ASIC

Australian Securities & Investments Commission

Australian Market Regulation Feed

FIX Specification

Date: 1 July, 2013

Version number: 1.6.1

Business sponsor: Greg Yanco

Security level: **Unclassified**

Change Summary

Summary Of Changes between AMRF v1.4.9 and v1.6.1				
1. Changes related to Market Operator Innovation and Regulation				
Vers	**Authors**	**Description**	**ASIC Ref**	**Date**
1.5.2	D. Law K. Lu	**Discontinuation of ASX VolumeMatch** Updated MarketSegmentID example in "Example PartyID Field Representations Table" to ASXT i. Removed ASXV from Section 9.3 Appendix C – Market Identification Codes	SCA003	14 Dec, 2012
1.5.2	D. Law K. Lu	**Unintentional Crossing Protection / Trade Protection** ii. Added MatchType(574) = 4 (Auto-match)	SCA009	14 Dec, 2012
1.5.2	D. Law K. Lu	**ASX BookBuild** iii. Added ASXB to Appendix C – Market Identification Codes iv. Added states BB_PREOPEN, BB_OPEN, BB_ALLOC, BB_CLOSE to Table 47: Special Security State Representations v. Added SecurityTradingStatus(326) = 16 (Trade Dissemination Time) vi. Added to Required Standard Security State Representations table	SCA004	14 Dec, 2012
1.5.2	D. Law K. Lu	**Broker Preferencing** i. Updated description for CrossType(549) = 101; from "Priority Crossing" to "Participant Preferenced" ii. Updated description for OrderRestriction(529) = I; from "Priority Cross" to "Participant Preferenced"	SCA017	14 Dec, 2012
1.5.2	D. Law K. Lu	**Self Managed Super Funds (RFU)** i. SecondaryTrdType (855)=22 and new custom value for TrdType (828)= 107 SMSF (RFU) ii. Updated description of TrdType(828) = 107 (Self Managed Super Fund Transfer)	SCA018	14 Dec, 2012

1.5.2 1.6.1	D. Law K. Lu M.Wood	**Enhanced Data for Market Supervision** i. New component Block RootParties included in Trade Capture Report Message. (conditional) ii. Added valid values to RootPartyIDSource(1118): a. D = Propriety/Custom (default) iii. Added valid values to RootPartyRole(1119) a. 73 = Executing Venue iv. RootPartyRole(1119) clarified with examples for ASIC Regulatory Guide 223 5A. v. New Custom OrderCapacity(528) value added = M (Mixed Agency Principle). vi. PartyRole(452) a. = 3 (Client ID) added for RG223 5A Origin Of Order. b. = 29 (Intermediary) added for RG223 5A Intermediary. vii. New user-defined Tag DirectedWholesaleIndicator(20013) added for RG223 5A. viii. DirectedWholesaleIndicator added in Execution Reports and TradeReportOrderDetail component block. (Used in Trade Capture Report)	SCA022	14 Dec, 2012
		ETR Notification I. For Security Status Message (f), added new value to SecurityTradingStatus(326) a. 6 = Trade RangeIndication (used to indicate an ETR event) II. For Text(58) for the proposed reject price, formatted as "NEWORDER AT PRICE [$$.cc] REJECTED" III. Updated Security State Representations table for reject price format. IV. In Security Status Message (f), for SecurityTradingStatus(326) = 5, added ETR reference price indication using a. 58 = "REF_PRICE"	SCA032 SCA036	17 April, 2013

1.6.0	M.Wood	**Short Selling (RFU)** Market Integrity Rules – identification of short sales: i. Reportable Short Sale Order – In **OrderQtyData** component block, updated tag ShortSellCoveredQty(20012) RFU (conditional for short sales) ii. Reportable Short Sale Transaction – In **TradeReportOrderDetail** component block (used in Trade Capture Report), added tag ShortSellCoveredQty(20012) (RFU) -conditional short selling in privately negotiated trades.		31 May, 2013

2.Miscellaneous Changes, Clarifications and Formatting Updates

Vers	Authors	Description	ASIC Ref	Date
1.5.1 to 1.6.1		i. Miscellaneous Changes and Clarifications. ii. Changes to CFI Code mappings Appendix I, iii. ASX: Exxxxx – 130 (Volume Match) iv. Multiple deletions from ASX Market column. v. TrdCapRptSideGrp Component Block, PegOffsetValue (211), description clarified. vi. TrdCapRptSideGrp Component Block, PegOffsetType (836), Value 0(Price) no longer RFU vii. Security Status, Special Security State Representations table. "International_Halt" restored as valid value (no longer RFU). viii. Separated ISO 10383(MIC) valid values for MarketID(1300) and MarketSegmentID(1301) in Appendix C – Market Identification Codes. ix. Updated UTCTimeStamp Description. x. Updated Notes for Execution Report – Order Replacement/Restatement to exclude leavesQty(151) = 0 but with exception. xi. Removed valid values in AccountType(581) for Execution Report – Order Cancellation/Expiration; tag currently RFU. xii. Custom valid value SecondaryTrdType(855) = 1000 (Trade derived from an order processed against multiple execution venues e.g. ASX Sweep) removed. xiii. Updated Restatement Reasons for each usage (Amend, Cancel) of Execution Reports.		

		xiv. Removed references to "DerivativeSecurityID" from description of Product Reference Model. xv. Updated description of Required Fields value "N". xvi. Updated definition of User Defined Fields. xvii. Updated description of Application business logic under Application Messages. xviii. Updated description of Market Identification under Application Messages. xix. Updated description for ParentStrategyID(20001) for Execution Reports. xx. Updated description for ParentStrategyIDSource(20002) = 1 (Strategy). xxi. Updated description of Market Regulation Feed Overview. xxii. Updated description of UTCTimestamp data type. xxiii. Updated description of order replacement/restatements to refer to participant, as oppose to trader. xxiv. Updated ShortSellCoveredQty(20012) data type from "String" to "Qty" in "Fields and Data Types" Section. xxv. Updated description of "RFU" and "MSV" to explicity specify should not be sent until removed. xxvi. Updated Appendix "CFI Code Mapping for ASX". xxvii. Updated Appendix "ASX Market Instrument Group Mapping". xxviii. Updated Appendix "ExecRestatementReason mapping for Market Operators". xxix. Updated Peg Suspension scenarios in Appendix "High-Level Message Sequencing Reference.		
		i. Removed RFU fields from Execution Reports a. Currency(15) b. SettlType(63) c. ListID(66) d. AccountType(581) e. DiscretionPrice(845) f. Text(58) ii. Removed RFU fields from Trade Capture Reports a. Currency(15) b. ExecRestatementReason(378_		

		c. ExecType(150) d. OrderBookID(5018) iii. Removed RFU fields from Component Blocks a. SideReasonCd(1007) b. SideTrdSubType(1008) c. CustOrderCapacity(582) d. AccountType(581) e. Text(58) f. OrderCategory(1115) g. LotType(1093) h. ListID(66)		
		i. TickRuleType(1209) from TickRules component block removed.		
		ii. Updated MinQty(110) required if specified and non-zero to Execution Reports.	OTM 3430	
		iii. Clarified "change_reason_c = 49" not a restatement (see Appendix J) ASX only.	OTM 3691	
		iv. Removed custom value OrderRestriction(529) = H(Sweep). Replaced with standard value ExecInst(18) = f(Intermarket Sweep).		
		v. SpecialMarketIndicator(20004) move from TradeCaptureReport to Instrument Component block and clarified condition. vi. ReconstructedIndicator(20005) move from TradeCaptureReport to Instrument Component block and clarified condition..	OTM 3551	
		vii. AggressorIndicator(1057) change to required on TrdCapRptSideGrp.	OTM 3321 SCA037	4 April 2013
		viii. DisplayMethod(1084) changed to Required. ix. Hidden/Undisclosed Order Differentiation using DisplayMethod(1084) values: a. = H – Hidden b. = 4 – Undisclosed Qty	OTM 3728	

		x. Trading Session Status message removed, including all references. xi. Value 0 for tag 1174 removed. Not required. xii. In TrdCapRptSideGrp removed RFU side(54) values: a. 6= Sell Short Exempt [RFU] b. 8 = Cross [RFU] c. 9 = Cross Short [RFU] d. A = Cross Short Exempt [RFU] i. Clarified conditional use for 20004 & 20005 as required in instrument reference data. ii. Clarified use of Pegged Price tag (839) iii. Removed reference to "Assign Time Priority" message in execution report description. iv. Added LEI to examples for Client ID (RG223 5A - Origin Of Order) v. Table 55 Clarified MO for ETR Event Detected vi. Clarified conditional use of Root Party block in Trade Capture Report and defining component block **vii. Enhanced Data for Market Supervision updated** **RootParty Component block.** RootPartyIDSource(118) value: a. G=MIC (10383 Market Identification Code) **removed** b. D= Custom/Proprietary now **default** c. RootPartIDSource(118) now **NOT** Required. RootPartyRole (119) value: a. 6=IntroducingFirm **removed** RootPartyRole(1119) clarified with examples for RG223 5A. i. Tag 20013, DirectedWholesaleIndicator now defined as 'char' rather than 'boolean' ii. In Parties component block clarified use of Client ID and Intermediary fields. iii. In **Required Fields** section clarified Market Participant regulatory data handling for RG223 5A..		June 2013

		i. **Unrequired ASX24 (RFU) messages and descriptions removed.**		
		Formatting i. Rearranged order of component blocks: In Use, then MSV, then RFU. ii. Rearranged order of component blocks in alphabetical order. iii. *All MSV converted to RFU* *iv. All RFU Items coloured Tan and in italics* v. Fields and Data Types (By Tag Number and By Name) moved to last pages in the document. (OTM 3426) vi. Document Control moved to after Appendices		OTM 3466 OTM 3426
1.6.0c		**Separation of confidential specification details to Market Operator specific addenda**		

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1 About this Document

1.1 Introduction

ASIC (Australian Securities and Investments Commission) is Australia's corporate, markets and financial services regulator.

ASIC contributes to Australia's economic reputation and wellbeing by ensuring that Australia's financial markets are fair and transparent, supported by confident and informed investors and consumers.

ASIC is an independent Commonwealth Government body, is set up under and administers the Australian Securities and Investments Commission Act (ASIC Act), and carries out most of its work under the Corporations Act.

The Australian Securities and Investments Commission Act 2001 requires ASIC to:

- maintain, facilitate and improve the performance of the financial system and entities in it
- promote confident and informed participation by investors and consumers in the financial system
- administer the law effectively and with minimal procedural requirements
- enforce and give effect to the law
- receive, process and store, efficiently and quickly, information that is given to us
- make information about companies and other bodies available to the public as soon as practicable.

ASIC has taken over responsibility for supervision of real-time trading on Australia's domestic licensed markets. This supplements its existing responsibility for enforcement of the laws against misconduct on Australia's financial markets and its supervision of Australian financial services licence holders.

To facilitate the monitoring of trading activity, each equity market is required to establish a network connection into ASIC's market surveillance system, and during the course of each trading day, provide a parallel data feed consisting of all orders, trades, and quotes being processed and disseminated by the market's trading engine, as well as all trading session and security price and status related messages.

This document describes ASIC's implementation of FIX (Financial Information Exchange) as the underlying messaging protocol for the market regulation feed, and provides information about session and application-level messages required for the Australian Market Regulation Feed.

1.2 Intended Audience

This document has been specifically written for Australian Market Operators who intend to provide the requisite order, and trade information to ASIC's Market Surveillance System using FIX, and the operator of the ASIC Market Surveillance System (MSS) platform.

This specification document will be of particular interest to business analysts, systems architects, and developers. This document will also be useful to market participants who choose to implement this Australian Market Regulation Feed.

1.3 References

- Australian Market Regulation Feed – FIX Message Sequence Guide
- Australian Market Regulation Feed – FIX Rules of Engagement
- Australian Market Regulation Feed – FIX Conformance Manual

1.4 Acknowledgments

The Australian market regulation feed FIX specification has been based on the existing feed defined and built by the Investment Industry Regulatory Organization of Canada (IIROC), with redactions and extensions as required for the Australian marketplace.

2 FIX and the Australian Market Regulation Feed

2.1 Financial Information Exchange (FIX) Summary

The Financial Information Exchange (FIX) Protocol is a message standard developed to facilitate the electronic exchange of information related to securities transactions. It is intended for use between trading partners wishing to automate communications. A detailed description of FIX is available from http://www.fixprotocol.org/ and includes all the technical specifications.

2.2 Market Regulation Feed Overview

The market regulation feed is a one-way transmission of information from the Market to the ASIC IMSS platform with bi-directional communication limited to session level messaging.

The current scope of the Australian Market Regulation Feed includes the following market operators: ASX Limited, ASX24, ChiX Australia.

This document describes the session and application-level messages required for the market regulation feed.

2.3 Supported Versions

The Market Regulation Feed utilizes FIX 5.0 – Service Pack 2.

2.4 Hours of Operation

The IMSS FIX Gateway will be up and accessible at 4:00 AM each business day and will remain up and running until 10:00 PM. It is recommended that markets log off at the end of each trading day. Markets still connected to the IMSS FIX Gateway at 10:00 PM will be disconnected during the shutdown sequence.

2.5 Encryption

IMSS does not require or support the use of encrypted messages.

2.6 Retained for future use (RFU)

Some data elements are considered not to have immediate relevance to the Australian marketplace but have been retained in this specification for reference for potential future use.

The term "RFU" is used to denote this for any such message, component or data field.

Market Operators must not include data items marked as "RFU" in their feed.

All RFU Items are coloured *Tan* and in italics

2.7 Required Fields

Market Operators are required to supply information to ASIC as stipulated by corresponding Market Integrity Rules (MIRs). This document specifies the elements that are sent via the Market Regulation Feed that will assist Market Operators to meet MIR requirements:

- Those fields in this document that are marked as required (with "Y" in the *Req* column) must always be supplied by Market Operators.
- Those fields in this document that are marked as conditionally required (with "C" in the *Req* column) are required in some circumstances, and will be indicated as such in the descriptive text for that field.
- Those fields in this document that are not required (with "N" in the *Req* column) are optional.

Data which is required to satisfy the MIRs must be supplied.

Market Participant Fields (Reg 223 5A – Market Participant Regulatory data)
• Market Participants must provide data that directly maps to the valid values;
• Market Operators are not required to validate data provided by Market Participants against these valid values. However, only data matching the corresponding field Data Type will comply with the AMRF FIX specification;
• Market Surveillance System Vendors should map the valid values as indicated. In the case of receiving other values, these should be accepted and recorded for future analysis.

2.8 User Defined Fields

This specification contains a number of User Defined Fields (UDF) defined by IIROC or ASIC.

3 Architecture and Connectivity

Markets are required to connect directly to ASIC's surveillance technology platform environment, the Integrated Market Surveillance System (IMSS), based in Sydney. IMSS hosts a Secondary site in Canberra.

As the Australian Securities Exchange (ASX) is the sole listing exchange in the Australian marketplace, the majority of reference data is to be transferred from the ASX only.

4 Message Types and Delivery Protocol

4.1 FIX Message Structure

A FIX message consists of three elements, a Header, a Body and a Trailer. The Header identifies the message type, length, routing, and address information. The Body defines the content of the actual business level message. The Trailer defines the three digit character representation of the CheckSum value.

4.2 Supported Session Messages

Table 1: Supported Session Messages

FIX Message	Message Type
Logon	A
Heartbeat	0
Test Request	1
Resend Request	2
Reject	3
Sequence Reset	4
Logout	5

4.3 Supported Application Messages

Table 2: Supported Application Messages

FIX Message	Message Type
Execution Report	8
SecurityDefinition	d
DerivativeSecurityList	AA
Trade Capture Report	AE
News	B
Security Status	f

4.4 Message Header

Each administrative or application message is preceded by a standard header. The header identifies the message type, length, destination, sequence number, origination point and time.

Notes
SenderCompID • IMSS will assign a SenderCompID value for the Market. SenderSubID • Used only where a IMSS has agreed that a Market may provide the AMRF using multiple FIX sessions, with a sub-feed in each session. SenderSubID is required in this instance. • IMSS will assign a SenderSubID value for each sub-feed. TargetCompID • The TargetCompID must identify IMSS as the receiving organization and must be "IMSS" SendingTime and OrigSendingTime • The SendingTime (52) provided by the market must be specified at the millisecond level of precision (YYYYMMDD-HH:MM:SS.sss). This also applies to the OrigSendingTime (122) field for messages sent in response to a Resend Request

Table 3: Message Header Format

Tag	Field Name	Req	Description
8	BeginString	Y	Identifies beginning of new message and protocol version. Always the first field in the message. Valid value: FIXT.1.1
9	BodyLength	Y	Message length in bytes. Forward to the CheckSum field. Always the second field in the message
35	MsgType	Y	Defines the message type. Always the third field in the message
49	SenderCompID	Y	Assigned value used to identify sender of message. Always the fourth field in the message
56	TargetCompID	Y	Assigned value used to identify receiver of message. Always the fifth position in the message
50	SenderSubID	C	Assigned value used to identify individual market sub-feed. Required where a market operator has obtained permission from the IMSS to provide the AMRF using multiple FIX connections. Required in this instance.

Tag	Field Name	Req	Description
34	MsgSeqNum	Y	Integer message sequence number
52	SendingTime	Y	Time of message transmission. UTC Timestamp at the millisecond level (YYYYMMDD-HH:MM:SS.sss)
43	PossDupFlag	N	Indicates possible retransmission of message with this sequence number. Always required for retransmitted messages, whether prompted by the sending system or as the result of a resend request
122	OrigSendingTime	N	The original UTC timestamp when transmitting orders as the result of a resend request. Required for message resent as a result of a Resend Request
369	LastMsgSeqNumProcessed	N	The last MsgSeqNum (34) value received by the FIX engine and processed by downstream application, such as trading engine or order routing system. Can be specified on every message sent. Useful for detecting a backlog with a counterparty

4.5 Message Trailer

Each message, administrative or application, ends with a standard trailer. The trailer is used to segregate messages and contains the three-digit character representation of the CheckSum value (See Appendix A – Checksum Calculation).

Table 4: Message Trailer Format

Tag	Field Name	Req	Description
10	Checksum	Y	Always unencrypted, always last field in message

4.6 Component Blocks

Many of the FIX Application Messages are composed of common "building blocks" or sets of data fields referred to as "Component Blocks". The relevant component blocks are included in each application message.

It is permissible for fields to be repeated within a repeating group (e.g., "453=2 | 448=007 | 447=C | 452=1 | 448=TD769IT | 447=C | 452=12 | " represents a repeating group with two repeating instances "delimited" by tag 448 (first field in the repeating group.).

- If the repeating group is used, the first field of the repeating group is required. This allows implementations of the protocol to use the first field as a "delimiter" indicating a new repeating group entry. The first field listed after the NoXXX, then becomes conditionally required if the NoXXX field is greater than zero. The NoXXX field (for example: NoPartyIDs) which specifies the number of repeating group instances occurs once for a repeating group and must immediately precede the repeating group contents
- If a repeating group field is listed as required, then it must appear in every repeated instance of that repeating group
- Repeating groups are designated within the message definition via indentation and the → symbol

Several component blocks are relevant to the Australian Market Regulation Feed and are referenced within this specification. The component blocks listed below contain only the fields relevant to the current regulatory feed requirements. Each component block contains a mix of required and conditionally-required fields and other nested blocks. The criteria for conditionally required fields are contained within each block. Required Fields within Component blocks are required only if the Component Block itself is provided. Within Application Messages, relevant components blocks are italicized and enclosed within chevron brackets (i.e., <*Component Block*>). See Appendix H – Component Block Mapping for Selected Messages.

4.6.1 BaseTradingRules

Table 5: Component Block – BaseTradingRules

Super component of TickRules

Tag	Field Name	Req	Description
<TickRules>		Y	Rules for determining how a security ticks

4.6.2 DerivativeSecurityDefinition

Table 6: Component Block – DerivativeSecurityDefinition

Tag	Field Name	Req	Description
<DerivativeInstrument>		Y	Component block summarising common attributes shared across a set of option instruments which belong to the same series.
<MarketSegmentGrp>		Y	Market Segments on which a security may trade

4.6.3 DerivativeInstrument

Table 7: Component Block – DerivativeInstrument

Tag	Field Name	Req	Description
1267	DerivativeMinPriceIncrement	C	Minimum price increase for a given exchange-traded Instrument *(Tick Size)* Required for Options and Futures
1270	DerivativeUnitOfMeasureQty	C	Used to indicate the quantity of the underlying commodity unit of measure on which the contract is based *(Lot Size)* Required for Options and Futures
1251	DerivativeMaturityMonthYear	C	Date of Maturity. Specified as MonthYear type, i.e., YYYYMM Required for Options and Futures
1248	DerivativeCFICode	Y	See CFICode (461)

4.6.4 DisplayInstruction

Table 8: Component Block – DisplayInstruction

Tag	Field Name	Req	Description
1138	DisplayQty	Y	The quantity to be displayed. Required for Partly Disclosed and Hidden orders. On *Execution Reports* specifies the quantity to be displayed. On *Trade Capture Reports* specifies the currently publicly displayed quantity. Not to be supplied for fully disclosed orders.
1084	DisplayMethod	Y	Defines the use of DisplayQty. If not specified the default DisplayMethod is "1". Required for hidden and undisclosed orders. Valid values: 1 = Initial (use original DisplayQty) – Default value 4 = Undisclosed Qty (visibe Price and invisible Qty) H = Hidden (invisible Price and invisible Qty) [1]

4.6.5 InstrmtGrp

For the purpose of the market regulation feed, the InstrmntGrp component block is used to define the one or more securities that a News messages relates to.

Table 9: Component Block – InstrmtGrp

Tag	Field Name	Req	Description
146	NoRelatedSym	Y	Number of Instrument entries
<Instrument>		Y	Component block specfying details of individual Option Strikes.

4.6.6 Instrument

Table 10: Component Block – Instrument

Tag	Field Name	Req	Description
55	Symbol	Y	The common ticker/symbol of the security. In the case that a special market or a reconstruction exists for a security, it represents the modified underlying ticker/symbol of that security. e.g. BHPDA, BHPCD
207	SecurityExchange	C	Identifies the MIC of the Market Operator. Required for *Security Status* messages

[1] The FIX 5.0SP2 specification defines 1084=4="undisclosed (invisible order)", however in the Australian marketplace invisible orders are known as Hidden Orders and undisclosed Orders have a visible price and so are partly disclosed, not invisible. See the Glossary for definitions

Tag	Field Name	Req	Description
48	SecurityID	C	Security ID. Required in instrument reference data, i.e., SecurityDefinition and DerivativeSecurityList messages. Valid values: ISIN
22	SecurityIDSource	C	Source of SecurityID value. Required in instrument reference data, i.e., SecurityDefinition and DerivativeSecurityList messages. Valid value: 4 = ISIN
<SecAltIDGrp>		C	Required to be supplied by the listing market to specify alternate security codes. Used for reconstructions and special markets
461	CFICode	C	Required to be supplied by the listing market in Securities reference data, including option strikes. Indicates the type of security using ISO 10962 standard, Classification of Financial Instruments (CFI code) values. See Appendix I CFI Code mappings for mappings to be made by Market Operators
202	StrikePrice	C	Strike Price for Options and Futures. Required for Options and Futures
969	MinPriceIncrement	N	Minimum price increase for the Instrument
1147	UnitOfMeasureQty	N	Used to indicate the quantity of the unit of measure. Defaults to a value of 1
107	SecurityDesc	C	Required to be supplied by the listing market in Securities reference data. Long name of a financial instrument
541	MaturityDate	C	Date of Maturity. Required for options and futures
967	StrikeMultiplier	C	Multiplier applied to the strike price for the purpose of calculating the settlement value. *(Multiplier)* Required for Option strikes
231	ContractMultiplier	C	Specifies the ratio or multiply factor to convert from "nominal" units (e.g. contracts) to total units (e.g. shares) *(Contract Size)* Required for Option strikes
20004	SpecialMarketIndicator	C	Indicates that a security is traded on a special market. Required in instrument reference data. Valid values: N = No (default value) Y = Yes

Tag	Field Name	Req	Description
20005	ReconstructedIndicator	C	Indicates that a security is reconstructed. Required in instrument reference data. Valid values: N = No (default value) Y = Yes

4.6.7 MarketSegmentGrp

Table 11: Component Block – MarketSegmentGrp

Used to define the market segments and trading rules on which a security may trade

Tag	Field Name	Req	Description
1310	NoMarketSegments	Y	Number of repeating Market Segments
→1301	MarketID	Y	MIC code of the market operator
→1300	MarketSegmentID	Y	MIC code of the market trading platform
<SecurityTradingRules>		C	Used to specify Tick Rules. Required when used within a Security Definition

4.6.8 OrderQtyData

Table 12 : Component Block – OrderQtyData

Tag	Field Name	Req	Description
38	OrderQty	Y	Quantity ordered. Also represents the total volume for iceberg orders. Must be non-zero
20010	ShortSellLongQty	N	Quantity ordered Long
20011	ShortSellNakedQty	N	Quantity ordered Naked
20012	ShortSellCoveredQty	RFU	Conditionally required for a short sell order. This field defines the portion of order quantity (defined by OrderQty) that is covered. It is assumed zero if it is not specified with a short sell order. For non-short sell order, this field is ignored. Side(54) should equal 5 (Sell Short)

4.6.9 Parties

For the purpose of market surveillance, information related to the following parties is required.

- **BrokerNumber** (Required for *Execution Report* and *Trade Capture Report* messages)

- **UserID** (Required where available for *Execution Report* and *Trade Capture Report* messages)
- **MarketID** (Required for *Execution Report* messages)
- **MarketSegmentID** (Required for *Execution Report* messages)
- **Additional Client Identifier** (Required for *Execution Reports* and *Trade Capture Report* messages, where available)
- **Client ID** (Required where available for *Execution Repor*t and *Trade Capture Report* messages in accordance with RG223 5A **Origin of Order**.
- **Intermediary** (Required where available for *Execution Report* and *Trade Capture Report* messages in accordance with RG223 5A **Intermediary**).

Table 13: Component Block – Parties

Tag	Field Name	Req	Description
453	NoPartyIDs	Y	Number of PartyID entries. Repeating group below should contain unique combinations of PartyID, PartyIDSource, and PartyRole
→448	PartyID	Y	Party identifier/code
→447	PartyIDSource	Y	Identifies class or source of the PartyID. Valid values: C = Generally accepted market participant identifier D = Proprietary/Custom code G = MIC (ISO-10383 – Market Identifier Code)[2]
→452	PartyRole	Y	Identifies the type or role of the PartyID specified. Valid values: 1 = Executing Firm (BrokerNumber) 12 = Executing Trader (UserID) [where available] 22 = Exchange (MarketID) 45 = Secondary Account (additional client identifier) [where available] 73 = Execution Venue (MarketSegmentID) 3 = Client ID (RG223 5A Origin Of Order) 29 = Intermediary (RG223 5A Intermediary)

[2] Tag 447=G if and only if Tag 452 = 22 or 73

Table 14: Example PartyID Field Representations

PartyIDSource	PartyRole	PartyID	Description
C	1	000	Executing Firm (BrokerNumber) A market assigned number identifying a member firm, specified as a 3 or 4 digit identifer assigned to market participants. The 4th digit, where supplied, indicates the clearing centre
C	12	ABC1234	Executing Trader (UserID) The trading system's user ID for a trader
G	22	XASX	Exchange (MarketID) The MarketID of the market operator, given as a MIC
G	73	ASXT	Execution Venue (MarketSegmentID) The MarketSegmentID of the trading platform, given as a MIC
D	45	As agreed	Additional Client Identiifer (SecondaryAccountID) Additional broker assigned client identifier, in String format. Binary values must be encoded as hexadecimal
D	3	Identifier	Client ID (RG223 5A - Origin Of Order) Examples include: ACN, ABN, ARBN, ARSN, LEI, Client ID, User Login, CHESS HIN, internal account Id, advisor ref etc can also annotate as VWAP, TWAP,TPAV
D	29	AFS License	Intermediary (RG223 5A - Intermediary)

4.6.10 PegInstructions

The PegInstructions component block is used for pegged orders where the price of a security is tied to a market event such as opening price, mid-price, best price, etc. This component block is only relevant to markets that accept this type of order.

Prices are not defined in the PegInstructions component, but in the encompassing ExecutionReport message. Limit prices are defined using the Price (44) field, and Pegged prices where available, are specified using the PeggedPrice (839) field.

Table 15: Component Block – PegInstructions

Tag	Field Name	Req	Description / Enumerator
211	PegOffsetValue	C	Amount added to the price of the peg for a pegged order in the context of the PegOffsetType. Required if specified on order. See PegOffsetType(38) for format of value values.
1094	PegPriceType	Y	Defines the type of peg. Required for pegged orders. Valid values: 2 = Mid-price peg 4 = Market peg 5 = Primary peg
835	PegMoveType	C	Describes whether peg is fixed(static) or floats. Required for fixed pegged orders. Valid values: 0 = Floating (default) 1 = Fixed
836	PegOffsetType	C	Type of Peg Offset value. Required if PegOffsetValue (211) is provided. Valid values: 0 = Price 1 = Basis Points (RFU) 2 = Ticks

4.6.11 RelSymDerivSecGrp

Table 16: Component Block – RelSymDerivSecGrp

Tag	Field Name	Req	Description
146	NoRelatedSym	Y	Number of repeating Instrument entries
<Instrument>		Y	Component block specfying details of individual Option Strikes.

4.6.12 RootParties

The RootParties component block is used for acting parties that apply to the whole message, not individual legs, sides, etc.

For the purpose of the market regulation feed, the RootParties component block is used to provide the execution venue identification in off market trade reports in accordance with RG 223 5A. The following RootParty is required:

- **Executing Venue**
  a. MIC venues (Required for *Trade Capture Report* messages in accordance with RG223 5A.
  b. Non-MIC venues (Required for *Trade Capture Report* messages in accordance with RG223 5A.

Table 17: Component Block – RootParties

Tag	Field Name	Req	Description
1116	NoRootPartyIDs	Y	Number of RootPartyID entries. Repating group below should contain unique combinations of RootPartyID (1117), RootPartyIDSource (1118), and RootPartyRole (1119)
→1117	RootPartyID	Y	Root Partyidentifier / code.
→1118	RootPartyIDSource	N	Identifies class or source of each RootPartyID value. Required for each entry of RootPartyID(1117) specified. D = Propriety/Custom (default)
→1119	RootPartyRole	Y	Identifies the type or role of the RootPartyID. Required for each entry of RootPartyID(1117) specified. 73 = Executing Venue

<table>
<tr><th>RootPartyIDSource</th><th>RootPartyRole</th><th>RootPartyID</th><th>Description</th></tr>
<tr><td rowspan="2">D
(Proprietary/Custom)
(default)</td><td rowspan="2">73
(Executing Venue)</td><td>"MIC code"</td><td>MIC Execution Venue
(RG223 5A execution venue)</td></tr>
<tr><td>"Crossing Venue ID"</td><td>Non-MIC Execution Venue
(RG223 5A execution venue)</td></tr>
</table>

4.6.13 SecAltIDGrp

Table 18: Component Block – SecAltIDGrp

Not required for non-listing markets

Tag	Field Name	Req	Description
454	NoSecurityAltID	Y	Number of repeating SecurityAltID entries, valid value: 1
→455	SecurityAltID	Y	Alternate Security symbol representing the underlying ticker/symbol of the security that a resulting trade will ultimately settle as. • Where the security is an ordinary, non-special security, this will match Tag 55. E.g. 55 = BHP, 455 = BHP • For special markets this will match Tag 55. E.g. 55 = BHPCD, 455 = BHP • For reconstructions this represents the underlying ticker/symbol. E.g. 55 = BHPDA, 455 = BHP
→456	SecurityAltIDSource	Y	Source of SecurityAltID value. Valid value: M = marketplace-assigned Identifier

4.6.14 SecurityTradingRules

Table 19: Component Block – SecurityTradingRules

Super component of Tick Rules

Tag	Field Name	Req	Description
<BaseTradingRules>		Y	Base trading rules

4.6.15 TickRules

Table 20: Component Block –Tick Rules

This block specifies the rules for determining how a security ticks, i.e. the price increments at which it can be quoted and traded, depending on the current price of the security

Tag	Field Name	Req	Description
1205	NoTickRules	Y	Number of tick rules. This block specifies the rules for determining how a security ticks, i.e. the price increments at which it can be quoted and traded, depending on the current price of the security.
1206	StartTickPriceRange	Y	Starting price range for specified tick increment
1207	EndTickPriceRange	Y	Ending price range for the specified tick increment
1208	TickIncrement	Y	Tick increment for stated price range. Specifies the valid price increments at which a security can be quoted and traded

4.6.16 TradeReportOrderDetail

Table 21: Component Block – TradeReportOrderDetail

Tag	Field Name	Req	Description
11	ClOrdID	C	Unique order identifier assigned by the firm submitting the order. Required if specified on the Order.
37	OrderID	Y	Unique identifier for the order as assigned by the market
151	LeavesQty	Y	Quantity of shares open for further execution.
20012	ShortSellCoveredQty	RFU	Conditionally required for a short sell order when part of a privately negotiated trade . (SecondaryTrdType(855)=22) This field defines the portion of trade order quantity (defined by LastQty) that is covered. It is assumed zero if it is not specified with a short sell order. For non-short sell order, this field is ignored. Side(54) should equal 5 (Sell Short)
44	Price	RFU	Public order price at time of trade.
<DisplayInstruction>		C	Required for Partly Disclosed and Hidden orders. On *Trade Capture Reports* specifies the current publicly displayed quantity Not to be supplied for fully disclosed orders.
528	OrderCapacity	C	Designates the capacity of the firm placing the order. Required where available. Valid values: A=Agency P=Principal M= Mixed Agency and Principal; to allow identification of transcations that are mixed principle/agent.
20013	DirectedWholesaleIndicator	C	Indicates whether the order was submitted by a wholesale AOP client with non-discretionary routing and execution instructions. Required if indicator is true. Valid values: Y = True N = False (default)
18	ExecInst	C	Instructions for order handling on exchange trading floor. This field can contain multiple instructions separated by a space. f = Intermarket Sweep

Tag	Field Name	Req	Description
529	OrderRestrictions	C	Restrictions associated with an order. Required if specified on order. This field can contain multiple instructions separated by a space. Valid values: C = Price Stabilization G = Market Bid I = Participant Preferenced

4.6.17 TrdCapRptSideGrp

Table 22: Component Block – TrdCapRptSideGrp

Tag	Field Name	Req	Description
552	NoSides	Y	Number of sides. Valid values: 2 = Both sides
→54	Side	Y	Side of order. Valid values: 1 = Buy 2 = Sell 5= Sell Short
→<Parties>		Y	
→752	SideMultiLegReportingType	C	Used to indicate if the side being reported on Trade Capture Report represents a multileg security or a leg of a multileg instrument. Not required for single securities that are not part of a multi-leg. Valid values: 1 = Single Security (default if not specified) 2 = Individual leg of a multileg security 3 = MultiLeg Security (only required if the Custom market order it self is provided) (RFU)
→20001	ParentStrategyID	C	ID of the parent Strategy. Required for a trade of an individual leg of a strategy
→20002	ParentStrategyIDSource	C	SecurityID of the parent Strategy. Required for a trade of an individual leg of a strategy. Valid Values: 1=Strategy (Tailor Made Combination, Custom or spread) 2=Portfolio (Required where TrdTpe (828) = 50 (large Portfolio Trade) and where available)
→1	Account	C	Trading account identifier. Required if specified on the order
→1057	AggressorIndicator	Y	Used to identify whether the order initiator is an aggressor or not in the trade. Valid values: Y = Order initiator is aggressor N = Order initiator is passive
→<TradeReportOrderDetail>		Y	

4.6.18 TrdRegTimestamps

The TrdRegTimestamps component block is used:

- Within an *Execution Report,* a TrdRegTimestamp (with TrdRegTimestampType =8) is required when the market updates time priority for an order and the timestamp is different from the TransactTime (60)
- Within an *Execution Report* , a TrdRegTimestamp (with TrdRegTimestampType =8) is required when carried-over orders have been re-inserted into a market's trading engine, and is used to indicate time priority
- Within an *Execution Report* , a TrdRegTimestamp (with TrdRegTimestampType =2) is required when carried-over orders have been re-inserted into a market's trading engine, and is used to indicate the time of original order creation
- Within the *Trade Capture Report*, a TrdRegTimestamp (with TrdRegTimestampType =1) is required to specify an additional trade processing time. It may differ from TransactTime (60) where the market manually adds a trade, such as for off-market trades and trade corrections. Where only the date of trade processing is available this TrdRegTimestamp may be specified with zero values for hours, minutes and seconds[3]

Table 23: Component Block – TrdRegTimestamp

Tag	Field Name	Req	Phase	Description
768	NoTrdRegTS	C	D1	Indicates the number of SideTrdRegTimestamps contained in the group
→769	TrdRegTimestamp	C	D1	Regulatory timestamp
→770	TrdRegTimestampType	C	D1	Regulatory timestamp type. Valid values: 1 = Trade processing (Execution) Time 2 = TimeIn 8 = Time Priority

[3] Subject to approval by ASIC

4.6.19 UnderlyingInstrument

Table 24: Component Block – UnderlyingInstrument

Tag	Field Name	Req	Description
311	UnderlyingSymbol	N	The unique security symbol, as required by s6.2.3 of the market integrity rules. This is the code used to identify securities in the Market Operator's trading system
308	UnderlyingSecurityExchange	N	Identifies the MIC of the listing marketplace. Required for *Security Status* messages (*Underlying Market)*
306	UnderlyingIssuer	N	Issuer of underlying security issuer *(Issuer)*

4.7 Product Reference Model

The Security Definition and Derivative Security List messages are used by listing markets to deliver product reference information to the IMSS.

The Security Definition message is used for outright instruments which are not options or Futures.

Derivative Families are defined using the DerivativeInstrument and underlyingInstrument component blocks of the Derivative Security List message.

Individual Derivative instruments (Strikes) that belong to that family are defined using the Derivative Family information together with Strike specific information held as "related Instruments" in the RelSymDerivSecGrp component block of the Derivative Family DerivativeSecurityList message.

SecurityID values are used to identify Strikes.

4.8 Data Types

The following data types are relevant to the Australian Market Regulation Feed Specification.

Table 25: Data Types

Type	Description
int	Sequence of digits without commas or decimals and optional sign character (ASCII characters "-" and "0" – "9"). The sign character utilizes one byte (i.e. positive int is "99999" while negative int is "-99999"). Note that int values may contain leading zeros (e.g. "00023" = "23")
Qty	Value capable of storing either a whole number (no decimal places) of "shares" (securities denominated in whole units) or a decimal value containing decimal places for non-share quantity asset classes (securities denominated in fractional units)
String	Alpha-numeric free format strings can include any character or punctuation except the delimiter. All char fields are case sensitive (i.e. morstatt != Morstatt)
Boolean	char field containing one of two values: 'Y' = True/Yes, 'N' = False/No
Currency	String field representing a currency type using ISO 4217 Currency (15) code (3 character) values
char	Single character value, can include any alphanumeric character or punctuation except the delimiter. All char fields are case sensitive
Exchange	String field representing an exchange or market
Length	Representing the length in bytes. Value must be positive
LocalMktDate	Date of Local Market (vs. UTC) in YYYYMMDD format. This is the "normal" date field used by the FIX protocol. Valid values: YYYY = 0000-9999, MM = 01-12, DD = 01-31
Float	Sequence of digits with optional decimal point and sign character (ASCII characters "-", "0" – "9" and "."); the absence of the decimal point within the string will be interpreted as the float representation of an integer value. All float fields must accommodate up to fifteen significant digits
MonthYear	String field representing month of a year in YYYYMM format. Valid values: YYYY = 0000-9999, MM = 01-12
MultipleCharValue	String field containing one or more SINGLE character space delimited values
NumInGroup	Value that represents the number of repeating values in a group
Price	Value representing a price, in the Australian dollar (AUD), with a fractional part expressing cents and fractions of cents. The number of decimal places may vary
SeqNum	Representing a message sequence number. Value must be positive

Type	Description
UTCTimestamp	Time/date combination represented in UTC (Universal Time Coordinated, also known as "GMT") in YYYYMMDD-HH:MM:SS.sss (milliseconds) format, colons, dash, and period required. Time must be specified to the precision available in the Market Operator Trading System (e.g. milliseconds, microseconds or nanoseconds) Where a more precise timestamp is required (i.e., for TransactTime), the UTC time may be represented with as many decimal digits as required; for example, YYYYMMDD-HH:MM:SS.sssuuu (microseconds), YYYYMMDD-HH:MM:SS.sssuuunnn (nanoseconds) Timestamps should not be padded with additional digits to simulate a false level of precision.

5 Session Message Details

5.1 Logon

The initial messages exchanged in a FIX session are the Logon Request and the Logon Response. The logon request is initiated by the Market, which will then be followed by a response from IMSS. The main purpose of the Logon request and response is to:

- Authenticate the client (i.e., the market)
- Agree on the sequence numbers
- Decide on Heartbeat handling

To establish a session, the Market will send the Logon message to the ASIC IMSS FIX Gateway. Sending a Logon message with incorrect credentials (such as SenderCompID or TargetCompID) will result in the FIX session being disconnected.

Figure 1: FIX Logon Standard Protocol

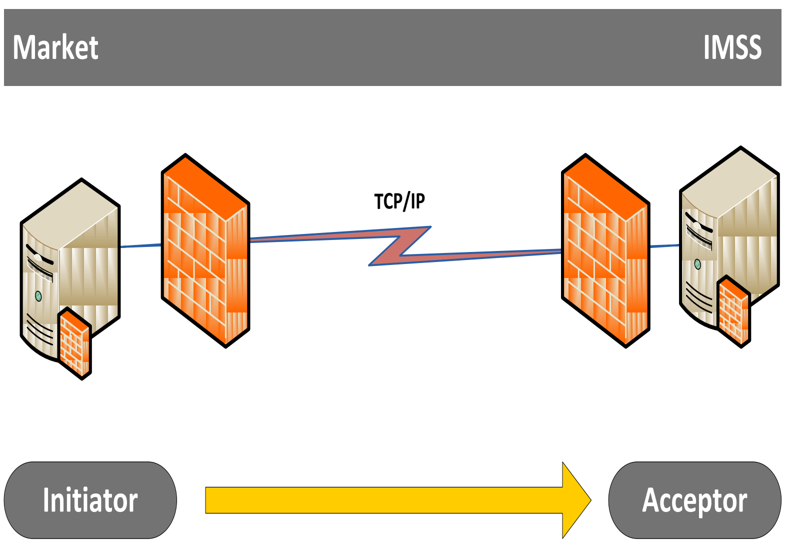

Table 26: Logon Message

Tag	Field Name	Req	Description
	Message Header	Y	MsgType = A
98	EncryptMethod	Y	Method of encryption. (Always unencrypted)
108	HeartBtInt	Y	Heartbeat interval (seconds). Note same value used by both sides
1137	DefaultApplVerID	Y	Specifies the service pack release being applied, by default, to message at the session level. Enumerated field with values assigned at time of service pack release. Uses same values as ApplVerID. Valid values: 9 = FIX50SP2
1408	DefaultcstmApplVerID	Y	Specifies the custom application version of FIX messages used in this session. Valid values: AMRF 1.6.1
1407	DefaultApplExtID	RFU	The default extension pack for FIX messages used in this session
	Message Trailer	Y	

5.2 Heartbeat

Heartbeat messages are used to monitor the status of the communication link between the Market and the IMSS FIX Gateway, and to identify when the last of a string of messages was not received. Heartbeat messages are bi-directional and the interval between heartbeats is configurable.

Table 27: Heartbeat Message

Tag	Field Name	Req	Description
	Message Header	Y	MsgType = 0
112	TestReqID	N	Required when the heartbeat is the result of a Test Request
	Message Trailer	Y	

5.3 Test Request

The Test Request message is useful for checking sequence numbers or verifying the status of the communication line. Either party on the FIX connection can send a Test Request message at any time during the FIX session. The recipient of a Test Request message must respond with a Heartbeat message. The Test Request contains the required TestReqID and the Heartbeat response message must contain the TestReqID of the Test Request.

Table 28: Test Request Message

Tag	Field Name	Req	Description
	Message Header	Y	MsgType = 1
112	TestReqID	Y	Identifier included in Test Request message to be returned in resulting Heartbeat
	Message Trailer	Y	

5.4 Resend Request

A Resend request is sent to initiate the retransmission of messages, and is used if, for example, the IMSS FIX Gateway detects a sequence number gap.

- If the request is for a single message: BeginSeqNo = EndSeqNo
- If the request is for all messages subsequent to a particular message: EndSeqNo = 0
- If the request is for a sequence of messages from BeginSeqNo to EndSeqNo: BeginSeqNo < EndSeqNo

Table 29: Resend Request Message

Tag	Field Name	Req	Description
	Message Header	Y	MsgType = 2
7	BeginSeqNo	Y	Message sequence number of first message in range to be resent
16	EndSeqNo	Y	Message sequence number of last message in range to be resent. • If request is for a single message BeginSeqNo (7) = EndSeqNo. • If request is for a sequence of messages, EndSeqNo = last message inrange to be resent • If request is for all messages subsequent to a particular message, EndSeqNo = "0" (representing infinity)
	Message Trailer	Y	

5.5 Reject

The IMSS FIX Gateway will reject or ignore messages that cannot be properly processed due to a session-level rule violation (e.g., invalid MsgType, incorrect CheckSum value, etc.). The reason for the rejection will be communicated in the Text (58) field.

Table 30: Reject Message

Tag	Field Name	Req	Description
	Message Header	Y	MsgType = 3
45	RefSeqNum	Y	Reference message sequence number
371	RefTagID	N	The tag number of the FIX field being referenced
372	RefMsgType	N	The MsgType of the FIX message being referenced
373	SessionRejectReason	N	Code to identify the reason for a session-level Reject message. Valid values: 0 = Invalid tag number 1 = Required tag missing 2 = Tag not defined for this message type 3 = Undefined Tag 4 = Tag specified without a value 5 = Value is incorrect (out of range) for this tag 6 = Incorrect data format for value 9 = CompID problem 10 = Sending time accuracy problem 11 = Invalid MsgType 13 = Tag appears more than once 14 = Tag specified out of required order 15 = Repeating group fields out of order 16 = Incorrect NumInGroup count for repeating groups 17 = Non “data” value includes field delimiter 18 = Invalid/unsupported application version 99 = Other
58	Text	N	Free format text string. Where possible, message to explain reason for rejection. In general, text should be equivalent in meaning to a parameterised version of the SessionRejectReason literal value, e.g., "Required tag 37 missing", or used to provide more specific error information
	MessageTrailer	Y	

5.6 Sequence Reset

In order to reduce unnecessary communication, FIX permits firms to skip (gap-fill) over administrative messages such as heartbeats and test requests during resends. This is accomplished by using the Sequence Reset message. This message can be used in the following scenarios:

- Gap Fill mode which will be used as the response to a Resend Request
- Reset mode which will be used to reset the sequence number after an unrecoverable application failure. It is important to note a Sequence Reset can only increase the sequence number

Table 31: Sequence Reset Message

Tag	Field Name	Req	Description
	Message Header	Y	MsgType = 4
36	NewseqNo	Y	New sequence number
123	GapFillFlag	N	Indicates that the Sequence Reset message is replacing administrative or application messages which will not be resent. Valid values: N = Sequence Reset, Ignore Msg Seq Num Y = Gap Fill Message, Msg Seq Num Field Valid
	Message Trailer	Y	

5.7 Logout

The market should gracefully terminate its session with IMSS at the end of each trading day. If a market is disabled by IMSS while the user is logged in, a Logout message will be sent to the market communicating the reason for the logout and the FIX session will be disconnected.

The IMSS FIX Gateway will reset its inbound and outbound sequence numbers to 1 prior to the start of each business day.

Table 32: Logout Message

Tag	Field Name	Req	Description
	Message Header	Y	MsgType = 5
58	Text	N	Additional information

Tag	Field Name	Req	Description
	Message Trailer	Y	

6 Start-of-Day, End-of-Day, and Recovery Process

6.1 Start of Day

IMSS's FIX gateway is active and listening at 4:00 AM each business day. Once the Logon has been acknowledged by IMSS and the session has been successfully established, the market is required to send the following messages before 6:00 AM*:

- *SecurityDefinition(Listing markets only) – For each equity on the market that has been de-listed, followed by one News message indicating all SecurityDefinition messages for de-listed securities have been sent.*
- *SecurityDefinition(Listing markets only) – For each equity traded on the market followed by one News message indicating all SecurityDefinition messages have been sent.*
- *DerivativeSecurityList (Listing markets only) – For each ETO family traded on the market followed by one News message indicating all DerivativeSecurityList messages have been sent.*
- *Security Status (All markets)* – For each security traded on the market followed by one *News* message indicating all *Security Status* messages have been sent. (See FIX Market Regulation Feed – Message Sequence Guide for message details)
- *Execution Report* – For each expired/cancelled order since the previous market close
- *Execution Report* – For each carried over order that has been re-inserted into the market's trading engine, followed by one *News* message indicating all *Execution Report* messages have been sent. Not required where orders are not carried over from the previous day. (See FIX Market Regulation Feed – Message Sequence Guide for message details).
- A *News* message indicating all *Execution Report* messages have been sent *(All markets)*. This *News* message is required regardless of whether the market supports GT orders or not as it signifies the end of the SOD message session(Note: Carried over orders sent to IMSS should be sequenced in price / time priority and must specify time priority using the TrdRegTimestamps component block within the *Execution Report*)

(See Figure 3: Start-of-Day / End-of-Day Process and Timeline)

6.2 Recovery Process

Each FIX session maintains two sequence numbers – one for incoming and one for outgoing messages which are initialized at "1" at the beginning of the session. When the incoming sequence number does not match the expected number corrective processing is required.

From IMSS's perspective, if the incoming message has a sequence number greater than expected, the IMSS FIX Gateway will send a *Resend request* to the market. Upon receipt of a *Resend request*, the market can respond in one of three ways:

- Retransmit the requested messages (in order) with the original sequence numbers and PossDupFlag set to "Y" except for the administrative messages (listed below) which are not to be present and which require a *SeqReset-GapFill* (#2)

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* Negotiable on a market-by-market basis

- Issue a *SeqReset-GapFill* message (Ga*pFillFlag* = "Y") with PossDupFlag set to "Y" to replace the retransmission of administrative messages
- Issue a *SeqReset-Reset* (GapFillFlag = "N") with PossDupFlag set to "Y" to force sequence number synchronization

The normal course of action involves a combination of #1 and #2. Note that #3 should be used ONLY to recover from a disaster situation which cannot be otherwise recovered via "Gap Fill" mode. During the gap fill process, no administrative messages should not be retransmitted. Instead, a special *SeqReset-GapFill* message is generated. The administrative messages not to be resent are: *Logon*, *Logout*, *ResendRequest*, *Heartbeat*, *TestRequest* and *SeqReset-Reset* and *SeqReset-GapFill*.

In the event IMSS receives a message with a sequence number that is less than expected and the PossDupFlag is not set to "Y", IMSS will terminate the session by sending a Logout message to the market with the following information in the Text (58) field:

"Message sequence number incorrect. Expected XX but received YY"

The market is then responsible for reconnecting to the IMSS FIX Gateway by sending a *Logon* message with the sequence number referenced by IMSS in the preceding *Logout* message.

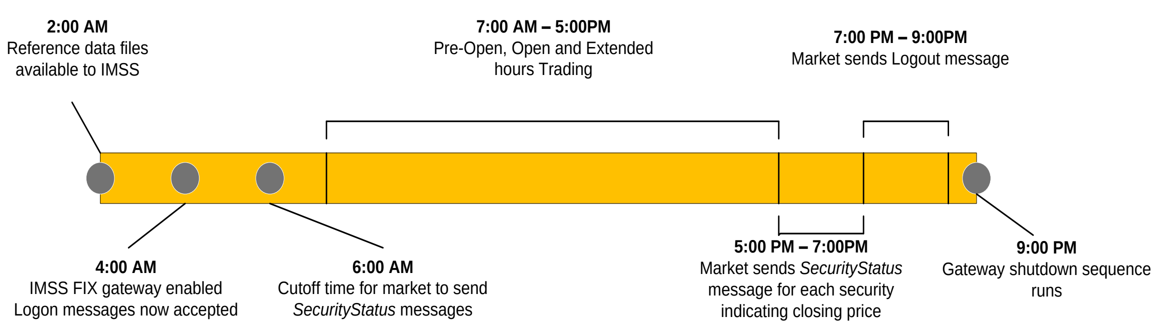
6.3 End of Day

After the market closes, the market must send IMSS a *Security Status* message for each security indicating the security's closing price, followed by a *News* message indicating all *Security Status* messages have been sent (See FIX Market Regulation Feed – Message Sequence Guide for message details).

It is recommended that the market log off at the end of each trading day. IMSS will disconnect markets still connected to its gateway during its FIX Gateway shutdown sequence which occurs at 10:00 PM each day.

6.4 Daily Timeline Summary

Figure 3: Start-of-Day / End-of-Day Process and Timeline



7 Application Messages

7.1 General Comments

7.1.1 Application business logic

Application business logic is to remain in Market Operator systems. It should not be expected that business logic be replicated in the ASIC market surveillance system. It should also not be expected that information about data provided via the AMRF be "derived" or "inferred". Examples of such business logic are:

- Market operators should notify the IMSS of the cancellation of the remaining volume of an IOC order that has been accepted and immediately partially filled.
- Market operators should notify the IMSS of the cancellation of the remaining volume of an FOK order that has been accepted but not immediately filled.

7.1.2 Market Identification

The regulation feed requires the market to provide the basic message types as illustrated in Table 33: Regulation Feed Message Types. In addition to the SenderCompID (49) field[4] (which is required in the header) the market must be identified within the body of each message.

The MarketID (1301) field is used to identify the originating market in the*, Trade Capture Report, Security Status* and *News* messages.

The MarketSegmentID (1300) field is used to identify the trading platform/matching pool in the *Trade Capture Report, Security Status* and *News* messages.

Instances of the PartyID (448) field are used to identify both the originating market and the trading platform in *Execution Report* messages.

Markets and trading platforms must be identified using the ISO-10383 Market Identification Code (MIC). (See Appendix C – Market Identification Codes).

Table 33: Regulation Feed Message Types

FIX Message	Business Content	Market Identifier	Trading Platform
Execution Report (8)	Orders	PartyID(448), where PartyIDSource(447) =G =MIC and PartyRole(452) =22 =Exchange	PartyID(448), where PartyIDSource(447) =G =MIC and PartyRole(452) =73 =Execution Venue
Trade Capture Report (AE)	Trade reports	MarketID (1301)	MarketSegmentID (1300)

[4] SenderSubID (50) is also supplied in the header, and is used to identify sub-feeds within the market feed. The sub-feeds of the AMRF merely provide a transport capability for the set of Trading Platforms making up the AMRF and are not synonymous with MarketSegmentID.

FIX Message	Business Content	Market Identifier	Trading Platform
Security Status (f)	Security Status and price indications	MarketID (1301)	MarketSegmentID (1300)
News (B)	General News	MarketID (1301)	MarketSegmentID (1300)

7.1.3 Extension Packs

Extension packs are a method of introducing new sets of functionality within a specified release. Extension Packs are applied to the FIX repository in a cumulative manner and culminate in a Service Pack release according the FPL Global Technical Committee schedule.

Extension Packs 101 and 104 were created and approved in 2009 to support IIROC requirements. New enumerators were added to existing fields, and some fields were added to existing messages. These new fields and enumerators will be rolled into FIX 5.0 SP3 when it is released by FPL. By making use of the IIROC extensions, IMSS will remain compliant with FIX 5.0 SP3. Any additional enhancements will be negotiated by ASIC with FPL and included in an additional extension pack.

7.2 Execution Report – New Order

The market sends an *Execution Report* to IMSS in response to a new order being entered into the trading system.

Notes
Order Types To ensure consistency, this FIX specification adheres precisely to the naming conventions and definitions for order types as prescribed by FPL. For clarification: • TimeInForce (59) = 3 (IOC) – Refers to an order that is to be *filled or partially filled* immediately. The total unfilled quantity is cancelled by the market • TimeInForce (59) = 4 (FOK) – Refers to an order that is to be *fully filled* immediately, or cancelled in its entirety by the market –Private vs. Public Order Information OrderID (37) and, where supplied, BrokerNumber (specified in PartyID(448)) must always contain the actual (private) information. Markets that maintain both a public and a private order number (e.g., to prevent information leakage) must always provide the private order number in OrderID(37)

Table 34: Execution Report – New Order

Tag	Field Name	Req	Description
	Message Header	Y	MsgType = 8
11	ClOrdID	C	Unique client order identifier assigned by the firm submitting the order. Required if specified on the Order.
526	SecondaryClOrdID	C	Additional client orderidentifier assigned by the firm submitting the order. Required if specified on Order.
17	ExecID	Y	Unique market-assigned identifier of the execution message
37	OrderID	Y	Unique market-assigned identifier of the order
39	OrdStatus	Y	Identifies current status of order. Valid values: 0 = New
40	OrdType	Y	Valid values: 1 = Market 2 = Limit P = Pegged
<OrderQtyData>		Y	OrderQty must be non-zero
<Instrument>		Y	
<Parties>		Y	Executing firm and executing trader (where available); MIC codes of the market and the trading platform
54	Side	Y	Side of order: Valid values: 1 = Buy 2 = Sell 5 = Sell short
59	TimeInForce	Y	Specifies how long the order remains in effect. Valid values: 0 = Day 1 = Good Till Cancel (GTC) 3 = Immediate or Cancel (IOC) (ASX: Fill and Kill") 4 = Fill or Kill (FOK) 6 = Good Till Date (GTD)

Tag	Field Name	Req	Description
60	TransactTime	Y	Time of order creation. Must be specified to the precision available in the Market Operator Trading System (either milliseconds, microseconds or nanoseconds)
150	ExecType	Y	Describes the specific ExecutionRpt. Valid values: 0 = New
151	LeavesQty	Y	Quantity of shares open for further execution
1	Account	C	Trading account identifier. Required if specified on order
44	Price	C	Price per unit of quantity. Must be non-zero. Required if specified on order
110	MinQty	C	Minimum quantity of an order to be executed. Required if specified on order, must be non-zero.
126	ExpireTime	C	Time/Date of order expiration. Required if specified on order
432	ExpireDate	C	Date of order expiration. Required if TimeInForce = GTD and ExpireTime (126) is not supplied
839	PeggedPrice	C	The current price the order is pegged at. Required for pegged orders when available.
<DisplayInstruction>		C	The quantity to be displayed. Required for Partly Disclosed and Hidden orders. Specifies the quantity to be displayed. Not to be supplied for fully disclosed orders.
<PegInstructions>		C	Required for pegged orders
64	SettlDate	C	Specific date of trade settlement in YYYYMMDD format. Required if specified on order
<TrdRegTimestamps>		C	Used to indicate the time an order was received by the broker. Required when a TrdRegTimestamp is required
→20001	ParentStrategyID	C	SecurityID of the parent Strategy. Required if order is an individual leg of a strategy
→20002	ParentStrategyIDSource	C	SecurityID of the parent Strategy. Required for a trade of an individual leg of a strategy. Valid Values: 1=Strategy (e.g. ASX Trade, Tailor Made Combination) 2=Portfolio

Tag	Field Name	Req	Description
528	OrderCapacity	C	Designates the capacity of the firm placing the order. Required where available. Valid values: A=Agency P=Principal M= Mixed Agency and Principal; to allow identification of transcations that are mixed principle/agent.
20013	DirectedWholesaleIndicator	C	Indicates whether the order was submitted by a wholesale AOP client with non-discretionary routing and execution instructions. Required if indicator is true. Valid values: Y = True N = False (default)
529	OrderRestrictions	C	Restrictions associated with an order. Required if specified on order. This field can contain multiple instructions separated by a space. Valid values: C = Price Stabilization G = Market Bid I = Participant Preferenced
18	ExecInst	C	Instructions for order handling on exchange trading floor, Valid values: f = Intermarket Sweep
	Message Trailer	Y	

7.3 Execution Report – Order Replacement / Restatement

The market sends an *Execution Report* to IMSS explicitly indicating when a change to any existing order (or a change to an order's status) has been processed by the trading engine. Such changes include Order Restatements resulting from Iceberg refreshes and pegging suspends and resumes, and Order Replacements from trader-initiated changes.

Pegged order price updates are the sole exception to such execution reports.

A *restated* Execution Report is also used for the morning insert of GT orders, where required.

Market operators should notify the IMSS of all changes to an order, including changes to remaining order volumes as a result of partial fills or complete fills.

Notes

Order Replacement

- The *Execution Report* resulting from an order modification initiated by a participant is represented with ExecType (150) = 5 (Replaced). This report contains the details of the order as well as the original ClOrdID (OrigClOrderID), the new ClOrdID and the OrderID
- LeavesQty(151) must not be zero for order modifications/amendments initiated by a participant; *Execution report* where ExecType(150) = 5 (Replaced) unless explicitly done by the participant and allowable by market operator systems or supported by the standard FIX "Order State Change Matrix".

Order Restatement

- The Execution Report resulting from a market-initiated change to an order is represented with:
- ExecType (150) = D (Restated) with the corresponding reason for restatement indicated in field ExecRestatementReason (378)
- ExecType (150) = L (Triggered) for orders that are triggered by the trading engine (e.g., on stop order)

ExecType (150) = 3 (Done for day) for markets that support this functionality

OrdStatus (39)

- The enumerator “5” (Replaced) was deprecated by FPL in version 4.3 and is no longer a valid value for OrdStatus. For orders that are restated by the market or replaced as the result of a request submitted by a trader, valid OrdStatus values include:
  - New (0) – for orders that have received no fills at the time of order replacement/restatement
  - Partially Filled (1) – for orders that have been partially filled at the time of order replacement/restatement
  - Filled (2) – for orders that have been completely filled at the time of order replacement/restatement
  - Done for day (3) – may be used for GT orders that are done for day
-

Table 35: Execution Report – Replace Order

Tag	Field Name	Req	Description
	Message Header	Y	MsgType = 8
11	ClOrdID	C	Unique client order identifier assigned by the firm submitting the order. Required if specified on Order
526	SecondaryClOrdID	C	Additional client order identifier assigned by the firm submitting the order. Required if specified on Order.
17	ExecID	Y	Unique market-assigned identifier of the execution message
37	OrderID	Y	Unique market-assigned identifier of the order
39	OrdStatus	Y	Identifies current status of order. Valid values: 0 = New 1 = Partially Filled 2 = Filled 3 = Done for day 9 = Suspended
40	OrdType	Y	Valid values: 1 = Market 2 = Limit P = Pegged
<OrderQtyData>		Y	OrderQty must be non-zero
<Instrument>		Y	
<Parties>		Y	Executing firm and executing trader (where available); MIC codes of the market and the trading platform

Tag	Field Name	Req	Description
54	Side	Y	Side of order: Valid values: 1 = Buy 2 = Sell 5 = Sell short
59	TimeInForce	Y	Specifies how long the order remains in effect. Valid values: 0 = Day 1 = Good Till Cancel (GTC) 3 = Immediate or Cancel (IOC) 4 = Fill or Kill (FOK) 6 = Good Till Date (GTD)
60	TransactTime	Y	Time of order creation. Must be specified to the precision available in the Market Operator Trading System (either milliseconds, microseconds or nanoseconds)
150	ExecType	Y	Describes the specific ExecutionRpt. Valid values: 3 = Done for day 5 = Replaced 9 = Suspended D = Restated L = Triggered [RFU]
151	LeavesQty	Y	Quantity of shares open for further execution
41	OrigClOrdID	C	ClOrdID of the previous accepted order. Conditionally required for response to a Cancel or Cancel/Replace request
44	Price	C	Price per unit of quantity. Must be non-zero. Required if specified on order
110	MinQty	C	Minimum quantity of an order to be executed. Required if specified on order must be non-zero.

Tag	Field Name	Req	Description
378	ExecRestatementReason	C	Required for ExecType = D (Restated). Valid values[5]: 1 = GT renewal / restatement 3 = Repricing of order 11 = Peg Refresh 100 = Iceberg Refresh 101 = Order Altered 103 = Order Activated 104 = Order Inactivated 105 = Order Reloaded 107 = No Self Trade
839	PeggedPrice	C	The current price the order is pegged at. Required for pegged orders when available.
<DisplayInstruction>		C	The quantity to be displayed. Required for Partly Disclosed and Hidden orders. Specifies the quantity to be displayed. Not to be supplied for fully disclosed orders.
<PegInstructions>		C	Required for pegged orders
126	ExpireTime	C	Time/Date of order expiration. Required if specified on order
432	ExpireDate	C	Date of order expiration. Required if TimeInForce = GTD and ExpireTime (126) is not supplied
1	Account	C	Trading account identifier. Required if specified on order
64	SettlDate	C	Specific date of trade settlement in YYYYMMDD format. Required if specified on order

[5] See Appendix J Exec Restatement Reason mappings for Market Operator mappings

Tag	Field Name	Req	Description
<TrdRegTimestamps>		C	Required when the market updates time priority for an order and the timestamp is different than the TransactTime (60)
→20001	ParentStrategyID	C	SecurityID of the parent Strategy. Required if order is an individual leg of a strategy
→20002	ParentStrategyIDSource	C	SecurityID of the parent Strategy. Required for a trade of an individual leg of a strategy. Valid Values: 1 = Strategy (e.g. ASX Trade, Tailor Made Combination) 2 = Portfolio
528	OrderCapacity	C	Designates the capacity of the firm placing the order. Required where available. Valid values: A=Agency P=Principal M= Mixed Agency and Principal; to allow identification of transactions that are mixed principle/agent.
20013	DirectedWholesaleIndicator	C	Indicates whether the order was submitted by a wholesale AOP client with non-discretionary routing and execution instructions. Required if indicator is true. Valid values: Y = True N = False (default)
529	OrderRestrictions	C	Restrictions associated with an order. Required if specified on order. This field can contain multiple instructions separated by a space. Valid values: C = Price Stabilization G = Market Bid I = Participant Preferenced

Tag	Field Name	Req	Description
18	ExecInst	C	Instructions for order handling on exchange trading floor, Valid values: f = Intermarket Sweep
	Message Trailer	Y	

7.4 Execution Report – Order Cancellation / Expiration

The market sends an *Execution Report* to IMSS when an order expires or is cancelled.

Notes
Solicited and Unsolicited Cancellations • A Day order (where timeInForce(59)=0) expired by the market due to a market session close is represented by: OrdStatus (39) = 3 (Done for day), ExecType (150) = 3 (Done for day) • A GTD order (where timeInForce(59)=6) expired by the market is represented by: OrdStatus (39) = C (Expired), ExecType (150) = C (Expired) • An unsolicited order cancellation by the market is represented by : OrdStatus (39) = 4 (Cancelled), ExecType (150) = D (Restated), with ExecRestatementReason (378) indicating the reason for the cancellation. Examples are when: • An order would create a trade outside the price range for a security, ExecRestatementReason (378) = 15 (Cancelled, Trade Price Violation) • An order is cancelled by the market due to a trading halt, ExecRestatementReason (378) = 6 (Cancelled on Trading Halt) • A solicited order cancellation is represented by : OrdStatus (39) = 4 (Cancelled), ExecType (150) = 4 (Cancelled), ExecRestatementReason (378) should not be supplied Cancellations resulting from un-filled IOC and FOK orders are also represented in this fashion • Start-of-day reporting of orders that were cancelled or expired after the previous close are represented by: OrdStatus (39) = 4 (Cancelled) or C (Expired), ExecType (150) = I (Order Status)

Table 36: Execution Report – Cancel Order

Tag	Field Name	Req	Description
	Message Header	Y	MsgType = 8

Tag	Field Name	Req	Description
11	ClOrdID	C	Unique client order identifier assigned by the firm submitting the order. Required if specified on Order
526	SecondaryClOrdID	C	Additional client orderidentifier assigned by the firm submitting the order. Required if specified on Order.
17	ExecID	Y	Unique market-assigned identifier of the execution message
37	OrderID	Y	Unique market-assigned identifier of the order
39	OrdStatus	Y	Identifies current status of order. Valid values: 3 = Done for Day 4 = Cancelled C = Expired
40	OrdType	Y	Valid values: 1 = Market 2 = Limit P = Pegged
54	Side	Y	Side of order: Valid values: 1 = Buy 2 = Sell 5 = Sell short
59	TimeInForce	Y	Specifies how long the order remains in effect. Valid values: 0 = Day 1 = Good Till Cancel (GTC) 3 = Immediate or Cancel (IOC) (ASX: "Fill and Kill") 4 = Fill or Kill (FOK) 6 = Good Till Date (GTD)
60	TransactTime	Y	Time of order creation. Must be specified to the precision available in the Market Operator Trading System (either milliseconds, microseconds or nanoseconds)
150	ExecType	Y	Describes the specific ExecutionRpt. Valid values: 3 = Done for day 4 = Cancelled C = Expired D = Restated I = Order Status

Tag	Field Name	Req	Description
151	LeavesQty	Y	Quantity of shares open for further execution
<OrderQtyData>		Y	
<Instrument>		Y	
<Parties>		Y	Executing firm and executing trader (where available); MIC codes of the market and the trading platform
41	OrigClOrdID	C	ClOrdID of the previous accepted order. Conditionally required for response to a Cancel or Cancel/Replace request
44	Price	C	Price per unit of quantity. Required if specified on order
110	MinQty	C	Minimum quantity of an order to be executed. Required if specified on order , must be non-zero.
432	ExpireDate	C	Date of order expiration. Required if TimeInForce = GTD and ExpireTime (126) is not supplied
126	ExpireTime	C	Time/Date of order expiration. Required if specified on order
839	PeggedPrice	C	The current price the order is pegged at. Required for pegged orders when available.
<DisplayInstruction>		C	The quantity to be displayed. Required for Partly Disclosed and Hidden orders. Specifies the quantity to be displayed. Not to be supplied for fully discosed orders.
<PegInstructions>		C	Required for pegged orders
1	Account	C	Trading account identifier. Required if specified on the order

Tag	Field Name	Req	Description
64	SettlDate	C	Specific date of trade settlement in YYYYMMDD format. Required if specified on order
378	ExecRestatementReason	C	Cancellation reason. Required for ExecType = D (Restated). Valid values[6]: 0 = GT corporate action 6 = Cancel on Trading Halt 7 = Cancel on System Failure 15 = Cancelled, Trade Price Violation 102 = Order Deleted 104 = Order Inactivated 107 = No Self Trade
→20001	ParentStrategyID	C	SecurityID of the parent Strategy. Required if order is an individual leg of a strategy
→20002	ParentStrategyIDSource	C	SecurityID of the parent Strategy. Required for a trade of an individual leg of a strategy. Valid Values: 1=Strategy (e.g. ASX Trade, Tailor Made Combination) 2=Portfolio
528	OrderCapacity	C	Designates the capacity of the firm placing the order. Required where available. Valid values: A=Agency P=Principal M= Mixed Agency and Principal; to allow identification of transcations that are mixed principle/agent.
529	OrderRestrictions	C	Restrictions associated with an order. Required if specified on order. This field can contain multiple instructions separated by a space. Valid values: C = Price Stabilization G = Market Bid I = Participant Preferenced

[6] See Appendix J Exec Restatement Reason mappings for Market Operator mappings

Tag	Field Name	Req	Description
20013	DirectedWholesaleIndicator	C	Indicates whether the order was submitted by a wholesale AOP client with non-discretionary routing and execution instructions. Required if indicator is true. Valid values: Y = True N = False (default)
18	ExecInst	C	Instructions for order handling on exchange trading floor, Valid values: f = Intermarket Sweep
	Message Trailer	Y	

7.5 Trade Capture Report

The market sends IMSS a *Trade Capture Report*:

- When a trade occurs on a previously acknowledged new or cross order
- In response to the market manually adding, correcting or cancelling a trade
- In response to participants manually adding, correcting or cancelling a trade

Notes

TradeID (1003)

- TradeID assigned by the market must be unique on a per execution venue basis within a single trading day

Trade Processing (Execution) Time

- TransactTime (60) specifies the date/time of processing by the market operator. TransactTime must be specified to the precision available in the Market Operator Trading System (either milliseconds, microseconds or nanoseconds)
- TrdRegTimestamp (769) (with TrdRegTimestamp (770) = 1) specifies the date/time of trade processing in market participant's trading systems. Must be specified where it differs from the time given in TransactTime. Examples of such instances are for off-market trades and Trade Corrections (see below)

Trade Additions

- Trade *additions* are represented with following key field representations:
  - TradeReportTransType (487) = 0 (New)
  - TradeID (1003) for the added trade
  - TransactTime (60), TrdRegTimestamp (769) – see above
  - SecondaryTrdType (855) = 22 (Required for Off-Market / OTC trades)

Trade Cancellations

- The TradeID field contains the TradeID of the trade being cancelled
- Trade *cancellations* are represented with the following key field representations:
  - TradeReportTransType (487) = 1 (Cancel)
  - TradeID (1003) = TradeID of the trade being cancelled
  - ExecRestatementReason (378) = Reason for cancel
  - All other fields, except timestamps, should be the same as the original order

Notes (cont'd)

Trade Corrections

- The trade being corrected must first be cancelled (see above for key field representations) followed by another *Trade Capture Report* with the following key field representations:
  - TradeReportTransType (487) = 2 (Replaced)
  - OrigTradeID (1126) = TradeID (1003) of trade being corrected
  - TradeID (1003) for the corrected trade
  - TransactTime (60) = Trade processing time by market operator.
  - TrdRegTimestamp (769) = Trade processing time, required if it differs from TransactTime (60)

Privately Negotiated Trades

- Privately negotiated trades are represented by SecondaryTrdType (855) = 22

Table 37: Trade Capture Report

Tag	Field Name	Req	Description
	Message Header	Y	MsgType = AE
31	LastPx	Y	Price of this (last) fill
< RootParties>		C	Conditionally required to provide execution venue identification in off market trade reports when available in accordance with RG 223 5A
32	LastQty	Y	Quantity (e.g. shares) bought/sold on this (last) fill
<Instrument>		Y	
60	TransactTime	Y	Date and Time of procssing by the market operator
487	TradeReportTransType	Y	Identifies Trade Report message transaction type. Valid values: 0 = New 1 = Cancel 2 = Replace
1003	TradeID	Y	The unique ID assigned to the trade once it is matched by the market
1301	MarketID	Y	MIC code of the market
1300	MarketSegmentID	Y	MIC code of the market trading platform
<TrdCapRptSideGrp>		Y	

Tag	Field Name	Req	Description
75	TradeDate	N	Used when reporting other than current day trades
549	CrossType*	C	Type of crossed trade Required for crossed trades Valid values: 100 = accidental crossing, where the trade is matched on the market's order book where both PartyIDs with a PartyRole of 1 (BrokerNumber) are identical 101 = prioritised crossing; used for crossing resulting from participant preferenced orders. 102 = other
574	MatchType	C	The point in the matching process at which the trade was matched. Valid values: 4 = Auto-match; to be used for auto-matched trades with valid SecondaryTrdType(855) 5 = Cross Auction
828	TrdType	C	Type of trade. Required when 855 = 22 or 855 = 1001[7]. Valid values: 1 = Block Trade 2 = EFP (RFU) 48 = Non-Standard Settlement Trade 50 = Portfolio Trade (Large Portfolio Trade) 10 = after hours trade (out of hours trade) 54 = OTC 100 = Trades at/or within the spread 101 = trades permitted during post-trading 102 = trades permitted during pre-trading 103 = Large Principal Transaction 104 = Booking purposes 105 = Non-Standard Instrument Trade 106 = Rectification Trade 107 = Self Managed Super Fund Transfer (RFU)

* CrossType (549) was added to the *Trade Capture Report* in EP101.

[7] Only in the instance where 855=1001 has been sent for booking purposes, in which case 828=104 (Booking Purposes) must be supplied. In other instances 855 is not required

Tag	Field Name	Req	Description
855	SecondaryTrdType	C	Additional TrdType assigned to a trade by trade match system. Required for enumerated values. Valid values: 22 = Privately Negotiated Trade 45 = Options Exercise 1001 = Information Only. TradeCaptureReports that describe transactions that are not trades with respect to the Market Integrity Rules, (e.g., Booking Purposes only, Loans and Loan Returns)
1126	OrigTradeID	C	Used to reference the previous TradeID for trade corrections. Required for trade corrections, where it differs from the current TradeID
<TrdRegTimestamps>		C	Required for the trade processing date/time.
20003	TrdConditionCode	C	Required for trades originating from the ASX only, to specify one or more ASX Market Condition Codes, where available. Multiple values should be space delimited, and should consist of standard ASX values
20006	NoPriceImpactIndicator	C	Indicates that a trade does not impact market price statistics. (e.g. Market open/high/low/last/close price statistics) Not required when default value. Valid values: N = No (default value) Y = Yes(does not impact price statistics)
63	SettlType	C	Indicates order settlement period. Required for non-standard or Extended Settlement. Not supplied for standard settlement. Valid values: 6 = Future
64	SettlDate	C	Specific date of trade settlement in YYYYMMDD format. Required if specified on order or if not default settlement date for traded security.
	Message Trailer	Y	

7.6 Security Definition

The Security Definition message is used by Listing Markets to communicate reference data for equity instruments, and is normally sent only at Start of Day (SOD).

Security Definitions are required to be sent intra-day for any intra-day created securities.

Table 38: Security Definition

Tag	Field Name	Req	Description
	Message Header	Y	MsgType = d
60	TransactTime	Y	Timestamp when the business transaction represented by the message occurred
<MarketSegmentGrp>		Y	Market Segments Security Trading Rules under which a security may trade
<Instrument>		Y	Specifies instrument details
	Message Trailer	Y	

7.7 Derivative Security List

The Derivatives Security List message is used by Listing Markets to communicate reference data for option series and individual strikes, and is normally sent only at Start of Day (SOD).

An Option Series is defined using the Derivatives Security List Message. The individual strikes for a given series are then elaborated as Related Symbols using Instrument components with the RelSymDerivSecGrp component block. The Option Series references an Equity symbol in order to tie back to a specific underlying instrument

Table 39: Derivative Security List

Tag	Field Name	Req	Description
	Message Header	Y	MsgType = AA
60	TransactTime	Y	Timestamp when the business transaction represented by the message occurred
<Underlying Instrument>		Y	Underlying security for which derivatives are being returned
<Derivative Security Definition>		Y	Group block which contains all information for an option family. Qualifies the strikes specified in the Instrument blocks specified in RelSymDerivSecGrp
<RelSymDerivSecGrp>		Y	Specifies the Strikes for an Option family
	Message Trailer	Y	

7.8 Security Status

The *Security Status* message is used to convey: 1) the status of a security prior to the markets first open state; 2) changes to the status of a security intraday; and, 3) to indicate intraday price calculations and adjustments. The market sends IMSS a *Security Status* message:

- Start of Day: for each security that is to be traded on the market prior to the market's first open state to indicate the security's status from the previous trading day.
- End of Day: for each security that traded on the market after the market closes to indicate the closing price of the security for the current trading day, as determined by the CLOB only[8].
- In response to a change in a security's status intraday (e.g., open, halt), there will be one security status message sent for each corresponding security.
- If an Extreme Trading Range event occurs in a Security that requires notification.

Notes

Security Status

- Start of Day messages are distinguished by TradingSessionSubID (625) = 7 (Quiescent). SecurityTradingStatus (326), Text (58) and SecurityTradingEvent (1174) are not required. LastPx (31) is optional.
- Changes to the status of a security are represented using the combination of SecurityTradingStatus (326), SecurityTradingEvent (1174) and the Text (58) field. (See Table 40: Required Standard Security State Representations and Table 41: Special Security State Representations (mappings to be made by Market operators). SecurityStatus messages should be sent for all relevant securities when their SecurityTradingStatus changes, e.g., on opening and closing of a market.

Price Indication

- The combination of LastPx (31) and Text (58) are used to indicate the type of price being referenced in the message with SecurityTradingStatus (326) = 5 (Price indication):
  - End of Day security status messages have 58=CLOSING_PRICE. The Close price is the official markets statistic price
  - Security status messages used for Opening prices have 58=OPEN_PRICE
  - Security status messages used for ETR reference price indication have 58=REF_PRICE

Extreme Trading Range Notification (ETR)

- The SecurityTradingStatus (326) = 6 (trading range indication) is used to indicate an ETR notification .The price being referenced is formatted in the text(58) field as
  - "NEWORDER AT PRICE [$$.cc] REJECTED".

[8] Excluded transactions to be documented

Table 40: Required Standard Security State Representations

State	MO	SecurityTradingStatus (326)	SecurityTradingEvent (1174)
Active	All	17 (ready to trade)	Valid values: 2 = trading resumes after halt
Restricted trading	All	101 (Restricted trading)	
Halted	All	2 (trading halt)	
Close	All	18 (not available for trade – end of session)	
Pegging Disabled	CHI-X	102 (Pegging disabled)	
Pre Open	ASX	21 (pre-open)	
Allocation	ASX	16 (trade dissemination time)	

Table 41: Special Security State Representations (mappings to be made by Market operators)

State	MO	SecurityTradingStatus (326)	SecurityTradingEvent (1174)	Text (58)
Pegging Resume	CHI-X	17 (ready to trade)		PEGGING RESUME
Off-market trading	CHI-X	101 (Restricted trading)		
OPEN	ASX	17 (ready to trade)		
CLOSE	ASX	18 (not available for trade – end of session)		
PRE_OPEN	ASX	21 (pre-open)		
TRADING_HALT	ASX	2 (trading halt)		
SUSPEND	ASX	2 (trading halt)		SUSPEND
ADJUST	ASX	101 (Restricted trading)		ADJUST
CSPA	ASX	101 (Restricted trading)		CSPA
PRE_NR	ASX	21 (pre-open)		PRE_NR
ENQUIRE	ASX	18 (not available for trade – end of session)		ENQUIRE
PRE_CSPA	ASX	21 (pre-open)		PRE_CSPA

ADJUST_ON	ASX	101 (Restricted trading)		ADJUST_ON
REG_HALT	ASX	2 (trading halt)		REG_HALT
PRE_NIGHT_TRADING	ASX	21 (pre-open)		PRE_NIGHT_TRADING
LATE_TRADING	ASX	21 (pre-open)		LATE_TRADING
ABB_AUCTION	ASX	21 (pre-open)		ABB_AUCTION
OPEN_QUOTE_DISPLAY	ASX	21 (pre-open)		OPEN_QUOTE_DISPLAY
OPEN_NIGHT_TRADING	ASX	17 (ready to trade)		OPEN_NIGHT_TRADING
PURGE_ORDERS	ASX	18 (not available for trade – end of session)		PURGE_ORDERS
SYSTEM_ MAINTENANCE	ASX	18 (not available for trade – end of session)		SYSTEM_ MAINTENANCE
WAIT_VMB	ASX	18 (not available for trade – end of session)		WAIT_VMB
OPEN_VMB	ASX	17 (ready to trade)		OPEN_VMB
INTERNATIONAL_HALT	ASX	2 (trading halt)		INTERNATIONAL_HALT
BB_PREOPEN	ASX	21 (pre-open)		BB_PREOPEN
BB_OPEN	ASX	17 (ready to trade)		BB_OPEN
BB_MARKET_OPEN	ASX	21 (pre-open)		BB_MARKET_OPEN
BB_ALLOC	ASX	16 (trade dissemination time)		BB_ALLOC
BB_CLOSE	ASX	18 (not available for trade – end of session)		BB_CLOSE
BB_MARKET_ENQUIRE	ASX	18 (not available for trade – end of session)		BB_MARKET_ENQUIRE
ETR Event Detected	CHI-X	6 (trading range indication)		NEW ORDER AT PRICE [$$.cc] REJECTED

Table 42: Security Status

Tag	Field Name	Req	Description
	Message Header	Y	MsgType = f
60	TransactTime	Y	Timestamp when the business transaction represented by the message occurred
1301	MarketID	Y	Identifes the market. (See Appendix C – Market Identification Codes)
1300	MarketSegmentID	Y	MIC code of the market trading platform
31	LastPx	C	Represents the last price for the security at the time message is disseminated. Required for end-of-day reporting and for intraday price indications. Optional for start-of-day reporting
15	Currency	N	Identifies currency used for price (Default = AUD)
58	Text	C	Comment, instructions, or other identifying information. Valid values: - OPEN_PRICE (only where 326=5) - CLOSING_PRICE (only where 326=5) - REF_PRICE (only where 326=5) - Values Specified in Special Security State Representations table. Required for price indications and optionally supplied where defined in Table 41: .
326	SecurityTradingStatus	C	Identifies the trading status applicable to the transaction. Required for price indications, opening delays, and trading halts / freezes. Valid values: 2 = Trading halt (Halted or Frozen) 3 = Resume 5 = Price Indication 6 = Trading Range Indication 17 = Ready to trade 18 = Not available for trading (end of session) 21 = Pre-Open 101 = Restricted Trading 102 = Pegging disabled 16 = Trade Dissemination Time
625	TradingSessionSubID	C	Identifier for Trading Session. Valid values: 7 = Quiescent (Required and only to be used for SOD *Security Status* messages.)

Tag	Field Name	Req	Description
1174	SecurityTradingEvent	C	Identifies an event related to a SecurityTradingStatus. Required for trading resumptions. Valid values: 2 = Trading resumes (after Halt) 3 = Price volatility interruption [RFU] 6 = Change of security trading status
<Instrument>		Y	

Tag	Field Name	Req	Description
20007	CorporateActionLongDesc	C	Identifies one or more Corporate Actions, delimited by a space. Required to be supplied by Listing Market. Valid values: NL = Notice Late NR = Notice Received NS = Under Offer of Takeover NX = New Ex Interest RD = Currently under reconstruction RE = Reconstructed SH = Covered Short Selling Prohibited UA = Under Adjustment XB = Ex Bonus Issue XC = Ex Return of Capital XD = Ex Dividend XE = Ex Entitlement XF = Ex Takeover Offer XI = Ex Interest XQ = Ex Equal Access Buyback XR = Ex Rights Issues XZ = Ex Priority SD = Special Distribution CB = Cum Bonus CC = Cum Capital Return CD = Cum Dividend Stock CE = Cum Entitlement CF = Cum Takeover Offer CI = Cum Interest CQ = Cum Equal Access Buyback CR = Cum Rights CT = Conditional Trading CZ = Cum Priority IN = Interest Only PA = Protection Available PU = Protection Unavailable RA = Receiver Appointed CL = Call Due CP = Call Paid RC = Rollover complete RP = Rollover pending

Tag	Field Name	Req	Description
			S1 = 1/10 price step FV = Cum fair value settlement
327	HaltReason	N	Denotes the reason for the Opening Delay or Trading Halt. Valid values: 0 = News Dissemination 102 = Regulatory
1655	MarketMakerActivity	N	Indicates market maker status in security. Valid values: 0 = No participation 1 = Buy participation 2 = Sell participation 3 = Both buy and sell participation
<InstrumentExtension>		RFU	
	Message Trailer	Y	

7.9 News

The market sends IMSS a *News* message when:

- The market wishes to send a market announcement
- The market wishes to send a company announcement
    - An announcement with a NewsCategory (1473) = 0 (company news) and Urgency (61) = 1 (flash) is considered to be market sensitive
- The market wishes to provide miscellaneous information.
- During Start of Day processing to indicate that all *Security Status* messages have been sent[9]
    - 148 = SEC_STATUS_SOD
    - 58 = END_OF_MESSAGES
- During Start of Day processing to indicate that all *Execution Report* messages have been sent
    - 148 = GT_CXL_EXP_ORDERS
    - 58 = END_OF_MESSAGES
- During End of Day processing to indicate that all *Security Status* messages have been sent[10], and that the market is to send no more business messages
    - 148 = SEC_STATUS_EOD
    - 58 = END_OF_MESSAGES
- During Start of Day processing to indicate that all *DerivativeSecurityList* messages have been sent by a listing market[11]
    - 148 = DSL_SOD
    - 58 = END_OF_MESSAGES
- During Start of Day processing to indicate that all *SecurityDefinition* messages have been sent by a listing market[12]
    - 148 = SD_SOD
    - 58 = END_OF_MESSAGES
- During Start of Day processing to indicate that all *SecurityDefinition* messages for de-listed securities have been sent by a listing market[13]
    - 148 = SD_DELISTED_SOD
    - 58 = END_OF_MESSAGES

Market, company and miscellaneous announcements require a MarketID (1301), but do not require MarketSegmentID (1300) to be provided. All other news messages require both fields

[10] See s6.3, End of Day

[10] See s6.3, End of Day

[11] see s6.1, Start of Day*)*

[12] see s6.1, Start of Day*)*

[13] see s6.1, Start of Day*)*

Table 43: General Message

Tag	Field Name	Req	Description
	Message Header	Y	MsgType = B
1472	NewsID	C	Unique identifier for a News message in a trading day. Required for market or company annoucements
1473	NewsCategory	C	Category of News message. Required for market or company annoucements. Valid values: 0 = Company News 1 = Marketplace news 3 = Technical news 100 = Notice received
42	OrigTime	Y	Time of message origination
61	Urgency	C	Urgency of News message. Company News and marketplace news messages Required for market or company annoucements. Valid values: 0 = Normal 1 = Flash 2 = Background
148	Headline	Y	The headline of a *News* message The values 'SEC_STATUS_SOD", "SEC_STATUS_EOD" and "GT_CXL_EXP_ORDERS" are only to be used as defined for Start of Day or End of Day processing above
1301	MarketID	Y	Identifies the market. (See Appendix C – Market Identification Codes)
1300	MarketSegmentID	C	MIC code of the market trading platform. Not required for market, company and miscellaneous announcements
<InstrmtGrp>		C	Used to indicate the securities associated with the News message. Required for Company News
33	NoLinesOfText	Y	Identifies number of lines of text body
→58	Text	Y	Comments, instructions, or other identifying information The value "END_OF_MESSAGES" is only to be used as defined for Start of Day or End of Day processing above
	Message Trailer	Y	

8 Appendices

8.1 Appendix A – Checksum Calculation

The checksum of a FIX message is calculated by summing every byte of the message up to but not including the checksum field itself. This checksum is then transformed into the modulo 256 number for transmission and comparison. The checksum is calculated after all encryption is completed, i.e. the message as transmitted between parties is processed.

For transmission, the checksum must be sent as printable characters, so the checksum is transformed into three ASCII digits.

For example, if the checksum has been calculated to be 274 then the module 256 value is 18 (256 + 18 = 274). This value would be transmitted as |10=018| where "10="is the tag for the checksum field.

A sample code fragment to generate the checksum field is as follows:

```
char *GenerateCheckSum( char *buf, long bufLen )
    {
        static char tmpBuf[ 4 ];
        long idx;
        unsigned int cks;

        for( idx = 0L, cks = 0; idx ( bufLen; cks += (unsigned int)buf[ idx++ ] );
        79print( tmpBuf, "%03d", (unsigned int)( cks % 256 ) );
        return( tmpBuf );
    }
```

8.2 Appendix B – Figures and Tables

8.2.1 Figures

8.2.2 Tables

8.3 Appendix C – Market Identification Codes

Table 52: ISO-10383 Market Identification Codes

ISO 10383 MIC	MarketID(1301)
CHIA	CHI-X Australia
XASX	ASX
XSFE (MSV)	ASX – Trade 24

ISO 10383 MIC	MarketSegmentID(1300)
CXAC	CHI-X Australia
ASXT	ASX – TradeMatch
ASXP	ASX – Purematch
ASXC	ASX – CentrePoint
ASXB	ASX – Book Build
To be advised (MSV)	ASX – Trade24

8.4 Appendix D – Required Field Summary

Notes

- The following table summarizes the optional versus mandatory field requirements for the Australian Market Regulation Feed (AMRF). Only the fields where a change is necessary are listed

8.4.1 Execution Report

Field #	Field Name	Required in FIX5.0SP2	Required in AMRF
17	ExecID	Y	Y
37	OrderID	Y	Y
38	OrderQty	N	Y
39	OrdStatus	Y	Y
40	OrdType	N	Y
Parties	452=1 Executing Firm, and corresponding 447, 448	N	Y

Field #	Field Name	Required in FIX5.0SP2	Required in AMRF
	452=12 Executing Trader, and corresponding 447, 448	N	Y
54	Side	Y	Y
59	TimeInForce	N	Y
60	TransactTime	N	Y
150	ExecType	Y	Y
151	LeavesQty	Y	Y

8.4.2 Trade Capture Report

Field #	Field Name	Required in FIX5.0SP2	Required in AMRF
31	LastPx	Y	Y
32	LastQty	Y	Y
37	OrderID	N	Y
60	TransactTime	N	Y
487	TradeReportTransType	N	Y
1003	TradeID	N	Y
1301	MarketID	N	Y
1300	MarketSegmentID	N	Y

8.4.3 Security Definition

Field #	Field Name	Required in FIX5.0SP2	Required in AMRF
60	TransactTime	N	Y
1301	MarketID	N	Y
1300	MarketSegmentID	N	Y

8.4.4 Derivative Security List

Field #	Field Name	Required in FIX5.0SP2	Required in AMRF
60	TransactTime	N	Y
1301	MarketID	N	Y
1300	MarketSegmentID	N	Y

8.4.5 Security Status

Field #	Field Name	Required in FIX5.0SP2	Required in AMRF
60	TransactTime	N	Y
207	SecurityExchange	N	Y
1301	MarketID	N	Y
1300	MarketSegmentID	N	Y

8.4.6 News

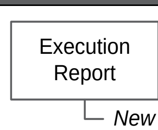
Field #	Field Name	Required in FIX5.0SP2	Required in AMRF
1301	MarketID	N	Y
1300	MarketSegmentID	N	Y
42	OrigTime	N	Y

8.5 Appendix E – High-Level Message Sequencing Reference

Notes

- Bid and Ask size contain actual number of shares
- Some High level message sequences have corresponding detailed examples in the FIX Message Sequence Guide. In these cases the section number of the detailed example is indicated
- The descriptor used below message sequence items are for: Execution Reports, Exectype values; Security Status, SecurityTradingStatus values; and a filled state for Trade Capture Reports

Figure 5: High-Level Message Sequencing Reference

Event	Msg Seq Guide detailed example	Application Message Sequence
Limit order accepted and not immediately tradable	None	

Event	Msg Seq Guide detailed example	Application Message Sequence
Market order accepted, partially filled with remainder converted to a limit order	3.7	Execution Report *New* → Trade Capture Report *Partially Filled* → Execution Report *Restated*
Market order accepted and fully filled	3.6	Execution Report *New* → Trade Capture Report *Fully Filled*
FOK order accepted and fully filled	None	Execution Report *New* → Trade Capture Report *Fully Filled*
FOK order accepted and immediately cancelled	3.9	Execution Report *New* → Execution Report *Cancelled*
IOC order accepted and immediately partially filled. Remaining volume is cancelled	3.10	Execution Report *New* → Trade Capture Report *Partially Filled* → Execution Report *Cancelled*
IOC order accepted and immediately fully filled	None	Execution Report *New* → Trade Capture Report *Fully Filled*
New order is accepted, then modified, and then partially filled	3.11 (1st 2 messages)	Execution Report *New* → Execution Report *Replaced* → Trade Capture Report *Partially Filled*
New order is accepted, then modified, and then fully filled	3.11 (1st 2 messages)	Execution Report *New* → Execution Report *Replaced* → Trade Capture Report *Fully Filled*

Event	Msg Seq Guide detailed example	Application Message Sequence
New floating pegged order is accepted, and is subsequently re-priced multiple times and fully filled	3.13	Execution Report → Execution Report → Trade Capture Report New; Restated (150=D, 378=3, 839=PeggedPrice); Fully Filled
New floating pegged order is accepted, broker amended, re-priced multiple times and fully filled		Execution Report → Execution Report → Execution Report → Trade Capture Report New; Replaced (150=5); Restated (150=D, 378=3, 839=PeggedPrice); Fully Filled
Trade occurs, Market manually cancels a trade	3.15	Trade Capture Report → Trade Capture Report New; Cancel
Market manually corrects a trade	3.14	Trade Capture Report → Trade Capture Report → Trade Capture Report New; Cancel; Replace
Iceberg order is accepted, partially filled, manually amended, and then fully filled	3.17 (1st 2 messages)	Execution Report → Trade Capture Report → Execution Report → Trade Capture Report New; Partially Filled; Replaced; Fully Filled
Iceberg order is accepted, visible volume is fully filled and then automatically refreshed by the system twice	3.17 (1st 2 messages)	Execution Report → Trade Capture Report → Execution Report → Trade Capture Report → Execution Report New; Partially Filled; Restated; Fully Filled; Restated

8.6 Appendix F – Special Terms Glossary

Term	Definition	Relevant Field
Disclosed Order	An order with publicly visible price and volume information, as defined by Part 1.4.3 of the ASIC Market Integrity Rules (MIR). DisplayQty (1138) must not be supplied.	DisplayQty(1138)
Fill or Kill	An order that is to be fully filled immediately, or killed in its entirety by the Market	TimeInForce (59)
Hidden Order	An order with publicly invisible price and volume information, as defined by Part 1.4.3 of the ASIC Market Integrity Rules (MIR). DisplayQty (1138) =0. DisplayMethod(1084) = H	DisplayQty(1138) DisplayMethod(1084)
Immediate or Cancel	An order that is to be filled or partially filled immediately. The total unfilled quantity is killed by the Market. Also known as a "Fill and Kill"	TimeInForce (59)
Partly Disclosed Order	An order with publicly visible price and partly visible or invisible volume information, as defined by Part 4.1.5 of the ASIC Market Integrity Rules (MIR). DisplayQty (1138) specifies the visible volume. Includes undisclosed (see Undisclosed Order) and iceberg orders	DisplayQty(1138) DisplayMethod(1084)
Undisclosed Order	An order with publicly visible price and invisible volume information, as defined by Part 1.4.3 of the ASIC Market Integrity Rules (MIR). DisplayQty (1138) =0. DisplayMethod(1084) = 4	DisplayQty(1138) DisplayMethod(1084)

8.7 Appendix G – Sample Messages

Execution Report (New Order, Replace, Cancel)

Message Type / Description	FIX Representation
Cancel	8=FIXT.1.1 | 9=282 | 35=8 | 49=MARKET | 56=IMSS | 34=17 | 52=20100302-15:48:28.455 | 37=9 | 11=123456 | 41=01234578 | 453=2 | 448=009 | 447=C | 452=1 | 448=TD769IT | 447=C | 452=12 | 17=05806ecf0711eee276b52ffffacfa | 150=4 | 39=4 | 55=XYZ | 54=1 | 38=300 | 40=2 | 44=31.69 | 59=0 | 151=0 | 60=20090119-15:13:26.358 | 10=999 |
Carried Over Cancel	8=FIXT.1.1 | 9=276 | 35=8 | 49=MARKET | 56=IMSS | 34=21 | 52=20100302-15:48:29.330 | 37=25 | 11=123456 | 453=2 | 448=025 | 447=C | 452=1 | 448=TD769IT | 447=C | 452=12 | 17=05806ecf0711eee276b52ffff9cfb | 150=I | 39=4 | 1=EM | 55=XYZ | 54=1 | 38=300 | 40=2 | 44=26.04 | 59=1 | 151=300 | 60=20091217-10:56:48.973 | 10=999 |
Carried Over Expired	8=FIXT.1.1 | 9=289 | 35=8 | 49=MARKET | 56=IMSS | 34=22 | 52=20100302-15:48:29.549 | 37=26 | 11=123456 | 453=2 | 448=026 | 447=C | 452=1 | 448=TD769IT | 447=C | 452=12 | 17=05806ecf0711eee276b52ffff9cfb | 150=I | 39=C | 1=EM | 55=XYZ | 54=1 | 38=300 | 40=2 | 44=26.04 | 59=6 | 432=20091217 | 151=300 | 60=20091217-10:57:48.973 | 10=999 |
Fill or Kill	8=FIXT.1.1 | 9=264 | 35=8 | 49=MARKET | 56=IMSS | 34=29 | 52=20100302-15:48:31.080 | 37=10 | 11=123456 | 453=2 | 448=010 | 447=C | 452=1 | 448=TD769IT | 447=C | 452=12 | 17=05806ecf0711eee276b52ffff9cfb | 150=0 | 39=0 | 1=EM | 55=XYZ | 54=1 | 38=300 | 40=2 | 44=26.04 | 59=4 | 151=300 | 60=20090119-14:54:48.973 | 10=999 |
Iceberg	8=FIXT.1.1 | 9=279 | 35=8 | 49=MARKET | 56=IMSS | 34=33 | 52=20100302-15:48:31.752 | 37=13 | 11=123456 | 453=2 | 448=013 | 447=C | 452=1 | 448=TD769IT | 447=C | 452=12 | 17=05806ecf0711eee276b52ffff9cfb | 150=0 | 39=0 | 1=EM | 55=XYZ | 54=1 | 38=10000 | 40=2 | 44=26.04 | 59=0 | 151=300 | 60=20090119-14:54:48.973 | 1138=200 | 10=999 |

Message Type / Description	FIX Representation
Immediate or Cancel	8=FIXT.1.1 | 9=264 | 35=8 | 49=MARKET | 56=IMSS | 34=32 | 52=201003 02- 15:48:31.737 | 37=10 | 11=123456 | 453=2 | 448=010 | 447=C | 452=1 | 4 48=TD769IT | 447=C | 452=12 | 17=05806ecf0711eee276b52ffff9cfb | 1 50=0 | 39=0 | 1=EM | 55=XYZ | 54=1 | 38=300 | 40=2 | 44=26.04 | 59=3 | 1 51=300 | 60=20090119-14:54:48.973 | 10=999 |
Morning Insert of Carried Over	8=FIXT.1.1 | 9=326 | 35=8 | 49=MARKET | 56=IMSS | 34=20 | 52=201003 02- 15:48:29.112 | 37=24 | 11=123456 | 453=2 | 448=024 | 447=C | 452=1 | 4 48=TD769IT | 447=C | 452=12 | 17=05806ecf0711eee276b52ffff9cfb | 1 50=D | 39=0 | 378=1 | 1=EM | 55=XYZ | 54=1 | 38=300 | 40=2 | 44=26.04 | 59=1 | 151=300 | 60=20091217-10:55:48.973 | 768=1 | 769=20090119- 14:54:48.001 | 770=8 | 10=999 |
New Good till Date	8=FIXT.1.1 | 9=290 | 35=8 | 49=MARKET | 56=IMSS | 34=31 | 52=201003 02- 15:48:31.518 | 37=11 | 11=123456 | 453=3 | 448=011 | 447=C | 452=1 | 4 48=TD769IT | 447=C | 452=12 | 17=05806ecf0711eee276b52ffff9cfb | 1 50=0 | 39=0 | 1=WM | 581=1 | 55=XYZ | 54=1 | 38=300 | 40=2 | 44=26.04 | 59=6 | 432=20091030-14:30:50.322 | 151=300 | 60=20090119- 14:54:48.973 | 10=999 |
New GTC	8=FIXT.1.1 | 9=299 | 35=8 | 49=MARKET | 56=IMSS | 34=30 | 52=201003 02- 15:48:31.299 | 37=12 | 11=123456 | 453=2 | 448=012 | 447=C | 452=1 | 4 48=TD769IT | 447=C | 452=12 | 17=05806ecf0711eee276b52ffff9cfb | 1 50=0 | 39=0 | 1=EM | 55=XYZ | 54=1 | 38=300 | 40=2 | 44=26.04 | 59=1 | 1 51=300 | 60=20090119-14:54:48.973 | 10=195 |
Pegged	8=FIXT.1.1 | 9=304 | 35=8 | 49=MARKET | 56=IMSS | 34=44 | 52=201003 02- 15:48:33.752 | 37=17 | 11=123456 | 453=2 | 448=017 | 447=C | 452=1 | 4 48=TD769IT | 447=C | 452=12 | 17=05806ecf0711eee276b52ffff9cfb | 1 50=0 | 39=0 | 1=EM | 55=XYZ | 54=1 | 38=300 | 40=P | 44=25.00 | 211=1.5 | 1094=5 | 835=0 | 836=0 | 839=24.50 | 59=0 | 151=300 | 60=20090119- 14:54:48.973 | 10=999 |
Pegged Price Refresh (CHI-X)	8=FIXT.1.1 | 9=290 | 35=8 | 49=MARKET | 56=IMSS | 34=43 | 52=201003 02- 15:48:33.534 | 37=22 | 11=PEG_PRICE_REFRESH | 453=2 | 448=022 | 44 7=C | 452=1 | 448=TD769IT | 447=C | 452=12 | 17=05806ecf0711eee276 b52ffffacf1 | 150=D | 39=0 | 378=3 | 55=XYZ | 54=1 | 38=22400 | 40=P | 4 4=4.79 | 839=5.00 | 59=0 | 151=22400 | 60=20090119- 15:13:22.517 | 10=999 |

Message Type / Description	FIX Representation
Replace	8=FIXT.1.1 | 9=284 | 35=8 | 49=MARKET | 56=IMSS | 34=48 | 52=20100302-15:48:34.237 | 37=18 | 11=123456 | 41=1LFBABO8P3_1 | 453=2 | 448=018 | 447=C | 452=1 | 448=TD769IT | 447=C | 452=12 | 17=05806ecf0711eee276b52ffffacf1 | 150=5 | 39=0 | 55=XYZ | 54=1 | 38=22400 | 40=2 | 44=4.79 | 59=0 | 151=22400 | 60=20090119-15:13:22.517 | 10=999 |

8.7.2 Security Status

Message Type / Description	FIX Representation
Start of Day (Status and Price)	8=FIXT.1.1 | 9=144 | 35=f | 49=MARKET | 56=IMSS | 34=58 | 52=20100302-15:48:36.221|55=XYZ|207=LISTING_MARKET|1301=MARKET|1301=SEGMENT|625=7|31=49.36|60=20091217-10:45:00.000 | 10=999 |
End of Day (Closing Price)	8=FIXT.1.1 | 9=147 | 35=f | 49=MARKET | 56=IMSS | 34=60 | 52=20100302-15:48:36.659|55=XYZ|207=LISTING_MARKET|1301=MARKET|1301=SEGMENT|326=5|31=49.36|60=20090119-14:54:48.973|58=CLOSING_PRICE | 10=999 |
Opening Price	8=FIXT.1.1 | 9=143|35=f|49=MARKET|56=IMSS|34=67|52=20100302-15:48:38.190|55=XYZ|207=LISTING_MARKET|1301=MARKET|1301=SEGMENT|326=5|31=49.36|60=20090119-14:54:48.973|58=OPEN_PRICE | 10=999 |
Trading Halt	8=FIXT.1.1 | 9=157 | 35=f | 49=MARKET|56=IMSS|34=68|52=20100302-15:48:38.409|55=XYZ|207=LISTING_MARKET|1301=MARKET|1301=SEGMENT|326=2|1174=6|327=0|31=49.36|60=20090119-14:54:48.973|10=999|

8.7.3 Trade Capture Report

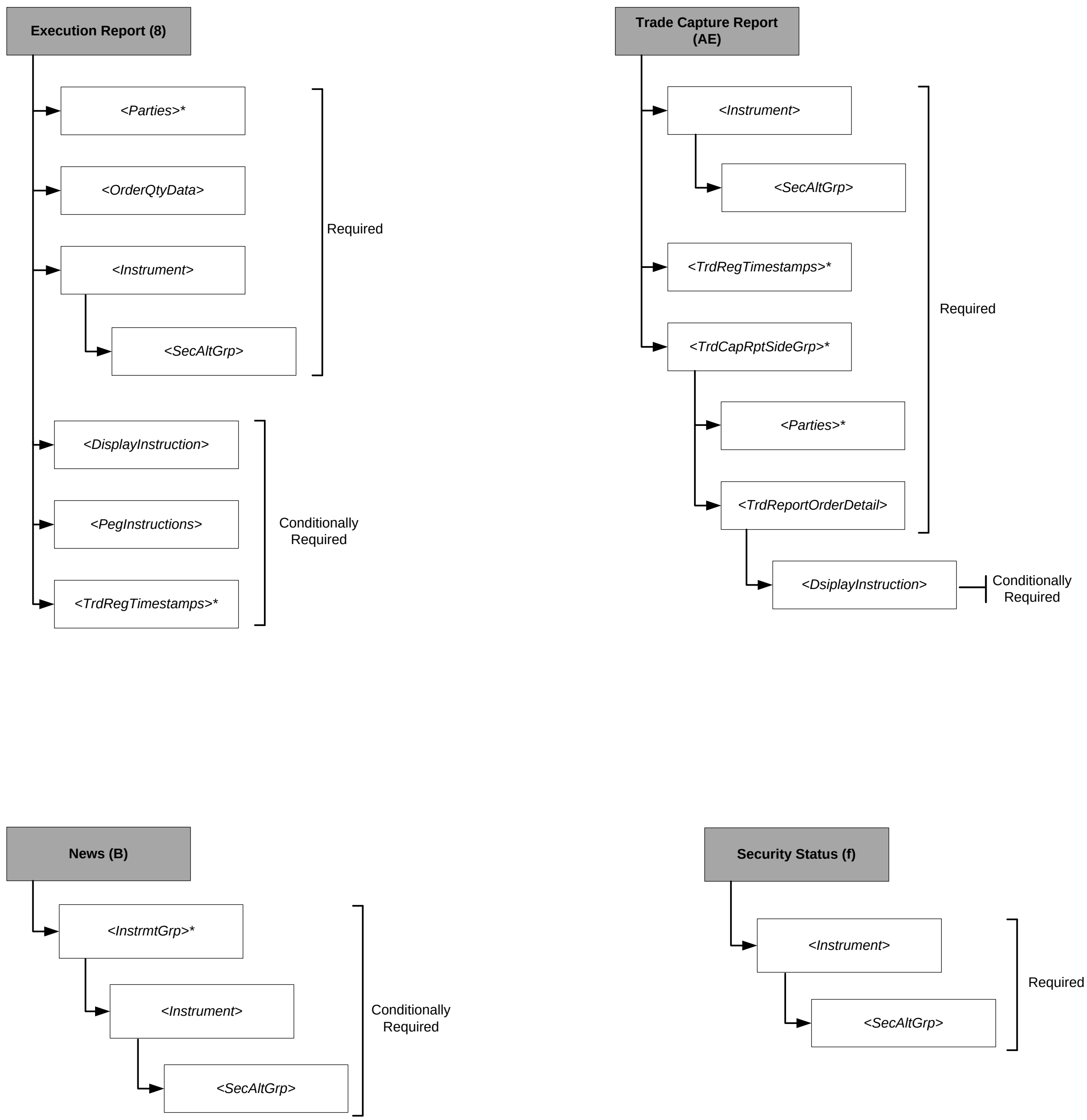
Message Type / Description	FIX Representation
Off Market (Block Trade)	8=FIXT.1.1 | 9=402 | 35=AE | 49=MARKET | 56=IMSS | 34=77 | 52=20100302-15:48:40.002 | 1003=123456 | 487=0 | 855=22 | 828=1 | 55=XYZ | 32=100 | 31=2.12 | 60=20090119-14:30:50.294 | 1301=MARKET|1301=SEGMENT|552=2 | 54=2 | 453=2 | 448=007 | 447=C | 452=1 | 448=TD306IT | 447=C | 452=12 | 625=3 | 1057=Y | 37=O8vg177nfgv | 11=03033183@000566707930 | 151=3900 | 54=1 | 453=2 | 448=007 | 447=C | 452=1 | 448=TD739IT | 447=C | 452=12 | 1=TI | 625=3 | 1057=N | 37=O8vg177nfgw|11=IAA2775|151=0|768=1|769=20090119-12:54:48.001|770=1|10=999 |

8.7.4 News

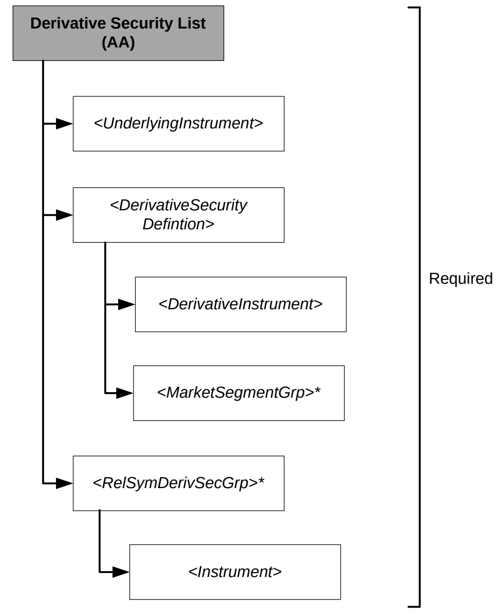
Message Type / Description	FIX Representation
Start of Day End of *Security Status* Messages	8=FIXT.1.1 | 9=132 | 35=B | 49=MARKET | 56=IMSS | 34=2 | 52=20100301-20:59:46.101 | 42=20091217-10:54:45.000 | 148=SEC_STATUS_SOD|1301=MARKET|1301=SEGMENT|33=1|58=END_OF_MESSAGES | 10=999 |

8.8 Appendix H – Component Block Mapping for Selected Messages

Figure 2: Component Block Mapping for Selected Messages




Security Definition (d)
<MarketSegmentGrp>*
<SecurityTradingRules>
<BaseTradingRules>
<TickRules>*
<Instrument>
<SecAltGrp>
Required


Derivative Security List (AA)
<UnderlyingInstrument>
<DerivativeSecurity Defintion>
<DerivativeInstrument>
<MarketSegmentGrp>*
<RelSymDerivSecGrp>*
<Instrument>
Required

8.9 Appendix I – CFI Code mappings for ASX

CFIC	ASX Market	ASX Group
Dxxxxx	120 (Interest Rate Market)	226 (Wholesale Interest Rate Security)
DBxTxx	120 (Interest Rate Market)	225 (Govt Loan)
DBFxxx	120 (Interest Rate Market)	222 (Fixed Rate Notes)
DBVxxx	120 (Interest Rate Market)	223 (Floating Rate Notes)
Exxxxx	101-105 (Equities), 151-155 (PM Equities)	200 (Equities)
ECxxxx	120 (Interest Rate Market)	220 (Convertible notes)
ERxxxx	120 (Interest Rate Market)	221 (Hybrids)
EUxxxx	156 (PM ETF), 50 (Funds, Warrants Struct Prods), 57 (Quotes)	207 (ETF), 206 (Managed Investment Unit)
FCxxxx	25 (Agricultural Derivatives)	4 (Futures), 33 (Strip)
FFSxxx	2 (Stock Derivatives)	4 (Futures), 33 (Strip)
FFIxxx	1 (Index Derivatives)	4 (Futures), 33 (Strip)
MRxxxx	All Markets excluding 250(Practice) & 254(PRV)	192 (Currency Avista Warrant), 193 (Commodity Avista Warrant), 194 (Index Avista Warrant), 5 (Avista), 218 (Indices), 254 (TMCs)
RSxxxx	253 (BookBuild)	240 (ASX Book Build)
OCAxxx	1 (Index Derivatives), 2 (Stock Derivatives), 25 (Agricultural Derivatives)	6 (American Call Option)
OCAFxx	1 (Index Derivatives), 2 (Stock Derivatives), 25 (Agricultural Derivatives)	16 (American Future Call Option)
OCExxx	1 (Index Derivatives), 2 (Stock Derivatives), 25 (Agricultural Derivatives)	1 (European Call Option), 22(Euro Call Option)
OPAxxx	1 (Index Derivatives), 2 (Stock Derivatives), 25 (Agricultural Derivatives)	7 (American Put Option)
OPAFxx	1 (Index Derivatives), 2 (Stock Derivatives), 25 (Agricultural Derivatives)	17 (American Future Put Option)
OPExxx	1 (Index Derivatives), 2 (Stock	2 (European Put Option)

CFIC	ASX Market	ASX Group
	Derivatives), 25 (Agricultural Derivatives)	
RWxxCx	50 (Funds, Warrants Struct Prods), 57 (Quote Display Board)	176-179, 182-191 (Other Warrants), 195-198 (Mini Calls)
RWBxCx	50 (Funds, Warrants Struct Prods), 57 (Quote Display Board)	[211, 212] (Basket Calls)
RWIxCx	50 (Funds, Warrants Struct Prods), 57 (Quote Display Board)	[140, 142] (Index Calls), [144, 146] (Index Barr Calls), [199, 201] (Mini Index Call)
RWIxPx	50 (Funds, Warrants Struct Prods), 57 (Quote Display Board)	[141, 143] (Index Puts), [145, 147] (Index Barr Puts), [202, 203] (Mini Index Puts)
RWSxCx	50 (Funds, Warrants Struct Prods), 57 (Quote Display Board)	[164, 166] (Equity Calls), [168, 170] (Equity Barr Calls), [172, 174] (Equity Capped Calls)
RWSxPx	50 (Funds, Warrants Struct Prods), 57 (Quote Display Board)	[165, 167] (Equity Puts), [169, 171} (Equity Barr Puts)
RWCxCx	50 (Funds, Warrants Struct Prods), 57 (Quote Display Board)	[148, 150] (Currency Calls)
RWTxCx	50 (Funds, Warrants Struct Prods), 57 (Quote Display Board)	[156, 158] (Commodity Calls)
RWCxPx	50 (Funds, Warrants Struct Prods), 57 (Quote Display Board)	[149, 151] (Currency Puts)
RWTxPx	50 (Funds, Warrants Struct Prods), 57 (Quote Display Board)	[157, 159] (Commodity Puts)
RWxxxx	50 (Funds, Warrants Struct Prods), 57 (Quote Display Board)	204 (Long Exposure), 205 (Short Exposure)

8.10 Appendix J – Exec Restatement Reason mappings for ASX

AMRF Mapping (378)	Change reason_c	Description	Result
Iceberg Refresh (100)	13	Hidden volume order recalculated	Order Amended
Order Altered (101)	28	Order transferred from one user to another	Order Amended
Order Altered (101)	39	Convert undisclosed order to normal order - for active orders falling below min order value due to trading	Order Amended

AMRF Mapping (378)	Change reason_c	Description	Result
Order Altered (101)	40	Convert undisclosed order to normal order - for inactivated orders falling below min order value upon modification	Order Amended
Order Deleted (102)	9	Order deleted by central system	Order Cancelled
Order Deleted (102)	15	Order deleted due to changed price limits	Order Cancelled
Order Deleted (102)	19	Central system deleted day order	Order Cancelled
Order Deleted (102)	20	Deleted by system due to Instrument Session change	Order Cancelled
Order Deleted (102)	34	Cancelled After Auction	Order Cancelled
Order Inactivated (104)	21	Inactivated by system due to Instrument Session change	Order Cancelled
Order Inactivated (104)	23	Inactivated due to Purge	Order Cancelled
Order Inactivated (104)	24	Inactivate day orders	Order Cancelled
Order Inactivated (104)	25	Inactivated due to de-list	Order Cancelled
Order Inactivated (104)	26	Inactivated due to Expiry	Order Cancelled
Order Inactivated (104)	27	Inactivated due to Price away from the market	Order Cancelled
Order Reloaded (105)	30	Order reload at normal system start	Order Created
Order Reloaded (105)	31	Order reload at intraday Market Place restart	Order Created
Not a Restatement	1	Order deleted	-
Not a Restatement	3	Deal	-
Not a Restatement	4	Order inactivated	-
Not a Restatement	5	Order altered	-
Not a Restatement	6	Order added	-
Repricing of Order (3)	8	Order price changed	Order Amended
Not a Restatement	10	Order deleted by proxy	-
Not a Restatement	29	Entering or activating a central inactive order	-

AMRF Mapping (378)	Change reason_c	Description	Result
Not a Restatement	47	Centre Point sweep limit converted to normal limit order	-
Not a Restatement	48	Centre Point Sweep Market to Limit order converted to normal limit order	-
Not a Restatement	49	CP Block below MAQ	-

8.11 Appendix K – ASX Market Instrument Group Mapping

ASX Market	ASX Trade Instrument Group	Orders and Session States	Trades	Comments
120 (Interest Rate Market)	226 (Wholesale Interest Rate Security)	Y*	Y	partial orders, non market maker
120 (Interest Rate Market)	225 (Govt Loan)	Y*	Y	partial orders, non market maker
120 (Interest Rate Market)	222 (Fixed Rate Notes)	Y	Y	
120 (Interest Rate Market)	223 (Floating Rate Notes)	Y	Y	
101-105 (Equities), 151-155 (PM Equities)	200 (Equities)	Y	Y	CentrePoint to be sent with 1300=ASXC
120 (Interest Rate Market)	220 (Convertible notes)	Y	Y	
120 (Interest Rate Market)	221 (Hybrids)	Y	Y	
156 (PM ETF), 50 (Funds, Warrants Struct Prods), 57 (Quotes)	207 (ETF), 206 (Managed Investment Unit)	Y*	Y	partial orders, non market maker
25 (Agricultural Derivatives)	4 (Futures), 33 (Strip)	N	Y	
2 (Stock Derivatives)	4 (Futures), 33 (Strip)	N	Y	
1 (Index Derivatives)	4 (Futures), 33 (Strip)	N	Y	
All Markets excluding 250(Practice) & 254(PRV)	192 (Currency Avista Warrant), 193 (Commodity Avista Warrant), 194 (Index Avista Warrant), 5 (Avista), 218 (Indices)	N	N	

All Markets excluding 250(Practice) & 254(PRV)	254 (TMCs)	N	Y	
253 (BookBuild)	240 (ASX Book Build)	Y	Y	
1 (Index Derivatives), 2 (Stock Derivatives), 25 (Agricultural Derivatives)	6 (American Call Option)	N	Y	
1 (Index Derivatives), 2 (Stock Derivatives), 25 (Agricultural Derivatives)	16 (American Future Call Option)	N	Y	
1 (Index Derivatives), 2 (Stock Derivatives), 25 (Agricultural Derivatives)	1 (European Call Option), 22(Euro Call Option)	N	Y	
1 (Index Derivatives), 2 (Stock Derivatives), 25 (Agricultural Derivatives)	7 (American Put Option)	N	Y	
1 (Index Derivatives), 2 (Stock Derivatives), 25 (Agricultural Derivatives)	17 (American Future Put Option)	N	Y	
1 (Index Derivatives), 2 (Stock Derivatives), 25 (Agricultural Derivatives)	2 (European Put Option)	N	Y	
50 (Funds, Warrants Struct Prods), 57 (Quote Display Board)	176-179, 182-191 (Other Warrants), 195-198 (Mini Calls)	Y*	Y	partial orders, non market maker
50 (Funds, Warrants Struct Prods), 57 (Quote Display Board)	[211, 212] (Basket Calls)	Y*	Y	partial orders, non market maker
50 (Funds, Warrants Struct Prods), 57 (Quote Display Board)	[140, 142] (Index Calls), [144, 146] (Index Barr Calls), [199, 201] (Mini Index Call)	Y*	Y	partial orders, non market maker
50 (Funds, Warrants Struct Prods), 57 (Quote Display Board)	[141, 143] (Index Puts), [145, 147] (Index Barr Puts), [202, 203] (Mini Index Puts)	Y*	Y	partial orders, non market maker
50 (Funds, Warrants Struct Prods), 57 (Quote Display Board)	[164, 166] (Equity Calls), [168, 170] (Equity Barr Calls), [172, 174] (Equity Capped Calls)	Y*	Y	partial orders, non market maker
50 (Funds, Warrants Struct Prods), 57 (Quote Display Board)	[165, 167] (Equity Puts), [169, 171} (Equity Barr Puts)	Y*	Y	partial orders, non market maker
50 (Funds, Warrants Struct	[148, 150] (Currency Calls)	Y*	Y	partial orders, non

Prods), 57 (Quote Display Board)				market maker
50 (Funds, Warrants Struct Prods), 57 (Quote Display Board)	[156, 158] (Commodity Calls)	Y*	Y	partial orders, non market maker
50 (Funds, Warrants Struct Prods), 57 (Quote Display Board)	[149, 151] (Currency Puts)	Y*	Y	partial orders, non market maker
50 (Funds, Warrants Struct Prods), 57 (Quote Display Board)	[157, 159] (Commodity Puts)	Y*	Y	partial orders, non market maker
50 (Funds, Warrants Struct Prods), 57 (Quote Display Board)	204 (Long Exposure), 205 (Short Exposure)	Y*	Y	partial orders, non market maker
250 (Practice Market)	Any	N	N	to be excluded from all messages
254 (PRV Market)	Any	N	N	to be excluded from all messages

9 Document Control

This document is a version-controlled document. All changes are recorded in the following version control table.

Vers	Author/s	Details of changes/comments	ASIC Ref	Date
1.2.3	K. Crnomarkovic	Board approved version		16 Aug 2011
1.2.4	K. Crnomarkovic	i. Inclusion of TrdRegTimstampType (770) = Time In (2) and modified usage of TransactTime (60) for TradeCapture Reports; clarification of reference to BrokerNumber in; correction of typo for field 625 in 7.5 ii. Inclusion of marketplace identifier in s0		9 Sep 2011
1.2.5	K. Crnomarkovic	i. Addition of messages and component blocks relating to derivatives		23 Nov 2011

1.2.6	K. Crnomarkovic	i. Addition of SecondaryClordID and parentStrategyID elements. ii. Removal of marketSegmentID iii. Inactive meaning assigned to suspended order status iv. Amended text for SecurityAltID		16 Jan 2012
1.2.7	K.Crnomarkovic	i. Support added for ISIN (SecurityID) ii. Support added for Security Long Name (SecurityDesc) iii. Support added for single leg reporting (SideMultiLegReportingType) iv. MarketSegmentID added v. Addition of Trade Capture Reports and Execution Reports to Regulation Feed Message Types table vi. News message indicated as supporting market news feeds vii. Additional partyRole values for MarketID and MarketSegmentID		10 Feb 2012
1.2.8	K.Crnomarkovic	i. Quote Message removed ii. Support added for multiple feeds, using senderSubID (50)		13 Feb 2012
1.2.9	K.Crnomarkovic	i. Fields added to News message to support company and market announcements ii. SecurityDefinition message reinserted, to support equity security reference data for listing markets iii. ISIN usage updated to extend to derivatives; 22=M removed		16 Feb 2012
1.2.10	K.Crnomarkovic	i. PegMoveType (835) added ii. SecondaryOrdType (20002) added		2 Mar 2012
1.2.11	K.Crnomarkovic	i. SecondaryOrdType (20002) removed		9 Mar 2012

		ii. TickRuleType made RFU iii. Added: a. ParentStrategyIDSource(20002) b. OrderRestrictins(529) c. MatchType(574) d. TrdConditionCode(20003) e. SettlType(63)		
1.4.0	K.Crnomarkovic	Changes accepted. Published version		9 Mar 2012
1.4.1	K.Crnomarkovic	i. InstrmtlegGrp made RFU ii. PegoffsetType added iii. Iceberg refresh restatementreason added iv. Component block mappings amended		21 Mar 2012
1.4.2	K.Crnomarkovic	i. Settlmethod (1193) added for reconstructions ii. Stipulations component (232,233,234) iii. For special markets		30 Mar 2012
1.4.3	K.Crnomarkovic	i. Settlmethod (1193) removed ii. Order deletion reasons added iii. partyIDSource = custom added iv. statuses amended v. OrigTradeID now not required where identical to TradeID vi. Text (58) now optional for Status messages		10 Apr 2012
1.4.4	K.Crnomarkovic	i. DerivativeSecurityID fields removed ii. OrderRestrictions on TradeReportOrderDetail amended to reflect usage on Orders iii. Refererence to 'manual amends' of iceberg orders removed iv. CorporateAction(292) noted as MultipleCharValue field. Custom values amended to single characters v. MarketSegmentGrp in		24 Apr 2012

		DerivativeSecurityList moved to DerivativeSecurityDefinition component vi. Some data elements moved from the DerivativeInstrument group to the Instrument group. vii. New StipulationType added for 'reconstructed securities' viii. Additional off-market trade type added (booking purposes) ix. OrderCapacity now conditionally required x. SideMultiLegReportingType (752) = 3 (multiLegSecurity) removed		
1.4.5	K.Crnomarkovic	i. New SecondaryTrdType 1000 = Trade derived from an order processed against multiple execution venues (for sweep orders that are 'sweeping' across venues)		26 Apr 2012
1.4.6	K.Crnomarkovic	i. New ExecRestatementReason (378) = 107 (No Self Trade) ii. OrderCapacity(528) also added to ExecutionReports iii. DefaultCstmAppVerID (1408) values amended to reflect final specififcation versions iv. Additional RFU values added to PegOffsetType (836) v. Clarification of sending of SecurityStatus messages on change of trading session status vi. SecurityTrading Status (326) values 100 and 101 amalgamated		30 May 2012
1.4.7	K.Crnomarkovic	i. Clarification of sending of SecurityStatus messages on change of trading session status ii. SecurityTrading Status (326) values 100 and 101 amalgamated		18 Jun 2012

1.4.8	K.Crnomarkovic	i. Remove Stipulations component from ExecutionReport and TradeCaptureReport messages, and replace with custom fields, SpecialMarketIndicator(20004) and ReconstructedIndicator(20005), in the TradeCaptureReport message only ii. Remove all references to LastMkt(30) iii. Correct reference to SecAltGrp, to SecAltIDGrp in 4.6.7 iv. Remove DiscretionInstructions from 7.4 v. MarketSegmentID(1300) is not required for News messages used for market, company and miscellaneous announcements vi. Removed EvntGrp (unused) vii. Added CFI Code mappings for market operators viii. Removed TimeInForce(59) from TradeReportOrderDetail ix. Added ExecRestatementReason(378) mappings for Market operators x. Removed obsolete reference to TradingSessionSubID(625) for off-market trades xi. Added CrossType(549) value of 102=Other, and removed constraint to allow specification when 855=22 xii. Added new CorporateAction values, using new custom field 20007 rather than 292 xiii. Added OffmarketIndicator xiv. Added additional 828 and 855 values xv. Amended wording to include Order restatements in 7.3 xvi. Added enumeration values for 20003 xvii. Use OPEN_PRICE rather than REF_PRICE, and clarified meaning of CLOSE_PRICE xviii. Clarified that TradingSessionStatus messages are not required		10 Sep 2012

1.4.9	K. Crnomarkovic	i. References to Options amended to refer to also refer to Futures, or Derivatives in general ii. PegOffsetType (836) and PegOffsetValue (211) amended to support Price offsets iii. CrossType(549), MatchType(574), TrdType(828) and SecondaryTrdType(855) updated with enhanced descriptions and explanations of conditionality iv. Removed enumeration values for 20003 v. Added NoPriceImpactIndicator vi. CFI Code ASX mapping table updated vii. Exec Restatement Reason ASX mapping table updated		1 Oct 2012
1.5.1 Sent to ASX24 for review	D. Law	**First version of specification containing ASX24** Changes to accomodate ASX24 are designated 'Reserved for Future Use' (RFU)_ – These changes are not scheduled for implementation with AMRF Release 1.5. i. Updated Version number to 1.5.1 ii. Changes for ASX24 operations iii. Symbol to accept "[N/A]" under Component Block – Instrument iv. CFICode Field to include FXXXXX for Future and MRXXXX for Inter and Intra Spread product / Custom Orders v. New Component Block – InstrmtLegExecGrp introduced for Future; it defines legs of a Strategy vi. New Valid values added for SideMultiLegReportingType(752) field vii. Execution Report – New Order to include new InstrmtLegExecGrp component block viii. New Valid values added for TrdType(828) Field ix. New Valid values added for TradSesStatus(340) Files x. Multiple business description changes		21 Nov 2012

		related to ASX24 extensions xi. Request for Quote Message including Text field added for Futures (RFU) xii. New valid value added for SecurityTradingStatus(326) 20= Unknown xiii. New value added to ISO-10383 Market Identification Codes Table: XSFE for "ASX – Trade24" xiv. Add placeholder for ASX24 hours of operation **Miscellaneous changes and clarifications – Not related to ASX24.** xv. Removed valid value for SecondaryTrdType(855) field: 1001 = Information Only xvi. Special Security State Rrepresentation table: INTERNATIONAL_HALT made RFU xvii. valid value for CorporateActionLongDesc – "FV" removed xviii. Changes to CFI Code mappings Appendix a) ASX: Exxxxx – 130 (Volume Match) b) multiple deletions from ASX Market column		
1.5.1.a	D. Law K. Lu	i. Updated document Version number to 1.5.1.a **Minor Clarifications** ii. Retained for future use (RFU) minor clarification – remove redundant description iii. Required Fields : Replaced Abbreviation "MOs" with Market Operators iv. TrdCapRptSideGrp Component Block) PegOffsetValue (211), description clarified. v. TrdCapRptSideGrp Component Block, PegOffsetType (836), Value 0(Price) no longer RFU vi. Market Identification Corrected spelling		29 Nov 2012

		error in footnote vii. New Order Multileg (RFU) Reject changes to Notes. Duplicate messages from 1.4.9. **Restored from 1.4.9** viii. Trade Capture Report, Footnote for description of SecondaryTradeType(855)=1001 (Information Only) restored. Change Rejected. ix. SecondaryTradeType(855). 1001 (Information Only) restored description from AMRF 1.4.9. x. Security Status, Special Security State Representations table. "International_Halt" restored as valid value (no longer RFU) xi. Appendix I. CFI Code Mapping Table restored. xii. Trading Session Status. MarketID(1301) description restored. Duplicate. xiii. Security Status. MarketID(1301) description restored. Duplicate. xiv. SecondaryTradeType(855). 1000 (Trade derived from an order processed against multiple execution venues) description restored. xv. Instrument Component Block, CFI Code (461) restored to original wording under notes to "Derivatives" xvi. SecurityTradingStatus(326) = 20 (Unknown) removed. xvii. CorporateActionLongDesc (20007). "FV" restored as valid value. xviii. TradSesStats(340). Value 0(Unknown) removed. **Changes for ASX24** xix. Insert place holder for updated hours of operation for ASX24, Section 2.4 xx. Acceptable symbol (55) ="(N/A)" remove		

		from Section 4.6.7 Instrument Component Block. xxi. InstmtLegExecGrp component block removed xxii. Added value to SideMultiLegReportingTyp (752) = 3(Multileg Security) as RFU xxiii. ParentStrategyIdSource(20002), value 1(Strategy). Usage expanded to include ASX24 Custom and Spread Strategies xxiv. Placehold for explaination of Strategy Definitions Added (Section 4.8) for ASX24 xxv. DefaultcstmApplVerID(1408) updated to "AMRF 1.5.2" xxvi. Section 7.2: Execution Report (New). Component Block "InstrmtLegExecGrp" removed. xxvii. TrdType(828) = 2(EFP) changed to RFU. Related to ASX24 (Exchange for Physical)		
1.5.1.b	D. Law K. Lu	i. Updated Version number to 1.5.1.b **Changes for ASX24** ii. New message NewOrdMleg (AB) introduced to capture Multileg Future strategy iii. New Message Multileg OrderCancelReplace (AC) introduced to capture Multileg Future strategy iv. New Message OrderCancelRequest (F) introduced to capture Multileg Future strategy v. Custom Quote Added vi. Component block added: LegOrdGrp vii. Component block added: InstrumentLeg viii. Component block added: LegSecAltIDGrp ix. Component block added: OrderQtyData x. Business description included for newly introduced Message Type: NewOrdMleg (AB), Multileg OrderCancelReplace (AC)		3 Dec 2012

		and OrderCancelRequest (F)		
1.5.2	D. Law K. Lu	**Changes related to market operator innovation and regulation.** i. Updated Version number to 1.5.2 **Discontinuation of ASX VolumeMatch** ii. Updated MarketSegmentID example in Table 21 to ASXT iii. Removed ASXV from Section 9.3 Appendix C – Market Identification Codes **Unintentional Crossing Protection / Trade Protection** iv. Added MatchType(574) = 4 (Auto-match) **ASX BookBuild** v. Added ASXB to Appendix C – Market Identification Codes vi. Added states BB_PREOPEN, BB_OPEN, BB_ALLOC, BB_CLOSE to Table 47: Special Security State Representations vii. Added SecurityTradingStatus(326) = 16 (Trade Dissemination Time) viii. Added SecurityTradingStatus(326) = 16 (Trade Dissemination Time) to Required Standard Security State Representations table **Self Managed Super Funds RFU** ix. SecondaryTrdType (855)=22 and new custom value for TrdType (828)= 107 SMSF (RFU) **Enhanced Data for Market Supervision** x. New component Block RootParties included in Trade Capture Report Message. xi. Added valid values to RootPartyIDSource(1118): a. D = Propriety/Custom	SCA003 SCA009 SCA011 SCA004 SCA006 SCA006a SCA012	14 Dec 2012

		b. G = MIC (10383 Market Identification Code) xii. Added valid values to RootPartyRole(1119) a. 6 = Introducing Firm b. 73 = Executing Venue xiii. New Custom OrderCapacity(528) value added = M (Mixed Agency Principle). xiv. Added tag ComplianceID (376) xv. New valid value for PartyRole (452) = 13 Order Origination Firm xvi. Added example of use of PartyRole(452) = 13(Order Origination Firm) to table of examples xvii. New field HandlInst(21) = 1 Automated execution order, private, no Broker intervention **Cosmetic Changes** xviii. Separated ISO 10383(MIC) valid values for MarketID(1300) and MarketSegmentID(1301) in Appendix C – Market Identification Codes xix. Updated change log formatting. xx. Removed Authors from front of document. xxi. Clarified Author in change log. "Name" changed to "Author/s" **Changes for ASX24** xxii. Corrected RFQRequest MsgType	SCA013 SCA018 SCA022	

1.5.2.a	K. Lu D. Law	i. Updated version number to 1.5.2.a **ASIC Market Surveillance Vendor** ii. Added Market Surveillance Vendor Only (MSV) attribute for all messages/tags. iii. Updated new message types for ASX24 from RFU to MSV; Message Title, Supported Application Messages and Market Identifiers a. RFQRequest; =AH b. StrategyQuote; =U1 c. newOrderMultiLeg; =AB d. MultiLegOrderCancelReplace; =AC e. OrderCancelRequest; =F iv. Updatednew component blocks for ASX24 from RFU to MSV f. RFQReqGrp g. LegOrdGrp h. InstrumentLeg i. LegSecAltIDGrp j. OrderQtyData v. Updated Stratateg Definitions from RFU to MSV **Enhanced Data for Market Supervision** vi. RootParties Component Block made MSV vii. OrderCapacity(528) value = M (Mixed Agency Principle) made MSV viii. ComplianceID(376) made MSV ix. value for PartyRole (452) = 13 Order Origination Firm made MSV x. HandlInst(21) made MSV **ASX24** xi. Added new message types to Supported Application Messages a. RFQRequest; =AH b. StrategyQuote; =U1		21 Dec 2012

		c. newOrderMultiLeg; =AB d. MultiLegOrderCancelReplace; =AC e. OrderCancelRequest; =F xii. Changed StrategyQuote MsgType = U1 (New Custom Message ID) xiii. Removed "MultLeg" from OrderCancelRequest message title. xiv. Added CFICode(461) example FXXXNX for Custom-Made Futures instrument xv. Updated CFICode(461) = MRXXXX description xvi. Updated Description for StrikePrice(202) xvii. Updated Description for MaturityDate(541) xviii. Added new message types to Market Identification, Regulation Feed Messages Types table f. RFQRequest g. StrategyQuote h. newOrderMultiLeg i. MultiLegOrderCancelReplace j. OrderCancelRequest xix. Diagram added for NewOrderMultiLeg (AB) to Component Block Mapping for Selected Messages **Miscellaneous** xx. Updated description of UTCTimeStamp Description xxi. Updated DefaultcstmApplVerID to AMRF 1.5.3 xxii. Updated Notes for Execution Report – Order Replacement/Restatement to exclude leavesQty(151) = 0 xxiii. Removed valid values in AccountType(581) for Execution Report – Order Cancellation/Expiration; tag currently RFU.		

		xxiv. Custom valid value SecondaryTrdType(855) = 1000 (Trade derived from an order processed against multiple execution venues e.g. ASX Sweep) removed. xxv. Updated Restatement Reasons for each usage (Amend, Cancel) of Execution Reports. xxvi. Removed references to "DerivativeSecurityID" from description of Product Reference Model xxvii. Reconciled "Fields and Data Types" tables. xxviii. Reconciled "Required Fields Summary"		
1.5.2.b	K. Lu	i. Updated version number to 1.5.2.b **Miscellaneous** ii. Duplication of document control items removed from Table of Contents iii. Updated description of Required Fields value "N". iv. Updated definition of User Defined Fields v. Updated decription of CFICode(461) = "MRXXXX" vi. Updated description of Application business logic under Application Messages vii. Updated description of Market Identification under Application Messages viii. Minor update of description for Execution Report – New Order ix. Removed ExecType(150) = 9 (Suspended). No instances of usage. x. Updated description for ParentStrategyID(20001) for Execution Reports xi. Updated description for ParentStrategyIDSource(20002) = 1		22 Dec 2012

		(Strategy) xii. Updated valid Text(58) values **Corrections** i. Corrected typo for SettlType(63) on TradeCaptureReports ii. Corrected typo for SettleDate(64) in Execution Reports iii. Corrected typo in Component Blocks description. iv. Corrected typo in DisplayInstruction component block v. Corrected grammatical error in description of StrikePrice(202) vi. Corrected typo in comment for <OrderQtyData> under Execution Report – New Order **ASIC Market Surveillance Vendor** vii. Updated OrderCapacity(528) = M (mixed)from RFU to MSV		
1.5.2.c	K. Lu	i. Updated version to 1.5.2.c **ASX24** ii. Updated description of Intended Audience **Feedback Items** iii. Updated description of Market Regulation Feed Overview iv. Updated description of UTCTimestamp data type. **Self Managed Super Funds** v. Updated description of TrdType(828) = 107 (Self Managed Super Fund Transfer) **ASX Bookbuild** vi. Updated Special Security State Representations table **Miscellaneous** vii. Updated description of order		24 Dec 2012

		replacement/restatements to refer to participant, as oppose to trader		
1.5.3	K. Lu	i. Updated version to 1.5.3		24 Dec 2012
1.5.3.a	K. Lu	i. Updated version to 1.5.3.a ii. Updated DefaultcstmApplVerID(1408) to 1.5.4 **Broker Preferencing** iii. Updated description for CrossType(549) = 101; from "Priority Crossing" to "Participant Preferenced" iv. Updated description for OrderRestriction(529) = I; from "Priority Cross" to "Participant Preferenced" **Miscellaneous** v. Updated ShortSellCoveredQty(20012) data type from "String" to "Qty" in "Fields and Data Types" Section vi. Updated description for CFICode(461); removed repeat of ISO10962 Standard. **Feedback** i. Updated description of "RFU" and "MSV" to explicity specify should not be sent until removed. ii. Updated Apendix "CFI Code Mapping for ASX" iii. Updated Appendix "ASX Market Instrument Group Mapping" iv. Updated Appendix "ExecRestatementReason mapping for Market Operators" v. Updated Peg Suspension scenarios in Appendix "High-Level Message Sequencing Reference	SCA017	7 Jan 2013
1.5.4	K. Lu	i. Accepted all changes in document ii. Updated Version to 1.5.4		4 April 2013

1.6.0.a	K. Lu M. Wood	i. Updated version to 1.6.0.a ii. Updated DefaultcstmApplVerID(1408) from 1.5.4 to 1.6.1 **Clarifications** iii. Removed RFU fields from Execution Reports a. Currency(15) b. SettlType(63) c. ListID(66) d. AccountType(581) e. DiscretionPrice(845) f. Text(58) iv. Removed RFU fields from Trade Capture Reports a. Currency(15) b. ExecRestatementReason(378_ c. ExecType(150) d. OrderBookID(5018) v. Removed RFU fields from Component Blocks a. SideReasonCd(1007) b. SideTrdSubType(1008) c. CustOrderCapacity(582) d. AccountType(581) e. Text(58) f. OrderCategory(1115) g. LotType(1093) h. ListID(66) vi. DisplayMethod(1084) changed to Required. vii. TickRuleType(1209) from TickRules component block removed viii. Updated MinQty(110) required if specified and non-zero to Execution Reports		4 April 2013

		ix. Clarified "change_reason_c = 49" not a restatement (see Appendix J) ASX only. **Restructures** x. Removed custom value OrderRestriction(529) = H(Sweep). Replaced with standard value ExecInst(18) = f(Intermarket Sweep) xi. NoPriceImpactIndicator(20006) updated to "PriceImpactIndicator". a. Default value for PriceImpactIndicator(20006) updated to Y = Yes xii. SpecialMarketIndicator(20004) move from TradeCaptureReport to Instrument Component block xiii. ReconstructedIndicator(20005) move from TradeCaptureReport to Instrument Component block. **Updated Functionality** xiv. AggressorIndicator(1057) change to required on TrdCapRptSideGrp xv. Regulatory Data updated a. RootParties Component Block on Trade Capture Reports changed from MSV to conditional b. HandlInst(21) changed from MSV to conditional c. ComplianceID(376) changed from MSV to conditional d. PartyRole(452) = 13 (OrderOrigination Firm) no longer MSV e. OrderCapacity(528) = M (Mixed) no longer MSV xvi. Trading Session Status message removed from AMRF xvii. Hidden/Undisclosed Order Differentiation using DisplayMethod(1084) values: a. = H - Hidden		

		b. = 4 – Undisclosed Qty **Formatting** xviii. Rearranged order of component blocks: In Use, then MSV, then RFU. xix. Rearranged order of component blocks in alphabetical order. xx. All RFU Items coloured Tan and in italics xxi. All MSV Items coloured Olive and in italics xxii. Fields and Data Types (By Tag Number and By Name) moved to last pages in the document.		
1.6.0b	M.Wood	i. Updated version to 1.6.0b **Restructures** i. "NoPriceImpactIndicator(20006) updated to PriceImpactIndicator" proposed change from 1.6.0a dropped after consultation.		16 May 2013
		Updated Functionality i. Regulatory Data updated a. HandlInst(21) removed no longer required for RG223 5Al b. RootPartyRole(1119) clarified with examples for RG223 5A. c. ComplianceID(376) removed, not required. d. PartyRole(452) 1. = 13 (OrderOrigination Firm) removed, not required. 2. = 3 (Client ID) added for RG223 5A Origin Of Order. 3. = 29 (Intermediary) added for RG223 5A	SCA022	

		Intermediary. e. New user-defined Tag DirectedWholesaleIndicator(20013) added for RG223 5A. Added in Execution Reports and TradeReportOrderDetail component block.(Used in Trade Capture Report)		
1.6.1	M. Wood	**Updated Functionality** Enhanced Regulatory Changes Updated. RootParty Component block. i. RootPartyIDSource(118) value: a. G=MIC (10383 Market Identification Code) Removed b. D= Custom/Proprietary now **default** c. RootPartIDSource(118) now **NOT** Required. ii. RootPartyRole (119) value: a) 6=IntroducingFirm Removed RootPartyRole(1119) clarified with examples for RG223 5A.		
		ETR Notification V. For Security Status Message (f), added new value to SecurityTradingStatus(326) a. 6 = Trade RangeIndication (used to indicate an ETR event) VI. For Text(58) for the proposed reject price, formatted as "NEWORDER AT PRICE [$$.cc] REJECTED" VII. Updated Security State Representations table for reject price format.	SCA032 SCA036	

1.6.0b	M.Wood	**Short Selling (RFU)** Market Integrity Rules – identification of short sales: i. Reportable Short Sale Order – In **OrderQtyData** component block, updated tag ShortSellCoveredQty(20012) RFU (conditional for short sales) ii. Reportable Short Sale Transaction – In **TradeReportOrderDetail** component block (used in Trade Capture Report), added tag ShortSellCoveredQty(20012) (RFU) - conditional short selling in privately negotiated trades.		31 May, 2013
1.6.0b 1.6.0c		**Minor Updates and Clarifications** i. Value 0 for tag 1174 removed. Not required. ii. Clarified condition for 20004/5 as required in instrument reference data		
		iii. SMSF changes declared RFU iv. Trading Session Status message removed, including all references. v. In TrdCapRptSideGrp remove RFU side(54) values: a. 6= Sell Short Exempt [RFU] b. 8 = Cross [RFU] c. 9 = Cross Short [RFU] d. A = Cross Short Exempt [RFU] vi. Clarified use of Pegged Price tag (839) vii. Removed reference to "Assign Time Priority" message in execution report description. viii. Added LEI to examples for Client ID (RG223 5A - Origin Of Order) ix. Table 55 Clarified MO for ETR Event Detected		

		x. Clarified conditional use of Root Party block in Trade Capture Report and defining component block **xi. Enhanced Data for Market Supervision updated** **RootParty Component block.** RootPartyIDSource(118) value: a. G=MIC (10383 Market Identification Code) **Removed** b. D= Custom/Proprietary now **default** c. RootPartIDSource(118) now **NOT** Required. RootPartyRole (119) value: d. 6=IntroducingFirm **removed** RootPartyRole(1119) clarified with examples for RG223 5A. xii. Tag 20013, DirectedWholesaleIndicator now defined as 'char' rather than 'boolean' xiii. In Parties component block clarified use of Client ID and Intermediary fields. VIII. In Security Status Message (f), for SecurityTradingStatus(326) = 5, added ETR reference price indication using a. 58 = "REF_PRICE" iv. In **Required Fields** section clarified Market Participant regulatory data handling for RG223 5A..		
1.6.0c	**M. Wood**	**Unrequired ASX24 (RFU) messages and descriptions removed. (see below)**		
		i. Changes to Accommodate ASX24 *ii. These changes are NOT scheduled for implementation with AMRF Release 1.6 .* *iii. CFICode Field to include FXXXXX for Future and MRXXXX for Inter and Intra Spread product / Custom Orders* *iv. Added CFICode(461) example FXXXNX for*		

		Custom-Made Futures instrument v. *New value added to ISO-10383 Market Identification Codes Table: XSFE for "ASX – Trade24"* vi. *Added value to SideMultiLegReportingTyp (752) = 3(Multileg Security) as RFU* vii. *ParentStrategyIdSource(20002), value 1(Strategy). Usage expanded to include ASX24 Custom and Spread Strategies* viii. *Place holder for explanation of Strategy Definitions Added (Section 4.8) for ASX24* ix. *TrdType(828) = 2(EFP) changed to RFU. Related to ASX24 (Exchange for Physical)* x. *Updated Description for StrikePrice(202)* xi. *Updated Description for MaturityDate(541)* xii. *New Component blocks added: for ASX24 (RFU)* a. *LegOrdGrp* b. *InstrumentLeg* c. *LegSecAltIDGrp* d. *OrderQtyData* xiii. *New message Types added: for ASX24 (RFU)* a. *RFQRequest(AH) - Request for Quote* b. *StrategyQuote(U1) – custom message* c. *NewOrdMultiLeg (AB) – New multi-leg strategy* d. *Multileg OrderCancelReplace (AC) amend multi-leg strategy* e. *OrderCancelRequest (F) cancel multi-leg strategy* xiv. *Added message types to Supported Application Messages, Market Identification and Regulation Feed Messages Types tables.* xv. *Diagram added for NewOrderMultiLeg (AB) to Component Block Mapping for Selected Messages.*		
1.6.0.c		**End of unrequired ASX24 (RFU) messages and descriptions removed.**		

10 Fields and Data Types (By Tag Number and By Name)

10.1 Fields by tag number ordered numerically

Tag	Field Name	Data Type
1	Account	String
7	BeginSeqNo	SeqNum
8	BeginString	String
9	BodyLength	Length
10	Checksum	String
11	ClOrdID	String
15	Currency	Currency
16	EndSeqNo	SeqNum
17	ExecID	String
18	ExecInst	MultipleCharValue
21	HandlInst	char
22	SecurityIDSource	String
23	IOIID	String
31	LastPx	Price
32	LastQty	Qty
33	NoLinesOfText	NumInGroup
34	MsgSeqNum	SeqNum
35	MsgType	String
36	NewseqNo	SeqNum
37	OrderID	String
38	OrderQty	Qty
39	OrdStatus	char
40	OrdType	char
41	OrigClOrdID	String
42	OrigTime	UTCTimestamp
43	PossDupFlag	Boolean
44	Price	Price
45	RefSeqNum	SeqNum
48	SecurityID	String

49	SenderCompID	String
50	SenderSubID	String
52	SendingTime	UTCTimestamp
54	Side	char
55	Symbol	String
56	TargetCompID	String
58	Text	String
59	TimeInForce	char
60	TransactTime	UTCTimestamp
61	Urgency	char
63	SettlType	String
64	SettlDate	LocalMktDate
66	ListID	String
75	TradeDate	LocalMktDate
98	EncryptMethod	int
107	SecurityDesc	String
108	HeartBtInt	int
110	MinQty	Qty
112	TestReqID	String
117	QuoteID	String
122	OrigSendingTime	UTCTimestamp
123	GapFillFlag	Boolean
126	ExpireTime	UTCTimestamp
140	PrevClosePx	Price
146	NoRelatedSym	NumInGroup
148	Headline	String
150	ExecType	char
151	LeavesQty	Qty
202	StrikePrice	Price
207	SecurityExchange	Exchange
211	PegOffsetValue	float
231	ContractMultiplier	float
263	SubscriptionRequestType	char

303	QuoteRequestType	int
306	UnderlyingIssuer	String
308	UnderlyingSecurityExchange	Exchange
311	UnderlyingSymbol	String
326	SecurityTradingStatus	int
327	HaltReason	int
336	TradingSessionID	String
340	TradSesStatus	int
369	LastMsgSeqNumProcessed	SeqNum
371	RefTagID	int
372	RefMsgType	String
373	SessionRejectReason	int
376	ComplianceID	String
378	ExecRestatementReason	int
432	ExpireDate	LocalMktDate
447	PartyIDSource	char
448	PartyID	String
452	PartyRole	int
453	NoPartyIDs	NumInGroup
454	NoSecurityAltID	NumInGroup
455	SecurityAltID	String
456	SecurityAltIDSource	String
461	CFICode	String
487	TradeReportTransType	int
526	SecondaryClOrdID	String
528	OrderCapacity	char
529	OrderRestrictions	MultipleCharValue
537	QuoteType	int
541	MaturityDate	LocalMktDate
549	CrossType	int
552	NoSides	NumInGroup
555	NoLegs	NumInGroup
566	LegPrice	Price

574	MatchType	String
581	AccountType	int
582	CustOrderCapacity	int
600	LegSymbol	String
602	LegSecurityID	String
603	LegSecurityIDSource	String
604	NoLegSecurityAltID	NumInGroup
605	LegSecurityAltID	String
606	LegSecurityAltIDSource	String
608	LegCFICode	String
610	LegMaturityMonthYear	MonthYear
611	LegMaturityDate	LocalMktDate
612	LegStrikePrice	Price
620	LegSecurityDesc	String
623	LegRatioQty	float
624	LegSide	char
625	TradingSessionSubID	String
644	RFQReqID	String
654	LegRefID	String
685	LegOrderQty	Qty
752	SideMultiLegReportingType	int
768	NoTrdRegTS	NumInGroup
769	TrdRegTimestamp	UTCTimestamp
770	TrdRegTimestampType	int
828	TrdType	int
835	PegMoveType	int
836	PegOffsetType	int
839	PeggedPrice	Price
845	DiscretionPrice	Price
854	QtyType	int
855	SecondaryTrdType	int
870	NoInstrAttrib	NumInGroup
871	InstrAttribType	int

872	InstrAttribValue	String
967	StrikeMultiplier	float
969	MinPriceIncrement	float
999	LegUnitOfMeasure	String
1003	TradeID	String
1007	SideReasonCd	String
1008	SideTrdSubType	int
1018	NoInstrumentParties	NumInGroup
1019	InstrumentPartyID	String
1050	InstrumentPartyIDSource	char
1051	InstrumentPartyRole	int
1052	NoInstrumentPartySubIDs	NumInGroup
1053	InstrumentPartySubID	String
1054	InstrumentPartySubIDType	int
1057	AggressorIndicator	Boolean
1084	DisplayMethod	char
1093	LotType	char
1094	PegPriceType	int
1115	OrderCategory	char
1116	NoRootPartyIDs	NumInGroup
1117	RootPartyID	String
1118	RootPartyIDSource	char
1119	RootPartyRole	int
1126	OrigTradeID	String
1137	DefaultApplVerID	String
1138	DisplayQty	Qty
1147	UnitOfMeasureQty	Qty
1171	PrivateQuote	Boolean
1174	SecurityTradingEvent	int
1205	NoTickRules	NumInGroup
1206	StartTickPriceRange	Price
1207	EndTickPriceRange	Price
1208	TickIncrement	Price

1209	TickRuleType	int
1224	LegUnitOfMeasureQty	Qty
1248	DerivativeCFICode	String
1251	DerivativeMaturityMonthYear	MonthYear
1267	DerivativeMinPriceIncrement	float
1270	DerivativeUnitOfMeasureQty	Qty
1300	MarketSegmentID	String
1301	MarketID	Exchange
1310	NoMarketSegments	NumInGroup
1358	LegPutOrCall	int
1377	MultilegModel	int
1407	DefaultApplExtID	int
1408	DefaultcstmApplVerID	String
1420	LegExerciseStyle	int
1472	NewsID	String
1473	NewsCategory	Int
1655	MarketMakerActivity	String
20001	ParentStrategyID	String
20002	ParentStrategyIDSource	String
20003	TrdConditionCode	String
20004	SpecialMarketIndicator	String
20005	ReconstructedIndicator	String
20006	NoPriceImpactIndicator	String
20007	CorporateActionLongDesc	String
20010	ShortSellLongQty	Qty
20011	ShortSellNakedQty	Qty
20012	ShortSellCoveredQty	Qty
20013	DirectedWholesaleIndicator	char

10.2 Fields by field name ordered alphabetically

Tag	Field Name	Data Type
1	Account	String
581	AccountType	int
1057	AggressorIndicator	Boolean
7	BeginSeqNo	SeqNum
8	BeginString	String
9	BodyLength	Length
461	CFICode	String
10	Checksum	String
11	ClOrdID	String
376	ComplianceID	String
231	ContractMultiplier	float
20007	CorporateActionLongDesc	String
549	CrossType	int
15	Currency	Currency
582	CustOrderCapacity	int
1407	DefaultApplExtID	int
1137	DefaultApplVerID	String
1408	DefaultcstmApplVerID	String
1248	DerivativeCFICode	String
1251	DerivativeMaturityMonthYear	MonthYear
1267	DerivativeMinPriceIncrement	float
1270	DerivativeUnitOfMeasureQty	Qty
20013	DirectedWholesaleIndicator	char
845	DiscretionPrice	Price
1084	DisplayMethod	char
1138	DisplayQty	Qty
98	EncryptMethod	int

16	EndSeqNo	SeqNum
1207	EndTickPriceRange	Price
17	ExecID	String
18	ExecInst	MultipleCharValue
378	ExecRestatementReason	int
150	ExecType	char
432	ExpireDate	LocalMktDate
126	ExpireTime	UTCTimestamp
123	GapFillFlag	Boolean
327	HaltReason	int
21	HandlInst	char
148	Headline	String
108	HeartBtInt	int
871	InstrAttribType	int
872	InstrAttribValue	String
1019	InstrumentPartyID	String
1050	InstrumentPartyIDSource	char
1051	InstrumentPartyRole	int
1053	InstrumentPartySubID	String
1054	InstrumentPartySubIDType	int
23	IOIID	String
369	LastMsgSeqNumProcessed	SeqNum
31	LastPx	Price
32	LastQty	Qty
151	LeavesQty	Qty
608	LegCFICode	String
1420	LegExerciseStyle	int
611	LegMaturityDate	LocalMktDate
610	LegMaturityMonthYear	MonthYear
685	LegOrderQty	Qty
566	LegPrice	Price
1358	LegPutOrCall	int
623	LegRatioQty	float

654	LegRefID	String
605	LegSecurityAltID	String
606	LegSecurityAltIDSource	String
620	LegSecurityDesc	String
602	LegSecurityID	String
603	LegSecurityIDSource	String
624	LegSide	char
612	LegStrikePrice	Price
600	LegSymbol	String
999	LegUnitOfMeasure	String
1224	LegUnitOfMeasureQty	Qty
66	ListID	String
1093	LotType	char
1301	MarketID	Exchange
1655	MarketMakerActivity	int
1300	MarketSegmentID	String
574	MatchType	String
541	MaturityDate	LocalMktDate
969	MinPriceIncrement	float
110	MinQty	Qty
34	MsgSeqNum	SeqNum
35	MsgType	String
1377	MultilegModel	int
1473	NewsCategory	int
36	NewseqNo	SeqNum
1472	NewsID	String
870	NoInstrAttrib	NumInGroup
1018	NoInstrumentParties	NumInGroup
1052	NoInstrumentPartySubIDs	NumInGroup
555	NoLegs	NumInGroup
604	NoLegSecurityAltID	NumInGroup
33	NoLinesOfText	NumInGroup
1310	NoMarketSegments	NumInGroup

453	NoPartyIDs	NumInGroup
20006	NoPriceImpactIndicator	String
146	NoRelatedSym	NumInGroup
1116	NoRootPartyIDs	NumInGroup
454	NoSecurityAltID	NumInGroup
552	NoSides	NumInGroup
1205	NoTickRules	NumInGroup
768	NoTrdRegTS	NumInGroup
5018	OrderBookID	int
528	OrderCapacity	char
1115	OrderCategory	char
37	OrderID	String
38	OrderQty	Qty
529	OrderRestrictions	MultipleCharValue
39	OrdStatus	char
40	OrdType	char
41	OrigClOrdID	String
122	OrigSendingTime	UTCTimestamp
42	OrigTime	UTCTimestamp
1126	OrigTradeID	String
20001	ParentStrategyID	String
20002	ParentStrategyIDSource	String
448	PartyID	String
447	PartyIDSource	char
452	PartyRole	int
839	PeggedPrice	Price
835	PegMoveType	int
836	PegOffsetType	int
211	PegOffsetValue	float
1094	PegPriceType	int
43	PossDupFlag	Boolean
140	PrevClosePx	Price
44	Price	Price

1171	PrivateQuote	Boolean
854	QtyType	int
117	QuoteID	String
303	QuoteRequestType	int
537	QuoteType	int
20005	ReconstructedIndicator	
372	RefMsgType	String
45	RefSeqNum	SeqNum
371	RefTagID	int
644	RFQReqID	String
1117	RootPartyID	String
1118	RootPartyIDSource	char
1119	RootPartyRole	int
526	SecondaryClOrdID	String
855	SecondaryTrdType	int
455	SecurityAltID	String
456	SecurityAltIDSource	String
107	SecurityDesc	String
207	SecurityExchange	Exchange
48	SecurityID	String
22	SecurityIDSource	String
1174	SecurityTradingEvent	int
326	SecurityTradingStatus	int
49	SenderCompID	String
50	SenderSubID	String
52	SendingTime	UTCTimestamp
373	SessionRejectReason	int
64	SettlDate	LocalMktDate
63	SettlType	String
20012	ShortSellCoveredQty	Qty
20010	ShortSellLongQty	Qty
20011	ShortSellNakedQty	Qty
54	Side	char

752	SideMultiLegReportingType	Int
1007	SideReasonCd	String
1008	SideTrdSubType	Int
20004	SpecialMarketIndicator	String
1206	StartTickPriceRange	Price
967	StrikeMultiplier	Float
202	StrikePrice	Price
263	SubscriptionRequestType	Char
55	Symbol	String
56	TargetCompID	String
112	TestReqID	String
58	Text	String
1208	TickIncrement	Price
1209	TickRuleType	Int
59	TimeInForce	Char
75	TradeDate	LocalMktDate
1003	TradeID	String
487	TradeReportTransType	Int
336	TradingSessionID	String
625	TradingSessionSubID	String
340	TradSesStatus	int
60	TransactTime	UTCTimestamp
20003	TrdConditionCode	
769	TrdRegTimestamp	UTCTimestamp
770	TrdRegTimestampType	int
828	TrdType	int
306	UnderlyingIssuer	String
308	UnderlyingSecurityExchange	Exchange
311	UnderlyingSymbol	String
1147	UnitOfMeasureQty	Qty
61	Urgency	String

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