

ENCORE Data Distribution Services (DDS) Guide - Stock Loan

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Document Organization

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

The following transmissions are defined in this guide:

- Stock Loan Trades
- Stock Loan Transmission and Mark To Market Report
- Stock Loan Adjusted Position Report
- Eligible Securities Report

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) —DDS supports both batch and real-time data delivery and utilizes the FIXML data formatting standard.

ENCORE – The clearing system at 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 will have message format validation, cleaner, more expressive structure, and leverage existing standards. The initial goal is to provide the ability to embed FIXML messages within traditional FIX header and trailers to minimize the impact on existing implementations.

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 this information delivery model, the observer—or client—requests information from the information owner. An example of this model is the download of a document from a web page.

Push Delivery Model – In this information delivery model, the information owner distributes the data to the observer as it deems appropriate. An example of this model 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). *Real-time* is an adjective pertaining to computers or processes that operate in real-time. Real-time describes a human rather than a machine sense of time.

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 is also playing an increasingly 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.

TRANSMISSIONS

ENCORE Transmission: Stock Loan Trades

FIX Message:	Trade Capture Report
Subscription Options:	Equity
Delivery Options:	Real-Time or Batch File

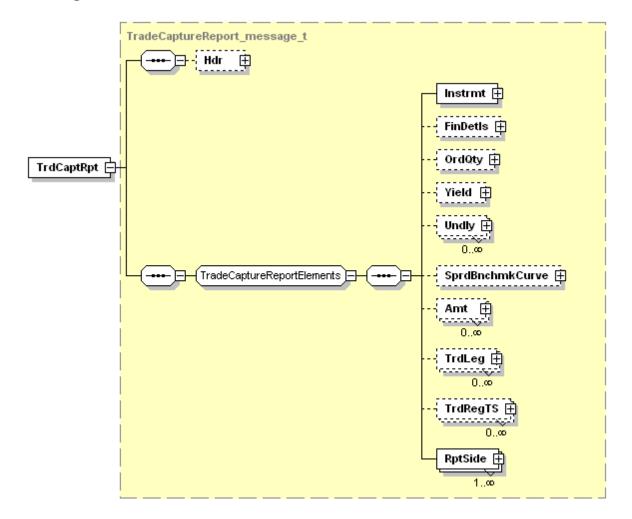
Overview

Trade Capture Report messages will be sent for each processed and applied New Loan and Return/Recall transaction for both the AQS and the bilateral stock loan programs.

Every time that a bilateral stock loan transaction settles at DTCC and clears at OCC, a Trade Capture Report message will be created. Likewise, every time an AQS stock loan transaction clears from AQS to OCC and settles at DTCC, a Trade Capture Report message will be created. Similarly, a Trade Capture Report message will be sent after processing a reclaim of a new loan or a reclaim of a return. Real-Time subscribers will receive these messages immediately and Batch subscribers will receive these messages at the end of the day in a batch file.

The end of day message sent to real-time subscribers serves as an indication that no more Stock Loan Trade Capture Report messages will be sent for that business day.

Message Structure



Message Layout – Trade Capture Report – Stock Loan Trades to OCC Clearing Members

		Trad	e Capture	Report –	Stock Loa	n Trades to OCC Clearing Memb	oers	
Tag #	Report Block		X Mapping Sub Component Block	Sub Sub Component Block	Fields	_ Data	Data Type	Sample Data
	TrdCaptRpt							
571					RptID	Unique Identifier for the Message	String	450391670
1003					TrdID	Unique Identifier for the Trade	String	123456789
75					TrdDt	As Of Date If the Exch (Trade Source MIC) is XAQS and the PosEfct (Open Close Code) is C (i.e. ECS Return), then the TrdDt is the original trade date of the loan. Otherwise, the TrdDt is the current business date.	LocalMkt Date	2010-06-08
60					TxnTm	Trade Time	UTCTimest amp	2010-06- 08T12:00:00
715					BizDt	Clearing Business Date	LocalMkt Date	2010-06-08
487					TransTyp	Trade Report Transaction Type 0 = New 1 = Reclaim	Int	0
828					TrdTyp	Trade Type 0 = Regular Trade	Int	0
32					LastQty	Processed Quantity	Qty	100
31					LastPx	Processed Marking Price	Price	30
	→	Instrmt						
55					Sym	Symbol	String	IBM
48					ID	CUSIP	String	459200101
22					Src	ID Source 1 = CUSIP	String	1
460					Prod	Product Type 5 = Equity	Integer	5
207					Exch	Trade Source (MIC) XAQS = AQS OOTC = bilateral OCC Stock Loan	Exchange	OOTC
	→	/Instrmt						•
	→	Amt						
708					Amt	Settlement Value of Loan/Borrow	Amount	3,000

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		Trad	e Capture	Report -	Stock Loa	an Trades to OCC Clearing Mo	embers	
		F	IX Mapping					
Tag #	Report Block		Sub Component Block	Sub Sub Component Block	Fields	Data	Data Type	Sample Data
707					Тур	Type of Amount SETL = Settlement Value	String	SETL
	→	/Amt						
	→	RptSide						
54					Side	F = Lend G = Borrow	Char	F
77					PosEfct	Open Close Code O = Open (New Loan/Borrow) C = Close (Return/Recall)	Char	0
1005					RptID	Exchange Trade Reference	String	457_DGGED_6547
	→	→	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	00549
452					R	Party Role 4 = Clearing Firm	Int	4
	→	→	→	Sub				
523					ID	Account Type	String	F
803					Тур	26 = Position Account Type (C/F/M)	Int	26
	→	→	→	/Sub				
	→	→	→	Sub				
523					ID	DTCC Participant Number	String	0549
803					Тур	17 = DTCC Participant Number	Int	17
	→	→	→	/Sub				
	→	→	/Pty					
	→	→	Pty					
448					ID	Executing Broker	String	TBH
452					R	Party Role 2 = Executing Broker (NCM)	Int	2
	→	→	/Pty					

		Trad	e Capture	Report -	Stock Loa	an Trades to OCC Clearing Me	embers	
			IX Mapping	•				
Tag#	Report Block	Component Block	Sub Component Block	Sub Sub Component Block	Fields	Data	Data Type	Sample Data
	→	→	Pty				-	
448					ID	Sub Account Acronym	String	MGS
452					R	Party Role 38 = Sub Account	Int	38
	→	→	/Pty					
	→	→	Pty					
448					ID	Customer Account	String	1Z0730
452					R	Party Role 24 = Customer Account	Int	24
	→	→	/Pty					
	→	/RptSide						
	→	RptSide						
54					Side	F = Lend G = Borrow	Char	G
77					PosEfct	Open Close Code O = Open (New Loan/Borrow) C = Close (Return/Recall)	Char	0
1005					RptID	Exchange Trade Reference	String	457_DGGED_6547
	→	→	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	00164
452					R	4 = Clearing Firm	Int	4
	→	→	→	Sub				
523					ID	Account Type	String	С
803					Тур	26 = Position Account Type (C/F/M)	Int	26
	→	→	→	/Sub				
	→	→	→	Sub				
523					ID	DTCC Participant Number	String	0164
803					Тур	17 = DTCC Participant Number	Int	17

		Trad	e Capture	Report -	Stock Loa	n Trades to OCC Clearing N	/lembers	
		F	IX Mapping					
Tag #	Report Block		Sub Component Block	Block	Fields	Data	Data Type	Sample Data
	→	→	→	/Sub				
	→	→	/Pty					
	→	→	Pty					
448					ID	Executing Broker	String	902T
452					R	2 = Executing Broker (NCM)	Int	2
	→	→	/Pty					
	→	→	Pty					
448					ID	Sub Account Acronym	String	XXX
452					R	Party Role 38 = Sub Account	Int	38
	→	→	/Pty					
	→	→	Pty					
448					ID	Customer Account	String	FSAD1564-654
452					R	Party Role 24 = Customer Account	Int	24
	→	→	/Pty					
	→	/RptSide						
	/TrdCaptRpt							

Sample Message - Stock Loan Trade (New Loan) - Bilateral

The bilateral trade capture message below is showing clearing member 00549 opening a new loan of 100 shares in CUSIP 459200101 with contra party 00164 for a settlement value of \$3,000.

```
<TrdCaptRpt
    RptID="450391670"
                                                Unique Identifier for the Message
    TrdID="123456789"
                                                Unique Identifier for the Trade
    TrdDt="2010-12-02"
                                                As of Date
    TxnTm="2010-12-02T17:58:15"
                                                Trade Time
    BizDt="2010-12-02"
                                                Clearing Business Date
    TransTyp="0"
                                                0 = New trade
    TrdTyp="0"
                                                0 = Regular Trade
    LastQty="100"
                                                Quantity
    LastPx="30">
                                                Price
<Instrmt
    Sym="IBM"
                                                Symbol
    ID="459200101"
                                                CUSIP
    Src="1"
                                                1 = CUSIP
    Prod="5"
                                                5 = Equity
                                                OOTC = OCC Bilateral
    Exch="OOTC">
<Amt
    Amt="3000"
                                                Settlement Value of Loan/Borrow
    Typ="SETL">
                                                SETL = Settlement Value
</Amt>
<RptSide
   Side="F"
                                                F = Lender
    PosEfct="0"
                                                O = New Loan
    RptID="457 DGGED 6547">
                                                Exchange Trade Reference
    <Pty ID="OCC" R="21"/>
                                                Clearing Group Name
    <Pty ID="00549" R="4">
                                                Clearing Member Number
        <Sub ID="F" Typ="26"/>
                                                Account Type
        <Sub ID="0549" Typ="17"/>
                                                DTCC Participant ID
    </Pty>
    <Pty ID="TBH" R="2"/>
                                                Executing Broker
    <Pty ID="MGS" R="38"/>
                                                Sub-Account
    <Pty ID="1Z0730" R="24"/>
                                                Optional Customer Account Identifier
</RptSide>
<RptSide
   Side="G"
                                                G = Borrower
   PosEfct="0"
                                                O = New Loan
    RptID="457 DGGED 6547">
                                                Exchange Trade Reference
    <Pty ID="OCC" R="21"/>
                                                Clearing Group Name
    <Pty ID="00164" R="4">
                                                Clearing Member Number
        <Sub ID="C" Typ="26"/>
                                                Account Type
        <Sub ID="0164" Typ="17"/>
                                                DTCC Participant ID
    </Pty>
    <Pty ID="902T" R="2"/>
                                                Executing Broker
</RptSide>
</TrdCaptRpt>
```

Sample Message - Stock Loan Trade (Reclaimed New Loan) - Bilateral

The bilateral trade capture message below is showing clearing member 00549 reclaiming a new loan of 100 shares in CUSIP 459200101 with contra party 00164 for a settlement value of \$3,000.

```
<TrdCaptRpt
    RptID="450391679"
                                                 Unique Identifier for the Message
    TrdID="123456789"
                                                 Unique Identifier for the Trade
    TrdDt="2010-12-02"
                                                 As of Date
    TxnTm="2010-12-02T18:18:15"
                                                 Trade Time
    BizDt="2010-12-02"
                                                 Clearing Business Date
                                                 1 = Reclaimed trade
    TransTyp="1"
    TrdTyp="0"
                                                 0 = Regular Trade
    LastQty="100"
                                                 Quantity
    LastPx="30">
                                                 Price
<Instrmt
    Sym="IBM"
                                                 Symbol
    ID="459200101"
                                                 CUSIP
    Src="1"
                                                 1 = CUSIP
    Prod="5"
                                                 5 = Equity
                                                 OOTC = OCC Bilateral
    Exch="OOTC">
<Amt
    Amt="3000"
                                                 Settlement Value of Loan/Borrow
    Typ="SETL">
                                                 SETL = Settlement Value
</Amt>
<RptSide
    Side="F"
                                                 F = Lender
    PosEfct="0"
                                                 O = New Loan
    RptID="457_DGGED_6547">
                                                 Exchange Trade Reference
    <Pty ID="OCC" R="21"/>
                                                 Clearing Group Name
    <Pty ID="00549" R="4">
                                                 Clearing Member Number
        <Sub ID="F" Typ="26"/>
                                                 Account Type
        <Sub ID="0549" Typ="17"/>
                                                 DTCC Participant ID
    </Pty>
    <Ptv ID="TBH" R="2"/>
                                                 Executing Broker
    <Pty ID="MGS" R="38"/>
                                                 Sub-Account
    <Pty ID="1Z0730" R="24"/>
                                                 Optional Customer Account Identifier
</RptSide>
<RptSide
    Side="G"
                                                 G = Borrower
    PosEfct="0"
                                                 O = New Loan
    RptID="457 DGGED 6547">
                                                 Exchange Trade Reference
    <Pty ID="OCC" R="21"/>
                                                 Clearing Group Name
    <Pty ID="00164" R="4">
                                                 Clearing Member Number
        <Sub ID="C" Typ="26"/>
                                                 Account Type
        <Sub ID="0164" Typ="17"/>
                                                 DTCC Participant ID
    </Pty>
    <Pty ID="902T" R="2"/>
                                                 Executing Broker
</RptSide>
</TrdCaptRpt>
```

Sample Message – Stock Loan Trade (Return)

The AQS trade capture message below is showing clearing member 00608 returning a loan of 2,000 shares in CUSIP 459200101 for a settlement value of \$326,000 with OCC '982' as the contra party.

```
<TrdCaptRpt
                                                 Unique Identifier for the Message
    RptID="000116789"
                                                 Unique Identifier for the Trade
    TrdID="7689333"
    TrdDt="2010-12-02"
                                                 As of Date
    TxnTm="2010-12-02T17:58:15"
                                                 Trade Time
    BizDt="2010-12-02"
                                                Clearing Business Date
    TransTyp="0"
                                                0 = New trade
    TrdTyp="0"
                                                0 = Regular Trade
    LastQty="2000"
                                                 Quantity
    LastPx="163">
                                                 Price
<Instrmt
    Sym="IBM"
                                                Symbol
    ID="459200101"
                                                CUSIP
    Src="1"
                                                 1 = CUSIP
    Prod="5"
                                                 5 = Equity
    Exch="XAQS">
                                                XAQS = AQS
<Amt
    Amt="326000"
                                                Settlement Value of Loan/Borrow
    Typ="SETL">
                                                SETL = Settlement Value
</Amt>
<RptSide
   Side="F"
                                                 F = Lender
    PosEfct="C"
                                                 C =Return
    RptID="006716 NEW">
                                                 Exchange Trade Reference
    <Pty ID="OCC" R="21"/>
                                                 Clearing Group Name
    <Pty ID="00608" R="4">
                                                 Clearing Member Number
        <Sub ID="C" Typ="26"/>
                                                 Account Type
        <Sub ID="0608" Typ="17"/>
                                                 DTCC Participant ID
    </Pty>
   <Pty ID="JEF" R="2"/>
                                                 Executing Broker
    <Pty ID="MGS" R="38"/>
                                                 Sub-Account
    <Pty ID="120730" R="24"/>
                                                 Optional Customer Account Identifier
</RptSide>
<RptSide
    Side="G"
                                                G = Borrow
    PosEfct="C">
                                                 C = Return
    <Pty ID="OCC" R="21"/>
                                                 Clearing Group Name
    <Pty ID="00982" R="4">
                                                 Clearing Member Number
        <Sub ID="F" Typ="26"/>
                                                Account Type
        <Sub ID="0982" Typ="17"/>
                                                 DTCC Participant ID
    </Pty>
</RptSide>
</TrdCaptRpt>
```

Sample Message - EOD Message - Stock Loan Trades

Real-time subscribers will receive an End of Day Message when OCC has completed processing of stock loan transactions for the day.

```
<DDSEODMessage
BizDt="2011-02-15"
MsgTypeCode="TRADE"
SchemaVer="FIX 4.4"
TransType="TRADES"
TransProductSet="EQUI"
FinalizationCycle="ENCORE Stock Loan Finalization"
NoMessagesSent="5741">
</DDSEODMessage>
```

Explanation of Selected Data Fields

TrdDt – If the Exch (Trade Source MIC) is XAQS and the PosEfct (Open Close Code) is C (i.e. ECS Return), then the TrdDt is the original trade date of the loan. Otherwise, the TrdDt is the current business date.

LastPx – The processed marking price used for returns and new loan transactions.

New Loans = LastPx equals DTCC settlement value divided by the number of shares

Returns/Recalls = LastPx equals the Last Close Price for the security multiplied by the margin rate then rounded up to the appropriate level

PosEfct – There are two possible values for PosEfct.

O = Open, for a New Loan or Borrow

C = Close, for a Return or Recall

RptSide & Side – Within each Stock Loan Trade Capture Report, there will be two RptSide groups describing the lender and borrower. Recipients will know which participant is being described by looking at the Side tag:

F = Lender

G = Borrower

AQS transactions are anonymous and will always show the lender or borrower as '982.' Trade Capture Report messages for the bilateral program will show member to member transactions made at DTCC.

Within each RptSide, OCC will provide the DTCC Participant ID used for settlement and the OCC tier account used for clearing (Clearing Group, Clearing Member #, Account Type, and optionally Sub Account). DTCC and AQS will allow stock loan participants to optionally specify an OCC tier account to use for clearing. If a valid tier account was provided on the input to clearing, OCC will use this account for the position. If the specified OCC account was invalid or not provided, OCC will clear the position using the default OCC tier account for the specified DTCC Participant ID.

Qty – The Qty tag will show the quantity of shares processed for the new loan or return.

For returns, OCC will return the specified quantity of shares from the OCC tier account given on the transaction from AQS or DTCC, provided the account maintains enough shares. If there are insufficient shares in the designated account, OCC will return any unfilled quantity from the default tier account provided the default account maintains enough shares. After drawing from both the designated account and the default tier account, any remaining excess shares will be rejected.

Implementation Considerations

Stock Loan messages will be 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 new

transaction or a reclaim. These messages will always be delivered in sequential order. This means that a message for a reclaim will be sent following the initial valid transaction.

ENCORE Transmission: Stock Loan Position and Mark To Market Report

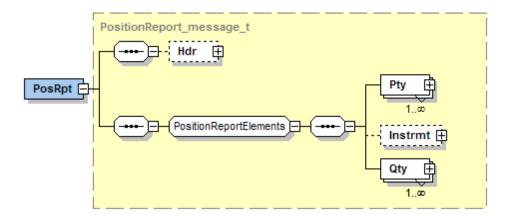
FIX Message:	Position Report
Subscription Options:	Equity
Delivery Options:	Batch File

Overview

OCC will generate a Position Report message for each open stock loan position every business day. Within each message, OCC will provide the account holding the position, the security, the start of day and end of day loan or borrow quantities, the start of day and end of day contract values, and the mark to market amount.

These DDS messages can be used by Clearing Members in conjunction with Trade Capture Report messages to confirm and balance positions and mark to market settlement amounts with OCC.

Message Structure



Message Layout – Stock Loan Position and Mark To Market Report

	Position Report – Stock Loan Position and Mark To Market Report											
Fields	Report Block	FI) Component Block	Mapping Sub Component	Sub Sub Component	Fields	Data	Data Type	Sample Data				
			Block	Block								
	PosRpt						•	•				
721					RptID	Unique Identifier of the Position	String	1129370363				
715					BizDt	Clearing Business Date	LocalMktDate	2010-06-09				
724					ReqTyp	Request Type 0 = Positions	Int	0				
15					Ccv	Currency	Currency	USD				
730					SetPx	Settlement Price	Price	32.5				
731					PriSetPx	Prior Settlement Price	Price	33.5				
	→	→	Pty									
448					ID	Clearing Group Name	String	OCC				
						Party Role						
452					R	21 = Clearing Organization	Int	21				
	→	→	/Pty									
	→	→	Pty		I							
448					ID	Clearing Member Number	String	00608				
452					R	Party Role 4 = Clearing Firm	Int	4				
	→	→	→	Sub								
523					ID	Account Type	String	С				
803					Тур	26 = Position Account Type (C/F/M)	Int	26				
	→	→	→	/Sub								
	→	→	→	Sub								
523					ID	DTCC Participant Number	String	0608				
803					Тур	17 = DTCC Participant Number	Int	17				
	→	→	→	/Sub								
	→	→	/Pty		1							
448					ID	Sub Account Acronym	String	MGS				
452					R	Party Role 38 = Sub Account	Int	38				
	→	→	/Pty									

		Po	sition Rep	ort – Sto	ck Loar	Position and Mark To Mark	et Report	
		FIX	X Mapping			Data	Data Type	Sample Data
Fields	Report Block	Component Block	Sub Component Block	Sub Sub Component Block	Fields			
	→	→	Pty					•
448					ID	Contra DTCC Participant ID	String	0549
						Party Role		
452					R	17 = Contra Firm	Int	17
	→	→	/Pty					
	→	Instrmt						
55					Sym	Security Symbol	String	AET
48					ID	CUSIP	String	00817Y108
22					Src	1 = CUSIP	String	1
400					D I	Product Type	1	_
460					Prod	5 = Equity	Integer	5
)	/Instrmt						
	→	Qty		1	T			
700					T	Quantity Type	Chrim m	SOD
703					Тур	SOD = Start of Day	String	
704					Long	SOD Loan Quantity	Qty	4000
705		10:			Short	SOD Borrow Quantity	Qty	0
	→	/Qty						
	→	Qty		1	T			
700					T	Quantity Type	Otalia a	FINI
703					Тур	FIN = End of Day	String	FIN
704					Long	Current Loan Quantity	Qty	4000
705		/01			Short	Current Borrow Quantity	Qty	0
	→	/Qty						
<u> </u>	→	Amt		1		A second True		
707					Typ	Amount Type	String	SMTM
707 708					Typ	SMTM = Start of Day Contract Value	String	
708		/A t			Amt	Start of Day Contract Value	Qty	134000
	<u>→</u>	/Amt						
	→	Amt		1		Amount Tune		
707					Typ	Amount Type IMTM = Mark to Market Amount	String	IMTM
					Тур			
708					Amt	MTM Amount	Qty	-4000

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	Position Report – Stock Loan Position and Mark To Market Report												
		FI)	K Mapping			Data	Data Type	Sample Data					
Fields	Report Block	Component Block	Sub Component Block	Sub Sub Component Block	Fields								
	→	/Amt											
	→	Amt											
707					Тур	Amount Type FMTM = End of Day Contract Value	String	FMTM					
708					Amt	End of Day Contract Value	Qty	130000					
	→	/Amt											
	/PosRpt												

Sample Message - Stock Loan Position and Mark to Market Report

Clearing Member 00608's stock loan position with 00549 has a prior day price of \$33.50 and has lost \$1.00 in value per share. This results in a new settlement value of \$130,000 for the 4,000 shares.

```
<PosRpt
   RptID="1129370363"
                                            Unique Identifier for the Report
    BizDt="2010-06-09"
                                            Clearing Business Date
   ReqTyp="0"
                                            Positions
   Ccy="USD"
                                            Currency
   SetPx="32.5"
                                            Settlement Price
   PriSetPx="33.5">
                                            Prior Settlement Price
   <Pty ID="OCC" R="21"/>
                                            Clearing Group Name
   <Pty ID="00608" R="4">
                                            Clearing Member Number
       <Sub ID="C" Typ="26"/>
                                            Account Type
       <Sub ID="0608" Typ="17"/>
                                            DTCC Participant ID
   </Pty>
   <Pty ID="MGS" R="38"/>
                                            Sub-Account
   <Pty ID="0549" R="17"/>
                                            Contra DTCC Participant Identifier
<Instrmt
   Sym="AET"
                                            Symbol
   ID="00817Y108"
                                            CUSIP
   Src="1"
                                            1 = CUSIP
   Prod="5">
                                            5 = Equity
<Qty
   Typ="SOD"
                                            Start of Day
   Long="4000"
                                            Start of Day Loan Share Quantity
    Short="0">
                                            Start of Day Borrow Share Quantity
</Qty>
<Qty
   Typ="FIN"
                                            End of Day
   Long="4000"
                                            Current Loan Quantity
    Short="0">
                                            Current Borrow Quantity
</Qty>
<amt Typ="SMTM"Amt="134000"/>
                                            Start of Day Contract Value
<amt Typ="IMTM" Amt="-4000"/>
                                            Mark to Market Amount
<amt Typ="FMTM" Amt="130000"/>
                                            End of Day Contract Value
</PosRpt>
```

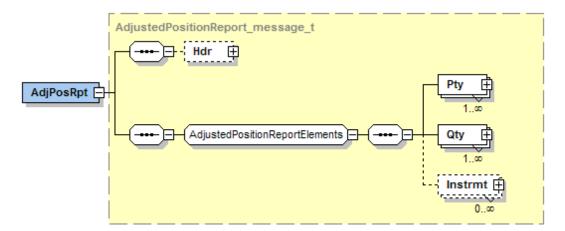
ENCORE Transmission: Stock Loan Adjusted Position Report

FIX Message:	Adjusted Position Report
Subscription Options:	Equity
Delivery Options:	Batch File

Overview

The Adjusted Position Report includes positions that have been adjusted due to a corporate action or manual adjustment. One message will be created for each loan and borrow position that was adjusted. Adjusted Position Report messages will be sent for all system generated stock splits and manually generated corporate action adjustments. Manually generated corporate actions are made for Cash Mergers, Stock Mergers, Spinoffs, Stock Dividends, CUSIP changes, and Reverse Stock Splits.

Message Structure



Message Layout – Stock Loan Adjusted Position Report

		out – Slock I				sition Report – Stock Loan		
			FIX Mappin	g		Data	Data Type	Sample Data
Tag#	Report Block	Component Block		Sub Sub Component Block	Fields			
	AdjPosRpt							
721					RptID	Unique Identifier of the Position	String	1234567
724					ReqTyp	Request Type 0 = Positions	Int	0
715					BizDt	Clearing Business Date	LocalMktDate	2010-09-10
716					SetSesID	Settle Session ID EOD = End of Day	String	EOD
730					SetPx	MTM Settlement Price (after corp. action adjustment)	Price	32.5
734					PriSetPx	Prior MTM Settlement Price (before corp. action adjustment)	Price	32.5
	→	→	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 4 = Clearing Firm	Int	4
	→	→	→	Sub				
523					ID	Account Type	String	С
803					Тур	26 = Position Account Type (C/F/M)	Int	26
	→	→	→	/Sub				
	→	→	→	Sub				
523					ID	DTCC Participant Number	String	0608
803					Тур	17 = DTCC Participant Number	Int	17
	→	→	→	/Sub				
	→	→	/Pty					

	Adjusted Position Report – Stock Loan							
			FIX Mapping	g		Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Sub Sub Component Block	Fields			
	→	→	Pty					
448					ID	Sub Account Acronym	String	MGS
						Party Role		
452		_	(D)		R	38 = Sub Account	Int	38
	→	→	/Pty					
4.40	→	→	Pty			D. 4. DT00 D. 411. 41D.	la	To = 40
448					ID	Contra DTCC Participant ID Party Role	String	0549
452					R	17 = Contra Firm	Int	17
702	→	→	/Pty		<u> </u>	17 - Contra i iiii	III C	17
	→	Qty	/1 ty					
						Quantity Type		
703					Тур	SOD = Start of Day	String	SOD
704					Long	Start of Day Loan Quantity	Qty	4000
705					Short	Start of Day Borrow Quantity	Qty	0
	→	/Qty						
	→	Qty		T	1			
703					Тур	Quantity Type BISO = Buy-In (Sell-Out)	String	BISO
703					Long	Loan Quantity after Buy-In (Sell-Out)	Qty	4000
704					Short	Borrow Quantity after Buy-In (Sell-Out)	Qty	0
700	→	/Qty			Onort	Donow Quantity after Day in (Och Out)	Qty	
	<u>,</u>	Qty						
						Quantity Type		
703					Тур	CAA = Corporate Action Adjustment	String	CAA
704					Long	Loan Quantity after the corp. action adjustment	Qty	4000
705					Short	Borrow Quantity after the corp. action adjustment	Qty	0
	→	/Qty						
	→	Qty						
703					Тур	Quantity Type PA = Manual Adjustment	String	PA
703					Long	Loan Quantity after the manual adjustment	Qty	4000
704					Short	Borrow Quantity after the manual adjustment	Qty	0
700	→	/Qty			Jonort	porrow Quantity after the manual adjustment	JQIY	Įυ

				Adju	sted Po	osition Report – Stock Loan		
			FIX Mapping			Data	Data Type	Sample Data
Tag#	Report Block	Component Block	Sub Component Block	Sub Sub Component Block	Fields		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,
	→	Qty						
703					Тур	Quantity Type MBKD = Matched Book Delete/Decrease	String	MBKD
704					Long	Loan Quantity after the matched book deletion	Qty	4000
705					Short	Borrow Quantity after the matched book deletion	Qty	0
	→	/Qty						
	→	Qty						
703					Тур	Quantity Type MBKA = Matched Book Add/Increase	String	MBKA
704					Long	Loan Quantity after the matched book addition	Qty	4000
705					Short	Borrow Quantity after the matched book addition	Qty	0
	→	/Qty						
	→	Instrmt						
965					Status	Status of Instrument (1=New/2=Old)	String	2
55					Sym	Security Symbol	String	AET
48					ID	CUSIP	String	00817Y108
22					Src	1 = CUSIP	String	1
460					Prod	Product Type 5 = Equity	Integer	5
	→	/Instrmt			_			
	→	Instrmt						
965					Status	Status of Instrument (1=New/2=Old)	String	1
55					Sym	Security Symbol	String	AET
48					ID	Underlying Cusip	String	00817Y109
22					Src	1 = CUSIP	String	1
460					Prod	Product Type 5 = Equity	Integer	5
.50	→	/Instrmt			1. 100		ıtogoi	i e
	/AdjPosRpt	71110011110						
	<i>in</i> ujrusnipi							

Sample Message - Stock Loan Adjusted Position Report - CUSIP Change

Clearing Member 00608 has a loan position of 4,000 shares in security symbol AET, CUSIP 00817Y108. The security's CUSIP is changing to 00817Y109.

```
<AdjPosRpt
    RptID="1129370363"
                                             Unique Identifier for the Report
   ReqTyp="0"
                                             Positions
   BizDt="20010-09-10"
                                             Clearing Business Date
   SetSesID="EOD"
                                             End of Day
   SetPx="32.5"
                                             Settlement Price
   PriSetPx="32.5">
                                             Prior Settlement Price
   <Pty ID="OCC" R="21"/>
                                             Clearing Group Name
   <Ptv ID="00608" R="4">
                                             Clearing Member Number
       <Sub ID="C" Typ="26"/>
                                             Account Type
       <Sub ID="0608" Typ="17"/>
                                             DTCC Participant ID
   </Pty>
   <Pty ID="MGS" R="38"/>
                                             Sub-Account
   <Pty ID="0549" R="17"/>
                                             Contra DTCC Participant Identifier
<Qty
   Typ="SOD"
                                             Start of Day
   Long="4000"
                                             Start of Day Loan Quantity
    Short="0"/>
                                             Start of Day Borrow Quantity
<Qty
   Typ="BISO"
                                             Buy-In (Sell-Out)
   Long="4000"
                                             Loan Quantity after Buy-In (Sell-Out)
    Short="0"/>
                                             Borrow Quantity after Buy-In (Sell-Out)
<Qty
   Typ="CAA"
                                             Corporate Action Adjustment
   Long="4000"
                                             Loan Quantity after the Corporate Action Adjustment
    Short="0"/>
                                             Borrow Quantity after the Corporate Action Adjustment
<Instrmt
   Status="2"
                                             Old
   Sym="AET"
                                             Symbol
   ID="00817Y108"
                                             CUSIP
   Src="1"
                                             1 = CUSIP
   Prod="5"/>
                                             5 = Equity
<Instrmt
   Status="1"
                                             New
   Sym="AET"
                                             Symbol
   ID="00817Y109"
                                             CUSIP
   Src="1"
                                             1 = CUSIP
   Prod="5"/>
                                             5 = Equity
</AdjPosRpt>
```

Sample Message - Adjusted Position without a CUSIP change - Stock Loan

Clearing Member 00608 has a loan position of 4,000 shares in security symbol AET, CUSIP 00817Y108. A 2-for-1 stock split occurs and the settlement price is changed from 32.50 to 16.25 and the number of shares increases to 8,000.

```
<AdiPosRpt
   RptID="41386431"
                                             Unique Identifier for the Report
   ReqTyp="0"
                                             Positions
   BizDt="2010-09-10"
                                             Clearing Business Date
   SetSesID="EOD"
                                             End of Day
   SetPx="16.25"
                                             Settlement Price
   PriSetPx="32.5">
                                             Prior Settlement Price
   <Pty ID="OCC" R="21"/>
                                             Clearing Group Name
   <Pty ID="00608" R="4">
                                             Clearing Member Number
       <Sub ID="C" Typ="26"/>
                                             Account Type
       <Sub ID="0608" Typ="17"/>
                                             DTCC Participant ID
   </Pty>
   <Pty ID="MGS" R="38"/>
                                             Sub-Account
   <Pty ID="0549" R="17"/>
                                             Contra DTCC Participant Identifier
<Qty
   Typ="SOD"
                                             Start of Day
   Long="4000"
                                             Start of Day Loan Quantity
   Short="0"/>
                                             Start of Day Borrow Quantity
<Qty
   Typ="BISO"
                                             Buy-In (Sell-Out)
   Long="4000"
                                             Loan Quantity after Buy-In (Sell-Out)
    Short="0"/>
                                             Borrow Quantity after Buy-In (Sell-Out)
<Qty
   Typ="CAA"
                                             Corporate Action Adjustment
   Long="8000"
                                             Loan Quantity after the Corporate Action Adjustment
   Short="0"/>
                                             Borrow Quantity after the Corporate Action Adjustment
<Instrmt
   Status="2"
                                             Old
   Sym="AET"
                                             Symbol
   ID="00817Y108"
                                             CUSIP
   Src="1"
                                             1 = CUSIP
   Prod="5"
                                             5 = Equity
   Dated="2009-07-21"/>
                                             Activation Date
<Instrmt
   Status="1"
                                             New
   Sym="AET"
                                             Symbol
   ID="00817Y108"
                                             CUSIP
   Src="1"
                                             1 = CUSIP
   Prod="5"/>
                                             5 = Equity
</AdjPosRpt>
```

Sample Message – Matched Book Delete/Decrease – Stock Loan

A matched book delete or decrease (MBKD) transaction decreases the position of the defaulting clearing member to the greatest extent possible based on the rematching of the lender and borrower of the defaulting clearing member's position for the same security. In the below sample message, Clearing Member 00286 has a start of day loan position of 900 shares for security symbol EIGR, CUSIP 28249U105. After a matched book delete transaction of 900 shares is applied, the Long is 0.

```
<AdiPosRpt
   RptID="16305259"
                                             Unique Identifier for the Report
                                             Positions
   ReqTyp="0"
   BizDt="2016-08-15"
                                             Clearing Business Date
   SetSesID="FOD"
                                             End of Day
                                             Settlement Price
   SetPx="19"
   PriSetPx="19">
                                             Prior Settlement Price
   <Pty ID="OCC" R="21"/>
                                             Clearing Group Name
   <Pty ID="00286" R="4">
                                             Clearing Member Number
       <Sub ID="C" Typ="26"/>
                                             Account Type
       <Sub ID="0286" Typ="17"/>
                                             DTCC Participant ID
   </Pty>
   <Pty ID="0352" R="17"/>
                                             Contra DTCC Participant Identifier
<Qtv
   Typ="SOD"
                                             Start of Day
   Long="900"
                                             Start of Day Loan Quantity
   Short="0"/>
                                             Start of Day Borrow Quantity
<Qty
   Typ="MBKD"
                                             Matched Book Delete/Decrease
   Long="0"
                                             Loan Quantity after Matched Book Delete/Decrease
   Short="0"/>
                                             Borrow Quantity after Matched Book Delete/Decrease
<Instrmt
   Status="2"
                                             Old
   Sym="EIGR"
                                             Symbol
   ID="28249U105"
                                             CUSIP
   Src="1"
                                             1 = CUSIP
   Prod="5"/>
                                             5 = Equity
<Instrmt
   Status="1"
                                             New
   Sym="EIGR"
                                             Symbol
   ID="28249U105"
                                             CUSIP
   Src="1"
                                             1 = CUSIP
                                             5 = Equity
   Prod="5"/>
</AdjPosRpt>
```

Sample Message – Matched Book Add/Increase – Stock Loan

A matched book add or increase (MBKA) transaction establishes a new position between the counterparties of a defaulting Clearing Member. In the below sample message, Clearing Member 00353 is the surviving lender of the defaulting clearing member. Clearing Member 0076 is the surviving borrower of the defaulting clearing member. After a matched book add transaction is applied, Clearing Member 00353 has a loan position of 3000 shares in security symbol KMX, CUSIP 143130102.

```
<AdjPosRpt
   RptID="16305245"
                                             Unique Identifier for the Report
   ReqTyp="0"
                                             Positions
   BizDt="2016-08-15"
                                             Clearing Business Date
   SetSesID="EOD"
                                             End of Day
                                             Settlement Price
   SetPx="61"
   PriSetPx="0">
                                             Prior Settlement Price
   <Pty ID="OCC" R="21"/>
                                             Clearing Group Name
   <Pty ID="00353" R="4">
                                             Clearing Member Number
       <Sub ID="F" Typ="26"/>
                                             Account Type
       <Sub ID="8353" Typ="17"/>
                                             DTCC Participant ID
   </Ptv>
   <Pty ID="0076" R="17"/>
                                             Contra DTCC Participant Identifier
<Qtv
   Typ="SOD"
                                             Start of Day
   Long="0"
                                             Start of Day Loan Quantity
   Short="0"/>
                                             Start of Day Borrow Quantity
<Qtv
   Typ="MBKA"
                                             Matched Book Add/Increase
   Long="3000"
                                             Loan Quantity after Matched Book Add/Increase
   Short="0"/>
                                             Borrow Quantity after Matched Book Add/Increase
<Instrmt
                                             Old
   Status="2"
   Sym="KMX"
                                             Symbol
                                             CUSIP
   ID="143130102"
   Src="1"
                                             1 = CUSIP
   Prod="5"/>
                                             5 = Equity
<Instrmt
   Status="1"
                                             New
   Sym="KMX"
                                             Symbol
   ID="143130102"
                                             CUSIP
   Src="1"
                                             1 = CUSIP
   Prod="5"/>
                                             5 = Equity
</AdjPosRpt>
```

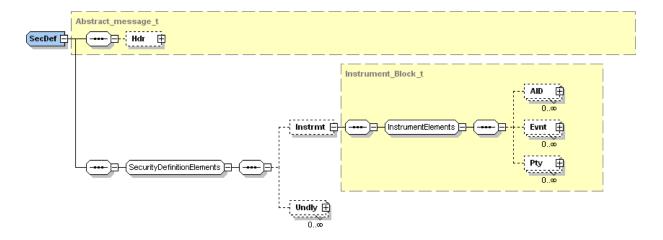
ENCORE Transmission: Eligible Securities Report

FIX Message:	Security Definition
Subscription Options:	Equity
Delivery Options:	Batch File

Overview

The Eligible Securities file provides a list of all securities which are eligible for stock loan and/or collateral. The message includes the symbol and cusip for each security.

Message Structure



Message Layout – Security Definition – Eligible Securities

	Security Definition –Eligible Securities Report							
		FIX Map	ping		Data	Data Type	Sample Data	
Tag #	Report Block	Component Block	Sub Component Block	Fields				
	SecDef							
715				BizDt	Clearing Business Date	Business Date	2010-06-08	
964				RptID	Unique Identifier of the Eligible Security	String	421	
	→	Instrmt						
55				Sym	Security Symbol	String	AET	
48				ID	CUSIP	String	00817Y108	
22				Src	1 = CUSIP	String	1	
460				Prod	Product Type 5 = Equity	Integer	5	
	→	/Instrmt		1.12.2	10 = 14····)			
	rogram.	arket Segment	•	ls on the nur	mber of programs each security is eligible for. One Market Seg	gment block will be	included for	
	→	→	MktSegGrp					
1300				MktSegID	Identifies the market segment STOCKLOAN = Eligible for Stock Loan COLLATERAL = Eligible for Collateral	String	STOCKLOAN	
	→	→	/ MktSegGrp					
	/SecDef							

Sample Message – Eligible Securities

This message is showing all of the securities that are eligible for deposit in either the bilateral or AQS stock loan programs and that it is also Collateral eligible.

```
<SecDef
   BizDt="2010-09-10"
                                          Clearing Business Date
   RptID="41386431">
                                          Unique Identifier for the Report
<Instrmt
   Sym="AET"
                                          Symbol
                                          CUSIP
   ID="00817Y108"
   Src="1"
                                          1 = CUSIP
   Prod="5">
                                          5 = Equity
<MktSegGrp
   MktSegID= "STOCKLOAN">
                                          Stock Loan Eligible
</MktSegGrp>
<MktSegGrp
   MktSegID= "COLLATERAL">
                                          Collateral Eligible
</MktSegGrp>
</SecDef>
```

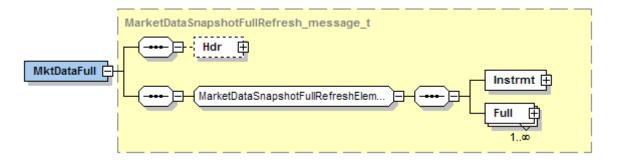
ENCORE Transmission: Stock Loan Eligible Security Prices

FIX Message:	Hedge Eligible Security Prices		
Subscription Options:	Equity		
Delivery Options:	Batch File		

Overview

The Hedge Eligible Security Prices file will include all securities which are Stock Loan eligible and the values used for mark to market processing.

Message Structure



Message Layout – Stock Loan Eligible Security Prices

	Market Data Snapshot Full Refresh – Stock Loan Eligible Security Prices								
FIX Mapping					Data	Data Type	Sample		
Tag #	Report Block	Component Block	Sub Component Block	Fields			Data		
	MktDataF	ull							
963				RptID	Unique Identifier of the Prices Report	String	6009999		
715				BizDt	Clearing Business Date	LocalMktDate	2011-04-07		
	→	Instrmt							
55				Sym	Symbol	String	IBM		
48				ID	Underlying Cusip	String	459200101		
22				Src	1 = CUSIP	String	1		
107				Desc	Security Description	String	INTL BUSINESS MACHINE		
	→	/Instrmt							
	→	Full							
269				Тур	Market Data Entry Type (5=Closing Price)	Char	5		
270				Px	Market Data Entry Price (Underlying Composite Close Price)	Price	161.37		
15				Ссу	Identifies currency used for price	Currency	USD		
272				Dt	Market Data Entry Date	UTCDateOnly	2011-04-07		
	→	/Full							
	/MktData	Full							

Sample Message – Stock Loan Eligible Security Prices

```
<MktDataFull
   RptID="6009999"
                                            Unique Identifier for the Report
   BizDt="2011-04-07">
                                            Clearing Business Date
<Instrmt
   Sym="IBM"
                                            Symbol
   ID="459200101"
                                            CUSIP
   Src="1"
                                            1 = CUSIP
   Desc="INTL BUSINESS MACHINE"/>
                                            Security Description
<Full
   Typ="5"
                                            5=Closing Price
   Px="161.37"
                                            Underlying Closing Price
   Ccy="USD"
                                            Currency
                                            Market Data Entry Date
   Dt="2011-04-07"/>
</MktDataFull>
```

Appendix

Revision History

to riolon i notoly									
Version	Date	Version Updates							
1.3	1/27/2016	Added:							
		Revision history table							
		Buy-In (Sell-Out) BISO Qty block and Quantity Type in the Stock Loan Adjusted Position Report							
1.4	10/3/2016	Updated Stock Loan Adjusted Position Report and sample messages to include two new tags: Matched Book Add/Increase and Matched Book Delete/Decrease.							
1.5	8/28/2018	Applied branding updates.							
1.6	2/16/2024	Updated Trade Capture message layout table to indicate that TrdDt value reflects the original loan date if trade source is AQS and PosEfct (Open Close Code) is C (i.e. ECS Return).							