582					CustCpcty	CTI Code	Char	1
1139					ExchSpeclInstr	Exchange Optional Data	String	ABC456
752					MLegRptTyp	Spread Indicator 1 = Outright Non-Spread Trade 2 = Individual Leg of a Multi-Leg Trade	Char	2
1003					TrdID	Exchange Assigned Trade ID	String	B1DF1234567890P
CUST					TrdCode	Trade Code	String	31
	→	→	Pty					
448					ID	Contra Clearing Group Name	String	OCC
452					R	Party Role 21 = Clearing Organization	Int	21
	→	→	/Pty					
	→	→	Pty					
448					ID	Contra Clearing Member Number	String	00501
452					R	18 = Contra Clearing Firm	Int	18
	→	→	→	Sub				
523					ID	Contra Account Type	String	M
803					Typ	26 = Position Account Type (C/F/M)	Int	26
	→	→	→	/Sub				
	→	→	/Pty					
	→	→	Pty					
448					ID	Sub Account	String	JNP
452					R	Party Role 38 = Position Account	Int	38
	→	→	/Pty					
	→	→	Pty					
448					ID	Contra Give Up Clearing Member Number	String	00792
452					R	Party Role 14 = Give Up Clearing Firm	Int	14
	→	→	/Pty					
	→	→	Pty					
448					ID	Contra Executing Broker	String	902T

Trade Capture Report – Option Trades								
FIX Mapping						Data	Data Type	Sample Data
Tag #	Report Block	Component Block	Sub Component Block	Sub Sub Component Block	Fields			
452					R	26 = Opposite Broker	Int	26
	➔	➔	/Pty					
	➔	➔	TrdRegTS					
769					TS	Sell Side Execution Time – utilizes a YYYY-MM-DDTHH:MM:SS:000 format, where the YYYY-MM-DD is the same as the BizDt.	Timestamp	2004-07-20T07:01:11.000
770					Typ	1 = Regular Timestamp Value	Char	1
	➔	➔	/TrdRegTS					
	➔	/RptSide						
	/TrdCaptRpt							

Message Layout – Trade Capture Report – Futures Trades

Trade Capture Report – Futures Trades								
FIX Mapping						Data	Data Type	Sample Data
Tag #	Report Block	Component Block	Sub Component Block	Sub Sub Component Block	Fields			
	TrdCaptRpt							
571					RptID	Unique Identifier for the Trade	String	541386431
570					PrevlyRpted	Y/N	Boolean	N
32					LastQty	Quantity	Qty	23
31					LastPx	Premium (Could be negative for futures only)	Price	0.35
75					TrdDt	As Of Date	LocalMkt Date	2003-09-10
487					TransTyp	Trade Report Transaction Type 0 = New 1 = Cancel (Bust) 4 = Cancel (Backout)	Int	0
856					RptTyp (only applies to the first report side listed)	Trade Report Type 2 = Accept 4 = Update 8 = Defaulted 9 = Invalid CMTA	Int	2
828					TrdTyp	Trade Type 0 = Regular Trade 1 = Block Trade 2 = EFP	Int	0
829					TrdSubTyp (only applies to the first report side listed)	Trade Sub Type 0 = CMTA Trade *If not applicable, tag is dropped.*	Int	
880					MtchID	Trade Source CSN	String	32854
715					BizDt	Clearing Business Date	LocalMkt Date	2003-09-10
573					MtchStat	Match Status 0 = Matched	Char	0
	➔	Instrmt						
55					Sym	Symbol	String	AOL1N
48					ID	Symbol	String	AOL1N

Trade Capture Report – Futures Trades								
FIX Mapping						Data	Data Type	Sample Data
Tag #	Report Block	Component Block	Sub Component Block	Sub Sub Component Block	Fields			
22					Src	ID Source 8 = Exchange Symbol	String	8
461					CFI	Default Values (refer to page 3)	String	FFSPSX
200					MMY	Series/Contract Year, Month, Date	MonthYear	20031121 (4 for year, 2 for month, 2 for day)
541					MatDt	Expiration Date	LocalMkt Date	2003-11-21
231					Mult	Multiplier	Float	100
207					Exch	Trade Source (MIC)	Exchange	XNQL
	➔	/Instrmt						
	➔	RptSide						
54					Side	1 = Buy 2 = Sell	Char	1
579					InptDev	Input Device MR = Machine Readable MQ = MQ	String	MQ
15					Ccy	Premium Currency	Currency	USD
77					PosEfct	Open Close Code O = Open C = Close	Char	C
58					Txt	Clearing Member Optional Data	String	NAM2659
11					ClOrdID	Order Id	String	98765
582					CustCpcty	CTI Code	Char	1
1139					ExchSpeclInstr	Exchange Optional Data	String	123XYZ
826					AllocInd	Trade Allocation Indicator 3 = Allocation Give Up Executor	Int	
752					MLegRptTyp	Spread Indicator 1 = Outright Non-Spread Trade 2 = Individual Leg of a Multi-Leg Trade	Char	1
1003					TrdID	Exchange Assigned Trade ID	String	S1DF1234567890
CUST					TrdCode	Trade Code	String	31
	➔	➔	Pty					

Trade Capture Report – Futures Trades								
FIX Mapping						Data	Data Type	Sample Data
Tag #	Report Block	Component Block	Sub Component Block	Sub Sub Component Block	Fields			
448					ID	Clearing Group Name	String	OCC
452					R	Party Role 21 = Clearing Organization	Int	21
	➔	➔	/Pty					
	➔	➔	Pty					
448					ID	Clearing Member Number	String	00608
452					R	Party Role 1 = Executing Clearing Firm	Int	1
	➔	➔	➔	Sub				
523					ID	Account Type	String	C
803					Typ	26 = Position Account Type (C/F/M)	Int	26
	➔	➔	➔	/Sub				
	➔	➔	/Pty					
	➔	➔	Pty					
448					ID	Contra Sub Account	String	ZZZ
452					R	Party Role 38 = Position Account	Int	38
			/Pty					
	➔	➔	Pty					
448					ID	Give Up Clearing Member Number	String	00000
452					R	Party Role 14 = Give Up Clearing Firm	Int	14
	➔	➔	/Pty					
	➔	➔	Pty					
448					ID	Executing Broker	String	Z14
452					R	Party Role 2 = Executing Broker	Int	2
	➔	➔	/Pty					
	➔	➔	Pty					
448					ID	Customer Account Number	String	DF6312
452					R	Party Role 24 = Customer Account Number	Int	24
	➔	➔	/Pty					

Trade Capture Report – Futures Trades								
FIX Mapping						Data	Data Type	Sample Data
Tag #	Report Block	Component Block	Sub Component Block	Sub Sub Component Block	Fields			
	➔	➔	TrdRegTS					
769					TS	Buy Side Execution Time – utilizes a YYYY-MM-DDTHH:MM:SS:000 format, where the YYYY-MM-DD is the same as the BizDt.	Timestamp	2003-09-10T07:01:11.000
770					Typ	1 = Regular Timestamp Value	Char	1
	➔	➔	/TrdRegTS					
	➔	/RptSide						
	➔	RptSide						
54					Side	1 = Buy 2 = Sell	Char	2
579					InptDev	Input Device MR = Machine Readable MQ = MQ	String	MQ
15					Ccy	Premium Currency	Currency	USD
77					PosEfct	Open Close Code O = Open C = Close	Char	O
58					Txt	Clearing Member Optional Data	String	P6X836V4
11					ClOrdID	Order ID	String	98765
582					CustCpcty	CTI Code	Char	1
1139					ExchSpecIInstr	Exchange Optional Data	String	123XYZ
826					AllocInd	Trade Allocation Indicator 3 = Allocation Give Up Executor	Int	3
752					MLegRptTyp	Spread Indicator 1 = Outright Non-Spread Trade 2 = Individual Leg of a Multi-Leg Trade	Char	2
1003					TrdID	Exchange Assigned Trade ID	String	B1DF1234567890P
CUST					TrdCode	Trade Code	String	31
	➔	➔	Pty					
448					ID	Contra Clearing Group Name	String	OCC
452					R	Party Role 21 = Clearing Organization	Int	21

Trade Capture Report – Futures Trades								
FIX Mapping						Data	Data Type	Sample Data
Tag #	Report Block	Component Block	Sub Component Block	Sub Sub Component Block	Fields			
	➔	➔	/Pty					
	➔	➔	Pty					
448					ID	Contra Clearing Member Number	String	00501
452					R	18 = Contra Clearing Firm	Int	18
	➔	➔	➔	Sub				
523					ID	Contra Account Type (C/F/M)	String	M
803					Typ	26 = Position Account Type	Int	26
	➔	➔	➔	/Sub				
	➔	➔	/Pty					
	➔	➔	Pty					
448					ID	Contra Sub Account	String	ZZZ
452					R	Party Role 38 = Position Account	Int	38
	➔	➔	/Pty					
	➔	➔	Pty					
448					ID	Contra Give Up Clearing Member Number	String	00000
452					R	Party Role 14 = Give Up Clearing Firm	Int	14
	➔	➔	/Pty					
	➔	➔	Pty					
448					ID	Contra Executing Broker	String	902T
452					R	26 = Opposite Broker	Int	26
	➔	➔	/Pty					
	➔	➔	Pty					
448					ID	Customer Account Number	String	DF6312
452					R	Party Role 24 = Customer Account Number	Int	24
	➔	➔	/Pty					
	➔	➔	TrdRegTS					
769					TS	Sell Side Execution Time – utilizes a YYYY-MM-DDTHH:MM:SS:000 format, where the YYYY-MM-DD is the same as the BizDt.	Timestamp	2003-09-10T07:01:11.000

Trade Capture Report – Futures Trades								
FIX Mapping						Data	Data Type	Sample Data
Tag #	Report Block	Component Block	Sub Component Block	Sub Sub Component Block	Fields			
770					Typ	1 = Regular Timestamp Value	Char	1
	➔	➔	/TrdRegTS					
	➔	/RptSide						
	/TrdCaptRpt							

Sample Messages – Trades

Trade Capture Report – Valid Trade Transmission for Options

A trade was executed on 07/20/2004 for the following option on the AMEX. Also listed is the buy and sell side Clearing Member information.

Trade Source	Symbol	P/C	Exp Date	Strike	Quantity	Premium	Extended Premium
AMEX	QUR	P	08/21/2004	37.5	1	5.60	560.00

Sell Side				Buy Side		
Executing CM	AT	Give Up CM	Executing Broker	Contra CM	AT	Opposite Broker
00501	M JNP	00792	902T	00608	C	811F

The Clearing Member DDS message for this trade is shown below for recipient subscribing to data for 00608.

```
<TrdCaptRpt RptID="450391670" PrevlyRpted="N" LastQty="1" LastPx="5.6" TrdDt="2004-07-20"
TransTyp="0" RptTyp="2" TrdTyp="0" MtchID="0009307" BizDt="2004-07-20" MtchStat="0">

     <Instrmt Sym="QUR" CFI="OPASPS" MMY="20040821" MatDt="2004-08-21" StrkPx="37.5" StrkCcy="USD"
     StrkMult="1" StrkValu="100" Mult="100" Exch="XASE"/>

     <Amt Typ="PREM" Amt="560"/>

     <RptSide Side="1" InptDev="MQ" Ccy="USD" PosEfct="O" Txt="NAM2659"> MLegRptTyp=”1”
          TrdID=”B1DF1234567890P” TrdCode=”31”>

          <Pty ID="OCC" R="21"/>
          <Pty ID="00608" R="1">
               <Sub ID="C" Typ="26"/>
          </Pty>
          <Pty ID="811F" R="2"/>

     <TrdRegTS TS="2004-07-20T11:58:11:000" Typ="1"/>

     </RptSide>


     <RptSide Side="2" InptDev="MQ" Ccy="USD" PosEfct="O" Txt="P6X836V4">
```

```
            <Pty ID="OCC" R="21"/>
            <Pty ID="00501" R="18">
                  <Sub ID="M" Typ="26"/>
            </Pty>
            <Pty ID="JNP" R="38"/>
            <Pty ID="00792" R="14"/>
            <Pty ID="902T" R="26"/>

      <TrdRegTS TS="2004-07-20T11:58:11:000" Typ="1"/>

      </RptSide>

</TrdCaptRpt>
```

The Exchange DDS messages for this trade are shown below.

```
<TrdCaptRpt RptID="450391670" PrevlyRpted="N" LastQty="1" LastPx="5.6" TrdDt="2004-07-20"
TransTyp="0" RptTyp="2" TrdTyp="0" MtchID="0009307" BizDt="2004-07-20" MtchStat="0">

      <Instrmt Sym="QUR" CFI="OPASPS" MMY="20040821" MatDt="2004-08-21" StrkPx="37.5" StrkCcy="USD"
      StrkMult="1" StrkValu="100" Mult="100" Exch="XASE"/>

      <Amt Typ="PREM" Amt="560"/>

      <RptSide Side="1" InptDev="MQ" Ccy="USD" PosEfct="O" Txt="NAM2659">

            <Pty ID="OCC" R="21"/>
            <Pty ID="00608" R="1">
                  <Sub ID="C" Typ="26"/>
            </Pty>
            <Pty ID="811F" R="2"/>

      <TrdRegTS TS="2004-07-20T11:58:11:000" Typ="1"/>

      </RptSide>

      <RptSide Side="2" InptDev="MQ" Ccy="USD" PosEfct="O" Txt="P6X836V4">

            <Pty ID="OCC" R="21"/>
            <Pty ID="00501" R="18">
                  <Sub ID="M" Typ="26"/>
            </Pty>
            <Pty ID="JNP" R="38"/>
            <Pty ID="00792" R="14"/>
            <Pty ID="902T" R="26"/>

      <TrdRegTS TS="2004-07-20T11:58:11:000" Typ="1"/>

      </RptSide>

</TrdCaptRpt>
```

```
<TrdCaptRpt RptID="450391670" PrevlyRpted="N" LastQty="1" LastPx="5.6" TrdDt="2004-07-20"
TransTyp="0" RptTyp="2" TrdTyp="0" MtchID="0009307" BizDt="2004-07-20" MtchStat="0">

     <Instrmt Sym="QUR" CFI="OPASPS" MMY="20040821" MatDt="2004-08-21" StrkPx="37.5" StrkCcy="USD"
     StrkMult="1" StrkValu="100" Mult="100" Exch="XASE"/>

     <Amt Typ="PREM" Amt="560"/>

     <RptSide Side="2" InptDev="MQ" Ccy="USD" PosEfct="O" Txt="P6X836V4">

          <Pty ID="OCC" R="21"/>
          <Pty ID="00501" R="18">
               <Sub ID="M" Typ="26"/>
          </Pty>
          <Pty ID="JNP" R="38"/>
          <Pty ID="00792" R="14"/>
          <Pty ID="902T" R="26"/>
          <Pty ID="DF6312" R="24"/>

     <TrdRegTS TS="2004-07-20T11:58:11:000" Typ="1"/>

     </RptSide>

     <RptSide Side="1" InptDev="MQ" Ccy="USD" PosEfct="O" Txt="NAM2659">

          <Pty ID="OCC" R="21"/>
          <Pty ID="00608" R="1">
               <Sub ID="C" Typ="26"/>
          </Pty>
          <Pty ID="811F" R="2"/>

     <TrdRegTS TS="2004-07-20T11:58:11:000" Typ="1"/>

     </RptSide>

</TrdCaptRpt>
```

Trade Capture Report – Valid Trade Transmission for Futures

A trade was executed on 09/10/2003 for the following future. The buy and sell side Clearing Member information is also listed.

Trade Source	Symbol	Exp Date	Quantity	Premium	Extended Premium
NQLX	AOL1N	11/21/2003	23	.35	800.5

Sell Side				Buy Side		
Executing CM	AT	Give Up CM	Executing Broker	Contra CM	AT	Opposite Broker
00792	M ZZZ	00000	Z14	00352	C	G21

The Clearing Member data service message for this trade is shown below for recipient subscribing to data for 00792.

```
<TrdCaptRpt RptID="541386431" PrevlyRpted="N" LastQty="23" LastPx="0.35" TrdDt="2003-09-10" TransTyp="0"
RptTyp="2" TrdTyp="0" MtchID="32854" BizDt="2003-09-10" MtchStat="0">

     <Instrmt Sym="AOL1N" ID="AOL1N" Src="8" CFI="FFSPSX" MMY="20031121" MatDt="2003-11-21" Mult="100"
     Exch="XNQL"/>

     <RptSide Side="2" InptDev="MQ" Ccy="USD" PosEfct="O">

          <Pty ID="OCC" R="21"/>
          <Pty ID="00792" R="1">
               <Sub ID="M" Typ="26"/>
          </Pty>
          <Pty ID="ZZZ" R="38"/>
          <Pty ID="Z14" R="2"/>

     <TrdRegTS TS="2003-09-10T11:58:11:000" Typ="1"/>

</RptSide>

     <RptSide Side="1" InptDev="MQ" Ccy="USD" PosEfct="C">

          <Pty ID="OCC" R="21"/>
          <Pty ID="00352" R="18">
               <Sub ID="C" Typ="26"/>
          <Pty ID="G21" R="26"/>
     <TrdRegTS TS="2003-09-10T11:58:11:000" Typ="1"/>
```

```
      </RptSide>

</TrdCaptRpt>
```

The Exchange data service messages for this trade are shown below.

```
<TrdCaptRpt RptID="541386431" PrevlyRpted="N" LastQty="23" LastPx="0.35" TrdDt="2003-09-10" TransTyp="0"
RptTyp="2" TrdTyp="0" MtchID="32854" BizDt="2003-09-10" MtchStat="0">

      <Instrmt Sym="AOL1N" ID="AOL1N" Src="8" CFI="FFSPSX" MMY="20031121" MatDt="2003-11-21" Mult="100"
      Exch="XNQL"/>

      <RptSide Side="1" InptDev="MQ" Ccy="USD" PosEfct="C">

            <Pty ID="OCC" R="21"/>
            <Pty ID="00352" R="18">
                  <Sub ID="C" Typ="26"/>
            <Pty ID="G21" R="26"/>

      <TrdRegTS TS="2003-09-10T11:58:11:000" Typ="1"/>

</RptSide>

      <RptSide Side="2" InptDev="MQ" Ccy="USD" PosEfct="O">

            <Pty ID="OCC" R="21"/>
            <Pty ID="00792" R="1">
                  <Sub ID="M" Typ="26"/>
            </Pty>
            <Pty ID="ZZZ" R="38"/>
            <Pty ID="Z14" R="2"/>

      <TrdRegTS TS="2003-09-10T11:58:11:000" Typ="1"/>

      </RptSide>
</TrdCaptRpt>

<TrdCaptRpt RptID="541386431" PrevlyRpted="N" LastQty="23" LastPx="0.35" TrdDt="2003-09-10" TransTyp="0"
RptTyp="2" TrdTyp="0" MtchID="32854" BizDt="2003-09-10" MtchStat="0">
```

```
      <Instrmt Sym="AOL1N" ID="AOL1N" Src="8" CFI="FFSPSX" MMY="20031121" MatDt="2003-11-21" Mult="100"
      Exch="XNQL"/>

      <RptSide Side="2" InptDev="MQ" Ccy="USD" PosEfct="O">

            <Pty ID="OCC" R="21"/>
            <Pty ID="00792" R="1">
                  <Sub ID="M" Typ="26"/>
            </Pty>
            <Pty ID="ZZZ" R="38"/>
            <Pty ID="Z14" R="2"/>

      <TrdRegTS TS="2003-09-10T11:58:11:000” Typ="1"/>

      </RptSide>

      <RptSide Side="1" InptDev="MQ" Ccy="USD" PosEfct="C">

            <Pty ID="OCC" R="21"/>
            <Pty ID="00352" R="18">
                  <Sub ID="C" Typ="26"/>
            <Pty ID="G21" R="26"/>

      <TrdRegTS TS="2003-09-10T11:58:11:000" Typ="1"/>

      </RptSide>

</TrdCaptRpt>
```

Anonymous Trading Sample Message

```
<FIXML r="20030618" s="20040109" v="4.4" xr="FIA" xv="1" xmlns="http://www.fixprotocol.org/FIXML-4-4">
<Batch>

<TrdCaptRpt RptID="200002496" PrevlyRpted="N" LastQty="50" LastPx="72.135" TrdDt="2008-12-12" TransTyp="0"
RptTyp="2" TrdTyp="0" MtchID="1005100" BizDt="2008-12-12" MtchStat="0">

     <Instrmt Sym="XOEE9C" ID="XOEE9C" Src="8" CFI="FFICSX" MMY="20090320" MatDt="2009-03-20" Mult="1000"
     Exch="XOCH" />

     <RptSide Side="1" InptDev="MQ" Ccy="USD" PosEfct="O" Txt="BUYONE XOEE9CVA">

          <Pty ID="OCC" R="21" />
          <Pty ID="00123" R="1">
               <Sub ID="C" Typ="26" />
          </Pty>
          <Pty ID="TST" R="2" />

     <TrdRegTS TS="2008-12-12T08:43:11:000" Typ="1" />

     </RptSide>

</TrdCaptRpt>
```

Sample End of Day Messages – Trades

EOD Message – Matched Trades – Equity Index Options

```
<DDSEODMessage BizDt="2005-01-09" MsgTypeCode="TRADE" SchemaVer="FIX 4.4" TransType="TRADES"
TransSubType="MATCHED" TransProductSet="OPTN" FinalizationCycle="ENCORE Equity Index Finalization"
NoMessagesSent="177966"/>
```

EOD Message – Matched Trades – Commodity Options

```
<DDSEODMessage BizDt="2005-01-09" MsgTypeCode="TRADE" SchemaVer="FIX 4.4" TransType="TRADES"
TransSubType="MATCHED" TransProductSet="OPTN" FinalizationCycle="ENCORE Futures Finalization"
NoMessagesSent="7"/>
```

EOD Message – Matched Trades – Futures

```
<DDSEODMessage BizDt="2005-01-09" MsgTypeCode="TRADE" SchemaVer="FIX 4.4" TransType="TRADES"
TransSubType="MATCHED" TransProductSet="FUTU" FinalizationCycle="ENCORE Futures Finalization"
NoMessagesSent="800"/>
```

Message Layout – Trade Capture Report – Rejected/Pended Trades (Rejected or Pended by OCC)

Trade Capture Report – Rejected Trades								
FIX Mapping						Data	Data Type	Sample Data
Tag #	Report Block	Component Block	Sub Component Block	Sub Sub Component Block	Fields			
	TrdCaptRpt							
571					RptID	Unique Identifier for the Trade	String	450431172
570					PrevlyRpted	N	Boolean	N
32					LastQty	Quantity	Qty	1
31					LastPx	Premium	Price	1.2
75					TrdDt	As Of Date	LocalMkt Date	2004-07-21
487					TransTyp	Trade Report Transaction Type 0 = New 1 = Cancel (Bust) 4 = Rejected Backout or Pended Backout	Int	0
856					RptTyp	Trade Report Type 3 = Rejected / Declined (by OCC) 10 = Pended (available to exchanges only)	Int	3
828					TrdTyp	Trade Type 0 = Regular Trade 1 = Block Trade	Int	0
829					TrdSubTyp	Trade Sub Type 0 = CMTA Trade	Int	0
880					MtchID	Trade Source CSN	String	0009307
715					BizDt	Clearing Business Date	LocalMkt Date	2004-07-21
573					MtchStat	Match Status 0 = Matched	Char	0
	➔	Instrmt						
55					Sym	Symbol	String	AAQ
461					CFI	Default Values (refer to page 3)	String	OCXXXX
200					MMY	Series/Contract Year, Month, Date	MonthYear	20040821 (4 for year, 2 for month, 2 for day)
541					MatDt	Expiration Date	LocalMkt Date	2004-08-21
202					StrkPx	Strike Price (decimal format, options only)	Price	

Trade Capture Report – Rejected Trades								
FIX Mapping						Data	Data Type	Sample Data
Tag #	Report Block	Component Block	Sub Component Block	Sub Sub Component Block	Fields			
207					Exch	Trade Source (MIC)	Exchange	XISX
	➔	/Instrmt						
	➔	Amt						
707					Typ	Amount Type PREM = Premium Amount	String	PREM
708					Amt	Extended Premium	Amt	560
	➔	/Amt						
	➔	RptSide						
54					Side	1 = Buy 2 = Sell	Char	1
579					InptDev	Input Device MR = Machine Readable MQ = MQ	String	MR
15					Ccy	Premium Currency	Currency	USD
77					PosEfct	Open Close Code O = Open C = Close	Char	O
58					Txt	Remarks	String	NAM2659
1139					ExchSpeclInstr	Exchange Special Instructions	String	ABC123
528					Cpcty	Linkage Trade Type P = Principal R = RisklessPrincipal W = AgentOtherMember	String	P
821					OrdInptDev	Linkage Originating Exchange	String	XISX
11					ClOrdID	Order Id	String	98765
582					CustCpcty	CTI Code	Char	1
1139					ExchSpecInstr	Exchange Optional Data	String	123XYZ
826					AllocInd **(Only applicable on Futures trades)**	Trade Allocation Indicator 3 = Allocation Give Up Executor	Int	3

Trade Capture Report – Rejected Trades								
FIX Mapping						Data	Data Type	Sample Data
Tag #	Report Block	Component Block	Sub Component Block	Sub Sub Component Block	Fields			
752					MLegRptTyp	Spread Indicator 1 = Outright Non-Spread Trade 2 = Individual Leg of a Multi-Leg Trade	Char	1
1003					TrdID	Exchange Assigned Trade ID	String	S1DF1234567890P
CUST					TrdCode	Trade Code	String	31
	→	→	Pty					
448					ID	Clearing Group Name	String	OCC
452					R	Party Role 21 = Clearing Organization	Int	21
	→	→	/Pty					
	→	→	Pty					
448					ID	Clearing Member Number	String	00050
452					R	Party Role 1 = Executing Clearing Firm	Int	1
	→	→	→	Sub				
523					ID	Account Type (C/F/M)	String	M
803					Typ	26 = Position Account Type	Int	26
	→	→	→	/Sub				
	→	→	/Pty					
	→	→	Pty					
448					ID	Sub Account	String	MGS
452					R	Party Role 38 = Position Account	Int	38
	→	→	/Pty					
	→	→	Pty					
448					ID	Give Up Clearing Member Number	String	00000
452					R	Party Role 14 = Give Up Clearing Firm	Int	14
	→	→	/Pty					
	→	→	Pty					
448					ID	Executing Broker	String	MGS6

Trade Capture Report – Rejected Trades								
FIX Mapping						Data	Data Type	Sample Data
Tag #	Report Block	Component Block	Sub Component Block	Sub Sub Component Block	Fields			
452					R	Party Role 2 = Executing Broker	Int	2
	➔	➔	/Pty					
	➔	➔	Pty					
448					ID	Customer Account	String	DF6312
452					R	Party Role 24 = Customer Account	Int	24
	➔	➔	/Pty					
	➔	➔	TrdRegTS					
769					TS	Execution Time – utilizes a YYYY-MM-DDTHH:MM:SS:000 format, where the YYYY-MM-DD is the same as the BizDt.	Timestamp	2004-07-21T07:01:11.000
770					Typ	1 = Regular Timestamp Value	Char	1
	➔	➔	/TrdRegTS					
	➔	/RptSide						
	➔	RptSide						
54					Side	1 = Buy 2 = Sell	Char	2
579					InptDev	Input Device MR = Machine Readable MQ = MQ	String	MR
15					Ccy	Premium Currency	Currency	USD
77					PosEfct	Open Close Code O = Open C = Close	Char	O
58					Txt	Remarks	String	0040721ISC00064
1139					ExchSpeclInstr	Exchange Special Instructions	String	ABC123
11					ClOrdID	Order Id	String	98765
582					CustCpcty	CTI Code	Char	1
1139					ExchSpecInstr	Exchange Optional Data	String	ABC456

Trade Capture Report – Rejected Trades								
FIX Mapping						Data	Data Type	Sample Data
Tag #	Report Block	Component Block	Sub Component Block	Sub Sub Component Block	Fields			
826					AllocInd **(Only applicable on Futures trades)**	Trade Allocation Indicator 3 = Allocation Give Up Executor	Int	5
752					MLegRptTyp	Spread Indicator 1 = Outright Non-Spread Trade 2 = Individual Leg of a Multi-Leg Trade	Char	2
1003					TrdID	Exchange Assigned Trade ID	String	B1DF1234567890P
CUST					TrdCode	Trade Code	String	31
	➔	➔	Pty					
448					ID	Contra Clearing Group Name	String	OCC
452					R	Party Role 21 = Clearing Organization	Int	21
	➔	➔	/Pty					
	➔	➔	Pty					
448					ID	Contra Clearing Member Number	String	00690
452					R	Party Role 18 = Contra Clearing Firm	Int	18
	➔	➔	➔	Sub				
523					ID	Contra Account Type (C/F/M)	String	M
803					Typ	26 = Position Account Type	Int	26
	➔	➔	➔	/Sub				
	➔	➔	/Pty					
	➔	➔	Pty					
448					ID	Sub Account	String	AJS
452					R	Party Role 38 = Position Account	Int	38
	➔	➔	/Pty					
	➔	➔	Pty					
448					ID	Contra Give Up Clearing Member Number	String	00000
452					R	Party Role 14 = Give Up Clearing Firm	Int	14

Trade Capture Report – Rejected Trades								
FIX Mapping						Data	Data Type	Sample Data
Tag #	Report Block	Component Block	Sub Component Block	Sub Sub Component Block	Fields			
	➔	➔	/Pty					
	➔	➔	Pty					
448					ID	Contra Executing Broker	String	FOCA
452					R	Party Role 26 = Opposite Broker	Int	26
	➔	➔	/Pty					
	➔	➔	TrdRegTS					
769					TS	Execution Time – utilizes a YYYY-MM-DDTHH:MM:SS:000 format, where the YYYY-MM-DD is the same as the BizDt.	Timestamp	2004-07-21T07:01:11.000
770					Typ	1 = Regular Timestamp Value	Char	1
	➔	➔	/TrdRegTS					
	➔	/RptSide						
	/TrdCaptRpt							

Sample Messages – Option Rejected Trades

Trade Capture Report – Rejected Trade

```
<TrdCaptRpt RptID="450431172" PrevlyRpted="N" LastQty="1" LastPx="1.2"
TrdDt="2004-07-21" TransTyp="0" RptTyp="3" TrdTyp="0" MtchID="" BizDt="2004-07-21" MtchStat="0">

     <Instrmt Sym="AAQ" CFI="OCXXXX" MMY="20040821" MatDt="2004-08-21" StrkPx="324" Exch="XISX"
          MLegRptTyp="1" TrdID="B1DF1234567890P" TrdCode="31">

     <RptSide Side="1" InptDev="MR" Ccy="USD" PosEfct="O" Txt="NAM2659" ExchSpeclInstr="ABC123" Cpcty="P"
OrdInptDev="XISX">
          <Pty ID="OCC" R="21"/>
          <Pty ID="00050" R="1">
               <Sub ID="M" Typ="26"/>
          </Pty>
          <Pty ID="MGS" R="38"/>
          <Pty ID="" R="14"/>
          <Pty ID="MGS6" R="2"/>
          <Pty ID="DF6312" R="24/>
          <TrdRegTS TS="2004-07-21T11:58:11:000" Typ="1"/>
     </RptSide>
     <RptSide Side="2" InptDev="MR" Ccy="USD" PosEfct="O" Txt="0040721ISC00064" ExchSpeclInstr="ABC123"
          MLegRptTyp="1" TrdID="B1DF1234567890P">

          <Pty ID="OCC" R="21"/>
          <Pty ID="00690" R="18">
               <Sub ID="M" Typ="26"/>
          </Pty>
          <Pty ID="AJS" R="38"/>
          <Pty ID="" R="14"/>
          <Pty ID="FOCA" R="26"/>
          <TrdRegTS TS="2004-07-21T11:58:11:000" Typ="1"/>
     </RptSide>

</TrdCaptRpt>
```

Trade Capture Report – Option Pended Trade (available to the exchanges only)

```
<TrdCaptRpt RptID="450431172" PrevlyRpted="N" LastQty="1" LastPx="1.2" TrdDt="2004-07-21" TransTyp="0"
RptTyp="10" TrdTyp="0" MtchID="" BizDt="2004-07-21" MtchStat="0">

     <Instrmt Sym="AAQ" CFI="OCXXXX" MMY="20040821" MatDt=”2004-08-21” StrkPx="324" Exch="XISX"/>

     <RptSide Side="1" InptDev="MR" Ccy="USD" PosEfct="O" Txt="NAM2659" ExchSpeclInstr=”ABC123” Cpcty=”P”
OrdInptDev=”XISX”>

          <Pty ID="OCC" R="21"/>
          <Pty ID="00050" R="1">
               <Sub ID="M" Typ="26"/>
          </Pty>
          <Pty ID="MGS" R="38"/>
          <Pty ID="" R="14"/>
          <Pty ID="MGS6" R="2"/>
          <Pty ID="DF6312" R="24/>
          <TrdRegTS TS="2004-07-21T11:58:11:000" Typ="1"/>

    </RptSide>

     <RptSide Side="2" InptDev="MR" Ccy="USD" PosEfct="O" Txt="0040721ISC00064" ExchSpeclInstr=”ABC123”>

          <Pty ID="OCC" R="21"/>
          <Pty ID="00690" R="18">
               <Sub ID="M" Typ="26"/>
          </Pty>
          <Pty ID="AJS" R="38"/>
          <Pty ID="" R="14"/>
          <Pty ID="FOCA" R="26"/>
          <TrdRegTS TS="2004-07-21T11:58:11:000" Typ="1"/>

     </RptSide>
</TrdCaptRpt>
```

Sample End of Day Messages – Rejected/Pended Trades

EOD Message – Rejected Trades – Options & Commodity Options

```
<DDSEODMessage BizDt="2005-01-09" MsgTypeCode="TRADE" SchemaVer="FIX 4.4" TransType="TRADES"
TransSubType="REJECTED" TransProductSet="OPTN" NoMessagesSent="76" />
```

EOD Message – Rejected Trades – Futures

```
<DDSEODMessage BizDt="2005-01-09" MsgTypeCode="TRADE" SchemaVer="FIX 4.4" TransType="TRADES"
TransSubType="REJECTED" TransProductSet="FUTU" NoMessagesSent="800" />
```

EOD Message – Pended Trades – Options & Commodity Options (available to the exchanges only)

```
<DDSEODMessage BizDt="2005-01-09" MsgTypeCode="TRADE" SchemaVer="FIX 4.4" TransType="TRADES"
TransSubType="PENDED" TransProductSet="OPTN" NoMessagesSent="76" />
```

EOD Message – Pended Trades – Futures (available to the exchanges only)

```
<DDSEODMessage BizDt="2005-01-09" MsgTypeCode="TRADE" SchemaVer="FIX 4.4" TransType="TRADES"
TransSubType="PENDED" TransProductSet="FUTU" NoMessagesSent="800" />
```

Implementation Considerations

General

Trade Transmissions are created in real time. Regardless of how these messages are delivered to a recipient (real time or batch file), recipients must be able to process each message as either a valid, busted, or rejected trade. In the case of valid and busted trades, these messages are always delivered in sequential order. This means that a message for a busted trade is sent following the initial valid trade message. Where the *TrdTyp* = 0 (Regular), 1 (Block Trade), or 2 (EFP), recipient systems must use the following fields to determine how to process the message:

- *RptID* – unique identifier for a trade
- *TransTyp* – 0 (New), 1 (Cancel/Bust) or 4 (Reverse/Backout)
- *RptTyp* – 2 (Accepted), 3 (Rejected), 8 (Defaulted), or 9 (Invalid CMTA agreement) *
- *TrdSubTyp* – 0 (CMTA), 3 (Reject for Submitting Side) or 4 (Advisory for Contra Side) *
- *MtchStat* – 0 (Matched)

* – these options only apply to the first report side listed in the message

For Exchanges that are designated as anonymous, the second report side, which contains contra Clearing Member information, is not disseminated.

Trades Transmission Matrix

Trade Description	Trans Type	Rpt Typ	Trd Typ	TrdSub Typ	Mtch Stat	BizDt	Prevly Rpted
Matched Trade (posted to the executor's intended account)	0	2	0/1/2	---	0	Current External ENCORE Date	N
Defaulted Matched Trade (posted to the executor's default account)	0	8	0/1/2	---	0	Current External ENCORE Date	N
CMTA Trade (posted to the giveup's intended account)	0	2	0/1/2	0	0	Current External ENCORE Date	N
Defaulted CMTA Trade (posted to the giveup's default account)	0	8	0/1/2	0	0	Current External ENCORE Date	N
Invalid CMTA trade (defaulted to executor's default account)	0	9	0/1/2	---	0	Current External ENCORE Date	N
Rejected Matched Trade	0	3	0/1/2	---	0	Current External ENCORE Date	N
Bust of Matched Trade (posted to the executor's intended account)	1	2	0/1/2	---	0	Current External ENCORE Date	N
Bust of Defaulted Matched Trade (posted to the executor's default account)	1	8	0/1/2	---	0	Current External ENCORE Date	N
Bust of CMTA Trade (posted to the giveup's intended account)	1	2	0/1/2	0	0	Current External ENCORE Date	N

Trade Description	Trans Type	Rpt Typ	Trd Typ	TrdSub Typ	Mtch Stat	BizDt	Prevly Rpted
Bust of Defaulted CMTA Trade (posted to the giveup's default account)	1	8	0/1/2	0	0	Current External ENCORE Date	N
Bust of Invalid CMTA trade (defaulted to executor's default account)	1	9	0/1/2	---	0	Current External ENCORE Date	N
Rejected Bust	1	3	0/1/2	---	0	Current External ENCORE Date	N
Backout of Matched Trade (posted to the executor's intended account)	4	2	0/1/2	---	0	Current External ENCORE Date	N
Backout of Defaulted Matched Trade (posted to the executor's default account)	4	8	0/1/2	---	0	Current External ENCORE Date	N
Backout of CMTA Trade (posted to the giveup's intended account)	4	2	0/1/2	0	0	Current External ENCORE Date	N
Backout of Defaulted CMTA Trade (posted to the giveup's default account)	4	8	0/1/2	0	0	Current External ENCORE Date	N
Backout of Invalid CMTA trade (defaulted to executor's default account)	4	9	0/1/2	---	0	Current External ENCORE Date	N
Backout of Rejected Trade	4	3	0/1/2	---	0	Current External ENCORE Date	N
Resubmit of Backed Out Matched Trade (posted to the executor's intended account)	0	2	0/1/2	---	0	Current External ENCORE Date	Y
Resubmit of Backed Out Defaulted Matched Trade (posted to the executor's default account)	0	8	0/1/2	---	0	Current External ENCORE Date	Y
Resubmit of Backed Out CMTA Trade (posted to the giveup's intended account)	0	2	0/1/2	0	0	Current External ENCORE Date	Y
Resubmit of Backed Out Defaulted CMTA Trade (posted to the giveup's default account)	0	8	0/1/2	0	0	Current External ENCORE Date	Y
Resubmit of Backed Out Invalid CMTA trade (defaulted to executor's default account)	0	9	0/1/2	---	0	Current External ENCORE Date	Y
Resubmit of Backed Out Rejected Trade	0	3	0/1/2	---	0	Current External ENCORE Date	Y
Resubmit of Busted Matched Trade (posted to the executor's intended account)	0	2	0/1/2	---	0	Current External ENCORE Date	Y
Resubmit of Busted Matched Trade (posted to the executor's default account)	0	8	0/1/2	---	0	Current External ENCORE Date	Y

Trade Description	Trans Type	Rpt Typ	Trd Typ	TrdSub Typ	Mtch Stat	BizDt	Prevly Rpted
Resubmit of Busted CMTA Trade (posted to the giveup's intended account)	0	2	0/1/2	0	0	Current External ENCORE Date	Y
Resubmit of Busted Defaulted CMTA Trade (posted to the giveup's default account)	0	8	0/1/2	0	0	Current External ENCORE Date	Y
Resubmit of Busted Invalid CMTA trade (defaulted to executor's default account)	0	9	0/1/2	---	0	Current External ENCORE Date	Y
Resubmit of Busted Rejected Trade	0	3	0/1/2	---	0	Current External ENCORE Date	Y

Additional Considerations

All transactions that affect positions are transmitted by OCC via DDS messages. The difference between Cancel/Bust messages and Reverse/Backout messages is as follows:

- Cancel/Bust – Messages sent by the exchanges to OCC to cancel previously submitted trades.
- Reverse/Backout – Messages generated by OCC that are sent as a result of a backout of trades from OCC's systems. Resubmitted trades are sent when previously backed out trades are resubmitted for processing at OCC.

The buy-side and sell-side transmissions for the same trade differ only in the order of the report side tags within the message. In the buy report side tag the attribute side has a value of 1 and appears first in the messages for buy-side transmissions. In the sell report side tag the attribute side has a value of 2 and appears first in the messages for sell-side transmissions.

Exchanges receive two messages per trade. These two messages contain the same Report ID (RptID). One message contains the buy side data followed by the sell side data. The second message contains the sell side data followed by the buy side data. The entire trade transmission is sorted first by the reporting buy/sell messages, followed by the sell/buy messages.

Uniqueness Checking

The nature of trade and trade update processing creates the possibility of multiple DDS messages per trade. Therefore, recipient systems must review the following fields and check for uniqueness against previously processed messages for the current processing day.

- RptID
- TransTyp
- RptType
- MtchStat
- PrevlyRpted
- BizDt
- The value of the Side tag within the first RptSide block

Rejected and Pended Trades

Due to the nature of rejected and pended transactions, it should be noted that any data transmitted via these DDS message may be invalid or be of an invalid type. For example, if a trade is received with a quantity of ABC, the trade is rejected, and the "ABC" is placed into an XML tag with a datatype of Qty (whole numbers only). This does not present a problem at OCC in regard to the construction and transmission of the message but should be a consideration for any recipients of DDS data that plan to validate against the FIXML schema.

Exchanges receive only one message for rejected and pended trades.

Updated Trades – Options and Futures

FIX Message:	Trade Capture Report
Subscription Options:	Options
	Futures
	Commodity Options
	Options on Futures
	Rejected Trades
	Pended Trades/ *Trade Sources Only
Delivery Options:	Real Time
	Batch File

Overview

OCC provides a trade management system that allows clearing members the ability to update non-critical fields for both options and futures. Firms may use this functionality to edit matched trades which were incorrectly entered or otherwise incomplete. An example of this is a trade marked for the wrong account or filled without a give-up clearing member indicated. Non-critical fields such as these may be changed at the clearinghouse. This action causes the trade to be updated on the clearinghouse's books and generates new cleared trade records that may be used in firm and exchange systems.

The OCC Trade Update system provides Clearing Members the ability to update certain fields on matched trades. Changes may be communicated to OCC through ENCORE or via inbound FIXML messages. All changes update trades at OCC as well as generate new cleared trade records for firm and exchange systems.

Trade Updates are available on the Trade Capture Report Message following the execution of a trade. It is possible to update non-critical fields on valid top day trades only.

Fields available for update include:

- Account Type
- Sub Account
- Open Close code
- Customer Account Number
- Trade Allocation Indicator (Futures)
- Give-up Clearing Firm
- Remarks
- Order ID
- CTI Code (Futures Only)

Clearing Members

Clearing Members have two methods for providing Trade Updates, on-line through ENCORE or via an inbound FIXML message. Once the Clearing Member inputs valid changes to non-critical fields on valid top day trades, the corresponding original trade is updated at OCC and new cleared trade messages is produced and sent to firm and exchange systems.

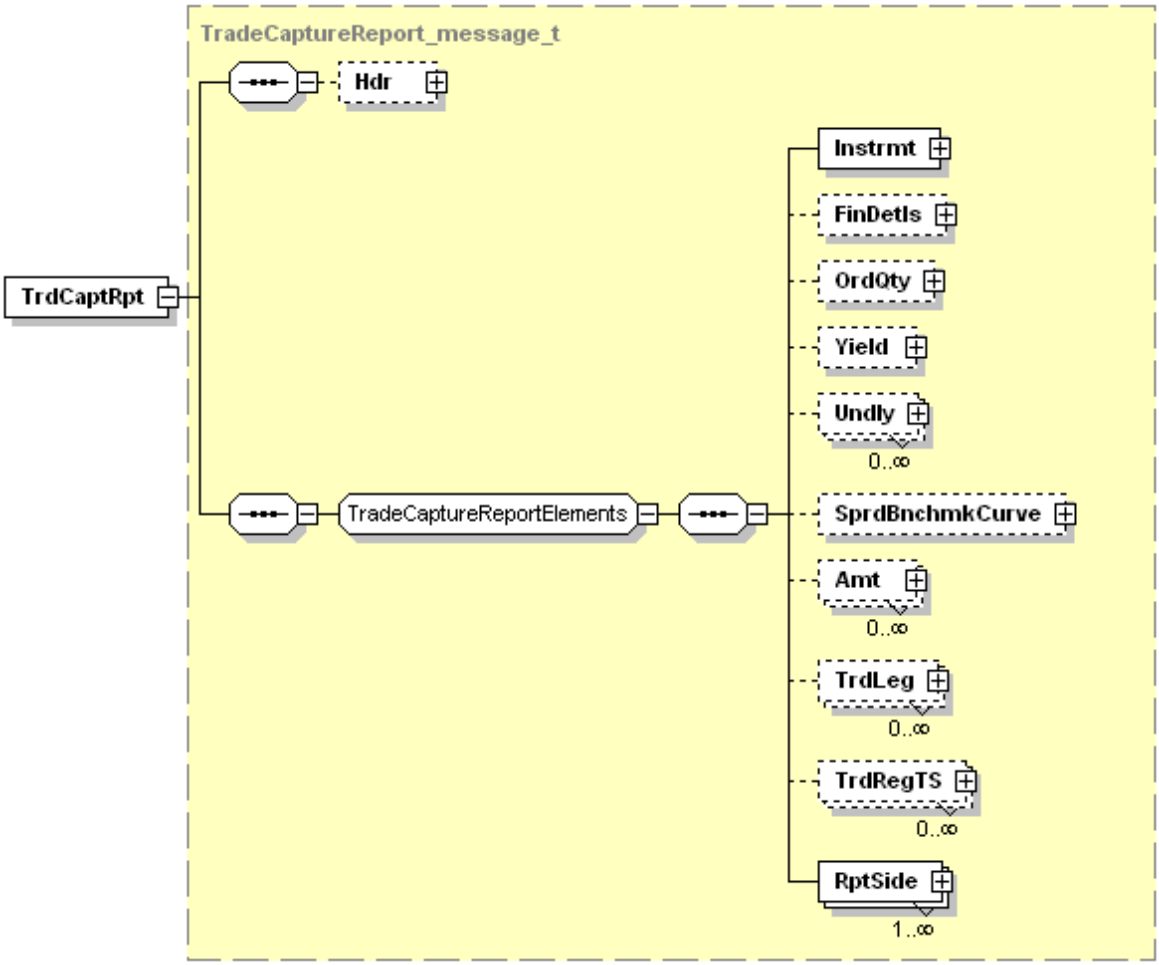
Once an update is performed (ENCORE or FIXML), DDS reports changes similar to the handling of busts. A cancel message (TransTyp=1) is issued for the trade prior to the change, and an add message (TransTyp=0) is then issued for the trade after the update is applied. Both of these messages carry a RptTyp=4 (Update/Addendum).

Clearing Members wishing to update editable fields have access to only their side of the trade. For example: the buyer to the trade is able to update only the buy-side fields, and the seller to the trade has authority over sell-side information only. If one side of a trade is updated, the contraside Clearing Member does not receive an update message.

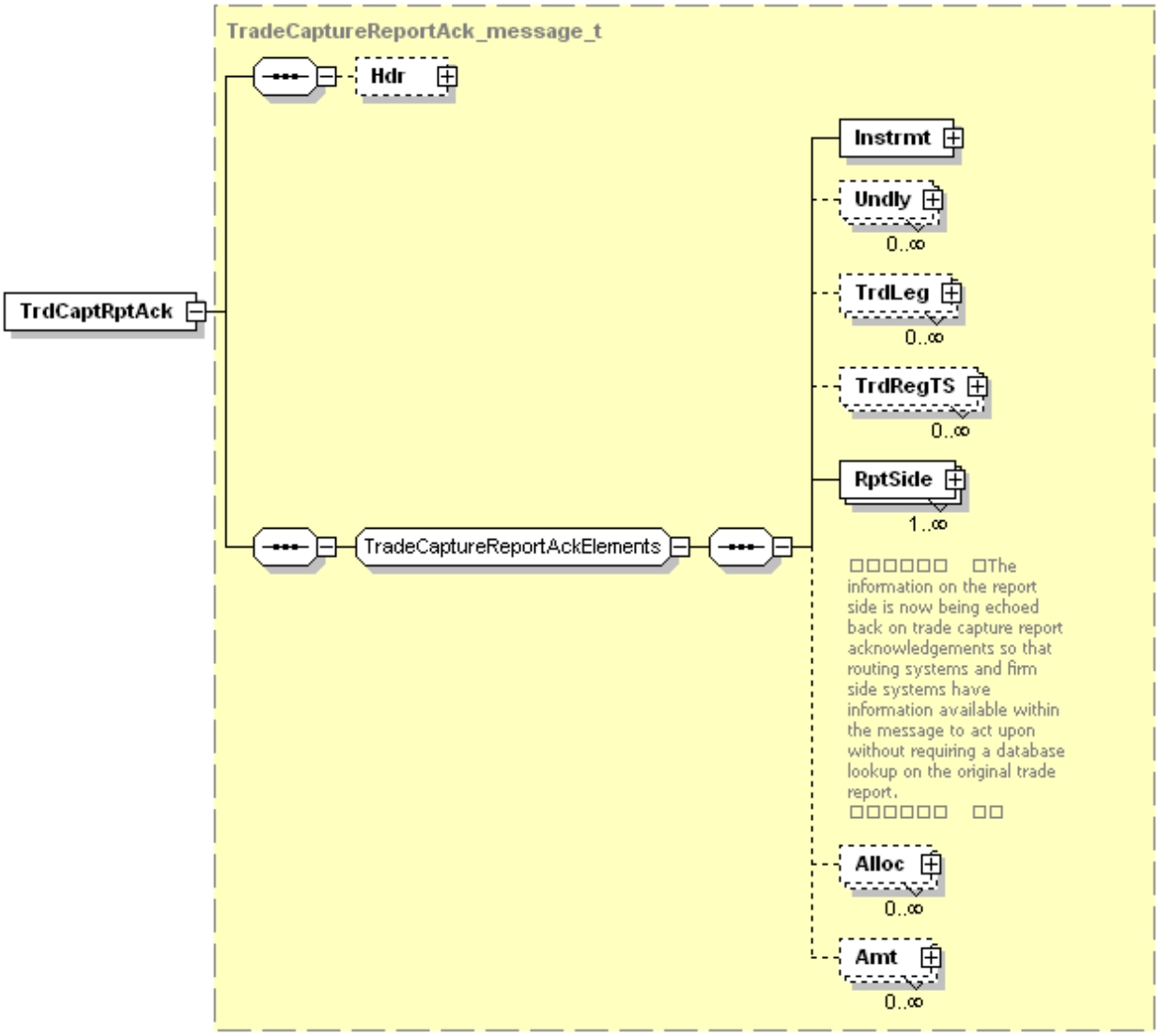
Invalid/Rejected Trade Updates are reported to the Executing Clearing Member using a Trade Capture Report Acknowledgment (TrdCaptRptAck) message. The original trade is not affected.

Note: A give-up Clearing Firm can be added or changed on a trade but cannot be removed. (This applies to both options and futures)

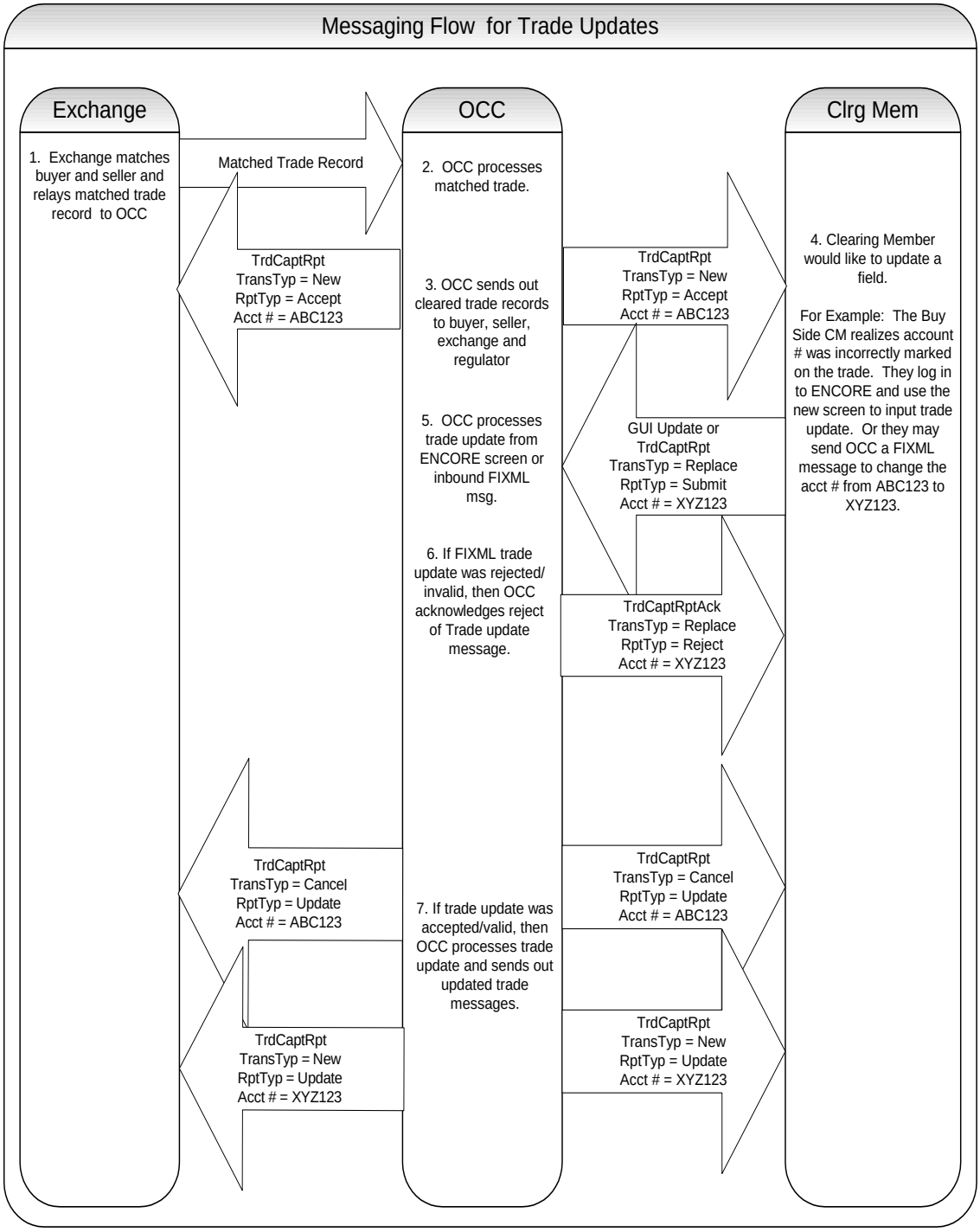
Message Structure – Trade Capture Report



Message Structure – Trade Capture Report Acknowledgement



Messaging Flow



Message Layout – Trade Capture Report – Options & Future Trades (Updates)

Trade Capture Report – Cleared Trades (Including Updates)								
FIX Mapping						Data	Data Type	Sample Data
Tag #	Report Block	Component Block	Sub Component Block	Sub Sub Component Block	Fields			
	TrdCaptRpt							
571					RptID	Identifier for the Trade (Updated trade messages repeats original trade RptId)	String	184496521
570					PrevlyRpted	Y/N	Boolean	N
32					LastQty	Quantity	Qty	1
31					LastPx	Premium (Could be negative for futures only)	Price	93.89
75					TrdDt	As Of Date	LocalMkt Date	2006-12-04
487					TransTyp	Trade Report Transaction Type 0 = New 1 = Cancel	Int	0
856					RptTyp	Trade Report Type 2 = Accept 4 = Update 8 = Defaulted 9 = Invalid CMTA	Int	4
828					TrdTyp	Trade Type 0 = Regular Trade 1 = Block Trade 2 = EFP (futures only) 20 = Cabinet Trade	Int	0
829					TrdSubTyp	Trade Sub Type 0 = CMTA Trade 3 = Reject for Submitting Side 4 = Advisory for Contra Side *If not applicable, tag is dropped.*	Int	
880					MtchID	Trade Source CSN	String	0000012
715					BizDt	Clearing Business Date	LocalMkt Date	2006-12-04

Trade Capture Report – Cleared Trades (Including Updates)								
FIX Mapping						Data	Data Type	Sample Data
Tag #	Report Block	Component Block	Sub Component Block	Sub Sub Component Block	Fields			
573					MtchStat	Match Status 0 = Matched	Char	0
	➔	Instrmt						
55					Sym	Symbol	String	AAPL1C
48					ID	Symbol (futures only)	String	AAPL1C
22					Src	ID Source (futures only) 8 = Exchange Symbol	String	8
461					CFI	Default Values (refer to page 3)	String	FFSPSX
200					MMY	Series/Contract Year, Month, Date	MonthYear	20070119 (4 for year, 2 for month, 2 for day)
541					MatDt	Expiration Date	LocalMkt Date	2007-01-19
202					StrkPx	Strike Price (decimal format, options only)	Price	
947					StrkCcy	Strike Currency (options only)	Currency	
967					StrkMult	Strike Multiplier (options only)	Float	
968					StrkValu	Strike Value (options only)	Float	
231					Mult	Multiplier	Float	100
207					Exch	Trade Source (MIC)	Exchange	XOCH
	➔	/Instrmt						
	➔	Amt						
707					Typ	Amount Type PREM = Premium Amount (options only)	String	
708					Amt	Extended Premium (options only)	Amt	
	➔	/Amt						
	➔	RptSide						
54					Side	1 = Buy 2 = Sell	2	2

Trade Capture Report – Cleared Trades (Including Updates)								
FIX Mapping						Data	Data Type	Sample Data
Tag #	Report Block	Component Block	Sub Component Block	Sub Sub Component Block	Fields			
579					InptDev	Input Device GUI = ENCORE Entry FXML = FIXML Message RTFX = Real Time FIXML Message	String	FXML
15					Ccy	Premium Currency	Currency	USD
77					PosEfct	Open Close Code O = Open C = Close	Char	O
58					Txt	Remarks	String	UPDATE
11					ClOrdID	Order Id	String	98765
582					CustCpcty	CTI Code	Char	1
1139					ExchSpeclInstr	Exchange Optional Data	String	123XYZ
826					AllocInd	Trade Allocation Indicator (futures only) 3 = Allocation Give Up Executor	Int	
1731					AvgPxGrpID	Average Price Allocation ID	String	16548321
752					MLegRptTyp	Spread Indicator 1 = Outright Non-Spread Trade 2 = Individual Leg of a Multi-Leg Trade	Char	1
1003					TrdID	Exchange Assigned Trade ID	String	S1DF1234567890P
CUST					TrdCode	Trade Code	String	31
	➔	➔	Pty					
448					ID	Clearing Group Name	String	OCC
452					R	Party Role 21 = Clearing Organization	Int	21
	➔	➔	/Pty					
	➔	➔	Pty					
448					ID	Clearing Member Number	String	00123
452					R	Party Role 1 = Executing Clearing Firm	Int	1
	➔	➔	➔	Sub				

Trade Capture Report – Cleared Trades (Including Updates)								
FIX Mapping						Data	Data Type	Sample Data
Tag #	Report Block	Component Block	Sub Component Block	Sub Sub Component Block	Fields			
523					ID	Account Type (C/F/M)	String	M
803					Typ	26 = Position Account Type	Int	26
	→	→	→	/Sub				
	→	→	/Pty					
	→	→	Pty					
448					ID	Sub Account	String	XYZ
452					R	Party Role 38 = Position Account	Int	38
	→	→	/Pty					
	→	→	Pty					
448					ID	Give Up Clearing Member Number	String	
452					R	Party Role 14 = Give Up Clearing Firm	Int	
	→	→	/Pty					
	→	→	Pty					
448					ID	Executing Broker	String	
452					R	Party Role 2 = Executing Broker	Int	
	→	→	/Pty					
	→	→	Pty					
448					ID	Customer Account Number	String	AB3
452					R	Party Role 24 = Customer Account Number	Int	24
	→	→	/Pty					
	→	→	TrdRegTS					
769					TS	Buy Side Execution Time – utilizes a YYYY-MM-DDTHH:MM:SS:000 format, where the YYYY-MM-DD is the same as the BizDt.	Timestamp	2006-12-04T07:01:11.000
770					Typ	1 = Regular Timestamp Value	Char	1
	→	→	/TrdRegTS					

Trade Capture Report – Cleared Trades (Including Updates)								
FIX Mapping						Data	Data Type	Sample Data
Tag #	Report Block	Component Block	Sub Component Block	Sub Sub Component Block	Fields			
	➔	/RptSide						
	➔	RptSide						
54					Side	1 = Buy 2 = Sell	Char	1
579					InptDev	Input Device GUI = ENCORE Entry FXML = FIXML Message RTFX = Real Time FIXML Message	String	FXML
15					Ccy	Premium Currency	Currency	USD
77					PosEfct	Open Close Code O = Open C = Close	Char	C
58					Txt	Remarks	String	
11					ClOrdID	Order Id	String	128976
582					CustCpcty	CTI Code (futures only)	Char	1
1139					ExchSpecInstr	Exchange Optional Data	String	ABC456
826					AllocInd	Trade Allocation Indicator (futures only) 3 = Allocation Give Up Executor	Int	
1731					AvgPxGrpID	Average Price Allocation ID	String	16548321
752					MLegRptTyp	Spread Indicator 1 = Outright Non-Spread Trade 2 = Individual Leg of a Multi-Leg Trade	Char	2
1003					TrdID	Exchange Assigned Trade ID	String	B1DF1234567890P
CUST					TrdCode	Trade Code	String	31
	➔	➔	Pty					
448					ID	Contra Clearing Group Name	String	OCC
452					R	Party Role 21 = Clearing Organization	Int	21
	➔	➔	/Pty					
	➔	➔	Pty					

Trade Capture Report – Cleared Trades (Including Updates)								
FIX Mapping						Data	Data Type	Sample Data
Tag #	Report Block	Component Block	Sub Component Block	Sub Sub Component Block	Fields			
448					ID	Contra Clearing Member Number	String	00789
452					R	18 = Contra Clearing Firm	Int	18
	→	→	→	Sub				
523					ID	Contra Account Type	String	C
803					Typ	26 = Position Account Type (C/F/M)	Int	26
	→	→	→	/Sub				
	→	→	/Pty					
	→	→	Pty					
448					ID	Contra Sub Account	String	
452					R	Party Role 38 = Position Account	Int	
	→	→	/Pty					
	→	→	Pty					
448					ID	Contra Give Up Clearing Member Number	String	
452					R	Party Role 14 = Give Up Clearing Firm	Int	
	→	→	/Pty					
	→	→	Pty					
448					ID	Contra Executing Broker	String	
452					R	26 = Opposite Broker	Int	
	→	→	/Pty					
	→	→	Pty					
448					ID	Contra Customer Account Number	String	12ABC45
452					R	Party Role 24 = Customer Account Number	Int	24
	→	→	/Pty					
	→	→	TrdRegTS					
769					TS	Sell Side Execution Time – utilizes a YYYY-MM-DDTHH:MM:SS:000 format, where the YYYY-MM-DD is the same as the BizDt.	Timestamp	2006-12-04T07:01:11.000

Trade Capture Report – Cleared Trades (Including Updates)								
FIX Mapping						Data	Data Type	Sample Data
Tag #	Report Block	Component Block	Sub Component Block	Sub Sub Component Block	Fields			
770					Typ	1 = Regular Timestamp Value	Char	1
	➔	➔	/TrdRegTS					
	➔	/RptSide						
	/TrdCaptRpt							

Sample Messages – Update Trades

Trade Capture Report Outbound Update Cancel Message for Options

```
<TrdCaptRpt RptID="1250000515" PrevlyRpted="N" LastQty="1" LastPx="101" TrdDt="2011-04-25" TransTyp="1" RptTyp="4"
TrdTyp="0" MtchID="111" BizDt="2011-04-25" MtchStat="0">

      <Instrmt Sym="IBM" CFI="OCASPS" MMY="20110618" MatDt="2011-06-18" StrkPx="100" StrkCcy="USD" StrkMult="1"
      StrkValu="100" Mult="100" Exch="XASE"/><Amt Typ="PREM" Amt="10100"/>

      <RptSide Side="1" InptDev="GUI" Ccy="USD" PosEfct="O" MLegRptTyp="1">

            <Pty ID="OCC" R="21" />
            <Pty ID="00005" R="1" >
                  <Sub ID="C" Typ="26"/>
            </Pty>
            <Pty ID="DES0005" R="38"/>

            <TrdRegTS TS="2011-04-25T17:00:11:000" Typ="1"/>

      </RptSide>

      <RptSide Side="2" InptDev="GUI" Ccy="USD" PosEfct="O" MLegRptTyp="1">

            <Pty ID="OCC" R="21" />
            <Pty ID="00009" R="18" >
                  <Sub ID="C" Typ="26"/>
            </Pty>

            <TrdRegTS TS="2011-04-25T17:00:11:000" Typ="1"/>

      </RptSide>

</TrdCaptRpt>
```

Trade Capture Report Outbound Update Cancel Message for Futures

```
<TrdCaptRpt RptID="184496521" PrevlyRpted="N" LastQty="1" LastPx="93.89" TrdDt="2006-12-04" TransTyp="1" RptTyp="4"
TrdTyp="0" MtchID="0000012" BizDt="2006-12-04" MtchStat="0">

    <Instrmt Sym="AAPL1C" ID="AAPL1C" Src="8" CFI="FFSPSX" MMY="20070119" MatDt="2007-01-19" Mult="100" Exch="XOCH"/>

      <RptSide Side="2" InptDev="FXML" Ccy="USD" PosEfct="O" ClOrdID="128976" CustCpcty ="2" MLegRptTyp="1"
      TrdID="S1DF1234567890P" TrdCode="31">

          <Pty ID="OCC" R="21"/>
          <Pty ID="00123" R="1">
              <Sub ID="M" Typ="26"/>
          </Pty>
          <Pty ID="ABC" R="38"/>
          <Pty ID="AB3" R="24"/>

          <TrdRegTS TS="2006-12-04T11:58:11:000" Typ="1"/>

      </RptSide>

      <RptSide Side="1" InptDev="FXML" Ccy="USD" PosEfct="C" ClOrdID="128976" CustCpcty ="1" MLegRptTyp="1"
      TrdID="B1DF1234567890P">

          <Pty ID="OCC" R="21"/>
          <Pty ID="00789" R="18">
              <Sub ID="C" Typ="26"/>
          </Pty>
          <Pty ID="12ABC45" R="24"/>

          <TrdRegTS TS="2006-12-04T11:58:11:000" Typ="1"/>

      </RptSide>

    </TrdCaptRpt>
```

Trade Capture Report Outbound Update Add Message for Options

```
<TrdCaptRpt RptID="1250000515" PrevlyRpted="N" LastQty="1" LastPx="101" TrdDt="2011-04-25" TransTyp="0" RptTyp="4"
TrdTyp="0" TrdSubTyp="0" MtchID="111" BizDt="2011-04-25" MtchStat="0">

    <Instrmt Sym="IBM" CFI="OCASPS" MMY="20110618" MatDt="2011-06-18" StrkPx="100" StrkCcy="USD" StrkMult="1"
      StrkValu="100" Mult="100" Exch="XASE"/>

      <Amt Typ="PREM" Amt="10100"/>

      <RptSide Side="1" InptDev="GUI" Ccy="USD" PosEfct="O" Txt="trd mod" ClOrdID="trd mod" MLegRptTyp="1">

            <Pty ID="OCC" R="21" />
            <Pty ID="00005" R="1" >
                  <Sub ID="C" Typ="26"/>
            </Pty>
            <Pty ID="00013" R="14"/>

      <TrdRegTS TS="2011-04-25T17:00:11:000" Typ="1"/>

      </RptSide>

      <RptSide Side="2" InptDev="GUI" Ccy="USD" PosEfct="O" MLegRptTyp="1">

            <Pty ID="OCC" R="21" />
            <Pty ID="00009" R="18" >
                  <Sub ID="C" Typ="26"/>
            </Pty>

      <TrdRegTS TS="2011-04-25T17:00:11:000" Typ="1"/>

      </RptSide>

</TrdCaptRpt>
```

Trade Capture Report Outbound Update Add Message for Futures

```
   <TrdCaptRpt RptID="184496521" PrevlyRpted="N" LastQty="1" LastPx="93.89" TrdDt="2006-12-04" TransTyp="0" RptTyp="4"
   TrdTyp="0" MtchID="0000012" BizDt="2006-12-04" MtchStat="0">
```

```
<Instrmt Sym="AAPL1C" ID="AAPL1C" Src="8" CFI="FFSPSX" MMY="20070119" MatDt="2007-01-19" Mult="100" Exch="XOCH"/>

   <RptSide Side="2" InptDev="FXML" Ccy="USD" PosEfct="O" Txt="UPDATE" ClOrdID="98765" CustCpcty ="1">

         <Pty ID="OCC" R="21"/>
         <Pty ID="00123" R="1">
               <Sub ID="M" Typ="26"/>
         </Pty>
         <Pty ID="XYZ" R="38"/>
         <Pty ID="AB3" R="24"/>

         <TrdRegTS TS="2006-12-04T11:58:11:000" Typ="1"/>

   </RptSide>

   <RptSide Side="1" InptDev="FXML" Ccy="USD" PosEfct="C" ClOrdID="128976" CustCpcty ="1">

         <Pty ID="OCC" R="21"/>
         <Pty ID="00789" R="18">
               <Sub ID="C" Typ="26"/>
         </Pty>
         <Pty ID="12ABC45" R="24"/>

         <TrdRegTS TS="2006-12-04T11:58:11:000" Typ="1"/>

  </RptSide>

</TrdCaptRpt>
```

Message Layout – Trade Capture Report Acknowledgement – Rejected Trade Updates

Trade Capture Report Acknowledgement – Update Trades (Reject)								
FIX Mapping						Data	Data Type	Sample Data
Tag #	Report Block	Component Block	Sub Component Block	Sub Sub Component Block	Fields			
	TrdCaptRptAck							
572					RptRefID	Unique Identifier for the trade that was provided to OCC	String	184496521
32					LastQty	Quantity	Qty	1
31					LastPx	Premium	Price	93.89
75					TrdDt	As Of Date	LocalMkt Date	2006-12-04
487					TransTyp	Trade Report Transaction Type 2 = Replace	Int	2
856					RptTyp	Trade Report Type 3 = Reject	Int	3
715					BizDt	Clearing Business Date	LocalMkt Date	2006-12-04
	➔	Instrmt						
55					Sym	Symbol	String	AAPL1C
461					CFI	Default Values (refer to page 3)	String	FFSPSX
200					MMY	Series/Contract Year, Month, Date	MonthYear	20070114 (4 for year, 2 for month, 2 for day)
202					StrkPx	Strike Price (Decimal Format only) – Options only	Price	
	➔	/Instrmt						
	➔	RptSide						
54					Side	1 = Buy 2 = Sell	Char	2
77					PosEfct	Open Close Code O = Open C = Close	Char	O
58					Txt	Remarks	String	UPDATE
11					ClOrdID	Order Id	String	98765

Trade Capture Report Acknowledgement – Update Trades (Reject)								
FIX Mapping						Data	Data Type	Sample Data
Tag #	Report Block	Component Block	Sub Component Block	Sub Sub Component Block	Fields			
TBA					ExchSpeclInstr	Exchange Optional Data	String	123XYZ
826					AllocInd	Trade Allocation Indicator 3 = Allocation Give Up Executor	Int	
582					CustCpcty	CTI Code	Char	1
	→	→	Pty					
448					ID	Clearing Member Number	String	00123
452					R	Party Role 1 = Executing Clearing Firm	Int	1
	→	→	→	Sub				
523					ID	Account Type (C/F/M)	String	M
803					Typ	26 = Position Account Type	Int	26
	→	→	→	/Sub				
	→	→	/Pty					
	→	→	Pty					
448					ID	Sub Account	String	XYZ
452					R	Party Role 38 = Position Account	Int	38
	→	→	/Pty					
	→	→	Pty					
448					ID	Give Up Clearing Member Number	String	
452					R	Party Role 14 = Give Up Clearing Firm	Int	
	→	→	/Pty					
	→	→	Pty					
448					ID	Customer Account Number	String	AB3
452					R	Party Role 24 = Customer Account Number	Int	24
	→	→	/Pty					
	→	/RptSide						
	/TrdCaptRptAck							

Sample Messages – Update Trades (Rejected)

Trade Capture Acknowledgement Report – Rejected Trade

```
<TrdCaptRptAck RptRefID="184496521" LastQty="0000001" LastPx ="93.89" TrdDt="2006-12-04" TransTyp="2" RptTyp="3"
BizDt="2006-12-04">

      <Instrmt Sym="AAPL1C" CFI="FFSPSX" MMY="20070119"/>

      <RptSide Side="2" PosEfct="O" Txt="UPDATE" ClOrdId="98765" CustCpcty ="1">

            <Pty ID="00123" R="1">
                  <Sub ID="M" R="26"/>
            </Pty>

            <Pty ID="XYZ" R="38"/>

            <Pty ID="AB3" R="24"/>

      </RptSide>

</TrdCaptRptAck>
```

Implementation Considerations

General

Trade Capture Report and Trade Capture Report Acknowledgement transmissions are created in real time. Regardless of how these messages are delivered to a recipient (real time or batch file), recipients must be able to process each message as either canceled, updated, or rejected (TrdCaptRptAck). The recipient systems must use the following fields to determine how to process the message:

- ***RptID*** **(RptRefID)** – unique identifier for the trade – Updated trade messages repeats the original trade RptId. Rejected Trade Updates contain a RptRefID that matches the original trade RptId.

- ***TransTyp*** – **0** (New), **1** (Canceled), **2** (Replace)

    - ** A value of 2 (Replace) is only valid for outbound Trade Capture Report Acknowledgement rejected messages.

- ***RptTyp*** –**3** (Reject), **4** (Update)

- ***TrdType* – 0** (Regular Trade), **1** (EFP), **2** (Block Trade)

Trade Update Matrix

Trade Capture Report	Trans Type	Rpt Typ	Trd Typ	BizDt
Trade Update Outbound Cancel Original Trade	1	4	0/1/2	Current External ENCORE Date
Trade Update Outbound Add Trade including Updates	0	4	0/1/2	Current External ENCORE Date
Trade Update Reject Message (TrdCaptRptAck)	2	3	0/1/2	Current External ENCORE Date

Additional Considerations

Rejected Trade Modification Updates

Due to the nature of rejected transactions, it should be noted that any rejected data transmitted via a DDS message may be invalid or be of an invalid type. For example, if a trade is received with a quantity of ABC, the trade is rejected, and the “ABC” is placed into an XML tag with a datatype of Qty (whole numbers only). This does not present a problem at OCC in regard to the construction and transmission of the message but should be a consideration for any recipients of DDS data that plan to validate against the FIXML schema.

The input source for rejected transfers is always a batch or real time FIXML transmission. GUI transactions do not generate rejected messages.

Transfers and Adjustments

FIX Message:	Trade Capture Report
Subscription Options:	Equity/Index Options
	Commodity Options
	Futures
	Options on Futures
	Rejected Options *Clearing Members Only
	Rejected Futures *Clearing Members Only
Delivery Options:	Real Time
	Batch File

Overview

Two-sided position movements (transfers/adjustments) are available on the Trade Capture Report and created real time as post trades are added, modified, deleted, backed out, or rejected. These messages are available to subscribers in real time or in a cumulative file at the end of the day.

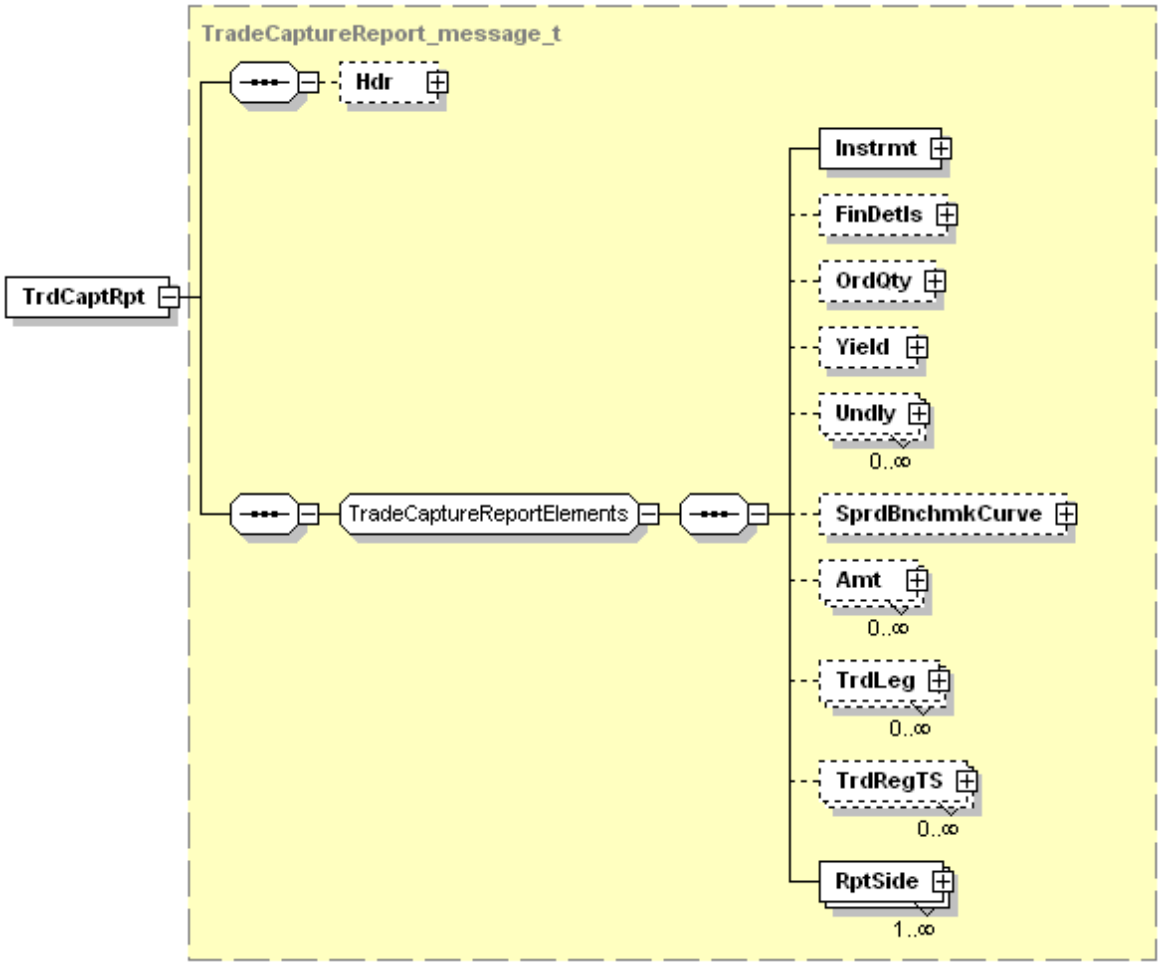
Clearing Members

For every Transfer of Account or CMTA Transfer, a message is created for both Clearing Members involved in the transaction. When the message is received, the subscribing Clearing Member account information always appears first in the message followed by the contra Clearing Member information. For Position Adjustments, one message is created for *each* account involved in the adjustment activity. For adjustments between the same Account (e.g. 00005 Customer to 00005 Customer), two messages are created and transmitted to the single subscriber.

Trade Sources and Regulatory Agencies

A message is created for each valid transfer and sent to all trade sources where the financial instrument is listed or regulated. The message contains source side information first, followed by target side information.

Message Structure



Message Layout – Trade Capture Report – Valid and Deleted Transfers – Options

Trade Capture Report – Valid and Deleted Equity/Index Options and Commodity Options Transfers								
FIX Mapping						Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Sub Sub Component Block	Fields			
	TrdCaptRpt							
571					RptID	Unique Identifier for the Position Movement	String	50000861
570					PrevlyRpted	N	Boolean	N
32					LastQty	Trade Quantity	Qty	10
31					LastPx	Transaction Price	Price	12.5
75					TrdDt	Trade As Of Date	LocalMkt Date	2007-04-19
60					TxnTm	Transaction Time	UTC Timestamp	2007-04-19T14:26:42-05:00
487					TransTyp	Transaction Type 0 = New 1 = Cancel (Bust) 2 = Replace 4 = Reverse/Backout	Int	0
856					RptTyp	Trade Report Type 2 = Accepted	Int	2
828					TrdTyp	Trade Type 1 = Block Trade 2 = Exchange for Physical (EFP) 3 = Transfer	Int	3
829					TrdSubTyp	Position Movement Type 0 = CMTA (CMTA Transfer) 1 = Internal Transfer (adjustment) 2 = External Transfer (transfer of account)	Int	0
715					BizDt	Clearing Business Date	LocalMkt Date	2007-04-19
573					MtchStat	Match Status 0 = Matched	Char	0
820					LinkID	Cost Basis Control Number	String	0419200707280302
	➔	Instrmt						

Trade Capture Report – Valid and Deleted Equity/Index Options and Commodity Options Transfers								
FIX Mapping						Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Sub Sub Component Block	Fields			
55					Sym	Symbol	String	IBM
461					CFI	Default Values (refer to page 3)	String	OPASPS
200					MMY	Series/Contract Year, Month, Date	MonthYear	20070519 (4 for year, 2 for month, 2 for day)
541					MatDt	Expiration Date	LocalMkt Date	2007-05-19
202					StrkPx	Strike Price (decimal format)	Price	60
947					StrkCcy	Strike Currency	Currency	USD
967					StrkMult	Strike Multiplier	Float	1
968					StrkValu	Strike Value	Float	100
231					Mult	Multiplier	Float	100
207					Exch	For CMTA Transfers – the Trade Source (MIC) where the CMTA agreement is established	Exchange	XCBO
	➔	/Instrmt						
	➔	Amt						
707					Typ	Amount Type PREM = Premium Amount	String	PREM
708					Amt	Extended Premium	Amt	12500
	➔	/Amt						
	➔	➔	TrdLeg					
990					RptID	Trade ID For CMTA Transfers – Block repeats for each Trade ID supplied	String	0728071158
	➔	➔	/TrdLeg					
	➔	RptSide						
54					Side	1 = Buy 2 = Sell	Char	1
579					InptDev	Input Device (RTFX = Realtime FIXML, GUI = GUI, BULK = Bulk Transfer, FXML = FIXML Message, ACAT = ACATS Transfer)	String	GUI
15					Ccy	Transfer Currency	Currency	USD

Trade Capture Report – Valid and Deleted Equity/Index Options and Commodity Options Transfers								
FIX Mapping						Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Sub Sub Component Block	Fields			
77					PosEfct	Open Close Code O = OpenC = Close	Char	O
58					Txt	Remarks	String	Misc Remarks
CUST					ORFInd	Option Regulatory Fee (CMTA Transfers only)	String	Y
	→	→	Pty					
448					ID	Clearing Group Name	String	OCC
452					R	Party Role 21 = Clearing Organization	Int	21
	→	→	/Pty					
	→	→	Pty					
448					ID	Clearing Member Number	String	00005
452					R	1 = Executing Clearing Firm 14 = Give Up Firm (CMTA Transfers only)	Int	1
	→	→	→	Sub				
523					ID	Account Type	String	C
803					Typ	26 = Position Account Type	Int	26
	→	→	→	/Sub				
	→	→	/Pty					
	→	→	Pty					
448					ID	Tier Account Acronym	String	ZZZ
452					R	38 = Position Account	Int	38
	→	→	/Pty					
	→	→	Pty					
448					ID	Account Number	String	ABC123
452					R	24 = Customer Account	Int	24
	→	→	/Pty					
	→	/RptSide						
	→	RptSide						
54					Side	1 = Buy 2 = Sell	Char	2

Trade Capture Report – Valid and Deleted Equity/Index Options and Commodity Options Transfers								
FIX Mapping						Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Sub Sub Component Block	Fields			
579					InptDev	Input Device (RTFX = Realtime FIXML, GUI = GUI, BULK = Bulk Transfer, FXML = FIXML Message, ACAT = ACATS Transfer)	String	GUI
15					Ccy	Transfer Currency	Currency	USD
77					PosEfct	Close Open Code C = Close O = Open	Char	C
58					Txt	Remarks	String	Misc Remarks
CUST					ORFInd	Option Regulatory Fee (CMTA Transfers only)	String	Y
	➔	➔	Pty					
448					ID	Contra Clearing Group Name	String	OCC
452					R	Party Role 21 = Clearing Organization	Int	21
	➔	➔	/Pty					
	➔	➔	Pty					
448					ID	Contra Clearing Member Number	String	00690
452					R	18 = Contra Clearing Firm	Int	18
	➔	➔	➔	Sub				
523					ID	Contra Account Type Code	String	C
803					Typ	26 = Position Account Type	Int	26
	➔	➔	➔	/Sub				
	➔	➔	/Pty					
	➔	➔	Pty					
448					ID	Tier Account Acronym	String	ZZZ
452					R	38 = Position Account	Int	38
	➔	➔	/Pty					
	➔		Pty					
448					ID	Account Number	String	ABC123
452					R	24 = Customer Account	Int	24
	➔		/Pty					
	➔	➔	MiscFees					
137					Amt	Fee Amount	Amt	189.75

Trade Capture Report – Valid and Deleted Equity/Index Options and Commodity Options Transfers								
FIX Mapping						Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Sub Sub Component Block	Fields			
139					Typ	Type of Fee 3 = Commission Fee 7 = Reportable Fees	String	3
	➔	➔	/MiscFees					
	➔	/RptSide						
	/TrdCaptRpt							

Sample Messages – Valid and Deleted Transfers – Equity/Index

In the below example, a Position Transfer was entered via ENCORE for the following position. The details of the Position Transfer are listed below.

Symbol	P/C	Exp Date	Strike	Quantity
IBM	P	05/19/2007	60	10

Sell Side			Buy Side		
O/C	CM	AT	O/C	CM	AT
C	00690	C	O	00005	C

The data service message for this Transfer is shown below. This is the message layout that a subscriber for 00005 receives if they are the Executing Firm.

```
<TrdCaptRpt RptID="50000861" PrevlyRpted="N" LastQty="10" LastPx="12.5"
TrdDt="2007-04-19" TxnTm="2007-04-19T14:26:42-05:00" TransTyp="0" RptTyp="2"
TrdTyp="3" TrdSubTyp="0" BizDt="2007-04-19" MtchStat="0"
LinkID="0419200707280302">

      <Instrmt Sym="IBM" CFI="OPASPS" MMY="20070519" MatDt="2007-05-19"
      StrkPx="60" StrkCcy="USD" StrkMult="1" StrkValu="100" Mult="100"
      Exch="XCBO"/>

      <Amt Typ="PREM" Amt="12500"/>

      <RptSide Side="1" InptDev="GUI" Ccy="USD" PosEfct="O" Txt="Misc
Remarks">

            <Pty ID="OCC" R="21"/>
            <Pty ID="00005" R="1">
                  <Sub ID="C" Typ="26"/>
            </Pty>
            <Pty ID= "123456" R="24"/>

      </RptSide>

      <RptSide Side="2" InptDev="GUI" Ccy="USD" PosEfct="C" ORFInd="Y" >

            <Pty ID="OCC" R="21"/>
            <Pty ID="00690" R="18">
                  <Sub ID="C" Typ="26"/>
            </Pty>
            <Pty ID= "654321" R="24"/>

            <MiscFees Amt="189.75" Type="3"/>
            <MiscFees Amt="28.00" Type="7"/>

      </RptSide>

</TrdCaptRpt>
```

The data service message for this Transfer is shown below. This is the message layout that a subscriber for 00690 receives if they are the Give-Up Firm.

```
<TrdCaptRpt RptID="50000861" PrevlyRpted="N" LastQty="10" LastPx="12.5"
TrdDt="2007-04-19" TxnTm="2007-05-03T14:26:42-05:00" TransTyp="0" RptTyp="2"
TrdTyp="3" TrdSubTyp="0" BizDt="2007-04-19" MtchStat="0"
LinkID="0419200707280302">

     <Instrmt Sym="IBM" CFI="OPASPS" MMY="20070519" MatDt="2007-05-19"
     StrkPx="60" StrkCcy="USD" StrkMult="1" StrkValu="100" Mult="100"
     Exch="XCBO"/>

     <Amt Typ="PREM" Amt="12500"/>
     <TrdLeg RptID="0728071158"/>
     <TrdLeg RptID="645123454"/>

     <RptSide Side="2" InptDev="GUI" Ccy="USD" PosEfct="C" ORFInd="Y">

          <Pty ID="OCC" R="21"/>
          <Pty ID="00690" R="14">
               <Sub ID="C" Typ="26"/>
          </Pty>

          <Pty ID= "654321" R="24"/>

          <MiscFees Amt="189.75" Type="3"/>
          <MiscFees Amt="28.00" Type="7"/>

     </RptSide>

     <RptSide Side="1" InptDev="GUI" Ccy="USD" PosEfct="O" Txt="Misc
     Remarks">

          <Pty ID="OCC" R="21"/>
          <Pty ID="00005" R="18">
               <Sub ID="C" Typ="26"/>
          </Pty>

          <Pty ID= "123456" R="24"/>


     </RptSide>
</TrdCaptRpt>
```

Sample End of Day Messages – Valid and Deleted Transfers

Trade Capture Report – End-Of-Day Transmission for Equity Index Options

```
<DDSEODMessage BizDt="2003-09-10" MsgTypeCode="TRADE" SchemaVer="FIX 4.4"
TransType="POSMOVE" TransSubType="VALID_DEL" TransProductSet="OPTN"
FinalizationCycle="ENCORE Equity Index Finalization" NoMessagesSent="253"/>
```

Trade Capture Report – End-Of-Day Transmission for Commodity Options

```
<DDSEODMessage BizDt="2003-09-10" MsgTypeCode="TRADE" SchemaVer="FIX 4.4"
TransType="POSMOVE" TransSubType="VALID_DEL" TransProductSet="OPTN"
FinalizationCycle="ENCORE Futures Finalization" NoMessagesSent="7"/>
```

Message Layout – Trade Capture Report – Valid and Deleted Transfers – Futures

Trade Capture Report – Valid and Deleted Futures Transfers								
FIX Mapping						Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Sub Sub Component Block	Fields			
	TrdCaptRpt							
571					RptID	Unique Identifier for the Position Movement	String	1500000080
570					PrevlyRpted	N	Boolean	N
32					LastQty	Trade Quantity	Qty	10
31					LastPx	Transaction Price (Could be negative for futures only)	Price	65.5
75					TrdDt	Trade As Of Date	LocalMkt Date	
60					TxnTm	Transaction Time	UTC Timestamp	2004-04-15T17:09:43-05:00
487					TransTyp	Transaction Type 0 = New 1 = Cancel (Bust) 2 = Replace 4 = Reverse/Backout	Int	0
856					RptTyp	Trade Report Type 2 = Accepted	Int	2
828					TrdTyp	Trade Type 1 = Block Trade 2 = Exchange for Physical (EFP) 3 = Transfer	Int	3
829					TrdSubTyp	Position Movement Type 0 = CMTA (CMTA Transfer) 1 = Internal Transfer (adjustment) 2 = External Transfer (transfer of account)	Int	2
715					BizDt	Clearing Business Date	LocalMkt Date	2004-04-15
573					MtchStat	Match Status 0 = Matched	Char	0
820					LinkID	Cost Basis Control Number	String	0419200707280302
	➔	Instrmt						

Trade Capture Report – Valid and Deleted Futures Transfers								
FIX Mapping						Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Sub Sub Component Block	Fields			
55					Sym	Symbol	String	IBM1C
48					ID	Exchange Symbol	String	IBM1C
22					Src	ID Source 8 = Exchange Symbol	String	8
461					CFI	Default Values (refer to page 3)	String	FFSPSX
200					MMY	Series/Contract Year, Month, Date	MonthYear	20040521 (4 for year, 2 for month, 2 for day)
541					MatDt	Expiration Date	LocalMkt Date	2004-05-21
231					Mult	Multiplier	Float	100
207					Exch	Trade Source (MIC)	Exchange	
	➔	/Instrmt						
	➔	Amt						
707					Typ	Amount Type PREM = Premium Amount	String	PREM
708					Amt	Extended Premium	Amt	65000
	➔	/Amt						
	➔	RptSide						
54					Side	1 = Buy 2 = Sell	Char	1
579					InptDev	Input Device (RTFX = Realtime FIXML, GUI = GUI, BULK = Bulk Transfer, FXML = FIXML Message)	String	GUI
15					Ccy	Transfer Currency	Currency	USD
77					PosEfct	Open Close Code O = Open C = Close	Char	O
58					Txt	Remarks	String	
	➔	➔	Pty					
448					ID	Clearing Group Name	String	OCC
452					R	Party Role 21 = Clearing Organization	Int	21

Trade Capture Report – Valid and Deleted Futures Transfers								
FIX Mapping						Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Sub Sub Component Block	Fields			
	➔	➔	/Pty					
	➔	➔	Pty					
448					ID	Clearing Member Number	String	00005
452					R	1 = Executing Clearing Firm 14 = Give Up Firm (CMTA Transfers only)	Int	1
	➔	➔	➔	Sub				
523					ID	Account Type	String	C
803					Typ	26 = Position Account Type	Int	26
	➔	➔	➔	/Sub				
	➔	➔	/Pty					
	➔	➔	Pty					
448					ID	Tier Account Acronym	String	ZZZ
452					R	38 = Position Account	Int	38
	➔	➔	/Pty					
	➔		Pty					
448					ID	Account Number	String	ABC123
452					R	24 = Customer Account	Int	24
	➔		/Pty					
	➔	/RptSide						
	➔	RptSide						
54					Side	1 = Buy 2 = Sell	Char	2
579					InptDev	Input Device (RTFX = Realtime FIXML, GUI = GUI, BULK = Bulk Transfer, FXML = FIXML Message)	String	GUI
15					Ccy	Trade Currency	Currency	USD
77					PosEfct	Close Open Code C = Close O = Open	Char	C
58					Txt	Remarks	String	
	➔	➔	Pty					

Trade Capture Report – Valid and Deleted Futures Transfers								
FIX Mapping						Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Sub Sub Component Block	Fields			
448					ID	Contra Clearing Group Name	String	OCC
452					R	Party Role 21 = Clearing Organization	Int	21
	→	→	/Pty					
	→	→	Pty					
448					ID	Contra Clearing Member Number	String	00690
452					R	18 = Contra Clearing Firm	Int	18
	→	→	→	Sub				
523					ID	Contra Account Type Code	String	C
803					Typ	26 = Position Account Type	Int	26
	→	→	→	/Sub				
	→	→	/Pty					
	→	→	Pty					
448					ID	Tier Account Acronym	String	ZZZ
452					R	38 = Position Account	Int	38
	→	→	/Pty					
	→	→	Pty					
448					ID	Account Number	String	ABC123
452					R	24 = Customer Account	Int	24
	→	→	/Pty					
	→	→	MiscFees					
137					Amt	Fee Amount	Amt	189.75
139					Typ	Type of Fee 3 = Commission Fee 7 = Reportable Fees	String	3
	→	→	/MiscFees					
	→	/RptSide						
	/TrdCaptRpt							

Sample Messages – Valid and Deleted Transfers – Futures

A Position Transfer was entered via ENCORE for the following position. The details of the Position Transfer are listed below.

Symbol	Exp Date	Quantity	Price
IBM1C	5/21/2004	10	65.5

Sell Side			Buy Side		
O/C	CM	AT	O/C	CM	AT
C	00690	C	O	00005	C

The DDS message for this Transfer is shown below. This is the message layout that a subscriber for 00005 receives. Report Sides are reversed for a subscriber to 00690 data.

```
<TrdCaptRpt RptID="1500000080" PrevlyRpted="N" LastQty="10" LastPx="65.5"
TxnTm="2004-04-15T17:09:43-05:00" TransTyp="0" RptTyp="2" TrdTyp="3"
TrdSubTyp="2" BizDt="2004-04-15" MtchStat="0" LinkID="0419200707280302">

     <Instrmt Sym="IBM1C" ID="IBM1C" Src="8" CFI="FFSPSX" MMY="20040521"
     MatDt="2004-05-21" Mult="100"/>

     <Amt Typ="PREM" Amt="65000"/>

     <RptSide Side="1" InptDev="GUI" Ccy="USD" PosEfct="O">

          <Pty ID="OCC" R="21"/>
          <Pty ID="00005" R="1">
               <Sub ID="C" Typ="26"/>
          </Pty>
          <Pty ID= "123456" R="24"/>

     </RptSide>

     <RptSide Side="2" InptDev="GUI" Ccy="USD" PosEfct="C" Txt="">

          <Pty ID="OCC" R="21"/>
          <Pty ID="00690" R="18"/>
               <Sub ID="C" Typ="26"/>
          </Pty>
          <Pty ID= "654321" R="24"/>

     </RptSide>

</TrdCaptRpt>
```

Sample End of Day Message – Valid and Deleted Transfers

Trade Capture Report – End-Of-Day Transmission for Futures

```
<DDSEODMessage BizDt="2003-09-10" MsgTypeCode="TRADE" SchemaVer="FIX 4.4"
TransType="POSMOVE" TransSubType="VALID_DEL" TransProductSet="FUTU"
FinalizationCycle="ENCORE Futures Finalization" NoMessagesSent="21"/>
```

Message Layout – Trade Capture Report – Rejected Transfers

Trade Capture Report – Rejected Transfers								
FIX Mapping						Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Sub Sub Component Block	Fields			
	TrdCaptRpt							
571					RptID	Unique Identifier for the Position Movement	String	1500000080
570					PrevlyRpted	N	Boolean	N
32					LastQty	Trade Quantity	Qty	10
31					LastPx	Transaction Price	Price	0
75					TrdDt	Trade As Of Date	LocalMkt Date	
60					TxnTm	Transaction Time	UTC Timestamp	2004-04-15T17:09:43-05:00
487					TransTyp	Transaction Type 0 = New	Int	0
856					RptTyp	Trade Report Type 3 = Rejected	Int	3
828					TrdTyp	Trade Type 2 = Exchange for Physical (EFP) 3 = Transfer	Int	3
829					TrdSubTyp	Position Movement Type 0 = CMTA 1 = Internal Transfer (adjustment) 2 = External Transfer (transfer of account)	Int	2
715					BizDt	Clearing Business Date	LocalMkt Date	2004-04-15
573					MtchStat	Match Status 0 = Matched	Char	0
	➔	Instrmt						
55					Sym	Symbol	String	IBM
461					CFI	Default Values (refer to page 3)	String	OXASPS
200					MMY	Series/Contract Year, Month, Date	MonthYear	20040514 (4 for year, 2 for month, 2 for day)
202					StrkPx	Strike Price (decimal format)	Price	125

Trade Capture Report – Rejected Transfers								
FIX Mapping						Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Sub Sub Component Block	Fields			
207					Exch	Trade Source (MIC)	Exchange	XISX
	➔	/Instrmt						
	➔	RptSide						
	➔	➔	TrdLeg					
990					RptID	Trade ID For CMTA Transfers – Block repeats for each Trade ID supplied	String	0728071158
	➔	➔	/TrdLeg					
54					Side	1 = Buy 2 = Sell	Char	1
579					InptDev	Input Device (RTFX = Realtime FIXML, GUI = GUI, BULK = Bulk Transfer, FXML = FIXML Message)	String	FXML
15					Ccy	Transfer Currency	Currency	USD
77					PosEfct	Open Close Code O = Open C = Close	Char	O
58					Txt	Remarks	String	
CUST					ORFInd	Option Regulatory Fee (CMTA Transfers only)	String	Y
	➔	➔	Pty					
448					ID	Clearing Group Name	String	OCC
452					R	Party Role 21 = Clearing Organization	Int	21
	➔	➔	/Pty					
	➔	➔	Pty					
448					ID	Clearing Member Number	String	00005
452					R	1 = Executing Clearing Firm 14 = Give Up Firm (CMTA Transfers only)	Int	1
	➔	➔	➔	Sub				
523					ID	Account Type	String	C
803					Typ	26 = Position Account Type	Int	26
	➔	➔	➔	/Sub				

Trade Capture Report – Rejected Transfers								
FIX Mapping						Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Sub Sub Component Block	Fields			
	➔	➔	/Pty					
	➔	➔	Pty					
448					ID	Tier Account Acronym	String	ZZZ
452					R	38 = Position Account	Int	38
	➔	➔	/Pty					
	➔		Pty					
448					ID	Account Number	String	ABC123
452					R	24 = Customer Account	Int	24
	➔		/Pty					
	➔	/RptSide						
	➔	RptSide						
54					Side	1 = Buy 2 = Sell	Char	2
579					InptDev	Input Device (RTFX = Realtime FIXML, GUI = GUI, BULK = Bulk Transfer, FXML = FIXML Message)	String	FXML
15					Ccy	Trade Currency	Currency	USD
77					PosEfct	Close Open Code O = Open C = Close	Char	C
58					Txt	Remarks	String	
	➔	➔	Pty					
448					ID	Contra Clearing Group Name	String	OCC
452					R	Party Role 21 = Clearing Organization	Int	21
	➔	➔	/Pty					
	➔	➔	Pty					
448					ID	Contra Clearing Member Number	String	00690
452					R	18 = Contra Clearing Firm	Int	18
	➔	➔	➔	Sub				
523					ID	Contra Account Type Code	String	C

Trade Capture Report – Rejected Transfers								
FIX Mapping						Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Sub Sub Component Block	Fields			
803					Typ	26 = Position Account Type	Int	26
	➔	➔	➔	/Sub				
	➔	➔	/Pty					
	➔	➔	Pty					
448					ID	Tier Account Acronym	String	ZZZ
452					R	38 = Position Account	Int	38
	➔	➔	/Pty					
	➔		Pty					
448					ID	Account Number	String	DEF456
452					R	24 = Customer Account	Int	24
	➔		/Pty					
	➔	➔	MiscFees					
137					Amt	Fee Amount	Amt	189.75
139					Typ	Type of Fee 3 = Commission Fee 7 = Reportable Fees	String	3
891					Basis	Unit of the Miscellaneous Fee 0 = Flat Fee 1 = Rate Fee	Int	0
	➔	➔	/MiscFees					
	➔	/RptSide						
	/TrdCaptRpt							

Sample Message – Option Rejected Transfers

```
<TrdCaptRpt RptID="1500000080" PrevlyRpted="N" LastQty="10" LastPx="0"
TxnTm="2004-07-12T17:09:43-05:00" TransTyp="0" RptTyp="3" TrdTyp="3"
TrdSubTyp="2" BizDt="2004-04-15" MtchStat="0">

      <Instrmt Sym="IBM" CFI="OXASPS" MMY="20040521" StrkPx="70" />

      <RptSide Side="1" InptDev="FXML" Ccy="USD" PosEfct="O" ORFInd="Y"
      >

            <Pty ID="OCC" R="21"/>
            <Pty ID="00005" R="1">
                  <Sub ID="C" Typ="26"/>
            </Pty>
            <Pty ID= "123456" R="24"/>

      </RptSide>

      <RptSide Side="2" InptDev= "FXML" Ccy="USD" PosEfct="C">

            <Pty ID="OCC" R="21"/>
            <Pty ID="00690" R="18"/>
                  <Sub ID="C" Typ="26"/>
            </Pty>
            <Pty ID= "654321" R="24"/>

      <MiscFees Amt="189.75" Type="3" Basis="0"/>
      <MiscFees Amt="28.00" Type="7"/>

</RptSide>
</TrdCaptRpt>
```

Sample End of Day Messages – Rejected Transfers

Trade Capture Report – End-Of-Day Transmission for Rejected Options

```
<DDSEODMessage BizDt="2003-09-10" MsgTypeCode="TRADE" SchemaVer="FIX
4.4" TransType="POSMOVE" TransSubType="REJECTED"
TransProductSet="OPTN" NoMessagesSent="3"/>
```

Trade Capture Report – End-Of-Day Transmission for Rejected Futures

```
<DDSEODMessage BizDt="2003-09-10" MsgTypeCode="TRADE" SchemaVer="FIX
4.4" TransType=" POSMOVE" TransSubType="REJECTED"
TransProductSet="FUTU" NoMessagesSent="1"/>
```

Implementation Considerations

General

Position Movement Transmissions are created real time. Regardless of how these messages are delivered to a recipient (real time or batch file), recipients must be able to process each message as either a valid, canceled, or rejected transfer. In the case of valid and canceled transfers, these messages are always delivered in sequential order. This means that a message for a canceled transfer is sent following the initial valid transfer message. Where the *TrdTyp* = 3 (Transfer), recipient systems must use the following fields to determine how to process the message:

- *RptID* – unique identifier for a transfer
- *TransTyp* – 0 (New), 1 (Cancel/Bust), 2 (Replace) or 4 (Reverse/Backout)
- *RptTyp* – 2 (Accepted) or 3 (Rejected)
- *TrdSubTyp* – 0 (CMTA), 1 (Internal Transfer / Adjustment) or 2 (External Transfer /Transfer of Account)
- *MtchStat* – 0 (Matched)

Transfer Transmission Matrix

Transfers/Adjustments	Trans Type	Rpt Typ	Trd Typ	TrdSub Typ	Mtch Stat	BizDt
Valid – CMTA Transfer, Adjustment, Matched Transfer	0	2	3	0/1/2	0	Current External ENCORE Date
Modified – CMTA Transfer, Adjustment, Matched Transfer	2	2	3	0/1/2	0	Current External ENCORE Date
Deleted –CMTA Transfer, Adjustment, Matched Transfer	1	2	3	0/1/2	0	Current External ENCORE Date
Rejected – CMTA Transfer, Adjustment, Matched Transfer	0	3	3	0/1/2	0	Current External ENCORE Date
Backout – CMTA Transfer, Adjustment, Matched Transfer	4	2	3	0/1/2	0	Current External ENCORE Date

Uniqueness Checking

The nature of position movement processing creates the possibility of multiple DDS messages per CMTA transfer, adjustment or matched transfer. Therefore, recipient systems must review the following fields and check for uniqueness against previously processed messages for the current processing day.

- RptID
- TransTyp
- RptTyp
- BizDt
- The value of the Side tag within the first RptSide block

Rejected Transfers

Due to the nature of rejected transactions, it should be noted that any rejected data transmitted via a DDS message may be invalid or be of an invalid type. For example, if a trade is received with a quantity of ABC, the trade is rejected, and the “ABC” is placed into an XML tag with a datatype of Qty (whole numbers only). This does not present a problem at OCC in regard to the construction and transmission of the message but should be a consideration for any recipients of DDS data that plan to validate against the FIXML schema.

The input source for rejected transfers is always a batch or real time FIXML transmission. GUI transactions do not generate rejected messages.

Miscellaneous Fees on CMTA Transfers

The fee(s) on CMTA transfers create a debit for the give-up firm and a credit for the executing firm. For Commission Fees on valid messages, the extended value is always shown. For rejects, the value shown is the value provided on the original inbound message, regardless of basis.

Trade ID on CMTA Transfers

Each Trade ID attached to a CMTA Transfer is included on the outbound message. If multiple Trade IDs are supplied on a CMTA Transfer, the TrdLeg block repeats for each Trade ID.

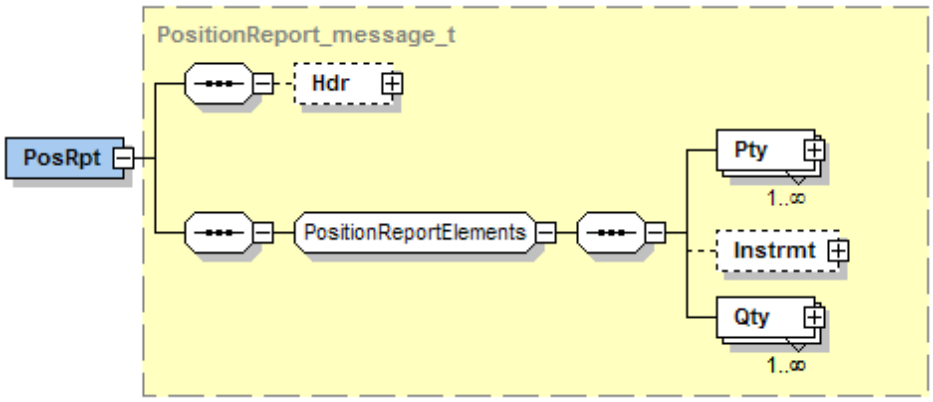
Positions

FIX Message:	Position Report
Subscription Options:	Commodity Options
	Options on Futures
	Equity/Index Options
	Futures
Delivery Options:	Batch File

Overview

Position information is included in the Position Report. For each open option or future position, one message is created for each position indicating both the long and/or short quantity. Mark-to-market data and Issue/Stop quantities are also included in each message when applicable.

Message Structure



Message Layout – Position Report Options

Position Report – Positions – Options							
FIX Mapping					Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Fields			
	PosRpt						
721				RptID	Unique Identifier of the Position	String	326877967
715				BizDt	Clearing Business Date	LocalMktDate	2005-10-22
724				ReqTyp	Request Type 0 = Positions	Int	0
15				Ccy	Currency	Currency	USD
	➔	Pty					
448				ID	Clearing Group Name	String	OCC
452				R	Party Role 21 = Clearing Organization	Int	21
	➔	/Pty					
	➔	Pty					
448				ID	Clearing Member Number	String	00161
452				R	Party Role 4 = Clearing Firm	Int	4
	➔	➔	Sub				
448				ID	Account Type	String	C
452				Typ	Party Role 26 = Position Account Type	Int	26
	➔	➔	/Sub				
	➔	/Pty					
	➔	Pty					
448				ID	Sub Account	String	
452				R	Party Role 38 = Position Account	Int	38
	➔	/Pty					
	➔	Instrmt					
55				Sym	Symbol	String	OXZ

Position Report – Positions – Options							
FIX Mapping					Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Fields			
461				CFI	Default Values (refer to page 3)	String	OCASPS
200				MMY	Series/Contract Year, Month, Date	MonthYear	20070120 (4 for year, 2 for month, 2 for day)
541				MatDt	Expiration Date	LocalMktDate	2007-01-20
202				StrkPx	Strike Price (decimal format)	Price	21.625
947				StrkCcy	Strike Currency	Currency	USD
967				StrkMult	Strike Multiplier	Float	1
968				StrkValu	Strike Value	Decimal	100
231				Mult	Multiplier	Decimal	100
	➔	Evnt					
865				EventTyp	Event Type 101 = Settlement Date (T+1 for cash settled positions)	LocalMktDate	2007-01-20
866				Dt	Settlement Date (T+1)	LocalMktDate	2007-01-20
	➔	/Instrmt					
	➔	Qty					
703				Typ	Quantity Type SOD = Start of Day	String	SOD
704				Long	Start Long	Qty	10
705				Short	Start Short	Qty	3327
	➔	/Qty					
	➔	Qty					
703				Typ	Quantity Type FIN = End of Day	String	FIN
704				Long	Current Long	Qty	10
705				Short	Current Short	Qty	3327
	➔	/Qty					
	➔	Qty					

Position Report – Positions – Options							
FIX Mapping					Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Fields			
703				Typ	Quantity Type EXP = Expiring Positions	String	EXP
704				Long	Expiring Long	Qty	4000
705				Short	Expiring Short	Qty	500
	➔	/Qty					
	➔	Amt					
707				Typ	Settlement Value SETL = Intrinsic Settlement Value	String	SETL
708				Amt	Intrinsic Value	Amt	156000
15				Ccy	Currency	Currency	USD
	➔	/Amt					
	/PosRpt						

Message Layout – Position Report Futures

Position Report – Positions – Futures							
FIX Mapping					Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Fields			
	PosRpt						
721				RptID	Unique Identifier of the Position	String	193197353
715				BizDt	Clearing Business Date	LocalMktDate	2004-07-20
724				ReqTyp	Request Type 0 = Positions	Int	0
15				Ccy	Currency	Currency	USD
	➔	Pty					
448				ID	Clearing Group Name	String	OCC
452				R	Party Role 21 = Clearing Organization	Int	21
	➔	/Pty					
	➔	Pty					
448				ID	Clearing Member Number	String	00690
452				R	Party Role 4 = Clearing Firm	Int	4
	➔	➔	Sub				
523				ID	Account Type (C/F/M)	String	M
803				Typ	Party Role 26 = Position Account Type	Int	26
	➔	➔	/Sub				
	➔	/Pty					
	➔	Pty					
448				ID	Sub Account	String	SPO
452				R	Party Role 38 = Position Account	Int	38
	➔	/Pty					
	➔	Instrmt					
55				Sym	Symbol	String	MOT1C

Position Report – Positions – Futures							
FIX Mapping					Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Fields			
48				ID	Futures Symbol	String	MOT1C
22				Src	8 = Exchange Symbol	String	8
461				CFI	Default Values (refer to page 3)	String	FFSPSX
200				MMY	Series/Contract Year, Month, Date	MonthYear	20041217 (4 for year, 2 for month, 2 for day)
541				MatDt	Expiration Date	LocalMktDate	2004-12-17
231				Mult	Multiplier	Decimal	100
	➔	/Instrmt					
	➔	Qty					
703				Typ	Quantity Type SOD = Start of Day	String	SOD
704				Long	Start Long	Qty	150
705				Short	Start Short	Qty	0
	➔	/Qty					
	➔	Qty					
703				Typ	Quantity Type DLV = Delivery Quantity	String	DLV
704				Long	Quantity of Stops	Qty	50
705				Short	Quantity of Issues	Qty	0
	➔	/Qty					
	➔	Qty					
703				Typ	Quantity Type FIN = End of Day	String	FIN
704				Long	Current Long	Qty	100
705				Short	Current Short	Qty	0
	➔	/Qty					
Note: Position Amount Block is created for Futures Positions only.							
	➔	Amt					

Position Report – Positions – Futures							
FIX Mapping					Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Fields			
707				Typ	Position Amount Type FMTM = Futures Mark-to-Market	String	FMTM
708				Amt	Position Amount Quantity	Qty	8970
	➔	/Amt					
	/PosRpt						

Sample Messages – Positions

Position Report – Position Transmission for Options

In the below example, Clearing Member 00161 has an OXZ position. The details of the position are listed below. These details include the start of day position and final position.

Note: The Qty block for Qty Type EXP is only included for positions that are expiring on that day.

The DDS message for this position is shown below.

```
<PosRpt RptID="326877967" BizDt="2005-10-22" ReqTyp="0" Ccy="USD">

      <Pty ID="OCC" R="21"/>
      <Pty ID="00161" R="4">
            <Sub ID="C" Typ="26"/>
      </Pty>


      <Instrmt Sym="SPX" CFI="OCASPS" MMY="20051022" MatDt="2005-10-22" StrkPx="21.625" StrkCcy="USD"
      StrkMult="1" StrkValu="100" Mult="100"/>
      <Evnt EventTyp="101" Dt="2005-10-25"/>
      <Instrmt/>

      <Qty Typ="SOD" Long="10" Short="3327"/>
      <Qty Typ="FIN" Long="10" Short="3327"/>
      <Qty Typ="EXP" Long="1450" Short="500"/>
      <Amt Typ="SETL" Amt="0" Ccy="USD"/>

</PosRpt>
```

Position Report – Position Transmission for Futures

Clearing Member 00690 has an MOT1C position in market maker SPO account. The details of the position are listed below and include the start of day position, the final position and the mark-to-market value.

The DDS message for this position is shown below.

```
<PosRpt RptID="193197353" BizDt="2004-07-20" ReqTyp="0" Ccy="USD">

      <Pty ID="OCC" R="21"/>

      <Pty ID="00690" R="4"/>
            <Sub ID="M" Typ="26">
      </Pty>

      <Pty ID="SPO" R="38"/>

      <Instrmt Sym="MOT1C" ID="MOT1C" Src="8" CFI="FFSPSX" MMY="20041217" MatDt="2004-12-17" Mult="100"/>

      <Qty Typ="SOD" Long="150" Short="0"/>
      <Qty Typ="FIN" Long="150" Short="0"/>

      <Amt Typ="FMTM" Amt="8970"/>

</PosRpt>
```

Position Report – Position Transmission for Futures with Physical Delivery

Clearing Member 00660 has a ZBE position in the customer account. The details of the position are listed below and include the start of day position, deliveries for the day, the final position and the mark-to-market value.

The DDS message for this position is shown below.

```
<PosRpt RptID="193197353" BizDt="2004-07-20" ReqTyp="0" Ccy="USD">

      <Pty ID="OCC" R="21"/>
      <Pty ID="00660" R="4"/>
            <Sub ID="C" R="26"/>

      <Instrmt Sym="XBE" ID="ZBE" Src="8" CFI="FFIPSX" MMY="20041217" MatDt="2004-12-17" Mult="1000"/>

      <Qty Typ="SOD" Long="150" Short="0"/>
      <Qty Typ="DLV" Long="50" Short="0"/>
      <Qty Typ="FIN" Long="100" Short="0"/>

      <Amt Typ="FMTM" Amt="8970"/>

</PosRpt>
```

Implementation Consideration

Trade Sources (Exchanges) receive positions for products listed on their exchange regardless of where the market maker is listed.

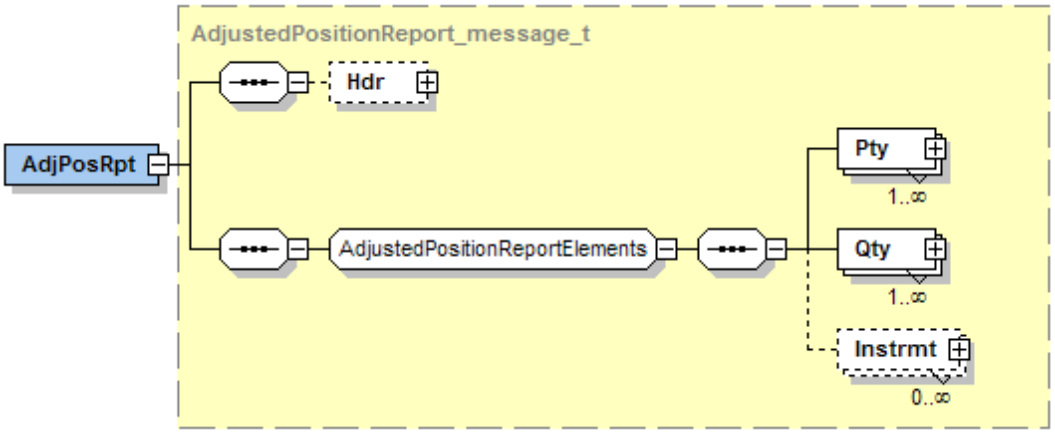
Adjusted Positions

FIX Message:	Adjusted Positions Report
Subscription Options:	Midday Options
	End-Of-Day Options
	Midday Futures
	End-Of-Day Futures
Delivery Options:	Batch File

Overview

The Adjusted Position Report includes positions that have been adjusted due to a corporate action. One message is created for each adjusted position.

Message Structure



Message Layout – Adjusted Position Report – Options

Adjusted Position Report – Options							
FIX Mapping					Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Fields			
	AdjPosRpt						
721				RptID	Unique Identifier of the Position	String	541386431
724				ReqTyp	Request Type 0 = Positions	Int	0
715				BizDt	Clearing Business Date	LocalMktDate	2003-09-10
716				SetSesID	Settle Session ID (ITD – midday corp. action, EOD – end-of-day corp. action)	String	EOD
	➔	Pty					
448				ID	Clearing Group Name	String	OCC
452				R	Party Role 21 = Clearing Organization	Int	21
	➔	/Pty					
	➔	Pty					
448				ID	Clearing Member Number	String	00005
452				R	Party Role 4 = Clearing Firm	Int	4
	➔	➔	Sub				
523				ID	Account Type Code (C / F / M)	String	M
803				Typ	26 = Position Account Type	Int	26
	➔	➔	/Sub				
	➔	/Pty					
	➔	Pty					
448				ID	Sub Account	String	ZZZ
452				R	Party Role 38 = Position Account	Int	38
	➔	/Pty					
	➔	Qty					
703				Typ	Quantity Type SOD = Start of Day	String	SOD
704				Long	Long Quantity before the corporate action adjustment	Qty	40
705				Short	Start Quantity before the corporate action adjustment	Qty	0

Adjusted Position Report – Options							
FIX Mapping					Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Fields			
	➔	/Qty					
	➔	Qty					
703				Typ	Quantity Type CAA = Corporate Action Adjustment	String	CAA
704				Long	Long Quantity after the corp. action adjustment	Qty	80
705				Short	Short Quantity after the corp. action adjustment	Qty	0
	➔	/Qty					
	➔	Instrmt					
965				Status	Status of Instrument (1=New/2=Old)	String	2
55				Sym	Symbol	String	AOL
461				CFI	Default Values (refer to page 3)	String	OCASPS
200				MMY	Series/Contract Year, Month, Date	MonthYear	20031122 (4 for year, 2 for month, 2 for day)
541				MatDt	Expiration Date	LocalMktDate	2003-11-22
202				StrkPx	Strike Price (decimal format)	Price	20
947				StrkCcy	Strike Currency	Currency	USD
967				StrkMult	Strike Multiplier	Float	1
968				StrkValu	Strike Value	Float	100
231				Mult	Multiplier	Decimal	100
873				Dated	Activation Date	LocalMktDate	2003-03-01
The presence of the InacDt in the message is dependent on the series data. If a product has both an activation and inactivation date, then Dated and InacDt are present. If an Activation Date exists without a corresponding Inactivation Date, then only Dated is present.							
CUST				InacDt	Inactivation Date	LocalMktDate	2003-09-11
CUST				ClrgOrg	The clearing corporation for an Instrument (1=OCC)	String	1
	➔	/Instrmt					
The following Instrmt block may be repeated as a result of a type of Corporate Action that results in the original position being allocated to multiple Symbols.							
	➔	Instrmt					
965				Status	Status of Instrument (1=New/2=Old)	String	1
55				Sym	Symbol	String	AOL

Adjusted Position Report – Options							
FIX Mapping					Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Fields			
461				CFI	Default Values (refer to page 3)	String	OCASPS
200				MMY	Series/Contract Year, Month, Date	MonthYear	20031122 (4 for year, 2 for month, 2 for day)
541				MatDt	Expiration Date	LocalMktDate	2003-11-22
202				StrkPx	Strike Price (decimal format)	Price	10
947				StrkCcy	Strike Currency	Currency	USD
967				StrkMult	Strike Multiplier	Float	1
231				Mult	Multiplier	Decimal	100
873				Dated	Activation Date	LocalMktDate	2003-09-11
The presence of the InacDt in the message is dependent on the series data. If a product has both an activation and inactivation date, then Dated and InacDt are present. If an Activation Date exists without a corresponding Inactivation Date, then only Dated is present.							
CUST				InacDt	Inactivation Date	LocalMktDate	
CUST				ClrgOrg	The clearing corporation for an Instrument (1=OCC)	String	1
CUST				PosPercent	Percentage of the new position quantity allocated to this symbol.	Percentage	50
	➔	/Instrmt					
	/AdjPosRpt						

Sample Message – Adjusted Positions Options

A Clearing Member has a position of 40 long contracts in AOL Nov 22, 2003 20 call. A 2 for 1 stock split occurs and the strike price is changed to 10 and the number of contracts increases to 80. The DDS message for the adjusted position is shown below.

```
<AdjPosRpt RptID="541386431" ReqTyp="0" BizDt="2003-09-10" SetSesID="EOD">

      <Pty ID="OCC" R="21"/>
      <Pty ID="00005" R="4"/>
            <Sub ID="M" R="26">
      </Pty>
      <Pty ID="ZZZ" R="38"/>

      <Qty Typ="SOD" Long="40" Short="0"/>
      <Qty Typ="CAA" Long="80" Short="0"/>

      <Instrmt Status="2" Sym="AOL" CFI="OCASPS" MMY="20031122" MatDt="2003-11-22" StrkPx="20"
      StrkCcy="USD" StrkMult="1" StrkValu="100" Mult="100" Dated="2003-03-01" InacDt="2003-09-11"
      ClrgOrg="1"/>

      </Instrmt>

      <Instrmt Status="1" Sym="AOL" CFI="OCASPS" MMY="20031122" MatDt="2003-11-22" StrkPx="10"
      StrkCcy="USD" StrkMult="1" Mult="100" Dated="2003-09-11" ClrgOrg="1"/>

      </Instrmt>

</AdjPosRpt>
```

Message Layout – Adjusted Position Report – Futures

Adjusted Position Report – Futures							
FIX Mapping					Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Fields			
	AdjPosRpt						
721				RptID	Unique Identifier of the Position	String	41386431
724				ReqTyp	Request Type 0 = Positions	Int	0
715				BizDt	Clearing Business Date	LocalMktDate	2003-09-10
716				SetSesID	Settle Session ID (ITD – midday corp. action, EOD – end-of-day corp. action)	String	EOD
730				SetPx	Futures Settlement Price (after corp. action adjustment)	Price	21.17
734				PriSetPx	Prior Futures Settlement Price (before corp. action adjustment)	Price	42.34
	➔	Pty					
448				ID	Clearing Group Name	String	OCC
452				R	Party Role 21 = Clearing Organization	Int	21
	➔	/Pty					
	➔	Pty					
448				ID	Clearing Member Number	String	99999
452				R	Party Role 4 = Clearing Firm	Int	4
	➔	➔	Sub				
523				ID	Account Type Code	String	M
803				Typ	Party Role 26 = Position Account Type	Int	26
	➔	➔	Sub				
	➔	/Pty					
	➔	Pty					
448				ID	Sub Account	String	ZZZ
452				R	Party Role 38 = Position Account	Int	38
	➔	/Pty					
	➔	Qty					

Adjusted Position Report – Futures							
FIX Mapping					Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Fields			
703				Typ	Quantity Type SOD = Start of Day	String	SOD
704				Long	Long Quantity before the corp. action adjustment	Qty	40
705				Short	Short Quantity before the corp. action adjustment	Qty	0
	➔	/Qty					
	➔	Qty					
703				Typ	Quantity Type CAA = Corporate Action Adjustment	String	CAA
704				Long	Long Quantity after the corp. action adjustment	Qty	80
705				Short	Short Quantity after the corp. action adjustment	Qty	0
	➔	/Qty					
	➔	Instrmt					
965				Status	Status of Instrument (1=Active/2=Inactive)	String	2
55				Sym	Symbol	String	AOL1N
48				ID	Symbol	String	AOL1N
22				Src	8 = Exchange Symbol	String	8
461				CFI	Default Values (refer to page 3)	String	FFSPSX
200				MMY	Series/Contract Year, Month, Date	MonthYear	20031121 (4 for year, 2 for month, 2 for day)
541				MatDt	Expiration Date	LocalMktDate	2003-11-21
231				Mult	Multiplier	Decimal	100
873				Dated	Activation Date	LocalMktDate	2003-03-01
The presence of the InacDt in the message is dependent on the series data. If a product has both an activation and inactivation date, then Dated and InacDt are present. If an Activation Date exists without a corresponding Inactivation Date, then only Dated is present.							
CUST				InacDt	Inactivation Date	LocalMktDate	2003-10-20
CUST				ClrgOrg	The clearing corporation for an Instrument (1=OCC)	String	1
873				Dated	Activation Date	LocalMktDate	2003-03-01
	➔	/Instrmt					
	➔	Instrmt					
965				Status	Status of Instrument (Active/Inactive)	String	1

Adjusted Position Report – Futures							
FIX Mapping					Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Fields			
55				Sym	Symbol	String	AOL1N
48				ID	Symbol	String	AOL1N
22				Src	8 = Exchange Symbol	String	8
461				CFI	Default Values (refer to page 3)	String	FFSPSX
200				MMY	Series/Contract Year, Month, Date	MonthYear	20031121 (4 for year, 2 for month, 2 for day)
541				MatDt	Expiration Date	LocalMktDate	2003-11-21
231				Mult	Multiplier	Decimal	100
873				Dated	Activation Date	LocalMktDate	2003-03-01
The presence of the InacDt in the message is dependent on the series data. If a product has both an activation and inactivation date, then Dated and InacDt are present. If an Activation Date exists without a corresponding Inactivation Date, then only Dated is present.							
CUST				InacDt	Inactivation Date	LocalMktDate	2003-10-20
CUST				ClrgOrg	The clearing corporation for an Instrument (1=OCC)	String	1
	➔	/Instrmt					
	/AdjPosRpt						

Sample Message – Adjusted Positions – Futures

A Clearing Member has a position of 40 long contracts in AOL1N Nov 21, 2003. A 2 for 1 stock split occurs and the settlement price is changed from 42 to 21 and the number of contracts increases to 80.

```
<AdjPosRpt RptID="41386431" ReqTyp="0" BizDt="2003-09-10" SetSesID="EOD" SetPx="21.17" PriSetPx="42.34">

           <Pty ID="OCC" R="21"/>

           <Pty ID="99999" R="4"/>
                <Sub ID="M" R="26"/>
           </Pty>

           <Pty ID="ZZZ" R="38"/>

     <Qty Typ="SOD" Long="40" Short="0"/>
     <Qty Typ="CAA" Long="80" Short="0"/>

     <Instrmt Status="2" Sym="AOL1N" ID="AOL1N" Src="8" CFI="FFSPSX" MMY="20031121" MatDt="2003-11-21"
     Mult="100" Dated="2003-03-01" InacDt="2003-10-20" ClrgOrg="1">

     </Instrmt>

      <Instrmt Status="1" Sym="AOL1N" ID="AOL1N" Src="8" CFI="FFSPSX" MMY="20031121" MatDt="2003-11-21"
      Mult="100" Dated="2003-03-01" InacDt="2003-10-20" ClrgOrg="1">

      </Instrmt>

</AdjPosRpt>
```

Implementation Considerations

The message generated due to a back out of a corporate action uses the same FIX Adjusted Position Report format as the message that was sent when the corporate action was applied. This message for the back out is sent after OCC notifies the data recipients of the data sent in error. In the case of a backout message the quantity fields and the data in the two instrument blocks are reversed.

Because a Corporate Action may be applied midday (at no pre-set time) and may also be applied at the end of the day (after Positions Finalization), the subscription to this message should be separate from a subscriber's end of day package.

This process only runs after the application of a corporate action. There may be days where this message is not generated because there were no corporate actions applied for the business date.

Regularly, corporate actions are processed at the very end of OCC's processing for a given day. Therefore, Adjusted Positions are generated several hours later than all other messages. If timeliness of receipt of DDS messages is important to your firm, OCC suggests packaging Adjusted Positions separately. Packaging Adjusted Positions with other message types may significantly delay delivery of the other message types contained in that package.

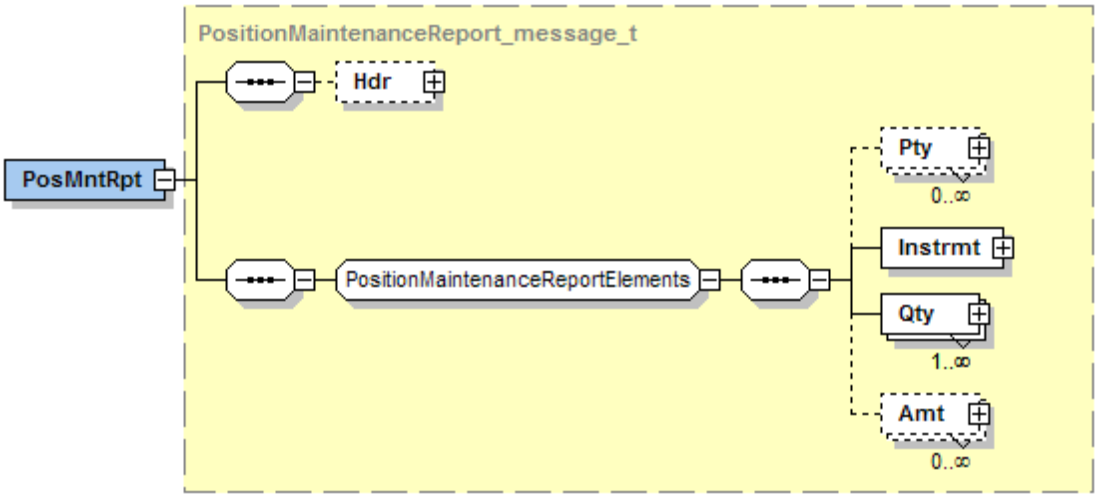
Exercises

FIX Message:	Position Maintenance Report
Subscription Options:	Commodity Options
	Equity/Index Options
	Options on Futures
Delivery Options:	Batch File

Overview

Exercise Activity is detailed on the Position Maintenance Report. The exercise quantity on the report is the quantity actually applied to the position that day, regardless of the number of exercises entered against that position. If exercise quantities exceed available longs, the excess quantity are reported as an unexercised quantity. The day the position is exercised, a settlement activity message is created in addition to the exercise message.

Message Structure



Message Layout – Position Maintenance Report – Exercises

Position Maintenance Report – Exercises							
FIX Mapping					Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Fields			
	PosMntRpt						
721				RptID	Unique Identifier for the Exercised Position	String	144535569
709				TxnTyp	Transaction Type 1 = Exercise	Int	1
712				Actn	Action 1 = New	Int	1
722				Stat	Status 0 = Accepted	Int	0
715				BizDt	Clearing Business Date	LocalMkt Date	2004-04-13
718				AdjTyp	Adjustment Action 3 = Final	Int	3
	➔	Pty					
448				ID	Clearing Group Name	String	OCC
452				R	Party Role 21 = Clearing Organization	Int	21
	➔	/Pty					
	➔	Pty					
448				ID	Clearing Member Number	String	00234
452				R	Party Role 4 = Clearing Firm	Int	4
	➔	➔	Sub				
523				ID	Account Type (C/F/M)	String	C
803				Typ	26 = Position Account Type	Int	26
	➔	➔	/Sub				
	➔	/Pty					
	➔	Pty					
448				ID	Sub Account	String	
452				R	Party Role 38 = Position Account	Int	38

Position Maintenance Report – Exercises							
FIX Mapping					Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Fields			
	➔	/Pty					
	➔	Instrmt					
55				Sym	Symbol	String	LU
461				CFI	Default Values (refer to page 3)	String	OCASPS
200				MMY	Series/Contract Year, Month, Date	MonthYear	20040417 (4 for year, 2 for month, 2 for day)
541				MatDt	Expiration Date	LocalMktDate	2004-04-17
202				StrkPx	Strike Price (decimal format)	Price	4
947				StrkCcy	Strike Currency	Currency	USD
967				StrkMult	Strike Multiplier	decimal	1
968				StrkValu	Strike Value	Float	100
231				Mult	Multiplier	decimal	100
	➔	/Instrmt					
	➔	Qty					
703				Typ	Quantity Type EX = Exercise Quantity	String	EX
704				Long	Long Quantity	Qty	417
	➔	/Qty					
	➔	Qty					
703				Typ	Quantity Type UNEX = Unexercised Exercise Quantity	String	UNEX
704				Long	Long Quantity	Qty	50
	➔	/Qty					
	➔	Amt					
707				Typ	Amount Type SETL = Settlement Value	String	SETL
708				Amt	Extended Settlement Value	Amt	166800
	➔	/Amt					

Position Maintenance Report – Exercises							
FIX Mapping					Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Fields			
	/PosMntRpt						

Sample Message – Exercises

Clearing Member 00234 submitted an exercise notice on 04/13/2004 to exercise 467 contracts, with 50 contracts not being exercised due to insufficient positions. The details of the exercise notice are listed below.

CM#	AT	P/C	Symbol	Exp Date	Strike	Quantity
00234	C	C	LU	04/17/2004	4	467

The data service message for this exercise is shown below.

```
<PosMntRpt RptID="144535569" TxnTyp="1" Actn="1" Stat="0" BizDt="2004-04-13" AdjTyp="3">

            <Pty ID="OCC" R="21"/>
            <Pty ID="00234" R="4">
                  <Sub ID="C" R="26">
            </Pty>

      <Instrmt Sym="LU" CFI="OCASPS" MMY="20040417" MatDt="2004-04-17" StrkPx="4" StrkCcy="USD" StrkMult="1"
      StrkValu="100" Mult="100"/>

      <Qty Typ="EX" Long="417"/>
      <Qty Typ="UNEX" Long="50"/>

      <Amt Typ="SETL" Amt="166800"/>

</PosMntRpt>
```

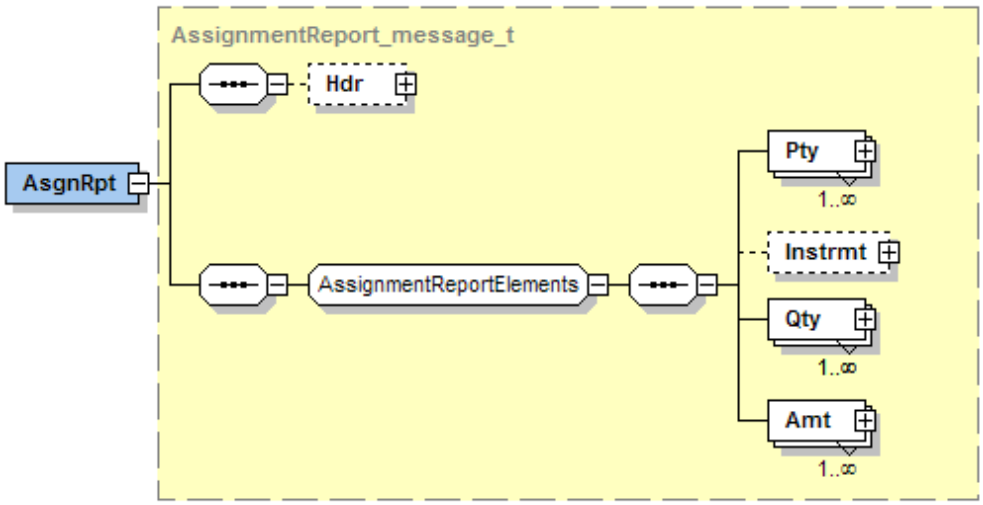
Assignments

FIX Message:	Assignment Report
Subscription Options:	Options on Futures
	Equity/Index Options
Delivery Options:	Batch File

Overview

The current day's assignments are included in the Position Maintenance Report. The day the position is assigned, both an assignment message and a settlement activity message are created.

Message Structure



Message Layout – Assignment Report

Assignment Report							
FIX Mapping							
Tag#	Report Block	Component Block	Sub Component Block	Fields	Data	Data Type	Sample Data
	AsgnRpt						
833				RptID	Unique Identifier for the Assigned Position	String	144535614
744				AsgnMeth	Assignment Method R = Random P = Pro Rata	Char	R
715				BizDt	Clearing Business Date	LocalMktDate	2004-04-13
	➔	Pty					
448				ID	Clearing Group Name	String	OCC
452				R	Party Role 21 = Clearing Organization	Int	21
	➔	/Pty					
	➔	Pty					
448				ID	Clearing Member Number	String	00050
452				R	Party Role 4 = Clearing Firm	Int	4
	➔	➔	Sub				
523				ID	Account Type (C/F/M)	String	C
803				Typ	Party Role 26 = Position Account Type	Int	26
	➔	➔	/Sub				
	➔	/Pty					
	➔	Pty					
448				ID	Sub Account	String	
452				R	Party Role 38 = Position Account	Int	38
	➔	/Pty					
	➔	Instrmt					
55				Sym	Symbol	String	MSQ

Assignment Report							
FIX Mapping					Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Fields			
461				CFI	Default Values (refer to page 3)	String	OPASPS
200				MMY	Series/Contract Year, Month, Date	MonthYear	20040417 (4 for year, 2 for month, 2 for day)
541				MatDt	Expiration Date	LocalMkt Date	2004-04-17
202				StrkPx	Strike Price (decimal format)	Price	27.5
947				StrkCcy	Strike Currency	Currency	USD
968				StrkValu	Strike Value	Float	100
231				Mult	Multiplier	Decimal	100
	➔	/Instrmt					
	➔	Qty					
703				Typ	Qty Type AS = Assignment Quantity	String	AS
704				Short	Assigned Quantity	Qty	25
	➔	/Qty					
	➔	Amt					
707				Typ	Amount Type SETL = Settlement Value	String	SETL
708				Amt	Extended Settlement Value	Amt	68750
	➔	/Amt					
	/AsgnRpt						

Sample Message – Assignments

Clearing Member 00050 was assigned 25 contracts on 04/13/2003. The details of the assignment are listed below.

CM#	AT	P/C	Symbol	Exp Date	Strike	Quantity
00050	M	P	MSQ	04/17/2004	27.5	25

The DDS message for this assignment is shown below.

```
<AsgnRpt RptID="144535614" AsgnMeth="R" BizDt="2004-04-13">

           <Pty ID="OCC" R="21"/>
           <Pty ID="00050" R="4"/>
                <Sub ID="C" R="26">
           </Pty>

     <Instrmt Sym="MSQ" CFI="OPASPS" MMY="20040417" MatDt="2004-04-17" StrkPx="27.5" StrkCcy="USD"
     StrkMult="1" StrkValu="100" Mult="100"/>

     <Qty Typ="AS" Short="25"/>

     <Amt Typ="SETL" Amt="68750"/>

</AsgnRpt>
```

Settlement Activity

FIX Message:	Position Report
Subscription Options:	Commodity Options
	Options on Futures
	Equity/Index Options
	Futures
Delivery Options:	Batch File

Overview

One message is created for each position with an exercise, assignment, or tender on the date of the activity (Obligation Date) only. If a single position has both exercise and assignment or tender and allocation activity, two messages are created for that position.

When an option or future has multiple components, the message includes repeating Underlying (<PosUnd>) component blocks. An Underlying block includes information on each delivery component that is defined for the option or future. Therefore, if there are multiple components, there are multiple Underlying blocks.

Futures that are settling for cash do not have settlement activity messages created on the day of the expirations, as the settlement takes places through the mark-to-market process.

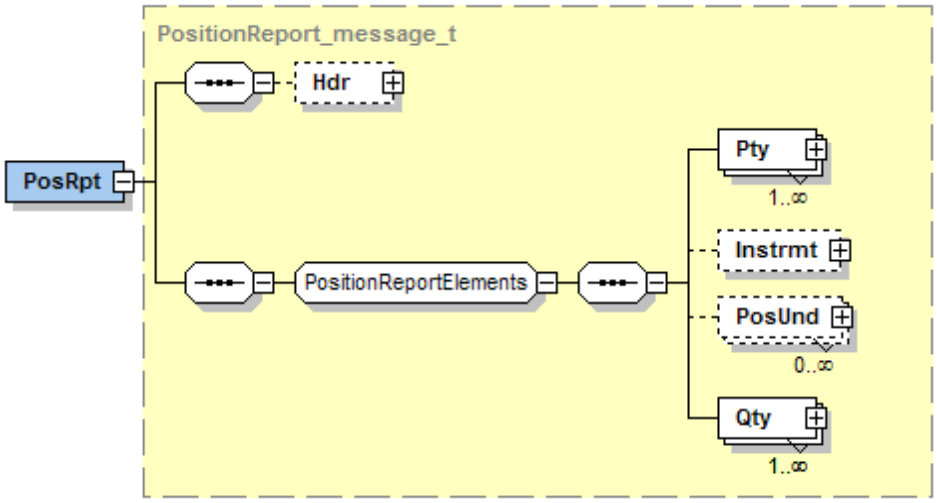
DDS creates Settlement Activity records on the following business dates only:

1. The date on which a delivery obligation is created (regardless if the delivery obligations is settling or is pended).
2. The date on which a pended delivery obligation unpends and is ready to settle. This message retains the business date of the originally created obligation.

Example:
Option Series ➔ Long IBM Call with three delivery components: IBM stock, AOL stock, and cash.

The IBM option reaches expiration date and the AOL stock and cash are ready to settle, but the IBM stock is not ready to settle. Assuming the option is in the money, a settlement activity record is created in DDS showing the IBM Option in the Instrument block and three repeating PositionUnderlying blocks showing the details of each component. Four days later the IBM stock is ready to settle. On that date a settlement activity record is created in DDS showing the IBM Option in the Instrument block and a single PositionUnderlying block showing the details of the IBM delivery settlement transaction. This settlement activity record has a business date of four days earlier, when the original obligation was created.

Message Structure



Message Layout – Settlement Activity Options

Position Report – Settlement Activity – Options							
FIX Mapping					Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Fields			
	PosRpt						
721				RptID	Unique Identifier for the Settling Position	String	1500045172
715				BizDt	Clearing Business Date or Original Obligation Date	LocalMktDate	2004-01-09
724				ReqTyp	Request Type 4 = Settlement Activity	Int	4
	➔	Pty					
448				ID	Clearing Group Name	String	OCC
452				R	Party Role 21 = Clearing Organization	Int	21
	➔	/Pty					
	➔	Pty					
448				ID	Clearing Member Number	String	00161
452				R	4 = Clearing Firm	Int	4
	➔	➔	Sub				
523				ID	Account Type	String	C
803				Typ	Party Role 26 = Position Account Type	Int	26
	➔	➔	/Sub				
	➔	/Pty					
	➔	Pty					
448				ID	Sub Account	String	
452				R	38 = Position Account	Int	38
	➔	/Pty					
	➔	Instrmt					
55				Sym	Symbol	String	EC
461				CFI	Default Values (refer to page 3)	String	OCASPS
200				MMY	Series/Contract Year, Month, Date	MonthYear	20040117 (4 for year, 2 for

Position Report – Settlement Activity – Options							
FIX Mapping					Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Fields			
							month, 2 for day)
541				MatDt	Expiration Date	LocalMktDate	2004-01-17
202				StrkPx	Strike Price (decimal format)	Price	30
947				StrkCcy	Strike Currency	Currency	USD
967				StrkMult	Strike Multiplier	Float	1
968				StrkValu	Strike Value	Decimal	100
231				Mult	Multiplier	Decimal	100
	➔	/Instrmt					
	➔	PosUnd					
		Note: This component block can repeat for more underlying components.					
	➔	➔	Undly				
311				Sym	Underlying Symbol	String	EC
309				ID	Underlying Cusip	String	292845104
305				Src	1 = CUSIP	String	1
463				CFI	**CHAR1-3** = Instrument (EXX = EQUITY, MRI = INDEX, MRC = CURRENCY, DXX = DEBT, FXX = FUTURE) **CHAR4** = X **CHAR5** = X **CHAR6** = X	String	EXXXXX
972				AllocPct	Allocation Pct	Percentage	100
879				Qty	Underlying Quantity	Qty	100
973				CashAmt	Underlying Cash Amount	Amt	
974				CashTyp	Underlying Cash Type	Char	
1039				SetMeth	Settlement Method BTOB = Broker To Broker CCC = Corresponding Clearing Corp. CAFX = Cash Fixed CADF = Cash Difference	Char	CCC

Position Report – Settlement Activity – Options							
FIX Mapping					Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Fields			
					CRFX = Cross Rate Foreign Currency FRFX = Foreign Currency CFR = Cash Fixed Return RNGE = Range Options PHYS = Physical		
	➔	➔	➔ Pty				
448				ID	Clearing Corp Name	String	NSCC
452				R	Party Role 25 = Correspondent Clearing Organization	Int	25
	➔	➔	➔ /Pty				
	➔	➔	/Undly				
	➔	➔	UndDlvAmt				
985				PayAmt	Underlying Pay Amount	Amt	5000
986				ColAmt	Underlying Collect Amount	Amt	150000
987				StlDt	Settlement Date	LocalMktDate	2004-01-14
988				SetStat	Settlement Status 0 = Settling 1 = Partially Delayed 2 = Delayed	String	0
	➔	➔	/UndDlvAmt				
	➔	/PosUnd					
	➔	Qty					
703				Typ	Quantity Type DLV = Delivery Quantity RCV = Receive Quantity	String	DLV
704				Long	Long Quantity	Qty	0
705				Short	Short Quantity	Qty	50
CUST				QtyDt	Date of Activity	LocalMktDate	2004-01-09
	➔	/Qty					
	/PosRpt						

Message Layout – Settlement Activity Futures

	Position Report – Settlement Activity – Futures							
	FIX Mapping					Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Sub Sub Component Block	Fields			
	PosRpt							
721					RptID	Unique Identifier for the Settling Position	String	350579344
715					BizDt	Clearing Business Date or Original Obligation Date	LocalMktDate	2004-04-16
724					ReqTyp	Request Type 4 = Settlement Activity	Int	4
	➔	Pty						
448					ID	Clearing Group Name	String	OCC
452					R	Party Role 21 = Clearing Organization	Int	21
	➔	/Pty						
	➔	Pty						
448					ID	Clearing Member Number	String	00161
452					R	4 = Clearing Firm	Int	4
	➔	➔	Sub					
523					ID	Account Type	String	F
803					Typ	Party Role 26 = Position Account Type	Int	26
	➔	➔	Sub					
	➔	/Pty						
	➔	Pty						
448					ID	Sub Account	String	
452					R	38 = Position Account	Int	38
	➔	/Pty						
	➔	Instrmt						
55					Sym	Symbol	String	JNJ1C
48					ID	Futures Symbol	String	JNJ1C
22					Src	8 = Exchange Symbol	String	8

Position Report – Settlement Activity – Futures								
	FIX Mapping					Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Sub Sub Component Block	Fields			
461					CFI	Default Values (refer to page 3)	String	FFSPSX
200					MMY	Series/Contract Year, Month, Date	MonthYear	20040416 (4 for year, 2 for month, 2 for day)
541					MatDt	Expiration Date	LocalMktDate	2004-04-16
231					Mult	Multiplier	Decimal	100
	➔	/Instrmt						
	➔		PosUnd (This component block can repeat for more underlying components.)					
	➔	➔	Undly					
311					Sym	Underlying Symbol	String	JNJ
309					ID	Underlying Cusip	String	478160104
305					Src	1 = CUSIP	String	1
463					CFI	**CHAR1-3** = Instrument (EXX = EQUITY, MRI = INDEX, MRC = CURRENCY, DXX = DEBT, FXX = FUTURE) **CHAR4** = X **CHAR5** = X **CHAR6** = X	String	EXXXXX
972					AllocPct	Allocation Pct	Percentage	100
879					Qty	Underlying Quantity	Qty	100
973					CashAmt	Underlying Cash Amount	Amt	
974					CashTyp	Underlying Cash Type	Char	
	➔	➔	➔	Pty				
448					ID	Clearing Corp Name	String	NSCC
452					R	Party Role 25 = Correspondent Clearing Organization	Int	25
	➔	➔	➔	/Pty				

	Position Report – Settlement Activity – Futures							
	FIX Mapping					Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Sub Sub Component Block	Fields			
	➔	➔	/Undly					
	➔	➔	UndDlvAmt					
985					PayAmt	Underlying Pay Amount	Amt	354540
986					ColAmt	Underlying Collect Amount	Amt	6000
987					StlDt	Settlement Date	LocalMktDate	2004-04-21
988					SetStat	Settlement Status 0 = Settling 1 = Partially Delayed 2 = Delayed	String	0
	➔	➔	/UndDlvAmt					
	➔	/PosUnd						
	➔	Qty						
703					Typ	Quantity Type DLV = Delivery Quantity RCV = Receive Quantity	String	RCV
704					Long	Long Quantity	Qty	60
705					Short	Short Quantity	Qty	0
CUST					QtyDt	Date of Activity	LocalMktDate	2006-04-16
	➔	/Qty						
	/PosRpt							

Sample Messages – Settlement Activity

Position Report – Settlement Activity Transmission for Options

Equity Option Example

Clearing Member 00161 has settlement activity for an EC Jan 17, 2004 Call with a strike of 30.00. The Clearing Member will deliver 5000 EC shares and receive 150000 US Dollars. The DDS message for this activity is shown below.

```
<PosRpt RptID="1500045172" BizDt="2004-01-09" ReqTyp="4">

      <Pty ID="OCC" R="21"/>
      <Pty ID="00161" R="4"/>
            <Sub ID="C" R="26">
      </Pty>

      <Instrmt Sym="EC" CFI="OCASPS" MMY="20040117" MatDt="2004-01-17"StrkPx="30" StrkCcy="USD" StrkMult="1"
      StrkValu="100" Mult="100"/>

      <PosUnd>

            <Undly Sym="EC" ID="292845104" Src="1" CFI="EXXXXX" AllocPct="100" Qty="100" SetMeth="CCC">
                  <Pty ID="NSCC" R="25"/>
            </Undly>

            <UndDlvAmt PayAmt="5000" ColAmt="150000" StlDt="2004-01-14" SetStat="0"/>

      </PosUnd>

      <Qty Typ="DLV" Long="0" Short="50" QtyDt="2004-01-09"/>

</PosRpt>
```

Position Report – Settlement Activity Transmission for Futures

Clearing Member 00161 has settlement activity for a JNJ1C Long April 2004 Futures Positions. The Clearing Member will receive 6000 JNJ shares and pay $354,540 (US Dollars). The DDS message for this activity is shown below.

```
<PosRpt RptID="350579344" BizDt="2004-04-16" ReqTyp="4">

            <Pty ID="OCC" R="21"/>
            <Pty ID="00161" R="4">
                <Sub ID="F" Typ="26"/>
            </Pty>

      <Instrmt Sym="JNJ1C" ID="JNJ1C" Src="8" CFI="FFSPSX" MMY="20040416" MatDt="2004-04-16" Mult="100"/>

      <PosUnd>

      <Undly Sym="JNJ" ID="478160104" Src="1" CFI="EXXXXX" AllocPct="100" Qty="100" SetMeth="CCC">

            <Pty ID="NSCC" R="25"/>

      </Undly>

      <UndDlvAmt PayAmt="354540" ColAmt="6000" StlDt="2004-04-21" SetStat="0"/>

      </PosUnd>

      <Qty Typ="RCV" Long="60" Short="0" QtyDt="2006-04-16"/>

</PosRpt>
```

Implementation Considerations

A settlement activity message contains all delivery components that are defined for the option or future as long as they are settling or pending settlement. Once the assignment/exercise date passes, the delivery component is no longer listed on the message, even if other components for the same option or future position are still pending settlement or “yet to settle”.

If a single position has both exercise and assignment or tender and allocation activity, two messages are created for that position.

The settlement pay or collect amount, settlement date, and settlement status are listed for each delivery component.

EED/DNED/Exercise Acknowledgements

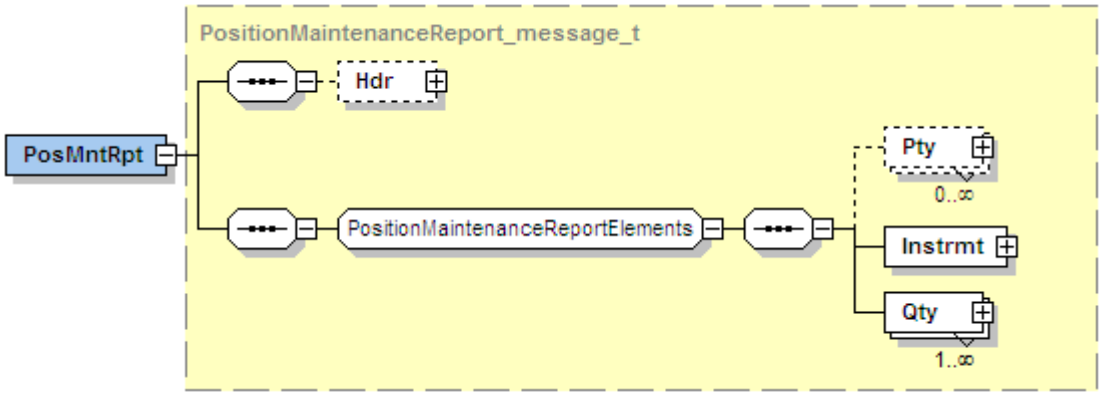
FIX Message:	Position Maintenance Report
Subscription Options:	Equity/Index Options
Delivery Options:	Real Time
	Batch File

Overview

The EED/DNED/Exercise Acknowledgement messages allow submitting Clearing Members to receive an acknowledgement that OCC received and accepted their Inbound FIXML exercise or contrary instruction. EED/DNED/Exercise Acknowledgement messages are generated for exercise or contrary instructions submitted via Inbound FIXML or from the GUI.

Please note that these messages only indicate that OCC accepted the exercise or contrary instruction. Processing of the exercise or contrary instruction occurs during finalization and may be accepted or rejected during this processing.

Message Structure



Message Layout – Position Maintenance Report – EED/DNED/Exercise Acknowledgements

Position Maintenance Report – EED/DNED/Exercise Acknowledgements							
FIX Mapping					Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Fields			
	PosMntRpt						
721				RptID	Unique Identifier for the Exercise or EED/DNED Acknowledgement	String	144535569
709				TxnTyp	Transaction Type 1 = Exercise Notice or EED 2 = DNED	Int	1
712				Actn	Action 1 = New	Int	1
722				Stat	Status 0 = Accepted	Int	0
979				InptSrc	Record Source	String	FXML
715				BizDt	Clearing Business Date	LocalMkt Date	2009-09-19
58				Txt	Optional Data	String	
60				TxnTm	Transaction Time	UTCTimestamp	2009-09-10T 12:53:24-05:00
	➔	Pty					
448				ID	Clearing Group Name	String	OCC
452				R	Party Role 21 = Clearing Organization	Int	21
	➔	/Pty					
	➔	Pty					
448				ID	Clearing Member Number	String	00234
452				R	Party Role 4 = Clearing Firm	Int	4
	➔	➔	Sub				
523				ID	Account Type (C/F/M)	String	C
803				Typ	26 = Position Account Type	Int	26

Position Maintenance Report – EED/DNED/Exercise Acknowledgements							
FIX Mapping					Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Fields			
	➔	➔	/Sub				
	➔	/Pty					
	➔	Pty					
448				ID	Sub Account	String	
452				R	Party Role 38 = Position Account	Int	38
	➔	/Pty					
	➔	Instrmt					
55				Sym	Symbol	String	LU
461				CFI	OCXXXX = Call Option OPXXXX = Put Option	String	OCXXXX
200				MMY	Series/Contract Year, Month, Date	MonthYear	20040417
202				StrkPx	Strike Price (decimal format)	Price	4
	➔	/Instrmt					
	➔	Qty					
703				Typ	Quantity Type EX = Exercise Notice Ack. TOT = EED/DNED	String	EX
704				Long	Long Quantity Note: If GUI input quantity = ALL, this tag does not appear.	Qty	417
706				Stat	Quantity Status 0 = Submitted	Int	0
	➔	/Qty					
	/PosMntRpt						

Sample Messages – Exercise Acknowledgements

GUI Input Source

```
<PosMntRpt RptID="38" TxnTyp="1" Actn="1" Stat="0" BizDt="2012-03-12" Txt="GUI" InptSrc="GUI" TxnTm="2012-
03-15T13:10:30-05:00"><Pty ID="OCC" R="21" /><Pty ID="00161" R="4" > <Sub ID="C" Typ="26"/></Pty><Instrmt
Sym="MSFT" CFI="OCXXXX" MMY="20130119" StrkPx="12.5"/><Qty Typ="EX" Long="11" Stat="0"/></PosMntRpt>
```

GUI Input Source – Exercise Quantity = ALL

```
<PosMntRpt RptID="39" TxnTyp="1" Actn="1" Stat="0" BizDt="2012-03-12" Txt="ALL" InptSrc="GUI" TxnTm="2012-
03-15T13:13:01-05:00"><Pty ID="OCC" R="21" /><Pty ID="00161" R="4" > <Sub ID="F" Typ="26"/></Pty><Instrmt
Sym="MSFT" CFI="OCXXXX" MMY="20130119" StrkPx="32.5"/><Qty Typ="EX" Stat="0"/></PosMntRpt>
```

FIXML Input Source – Real Time MQ

```
<PosMntRpt RptID="43" TxnTyp="1" Actn="1" Stat="0" BizDt="2012-03-12" Txt="RTFX" InptSrc="RTFX"
TxnTm="2012-03-15T14:26:36-05:00"><Pty ID="OCC" R="21" /><Pty ID="00161" R="4" > <Sub ID="M"
Typ="26"/></Pty><Pty ID="CIT" R="38"/><Instrmt Sym="AEM" CFI="OPXXXX" MMY="20120319" StrkPx="42.5"/><Qty
Typ="EX" Long="6" Stat="0"/></PosMntRpt>
```

FIXML Input Source – Batch File

```
FIXML Input Source – Batch File<PosMntRpt RptID="49" TxnTyp="1" Actn="1" Stat="0" BizDt="2012-03-12"
Txt="Batch" InptSrc="FXML" TxnTm="2012-03-15T16:35:59-05:00"><Pty ID="OCC" R="21" /><Pty ID="00161" R="4" >
<Sub ID="C" Typ="26"/></Pty><Instrmt Sym="MSFT" CFI="OPXXXX" MMY="20120317" StrkPx="32"/><Qty Typ="EX"
Long="1" Stat="0"/></PosMntRpt>
```

End of Day Message

```
<DDSEODMessage BizDt="2009-09-24" MsgTypeCode="POSMAINT" SchemaVer="FIX 4.4" TransType="EXERCISE"
TransSubType="ACK" TransProductSet="OPTN" FinalizationCycle="ENCORE Equity Index Finalization"
NoMessagesSent="1158"/>
```

Sample Messages – EED/DNED Acknowledgements

GUI Input Source – DNED

```
<PosMntRpt RptID="58" TxnTyp="2" Actn="1" Stat="0" BizDt="2012-03-12" Txt="GUI" InptSrc="GUI" TxnTm="2012-
03-19T10:17:02-05:00"><Pty ID="OCC" R="21" /><Pty ID="00005" R="4" > <Sub ID="C" Typ="26"/></Pty><Instrmt
Sym="2GOOG" CFI="OCXXXX" MMY="20120312" StrkPx="690"/><Qty Typ="TOT" Long="12" Stat="0"/></PosMntRpt>
```

GUI Input Source – EED Quantity = ALL

```
<PosMntRpt RptID="83" TxnTyp="1" Actn="1" Stat="0" BizDt="2012-03-12" Txt="ALL" InptSrc="GUI" TxnTm="2012-
03-20T14:54:23-05:00"><Pty ID="OCC" R="21" /><Pty ID="00005" R="4" > <Sub ID="C" Typ="26"/></Pty><Instrmt
Sym="4SPX" CFI="OCXXXX" MMY="20120312" StrkPx="1304"/><Qty Typ="TOT" Stat="0"/></PosMntRpt>
```

FIXML EED Input Source – Real Time MQ

```
<PosMntRpt RptID="44" TxnTyp="1" Actn="1" Stat="0" BizDt="2012-03-12" Txt="RTFX" InptSrc="RTFX"
TxnTm="2012-03-15T15:21:55-05:00"><Pty ID="OCC" R="21" /><Pty ID="00551" R="4" > <Sub ID="M"
Typ="26"/></Pty><Pty ID="CIT" R="38"/><Instrmt Sym="AEM" CFI="OPXXXX" MMY="20120317" StrkPx="42.5"/><Qty
Typ="TOT" Long="6" Stat="0"/></PosMntRpt>
```

FIXML DNED Input Source – Real Time MQ

```
<PosMntRpt RptID="45" TxnTyp="2" Actn="1" Stat="0" BizDt="2012-03-12" Txt="RTFX" InptSrc="RTFX"
TxnTm="2012-03-15T15:51:19-05:00"><Pty ID="OCC" R="21" /><Pty ID="00551" R="4" > <Sub ID="M"
Typ="26"/></Pty><Pty ID="CIT" R="38"/><Instrmt Sym="AEM" CFI="OPXXXX" MMY="20120317" StrkPx="45"/><Qty
Typ="TOT" Long="6" Stat="0"/></PosMntRpt>
```

FIXML EED Input Source – Batch File

```
<PosMntRpt RptID="50" TxnTyp="1" Actn="1" Stat="0" BizDt="2012-03-12" Txt="Batch EED  Test1" InptSrc="FXML"
TxnTm="2012-03-15T16:35:59-05:00"><Pty ID="OCC" R="21" /><Pty ID="00161" R="4" > <Sub ID="C"
Typ="26"/></Pty><Instrmt Sym="MSFT" CFI="OPXXXX" MMY="20120317" StrkPx="33"/><Qty Typ="TOT" Long="2"
Stat="0"/></PosMntRpt>
```

End of Day Message

```
<DDSEODMessage BizDt="2009-09-24" MsgTypeCode="POSMAINT" SchemaVer="FIX 4.4" TransType="EEDDNED"
TransSubType="ACK" TransProductSet="OPTN" FinalizationCycle="ENCORE Equity Index Finalization"
NoMessagesSent="120"/>
```

Implementation Considerations

Listed below are some examples of how exercises are handled in DDS.

Example 1: Sufficient Long Positions

- If an exercise is entered for 5 contracts and the final long position is 10 contracts, the EX output is <Qty Typ="EX" Long="5" />.
- If an exercise is entered for ALL contracts and the final long position is 10 contracts, the EX output is <Qty Typ="EX" Long="10" />.

Example 2: Insufficient Long Positions

- If an exercise is entered for 20 contracts and the final long position is 5 contracts, the EX output is <Qty Typ="EX" Long="5" /> and the UNEX output is <Qty Typ="UNEX" Long="15" />.
- If an exercise is entered for 5 contracts and the final long position is 0 contracts, the UNEX output is <Qty Typ="UNEX" Long="5" />.
- If an exercise is entered for ALL contracts and the final long position is 0 contracts, the UNEX output is <Qty Typ="UNEX" Long="0" />.

In Examples 2 and 3 above, since there is no exercise quantity, the Amt blocks which include the settlement value are **not** included in the message.

Example 3: Expiration Processing

For expiration processing, OCC looks at all EEDs entered as an exercise instruction. However, if a Clearing Member inputs an Ex-by-Ex instruction, this overrides the EED instruction. For example:

An EED is entered for 50 contracts and the Clearing Member changes the instruction during the Ex-by-Ex entry window to 25 contracts. If the final long position is 10 contracts, the EX output is <Qty Typ="EX" Long="10" /> and the UNEX output is <Qty Typ="UNEX" Long="15" />.

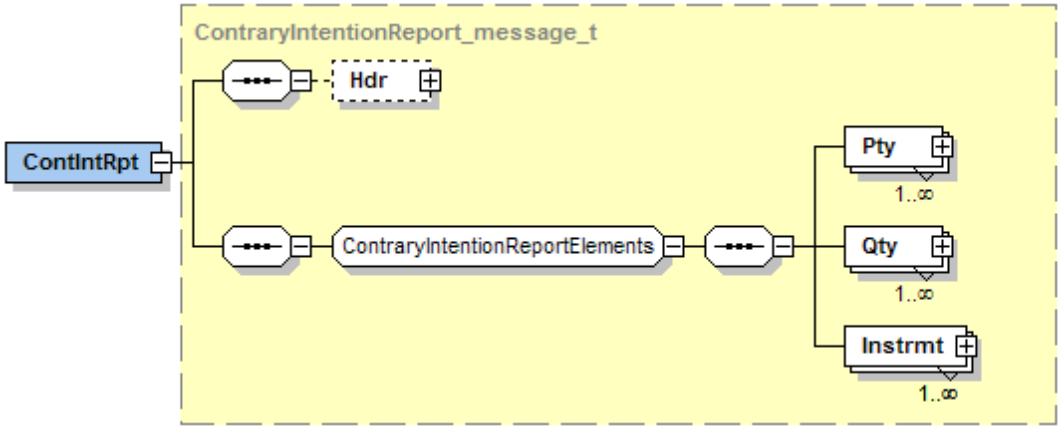
Contrary Intentions

FIX Message:	Contrary Intention Report
Subscription Options:	Equity Options *Trade Sources Only
Delivery Options:	Batch File

Overview

The Contrary Intention Report is created for Trade Sources following an expiration to show exercise instructions entered that are contrary to OCC auto exercise thresholds. The report includes expiring positions whose auto-ex quantity does not equal the final “will be” quantity. This indicates the position is either out of the money and exercised, in the money above the OCC auto ex threshold and not exercised, or in the money below the OCC auto ex threshold and exercised.

Message Structure



Message Layout – Contrary Intention Report

Contrary Intention Report							
FIX Mapping					Data	Data Type	Sample Data
Tag #	Report Block	Component Block	Sub Component Block	Sub Sub Component Block			
	ContIntRpt						
CUST				RptID	Unique Identifier for the Contrary Intention Message	String	541386431
60				TxnTm	Transaction Time	UTC Timestamp	2003-09-22T03:45:23-05:00
978				LateInd	Late Indicator	Boolean	N
979				InputSrc	Input Source (FXML=FIXML , GUI=Screen entry, RTFX = Realtime FIXML)	String	FXML
715				BizDt	Clearing Business Date	LocalMkt Date	2003-09-22
	➔	Pty					
448				ID	Clearing Group Name	String	OCC
452				R	Party Role 21 = Clearing Organization	Int	21
	➔	/Pty					
	➔	Pty					
448				ID	Clearing Member Number	String	00551
452				R	Party Role 4 = Clearing Firm	Int	4
	➔	➔	Sub				
448				ID	Account Type Code	String	M
452				Typ	Party Role 26 = Position Account Type	Int	26
	➔	➔	Sub				
	➔	/Pty					
	➔	Pty					
448				ID	Sub Account	String	ZZZ
452				R	38 = Position Account	Int	38
	➔	/Pty					
	➔	Qty					

Contrary Intention Report							
FIX Mapping					Data	Data Type	Sample Data
Tag #	Report Block	Component Block	Sub Component Block	Sub Sub Component Block			
982				ExpTyp	Expiration Qty Type 1 = Auto Exercise	Int	1
983				ExpQty	Auto Ex Qty	Qty	40
	➔	/Qty					
	➔	Qty					
982				ExpTyp	Expiration Qty Type 2 = Non Auto Exercise	Int	2
983				ExpQty	Non Auto Ex	Qty	0
	➔	/Qty					
	➔	Qty					
982				ExpTyp	Expiration Qty Type 3 = Will Be Exercised	Int	3
983				ExpQty	Will Be Qty	Qty	35
	➔	/Qty					
	➔	Qty					
982				ExpTyp	Expiration Qty Type 4 = EED Quantity/DNED Quantity	Int	4
983				ExpQty	EED/DNED Quantity (Contrary Intention)	Qty	35
	➔	/Qty					
	➔	Qty					
982				ExpTyp	Expiration Qty Type 5 = Difference	Int	5
983				ExpQty	Difference Qty	Qty	5
	➔	/Qty					
	➔	Instrmt					
55				Sym	Symbol	String	AOL
461				CFI	Default Values (refer to page 3)	String	OCASPS
200				MMY	Series/Contract Year, Month, Date	MonthYear	20030922 (4 for year, 2 for month, 2 for day)

Contrary Intention Report							
FIX Mapping					Data	Data Type	Sample Data
Tag #	Report Block	Component Block	Sub Component Block	Sub Sub Component Block			
541				MatDt	Expiration Date	LocalMkt Date	2003-09-22
202				StrkPx	Strike Price (decimal format)	Price	20
	➔	/Instrmt					
	/ContIntRpt						

Sample Message – Contrary Intentions (EED entry)

Clearing Member 00551 submits an EED to OCC on the Friday before equity expiration on an In the Money position. On Saturday, Clearing Members enter their exercise instructions. The following data service message is created for the Trade Sources and displays differences between what was exercised and the EED quantity submitted on Friday.

```
<ContIntRpt RptID="541386431" TxnTm="2003-09-22T03:45:23-05:00" LateInd="N" InptSrc="FXML" BizDt="2003-09-
22">

           <Pty ID="OCC" R="21"/>

           <Pty ID="00551" R="4"/>
                 <Sub ID="M" Typ="26">
           <Pty ID="ZZZ" R="38"/>

           </Pty>

      <Qty ExpTyp="1" ExpQty="40"/>
      <Qty ExpTyp="2" ExpQty="0"/>
      <Qty ExpTyp="3" ExpQty="35"/>
      <Qty ExpTyp="4" ExpQty="35"/>
      <Qty ExpTyp="5" ExpQty="5"/>

      <Instrmt Sym="AOL" CFI="OCASPS" MMY="20030922" MatDt="2003-09-22" StrkPx="20" />

</ContIntRpt>
```

Sample Message – Contrary Intentions (DNED entry)

```
<ContIntRpt RptID="541386431" TxnTm="2003-09-22T03:45:23-05:00" LateInd="N" InptSrc="FXML" BizDt="2003-09-
22">

           <Pty ID="OCC" R="21"/>

           <Pty ID="00551" R="4"/>
                <Sub ID="M" Typ="26">

           <Pty ID="ZZZ" R="38"/>

           </Pty>

     <Qty ExpTyp="1" ExpQty="40"/>
     <Qty ExpTyp="2" ExpQty="0"/>
     <Qty ExpTyp="3" ExpQty="35"/>
     <Qty ExpTyp="4" ExpQty="-35"/>
     <Qty ExpTyp="5" ExpQty="5"/>

     <Instrmt Sym="AOL" CFI="OCASPS" MMY="20030922" MatDt="2003-09-22" StrkPx="20"

</ContIntRpt>
```

Implementation Considerations

The quantity shown on ExpTyp = 4 (Exercise Declaration) contains either EED or DNED quantities, depending on the type of transaction submitted for the position. An EED is a positive instruction indicating the quantity that should be exercised. This amount is always greater than or equal to zero.

A DNED is a negative instruction which reduces the auto exercise amount shown in ExpTyp=1 (Auto Exercise) to arrive at the number of contracts that should be exercised. The DNED amount is always be a negative number.

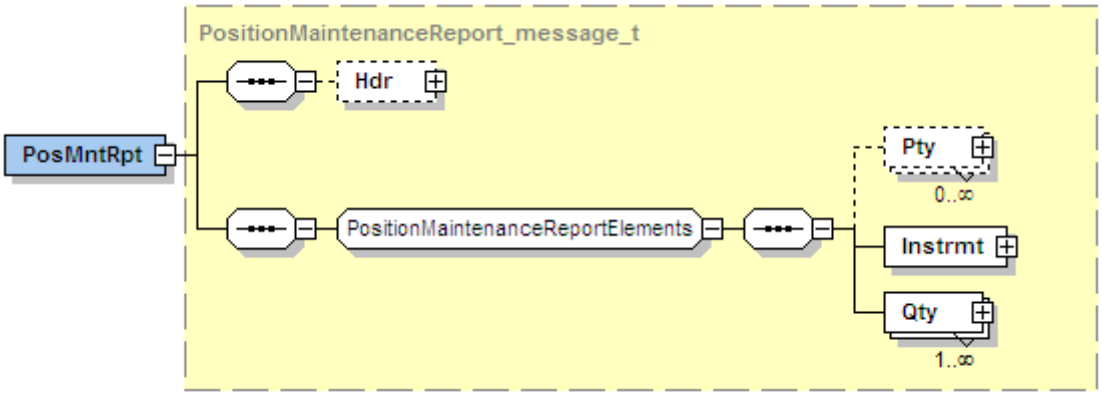
Gross Position Adjustments

FIX Message:	Position Maintenance Report
Subscription Options:	Futures
	Rejected Futures *Clearing Members Only
	Commodity Options
	Options on Futures
Delivery Options:	Real Time
	Batch File

Overview

Gross Position Adjustments for futures, commodity options and options on futures, are included in the Position Maintenance Report. Gross position adjustment messages are created real-time as messages may be added, modified, deleted, backed out, or rejected.

Message Structure



Message Layout – Valid and Deleted Futures Gross Position Adjustments

Position Maintenance Report – Valid and Deleted Futures Gross Position Adjustments							
FIX Mapping					Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Fields			
	PosMntRpt						
721				RptID	Unique Gross Position Adjustment Identifier	String	96805733
709				TxnTyp	Transaction Type 3 = Position Adjustment	Int	3
712				Actn	Action Code 1 = New (Valid), 3 = Cancel (Deleted), 4 = Reverse (Backed Out)	Int	1
722				Stat	Status 0 = Accepted	Int	0
715				BizDt	Clearing Business Date	LocalMkt Date	2003-09-10
60				TxnTm	Transaction Time	UTC Timestamp	2003-09-10T12:53:24-05:00
718				AdjTyp	Adjustment Action 1 = PLUS, 2 = MINUS	Int	1
58				Txt	Remarks	String	
	➔	Pty					
448				ID	Clearing Group Name	String	OCC
452				R	Party Role 21 = Clearing Organization	Int	21
	➔	/Pty					
	➔	Pty					
448				ID	Clearing Member Number	String	00352
452				R	Party Role 4 = Clearing Firm	Int	4
	➔	➔	Sub				
523				ID	Account Type (C / F / M)	String	M
803				Typ	26 = Position Account Type	Int	26
	➔	➔	/Sub				
	➔	/Pty					

Position Maintenance Report – Valid and Deleted Futures Gross Position Adjustments							
FIX Mapping					Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Fields			
	➔	Pty					
448				ID	Tier Account Acronym	String	ZZZ
452				R	Party Role 38 = Position Account	Int	38
	➔	/Pty					
	➔	Instrmt					
55				Sym	Symbol	String	AOL1N
48				ID	Symbol	String	AOL1N
22				Src	ID Source 8 = Exchange Symbol	String	8
461				CFI	Default Values (refer to page 3)	String	FFSPSX
200				MMY	Series/Contract Year, Month, Date	MonthYear	20031122 (4 for year, 2 for month, 2 for day)
541				MatDt	Expiration Date	LocalMkt Date	2003-11-22
231				Mult	Multiplier	Decimal	100
	➔	/Instrmt					
	➔	Qty					
703				Typ	Quantity Type TQ = Adjustment Qty	String	TQ
704				Long	Contract Quantity*	Qty	35
705				Short	Contract Quantity*	Qty	35
	➔	/Qty					
	/PosMntRpt						

* Note: Contract Quantity values of 0 are allowed.

Sample Message – Valid and Deleted Futures Gross Position Adjustments

```
<PosMntRpt RptID="96805733" TxnTyp="3" Actn="1" Stat="0" BizDt="2003-09-10"
TxnTm="2003-09-10T12:53:24-05:00" AdjTyp="1">
          <Pty ID="OCC" R="21"/>

          <Pty ID="00352" R="4">
                <Sub ID="M" Typ="26">
          </Pty>

          <Pty ID="ZZZ" R="38"/>

     <Instrmt Sym="AOL1N" ID="AOL1N" Src="8" CFI=" FFSPSX" MMY="20031122"
MatDt="2003-11-22″ Mult="100"/>

     <Qty Typ="TQ" Long="35" Short="35"/>

</PosMntRpt>
```

Sample End of Day Message – Valid and Deleted Futures Gross Position Adjustments

```
<DDSEODMessage BizDt="2005-01-09" MsgTypeCode="POSMAINT" SchemaVer="FIX 4.4"
TransType="GPA" TransSubType="VALID_DEL" TransProductSet="FUTU"
FinalizationCycle="ENCORE Futures Finalization" NoMessagesSent="31"/>
```

Message Layout – Rejected Futures Gross Position Adjustments

Position Maintenance Report – Rejected Futures Gross Position Adjustments							
FIX Mapping					Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Fields			
	PosMntRpt						
721				RptID	Unique Gross Position Adjustment Identifier	String	541386431
709				TxnTyp	Transaction Type 3 = Position Adjustment	Int	3
712				Actn	Action Code 1 = New	Int	1
722				Stat	Status 2 = Rejected	Int	2
715				BizDt	Clearing Business Date	LocalMkt Date	2003-09-10
60				TxnTm	Transaction Time	UTC Timestamp	2003-09-10T12:53:24-05:00
718				AdjTyp	Adjustment Action 1 = PLUS, 2 = MINUS	Int	1
58				Txt	Remarks	String	
	➔	Pty					
448				ID	Clearing Group Name	String	OCC
452				R	Party Role 21 = Clearing Organization	Int	21
	➔	/Pty					
	➔	Pty					
448				ID	Clearing Member Number	String	00352
452				R	Party Role 4 = Clearing Firm	Int	4
	➔	➔	Sub				
523				ID	Account Type (C / F / M)	String	M
803				Typ	26 = Position Account Type	Int	26
	➔	➔	/Sub				
	➔	/Pty					
	➔	Pty					

Position Maintenance Report – Rejected Futures Gross Position Adjustments							
FIX Mapping					Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Fields			
448				ID	Tier Account Acronym	String	ZZZ
452				R	Party Role 38 = Position Account	Int	38
	➔	/Pty					
	➔	Instrmt					
55				Sym	Symbol	String	XS#$1
48				ID	Symbol	String	XS#$1
22				Src	ID Source 8 = Exchange Symbol	String	8
461				CFI	Default Values (refer to page 3)	String	FFSPSX
200				MMY	Series/Contract Year, Month, Date	MonthYear	20031122 (4 for year, 2 for month, 2 for day)
	➔	/Instrmt					
	➔	Qty					
703				Typ	Quantity Type TQ = Adjustment Qty	String	TQ
704				Long	Contract Quantity*	Qty	35
705				Short	Contract Quantity*	Qty	35
	➔	/Qty					
	/PosMntRpt						

* Note: Contract Quantity values of 0 are allowed.

Sample Message – Rejected Futures Gross Position Adjustments

```
<PosMntRpt RptID="541386431" TxnTyp="3" Actn="1" Stat="2" BizDt="2003-09-10"
TxnTm="2003-09-10T12:53:24-05:00" AdjTyp="1">

      <Pty ID="OCC" R="21"/>
            <Pty ID="00352" R="4">
            <Sub ID="M" Typ="26"/>
      </Pty>

      <Pty ID="ZZZ" R="38"/>

      <Instrmt Sym="XS#$1" ID="XS#$1" Src="8" CFI=" FFSPSX" MMY="20031122"/>

      <Qty Typ="TQ" Long="35" Short="35"/>

</PosMntRpt>
```

Sample End of Day Message – Rejected Futures Gross Position Adjustments

```
<DDSEODMessage BizDt="2005-01-09" MsgTypeCode="POSMAINT" SchemaVer="FIX 4.4"
TransType="GPA" TransSubType="REJECTED" TransProductSet="FUTU"
NoMessagesSent="0"/>
```

Message Layout – Valid and Deleted Commodity Options Gross Position Adjustments

Position Maintenance Report – Valid and Deleted Commodity Options Gross Position Adjustments							
FIX Mapping					Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Fields			
	PosMntRpt						
721				RptID	Unique Gross Position Adjustment Identifier	String	96805733
709				TxnTyp	Transaction Type 3 = Position Adjustment	Int	3
712				Actn	Action Code 1 = New (Valid), 3 = Cancel (Deleted), 4 = Reverse (Backed Out)	Int	1
722				Stat	Status 0 = Accepted	Int	0
715				BizDt	Clearing Business Date	LocalMkt Date	2003-09-10
60				TxnTm	Transaction Time	UTC Timestamp	2003-09-10T12:53:24-05:00
718				AdjTyp	Adjustment Action 1 = PLUS, 2 = MINUS	Int	1
58				Txt	Remarks	String	
	➔	Pty					
448				ID	Clearing Group Name	String	OCC
452				R	Party Role 21 = Clearing Organization	Int	21
	➔	/Pty					
	➔	Pty					
448				ID	Clearing Member Number	String	00352
452				R	Party Role 4 = Clearing Firm	Int	4
	➔	➔	Sub				
523				ID	Account Type (C / F / M)	String	M
803				Typ	26 = Position Account Type	Int	26
	➔	➔	/Sub				

Position Maintenance Report – Valid and Deleted Commodity Options Gross Position Adjustments							
FIX Mapping					Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Fields			
	➔	/Pty					
	➔	Pty					
448				ID	Tier Account Acronym	String	ZZZ
452				R	Party Role 38 = Position Account	Int	38
	➔	/Pty					
	➔	Instrmt					
55				Sym	Symbol	String	RXNAA
461				CFI	Default Values (refer to page 3)	String	OPASPS
200				MMY	Series/Contract Year, Month, Date	MonthYear	20090115 (4 for year, 2 for month, 2 for day)
541				MatDt	Expiration Date	LocalMkt Date	2009-01-15
202				StrkPx	Strike Price	Price	125
947				StrkCcy	Strike Currency	Currency	USD
967				StrkMult	Strike Multiplier	Float	1
968				StrkValu	Strike Value	Float	10
231				Mult	Multiplier	Decimal	10
	➔	/Instrmt					
	➔	Qty					
703				Typ	Quantity Type TQ = Adjustment Qty	String	TQ
704				Long	Contract Quantity*	Qty	35
705				Short	Contract Quantity*	Qty	35
	➔	/Qty					
	/PosMntRpt						

* Note: Contract Quantity values of 0 are allowed.

Sample Message – Valid and Deleted Commodity Options Gross Position Adjustments

```
<PosMntRpt RptID="96805733" TxnTyp="3" Actn="1" Stat="0" BizDt="2008-
03-13" TxnTm="2008-03-13T12:53:24-05:00" AdjTyp="1">
          <Pty ID="OCC" R="21"/>

          <Pty ID="00352" R="4">
                <Sub ID="M" Typ="26">
          </Pty>

          <Pty ID="ZZZ" R="38"/>

     <Instrmt Sym="RXNAA" CFI="OPASPS" MMY="20090115" MatDt="2009-01-
     15″ StrkPx="125" StrkCcy="USD" StrkMult="1" StrkValu="10"
     Mult="10"/>

     <Qty Typ="TQ" Long="35" Short="35"/>

</PosMntRpt>
```

Sample End of Day Message – Valid and Deleted Commodity Option Gross Position Adjustments

```
<DDSEODMessage BizDt="2005-01-09" MsgTypeCode="POSMAINT"
SchemaVer="FIX 4.4" TransType="GPA" TransSubType="VALID_DEL"
TransProductSet="OPTN" FinalizationCycle="ENCORE Futures Finalization"
NoMessagesSent="31"/>
```

Implementation Considerations

General

Gross Position Adjustment Transmissions are created in real time and delivered in batch or real time. Regardless of how these messages are delivered to a recipient (real time or batch file), recipients must be able to process each message as either a valid, canceled, rejected, or backed out gross position adjustment. In the case of valid and deleted gross position adjustments, these messages are always delivered in sequential order. This means that a message for a deleted gross position adjustment is sent following the initial valid gross position adjustment message. Where the *TxnTyp* = 3 (Position Adjustment), recipient systems must use the following fields to determine how to process the message:

- RptID – unique identifier for a gross position adjustment
- Actn – 1 (New), 2 (Replace), 3 (Cancel) or 4 (Reverse)
- Stat – 0 (Accepted) or 2 (Rejected)

Gross Position Adjustment Transmission Matrix

Gross Position Adjustment	TxnTyp	Actn	Stat	BizDt
Valid Gross Position Adjustment	3	1	0	Current External ENCORE Date
Rejected Gross Position Adjustment	3	1	2	Current External ENCORE Date
Modified Gross Position Adjustment	3	2	0	Current External ENCORE Date
Deleted Gross Position Adjustment	3	3	0	Current External ENCORE Date
Backout of Valid Gross Position Adjustment	3	4	0	Current External ENCORE Date

Uniqueness Checking

The nature of gross position adjustment processing creates the possibility of multiple DDS messages per gross position adjustment. Therefore, recipient systems must review the following fields and check for uniqueness against previously processed messages for the current processing day.

- RptID
- Actn
- Stat
- BizDt

Rejected Gross Position Adjustments

Due to the nature of rejected transactions, it should be noted that any rejected data transmitted via a DDS message may be invalid or be of an invalid type. For example, if a trade is received with a quantity of ABC, the trade is rejected, and the “ABC” is placed into an XML tag with a datatype of Qty (whole numbers only). This does not present a problem at OCC in regard to the construction and transmission of the message but should be a consideration for any recipients of DDS data that plan to validate against the FIXML schema.

Please note that rejected gross position adjustments are applicable only to those subscribers that submit gross position adjustments to OCC in a machine-readable format.

Futures Allocations

FIX Message:	Allocation Report
Subscription Options:	Valid and Deleted Options on Futures
	Valid and Deleted Futures
	Invalid Futures
	Invalid Options on Futures
Delivery Options:	Real Time
	Batch File

Overview

The Futures Allocation transmission extends to futures and options on futures products.

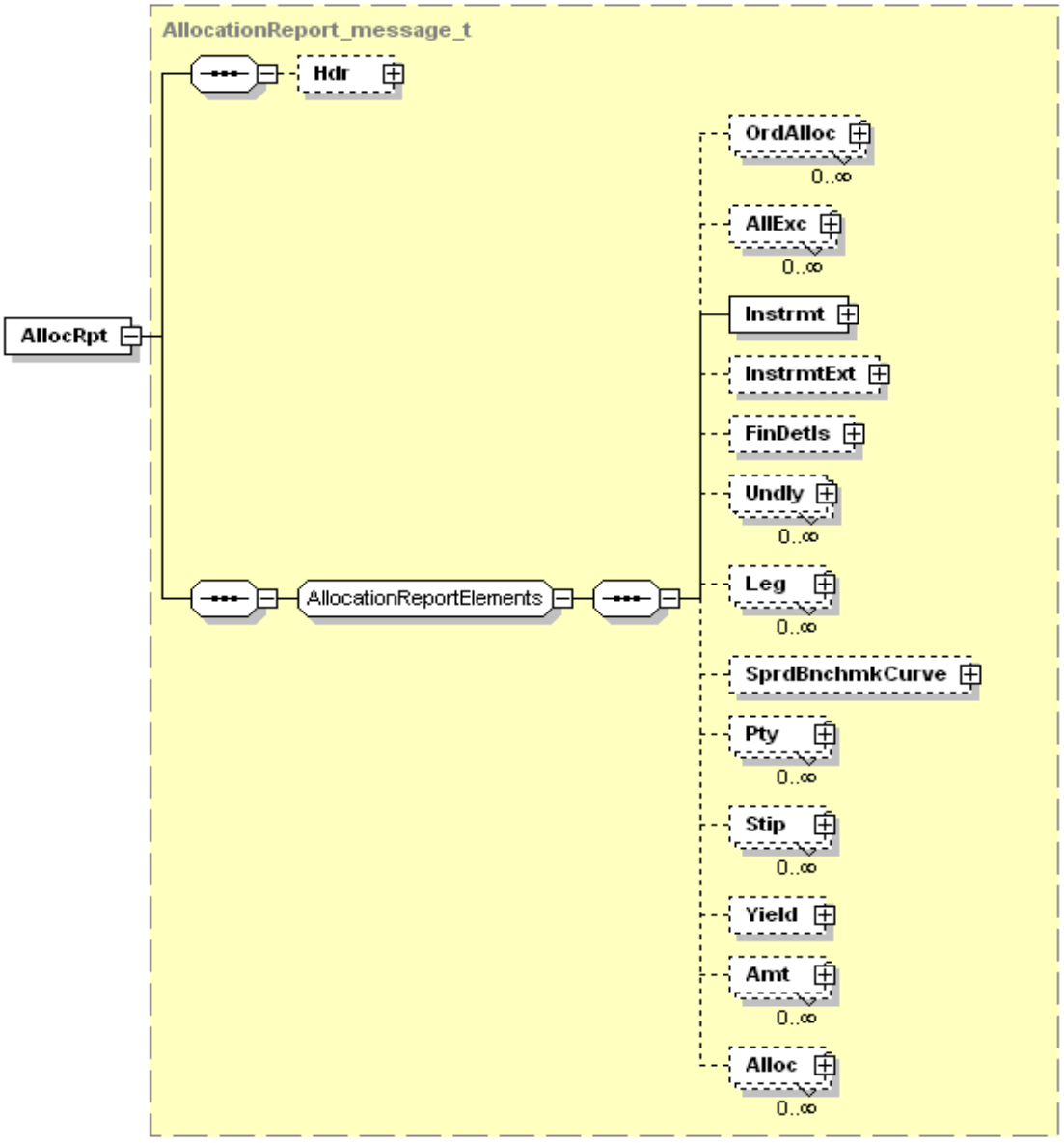
Following the execution of a trade, the exchange relays a matched trade record to OCC and positions are updated for the buy and sell side clearing firms. If the trade is executed for an account other than the Executing Clearing Member (and it is not originally indicated on the trade), then the holder may enter a post trade allocation (give-up) in order to transfer that position to another clearing account.

The Executing/Originating Clearing Member inputs the allocation, which transfers the position with premium/variation to the Claiming/Contra/Give-Up Clearing Member's account. Allocations require that the Claiming CM accept the position. This can be done explicitly through a claim or implicitly by registering an allocation agreement.

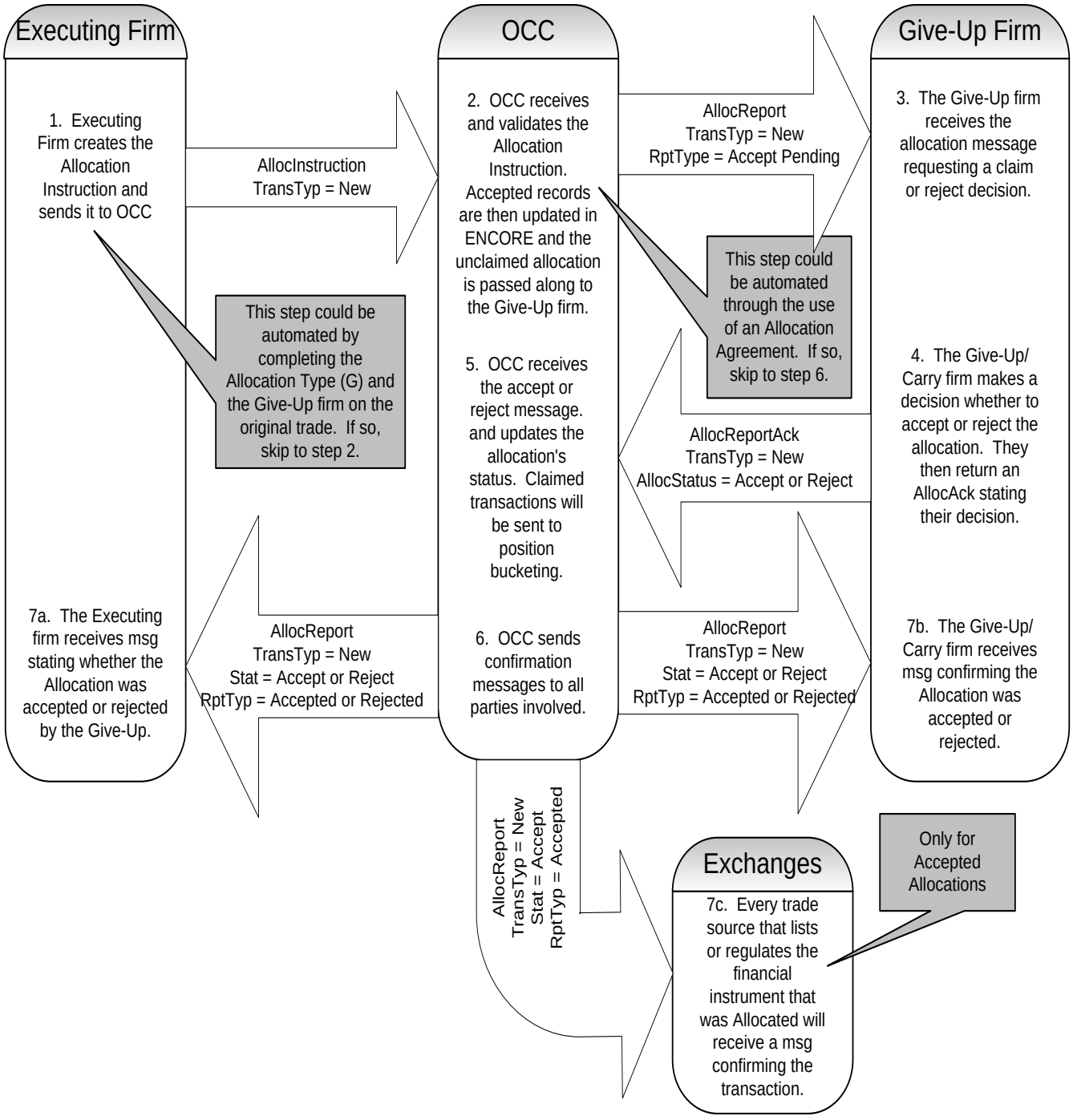
The Executing Member has two methods for providing allocations: on-line or via FIXML message. Once the Executing Clearing Member inputs a valid allocation, a FIXML confirmation is sent to the Executing CM and a notification is sent to the Claiming CM alerting them that there is an unclaimed allocation pending which requires their attention. The Claiming CM is then able to accept or reject unclaimed allocations through a FIXML message or ENCORE GUI screens. Once the allocation is claimed or rejected, both the Executing and Give-Up Clearing Members are notified through an Allocation Report FIXML message.

Claimed allocation messages are also sent to all of the trade sources where the financial instrument is listed or regulated. These notifications are done according to the recipient's DDS profile.

Message Structure



Messaging Flow



Futures Allocation Message Flow

Allocation Instruction Message (Inbound Add/Request)[1]

Step #1 (in the previous Messaging Flow diagram). The allocation process begins with an allocation being entered via the GUI or by an Allocation Instruction message being sent to OCC via FIXML by the executing clearing member.

Allocation Report Message (Outbound Notification/Confirmation)

Step #2 (in the overview diagram above). Once OCC validates and processes the Allocation Instruction message, an allocation transaction is created in ENCORE.

If a valid Allocation Agreement between the executing and give-up clearing members has been entered in ENCORE the transaction is automatically marked as claimed and a completed Allocation Report message is sent to both parties of the transaction as well as any regulators and exchanges (**Step #6**).

If an allocation agreement is not found, then the allocation has an unclaimed status and a notification is sent to the give-up clearing member (**Step #3**). This notification is done using an Allocation Report message. The Stat = 3 and RptType = 11 (accept pending) signifies that the allocation's status is unclaimed.

Allocation Report Acknowledgement Message (Inbound Claim/Reject)

In **Step #2** of the previous diagram OCC checked for an allocation agreement between the originator and the contra clearing member to the allocation. Assuming one is not registered, OCC sends an unclaimed allocation notification to the give-up requesting them to claim or reject the transaction (**Step #3**).

The give-up clearing member may indicate to OCC whether they want to claim or reject the pending allocation by updating the ENCORE GUI or by sending a FIXML message (**Step #4**). The FIXML message for this acceptance or rejection is the Allocation Report Ack. This message must specifically reference the unclaimed Allocation Report message OCC produced by citing the ID from the original message.

Once OCC processes the claim or reject message (**Step #5**), a completed Allocation Report message (see above) is sent to the executing and give-up sides stating whether the allocation is claimed or rejected (**Step #6**).

If the allocation is claimed, OCC sends the executing clearing member an AllocRpt message with Stat = 0 and RptTyp = 9 (**Step #7a**). The clearing member claiming the position receives an AllocRpt message with Stat = 0 and RptTyp = 12 (**Step #7b**).

[1] Refer to the ENCORE Inbound FIXML Developer Reference Guide for inbound FIXML layouts.

If the allocation is rejected, OCC sends the clearing member trying to move the position an AllocRpt message with Stat = 1 and RptTyp = 10 (**Step #7a**). The clearing member who rejected the position receives an AllocRpt message with Stat = 1 and RptTyp = 12 (**Step #7b**).

Invalid Messaging

If OCC is unable to process the inbound allocation message for any reason (such as invalid FIXML structure, invalid symbol or account, and so on), an Allocation Report message is returned to the message sender. The returned message is limited to 40 trade IDs and is also limited to single give-ups.

In the AllocInstr from **Step #1**, if the executing clearing member references an inactive symbol, is trying to give-up to an account ineligible to clear the product, includes invalid Trade IDs, or quantities for multiple Give-Ups do not sum correctly, OCC must reject the AllocInstr. The originator is notified of the invalid allocation through an AllocRpt message. On this message, the Stat = 5 and the RptTyp = 8.

In the AllocRptAck message where the give-up clearing member is claiming or rejecting the allocation (**Step #4**) if the message does not carry the correct ID for the transaction, or if the quantity or clearing member number does not match, OCC must reject the AllocRptAck message. When this happens, OCC sends an AllocRpt message with a Stat = 5 and RptTyp = 8 to the give-up clearing member.

In both of these cases, the invalid AllocRpt message repeats the data that was submitted. This may mean that the message is not properly formatted FIXML or the AllocRpt may not be complete. In the case of an invalid AllocRptAck, the original message only carries give-up information, so the message that is returned likewise does not carry the executor's information. The AllocRpt for invalid messages carries the RptID which was originally submitted. This tag could be used for clearing member reconciliation and problem resolution.

Message Layout – Allocation Report – Valid Futures/Options on Futures

Allocation Report – Futures Allocations								
FIX Mapping						Data	Data Type	Sample Data
Tag #	Report Block	Component Block	Sub Component Block	Sub Sub Component Block	Fields			
	AllocRpt							
755					RptID	Unique Identifier for Allocation Message	String	350003602
70					ID	Unique Identifier for the Allocation Transaction	String	350001978
87					Stat	Identifies status of Allocation 0 = Accepted successfully processed (Claimed) 1 = Reject successfully processed (Rejected) 3 = Received, not yet processed (Unclaimed) 5 = Rejected by OCC (Invalid)	Int	3
77					PosEfct	Open/Close Code (Originator) O = Open C = Close	String	O
54					Side	1 = Buy, 2 = Sell (Originator)	Int	1
75					TrdDt	As Of Date	LocalMkt Date	2006-05-16
60					TxnTm	Date/Time when Allocation is created	UTC Timestamp	2006-05-16T15:13:35-05:00
71					TransTyp	Allocation Transaction Type 0 = New 2 = Cancel	Int	0

Allocation Report – Futures Allocations								
FIX Mapping						Data	Data Type	Sample Data
Tag #	Report Block	Component Block	Sub Component Block	Sub Sub Component Block	Fields			
794					RptTyp	Specifies type or purpose of Allocation transaction 2 = Preliminary Confirm 8 = Request to OCC 9 = Allocation Accepted 10 = Reject 11 = Accept Pending 12 = Allocation Completed	Int	11
828					TrdTyp	Trade Type 0 = Regular Trade 1 = Block Trade 2 = EFP	Int	1
442					MLegRptTyp	Spread Indicator 1 = Outright Non-Spread Trade 2 = Individual Leg of a Multi-Leg Trade	Char	2
715					BizDt	Clearing Business Date	LocalMkt Date	20060516
579					InptDev	Message Event Source (RTFX = Realtime FIXML, GUI = GUI, FXML = Batch FIXML, SYST = Auto Generated from Trade)	String	GUI
53					Qty	Quantity	Qty	100
6					AvgPx	Transaction Price(Could be negative for futures only)	Price	600
819					AvgPxInd	Average Pricing Indicator 0 = No Average Pricing 1 = Trades are part of an average price group	Char	1
1731					AvgPxGrpID	Average Price Group ID	String	12654953
15					Ccy	Premium Currency	Currency	USD
58					Txt	Originator Remarks	String	
	➔	OrdAlloc						

Allocation Report – Futures Allocations								
FIX Mapping						Data	Data Type	Sample Data
Tag #	Report Block	Component Block	Sub Component Block	Sub Sub Component Block	Fields			
11					ClOrdId	Order ID	String	FHUR032 15648
	➔	/OrdAlloc						
	➔	AllExc	Note: This block repeats for each Trade ID provided					
1003					TrdID	Trade ID	String	B778HB08 9UI
1041					FirmTrdID	Firm Trade ID	String	7865FTR
	➔	/AllExc						
	➔	Instrmt						
55					Sym	Symbol	String	VX
48					ID	Symbol	String	VX
22					Src	ID Source 8 = Exchange	String	8
207					Exch	Security Exchange Field is not shown for multiply listed products.	MIC Value	XCBF
461					CFI	Default Values (refer to page 3)	String	FFICSX
200					MMY	Series/Contract Year, Month, Date	MonthYear	20061115 (4 for year, 2 for month, 2 for day)
541					MatDt	Expiration Date	LocalMkt Date	2006-11-15
231					Mult	Multiplier	Decimal	100
202					StrkPx	Strike Price (decimal format) (Options on Futures only)	Price	60.00
947					StrkCcy	Strike Currency (Options on Futures only)	Currency	USD
967					StrkMult	Strike Multiplier (Options on Futures only)	Decimal	1.00
968					StrkValu	Strike Value (Options on Futures only)	Decimal	100

Allocation Report – Futures Allocations								
FIX Mapping						Data	Data Type	Sample Data
Tag #	Report Block	Component Block	Sub Component Block	Sub Sub Component Block	Fields			
	➔	/Instrmt						
	➔	Amt						
707					Typ	Amount Type PREM = Premium Amount	String	PREM
708					Amt	Extended Premium	Amt	6000005
	➔	/Amt						
	➔	Amt						
707					Typ	Amount Type CRES = Cash Residual	String	CRES
708					Amt	Residual Amount	Amt	5
	➔	/Amt						
	➔	Pty						
448					ID	Clearing Member Number	String	00123
452					R	Party Role 1 = Executing Clearing Firm	Int	1
	➔	➔	Sub					
523					ID	Account Type	String	C
803					Typ	26 = Position Account Type	Int	26
	➔	➔	/Sub					
	➔	/Pty						
	➔	Pty						
448					ID	Account ID (Sub-Account)	String	
452					R	38 = Position Account	Int	38
	➔	/Pty						
	➔	Pty						
448					ID	Executing Broker	String	811F
452					R	Party Role 2 = Executing Broker	Int	2
	➔	/Pty						

Allocation Report – Futures Allocations								
FIX Mapping						Data	Data Type	Sample Data
Tag #	Report Block	Component Block	Sub Component Block	Sub Sub Component Block	Fields			
	➔	Pty						
448					ID	Account Number	String	ABC123
452					R	24 = Customer Account	Int	24
	➔	/Pty						
	➔	Alloc	**Note**: The Alloc block is always used to refer to the give-up clearing member who is receiving the position or trade. The Alloc block may repeat if the allocation was sub-allocated through ENCORE. In this case the Alloc block shows the quantity and tier account details for each sub-allocation.					
161					Txt	Contra Remarks	String	gu414
80					Qty	Quantity to be allocated to specific sub-account	Qty	100
1047					AllocPosEfct	Open/Close Code (Contra) O = Open C = Close	String	C
	➔	➔	Pty					
448					ID	Clearing Group Name	String	OCC
452					R	Party Role 21 = Clearing Organization	Int	21
	➔	➔	/Pty					
	➔	➔	Pty					
448					ID	Clearing Member Number	String	00897
452					R	Party Role 18 = Contra Clearing Firm	Int	18
	➔	➔	➔	Sub				
523					ID	Account Type	String	C
803					Typ	26 = Position Account Type	Int	26
	➔	➔	➔	/Sub				
	➔	➔	/Pty					
	➔	➔	Pty					
448					ID	Account ID (Sub-Account)	String	
452					R	38 = Position Account	Int	38

Allocation Report – Futures Allocations								
FIX Mapping						Data	Data Type	Sample Data
Tag #	Report Block	Component Block	Sub Component Block	Sub Sub Component Block	Fields			
	➔	➔	/Pty					
	➔	➔	Pty					
448					ID	Account Number	String	XYZ789
452					R	24 = Customer Account	Int	24
	➔	➔	/Pty					
	➔	➔	MiscFee					
137					Amt	Misc. Fee Amt	Amt	1.00
139					Typ	Indicates type of misc. fee 1 = Regulatory (SEC Fees)	Char	1
	➔	➔	/MiscFees					
	➔	➔	MiscFees					
137					Amt	Misc. Fee Amt	Amt	2.00
139					Typ	Indicates type of misc. fee 7 = Other (Additional Amount)	Char	7
	➔	➔	/MiscFees					
	➔	➔	MiscFees					
137					Amt	Misc. Fee Amt	Amt	7.00
139					Typ	Indicates type of misc. fee 13 = Clearing Fees	Char	13
	➔	➔	/MiscFees					
	➔	/Alloc						
	/AllocRpt							

Sample Messages – Allocation Report – Futures

Unclaimed Allocation to Originating/Executing Firm

```
<AllocRpt RptID="106986326" ID="54971498" Stat="3" PosEfct="O" Side="2" TrdDt="2013-08-23" TxnTm="2013-08-
23T07:07:27-05:00" TransTyp="0" RptTyp="2" TrdTyp="0" MLegRptTyp="1" BizDt="2013-08-23" InptDev="RTFX"
Qty="10" AvgPx="15.45" AvgPxInd="0" Ccy="USD" Txt="6561480060">
      <AllExc TrdID="20130823100299B"/>
      <Instrmt Exch="XCBF" Sym="VX" ID="VX" Src="8" CFI="FFICSX" MMY="20130918" MatDt="2013-09-18"
Mult="1000"/>
      <Pty ID="OCC" R="21" />
      <Pty ID="00123" R="1" >
            <Sub ID="C" Typ="26"/>
      </Pty>
      <Pty ID="U08HDX01" R="24"/>
      <Amt Typ="PREM" Amt="154500"/>
      <Alloc AllocPosEfct="C" Qty="10">
            <Pty ID="OCC" R="21" />
            <Pty ID="00456" R="18" >
                  <Sub ID="C" Typ="26"/>
            </Pty>
            <Pty ID="240HDX01" R="24"/>
      </Alloc>
</AllocRpt>
```

Claimed Allocation to Originating/Executing Firm

```
<AllocRpt RptID="106986334" ID="54971498" Stat="0" PosEfct="O" Side="2" TrdDt="2013-08-23" TxnTm="2013-08-
23T07:08:39-05:00" TransTyp="0" RptTyp="9" TrdTyp="0" MLegRptTyp="1" BizDt="2013-08-23" InptDev="RTFX"
Qty="10" AvgPx="15.45" AvgPxInd="0" Ccy="USD" Txt="6561480060">
      <AllExc TrdID="20130823100299B"/>
      <Instrmt Exch="XCBF" Sym="VX" ID="VX" Src="8" CFI="FFICSX" MMY="20130918" MatDt="2013-09-18"
Mult="1000"/>
      <Pty ID="OCC" R="21" />
      <Pty ID="00123" R="1" >
            <Sub ID="C" Typ="26"/>
      </Pty>
      <Pty ID="U08HDX01" R="24"/>
```

```
      <Amt Typ="PREM" Amt="154500"/>
      <Alloc AllocPosEfct="O" Qty="10">
            <Pty ID="OCC" R="21" />
            <Pty ID="00456" R="18" >
                  <Sub ID="F" Typ="26"/>
            </Pty>
            <Pty ID="240HDX01" R="24"/>
            <MiscFees Amt="0.3" Typ="13"/>
      </Alloc>
</AllocRpt>
```

Unclaimed Allocation to Give Up Firm – Average Price Grouped

```
<AllocRpt RptID="107120001" ID="55098027" Stat="3" PosEfct="O" Side="2" TrdDt="2013-08-27" TxnTm="2013-08-
27T09:18:53-05:00" TransTyp="0" RptTyp="11" TrdTyp="0" MLegRptTyp="1" BizDt="2013-08-27" InptDev="RTFX"
Qty="1" AvgPx="18.65" AvgPxInd="1"  AvgPxGrpID="4382753" Ccy="USD" Txt="6586186860">
      <Instrmt Exch="XCBF" Sym="VX" ID="VX" Src="8" CFI="FFICSX" MMY="20140122" MatDt="2014-01-22"
      Mult="1000"/>
            <Pty ID="OCC" R="21" />
            <Pty ID="00123" R="1" >
                  <Sub ID="C" Typ="26"/>
            </Pty>
            <Pty ID="CRABELM" R="24"/>
            <Amt Typ="PREM" Amt="18650"/>
            <Alloc AllocPosEfct="C" Qty="1">
                  <Pty ID="OCC" R="21" />
                  <Pty ID="00456" R="18" >
                        <Sub ID="C" Typ="26"/>
                  </Pty>
            <Pty ID="41213066" R="24"/>
      </Alloc>
</AllocRpt>
```

Claimed Allocation to Give Up Firm – Multiple Trades

```
<AllocRpt RptID="107120100" ID="55098027" Stat="0" PosEfct="O" Side="2" TrdDt="2013-08-27" TxnTm="2013-08-
27T09:21:36-05:00" TransTyp="0" RptTyp="12" TrdTyp="0" MLegRptTyp="1" BizDt="2013-08-27" InptDev="RTFX"
Qty="1" AvgPx="18.65" AvgPxInd="1" AvgPxGrpID="4382753" Ccy="USD" Txt="6586186860">
```

```
      <Instrmt Exch="XCBF" Sym="VX" ID="VX" Src="8" CFI="FFICSX" MMY="20140122" MatDt="2014-01-22"
      Mult="1000"/>
            <Pty ID="OCC" R="21" />
            <Pty ID="00123" R="1" >
                  <Sub ID="C" Typ="26"/>
            </Pty>
            <Pty ID="CRABELM" R="24"/>
            <Amt Typ="PREM" Amt="18650"/>
            <Alloc AllocPosEfct="O" Qty="1">
                  <Pty ID="OCC" R="21" />
                  <Pty ID="00456" R="18" >
                        <Sub ID="C" Typ="26"/>
                  </Pty>
            <Pty ID="41213066" R="24"/>
            <MiscFees Amt="0.03" Typ="13"/>
      </Alloc>
</AllocRpt>
```

Sample Messages – Allocation Report – Commodity Option/Option on Future

Unclaimed Allocation to Give Up Firm

```
<AllocRpt RptID="100201659" ID="1800302438" Stat="3" PosEfct="C" Side="1" TrdDt="2013-08-28" TxnTm="2013-
08-28T15:02:15-05:00" TransTyp="0" RptTyp="11" TrdTyp="0" MLegRptTyp="1" BizDt="2013-08-28" InptDev="SYST"
Qty="10" AvgPx="0.5" AvgPxInd="0" Ccy="USD" Txt="txt">
      <OrdAlloc ClOrdID="000721158681542557 67"/>
      <AllExc TrdID="0561701S"/>
      <Instrmt Exch="XNLI" Sym="ZI" CFI="OPAFPN" MMY="20131029" MatDt="2013-09-25" StrkPx="21"
      StrkCcy="USD" StrkMult="1" StrkValu="5000" Mult="5000"/>
      <Pty ID="OCC" R="21" />
      <Pty ID="00123" R="1" >
            <Sub ID="C" Typ="26"/>
      </Pty>
      <Pty ID="A05" R="2"/>
      <Pty ID="AcctNmbr" R="24"/>
      <Amt Typ="PREM" Amt="25000"/>
      <Alloc AllocPosEfct="O" Qty="10">
            <Pty ID="OCC" R="21" />
            <Pty ID="00277" R="18" >
```

```
                  <Sub ID="C" Typ="26"/>
            </Pty>
            <Pty ID="ACCTNMBR" R="24"/>
            <MiscFees Amt="0.3" Typ="13"/>
      </Alloc>
</AllocRpt>
```

Claimed Allocation to Give Up Firm

```
<AllocRpt RptID="100201659" ID="1800302438" Stat="0" PosEfct="C" Side="1" TrdDt="2013-08-28" TxnTm="2013-
08-28T15:02:18-26:00" TransTyp="0" RptTyp="12" TrdTyp="0" MLegRptTyp="1" BizDt="2013-08-28" InptDev="SYST"
Qty="10" AvgPx="0.5" AvgPxInd="0" Ccy="USD" Txt="txt">
      <OrdAlloc ClOrdID="000721158681542557 67"/>
      <AllExc TrdID="0561701S"/>
      <Instrmt Exch="XNLI" Sym="ZI" CFI="OPAFPN" MMY="20131029" MatDt="2013-09-25" StrkPx="21"
      StrkCcy="USD" StrkMult="1" StrkValu="5000" Mult="5000"/>
      <Pty ID="OCC" R="21" />
      <Pty ID="00123" R="1" >
            <Sub ID="C" Typ="26"/>
      </Pty>
      <Pty ID="A05" R="2"/>
      <Pty ID="AcctNmbr" R="24"/>
      <Amt Typ="PREM" Amt="25000"/>
      <Alloc AllocPosEfct="O" Qty="10">
            <Pty ID="OCC" R="21" />
            <Pty ID="00277" R="18" >
                  <Sub ID="C" Typ="26"/>
            </Pty>
            <Pty ID="ACCTNMBR" R="24"/>
            <MiscFees Amt="0.3" Typ="13"/>
      </Alloc>
</AllocRpt>
```

Sample Messages – End of Day Messages – Valid Claimed and Deleted Futures Allocations

EOD Message – Allocations – Futures

```
<DDSEODMessage BizDt="2006-01-09" MsgTypeCode="ALLOC" SchemaVer="FIX 4.4" TransType="POSMOVE"
TransSubType="VALID_DEL" TransProductSet="FUTU" FinalizationCycle="ENCORE Futures Finalization"
NoMessagesSent="16" />
```

EOD Message – Allocations – Options on Futures

```
<DDSEODMessage BizDt="2006-01-09" MsgTypeCode="ALLOC" SchemaVer="FIX 4.4" TransType="POSMOVE"
TransSubType="VALID_DEL" TransProductSet="OPTN" FinalizationCycle="ENCORE Futures Finalization"
NoMessagesSent="27" />
```

Message Layout – Allocation Report – Invalid Futures/Options on Futures

Allocation Report – Invalid Futures Allocations								
FIX Mapping						Data	Data Type	Sample Data
Tag #	Report Block	Component Block	Sub Component Block	Sub Sub Component Block	Fields			
	AllocRpt							
755					RptID	Unique Identifier for Allocation Message	String	350000929
70					RptRefID	Unique Identifier for the Allocation Claim/Reject Transaction that was submitted to OCC by Clearing Member on inbound AllocRptAck claim/reject message.	String	10000
87					Stat	Identifies status of Allocation 5 = Rejected by OCC (Invalid)	Int	5
77					PosEfct	Open/Close Code (Originator) O = Open C = Close	String	O
54					Side	1 = Buy, 2 = Sell (Originator)	Int	1
75					TrdDt	As Of Date	LocalMkt Date	2006-04-05
71					TransTyp	Allocation Transaction Type 0 = New	Int	0
794					RptTyp	Specifies type or purpose of Allocation transaction 2 = Preliminary Confirm 8 = Request to OCC	Int	8
828					TrdTyp	Trade Type 0 = Regular Trade 1 = Block Trade 2 = EFP	Int	0
442					MLegRptTyp	Spread Indicator 1 = Outright Non-Spread Trade 2 = Individual Leg of a Multi-Leg Trade	Char	2
715					BizDt	Clearing Business Date	LocalMkt Date	2006-04-05

Allocation Report – Invalid Futures Allocations								
FIX Mapping						Data	Data Type	Sample Data
Tag #	Report Block	Component Block	Sub Component Block	Sub Sub Component Block	Fields			
579					InptDev	Message Event Source (RTFX = Realtime FIXML, GUI = GUI, FXML = Batch FIXML)	String	FXML
53					Qty	Total Quantity	Qty	15
6					AvgPx	Transaction Price	Price	30.25
819					AvgPxInd	Average Pricing Indicator 0 = No Average Pricing 1 = Trade is part of an average price group	Char	0
15					Ccy	Premium Currency	Currency	USD
58					Txt	Originator Remarks	String	Invalid_Alloc
	➔	OrdAlloc						
11					ClOrdID	Order ID	String	FHURO32 15648
	➔	/OrdAlloc						
	➔	AllExc	**Note**: This block repeats for each Trade ID provided					
1003					TrdID	Trade ID	String	B778HB089 UI
1041					FirmTrdID	Firm Trade ID	String	7864FTR
	➔	/AllExc						
	➔	Instrmt						
55					Sym	Symbol	String	OFPP
461					CFI	Default Values (refer to page 3)	String	OCXXXX
200					MMY	Series/Contract Year, Month, Date	MonthYear	20060614 (4 for year, 2 for month, 2 for day)
202					StrkPx	Strike Price (decimal format) (Options on Futures only)	Price	700.00
	➔	/Instrmt						

Allocation Report – Invalid Futures Allocations								
FIX Mapping						Data	Data Type	Sample Data
Tag #	Report Block	Component Block	Sub Component Block	Sub Sub Component Block	Fields			
	➔	Pty						
448					ID	Clearing Member Number	String	00610
452					R	Party Role 1 = Executing Clearing Firm	Int	1
	➔	➔	Sub					
523					ID	Account Type	String	C
803					Typ	26 = Position Account Type	Int	26
	➔	➔	/Sub					
	➔	/Pty						
	➔	Pty						
448					ID	Account ID (Sub-Account)	String	
452					R	38 = Position Account	Int	38
	➔	/Pty						
	➔	Pty						
448					ID	Executing Broker	String	811F
452					R	Party Role 2 = Executing Broker	Int	2
	➔	/Pty						
	➔	Pty						
448					ID	Account Number	String	12345
452					R	24 = Customer Account	Int	24
	➔	/Pty						
	➔	Alloc	**Note:** The Alloc block is always used to refer to the give-up clearing member(s) who is (are) receiving the position or trade. Allocation Group is repeated for each Give-up.					
80					Qty	Quantity Allocated to Give-up firm	Qty	5
161					Txt	Contra Remarks	String	
1047					AllocPosEfct	Open/Close Code (Contra) O = Open C = Close	String	C

Allocation Report – Invalid Futures Allocations								
FIX Mapping						Data	Data Type	Sample Data
Tag #	Report Block	Component Block	Sub Component Block	Sub Sub Component Block	Fields			
	→	→	Pty					
448					ID	Clearing Group Name	String	OCC
452					R	Party Role 21 = Clearing Organization	Int	21
	→	→	/Pty					
	→	→	Pty					
448					ID	Clearing Member Number	String	00325
452					R	Party Role 18 = Contra Clearing Firm	Int	18
	→	→	→	Sub				
523					ID	Account Type	String	C
803					Typ	26 = Position Account Type	Int	26
	→	→	→	/Sub				
	→	→	/Pty					
	→	→	Pty					
448					ID	Account ID (Sub-Account)	String	
452					R	38 = Position Account	Int	38
	→	→	/Pty					
	→	→	Pty					
448					ID	Account Number	String	1111
452					R	24 = Customer Account	Int	24
	→	→	/Pty					
	→	→	Misc Fee					
137					MiscFeeAmt	Misc. Fee Amt	Amt	1.30
139					MiscFeeType	Indicates type of misc. fee 11 = Conversion (Cash Residual Amount)	Char	11
	→	→	/Misc Fee					
	→	→	Misc Fee					
137					MiscFeeAmt	Misc. Fee Amt	Amt	15.00

Allocation Report – Invalid Futures Allocations								
FIX Mapping						Data	Data Type	Sample Data
Tag #	Report Block	Component Block	Sub Component Block	Sub Sub Component Block	Fields			
139					MiscFeeType	Indicates type of misc. fee 7 = Other (Additional Amount)	Char	7
	➔	➔	/Misc Fee					
	➔	/Alloc						
	/AllocRpt							

Sample Messages – Allocation Report – Invalid Futures Allocation

An Invalid Allocation Instruction is produced when OCC cannot process an AllocInst message (allocation add msg.) that is submitted for processing by Originating Clearing Member.

Invalid Allocation Instruction: Single Trade/Single Give-up

```
<AllocRpt RptID="200000181" RptRefID="111116" Stat="5" PosEfct="O" Side="2" TrdDt="2013-08-01" TransTyp="0"
RptTyp="8" InptDev="FXML" TrdTyp="2" MLegRptTyp="1" BizDt="2013-08-01" Qty="0000004" AvgPx="1746.20000000"
AvgPxInd="0" Ccy="USD" Txt="Invalid_Alloc_singgiveup">

      <OrdAlloc ClOrdID="00072120266234839449"/>
      <AllExc TrdID="011597631S"/>
      <Instrmt Sym="MFS" CFI="FXXXXX" MMY="20130920"/>
            <Pty ID="OCC" R="21"/>
            <Pty ID="00035" R="1">
                  <Sub ID="X" Typ="26"/>
            </Pty>
            <Pty ID="ABCD" R="24"/>
      <Alloc>
            <Pty ID="OCC" R="21"/>
            <Pty ID="00140" R="18">
                  <Sub ID="C" Typ="26"/>
            </Pty>
            <MiscFees Amt="0000.4500" Typ="11"/>
      </Alloc>
</AllocRpt>
```

Invalid Allocation Instruction: Multiple Trade/Single Give-up

```
<AllocRpt RptID="200000180" RptRefID="111115" Stat="5" PosEfct="O" Side="2" TrdDt="2013-08-01" TransTyp="0"
RptTyp="8" InptDev="FXML" TrdTyp="2" MLegRptTyp="1" BizDt="2013-08-01" Qty="0000003" AvgPx="0019.55000000"
AvgPxInd="0" Ccy="USD" Txt=" Invalid_Alloc_multtr_singgiveup">

      <OrdAlloc ClOrdID="00072082882839027459"/>
      <AllExc TrdID="011583626S"/>
      <AllExc TrdID="011583627S"/>
      <AllExc TrdID="011583628S"/>
      <Instrmt Sym="YI" CFI="FXXXXX" MMY="20130926"/>
```

```
            <Pty ID="OCC" R="21"/>
            <Pty ID="00035" R="1">
                  <Sub ID="X" Typ="26"/>
            </Pty>
            <Pty ID="ABCD" R="24"/>
      <Alloc>
            <Pty ID="OCC" R="21"/>
            <Pty ID="00140" R="18">
                  <Sub ID="C" Typ="26"/>
            </Pty>
            <MiscFees Amt="0000.4500" Typ="11"/>
      </Alloc>
</AllocRpt>
```

Sample Message – Allocation Acknowledgement Report – Invalid Futures Allocation Claim/Reject

An Invalid Allocation Acknowledgement is produced when OCC cannot process an AllocRptAck message (allocation claim or reject msg.) that is submitted for processing by Give Up/Contra Clearing Member.

```
<AllocRpt RptID="350000861" RptRefID="222222" Stat="5" TransTyp="0" RptTyp="8" InptDev="FXML" BizDt="2006-
04-05" Qty="100">
      <Alloc AllocPosEfct="C" Txt="Allocation Ack Claim">
            <Pty ID="OCC" R="21"/>
            <Pty ID="00456" R="18">
                  <Sub ID="M" Typ="26"/>
            </Pty>
            <Pty ID="MBB" R="38"/>
            <Pty ID="1234" R="24"/>
      </Alloc>
</AllocRpt>
```

Sample End of Day Message – Invalid Futures/Options on Futures

```
<FIXML r="20030618" s="20040109" v="4.4" xr="FIA" xv="1" xmlns="http://www.fixprotocol.org/FIXML-4-4">
<DDSEODMessage BizDt="2006-06-09" MsgTypeCode="ALLOC" SchemaVer="FIX 4.4" TransType="POSMOVE"
TransSubType="REJECTED" TransProductSet="FUTU" NoMessagesSent="1"/></FIXML>
```

Implementation Considerations

General

Allocation Transmissions are created real time. Regardless of how these messages are delivered to a recipient (real time or batch file), recipients must be able to process each message as either an unclaimed, claimed, rejected, cancelled, or invalid transaction. The recipient systems must use the following fields to determine how to process the message:

RptID – Unique identifier for a message.

ID – Unique identifier for the transaction. Used across multiple messages, allowing the messages to be tied together.

Stat – Specifies the processing status of the transaction:

0 = Accepted and successfully processed **(Claimed)**

1 = Reject successfully processed **(Rejected)**

3 = Received and not yet processed **(Unclaimed)**

5 = Rejected by OCC **(Invalid)**

Note: The returned message is limited to 40 trade IDs and is also limited to single give-ups.

TransTyp – **0** (New), **2** (Cancelled)

RptTyp – Specifies the type or purpose of the transaction:

8 = Request to OCC

9 = Allocation Accepted

10 = Allocation Rejected

11 = Accept Pending

12 = Allocation Completed

***TrdType* – 0** (Regular Trade), **1** (EFP), **2** (Block Trade)

Claim Allocation to Originating/Executing Firm – Sub Allocated

Note: In the event of a sub-allocation, the executing firm receives a message for each sub allocated lot. The counter party on the allocation receives only the message pertaining to the sub allocated lot which they are receiving.

Allocation Transmission Matrix

Allocation	Stat	Trans Type	Rpt Typ	Trd Typ	BizDt
Unclaimed Allocation – to Originator	3	0	2	0/1/2	Current External ENCORE Date
Unclaimed Allocation – to Contra	3	0	11	0/1/2	Current External ENCORE Date
Claimed Allocation – to Originator	0	0	9	0/1/2	Current External ENCORE Date
Claimed Allocation – to Contra	0	0	12	0/1/2	Current External ENCORE Date
Rejected Allocation – to Originator	1	0	10	0/1/2	Current External ENCORE Date
Rejected Allocation – to Contra	1	0	12	0/1/2	Current External ENCORE Date
Cancelled Allocation – to Originator	0	2	12	0/1/2	Current External ENCORE Date
Cancelled Allocation – to Contra	0	2	12	0/1/2	Current External ENCORE Date
Invalid Inbound Allocation Instruction – to Originator	5	0	8	0/1/2	Current External ENCORE Date
Invalid Inbound Allocation Claim/Reject – to Contra	5	0	8	0/1/2	Current External ENCORE Date
Invalid System Generated Allocation – to Originator	5	0	8	0/1/2	Current External ENCORE Date

Uniqueness Checking

The nature of allocation processing creates the possibility of multiple DDS messages per Allocation. Therefore, recipient systems must review the fields and check for uniqueness against previously processed messages for the current processing day. In addition, due to the fact the clearing members may use allocations to internally transfer positions within accounts; multiple messages with the same RptID are created. The RptTyp field can be used to determine if the message is for the originator account or the contra account, but typically the following fields may be used to determine uniqueness:

RptID –Unique id created for each message

BizDt – Clearing business date

RptTyp –Used if the originator and contra sides are the same to determine which party blocks to look at.

Customer Gross Margins Positions

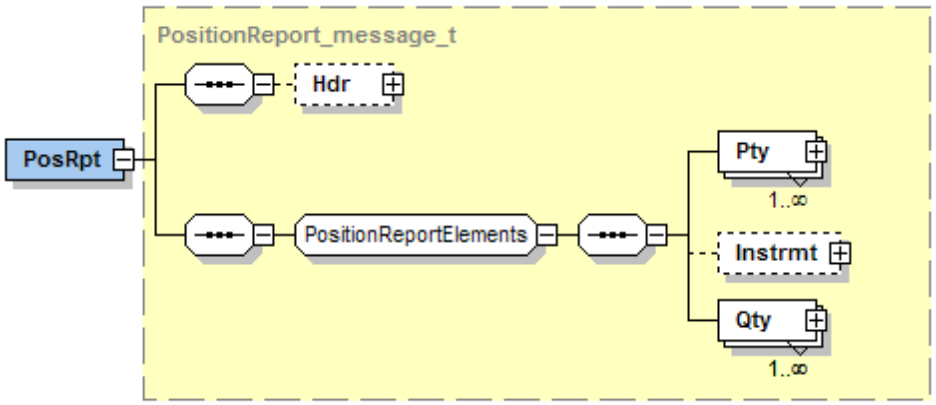
FIX Message:	Position Report
Subscription Options:	Commodity Options/Options on Futures Futures
	*Futures Trade Sources Only
Delivery Options:	Batch File

Overview

The Customer Gross Margins Positions by Exchange is created for futures Trade Sources at the end of each processing day. This batch file contains the final, edited positions used to calculate each Clearing Member's margin requirement for accounts that are subject to the CFTC customer gross margins rule.

Note that only positions in futures contracts and option on future series that are traded on the subscribing exchange are included.

Message Structure



Message Layout – Customer Gross Margins Position Report – Options

Position Report – Customer Gross Margins Positions – Options							
FIX Mapping					Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Fields			
	PosRpt						
721				RptID	Unique Identifier of the Position	String	326877967
715				BizDt	Clearing Business Date	LocalMktDate	2005-10-22
724				ReqTyp	Request Type 0 = Positions	Int	0
15				Ccy	Currency	Currency	USD
	➔	Pty					
448				ID	Clearing Group Name	String	OCC
452				R	Party Role 21 = Clearing Organization	Int	21
	➔	/Pty					
	➔	Pty					
448				ID	Clearing Member Number	String	00161
452				R	Party Role 4 = Clearing Firm	Int	4
	➔	/Pty					
	➔	Pty					
448				ID	Customer Account ID	String	ABCDEFG
452				R	Party Role 24 = Customer Account	Int	24
	➔	➔	Sub				
448				ID	Account Type C = Customer F = Firm M = Market Maker	String	C
452				R	Party Role 26 = Position Account Type	Int	26
	➔	➔	/Sub				

Position Report – Customer Gross Margins Positions – Options							
FIX Mapping					Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Fields			
	➔	➔	Sub				
448				ID	Customer Account Type	String	O
452				R	Party Role 41 = Customer Account Type	Int	41
	➔	➔	/Sub				
	➔	➔	Sub				
448				ID	Parent Omnibus Account	String	PARENTOMNI
452				R	Party Role 42 = Parent Omnibus Account	Int	42
	➔	➔	/Sub				
	➔	/Pty					
	➔	Pty					
448				ID	Sub Account Acronym	String	QVO
452				R	Party Role 38 = Position Account	Int	38
	➔	/Pty					
	➔	Instrmt					
207				Exch	Trade Source (MIC)	Exchange	XOCH
167				SecTyp	Security Type OOF = Option on Future	String	FUT
55				Sym	Symbol	String	ZG
461				CFI	Default Values (refer to page 3)	String	OCAFPN
200				MMY	Series/Contract Year, Month, Date	MonthYear	20120126 (4 for year, 2 for month, 2 for day)
541				MatDt	Expiration Date	LocalMktDate	2012-01-26
202				StrkPx	Strike Price (decimal format)	Price	21.625

Position Report – Customer Gross Margins Positions – Options							
FIX Mapping					Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Fields			
947				StrkCcy	Strike Currency	Currency	USD
967				StrkMult	Strike Multiplier	Float	1
968				StrkValu	Strike Value	Decimal	100
231				Mult	Multiplier	Decimal	100
966				SettlOn OpenFlag	Settle On Open Flag (Y / N)	String	N
201				PutCall	Put or Call 0=Put 1=Call	Int	1
1194				ExerStyle	Exercise Style 0=European 1= American	Int	1
	➔	/Instrmt					
	➔	Qty					
703				Typ	Quantity Type FIN = End of Day Quantity	String	FIN
704				Long	Final Long Position	Qty	10
705				Short	Final Short Position	Qty	3327
	➔	/Qty					
	/PosRpt						

Sample Message – Customer Gross Margin Position Report – Options

Clearing Member 00123 has a YG position. The details of the final, edited gross margin position are listed below.

```
<PosRpt RptID="1559180403" BizDt="2012-09-28" ReqTyp="0" Ccy="USD">
      <Pty ID="OCC" R="21" />
      <Pty ID="00123" R="4" />
      <Pty ID="U1071207C" R="24">
            <Sub ID="C" Typ="26"/>
            <Sub ID="S" Typ="41"/>
            <Sub ID="078910003" Typ="42"/>
      </Pty>

      <Instrmt Exch="XNLI" SecTyp="OOF" Sym="YG" CFI="OCAFPN" MMY="20121227"
      MatDt="2012-11-27" StrkPx="1550" StrkCcy="USD" StrkMult="1"
      StrkValu="33.2" Mult="33.2" PutCall="1" ExerStyle="1"
      SettlOnOpenFlag="Y"/>

      <Qty Typ="FIN"  Long="10"   Short="0"/>
</PosRpt>
```

Message Layout – Customer Gross Margins Position Report – Futures

Position Report – Customer Gross Margins Positions – Futures							
FIX Mapping					Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Fields			
	PosRpt						
721				RptID	Unique Identifier of the Position	String	326877967
715				BizDt	Clearing Business Date	LocalMktDate	2005-10-22
724				ReqTyp	Request Type 0 = Positions	Int	0
15				Ccy	Currency	Currency	USD
	➔	Pty					
448				ID	Clearing Group Name	String	OCC
452				R	Party Role 21 = Clearing Organization	Int	21
	➔	/Pty					
	➔	Pty					
448				ID	Clearing Member Number	String	00161
452				R	Party Role 4 = Clearing Firm	Int	4
	➔	/Pty					
	➔	Pty					
448				ID	Customer Account ID	String	ABCDEFG
452				R	Party Role 24 = Customer Account	Int	24
	➔	➔	Sub				
448				ID	Account Type C = Customer F = Firm M = Market Maker	String	C
452				R	Party Role 26 = Position Account Type	Int	26
	➔	➔	/Sub				

Position Report – Customer Gross Margins Positions – Futures							
FIX Mapping					Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Fields			
	➔	➔	Sub				
448				ID	Customer Account Type	String	O
452				R	Party Role 41 = Customer Account Type	Int	41
	➔	➔	/Sub				
	➔	➔	Sub				
448				ID	Parent Omnibus Account	String	PARENTOMNI
452				R	Party Role 42 = Parent Omnibus Account	Int	42
	➔	➔	/Sub				
	➔	/Pty					
	➔	Pty					
448				ID	Sub Account Acronym	String	QVO
452				R	Party Role 38 = Position Account	Int	38
	➔	/Pty					
	➔	Instrmt					
207				Exch	Trade Source (MIC)	Exchange	XOCH
167				SecTyp	Security Type FUT = Futures	String	FUT
55				Sym	Symbol	String	ZG
48				ID	Futures Symbol	String	MOT1C
22				Src	8 = Exchange Symbol	String	8
461				CFI	Default Values (refer to page 3)	String	FFSPSX

Position Report – Customer Gross Margins Positions – Futures							
FIX Mapping					Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Fields			
200				MMY	Series/Contract Year, Month, Date	MonthYear	20120126 (4 for year, 2 for month, 2 for day)
541				MatDt	Expiration Date	LocalMktDate	2012-01-26
231				Mult	Multiplier	Decimal	100
	➔	/Instrmt					
	➔	Qty					
703				Typ	Quantity Type FIN = End of Day Quantity	String	FIN
704				Long	Final Long Position	Qty	10
705				Short	Final Short Position	Qty	3327
	➔	/Qty					
	/PosRpt						

Sample Message – Customer Gross Margin Position Report – Futures

Clearing Member 00123 has an AEP1D position in market maker SPO account. The details of the final, edited gross margin position are listed below.

```
<PosRpt RptID="1626174423" BizDt="2012-09-28" ReqTyp="0" Ccy="USD">
      <Pty ID="OCC" R="21" />
      <Pty ID="00123" R="4" />
      <Pty ID="U1071207C" R="24">
            <Sub ID="M" Typ="26"/>
      </Pty>
      <Pty ID="SPO" R="38"/>
      <Instrmt Exch="XOCH" Sym="AEP1D" ID="AEP1D" Src="8" CFI="FFICSX"
      MMY="20121221" MatDt="2012-12-21" Mult="100"/>
      <Qty Typ="FIN"  Long="32471"   Short="6067"/>
</PosRpt>
```

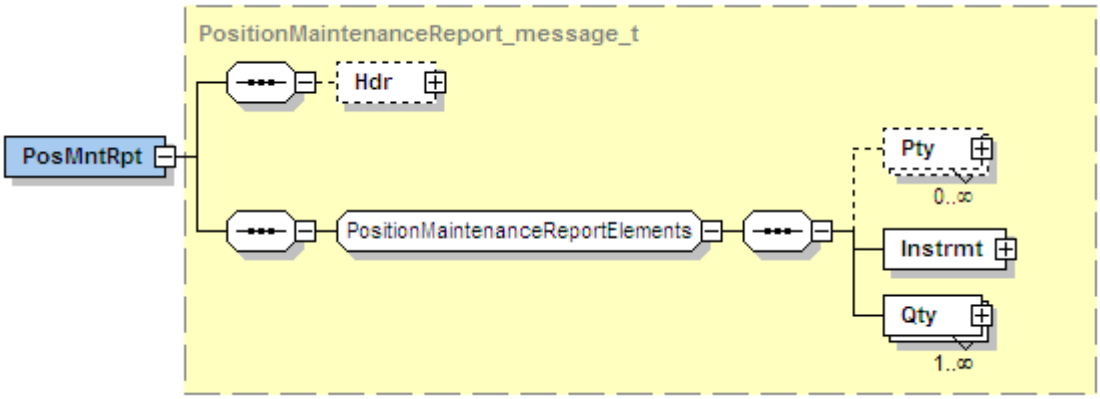
Rejected Holding Submissions

FIX Message: OCC to CM	Position Maintenance Report
Subscription Options:	Clearing Members Only
Delivery Options:	Batch File

Overview

Holding Submissions allow Clearing Members to submit instructions to adjust their long holdings in the Encore Futures Delivery system. If OCC is unable to process the Holding or if the transaction is rejected for any reason, then OCC produces a Rejected Holdings Submission DDS message.

Message Structure



Message Layout – Rejected Holding Submission

Position Maintenance Report – Rejected Holding Submission							
FIX Mapping					Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Fields			
	PosMntRpt						
721				RptID	Unique OCC assigned ID number	String	541386431
709				TxnTyp	Transaction Type 8 = Long Holding	Int	8
712				Actn	Action Code 1 = New	Int	1
722				Stat	Status 2 = Rejected	Int	2
710				ReqID	Request ID from the rejected PosMntReq	String	1658412
715				BizDt	Clearing Business Date	LocalMkt Date	2003-09-10
60				TxnTm	Transaction Time	UTC Timestamp	2003-09-10T12:53:24-05:00
58				Txt	Remarks	String	
	➔	Pty					
448				ID	Clearing Group Name	String	OCC
452				R	Party Role 21 = Clearing Organization	Int	21
	➔	/Pty					
	➔	Pty					
448				ID	Clearing Member Number	String	00352
452				R	Party Role 4 = Clearing Firm	Int	4
	➔	➔	Sub				
523				ID	Account Type (C / F / M)	String	M
803				Typ	26 = Position Account Type	Int	26
	➔	➔	/Sub				
	➔	/Pty					
	➔	Pty					

Position Maintenance Report – Rejected Holding Submission							
FIX Mapping					Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Fields			
448				ID	Sub Account	String	ZZZ
452				R	Party Role 38 = Position Account	Int	38
	➔	/Pty					
	➔	Instrmt					
55				Sym	Symbol	String	ZBE
48				ID	Symbol	String	ZBE
22				Src	ID Source 8 = Exchange Symbol	String	8
461				CFI	Default Values	String	FFSPSX
200				MMY	Series/Contract Year, Month, Date	MonthYear	20031122 (4 for year, 2 for month, 2 for day)
	➔	/Instrmt					
	➔	Qty					
703				Typ	Quantity Type TQ = Transaction Qty	String	TQ
704				Long	Contract Quantity*	Qty	35
976				QtyDt	Trade Date for Holding	LocalMkt Date	2009-11-20
	➔	/Qty					
	/PosMntRpt						

* **Note**: Contract Quantity values of 0 are allowed.

Sample Message – Rejected Holding Submission

```
<FIXML r="20030618" s="20040109" v="4.4" xr="FIA" xv="1.1" xmlns="http://www.fixprotocol.org/FIXML-4-4">
        <Batch BizDt="2010-03-13" TotMsg="1">
                <PosMntRpt RptID=”541386431” Stat=”2” ReqID=”1654812” TxnTyp="8" Actn="1" BizDt="2010-03-13" TxnTm=”2010-03-
                  13T14:26:42-05:00”>
                        <Pty ID="OCC" R="21"/>
                        <Pty ID="00123" R="4">
                                <Sub ID="C" Typ="26" />
                        </Pty>
                        <Instrmt Sym="ZBE" ID=”ZBE” Src=”8” CFI="FXXXXX" MMY="20100322" />
                                <Qty Typ="TQ" Long="150" QtyDt=”2009-11-26”/>
                </PosMntReq>
        </Batch>
</FIXML>
```

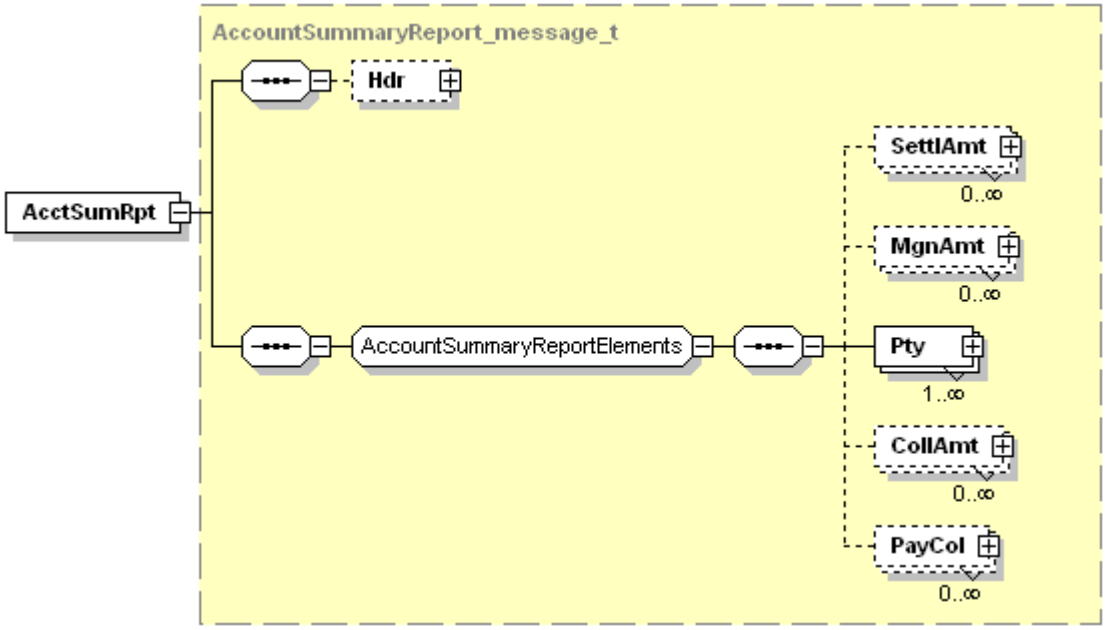
Account Summary

FIX Message:	Account Summary Report
Subscription Options:	Clearing Members only
Delivery Options:	Batch

Overview

The Account Summary message provides margin, collateral and settlement details for all tier accounts in a machine-readable format. The FIXML Account Summary message is produced for every settlement enabled tier account and transmitted to subscribers each time the Account Summary by CMO Core Report is generated.

Message Structure



Message Layout – Account Summary Report

Account Summary Report							
FIX Mapping					Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Comp Block	Fields			
	AcctSumRpt						
715				BizDt	Clearing Business Date	LocalMktDate	2010-07-28
1699				RptID	Unique identifier of the Account Summary Report	String	987654321
900				TotNetValu	Total Collateral Value	Amt	5660300
899				MgnExcess	Excess/Deficit (deficit if value is negative)	Amt	1462781
	➔	SettlAmt					
1701				Amt	Net Settlement (pay if value is negative)	Amt	-486126
1702				Ccy	Settlement Currency	Ccy	USD
	➔	/SettlAmt					
	➔	MgnAmt			*The Margin Amount Data Component Block is generated for each amount type. Typ 22 is used for all margin accounts, while Typ 18 is used only for the Clearing Fund tier account.*		
1644				Typ	Margin Amount Type 22 = Total Margin Requirement (Debit if negative, Credit if positive) 14 = Deficit (Prior to Cash Conversion) 25 = Rolled-Up Margin Deficit 18 = Reserve (Clearing Fund Requirement) 101 = Total Margin Requirement from Margin Memo Collateral Report 102 = Total Margin Requirement from Margin Memo Collateral, Stock Loan, & Repo Report 103 = Minimum Cash Requirement	Int	22
1645				Amt	Margin Amount or Clearing Fund Amount	Amount	-4197519
	➔	/MgnAmt					
	➔	Pty					
448				ID	Clearing Group Name	String	OCC

Account Summary Report							
FIX Mapping					Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Comp Block	Fields			
452				R	Party Role 21 =Clearing Organization	Int	21
	➔	/Pty					
	➔	Pty					
448				ID	Clearing Member Number	String	00017
452				R	Party Role 4 = Clearing Firm	Int	4
	➔	➔	Sub				
523				ID	Account Type (C / F/ M / Z)		M
803				Typ	26 = Account Type		26
	➔	➔	/Sub				
	➔	/Pty					
	➔	Pty					
448				ID	Sub Account	String	N
452				R	Party Role 38 = Position Account	Int	38
	➔	/Pty					
	➔	CollAmt			*The Collateral Amount Group repeats for each collateral type, even if value is zero. The total of these Collateral Values = Total Collateral Value*		
1706				Typ	Type of Collateral CASH = Cash VSEC = Valued Securities CVH GOVT = Government (GS & GE) LOC = Letters of Credit	String	LOC
1704				Amt	Current Collateral Value Currency value currently attributed to the collateral	Amt	5660300
	➔	/CollAmt					

Account Summary Report							
FIX Mapping					Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Comp Block	Fields			
	➔	PayCol			*The Pay Collect component group repeats for each non-zero pay collect. Either a Pay Amount or a Collect Amount is included. The Net Pay/Collect equals the net of pays and collects.*		
1708				Typ	Pay/Collect Type See list of Pay/Collect values on next page.	String	1
1710				PayAmt	Pay/Collect Pay Amount	Amt	
1711				ColAmt	Pay/Collect Collect Amount	Amt	4330
	➔	/PayCol					
	/AcctSumRpt						

Pay/Collect Codes

Value	Pay/Collect Type
1	Net Pay/Collect
2	Miscellaneous
3	Index Trade Premium
4	Equity Trade Premium
5	Index Post Trade Premium
6	Equity Post Trade Premium
7	Equity Intraday Trade Premium
8	Index Intraday Trade Premium
9	Index Cash Difference
10	Equity Cash Difference
11	Index Cash Fixed
12	Equity Cash Fixed
13	Cross Margin Variation
14	Cross Margin Intraday Offset
15	Cross Margin Option Premium
16	Stock Loan Mark to Market
17	Position Pledge
18	Escrow Premium
19	Index Futures Mark to Market
20	Equity Futures Mark to Market
21	Trade Premium
22	Post Trade Premium
23	Intraday Trade Premium
24	Cash Difference
25	Cash Fixed
26	Range Options
28	XX USD Trade Premium Fail
29	XX Trade Premium Fail
36	OTC Deal Premium
37	OTC Post Deal Premium
38	Debt Trade Premium
39	Debt Post Trade Premium
40	Debt Intraday Trade Premium
41	Debt Futures Mark to Market

Sample Message – Account Summary

```
<AcctSumRpt RptID="123456" BizDt="2012-06-10" TotNetValu="0" MgnExcess="46043499">
        <SettlAmt Amt="5930830.17" Ccy="USD"/>
        <MgnAmt Typ="14" Amt="0"/>
        <MgnAmt Typ="22" Amt="46043499"/>
        <MgnAmt Typ="25" Amt="0"/>
        <MgnAmt Typ="101" Amt="4317892"/>
        <MgnAmt Typ="102" Amt="4984964"/>
        <MgnAmt Typ="103" Amt="-48988517"/>
        <Pty ID="OCC" R="21" />
        <Pty ID="00501" R="4" >
              <Sub ID="C" Typ="26"/>
        </Pty>
        <CollAmt Typ="CASH" Amt="0"/>
        <CollAmt Typ="VSEC" Amt="0"/>
        <CollAmt Typ="GOVT" Amt="0"/>
        <CollAmt Typ="LOC" Amt="0"/>
        <PayCol Typ="3" PayAmt="614805"/>
        <PayCol Typ="4" ColAmt="261636"/>
        <PayCol Typ="5" ColAmt="546855"/>
        <PayCol Typ="6" ColAmt="5879848.17"/>
        <PayCol Typ="9" PayAmt="142704"/>
        <PayCol Typ="1" ColAmt="5930830.17"/>
</AcctSumRpt>
```

Implementation Considerations

For Clearing Fund, firms receive the following account information:

```
   <Pty ID="00017" R="4">
      <Sub ID="Z" R="26"/>
</Pty>
<Pty ID=”X” R="38"/>
```

Collateral Response

FIX Message:	Collateral Response
Subscription Options:	Clearing Members Only
Delivery Options:	Real Time
	Batch File

Overview

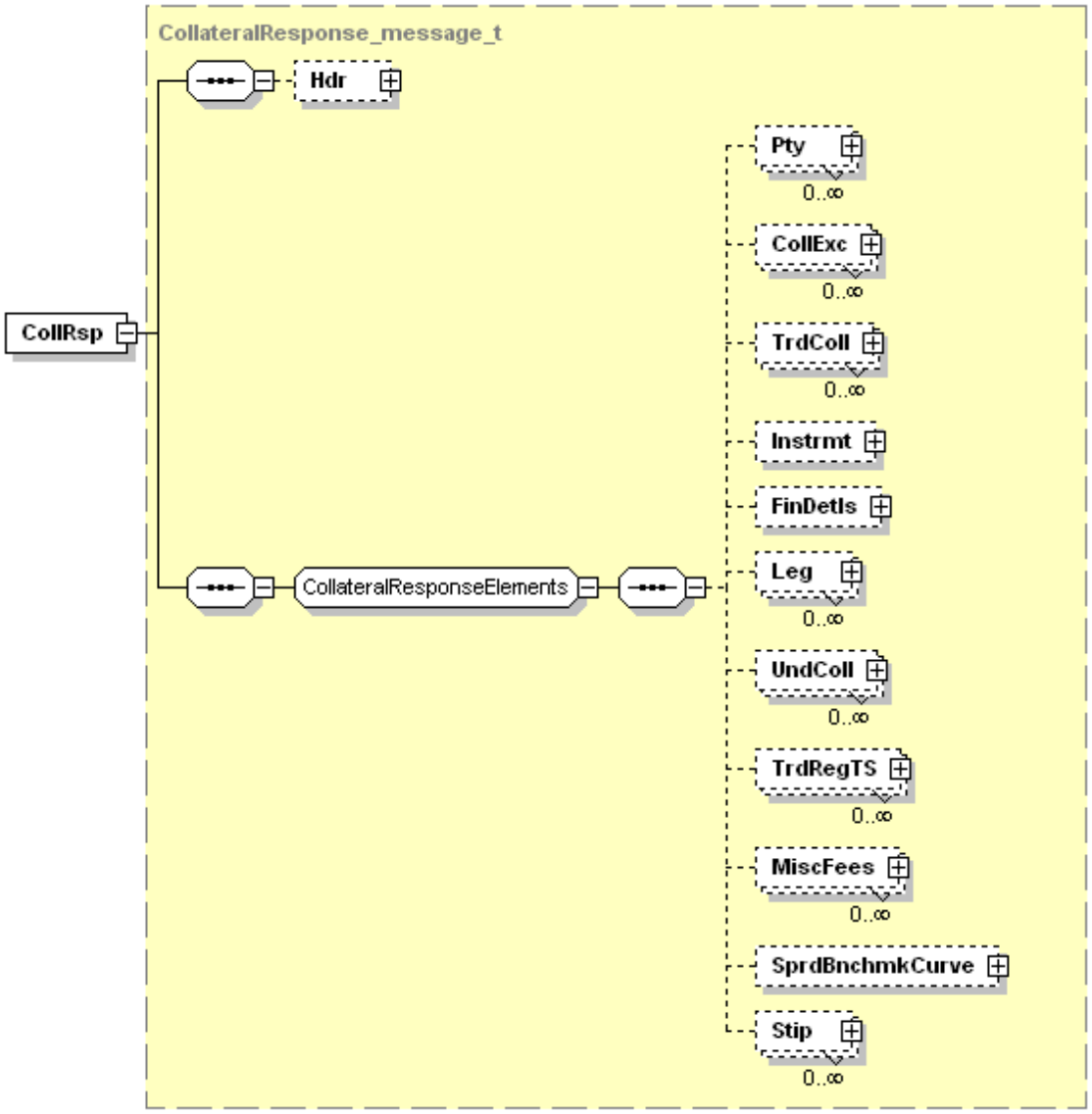
Collateral Response messages are created in real time as accepted collateral deposits and withdrawals are applied throughout the day in ENCORE. Subscribers of this data have the ability to specify if these messages are delivered in a real time or batch mode.

The following collateral types are supported within this message:

- Valued Securities
- Letters of Credit
- Escrow Deposits
- Specific Deposits
- Government Securities
- Government Sponsored Enterprises (GSE)
- Cash

Only transactions involving accepted and processed additions (deposits/pledges) or subtractions (withdrawals/releases) of collateral are included on this report. Any other changes to collateral are not supported through DDS. (For example. pending transactions are not reported).

Message Structure



Message Layout – Collateral Response

Collateral Response							
FIX Mapping					Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Fields			
	CollRsp						
904				RespID	Unique identifier for the collateral report	String	200007957
902				ID	Transaction ID of the collateral transaction (populated for restructured EDs only)	String	16787071
905				RespTyp	Collateral Assignment Response Type 1 = Accepted	Int	1
60				TxnTm	Message creation Date & Time	Timestamp	2006-02-28T15:18:41-06:00
1043				ApplTyp	Identifies collateral that is used to offset a margin position vs. collateral that does not. 0 = margin offset collateral (e.g. specific deposits and escrow deposits) 1 = non-margin offset collateral (e.g. valued securities, government securities, etc.)	Int	1
53				Qty	The number of contracts being covered by the collateral pledge. Escrow Deposits only.	Qty	25
854				QtyTyp	Type of quantity 1 = Contracts Escrow Deposits only.	Int	1
1				Acct	Account Number	String	123456
11				ClOrdID	Order/Branch Sequence Number	String	ABCDEF
715				BizDt	Clearing Business Date	LocalMktDate	2006-02-28
291				FinclStat	Financial Status 3 = Restricted	MultipleValue String	3
900				TotNetValu	Collateral Value or MRAV depending on the collateral type and security	Amt	
15				Ccy	Currency (populated for restructured EDs also)	Currency	USD
	➔	Pty					

Collateral Response							
FIX Mapping					Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Fields			
448				ID	Clearing Group Name	String	OCC
452				R	Party Role 21 = Clearing Organization	Int	21
	➔	/Pty					
	➔	Pty					
448				ID	Clearing Member Number	String	00123
452				R	Party Role 4 = Clearing Firm	Int	4
	➔	➔	Sub				
523				ID	Account Type (C / F / M / Z)	String	C
803				Typ	26 = Position Account Type	Int	26
			/Sub				
	➔	/Pty					
	➔	Pty					
448				ID	Sub Account	String	
452				R	Party Role 38 = Position Account	Int	38
	➔	/Pty					
	➔	Pty					
448				ID	Bank Holding the Collateral for restructured EDs	String	SBOSUS33XXX
452				R	28 = Escrow Bank	Int	28
	➔	/Pty					
	➔	Pty					
448				ID	Asset Manager/Bank holding the collateral. SWIFT BIC Code or OCC assigned acronym if the Asset Manager does not have a SWIFT BIC Code.	String	DTCCUS33XXX
452				R	Party Role 49 = Asset Manager	Int	49

Collateral Response							
FIX Mapping					Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Fields			
	➔	/Pty					
	➔	Pty					
448				ID	Participant's Account at Asset Manager	String	0123
452				R	Party Role 50 = Pledgor Account	Int	50
	➔	/Pty					
	➔	Pty					
448				ID	OCC's Account at Asset Manager	String	0981
452				R	Party Role 51 = Pledgee Account	Int	51
	➔	/Pty					
	➔	Instrmt	**Note:** If collateral was done on a "Valued Basis" (not specifically assigned to an option position) then the instrument block is not shown. The instrument block displays only if the Collateral Type is "SD" or "ED". For all other Collateral Types, the instrument block is not used.				
55				Sym	Symbol	String	GGD
461				CFI	Default Values (refer to page 3)	String	OCASPS
200				MMY	Series/Contract Year, Month, Date	MonthYear	20051214 (4 for year, 2 for month, 2 for day)
541				MatDt	Expiration Date	LocalMktDate	2005-12-14
202				StrkPx	Strike Price (decimal format)	Price	280
947				StrkCcy	Strike Currency	Currency	USD
967				StrkMult	Strike Multiplier	Float	1
968				StrkValu	Strike Value	Float	100
	➔	/Instrmt					
	➔	UndColl					
944				Actn	1 = Add (deposit/pledge) 2 = Remove (withdrawal/release)	Int	1

Collateral Response							
FIX Mapping					Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Fields			
	➔	➔	Undly	**Note:** The Undly block is populated for restructured EDs also. It reports the supporting collateral transaction data			
311				Sym	Underlying Symbol or Security Symbol	String	IBOC
309				ID	Underlying Reference ID	String	459044103
305				Src	1 = CUSIP L = Letter of Credit Number	String	1
462				Prod	Underlying Product 1 = Agency 4 = Currency 5 = Equity 6 = Government 8 = Loan	Int	5
463				CFI	**CHAR1-3** = Instrument (EXX = EQUITY, MRC = CURRENCY, DXX = DEBT, FXX = FUTURE) **CHAR4** = X **CHAR5** = X **CHAR6** = X	String	EXXXXX

Collateral Response							
FIX Mapping					Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Fields			
310				Typ	Underlying Security Type PS = Preferred Stock CS = Common Stock TBILL = US Treasury Bill TBOND = US Treasury Bond TNOTE = US Treasury Note TSTRP = US Treasury Strip TTPS = US Treasury TIPS TTPST = US Treasury TIP Strip CTB = CAD Treasury Bill CAB = CAD Treasury Bond CAN = CAD Treasury Note CAS = CAS Treasury Strip CAT = CAD Treasury TIPS CATS = CAD Treasury TIP Strip FATB = Federal Agency Bill FAB = Federal Agency Bond FAN = Federal Agency Note FAS = Federal Agency Strip FAT = Federal Agency TIPS FATS = Federal Agency TIP Strip CASH = Cash LOAN = Letter of Credit ETF = Exchange Traded Fund	String	CS
542				MatDt	Underlying Maturity Date	LocalMktDate	
435				CpnRt	Underlying Coupon Rate	Percentage	
306				Issr	Underlying Issuer	String	INTERNATIONAL BANCSHARES COR
318				Ccy	Underlying Currency	Currency	USD
879				Qty	Underlying Quantity	Qty	1000

Collateral Response							
FIX Mapping					Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Fields			
810				Px	Underlying Price of the security	Price	28.8
1045				FxRate	Foreign exchange rate used to compute current value (market value)	Price	1.0000
1046				FxRateCalc	Specifies whether the FxRate should be multiplied (M) or divided (D) to derive current value.	String	M
885				CurVal	Underlying Current Value (Market Value)	Amt	28800.00
	➔	➔ ➔	<Stip>	**Note:** This Stip block is populated for restructured EDs only. It reports the collateral value of a supporting collateral transaction.			
888				Typ	CollVal = Collateral Value	String	CollVal
889				Val	Collateral Value	Amt	28800.00
	➔	➔ ➔	</Stip>				
	➔	➔	/Undly				
	➔	/Undcoll					
	➔	<Stip>	**Note:** The below Hold Indicator block is populated for Specific Deposits and Escrow Deposit only.				
233				Typ	Hold = Hold Indicator	String	Hold
234				Val	Hold Indicator	String	Y
	➔	</Stip>					
	➔	<Stip>	All the Stip blocks below are populated for restructured EDs only. These report values at ED contract level.				
233				Typ	BankQty = Bank Quantity	String	BankQty
234				Val	Bank Quantity	Qty	1000
	➔	</Stip>					
	➔	<Stip>					
233				Typ	CalcQty = Calculated Contract Quantity	String	CalcQty
234				Val	Calculated Contract Quantity	Qty	1000
	➔	</Stip>					
	➔	<Stip>					
233				Typ	ThrsQty = Threshold Contract Quantity	String	ThrsQty
234				Val	Threshold Contract Quantity	Qty	1
	➔	</Stip>					

Collateral Response							
FIX Mapping					Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Fields			
	➔	<Stip>					
233				Typ	MktVal = Market Value	String	MktVal
234				Val	Market Value	Amt	28800.00
	➔	</Stip>					
	➔	<Stip>					
233				Typ	CollVal = Collateral Value	String	CollVal
234				Val	Collateral Value	Amt	28800.00
	➔	</Stip>					
	➔	<Stip>					
233				Typ	ReqCollVal = Required Collateral Value	String	ReqCollVal
234				Val	Required Collateral Value	Amt	28800.00
	➔	</Stip>					
	/CollRsp						

Sample Message – Collateral Response – Valued Security Deposit

```
<FIXML r="20030618" s="20040109" v="4.4" xr="FIA" xv="1.1"
xmlns="http://www.fixprotocol.org/FIXML-4-4">

      <Batch>

            <CollRsp RespID="200007957" RespTyp="1" TxnTm="2006-02-28T15:18:41-06:00" ApplTyp="1"
            Ccy="USD" TotNetValu="20160" BizDt="2006-02-28">

                  <Pty ID="OCC" R="21"/>

                  <Pty ID="00123" R="4">
                        <Sub ID="C" Typ="26"/>
                  </Pty>

                  <Pty ID="DTCCUS33XX" R="49"/>
                  <Pty ID="0123" R="50"/>
                  <Pty ID="0981" R="51"/>

                  <UndColl Actn="1">

                        <Undly Sym="IBOC" ID="459044103" Src="1" Prod="5" CFI="EXXXXX" Typ="CS"
                        Issr="INTERNATIONAL BANCSHARES COR" Ccy="USD" Qty="1000" Px="28.8"
                        FxRate="1" FxRateCalc="M" CurVal="28800"/>

                  </UndColl>

            </CollRsp>

      </Batch>

</FIXML>
```

Sample Message – Collateral Response – Government Sponsored Enterprise (GSE) Withdrawal

```
<FIXML r="20030618" s="20040109" v="4.4" xr="FIA" xv="1.1"
xmlns="http://www.fixprotocol.org/FIXML-4-4">

      <Batch>

            <CollRsp RespID="200009142" RespTyp="1" TxnTm="2006-02-28T14:04:21-06:00" ApplTyp="1"
            Ccy="USD" TotNetValu="-871875" BizDt="2006-02-28">

                  <Pty ID="OCC" R="21"/>

                  <Pty ID="00123" R="4">
                        <Sub ID="F" Typ="26"/>
                  </Pty>

                  <Pty ID="DTCCUS33XX" R="49"/>
                  <Pty ID="0123"R="50"/>
                  <Pty ID="0981" R="51"/>

                  <UndColl Actn="2">
                        <Undly ID="3134A4AA2" Src="1" Prod="1" CFI="DXXXXX" Typ="FAB" Mat="2031-03-
                        15" CpnRt="6.75" Issr="FEDERAL HOME LN MTG CORP" Ccy="USD" Qty="-750000"
                        Px="1.25" FxRate="1" FxRateCalc="M" CurVal="-937500"/>

                  </UndColl>

            </CollRsp>

      </Batch>

</FIXML>
```

Sample Message – Collateral Response – Letter of Credit Increase

```
<FIXML r="20030618" s="20040109" v="4.4" xr="FIA" xv="1.1"
xmlns="http://www.fixprotocol.org/FIXML-4-4">

      <Batch>

            <CollRsp RespID="200009143" RespTyp="1" TxnTm="2006-02-28T14:19:31-06:00" ApplTyp="1"
            Ccy="USD" TotNetValu="935000" BizDt="2006-02-28">

                  <Pty ID="OCC" R="21"/>

                  <Pty ID="00123" R="4">
                        <Sub ID="F" Typ="26"/>
                  </Pty>

                  <Pty ID="HATRUS44XX" R="49"/>

                  <UndColl Actn="1">

                        <Undly Sym="USD" ID="DK12345" Src="L" Prod="8" CFI="MRCXXX" Typ="LOAN"
                        Mat="2006-03-01" Issr="HARRIS N.A." Ccy="USD" Qty="935000" Px="1" FxRate="1"
                        FxRateCalc="M" CurVal="935000"/>

                  </UndColl>

            </CollRsp>

      </Batch>

</FIXML>
```

Sample Message – Collateral Response – Escrow Deposit Withdrawal

```
<FIXML r="20030618" s="20040109" v="4.4" xr="FIA" xv="1.1"
xmlns="http://www.fixprotocol.org/FIXML-4-4">

      <Batch>

            <CollRsp RespID="200009148" RespTyp="1" TxnTm="2006-02-28T14:37:24-06:00" ApplTyp="0"
            Qty="-25" QtyTyp="1" TotNetValu="20160" BizDt="2006-02-28">

                  <Pty ID="OCC" R="21"/>

                  <Pty ID="00123" R="4">
                        <Sub ID="C" Typ="26"/>
                  </Pty>

                  <Pty ID="CITIUS33XX" R="49"/>

                  <Instrmt Sym="SZP" CFI="OCEICS" MMY="20060318" MatDt="2006-03-18"
                  StrkPx="1225.00" StrkCcy="USD" StrkMult="1" StrkValu="100"/>

                  <UndColl Actn="2"/>

            </CollRsp>

      </Batch>

</FIXML>
```

Sample Message – Collateral Response – Escrow Deposit with Equity Supporting Collateral

```
<FIXML r="20030618" s="20040109" v="4.4" xr="FIA" xv="1.1"
xmlns="http://www.fixprotocol.org/FIXML-4-4">

     <Batch>

          <CollRsp RespID="200009148" ID="100002141" ="1" TxnTm="2013-05-14T13:06:32-05:00"
          ApplTyp="0" Acct="93825041" ClOrdID="77/2209549" Qty="25" QtyTyp="1" TotNetValu="20160"
          BizDt="2013-05-14" Ccy="USD">

               <Pty ID="OCC" R="21"/>

               <Pty ID="00123" R="4">
                    <Sub ID="C" Typ="26"/>
               </Pty>

               <Pty ID="SBOSUS33XXX" R="28"/>
               <Pty ID="DTCCUS33XXX" R="49"/>
               <Pty ID="0997" R="50"/>
               <Pty ID="0981" R="51"/>

               <Instrmt Sym="SZP" CFI="OCEICS" MMY="20130720" MatDt="2013-07-20"
               StrkPx="1225.00" StrkCcy="USD" StrkMult="1" StrkValu="100"/>

               <UndColl Actn="1">

                    <Undly Sym="GLD" ID="78463V107" Src="1" Prod="5" Typ="CS" Issr="SPDR Gold
                    Trust" Ccy="USD" Qty="400" Px="152.97" FxRate="1" FxRateCalc="M"
                    CurVal="61188.00000">

                         <Stip Typ="CollVal" Val="85000.85"/>

                    </Undly>

               </UndColl>
```

```
                <Stip Typ="CalcQty" Val="1501"/>
                <Stip Typ="BankQty" Val="1501"/>
                <Stip Typ="ThrsQty" Val="1"/>
                <Stip Typ="Hold" Val="Y"/>
                <Stip Typ="MktVal" Val="99999.95"/>
                <Stip Typ="CollVal" Val="85000.85"/>
                <Stip Typ="ReqCollVal" Val="99999.95"/>

            </CollRsp>

        </Batch>

</FIXML>
```

Sample Message – Collateral Response – Escrow Deposit with Treasury Supporting Collateral

```
<FIXML r="20030618" s="20040109" v="4.4" xr="FIA" xv="1.1"
xmlns="http://www.fixprotocol.org/FIXML-4-4">

     <Batch>

          <CollRsp RespID="200009149" ID="100002141" RespTyp="1" TxnTm="2013-05-14T13:06:32-
          05:00" ApplTyp="0" Acct="93825041" ClOrdID="77/2209549" Qty="25" QtyTyp="1"
          TotNetValu="20160" BizDt="2013-05-14" Ccy="USD">

               <Pty ID="OCC" R="21"/>

               <Pty ID="00123" R="4">
                    <Sub ID="C" Typ="26"/>
               </Pty>

               <Pty ID="SBOSUS33XXX" R="28"/>
               <Pty ID="DTCCUS33XXX" R="49"/>
               <Pty ID="0997" R="50"/>
               <Pty ID="0981" R="51"/>

               <Instrmt Sym="SZP" CFI="OCEICS" MMY="20130720" MatDt="2013-07-20"
               StrkPx="1225.00" StrkCcy="USD" StrkMult="1" StrkValu="100"/>

               <UndColl Actn="1">

                    <Undly ID="912828NC0" Src="1" Prod="6" Typ="TNOTE" Mat="2013-05-15"
                    CpnRt="1.375" Issr="United States Treasury Note/Bond" Ccy="USD" Qty="240000"
                    Px="1.0065" FxRate="1" FxRateCalc="M" CurVal="61188.00000">

                         <Stip Typ="CollVal" Val="85000.85"/>

                    </Undly>

               </UndColl>
```

```
                <Stip Typ="CalcQty" Val="1501"/>
                <Stip Typ="BankQty" Val="1501"/>
                <Stip Typ="ThrsQty" Val="1"/>
                <Stip Typ="Hold" Val="Y"/>
                <Stip Typ="MktVal" Val="99999.95"/>
                <Stip Typ="CollVal" Val="85000.85"/>
                <Stip Typ="ReqCollVal" Val="99999.95"/>

            </CollRsp>

        </Batch>

</FIXML>
```

Sample Message – Collateral Response – Escrow Deposit with Cash

```
<FIXML r="20030618" s="20040109" v="4.4" xr="FIA" xv="1.1"
xmlns="http://www.fixprotocol.org/FIXML-4-4">

     <Batch>

          <CollRsp RespID="200009150" ID="100002141" RespTyp="1" TxnTm="2013-05-14T13:06:32-
          05:00" ApplTyp="0" Acct="93825041" ClOrdID="77/2209549" Qty="25" QtyTyp="1"
          TotNetValu="20160" BizDt="2013-05-14" Ccy="USD">

               <Pty ID="OCC" R="21"/>

               <Pty ID="00123" R="4">
                    <Sub ID="C" Typ="26"/>
               </Pty>

               <Pty ID="SBOSUS33XXX" R="28"/>
               <Pty ID="SBOSUS33XXX" R="49"/>

               <Instrmt Sym="SZP" CFI="OCEICS" MMY="20130720" MatDt="2013-07-20"
               StrkPx="1225.00" StrkCcy="USD" StrkMult="1" StrkValu="100"/>

               <UndColl Actn="1">

                    <Undly Sym="USD" Prod="4" Typ="CASH" Issr="United States Dollar" Ccy="USD"
                    Qty="61188" Px="1.000000" FxRate="1" FxRateCalc="M" CurVal="61188.00000">

                         <Stip Typ="CollVal" Val="85000.85"/>

                    </Undly>

               </UndColl>
               <Stip Typ="CalcQty" Val="1501"/>
               <Stip Typ="BankQty" Val="1501"/>
               <Stip Typ="ThrsQty" Val="1"/>
```

```
                <Stip Typ="Hold" Val="Y"/>
                <Stip Typ="MktVal" Val="99999.95"/>
                <Stip Typ="CollVal" Val="85000.85"/>
                <Stip Typ="ReqCollVal" Val="99999.95"/>

            </CollRsp>

        </Batch>

</FIXML>
```

Sample Message – Collateral Response – Escrow Deposit without Supporting Collateral

```
<FIXML r="20030618" s="20040109" v="4.4" xr="FIA" xv="1.1"
xmlns="http://www.fixprotocol.org/FIXML-4-4">

     <Batch>

          <CollRsp RespID="200009155" ID="100002152" RespTyp="1" TxnTm="2013-05-14T13:06:32-
          05:00" ApplTyp="0" Acct="93825041" ClOrdID="77/2209549" Qty="25" QtyTyp="1"
          TotNetValu="20160" BizDt="2013-05-14" Ccy="USD">

               <Pty ID="OCC" R="21"/>
               <Pty ID="00123" R="4">
                    <Sub ID="C" Typ="26"/>
               </Pty>
               <Pty ID="SBOSUS33XXX" R="28"/>

               <Instrmt Sym="SZP" CFI="OCEICS" MMY="20130720" MatDt="2013-07-20"
               StrkPx="1225.00" StrkCcy="USD" StrkMult="1" StrkValu="100"/>

               <UndColl Actn="1"/>

               <Stip Typ="CalcQty" Val="0"/>
               <Stip Typ="BankQty" Val="1501"/>
               <Stip Typ="ThrsQty" Val="0"/>
               <Stip Typ="Hold" Val="Y"/>
               <Stip Typ="MktVal" Val="99999.95"/>
               <Stip Typ="CollVal" Val="85000.85"/>
               <Stip Typ="ReqCollVal" Val="99999.95"/>

          </CollRsp>

     </Batch>
</FIXML>
```

Sample Message – Collateral Response – Specific Deposit Withdrawal

```
<FIXML r="20030618" s="20040109" v="4.4" xr="FIA" xv="1.1"
xmlns="http://www.fixprotocol.org/FIXML-4-4">

     <Batch>
          <CollRsp RespID="200008068" RespTyp="1" TxnTm="2006-02-28T15:28:18-06:00" ApplTyp="0"
          TotNetValu="20160" BizDt="2006-02-28" Acct="ABC123" ClOrdID="XYZ321">

               <Pty ID="OCC" R="21"/>
               <Pty ID="00123" R="4">
                    <Sub ID="F" Typ="26"/>
               </Pty>

               <Pty ID="DTCCUS33XX" R="49"/>
               <Pty ID="0123" R="50"/>
               <Pty ID="0981" R="51"/>

               <Instrmt Sym="QCI" CFI="OCASPS" MMY="20060819" MatDt="2006-08-19" StrkPx="35"
               StrkCcy="USD" StrkMult="1" StrkValu="100"/>

               <UndColl Actn="2">

                    <Undly Sym="IMCL" ID="45245W109" Src="1" Prod="5" CFI="EXXXXX" Typ="CS"
                    Issr="IMCLONE SYS INCCOM" Ccy="USD" Qty="-500" Px="38.52" FxRate="1"
                    FxRateCalc="M" CurVal="-19260" FinclStat="3" />

               </UndColl>

               <Stip Typ="Hold" Val="Y"/>

          </CollRsp>

     </Batch>
</FIXML>
```

Sample Message – Collateral Response – Government Security Deposit

```
<FIXML r="20030618" s="20040109" v="4.4" xr="FIA" xv="1.1"
xmlns="http://www.fixprotocol.org/FIXML-4-4">

      <Batch>

            <CollRsp RespID="200007851" RespTyp="1" TxnTm="2006-02-28T14:45:19-06:00" ApplTyp="1"
            Acct="93825041" ClOrdID="77/2209549" Ccy="USD" TotNetValu="4612391.2" BizDt="2006-02-
            28">

                  <Pty ID="OCC" R="21"/>

                  <Pty ID="00123" R="4">
                        <Sub ID="F" Typ="26"/>
                  </Pty>

                  <Pty ID="DTCCUS33XX" R="49"/>
                  <Pty ID="0123"R="50"/>
                  <Pty ID="0981" R="51"/>

                  <UndColl Actn="1">

                        <Undly ID="9128277J5" Src="1" Prod="6" CFI="DXXXXX" Typ="TNOTE" Mat="2012-
                        01-15" CpnRt="3.375" Issr="INFLATIONARY T-NOTE" Ccy="USD" Qty="4000000"
                        Px="1.194917" FxRate="1" FxRateCalc="M" CurVal="4779680"/>

                  </UndColl>

            </CollRsp>

      </Batch>

</FIXML>
```

Sample Message – Collateral Response – Cash Deposit

```
<FIXML r="20030618" s="20040109" v="4.4" xr="FIA" xv="1.1"
xmlns="http://www.fixprotocol.org/FIXML-4-4">

      <Batch>

            <CollRsp RespID="200007893" RespTyp="1" TxnTm=" 2006-02-28T10:34:35-06:00" ApplTyp="1"
            Ccy="USD" TotNetValu="930000" BizDt="2006-02-28">

                  <Pty ID="OCC" R="21"/>

                  <Pty ID="00123" R="4">
                        <Sub ID="F" Typ="26"/>
                  </Pty>

                  <Pty ID="HATRUS44XX" R="49"/>

                  <UndColl Actn="1">

                        <Undly Sym="USD" Prod="4" CFI="MRCXXX" Typ="CASH" Issr="United States
                        Dollar" Ccy="USD" Qty="930000" Px="1.000000" FxRate="1" FxRateCalc="M"
                        CurVal="930000"/>

                  </UndColl>

            </CollRsp>

      </Batch>

</FIXML>
```

Implementation Considerations

Collateral Types

The ApplTyp tag is used to indicate how collateral is applied. Securities are pledged on either a Valued or Margin Offset basis and this tag represents the manner in which the collateral is pledged (0 = margin offset collateral, 1 = non-margin offset collateral).

Collateral types that are accepted on a valued basis include equities, letters of credit, currency, and government and agency debt. Collateral deposits made on a valued basis are given a collateral value based upon their market value and any applied haircuts. This collateral value offsets the overall margin requirement for the account where the collateral is deposited.

Equities and escrow deposits may be specifically assigned to certain option positions on a margin offset basis. When this is done, the covered positions are removed from the risk margin calculation of a given portfolio.

The table below represents how DDS collateral messages represent collateral type.

	DDS Collateral Messages				
Collateral Type	**Collateral Application Type**	**Product**	**Security Type**	**Quantity Type**	**Other Details**
Valued Security (VS)	1 = Valued	Equity	CS = Common Stock PS = Preferred Stock		

	DDS Collateral Messages				
Collateral Type	**Collateral Application Type**	**Product**	**Security Type**	**Quantity Type**	**Other Details**
Government Security (GS)	1 = Valued	Government	TBOND = US Treasury Bond TNOTE = US Treasury Note TBILL = US Treasury Bill TSTRP = US Treasury Strip TTIPS = US Treasury TIPS TTPST = US Treasury TIP Strip CTB = CAD Treasury Bill CAB = CAD Treasury Bond CAN = CAD Treasury Note CAS = CAS Treasury Strip CAT = CAD Treasury TIPS CATS = CAD Treasury TIP Strip		
Government Sponsored Enterprise (GE)	1 = Valued	Agency	FAC = Federal Agency Coupon FADN = Federal Agency Discount Note		
Cash (CS)	1 = Valued	Currency	CASH = Cash		
Letter of Credit (LC)	1 = Valued	Loan	LOFC = Letter of Credit		
Specific Deposit (SD)	0 = Marginable	Equity	CS = Common Stock		

	DDS Collateral Messages				
Collateral Type	**Collateral Application Type**	**Product**	**Security Type**	**Quantity Type**	**Other Details**
Legacy Escrow Deposit (ED)	0 = Marginable	The Underlying Instrument block which carries Product and Security Type is not shown in this ED message.		QtyTyp=1	ID tag is NOT reported. Also, Escrow Bank XML block is NOT reported.
Restructured Escrow Deposit (ED) without supporting collateral	0 = Marginable	The Underlying Instrument block which carries Product and Security Type is not shown in this ED message.		QtyTyp="1"	**ID="XXX"** is reported. Also, Escrow Bank **<Pty ID="XXX" R="28"/>** Is reported.
Restructured Escrow Deposit (ED) with Supporting Collateral of Equity Type	0 = Marginable	Equity (Prod="5")	CS = Common Stock	QtyTyp="1"	**ID="XXX"** is reported. Also, Escrow Bank **<Pty ID="XXX" R="28"/>** Is reported.
Restructured Escrow Deposit (ED) with Supporting Collateral of Debt Type	0 = Marginable	Government (Prod="6")	TBOND = US Treasury Bond TNOTE = US Treasury Note TBILL = US Treasury Bill TSTRP = US Treasury Strip TTIPS = US Treasury TIPS	QtyTyp="1"	**ID="XXX"** is reported. Also, Escrow Bank **<Pty ID="XXX" R="28"/>** Is reported.

Instrument and Underlying Instrument Blocks

When reporting specific deposit transactions, the covered position is located in the Instrument block and the underlying collateral deposit is in the Underlying Instrument block.

When reporting legacy escrow deposit transactions, the covered position is located in the Instrument block. The collateral underlying the position is held at the escrow bank and not specifically represented to OCC. For this reason, the Underlying Instrument block is not included in OCC's collateral messages for legacy escrow deposit transactions.

When reporting collateral transactions made on a valued basis, there is no specific overlying position to place in the Instrument block. In this case, the Instrument block is not shown, and the collateral is located in the Underlying Instrument block.

Underlying Current Value

The Underlying Current Value (UndrlyCurrentValue, Tag #885) tag indicates the market value currently attributed to this collateral.

Underlying Current Value (market value) is always displayed by OCC in USD, as indicated by the Ccy tag.

Total Net Value

The Total Net Value tag (Tag # 900) is used to indicate the collateral value of the depository record.

Marginable deposits are valued based upon the offset of the overlying option's risk margin. Specific deposits and legacy escrow deposits do not have a collateral value.

All Valued deposits and withdrawals carry a Collateral Value in the Total Net Value tag.

Total Net Value (collateral value) are always displayed by OCC in USD, as indicated by the Ccy tag.

Holds on Specific Deposits

The Stip Type and Value tags (Hold Indicator Typ (Tag #233) and Val (Tag #234)) are used to indicate whether a hold is placed on a specific deposit. If a specific deposit record is flagged as held, the record and its supporting collateral are not released until the flag is removed.

Collateral Report

FIX Message:	Collateral Report
Subscription Options:	Clearing Members Only
Delivery Options:	Batch File

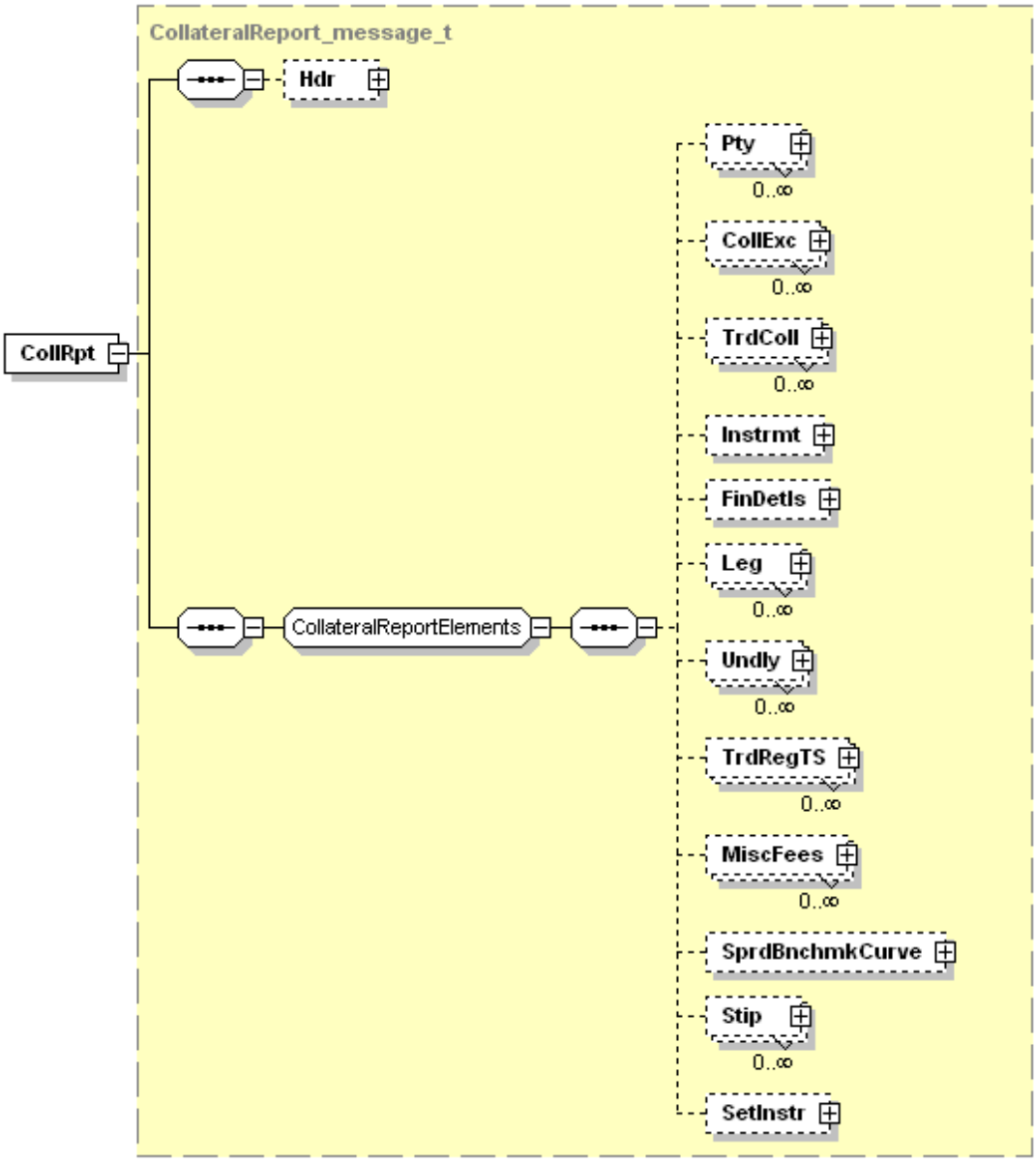
Overview

The Collateral Report message is created as part of the Collateral End of Day job plan and provides users with an overview of their collateral inventory at the time the message is created. This message does not contain any information regarding adds, changes, or deletions within the database.

The following collateral types supported within this message:

- Cash
- Letters of Credit
- Government Securities
- Government Sponsored Enterprises (GSE)
- Valued Securities
- Specific Deposits
- Escrow Deposits

Message Structure



Message Layout – Collateral Report

Collateral Report							
FIX Mapping					Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Fields			
	CollRpt						
908				RptID	Unique identifier for the collateral report	String	12377375
909				ID	Collateral Item ID of supporting collateral (populated for restructured EDs only)	String	16787071
910				Stat	Collateral Status. 3 = Assigned (active collateral)	Int	3
1043				ApplTyp	Identifies collateral that is used to offset a margin position vs. collateral that does not. 0 = margin offset collateral (e.g. specific deposits and escrow deposits) 1 = non-margin offset collateral (e.g. valued securities, government securities, etc.)	Int	0
53				Qty	The number of contracts being covered by the collateral pledge. Escrow Deposits only.	Qty	25
854				QtyTyp	Type of quantity 1 = Contracts Escrow Deposits only.	Int	1
715				BizDt	Date when collateral was created	LocalMktDate	2006-02-28
				Acct	Account Number	String	123456
				ClOrdID	Order/Branch Sequence Number	String	ABCDEF
291				FinclStat	Financial Status 3 = Restricted	Int	3
15				Ccy	Currency of the total net value	Currency	USD
900				TotNetValu	Collateral Value (VS, SD, and legacy ED do not have a value). Collateral Value of ED contract is populated for restructured EDs.	Amount	
	➔	Pty					
448				ID	Clearing Group Name	String	OCC

Collateral Report							
FIX Mapping					Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Fields			
452				R	Party Role 21 = Clearing Organization	Int	21
	➔	/Pty					
	➔	Pty					
448				ID	Clearing Member Number	String	00123
452				R	Party Role 4 = Clearing Firm	Int	4
	➔	➔	Sub				
523				ID	Account Type (C / F / M / Z)	String	C
803				Typ	Party Role 26 = Position Account Type	Int	26
	➔	➔	/Sub				
	➔	/Pty					
	➔	Pty					
448				ID	Sub Account	String	
452				R	Party Role 38 = Position Account	Int	38
	➔	/Pty					
	➔	Pty					
				ID	Bank Holding the Collateral for restructured EDs	String	SBOSUS33XXX
				R	28 = Escrow Bank	Int	28
	➔	/Pty					
	➔	Pty					
448				ID	Asset Manager/Bank holding the collateral SWIFT BIC Code or OCC assigned acronym if the Asset Manager does not have a SWIFT BIC Code.	String	DTCCUS33XXX
452				R	Party Role 49 = Asset Manager	Int	49

Collateral Report							
FIX Mapping					Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Fields			
	➔	/Pty					
	➔	Pty					
448				ID	Participant's Account at Asset Manager	String	0123
452				R	Party Role 50 = Pledgor Account	Int	50
	➔	/Pty					
	➔	Pty					
448				ID	OCC's Account at Asset Manager	String	0981
452				R	Party Role 51 = Pledgee Account	Int	51
	➔	/Pty					
	➔	Instrmt					
55				Sym	Symbol	String	A
461				CFI	Default Values (refer to page 3)	String	OCASPS
200				MMY	Series/Contract Year, Month, Date	MonthYear	20060318 (4 for year, 2 for month, 2 for day)
541				MatDt	Expiration Date	LocalMktDate	2006-03-18
202				StrkPx	Strike Price (decimal format)	Price	35.000000
947				StrkCcy	Strike Currency	Currency	USD
967				StrkMult	Strike Multiplier	Float	1.00000
968				StrkValu	Strike Value	Float	100.000000
	➔	/Instrmt					
	➔	Undly			**Note:** The Undly block is populated for restructured EDs also. It reports the supporting collateral data.		
311				Sym	Underlying Symbol	String	DC
309				ID	Underlying Reference	String	DC Test
305				Src	Security ID Source 1 = CUSIP L = Letter of Credit Number	String	1

Collateral Report							
FIX Mapping					Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Fields			
462				Prod	Underlying Product 1 = Agency 4 = Currency 5 = Equity 6 = Government 8 = Loan	Int	5
463				CFI	CFI Code **CHAR1-3** = Instrument (EXX = EQUITY, MRC = CURRENCY, DXX = DEBT, FXX = FUTURE) **CHAR4** = X **CHAR5** = X **CHAR6** = X	String	EXXXXX

Collateral Report							
FIX Mapping					Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Fields			
310				Typ	Underlying Security Type PS = Preferred Stock CS = Common Stock TBILL = US Treasury Bill TBOND = US Treasury Bond TNOTE = US Treasury Note TSTRP = US Treasury Strip TTPS = US Treasury TIPS TTPST = US Treasury TIP Strip CTB = CAD Treasury Bill CAB = CAD Treasury Bond CAN = CAD Treasury Note CAS = CAS Treasury Strip CAT = CAD Treasury TIPS CATS = CAD Treasury TIP Strip FATB = Federal Agency Bill FAB = Federal Agency Bond FAN = Federal Agency Note FAS = Federal Agency Strip FAT = Federal Agency TIPS FATS = Federal Agency TIP Strip CASH = Cash LOAN = Letter of Credit ETF = Exchange Traded Fund	String	CS
542				MatDt	Underlying Maturity Date	LocalMktDate	
435				CpnRt	Underlying Coupon Rate	Percentage	
306				Issr	Underlying Issuer	String	AGILENT TECHNOLOGIES INC
318				Ccy	Underlying Currency	Currency	USD
879				Qty	Underlying Quantity	Qty	11600

Collateral Report							
FIX Mapping					Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Fields			
1044				AdjQty	Quantity adjusted for corporate actions which have been applied to options but are awaiting DTCC allocation to pledged collateral. (reported only when it is different than Underlying Quantity)	Qty	200
810				Px	Underlying Price	Price	36.590000
1045				FxRate	Foreign exchange rate used to compute current value(market value)	Price	1.000000
1046				FxRateCalc	Specifies whether the FxRate should be multiplied (M) or divided (D) to derive current value.	Int	M
885				CurVal	Underlying Current Value (Market Value)	Amount	424444.00000
				Note: The Stip block below (within the Undly block) is populated for restructured EDs only. It reports the collateral value of supporting collateral item.			
	➔	➔	<Stip>				
888				Typ	CollVal = Collateral Value	String	CollVal
889				Val	Collateral Value	Amt	28800.00
	➔	➔	</Stip>				
	➔	/Undly					
	➔	<Stip>	**Note:** The below Hold Indicator block is populated for Specific Deposits and Escrow Deposits only.				
233				Typ	Hold = Hold Indicator	String	Hold
234				Val	Hold Indicator	String	Y
	➔	</Stip>					
	➔	<Stip>		All the Stip blocks below are populated for restructured EDs only. These report values at the ED contract level.			
233				Typ	BankQty = Bank Quantity	String	BankQty
234				Val	Bank Quantity	Qty	1000
	➔	</Stip>					
	➔	<Stip>					
233				Typ	CalcQty = Calculated Contract Quantity	String	CalcQty

Collateral Report							
FIX Mapping					Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Fields			
234				Val	Calculated Contract Quantity	Qty	1000
	➔	</Stip>					
	➔	<Stip>					
233				Typ	ThrsQty = Threshold Contract Quantity	String	ThrsQty
234				Val	Threshold Contract Quantity	Qty	1
	➔	</Stip>					
	➔	<Stip>					
233				Typ	MktVal = Market Value	String	MktVal
234				Val	Market Value	Amt	28800.00
	➔	</Stip>					
	➔	<Stip>					
233				Typ	ReqCollVal = Required Collateral Value	String	ReqCollVal
234				Val	Required Collateral Value	Amt	28800.00
	➔	</Stip>					
	/CollRpt						

Sample Message – Collateral Report – Specific Deposit

```
<FIXML r="20030618" s="20040109" v="4.4" xr="FIA" xv="1.1" xmlns="http://www.fixprotocol.org/FIXML-4-4">
     <Batch>

          <CollRpt Stat="3" ApplTyp="0" FinclStat="3" Ccy="USD" RptID="12377375" BizDt="2006-02-28">

                    <Pty ID="OCC" R="21"/>
                    <Pty ID="00123" R="4">
                         <Sub ID="C" Typ="26"/>
                    </Pty>

                    <Pty ID="DTCCUS33XX" R="49"/>
                    <Pty ID="0123" R="50"/>
                    <Pty ID="0981" R="51"/>

               <Instrmt Sym="A" CFI="OCASPS" MMY="20060318" MatDt="2006-03-18" StrkPx="35.000000"
               StrkCcy="USD" StrkMult="1.00000" StrkValu="100.000000"/>

                    <Undly Sym="DC" ID="DC Test" Src="1" Prod="5" CFI="EXXXXX" Typ="CS" Issr="AGILENT
                    TECHNOLOGIES INC" Ccy="USD" Qty="11600" Px="36.590000" FxRate="1.000000" FxRateCalc="M"
                    CurVal="424444.00000"/>

               <Stip Typ="Hold" Val="Y"/>

          </CollRpt>

     </Batch>

</FIXML>
```

Sample Message – Collateral Report – Cash

```
<FIXML r="20030618" s="20040109" v="4.4" xr="FIA" xv="1.1" xmlns="http://www.fixprotocol.org/FIXML-4-4">

      <Batch>

            <CollRpt Stat="3" ApplTyp="1" Ccy="USD" TotNetValu="6358.97" RptID="12119761" BizDt="2006-02-28">

                        <Pty ID="OCC" R="21"/>
                        <Pty ID="00123" R="4">
                              <Sub ID="C" Typ="26"/>
                        </Pty>

                        <Pty ID="CITIGB2LXX" R="49"/>

                  <Undly Sym="GBP" Prod="4" CFI="MRCXXX" Typ="CASH" Ccy="USD" Qty="6358.97" Px="1.000000"
                  FxRateCalc="M" CurVal="6358.97"/>

            </CollRpt>

      </Batch>

</FIXML>
```

Sample Message – Collateral Report – Escrow Deposit

```
<FIXML r="20030618" s="20040109" v="4.4" xr="FIA" xv="1.1" xmlns="http://www.fixprotocol.org/FIXML-4-4">

      <Batch>

            <CollRpt Stat="3" ApplTyp="0" Ccy="USD" Qty="500" QtyTyp="1" RptID="12372763" BizDt="2006-06-28">

                        <Pty ID="OCC" R="21"/>
                        <Pty ID="00123" R="4">
                              <Sub ID="C" Typ="26"/>
                        </Pty>

                        <Pty ID="IRVTUS3NXX" R="49"/>

                  <Instrmt Sym="PSU" CFI="OPASPS" MMY="20060819" MatDt="2006-08-19" StrkPx="50.000000"
                  StrkCcy="USD" StrkMult="1.00000" StrkValu="100.000000"/>

            </CollRpt>

      </Batch>

</FIXML>
```

Sample Message – Collateral Report – Escrow Deposit with Equity Supporting Collateral

```
<FIXML r="20030618" s="20040109" v="4.4" xr="FIA" xv="1.1" xmlns="http://www.fixprotocol.org/FIXML-4-4">

     <Batch>

          <CollRpt Stat="3" ApplTyp="0" Ccy="USD" Qty="500" QtyTyp="1" TotNetValu="959435.6"
     RptID="12372763" ID="100005981" BizDt="2013-04-15" Acct="93825041" ClOrdID="77/2209549">

                    <Pty ID="OCC" R="21"/>
                    <Pty ID="00123" R="4">
                         <Sub ID="C" Typ="26"/>
                    </Pty>

                    <Pty ID="IRVTUS3NXX" R="28"/>
                    <Pty ID="DTCCUS33XXX" R="49"/>
                    <Pty ID="0901" R="50"/>
                    <Pty ID="0981" R="51"/>

               <Instrmt Sym="PSU" CFI="OPASPS" MMY="20151219" MatDt="2015-12-19" StrkPx="50.000000"
               StrkCcy="USD" StrkMult="1.00000" StrkValu="100.000000"/>

               <Undly Sym="BELFA" ID="077347201" Src="1" Prod="5" CFI="EXXXXX" Typ="CS" Issr="BEL FUSE
               INCCL A" Ccy="USD" Qty="100" Px="13.4001" FxRate="1" FxRateCalc="M" CurVal="1340.01000">

                    <Stip Typ="CollVal" Val="1139.01000"/>

               </Undly>

               <Stip Typ="CalcQty" Val="48"/>
               <Stip Typ="BankQty" Val="22"/>
               <Stip Typ="ThrsQty" Val="0"/>
               <Stip Typ="Hold" Val="N"/>
               <Stip Typ="MktVal" Val="9594354.60000"/>
               <Stip Typ="ReqCollVal" Val="3667252.54000"/>

          </CollRpt>
```

```
      </Batch>
</FIXML>
```

Sample Message – Collateral Report – Escrow Deposit with Treasury Supporting Collateral

```
<FIXML r="20030618" s="20040109" v="4.4" xr="FIA" xv="1.1" xmlns="http://www.fixprotocol.org/FIXML-4-4">

     <Batch>

          <CollRpt Stat="3" ApplTyp="0" Ccy="USD" Qty="500" QtyTyp="1" TotNetValu="959435.6"
     RptID="12372764" ID="100005981" BizDt="2013-04-15" Acct="93825041" ClOrdID="77/2209549">

                    <Pty ID="OCC" R="21"/>
                    <Pty ID="00123" R="4">
                         <Sub ID="C" Typ="26"/>
                    </Pty>

                    <Pty ID="IRVTUS3NXX" R="28"/>
                    <Pty ID="DTCCUS33XXX" R="49"/>
                    <Pty ID="0901" R="50"/>
                    <Pty ID="0981" R="51"/>

               <Instrmt Sym="PSU" CFI="OPASPS" MMY="20151219" MatDt="2015-12-19" StrkPx="50.000000"
               StrkCcy="USD" StrkMult="1.00000" StrkValu="100.000000"/>

               <Undly ID="912810DF2" Src="1" Prod="6" CFI="DXXXXX" Typ="TBOND" Mat="2013-08-15" CpnRt="12"
               Issr="U.S. T-BOND" Ccy="USD" Qty="11100" Px="1.403125" FxRate="1" FxRateCalc="M"
               CurVal="15574.69000">

                    <Stip Typ="CollVal" Val="15496.82000"/>

               </Undly>

               <Stip Typ="CalcQty" Val="48"/>
               <Stip Typ="BankQty" Val="22"/>
               <Stip Typ="ThrsQty" Val="0"/>
               <Stip Typ="Hold" Val="N"/>
               <Stip Typ="MktVal" Val="9594354.60000"/>
               <Stip Typ="ReqCollVal" Val="3667252.54000"/>
```

```
            </CollRpt>
      </Batch>
</FIXML>
```

Sample Message – Collateral Report – Escrow Deposit with Cash Supporting Collateral

```
<FIXML r="20030618" s="20040109" v="4.4" xr="FIA" xv="1.1" xmlns="http://www.fixprotocol.org/FIXML-4-4">

     <Batch>

          <CollRpt Stat="3" ApplTyp="0" Ccy="USD" Qty="500" QtyTyp="1" TotNetValu="959435.6"
     RptID="12372765" ID="100005981" BizDt="2013-04-15" Acct="93825041" ClOrdID="77/2209549">

                    <Pty ID="OCC" R="21"/>
                    <Pty ID="00123" R="4">
                         <Sub ID="C" Typ="26"/>
                    </Pty>

                    <Pty ID="IRVTUS3NXX" R="28"/>
                    <Pty ID="IRVTUS3NXX" R="49"/>

               <Instrmt Sym="PSU" CFI="OPASPS" MMY="20151219" MatDt="2015-12-19" StrkPx="50.000000"
               StrkCcy="USD" StrkMult="1.00000" StrkValu="100.000000"/>

               <Undly Sym="USD" Prod="4" CFI="MRCXXX" Typ="CASH" Issr="United States Dollar" Ccy="USD"
               Qty="985686.36" Px="1.000000" FxRate="1" FxRateCalc="M" CurVal="985686.36000">

                    <Stip Typ="CollVal" Val="985686.36000"/>

               </Undly>

               <Stip Typ="CalcQty" Val="48"/>
               <Stip Typ="BankQty" Val="22"/>
               <Stip Typ="ThrsQty" Val="0"/>
               <Stip Typ="Hold" Val="N"/>
               <Stip Typ="MktVal" Val="9594354.60000"/>
               <Stip Typ="ReqCollVal" Val="3667252.54000"/>

          </CollRpt>

     </Batch>
```

```
</FIXML>
```

Sample Message – Collateral Report – Government Sponsored Enterprise (GSE)

```
<FIXML r="20030618" s="20040109" v="4.4" xr="FIA" xv="1.1" xmlns="http://www.fixprotocol.org/FIXML-4-4">

     <Batch>

          <CollRpt Stat="3" ApplTyp="1" Ccy="USD" TotNetValu="47849463.33" RptID="12376784" BizDt="2006-02-
          28">

                    <Pty ID="XCME" R="21"/>
                    <Pty ID="00123" R="4">
                         <Sub ID="M" Typ="26"/>
                    </Pty>

                    <Pty ID="HATRUS44XX" R="49"/>

               <Undly ID="313589WH2" Src="1" Prod="1" CFI="DXXXXX" Typ="FAB" Mat="2006-05-03" Issr="FANNIE
               MAE" Ccy="USD" Qty="50000000" Px="0.991800" FxRate="1.000000" FxRateCalc="M"
               CurVal="49590000.00000"/>

          </CollRpt>

     </Batch>

</FIXML>
```

Sample Message – Collateral Report – Government Security

```
<FIXML r="20030618" s="20040109" v="4.4" xr="FIA" xv="1.1" xmlns="http://www.fixprotocol.org/FIXML-4-4">

     <Batch>

          <CollRpt Stat="3" ApplTyp="1" Ccy="USD" TotNetValu="19874237.5" RptID="12115377" BizDt="2006-02-
          28">

                    <Pty ID="OCC" R="21" />
                    <Pty ID="00123" R="4" >
                         <Sub ID="Z" Typ="26"/>
                    </Pty>

                    <Pty ID="DTCCUS33XX" R="49"/>
                    <Pty ID="0123" R="50"/>
                    <Pty ID="0554" R="51"/>

               <Undly ID="912810ED6" Src="1" Prod="6" CFI="DXXXXX" Typ="TBOND" Mat="2019-08-15"
               CpnRt="8.125" Issr="U.S. T-BOND" Ccy="USD" Qty="15700000" Px="1.332500" FxRate="1.000000"
               FxRateCalc="M" CurVal="20920250.00000"/>

          </CollRpt>

     </Batch>

</FIXML>
```

Sample Message – Collateral Report – Letter of Credit

```
<FIXML r="20030618" s="20040109" v="4.4" xr="FIA" xv="1.1" xmlns="http://www.fixprotocol.org/FIXML-4-4">

     <Batch>

          <CollRpt Stat="3" ApplTyp="1" Ccy="USD" TotNetValu="15000000" RptID="12248049" BizDt=" 2006-06-
     28">

                    <Pty ID="OCC" R="21"/>
                    <Pty ID="00123" R="4">
                         <Sub ID="F" Typ="26"/>
                    </Pty>

                    <Pty ID="BKTRUS33XX" R="49"/>

               <Undly Sym="USD" ID="S -12345" Src="L" Prod="8" CFI="MRCXXX" Typ="LOAN" Mat="2006-09-01"
               Issr="DEUTSCHE BANK TRUST COMPANY AMERICAS" Ccy="USD" Qty="15000000" Px="1.000000"
               FxRate="1.000000" FxRateCalc="M" CurVal="15000000"/>

          </CollRpt>

     </Batch>

</FIXML>
```

Sample Message – Collateral Report – Valued Security

```
<FIXML r="20030618" s="20040109" v="4.4" xr="FIA" xv="1.1" xmlns="http://www.fixprotocol.org/FIXML-4-4">

     <Batch>

          <CollRpt Stat="3" ApplTyp="1" Ccy="USD" RptID="12376879" BizDt="2006-02-28">

                    <Pty ID="OCC" R="21"/>
                    <Pty ID="00123" R="4">
                         <Sub ID="C" Typ="26"/>
                    </Pty>

                    <Pty ID="DTCCUS33XX" R="49"/>
                    <Pty ID="0123" R="50"/>
                    <Pty ID="0981" R="51"/>

               <Undly Sym="AA" ID="013817101" Src="1" Prod="5" CFI="EXXXXX" Typ="CS" Issr="ALCOA, INC"
               Ccy="USD" Qty="994" Px="29.560000" FxRate="1.000000" FxRateCalc="M" CurVal="29382.64000"/>

          </CollRpt>

     </Batch>

</FIXML>
```

Implementation Considerations

Collateral Types

The ApplTyp tag is used to indicate how the collateral was applied. Securities are pledged on either a Valued or Margin Offset basis and this tag represents which manner the collateral was pledged (0 = margin offset collateral, 1 = non-margin offset collateral).

Collateral types that are accepted on a valued basis include equities, letters of credit, currency, and government and agency debt. Collateral deposits made on a valued basis are given a collateral value based upon their market value. This collateral value offsets the overall margin requirement for the account where the collateral was deposited.

Equities and escrow deposits may be specifically assigned to certain option positions on a margin offset basis. When this is done, the covered positions are removed from the risk margin calculation of a given portfolio.

The table below represents how DDS collateral messages represent collateral types.

	DDS Collateral Messages				
Collateral Type	**Collateral Application Type**	**Product**	**Security Type**	**Quantity Type**	**Other Details**
Valued Security (VS)	1 = Valued	Equity	CS = Common Stock PS = Preferred Stock		
Government Security (GS)	1 = Valued	Government	TBOND = US Treasury Bond TNOTE = US Treasury Note TBILL = US Treasury Bill		
Government Sponsored Enterprise (GE)	1 = Valued	Agency	FAC = Federal Agency Coupon FADN = Federal Agency Discount Note		
Cash (CS)	1 = Valued	Currency	CASH = Cash		
Letter of Credit (LC)	1 = Valued	Loan	LOFC = Letter of Credit		
Specific Deposit (SD)	0 = Marginable	Equity	CS = Common Stock		

	DDS Collateral Messages				
Collateral Type	**Collateral Application Type**	**Product**	**Security Type**	**Quantity Type**	**Other Details**
Legacy Escrow Deposit (ED)	0 = Marginable	The Underlying Instrument block which carries Product and Security Type is not shown in this ED message.		QtyTyp="1"	ID tag is NOT reported. Also, Escrow Bank XML block is NOT reported/ applicable.
Restructured Escrow Deposit (ED) with Supporting Collateral of Equity Type	0 = Marginable	Equity (Prod="5")	CS = Common Stock	QtyTyp="1"	ID=**"**XXX**"** is reported. Also, Escrow Bank **<Pty ID="XXX" R="28"/>** is reported.
Restructured Escrow Deposit (ED) with Supporting Collateral of Debt Type	0 = Marginable	Government (Prod="6")	TBOND = US Treasury Bond TNOTE = US Treasury Note TBILL = US Treasury Bill TSTRP = US Treasury Strip TTIPS = US Treasury TIPS	QtyTyp="1"	**ID="XXX"** is reported. Also, Escrow Bank **<Pty ID="XXX" R="28"/>** is reported.
Restructured Escrow Deposit (ED) with Supporting Collateral of Cash Type	0 = Marginable	Currency (Prod="4")	CASH = Cash	QtyTyp="1"	**ID="XXX"** is reported. Also, Escrow Bank **<Pty ID="XXX" R="28"/>** is reported.

Instrument & Underlying Instrument Blocks

When reporting specific deposit transactions, the covered position is located in the Instrument block and the underlying collateral deposit is in the Underlying Instrument block.

When reporting legacy escrow deposits, the covered position is located in the Instrument block. The collateral underlying the position is held at the escrow bank and not specifically represented to OCC. For this reason, the Underlying Instrument block is not included in OCC collateral messages for legacy escrow deposits.

When reporting restructured escrow deposits, the covered position is located in the Instrument block. The collateral underlying the position is pledged to OCC at the escrow bank's pledge account at DTCC. Therefore, the Underlying Instrument block is included in OCC collateral messages for restructured escrow deposits.

When reporting collateral transactions made on a valued basis there is no specific overlying position to place in the Instrument block. In this case, the Instrument block is not shown, and the collateral is located in the Underlying Instrument block.

Underlying Current Value

The Underlying Current Value (UndrlyCurrentValue, Tag #885) tag indicates the market value currently attributed to this collateral.

Underlying Current Value (market value) is always displayed by OCC in USD, as indicated by the Ccy tag.

Holds on Specific Deposits

The Stip Type and Value tags (Hold Indicator Typ (Tag #233) and Val (Tag #234)) are used to indicate whether a hold is placed on a specific deposit. If a specific deposit record is flagged as held, the record and its supporting collateral are not released until the flag is removed.

Total Net Value

The Total Net Value tag (Tag # 900) is used to indicate the collateral value of the depository record.

Marginable deposits are valued based upon the offset of the overlying option's risk margin. Specific deposits and legacy escrow deposits do not have a collateral value.

All Valued deposits carry a Collateral Value with the exception of valued security records. Valued security inventory is subject to concentration limits which are not calculated at the inventory level; therefore, they do not carry a Total Net Value tag.

Total Net Value (collateral value) is always displayed by OCC in USD, as indicated by the Ccy tag.

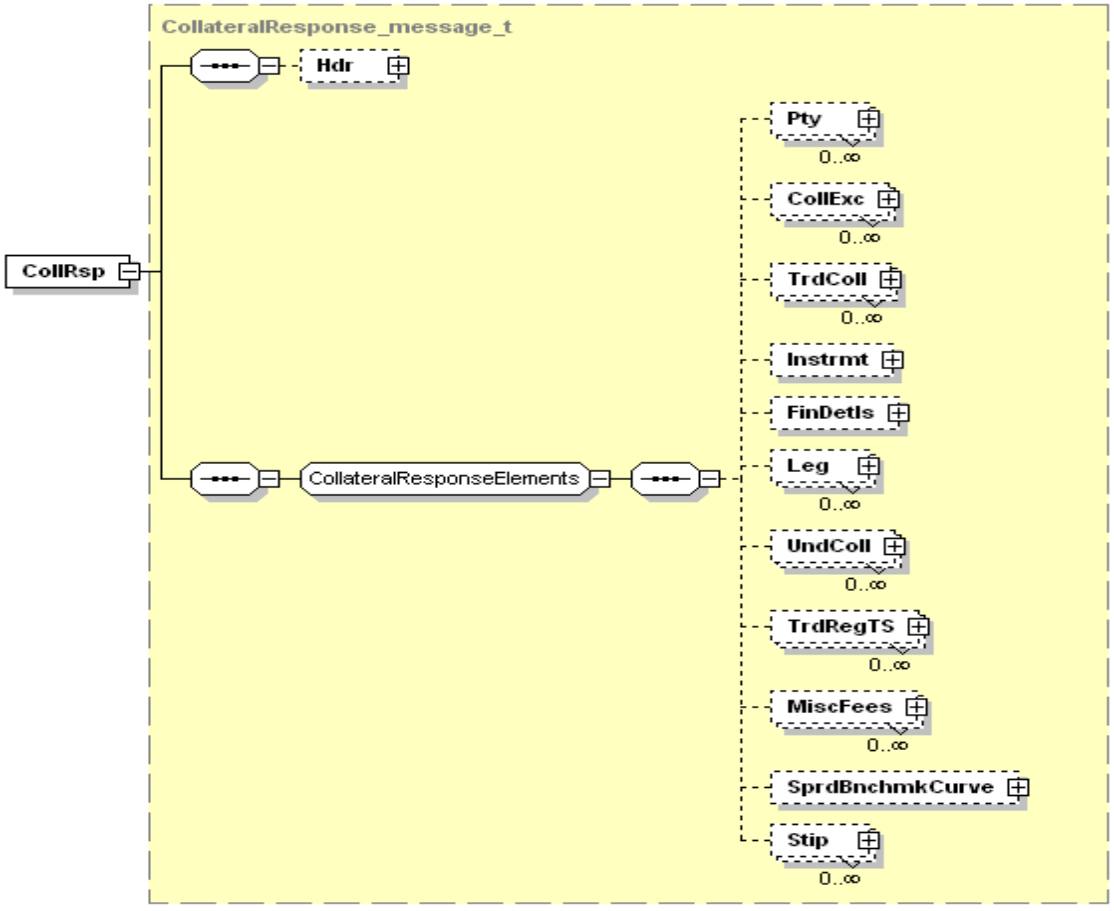
Collateral Response for Margin Requirements Haircuts

FIX Message:	Collateral Response for Margin Requirements Haircut
Subscription Options:	Clearing Members Only
Delivery Options:	Batch File

Overview

Collateral Response for Margin Requirement Haircuts messages are created daily to provide members with the account specific common stock ETF valued security and government security haircuts. These haircuts are used to calculate the amount of requirement adjustment that an accepted deposit or withdrawal transaction generate.

Message Structure



Message Layout – Collateral Response for Margin Requirement Haircuts

Collateral Response for Margin Requirement Haircuts								
FIX Mapping						Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Sub Sub Component Block	Fields			
	CollRsp							
904					RespID	Unique identifier for the collateral report	String	200007957
905					RespTyp	Collateral Assignment Response Type 1 = Accepted	Int	1
60					TxnTm	Message Creation Date & Time	Timestamp	2006-02-28T15:18:41-06:00
715					BizDt	Clearing Business Date	LocalMktDate	2006-02-28
44					Px	Previous Night's Closing Price	Price	100
	➔	Pty						
448					ID	Clearing Group Name	String	OCC
452					R	Party Role 21 = Clearing Organization	Int	21
	➔	/Pty						
	➔	Pty						
448					ID	Clearing Member Number	String	00123
452					R	Party Role 4 = Clearing Firm	Int	4
	➔	➔	Sub					
523					ID	Account Type (C / F / M)	String	C
803					Typ	26 = Position Account Type	Int	26
	➔	➔	/Sub					
	➔	/Pty						
	➔	Pty						
448					ID	Sub Account	String	
452					R	Party Role 38 = Position Account	Int	38
	➔	/Pty						

Collateral Response for Margin Requirement Haircuts								
FIX Mapping						Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Sub Sub Component Block	Fields			
	➔	Instrmt						
55					Sym	Symbol (not displayed for government securities)	String	GGD
48					ID	Cusip	String	123456789
22					Src	ID Source 1 = Cusip	String	1
	➔	/Instrmt						
	➔	UndColl						
944					Actn	1 = Add (deposit/pledge) – Theoretical and Haircut values used for Deposit Transactions	Int	1
	➔	➔	Undly					
246					Fctr	Dollar Value of Haircut	Float	80
	➔	➔	➔	Stip				
888					Typ	Haircut	String	HAIRCUT
889					Val	Haircut Amount	String	.80
	➔	➔	➔	/Stip				
	➔	➔	/Undly					
	➔	/UndColl						
	➔	UndColl						
944					Actn	2 = Remove (withdrawal/release) – Theoretical and Haircut values used for Withdrawal Transactions	Int	2
	➔	➔	Undly					
246					Fctr	Dollar Value of Haircut	Float	90
	➔	➔	➔	Stip				
888					Typ	Haircut	String	HAIRCUT
889					Val	Haircut Amount	String	.90
	➔	➔	➔	/Stip				
	➔	➔	/Undly					

Collateral Response for Margin Requirement Haircuts								
FIX Mapping						Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Sub Sub Component Block	Fields			
	➔	/UndColl						
	➔	Stip						
233					Typ	Double Average Daily Volume	String	2XADV
234					Val	Amount	String	120000
	➔	/Stip						
	➔	Stip						
233					Typ	Valued CIM Share Limit	String	MAXSHARES
234					Val	Amount	String	1200822
	➔	/Stip						
	➔	Stip						
233					Typ	Over Pledged Shares	String	OVERMAX
234					Val	Amount	String	11000
	➔	/Stip						
	/CollRsp							

Sample Message – Collateral Response for Margin Requirement Haircuts

```
<FIXML r="20030618" s="20040109" v="4.4" xr="FIA" xv="1.1" xmlns="http://www.fixprotocol.org/FIXML-4-4">

      <Batch>

            <CollRsp RespID="200008068" RespTyp="1" Px=”100” TxnTm="2006-02-28T15:28:18-06:00"
            BizDt="2006-02-28" Px=”34.23”>

                  <Pty ID="OCC" R="21"/>
                  <Pty ID="00123" R="4">
                        <Sub ID="F" Typ="26"/>
                  </Pty>

                  <Instrmt Sym="QCI" ID="123456789" Src="1"/>

                  <UndColl Actn="1">
                        <Undly Fctr="31.7205987">
                              <Stip Typ=”HAIRCUT” Val=”-0.07331”/>
                        </Undly>
                  </UndColl>

                  <UndColl Actn="2">
                        <Undly Fctr="36.8352453">
                              <Stip Typ=”HAIRCUT” Val=”0.07611”/>
                        </Undly>
                  </UndColl>

                  <Stip Typ="2XADV" Val="54762940"/>
                  <Stip Typ="MAXSHARES" Val="54762940"/>
                  <Stip Typ="OVERMAX" Val="0"/>
            </CollRsp>

      </Batch>
</FIXML>
```

Sample Message – Collateral Response for Margin Requirement Haircuts – Government Security

```
<CollRsp RespID="8009917-10741065" RespTyp="1" TxnTm="2010-02-05T15:51:34-06:00" BizDt="2010-01-
04" Px="1.0391">

      <Pty ID="OCC" R="21"/>
      <Pty ID="00111" R="4">
            <Sub ID="C" Typ="26"/>
      </Pty>

      <Instrmt ID="912828JK7" Src="1"/>

      <UndColl Actn="1">
           <Undly Fctr="1.018318">
                 <Stip Typ="HAIRCUT" Val="-0.02"/>
            </Undly>
      </UndColl>

      <UndColl Actn="2">
            <Undly Fctr="1.028709">
                 <Stip Typ="HAIRCUT" Val="-0.01"/>
            </Undly>
      </UndColl>

      <Stip Typ="2XADV" Val="5659872"/>
      <Stip Typ="MAXSHARES" Val="5659872"/>
      <Stip Typ="OVERMAX" Val="0"/>

</CollRsp>
```

Appendix A

CMTA and Defaulting Rules in DDS Trades Messages

IA = Posted to Intended Account; DA = Posted to Default Account

Trade Type												Who Receives a Trade Message	Info in the First Report Side block	Info in the Second Report Side block	CMTA Party block in the First Report Side	CMTA Party block in the Second Report Side	Value of RptTyp field	Value of TrdSubTyp field
Group	No	Buy					Sell											
		No CMTA		Valid CMTA		Invalid CMTA	No CMTA		Valid CMTA		Invalid CMTA							
		IA*	DA*	IA*	DA*		IA*	DA*	IA*	DA*								
No CMTA on either side	1	X					X					Buy Executing CM	Buy Side	Sell Side	No	No	2	Not present
	1	X					X					Sell Executing CM	Sell Side	Buy Side	No	No	2	Not present
	2		X				X					Buy Executing CM	Buy Side	Sell Side	No	No	8	Not present
	2		X				X					Sell Executing CM	Sell Side	Buy Side	No	No	2	Not present
	3	X						X				Buy Executing CM	Buy Side	Sell Side	No	No	2	Not present
	3	X						X				Sell Executing CM	Sell Side	Buy Side	No	No	8	Not present
	4		X					X				Buy Executing CM	Buy Side	Sell Side	No	No	8	Not present
	4		X					X				Sell Executing CM	Sell Side	Buy Side	No	No	8	Not present
Valid CMTA on the buy side – no CMTA on the sell side	5			X			X					Buy Executing CM	Buy Side	Sell Side	Yes	No	2	0
	5			X			X					Buy Giveup CM	Buy Side	Sell Side	Yes	No	2	0
	5			X			X					Sell Executing CM	Sell Side	Buy Side	No	Yes	2	Not present
	6				X		X					Buy Executing CM	Buy Side	Sell Side	Yes	No	8	0
	6				X		X					Buy Giveup CM	Buy Side	Sell Side	Yes	No	8	0
	6				X		X					Sell Executing CM	Sell Side	Buy Side	No	Yes	2	Not present
	7			X				X				Buy Executing CM	Buy Side	Sell Side	Yes	No	2	0
	7			X				X				Buy Giveup CM	Buy Side	Sell Side	Yes	No	2	0
	7			X				X				Sell Executing CM	Sell Side	Buy Side	No	Yes	8	Not present
	8				X			X				Buy Executing CM	Buy Side	Sell Side	Yes	No	8	0
	8				X			X				Buy Giveup CM	Buy Side	Sell Side	Yes	No	8	0
	8				X			X				Sell Executing CM	Sell Side	Buy Side	No	Yes	8	Not present
No CM	9	X							X			Buy Executing CM	Buy Side	Sell Side	No	Yes	2	Not present

Trade Type													Who Receives a Trade Message	Info in the First Report Side block	Info in the Second Report Side block	CMTA Party block in the First Report Side	CMTA Party block in the Second Report Side	Value of RptTyp field	Value of TrdSubTyp field
Group	No	Buy					Sell												
		No CMTA		Valid CMTA		Invalid CMTA	No CMTA		Valid CMTA		Invalid CMTA								
		IA*	DA*	IA*	DA*		IA*	DA*	IA*	DA*									
	9	X							X				Sell Executing CM	Sell Side	Buy Side	Yes	No	2	0
	9	X							X				Sell Giveup CM	Sell Side	Buy Side	Yes	No	2	0
	10	X								X			Buy Executing CM	Buy Side	Sell Side	No	Yes	2	Not present
	10	X								X			Sell Executing CM	Sell Side	Buy Side	Yes	No	8	0
	10	X								X			Sell Giveup CM	Sell Side	Buy Side	Yes	No	8	0
	11		X						X				Buy Executing CM	Buy Side	Sell Side	No	Yes	8	Not present
	11		X						X				Sell Executing CM	Sell Side	Buy Side	Yes	No	2	0
	11		X						X				Sell Giveup CM	Sell Side	Buy Side	Yes	No	2	0
	12		X							X			Buy Executing CM	Buy Side	Sell Side	No	Yes	8	Not present
	12		X							X			Sell Executing CM	Sell Side	Buy Side	Yes	No	8	0
	12		X							X			Sell Giveup CM	Sell Side	Buy Side	Yes	No	8	0
Valid CMTA on the buy side – Valid CMTA on the sell side	13			X					X				Buy Executing CM	Buy Side	Sell Side	Yes	Yes	2	0
	13			X					X				Buy Giveup CM	Buy Side	Sell Side	Yes	Yes	2	0
	13			X					X				Sell Executing CM	Sell Side	Buy Side	Yes	Yes	2	0
	13			X					X				Sell Giveup CM	Sell Side	Buy Side	Yes	Yes	2	0
	14				X				X				Buy Executing CM	Buy Side	Sell Side	Yes	Yes	8	0
	14				X				X				Buy Giveup CM	Buy Side	Sell Side	Yes	Yes	8	0
	14				X				X				Sell Executing CM	Sell Side	Buy Side	Yes	Yes	2	0
	14				X				X				Sell Giveup CM	Sell Side	Buy Side	Yes	Yes	2	0
	15			X						X			Buy Executing CM	Buy Side	Sell Side	Yes	Yes	2	0
	15			X						X			Buy Giveup CM	Buy Side	Sell Side	Yes	Yes	2	0
	15			X						X			Sell Executing CM	Sell Side	Buy Side	Yes	Yes	8	0
	15			X						X			Sell Giveup CM	Sell Side	Buy Side	Yes	Yes	8	0
	16				X					X			Buy Executing CM	Buy Side	Sell Side	Yes	Yes	8	0
	16				X					X			Buy Giveup CM	Buy Side	Sell Side	Yes	Yes	8	0
	16				X					X			Sell Executing CM	Sell Side	Buy Side	Yes	Yes	8	0
	16				X					X			Sell Giveup CM	Sell Side	Buy Side	Yes	Yes	8	0

Trade Type												Who Receives a Trade Message	Info in the First Report Side block	Info in the Second Report Side block	CMTA Party block in the First Report Side	CMTA Party block in the Second Report Side	Value of RptTyp field	Value of TrdSubTyp field
Group	No	Buy					Sell											
		No CMTA		Valid CMTA		Invalid CMTA	No CMTA		Valid CMTA		Invalid CMTA							
		IA*	DA*	IA*	DA*		IA*	DA*	IA*	DA*								
Invalid CMTA on the buy side – Valid or No CMTA on the sell side	17					X	X					Buy Executing CM	Buy Side	Sell Side	Yes	No	9	Not present
	17					X	X					Sell Executing CM	Sell Side	Buy Side	No	Yes	2	Not present
	18					X		X				Buy Executing CM	Buy Side	Sell Side	Yes	No	9	Not present
	18					X		X				Sell Executing CM	Sell Side	Buy Side	No	Yes	8	Not present
	19					X			X			Buy Executing CM	Buy Side	Sell Side	Yes	Yes	9	Not present
	19					X			X			Sell Executing CM	Sell Side	Buy Side	Yes	Yes	2	0
	19					X			X			Sell Giveup CM	Sell Side	Buy Side	Yes	Yes	2	0
	20					X				X		Buy Executing CM	Buy Side	Sell Side	Yes	Yes	9	Not present
	20					X				X		Sell Executing CM	Sell Side	Buy Side	Yes	Yes	8	0
	20					X				X		Sell Giveup CM	Sell Side	Buy Side	Yes	Yes	8	0
Invalid CMTA on the sell side – Valid or No CMTA on the Buy side	21	X									X	Buy Executing CM	Buy Side	Sell Side	No	Yes	2	Not present
	21	X									X	Sell Executing CM	Sell Side	Buy Side	Yes	No	9	Not present
	22		X								X	Buy Executing CM	Buy Side	Sell Side	No	Yes	8	Not present
	22		X								X	Sell Executing CM	Sell Side	Buy Side	Yes	No	9	Not present
	23			X							X	Buy Executing CM	Buy Side	Sell Side	Yes	Yes	2	0
	23			X							X	Buy Giveup CM	Buy Side	Sell Side	Yes	Yes	2	0
	23			X							X	Sell Executing CM	Sell Side	Buy Side	Yes	Yes	9	Not present
	24				X						X	Buy Executing CM	Buy Side	Sell Side	Yes	Yes	8	0
	24				X						X	Buy Giveup CM	Buy Side	Sell Side	Yes	Yes	8	0
	24				X						X	Sell Giveup CM	Sell Side	Buy Side	Yes	Yes	9	Not present
	25					X					X	Buy Executing CM	Buy Side	Sell Side	Yes	Yes	9	Not present
	25					X					X	Sell Executing CM	Sell Side	Buy Side	Yes	Yes	9	Not present

Product Multipliers in DDS

Strike Multiplier (tag name StrkMult)

It is a number that identifies where the decimal for the strike price should be.

Strike Value (tag name StrkValu):

It is a number that the user defines for 1 unit of strike value.

For example, if the strike value = 100, then a strike of $17 equals $1,700. This field used for calculating extended strike values.

The number of units represented by the Strike Value is comprised of:
1). Number of shares for Equity Options
2). A dollar amount for Index Options

The typical value of this multiplier for Equity and Index options is 100.

The Strike Value in DDS accounts for products with multiple delivery components.

Trade Value (tag name Mult):

It is a number that the user defines for 1 unit of trade premium value.

For example, if the trade value = 100, then a premium of $1.50 equals $150. This field is used for calculating premium money extensions.

The number of units represented by the Trade Value is comprised of:
1). Number of shares for Equity Options
2). A dollar amount for Index Options

The typical value of this multiplier for Equity and Index options is 100. In the majority of cases, the Trade Premium has to be extended to the same base as the Strike Price. Therefore, the Trade Value is usually the same as the Strike Value.

Product Multipliers in Extended Value Calculations

Extended Strike Calculation

DDS method of calculating extended strike:
extended strike price = strike price * strike multiplier * strike value

Extended Trade Premium Calculation

DDS method of calculating extended premium:
extended trade premium per contract = trade premium * trade value * no. of contracts

Product Examples

Standard Equity Option

Symbol = **IBM**
Strike Price = $75
Trade Premium = $3.25
No. of contracts = 25

DDS
Strike Multiplier (StrkMult) = 1.0
Strike Value (StrkValu) = 100
Trade Value (Mult) = 100

Extended Strike Price (DDS) =
strike price * strike multiplier * strike value = $75 * 1.0 * 100 = **$7,500**

Extended Trade Premium (DDS) =
trade premium * trade value * no. of contracts = $3.25 * 100 * 25 = **$8,125**

Equity Option After a 3 for 2 Stock Split

Symbol = **YIW**
Strike Price = $35
Trade Premium = $2.75
No. of contracts = 25

DDS
Strike Multiplier (StrkMult) = 1.0
Strike Value (StrkValu) = 150
Trade Value (Mult) = 150

Extended Strike Price (DDS) =
strike price * strike multiplier * strike value = $35 * 1.0 * 150 = **$5,250**

Extended Trade Premium (DDS) =
trade premium * trade value * no. of contracts = $2.75 * 150 * 25 = **$10,312.50**

Standard Index Option

Symbol = **DJX**
Strike Price = $76
Trade Premium = $1.50
No. of contracts = 25

DDS
Strike Multiplier (StrkMult) = 1.0
Strike Value (StrkValu) = 100
Trade Value (Mult) = 100

Extended Strike Price (DDS) =
strike price * strike multiplier * strike value = $76 * 1.0 * 100 = **$7,600**

Extended Trade Premium (DDS) =
trade premium * trade value * no. of contracts = $1.50 * 100 * 25 = **$3,750**

Mini Index Option

Symbol = **QCE**
Strike Price = $125
Trade Premium = $1.50
No. of contracts = 25

DDS
Strike Multiplier (StrkMult) = 1.0
Strike Value (StrkValu) = 10
Trade Value (Mult) = 10

Extended Strike Price (DDS) =
strike price * strike multiplier * strike value = $125 * 1.0 * 10 = **$1,250**

Extended Trade Premium (DDS) =
trade premium * trade value * no. of contracts = $1.50 * 10 * 25 = **$375**

Appendix B

Revision History

Version	Date	Version Updates
4.13	9/6/2013	Remove references to Equity/Index Option Allocations and identify the current Allocation capability as Futures Options only. Update the Account Summary report Pay/Collect type codes to include: • 38 – Debt Trade Premium • 39 – Debt Post Trade Premium • 40 – Debt Intraday Trade Premium • 41 – Debt Futures Mark to Market Update the Allocation Report – Invalid Allocations message layout and sample message for the following: • System change that allows existing blocks to be repeated (AllExc for trade IDs, Alloc for give-ups). • Remove Amt block for Cash Residual. • Add Misc Fee block for 11 = Conversion (Cash Residual Amount). • Add MiscFee block for 7= Other (Additional Amount). Correct the Futures Trades layouts for Average Price Allocation ID: • Remove AvgPxGrpID from the Trade Capture Report – Futures Trades message layout. • Add AvgPxGrpID to the Trade Capture Report – Cleared Trades (Including Updates) message layout. Standardize references to data types as follows for consistency within document and to agree with industry standards: • Change references to data type “Integer” to “Int”. • Change references to data type “Quantity” to “Qty”. • Change references to data type “Amount” to “Amt”. Add Appendix B – Revision History.
4.14	9/27/2013	Update Trade Capture Reports for Cost Basis Transfer of Account Changes for: • Valid and Deleted Transfers – Options • Valid and Deleted Futures Transfers • Rejected Transfers
4.15	1/28/2014	Update the Collateral Report and Collateral Response Report message layouts, sample messages, and implementation considerations for the new Hold tag for Specific Deposits.
4.16	2/19/14	Update the Allocation Report – Invalid Allocations description and sample message to indicate that the message is limited to 40 trade IDs and single give ups.
4.17	4/25/14	Update the Collateral Response for Margin Requirement Haircut layout and sample messages to include three new tags related to valued security concentration limits.
4.18	6/30/14	Update cover page logo. Remove references to NYL. Spelling corrections: Collateral Response layout tag: (RespTyp, QtyTyp, Acct).

Version	Date	Version Updates
4.19	8/31/2015	Remove an invalid Claim Allocation to Originating/Executing Firm – Sub Allocated sample message. Add futures allocations implementation consideration information. Update Position Report – Options layout and sample message to include the Settlement Date and Intrinsic value. Update Account Summary layout and sample message to include the Minimum Cash Requirement.
4.20	11/19/2015	Update the following sections for Escrow Program Changes: • ENCORE Transmission: Collateral Response • ENCORE Transmission: Collateral Report
4.21	9/18/2017	Update the following message layout tables for potentially negative futures prices: • Trade Capture Report – Valid and Deleted Transfers – Futures • Allocation Report – Valid Futures/Options on Futures • Trade Capture Report – Future Trades • Trade Capture Report – Options & Future Trades (Updates)
4.22	6/27/2018	Update the following message layout tables and sample messages to remove the contra side Customer Account Number and Party Role fields: • Trade Capture Report – Option Trades • Trade Capture Report – Rejected Trades Apply branding updates.
4.23	2/21/2019	Update the following message layout tables to remove references to SLEDS: • Allocation Report – Valid Futures/Options on Futures • Allocation Report – Invalid Futures/Options on Futures • Trade Capture Report – Futures Trades • Trade Capture Report – Rejected/Pended Trades • Trade Capture Report – Options & Future Trades (Updates)
4.24	7/5/2019	TS sample data date changes on pages 77, 79, 83, 85, 98, 100, 116 and 118.
4.25	6/28/2020	• Position Report Options message layout table and Position Report – Position Transmission for Futures sample message: Correct Account type field from “R” to “Typ”. • Contrary Intentions (DNED entry) sample message correction.
5.0	9/30/2021	• Reorder the transmission layout content within the document. • Add Market Identifier Code (MIC) listing. • Minor updates for clarity. • Update the following messages and sample reports to correct MLegRptTyp Spread Indicator valid values: o Trade Capture Report – Option Trades o Trade Capture Report – Futures Trades o Trade Capture Report – Rejected Trades o Trade Capture Report – Clearing Trades
5.1	6/1/2023	• Added MEMX exchange. • Remove references to corporate and money market fund collateral types, which are no longer is use, from layout tables, sample messages, and implementation considerations for the following messages: o Account Summary Report o Collateral Response o Collateral Report • Added minor updates for clarity.
5.2	2/1/2024	• Added MIAX Sapphire exchange.