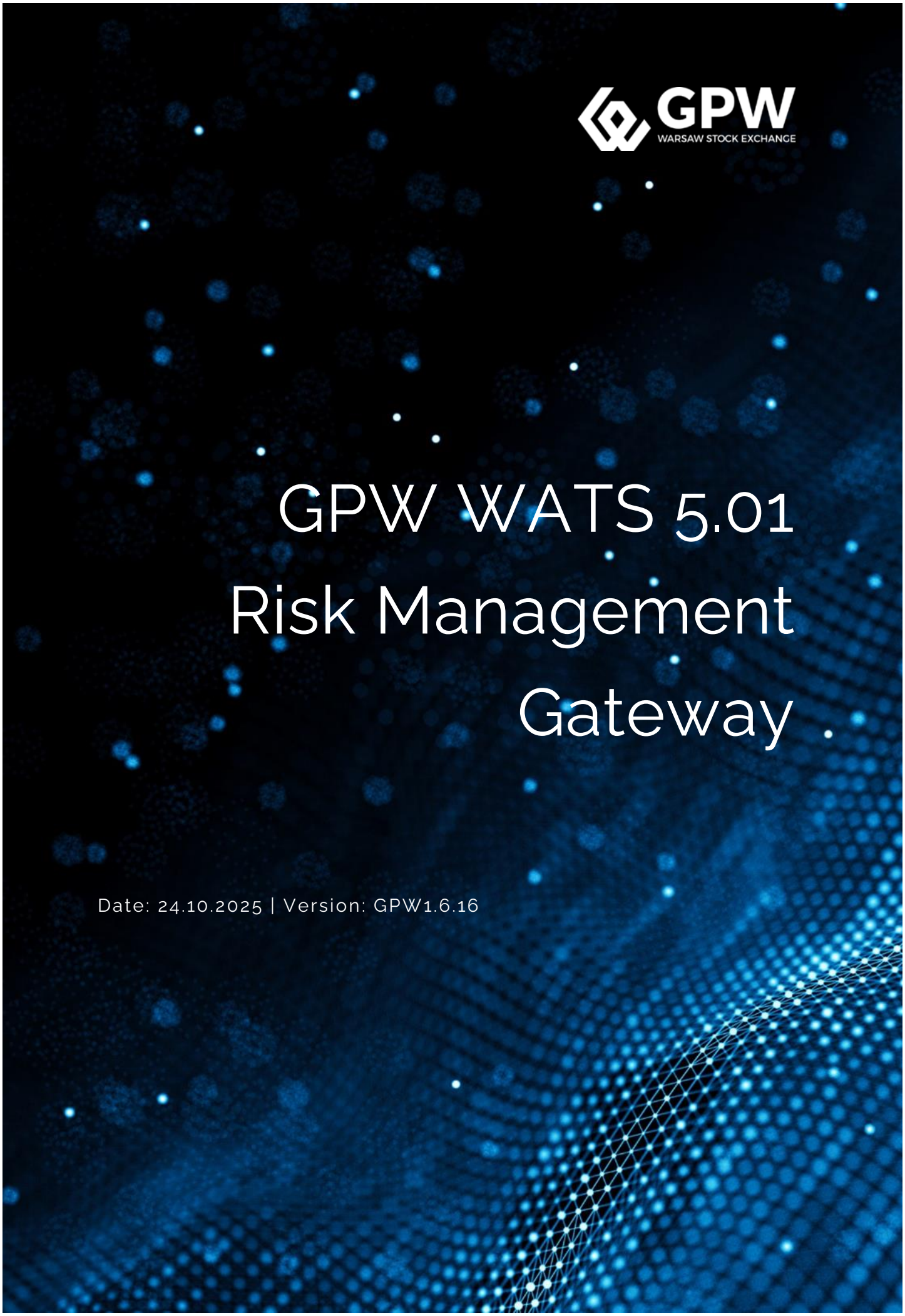
GPW
WARSAW STOCK EXCHANGE
GPW WATS 5.01
Risk Management
Gateway
Date: 24.10.2025 | Version: GPW1.6.16
Fundusze Europejskie
Rzeczpospolita Polska
Unia Europejska
Europejskie Fundusze Strukturalne i Inwestycyjne
NCBR
Narodowe Centrum Badań i Rozwoju

CONTENTS

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In case of sections of documentation at a High level work progress according to the current version of *GPW WATS Advancement of Documentation*, Warsaw Stock Exchange will endeavor to limit changes to these sections of documents to those related to:

1. correcting errors in the documentation or in the software;
2. clarification of the documentation content or removing ambiguity;
3. implementation of approved change requests or;
4. regulatory changes.

2. PREFACE

This document has been prepared by Warsaw Stock Exchange in order to help in the implementation process of GPW WATS trading platform. This section describes the basic information about Risk Management Gateway. You can learn about the target audience, the document purpose and all the necessary documents you should read in relation to this Specification.

2.1. TARGET AUDIENCE

This document has been prepared to development staff, Independent Software Vendors who produce software integrated with GPW WATS, analysts, market Participants and all Clients who want to deepen their knowledge about GPW WATS.

2.2. DOCUMENT PURPOSE

The purpose of this document is to provide a full description of Risk Management Gateway, which is part of GPW WATS.

This document contains a description of trading port behavior, message types and their fields.

2.3. ASSOCIATED DOCUMENTS

GPW WATS 5.01 Risk Management Gateway is a part of GPW WATS documentation set.

Please check the following documents to learn about the construction of Trading System.

- GPW WATS 1.01 Trading System.

Please check the documentation of the trading protocols supported by GPW WATS.

- GPW WATS 2.01 Native Order Gateway Specification (this document),
- GPW WATS 2.02 FIX Order Gateway Specification.

Please check the description of the communication with Data Distribution Service.

- GPW WATS 3.01 Market Data Protocol.

Please check the description of the communication with Internet Data Distribution System.

- GPW WATS 3.02 Internet Data Distribution System,
- GPW WATS 3.03 Streaming Messages for IDDS,
- GPW WATS 3.04 Rest API Messages for IDDS.

Please check the additional documentation, which explains other services provided within GPW WATS.

- GPW WATS 4.01 Drop Copy Gateway,
- GPW WATS 4.02 Post Trade Gateway,
- **GPW WATS 5.01 Risk Management Gateway** (this document).

Please check the additional documentation describing the following:

- GPW WATS 2.03 Rejection Codes,
- GPW WATS 2.04 BenDec Message Definition Format,
- GPW WATS 4.03 Contract Notes,
- GPW WATS 6.01 Connectivity,
- GPW WATS 6.02 (ENG) Short Code Record Keeping,
- GPW WATS 6.02 (PL) Mapowanie Short Code,
- GPW WATS 6.03 Short-Long Mapper User Guide.

It is recommended to read ***GPW WATS 1.01 Trading System*** document first.

3. Document History

version	Date	Description
0.51	29.06.2023	The initial publication of the documentation.
0.52	26.07.2023	Addition of a new risk limit type to FIX protocol. Messages updated: CS, CT, CL, CM • Tag: RiskLimitType • Value: RISKLIMITNOTDEFINED
0.53	28.08.2023	Improved the readability of the Order Value Control tables in Section 5.3 and Chapter 6. Updated RM protocol message descriptions in Chapter 8 RM Protocol.
0.53+	30.09.2023	RM Protocol • Update of FIX RM protocol messages • Addition of Native RM protocol New Sections: • Section 7.2 Breach Action Message Flow in Pre-Trade Controls • Sections 7.2.1 and 7.2.2 Kinematics diagrams illustrating pre-trade control action • Section 7.3 RM Parametrization • Section 7.4 RM Controls Configuration • Section 8.3 Concordance • Section 8.4 RM Control of Trading Activity • Section 8.5 Order Identification • Section 8.6 Pre-Trade checks and Order Types • Section 8.7 Order Calculation
0.56	17.11.2023	RM Protocol • Update of FIX RM protocol messages • Removal of Native RM protocol New Sections: • Section 8.1 FIX RM Protocol Messages • Section 8.2 FIX RM Protocol Message Examples
0.57	27.11.2023	RM Protocol • Section 8.1.2 New error codes for the PartyRiskLimitsDefinitionRequestAck[CT] message. The RiskLimitRequestResult [1761] attribute is updated. Updated Sections: • Section 7.4.5 Error Codes. Update to the descriptions of error codes.
0.58	15.12.2023	Publication of v0.58.
0.59	20.01.2024	Publication of v0.59.
0.60	20.02.2024	Minor changes to the document. Section 4.3 incorporates updated example market structure. Native protocol Risk Management configuration functionality is deprecated. Native RM messages removed from the system are: • RiskLimitBreach • RiskLimitDefinition

version	Date	Description
		• RiskLimitDefinitionResponse From now on, Risk Management configuration is exclusively carried out **RiskLimitID** by means of FIX protocol messages CS, CT, CL and CM. References to Native Risk Management messages have been removed from the document. MassQuote monitoring is now part of RM. Sections 4.3.3, 4.4 and 7.4.1 updated accordingly.
0.61	29.02.2024	Added Section 8.3 Message Kinematics which describes the kinematics of RM messages: • PartyRiskLimitsDefinitionRequest (CS) • PartyRiskLimitsDefinitionRequestAck (CT) • PartyRiskLimitsRequest (CL) • PartyRiskLimitsReport (CM)
0.63	20.04.2024	Supplied high resolution kinematics diagrams for section 8.3
1.0	30.04.2024	Supplied even higher resolution kinematics diagrams for section 8.3 and revised the diagrams. Changes in FIX tags in message PartyRiskLimitsDefinitionRequest (CS). RequestingPartyRole (1660) - Identifies the type or role of the RequestingPartyID(1658) specified. Values: • 1 = Executing Firm • 4 = Clearing Firm • 19 = Sponsoring Firm RiskLimitAction (1767) - Cancellation of unexecuted orders when the limit is breached. Applies to the following risk limits: 315, 316, 317. Values: • 2 = Reject
1.1	28.06.2024	Section 4.4.3.1 Agency orders. Added mifidFields.flags = LiquidityProvisionActivity to order attributes on native port to indicate market making activity. Sections 9.1 and 9.2 Bug in the PartyDetailRoleQualifier (1674) tag conditionally required in messages • PartyRiskLimitsDefinitionRequest[CS] • PartyRiskLimitsDefinitionRequestAck[CT] • PartyRiskLimitsReport[CM] The description initially read: conditionally required if PartyDetailedRole(1693) = **2** (Client ID) The correct usage is: conditionally required if PartyDetailedRole(1693) = **3** (Client ID)
1.1.2	9.08.2024	Publication of v1.1.2. No changes in the document.
1.3	17.10.2024	**This version has undergone a comprehensive overhaul, with significant updates and improvements that address both content and structure.**
1.3.1	19.11.2024	6.2.1 New Order Entry Rejected – Order modification is not allowed. Other parts of the document where that state is mentioned the change has been made.
1.4	6.12.2024	Unpublished version. No changes in the document.
1.5	3.02.2025	Two new limits have been added to order price collars. These are dynamic price collars for buy orders and dynamic price collars for sell orders. In price control it will be necessary to use either static or dynamic price collars. It is not possible to use both.
1.5.4	30.04.2025	Restricted Instruments List – updated description.

version	Date	Description
1.6	26.05.2025	Pre Trade limits were introduced depending on the type of session phase - separate limits for Continuous phase and Auction phases (Opening Auction and Closing Auction). The ability to define Pre Trade limits depending on the order side has been removed.
1.6.5	18.06.2025	Publication of v1.6.5. No changes in the document.
1.6.6	10.07.2025	Publication of v1.6.6. No changes in the document.
1.6.7	7.08.2025	RiskLimitType (1530) field: 400 = KILL SWITCH value added.
1.6.8	14.08.2025	Publication of v1.6.8. No changes in the document.
1.6.12	12.09.2025	Publication of v1.6.12. No changes in the document.
1.6.15	29.09.2025	Added new value "19 = Sponsoring Firm" to: - PartyDetailRole (Fix Tag 1693) in: o PartyRiskLimitsDefinitionRequest (CS) message, o PartyRiskLimitsDefinitionRequestAck (CT) message, o PartyRiskLimitsReport (CM) message. - PartyRole (Fix Tag 452) in PartyRiskLimitsRequest (CL) message Examples of using the new value can be found: - 4.7.5. Limits on Sponsored Client Orders, - 8.2.1.3. Example of configuring a risk limit for an Sponsored Client. Added two new error codes: - "10 - Operation forbidden during NoTradingClosed" - "11 - Duplicate RiskLimitID (1670)" to RiskLimitRequestResult (Fix Tag 1761) in PartyRiskLimitsDefinitionRequestAck (CT) message.
1.6.16	24.10.2025	Publication of v1.6.16. No changes in the document.

4. GPW WATS Risk Management Gateway

GPW WATS Risk Management (RM) is a set of Exchange Level Controls offering a risk-management capability to Exchange Members and Clearing Members. This functionality, available to Risk Entities, covers all financial instrument, except excluding Structured Products. Exchange Members as well as Clearing Members in their role of Risk Controllers, can define risk controls for Market Participants including Sponsored Access users, monitor risk levels and receive breach of trading limit notifications.

GPW WATS RM implements pre-trade and post-trade risk controls. The pre-trade controls fulfill the requirements of MIFID II/MIFIR under RTS 7 Article 20 Pre-trade and post-trade controls (Article 48(4) and (6) of the Directive 2014/65/EU).

4.1. Users and Roles

Risk management within GPW WATS RM is carried out by the risk manager. Risk managers are either trading Participants (Exchange Members) or clearing firms who offer clearing services to trading Participants. Risk managers configure limits, receive limit breach notifications and monitor risk usage. Clearing members may manage risks for multiple Exchange Members and Exchange Members may have one or more clearing firms as risk managers.

RM User type	Characteristic	Risk Management Role
Exchange Members (EM)	EMs are trading Participants in one of the following capacities: Agency Principal Market Maker	EMs can configure risk controls for their Clients including Sponsored Access Clients and Principal / Market Maker activity
Clearing Members (CM)	CMs offer clearing and settlement services to Exchange Members	CMs can configure risk controls for those EMs with whom they have a clearing and settlement relationship

Risk Management Function	Description.
Set and modify risk limits	Risk managers configure RM settings for their Clients or themselves
View current risk limits and risk limit usage	Risk managers view current risk limits and usage
Receive notifications of risk limit usage	Risk managers may receive notifications

4.2. Scope of RM Controls

4.2.1. TRADING PORTS

The RM service will control the order flow of members on all Order Entry Gateway connections, Native and FIX. The system will enable removing selected connections from RM control. For example, a member owning 4 connections to the system will be able to exclude one or more from RM control.

4.2.2. ORDERS

All orders entered into GPW WATS by means of FIX and Native Order Gateway messages as outlined in the following table are screened and controlled by the RM subsystem:

Message Type	FIX Order Gateway	Native Order Gateway
Order entry	NewOrderSingle [type 'D'], MassQuote [type 'i']	OrderAdd, MassQuote
Order modification	OrderCancelReplaceRequest [type 'G'], MassQuote [type 'i']	OrderModify, MassQuote

The service controls all order types: Limit, Market Order, Market to Limit, Stop Limit, Stop Loss, and Iceberg.

4.2.3. MARKET MODEL

RM is enabled only for the Central Limit Order Book (CLOB) market model and screens all order types. Other market models such as CROSS and BLOCK are not covered by RM control.

4.2.4. INSTRUMENTS

RM screens the following types of financial instruments:

- Equities,
- Bonds,
- Derivatives.

4.3. RM AND TRADING PHASES

Interaction with the RM system, including the setting of limits, interrogation of limit bounds is allowed at all times.

There are distinct Pre Trade limits for Continuous phase and Auction phases (Opening Auction and Closing Auction).

4.4. FIX RM MESSAGES

GPW WATS implements RM by means of dedicated FIX protocol messages (the Native protocol is not supported). The control messages enable Risk Controllers to define limits for Clients as well as receive usage statistics. RM management is implemented by4 FIX messages:

- Party Risk Limits Definition Request (CS) – used for limit definition. It enables the creation of new limits, their modification or deletion. Kill Switch functionality is also defined by means of this message.
- Party Risk Limits Definition Request Ack (CT) – the response to the CS message. Informs the user about whether the limit definition was accepted or rejected.
- Party Risk Limits Request (CL) – used for interrogating RM about limit amounts (pre and post-trade controls) and usage statistics (post-trade controls).
- Party Risk Limits Report (CM) – a response to CL. If solicited by a CL message, it conveys information about the configuration of limits. It is sent unsolicited by RM when post-trade warning

limits are breached or when post-trade limits are exhausted. Up to 2 warning levels can be defined by the Market Operator.

The sections that follow discuss the construction of the RM FIX messages. The specification of the FIX RM protocol is provided in the appendix.

4.5. Configurable Controls

4.5.1. RISK LIMITS

The risk controls configuration consists of setting the appropriate limits on operations performed by Exchange Members. These limits consist of maximum values on certain variables related to order entry and modification. The limits are expressed in terms of currency, number of securities (instrument volume) and other types and are presented in the table below.

Control	Control name	Limit parameter	Note
Pre-trade	Order price collars	OrderPriceStaticCollarsContinuous or OrderPriceDynamicCollarsContinuous OrderPriceStaticCollarsAuction or OrderPriceStaticCollarsAuction	For Static Collars - The multiplier specifies the extent to which order price collars can narrow relative to static order price collars. Type: integer, between 10% and 99%. For Dynamic Collars – The multiplier specifies the extent to which order price collars can narrow or widen relative to dynamic trade price collars. Type: integer, between 10% and 1000%.
	Maximum order value	MaxOrderValueContinuous MaxOrderValueAuction	Maximum value of an order. Distinct limits for for Continuous phase and Auction phases (Opening Auction and Closing Auction). Type: currency value, integer.
	Maximum order volume	MaxOrderVolumeContinuous MaxOrderVolumeAuction	The maximum order volume, in units of a financial instrument. Distinct values for Continuous phase and Auction phases (Opening Auction and Closing Auction). Type: number of units, integer (lot size * order quantity).
Post-trade	Traded Value Controls	TotalTradedValueLimit TotalTradedBuyValueLimit TotalTradedSellValueLimit	Limits on the total value of transactions performed by an EM. Separate limits for buy, sell side and total trades. Type: currency value, integer.
	Open Orders Value Controls	TotalOpenBuyValueLimit TotalOpenSellValueLimit TotalOpenValueLimit.	Limits on the total value of open orders. Separate limits for buy, sell side and total orders. Type: currency value, integer.
	Risk Value Controls	TotalBuyRiskValueLimit TotalSellRiskValueLimit	Limits on the total value of open orders and transactions. Separate limits for buy, sell side. Type: currency value, integer.
		TotalRiskValueLimit	TotalBuyRiskValueLimit + TotalSellRiskValueLimit Type: currency value, integer.
		TotalNetRiskValueLimit	TotalBuyRiskValueLimit - TotalSellRiskValueLimit Type: currency value, integer.

	Total Daily Number of Orders	Total Daily Number of Orders	The Total Number of Orders takes into account new order entries, order amendments and order rejects.

4.5.2. KILL SWITCH

The kill switch functionality implements the following functions:

- Suspend – stops accepting further orders from the trading party,
- Halt trading - stops accepting further orders from the trading party and cancels all existing orders,

4.5.3. DEFAULT CONTROLS

Risk management default behavior differs between pre-trade and post-trade controls. Pre-trade controls are mandatory and require the definition of control limits. If any of the 3 pre-trade controls are undefined, all orders will be automatically rejected. For post-trade checks, the behavior is reversed since post-trade controls are not mandatory. When a post-trade control is undefined, the order is accepted and routed into the trading engine.

Control type	Default behavior	Note
Pre-trade	Reject	If any pre-trade control is undefined, all orders entered are rejected by the system.
Post-trade	Pass-through	If post-trade controls are undefined, all orders entered in the system are accepted.

4.6. DEFINING RM USER ROLES

4.6.1. RM USER IS AN EXCHANGE MEMBER

If the RM user is an Exchange Member then it is identified as an *executing firm* in the CS message.

- In RequestingPartyRole field (FIX Tag 1660) enter 1 (Executing Firm),
- In RequestingPartyID field (FIX Tag 1658) enter the Exchange Member's LEI Code .

Tag	Field Name	Values	Example
	RequestingPartyGrp		
1657	**NoRequestingPartyIDs**	Must be 1 - only one party requests the limit	1
1658	**RequestingPartyID**	LEI code	2569855126598756254
1659	**RequestingPartyIDSource**	N = LEI	LEI
1660	**RequestingPartyRole**	1 = Executing Firm 4 = Clearing Firm 19 = Sponsoring Firm	1

4.6.2. RM USER IS A CLEARING MEMBER

When the RM user is a Clearing Member, their role is *clearing firm*:

- RequestingPartyRole (FIX Tag 1660)= 4 (Clearing Firm),
- RequestingPartyID (FIX Tag 1658) = LEI Code of Clearing Member

Tag	Field Name	Values	Example
	RequestingPartyGrp		
1657	**NoRequestingPartyIDs**	Must be 1 - only one party requests the limit	1
1658	**RequestingPartyID**	LEI code	2569855126598756254
1659	**RequestingPartyIDSource**	N = LEI	LEI
1660	**RequestingPartyRole**	1 = Executing Firm 4 = Clearing Firm 19 = Sponsoring Firm	4

4.6.3. RM USER IS AN EN EXCHANGE MEMBER ACTING AS A SPONSOR (SPONSORED ACCESS)

All Exchange Members providing Sponsored Access must control members on sponsored connections. In the FIX CS message, the sponsoring member's role is *sponsoring firm*.

- RequestingPartyRole (FIX Tag 1660) = 19 (Sponsoring Firm),
- RequestingPartyID (FIX Tag 1658) = Sponsoring Member's LEI Code

Tag	Field Name	Values	Example
	RequestingPartyGrp		
1657	**NoRequestingPartyIDs**	Must be 1 - only one party requests the limit	1
1658	**RequestingPartyID**	LEI code	2569855126598756254
1659	**RequestingPartyIDSource**	N = LEI	LEI
1660	**RequestingPartyRole**	1 = Executing Firm 4 = Clearing Firm 19 = Sponsoring Firm	19

4.7. TRADING CAPACITY CONTROLS

RM enables risk controllers to set limits on the following types of trading capacity:

- Agency – all orders submitted by a member's Clients,
- Principal/Dealer – an Exchange Member's principal/dealer activity on their own account,
- Market making activity or an Exchange Member,
- Institutional Client order flow – the order flow of selected institutional Clients,

4.7.1. LIMITS ON AGENCY ORDERS

To define a limit at the Agency level, the CS message must be filled the following:

- The PartyDetailGrp group contains the Exchange Member's data,
- OrderCapacity (FIX Tag 528) = A (Agency) – Client orders,
- OrderAttributeType (FIX Tag 2594) and OrderAttributeValue (FIX Tag 2595) are left empty.

Tag	Field Name	Values	Example
	PartyDetailGrp		
1671	NoPartyDetails	Must be 1 or 2 The first repeating group defines the Exchange Member The second repeating group defines the Client. If Client is not being defined, NoPartyDetails=1	1
1691	PartyDetailID	LEI of Exchange Member or Short Code of Institutional Client	2569855126598756254
1692	PartyDetailIDSource	P = Short Code N = LEI	N
1693	PartyDetailRole	1 = Executing Firm 3 = Client ID 19 = Sponsoring Firm	1
1674	PartyDetailRoleQualifier	23 = Firm or Legal Entity	none
	RiskLimitsGrp		
1669	NoRiskLimits	Must be 1	1
528	OrderCapacity	A = Agency P = Principal	A
	OrderAttributeGrp		
2593	NoOrderAttributes	Must be 1	1
2594	OrderAttributeType	2 = Liquidity Provision Activity Order	none
2595	OrderAttributeValue	Y = Yes N = No	none

4.7.2. LIMITS ON PRINCIPAL/DEALER ORDERS

To define a limit at the Principal/Dealer level, the CS message must be filled the following:

- In PartyDetailGrp group enter Exchange Member's data,
- OrderCapacity (FIX Tag 528) = P (Principal) – orders entered on the member's own account,
- OrderAttributeType (FIX Tag 2594) = 2 (Liquidity Provision Activity Order) and OrderAttributeValue (FIX Tag 2595) = N – this covers orders entered on the member's own account which are not part of market making activity.

Tag	Field Name	Values	Example
	PartyDetailGrp		
1671	NoPartyDetails	Must be 1 or 2 The first repeating group defines the Exchange Member The second repeating group defines the Client. If Client is not being defined, NoPartyDetails=1	1
1691	PartyDetailID	LEI of Exchange Member or Short Code of Institutional Client	2569855126598756254
1692	PartyDetailIDSource	P = Short Code N = LEI	N
1693	PartyDetailRole	1 = Executing Firm 3 = Client ID 19 = Sponsoring Firm	1
1674	PartyDetailRoleQualifier	23 = Firm or Legal Entity	none
	RiskLimitsGrp		
1669	NoRiskLimits	Must be 1	1
528	OrderCapacity	A = Agency P = Principal	P
	OrderAttributeGrp		
2593	NoOrderAttributes	Must be 1	1
2594	OrderAttributeType	2 = Liquidity Provision Activity Order	2
2595	OrderAttributeValue	Y = Yes N = No	N

4.7.3. LIMITS ON MARKET MAKER ORDERS

To define a limit at the Market Maker level, the CS message must be filled the following:

- in PartyDetailGrp group enter the Exchange Member's data,
- OrderCapacity (FIX Tag 528) = P (Principal) – orders entered on the member's own account,
- OrderAttributeType (FIX Tag 2594) = 2 (Liquidity Provision Activity Order) and OrderAttributeValue (FIX Tag 2595) = Y - this covers orders entered on the member's own account as part of market making activity.

Tag	Field Name	Values	Example
	PartyDetailGrp		
1671	NoPartyDetails	Must be 1 or 2 The first repeating group defines the Exchange Member The second repeating group defines the Client. If Client is not being defined, NoPartyDetails=1	1

Tag	Field Name	Values	Example
1691	**PartyDetailID**	LEI of Exchange Member or Short Code of Institutional Client	25698551265987562 54
1692	**PartyDetailIDSource**	P = Short Code N = LEI	N
1693	**PartyDetailRole**	1 = Executing Firm 3 = Client ID 19 = Sponsoring Firm	1
1674	**PartyDetailRoleQualifier**	23 = Firm or Legal Entity	none
	RiskLimitsGrp		
1669	**NoRiskLimits**	Must be 1	1
528	**OrderCapacity**	A = Agency P = Principal	P
	OrderAttributeGrp		
2593	**NoOrderAttributes**	Must be 1	1
2594	**OrderAttributeType**	2 = Liquidity Provision Activity Order	2
2595	**OrderAttributeValue**	Y = Yes N = No	Y

4.7.4. LIMITS ON INSTITUTIONAL CLIENT ORDERS

To define a limit at the Institutional Client level, the CS message must be filled the following:

- in PartyDetailGrp group enter the Exchange Member's and the institutional Client's data identified by means of a Short Code,
- OrderCapacity (FIX Tag 528) = A (Agency) – identifies Client orders,
- OrderAttributeType (FIX Tag 2594) and OrderAttributeValue (FIX Tag 2595) are left empty.

Tag	Field Name	Values	Example	
	PartyDetailGrp			
1671	**NoPartyDetails**	Must be 1 or 2 The first repeating group defines the Exchange Member The second repeating group defines the Client.	2	
1691	**PartyDetailID**	LEI of Exchange Member or Short Code of Institutional Client	25698551265987562 54	123
1692	**PartyDetailIDSource**	P = Short Code N = LEI	N	P
1693	**PartyDetailRole**	1 = Executing Firm 3 = Client ID	1	3

Tag	Field Name	Values	Example	
		19 = Sponsoring Firm		
1674	**PartyDetailRoleQualifier**	23 = Firm or Legal Entity	none	23
	RiskLimitsGrp			
1669	**NoRiskLimits**	Must be 1	1	
528	**OrderCapacity**	A = Agency P = Principal	A	
	OrderAttributeGrp			
2593	**NoOrderAttributes**	Must be 1	1	
2594	**OrderAttributeType**	2 = Liquidity Provision Activity Order	none	
2595	**OrderAttributeValue**	Y = Yes N = No	none	

4.7.5. LIMITS ON SPONSORED CLIENT ORDERS

To define a limit at the Sponsored Client level, the CS message must be filled the following:

- in PartyDetailGrp group enter the Sponsoring Exchange Member's and the Sponsored Client's data identified by means of a Short Code,
- OrderCapacity (FIX Tag 528) = A (Agency) – identifies Client orders,
- OrderAttributeType (FIX Tag 2594) and OrderAttributeValue (FIX Tag 2595) are left empty.

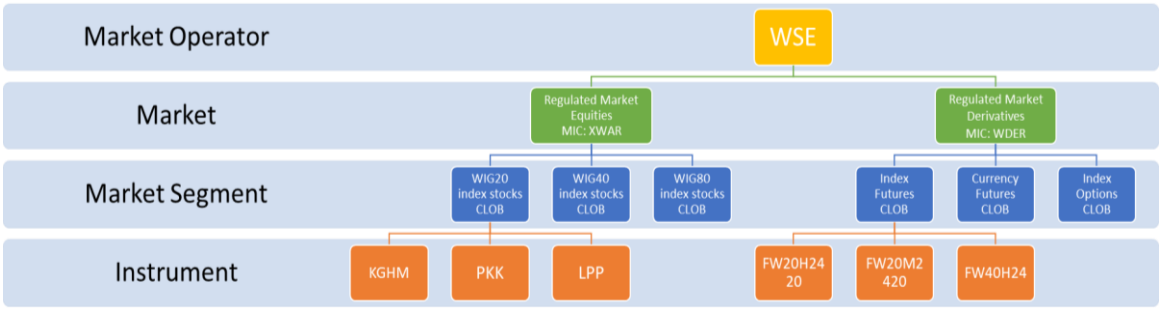
Tag	Field Name	Values	Example	
	PartyDetailGrp			
1671	**NoPartyDetails**	Must be 1 or 2 The first repeating group defines the Sponsoring Exchange Member The second repeating group defines the Sponsored Client.	2	
1691	**PartyDetailID**	LEI of Sponsoring Exchange Member or Short Code of Sponsored Client	2569855126598756254	123
1692	**PartyDetailIDSource**	P = Short Code N = LEI	N	P
1693	**PartyDetailRole**	1 = Executing Firm 3 = Client ID 19 = Sponsoring Firm	19	3
1674	**PartyDetailRoleQualifier**	23 = Firm or Legal Entity	none	23
	RiskLimitsGrp			
1669	**NoRiskLimits**	Must be 1	1	

Tag	Field Name	Values	Example
528	**OrderCapacity**	A = Agency P = Principal	A
	OrderAttributeGrp		
2593	**NoOrderAttributes**	Must be 1	1
2594	**OrderAttributeType**	2 = Liquidity Provision Activity Order	none
2595	**OrderAttributeValue**	Y = Yes N = No	none

4.8. Control of Market Structure

In RM, risk managers may configure risk controls at various levels of the market structure: at the level of Market, Market Segment or individual Financial Instrument. An example market structure to help illustrate the possible risk configurations is presented below:

Figure 1 - Example Market Structure



The following table presents details of the mechanisms for configuring RM limits across the market structure.

Hierarchy	Level	ID	Description
1	Instrument	InstrumentID	Limits may be configured at the level of an individual financial instrument using InstrumentID.
2	Market Segment	SegmentID	An entire Market Segment may be configured using a SegmentID. The same limit will apply across all instruments listed in that segment.
3	Market	MIC code	A limit may be applied to an entire market. The limit will apply to all Market Segments and instruments. Venues are identified by MIC code.

The control of market structure limits is carried out by means of the InstrumentScope group in CS.

4.8.1. LIMITS ON SPECIFIC MARKETS

To define a limit at the Market level, the CS message must specify the MIC code in InstrumentScopeSecurityExchange (FIX Tag 1616).

Tag	Field Name	Values	Example

	InstrumentScope		
1616	**InstrumentScopeSecurityExchange**	MIC code	XWAR
1538	**InstrumentScopeSecurityID**	InstrumentID	none
1539	**InstrumentScopeSecurityIDSource**	8 = Exchange Symbol	none
1300	**MarketSegmentID**	Market Segment ID	none

4.8.2. LIMITS ON MARKET SEGMENTS

The relevant fields for putting limits on Market Segments are:

- MarketSegmentID (FIX Tag 1300) –must contain the MarketSegmentID,
- InstrumentScopeSecurityExchange (FIX Tag 1616) – must contain the MIC of the relevant Market Segment.

Tag	Field Name	Values	Example
	InstrumentScope		
1616	**InstrumentScopeSecurityExchange**	MIC code	XWAR
1538	**InstrumentScopeSecurityID**	InstrumentID	none
1539	**InstrumentScopeSecurityIDSource**	8 = Exchange Symbol	none
1300	**MarketSegmentID**	Market Segment ID	10

4.8.3. LIMITS ON INDIVIDUAL INSTRUMENTS

To define a limit at Instrument level, the CS message must specify:

- InstrumentScopeSecurityIDSource (FIX Tag 1539) = 8 and InstrumentScopeSecurityID (FIX Tag 1538) = SecurityID,
- InstrumentScopeSecurityExchange (FIX Tag 1616) = the instrument's MIC code.

Tag	Field Name	Values	Example
	InstrumentScope		
1616	**InstrumentScopeSecurityExchange**	MIC code	XWAR
1538	**InstrumentScopeSecurityID**	InstrumentID	1256
1539	**InstrumentScopeSecurityIDSource**	8 = Exchange Symbol	8
1300	**MarketSegmentID**	Market Segment ID	none

5. Pre-Trade Risk Controls

Pre-Trade Risk Limits screen orders upon order entry for exceedingly large orders or fat-finger errors.

There are separate pre-trade limits for the Continuous phase and the Auction phases (Opening Auction and Closing Auction)

GPW WATS implements the following Pre-Trade risk controls:

Control	Control name	Limit parameter	Note
Pre-trade	Order price collars	OrderPriceStaticCollarsContinuous or OrderPriceDynamicColarsContinuous OrderPriceStaticCollarsAuction or OrderPriceDynamicCollarsAuction	For Static Collars - The multiplier specifies the extent to which order price collars can narrow relative to static order price collars. Type: integer, between 10% and 99%. For Dynamic Collars – The multiplier specifies the extent to which order price collars can narrow or widen relative to dynamic trade price collars. Type: integer, between 10% and 1000%.
	Maximum order value	MaxOrderValueContinuous MaxOrderValueAuction	Maximum value of an order. Distinct limits for Continuous phase and the Auction phases (Opening Auction and Closing Auction). Type: currency value, integer.
	Maximum order volume	MaxOrderVolumeContinuous MaxOrderVolumeAuction	The maximum order volume, in units of a financial instrument. Distinct values for Continuous phase and the Auction phases (Opening Auction and Closing Auction). Type: number of units, integer (lot size * order quantity).

MassQuotes are screened similarly to orders. If either side of a Mass Quote breaches a pre-trade control, the quote is rejected in its entirety.

5.1. Breach Action

Orders breaching Pre-Trade limits are rejected. Upon breach, Exchange Members receive a reject message showing the breached limit. Risk Controllers do not receive Pre-Trade order rejection messages. Orders can also be rejected when the Risk Controller has not configured all the Pre-Trade checks.

The table below shows the FIX messages involved in rejections:

Incoming order message	Rejection message
NewOrderSingle (D)	Execution Report (8), with fields ExecType [150]: 8 (Rejected) OrdRejReason [103]: Rejection Code[1]
OrderCancelReplaceRequest (G)	OrderCancelReject (9), with fields OrdStatus [39]: 8 (Rejected) CxlRejReason [102] : Rejection Code[1]

[1]Rejection Codes:

- 7000 - Risk Limit not defined,
- 7001 - Maximum Order Volume exceeded,

- 7002 - Maximum Order Value exceeded,
- 7003 - Order Price Collar exceeded.

The table below shows the Native protocol messages involved in rejections:

Incoming order message	Rejection message
OrderAdd	OrderAddResponse status = Rejected
OrderModify	OrderModifyResponse status = Rejected

5.2. Hierarchy of Pre Trade Limits

5.2.1. MARKET STRUCTURE CONTROL LEVEL

Pre-Trade limits can be set for the following levels of the market structure:

- Market,
- Market Segment,
- Instrument.

If a Pre Trade check are configured at several levels of the Market Structure, the limits defined at the lowest level override those defined at higher levels. The order of application of limits, if and when defined is: 1) Instrument, 2) Market Segment, 3) Market. There is no double-checking of orders at different levels.

Market Structure and Risk Limit Definition

5.2.2. EXCHANGE MEMBER ACTIVITY LEVEL

Pre-Trade limits can be defined for the following levels of Exchange Member Activity:

- Agency – all orders submitted by a member's Clients,
- Principal/Dealer – an Exchange Member's principal/dealer activity on their own account,
- Market making activity or an Exchange Member,
- Institutional Client order flow – the order flow of selected institutional Clients.

If Pre Trade limits were defined at several levels of activity, the limits defined at the lowest level override those defined at higher levels. The order of application of limits, if and when defined is:

1. Institutional Client,
2. Market Maker activity,
3. Principal/Dealer,
4. Agency. There is no double-checking of limits at different levels and only the limits defined at the lowest activity level apply.

5.3. PRE-TRADE CHECKS AND ORDER TYPES

RM applies pre-trade controls to the following order types submitted to the System. Unpriced orders do not undergo pre-trade order price controls because they follow the market price.

Order Types	Order Price Control	Order Volume Control	Order Value Control
Limit Order	yes	yes	yes
Market Order	no	yes	yes
Market to Limit	no	yes	yes
Stop Limit	yes	yes	yes
Stop Loss	no	yes	yes
Iceberg (Hidden) Order	yes	yes	yes

5.4. ORDER PRICE CONTROL

RM Order Price Control ensures orders fit within reasonable price bands before entering the order book. GPW WATS implements separate order price collars for Continuous phase and the Auction phases (Opening Auction and Closing Auction). The risk manager will need to decide whether price control should be conducted using a static or dynamic collars. It is not possible to use both. There are separate risk limits for static collars and separate risk limits for dynamic collars.

Order Price Collar concerns only those orders that feature a price limit (limit orders). Orders without a price limit, that is

- Stop Loss,
- Market,
- Market to Limit,

are not screened by the Order Price Collar controls.

Stop Limit orders which include activation and realization limits are controlled with respect to the realization limit: Order Price Collars on Stop Limit orders are controlled on the realization limit.

RM static order price collars are defined in relation to GPW WATS static order price collars configured in the system for a given tradable security. RM dynamic order price collars are defined in relation to GPW WATS dynamic trade price collars configured in the system for a given tradable security. Collars are set through a Multiplier parameter which determines the spread of the price bands around the reference price.

The calculation of the RM static order price collars is illustrated in the following table.

Order Type	RM Static Collar Bound	Formula
Buy	RMUpperBid	R+(bidupper-R)*m
Buy	RMLowerBid	R-(R-bidlower)*m
Sell	RMUpperAsk	R+(askupper-R)*m
Sell	RMLowerAsk	R-(R-asklower)*m

Notation:

R: static collar reference price;

bid upper, bid lower , ask upper, ask lower: GPW WATS static order price collar values (upper and lower / for bid and ask separately), are communicated by the Order Collars Market Data message for any financial instrument

m: multiplier in %; 10% < m < 99%

The calculation of the RM dynamic order price collars is illustrated in the following table.

Order Type	RM Dynamic Collar Bound	Formula
Buy	RMUpperBid	R+(upper-R)*m
Buy	RMLowerBid	R-(R-lower)*m
Sell	RMUpperAsk	R+(upper-R)*m
Sell	RMLowerAsk	R-(R-lower)*m

Notation:

R: dynamic collar reference price;

upper, lower: GPW WATS dynamic trade price collar values are communicated by the Order Collars Market Data message for any financial instrument

m: multiplier in %; 10% < m < 1000%

Check application:

FIX Order Gateway

Order type	Behavior	Control Formula
Buy order	check if Price [44] in NewOrderSingle [type 'D'] message falls within configured RM price collars, reject order otherwards	RMLowerBid <= Price [44] <= RMUpperBid
Sell order		RMLowerAsk <= Price [44] <= RMUpperAsk
Buy order modification	check if Price [44] in OrderCancelReplaceRequest [type 'G']	RMLowerBid <= Price [44] <= RMUpperBid
Sell order modification		RMLowerAsk <= Price [44] <= RMUpperAsk

	message falls within configured RM price collars, reject order otherwards	

Native Order Gateway

Order type	Behavior	Control Formula
Buy order	check if *price* field in OrderAdd message falls within configured RM price collars, reject order otherwards	RMLowerBid <= price <= RMUpperBid
Sell order		RMLowerAsk <= price <= RMUpperAsk
Buy order modification	check if *price* field in OrderModify message falls within configured RM price collars, reject order otherwards	RMLowerBid <= price <= RMUpperBid
Sell order modification		RMLowerAsk <= price <= RMUpperAsk

This example shows how to configure the CS message to define an Order price collar:

- RiskLimitType (FIX Tag 1530) - select the type of Order Price Collar
  a) For orders entered during the Continuous phase:
     ✓ for Static Control - 313 (PER ORDER STATIC PRICE LIMIT CONTINUOUS),
     or
     ✓ for Dynamic Control – 303 (PER ORDER DYNAMIC PRICE LIMIT CONTINUOUS).
  b) For orders entered during the Auction phases (Opening Auction and Closing Auction):
     ✓ for Static Control - 314 (PER ORDER STATIC PRICE LIMIT AUCTION).
     or
     ✓ for Dynamic Control – 304 (PER ORDER DYNAMIC PRICE LIMIT AUCTION).
- RiskLimitAmount (FIX Tag 1531) – enter the value of the multiplier,
  a) enter the multiplier as a whole number in the range:
     ✓ for Static Control: 10 – 99. For example, 55 is interpreted as 55%.
     ✓ for Dynamic Control: 10 – 1000.
- leave FIX Tags 1767, 1766, 1765 empty.

Tag	Field Name	Values	Example
	RiskLimitTypesGrp		
1529	**NoRiskLimitTypes**	Must be 1	1
1530	**RiskLimitType**	303 = Per Order Dynamic Price Limit Continuous 304 = Per Order Dynamic Price Limit Auction 313 = Per Order Static Price Limit Continuous 314 = Per Order Static Price Limit Auction	313 = Per Order Static Price Limit Continuous
1531	**RiskLimitAmount**	Order Price Collar Multiplier	50
1767	**RiskLimitAction**	2 = Reject or none	none
1766	**RiskLimitUtilizationAmount**		none
1765	**RiskLimitUtilizationPercent**		none

5.5. Order Value Control

Order Value Control ensures that incoming orders with unusually large values are screened and not entered into the order book if they exceed predefined limits

The calculation of RM value limits varies by type of instrument. Separate limits may be applied to Continuous phase and the Auction phases (Opening Auction and Closing Auction). Lot size is considered when computing order values.

Instrument type	Formula for calculating order value
Equities, ETFs and Structured Products	Price[1] * Volume[2]
Bonds	Nominal * Volume[2]
Futures	Price[1] * Multiplier * Volume[2]
Options	Multiplier * Volume[2] * Strike Price

Notation:

[1] For non-priced buy and sell orders (Market Orders and Market to Limit Orders), the Upper Static Trade Price Collar is used as the Order Price,

[2] Volume = Quantity (specified in the order) x Lot Size, For Iceberg orders, the controlled quantity is the total order quantity, and not the peak alone. Stop Limit orders are controlled on the realization limit and not the activation limit.

Check application:

Behavior	Control Formula
Check if Order Value (calculated according to the formulas in the table above) is less than configured RM order value bound, reject order otherwards	Order Value <= RMValueBound

This example shows how to configure the CS message to define a Maximum Order Value:

- RiskLimitType (FIX Tag 1530) select the limit type:
  a) For orders entered during the Continuous phase:302 (PER ORDER NOTIONAL VALUE CONTINUOUS),
  b) For orders entered during the Auction phases (Opening Auction and Closing Auction) 312 (PER ORDER NOTIONAL VALUE AUCTION).
- in RiskLimitAmount (FIX Tag 1531) enter the maximum order value,
  a) enter a whole number greater than zero (0), for example 10,000,000.
- leave FIX Tags 1767, 1766, 1765 empty.

Tag	Field Name	Values	Example
	RiskLimitTypesGrp		
1529	NoRiskLimitTypes	Must be 1	1
1530	RiskLimitType	302 = PER ORDER NOTIONAL VALUE CONTINUOUS 312 = PER ORDER NOTIONAL VALUE AUCTION	302 = PER ORDER NOTIONAL VALUE CONTINUOUS
1531	RiskLimitAmount	Maximum Order Value	10000000
1767	RiskLimitAction	2 = Reject	none

Tag	Field Name	Values	Example
		or none	
1766	**RiskLimitUtilizationAmount**		none
1765	**RiskLimitUtilizationPercent**		none

5.6. Order Volume Control

Order Volume Control ensures that incoming orders with unusually large volume are screened and not entered the order book if they exceed predefined limits.

Separate limits may be applied to Continuous phase and the Auction phases (Opening Auction and Closing Auction).

Check application:

FIX Order Gateway

Order type	Behavior	Control Formula
Buy order	Check if OrderQty [38] in NewOrderSingle [type 'D'] message x LotSize is less than configured RM order volume bound, reject order otherwards	OrderQty [38] x LotSize <= RMVolumeBound
Sell order		OrderQty [38] x LotSize <= RMVolumeBound
Buy order modification	Check if OrderQty [38] in OrderCancelReplaceRequest [type 'G'] message x LotSize is less than configured RM order volume bound, reject order otherwards	OrderQty [38] x LotSize <= RMVolumeBound
Sell order modification		OrderQty [38] x LotSize <= RMVolumeBound

Native Order Gateway

Order type	Behavior	Control Formula
Buy order	Check if *quantity* in OrderAdd message x LotSize is less than configured RM order value bound, reject order otherwards	Quantity x LotSize <= RMValueBound
Sell order		Quantity x LotSize <= RMValueBound
Buy order modification	Check if *quantity* in OrderModify message x LotSize is less than configured RM order value bound, reject order otherwards	Quantity x LotSize <= RMValueBound
Sell order modification		Quantity x LotSize <= RMValueBound

This example shows how to configure the CS message to define an Order Volume Control:

- RiskLimitType (FIX Tag 1530) select the limit type:
    a) For orders entered during the Continuous phase: 301 (PER ORDER VOLUME CONTINUOUS),
    b) For orders entered during the Auction phases (Opening Auction and Closing Auction): 311 (PER ORDER VOLUME AUCTION).
- in RiskLimitAmount (FIX Tag 1531) enter the maximum order volume:
    a) enter a whole number greater than zero (0), for example, 1,000,000.

- leave FIX Tags 1767, 1766, 1765 empty.

Tag	Field Name	Values	Example
	RiskLimitTypesGrp		
1529	NoRiskLimitTypes	Must be 1	1
1530	RiskLimitType	301 = PER ORDER VOLUME CONTINUOUS 311 = PER ORDER VOLUME AUCTION	301 = PER ORDER VOLUME CONTINUOUS
1531	RiskLimitAmount	Maximum Order Volume	1000000
1767	RiskLimitAction	2 = Reject or none	none
1766	RiskLimitUtilizationAmount		none
1765	RiskLimitUtilizationPercent		none

6. Post-Trade Risk Controls

6.1. Introduction

Post-trade risk controls manage aspects of a Participant's trading activity over an entire trading session. Unlike pre-trade controls, post-trade controls are cumulative and monitor a Participant's activity during a trading day.

RM distinguishes buy and sell side risk and computes aggregate statistics which capture a Participant's total risk activity. Post-trade controls can therefore be used to shape the risk behavior of a trading member.

At the beginning of each trading day, the control limits are reset. During the trading session the controls are incremented in line with a Participant's trading activity.

If a Post-Trade limit is defined during a trading session, its calculation will only include orders entered from that time on and. Orders and Trades executed prior to the definition of the limit will not be taken into account in its calculation.

Unlike RM pre-trade checks, RM post-trade controls do not pre-validate incoming orders. Under the post-trade scheme, order entry, modification and cancellation are allowed unless risk limits are exceeded. Breach actions are only undertaken when post-trade limits are exceeded.

Example

A user has a configured maximum Total Risk Value limit of $1,000,000. He first submits a limit buy order for a value of $200,000. He then submits a market buy order for a value of $1,000,000. RM post-trade controls will not block the second order because they do not perform order pre-validation, and at the time of entry, the post-trade limit was not yet exhausted. The second order exhausts the post-trade limit configured for the user. Entry of a third order will not be allowed and any subsequent order will be rejected, unless the configured limit is adjusted.

GPW WATS RM implements the following post-trade controls:

Category	Risk Measure	Trading Side Risk Measure	Definition
Traded Value Controls	Total Traded Value		Total Traded Buy Value + Total Traded Sell Value
		Total Traded Buy Value	The value of buy transactions.
		Total Traded Sell Value	The value of sell transactions.
Open Orders Value Controls	Total Open Orders Value		Total Buy Open Orders Value + Total Sell Open Orders Value
		Total Open Buy Orders Value	The value of open buy orders.
		Total Open Sell Orders Value	The value of open sell orders.
Risk Value Controls	Total Risk Value		Total Buy Risk Value + Total Sell Risk Value
	Total Net Risk Value		|Total Buy Risk Value – Total Sell Risk Value| (|absolute value|)

Category	Risk Measure	Trading Side Risk Measure	Definition
		Total Buy Risk Value	Total Buy Traded Value + Total Buy Open Orders Value
		Total Sell Risk Value	Total Sell Traded Value + Total Sell Open Orders Value
Total Daily Number of Orders	Total Daily Number of Orders		The Total Number of Orders takes into account new order entries, order amendments and order rejects.

Order Value is calculated according to formulas indicated below and varies by type of instrument.

Instrument type	Formula for calculating order value
Equities, ETFs and Structured Products	Price[1] * Volume[2]
Bonds	Nominal * Volume[2]
Futures	Price[1] * Multiplier * Volume[2]
Options	Multiplier * Volume[2] * Strike Price

Notation:

[1] For non-priced buy and sell orders (Market Orders and Market to Limit Orders), the Upper Static Trade Price Collar is used as the Order Price,

[2] Volume = Quantity (specified in the order) x Lot Size,

For Iceberg orders, the controlled quantity is the total order quantity, and not the peak alone. Stop Limit orders are controlled on the realization limit and not the activation limit.

Transaction Value is calculated according to the following formulas:

Instrument type	Formula for calculating transaction value
Equities, ETFs and Structured Products	Price * Volume[1]
Bonds	Nominal * Volume[1]
Futures	Price * Multiplier * Volume[1]
Options	Multiplier * Volume[1] * Strike Price

Notation:

1 Volume = Quantity (specified in the order) x Lot Size

6.2. Breach Action

When a Participant exceeds a given control limit, the following actions are taken:

- New Order Entry Rejected,
- Canceling Unexecuted Orders.

The Risk Controller is notified of limit breaches and the Exchange Member receives order rejection messages.

The Canceling of Unexecuted Orders relates only to Traded Value Controls. The Risk Controller can decide if orders will be cancelled upon breach of limit.

6.2.1. NEW ORDER ENTRY REJECTED

New Order Entry Rejected means new order are rejected. Order cancellation is allowed. Order modification is not allowed.

When an order is rejected, the Exchange Member receives a rejection message stating which limit was breached. The Risk Controller is not notified about order rejections cause by breaches of Post-Trade controls.

The table below shows the relevant FIX order rejection messages.

Incoming order message	Rejection message
NewOrderSingle (D)	Execution Report (8), with fields ExecType [150]: 8 (Rejected) OrdRejReason [103]: Rejection Code[1]
OrderCancelReplaceRequest (G)	OrderCancelReject (9), with fields OrdStatus [39]: 8 (Rejected) CxlRejReason [102] : Rejection Code[1]

[1]Rejection Codes:

- 7011 - Total Traded Value exceeded,
- 7012 - Total Traded Buy Value exceeded,
- 7013 - Total Traded Sell Value exceeded,
- 7014 - Total Open Value exceeded,
- 7015 - Total Open Buy Value exceeded,
- 7016 - Total Open Sell Value exceeded,
- 7017 - Total Risk Value exceeded,
- 7018 - Total Buy Risk Value exceeded,
- 7019 - Total Sell Risk Value exceeded,
- 7020 - Total Net Risk Value exceeded,
- 7021 - Max Order Count exceeded.

The table below shows the relevant Native protocol order rejection messages.

Incoming order message	Rejection message
OrderAdd	OrderAddResponse status = Rejected
OrderModify	OrderModifyResponse status = Rejected

6.2.2. CANCELING UNEXECUTED ORDERS

Canceling Unexecuted Orders relates only to Traded Value Controls. The Risk Controller can decide if orders will be cancelled upon breach of limit Canceling of unexecuted orders can be configured in the CS message by RiskLimitAction (FIX Tag 1767) = 2 (Reject). If unexecuted orders are note to be cancelled, RiskLimitAction (FIX Tag 1767) should be left empty.

6.2.3. LIMIT BREACH NOTIFICATION

The Risk Controller is notified of Post-Trade limit breaches by its Clients by means of the CM message.

The CM message contains:

- RiskLimitID (FIX Tag 1670) = the identification of the limit that was breached and RiskLimitType (FIX Tag 1530) = type of limit,
- RiskLimitAmount (FIX Tag 1531) = the current value of the breached limit,
- RiskLimitUtilizationAmount (FIX Tag 1766) = the value of the limit at the time of breaching, RiskLimitUtilizationPercent (FIX Tag 1765) = limit utilization ratio in %,
- RiskLimitAction (FIX Tag 1767) – the type of action:
    a) 9 (suspend) – indicates that new orders will be rejected,
    b) 10 (halt trading) – indicates new orders will be rejected and unexecuted orders will be canceled.

An example of a CM message informing of a limit breach is found below. The Buy Traded Value limit has ID 100, a limit value of 10,000,000.Upon breach, the limit reached a value of 11,000,000 which translates to 110% of limit utilization. The limit action is to halt trading (10).

Tag	Field Name	Example
	PartyRiskLimitsGrp	
1670	RiskLimitID	100
	RiskLimitsGrp	
	RiskLimitTypesGrp	
1530	RiskLimitType	315 = PER TOTAL BUY TRADED VALUE
1531	RiskLimitAmount	10000000
1767	RiskLimitAction	10 = Halt trading
1766	RiskLimitUtilizationAmount	11000000
1765	RiskLimitUtilizationPercent	110

6.2.4. WARNING LEVELS BREACH NOTIFICATION

Risk Controllers may receive warnings before a Post-Trade risk limit is breached. Breaches of warning levels are communicated by means of unsolicited CM messages. WATS RM implements up to 2 warning levels. The warning levels are defined by the Market Operator. As an example, consider 2 warning levels, 80% and 90%. If a given limit exceeds 80%, the Risk Controller will be notified about its breach. Similarly, the Risk Controller will receive a second warning once the limit reaches 90%. of risk.

The structure of the relevant CM message is:

- RiskLimitID (FIX Tag 1670) = identifier of the limit which exceeded the warning level, and RiskLimitType (FIX Tag 1530) = type of limit,

- RiskLimitAmount (FIX Tag 1531) = the configured value of the limit,
- RiskLimitUtilizationAmount (FIX Tag 1766) = the value of the limit after breaching the warning level, and RiskLimitUtilizationPercent (FIX Tag 1765) = % of limit utilization,
- RiskLimitAction (FIX Tag 1767) = 4 (Warning),
- NoRiskWarningLevels (FIX Tag 1559) – always takes the value 1,
- RiskWarningLevelAction (FIX Tag 1769) = 4 (Warning),
- RiskWarningLevelPercent (FIX Tag 1560) = the value of the warning level in %,
- RiskWarningLevelName (FIX Tag 1560) – indicates the warning level breached. In case the first warning level was breached, this value is 1, in case the second warning level was breached this value is 2.

The example below shows a CM message informing that a first warning level was breached for the Buy Traded Value. The Id of the limit is 100 and its configured value 10,000,000. Upon breaching the first warning level, the limit had a fill of 8,100,000 which is 81% of limit utilization. The 1st warning level was set to 80%.

Tag	Field Name	Example
	PartyRiskLimitsGrp	
1670	RiskLimitID	100
	RiskLimitsGrp	
	RiskLimitTypesGrp	
1530	RiskLimitType	315 = PER TOTAL BUY TRADED VALUE
1531	RiskLimitAmount	10000000
1767	RiskLimitAction	4 = Warning
1766	RiskLimitUtilizationAmount	8100000
1765	RiskLimitUtilizationPercent	81
	RiskWarningLevelGrp	
1559	NoRiskWarningLevels	1
1769	RiskWarningLevelAction	4 = Warning
1560	RiskWarningLevelPercent	80
1561	RiskWarningLevelName	1 = Warning Level 1 Breach

6.2.5. REINSTATE TRADING

When a Post-Trade limit is breached, order entry is blocked. The Risk Controller can re-enable order entry with the appropriate command message. Two methods are available:

1. Method 1: deleting a limit. One can delete a limit by means of the CS message with ListUpdateAction (Fix Tag 1324) = D (Delete). By removing a limit, the related risk controls are also lifted.
2. Method 2: use message CS to reinstate trading. To reinstate trading the CS message needs to refer to the ID of the limit which closed order entry. The limit is updated with ListUpdateAction (Fix Tag 1324) = M (Modify) and the command to reinstate is activates with PartyActionType (Fix Tag 2329) = 2 (reinstate). The other message fields should be left unmodified. If an increase in the value of the limit is to accompany reinstatement, new values for the limit should be entered.

6.3. Hierarchy of Post Trade Limits

6.3.1. MARKET STRUCTURE CONTROL LEVEL

Post-Trade limits can be set on the following levels of Market Structure:

- Market,
- Market Segment.

Post-Trade limits can't be configured at the level of individual instrument.

Post-Trade limits are not hierarchical and order entry is blocked upon the breach of any control.

Example: 2 Total Traded Value Post-Trade limits are configured

- Limit on the level of Market (MIC: XWAR) = 20 mil,
- Limit on the level of Market Segment (WIG20) = 10 mil.

If the limit is breached on the WIG20, then trading will be blocked only on those 20 instruments and the Client will be able to trade on the other instruments composing XWAR. However if the limit on XWAR is breached, then all trading on XWAR will be disallowed.

6.3.2. EXCHANGE MEMBER ACTIVITY LEVEL

Pre-Trade limits can be configured for the following Exchange Member activities:

- Agency - all orders submitted by a member's Clients,
- Principal/Dealer - an Exchange Member's principal/dealer activity on their own account,
- Market making activity or an Exchange Member,
- Institutional Client order flow - the order flow of selected institutional Clients.

Post-Trade limits are not hierarchical and order entry is blocked upon the breach of any control. All Post-Trade limits are controlled and if any is breached trading is stopped.

Example: a Total Traded Value limit of 50,000,000 is defined on all Client orders. Two additional limits are defined on 2 Clients of the Exchange Member.

- Client A: 20 mil,
- Client B: 35 mil.

Trading by Client A and Client B will be blocked when the limit of 50mln on all Clients is breached. The breaches on individual Client limits will be applied to those Clients and will only affect those Clients.

6.4. Traded Value Controls

Traded value control tracks the total value of transactions made by a Participant. These controls are computed separately for the buy and sell sides. The table below presents the Traded Value Controls implemented within GPW WATS RM.

Category	Risk Measure	Trading Side Risk Measure	Definition	Breach Action
Traded Value Controls	Total Traded Value		Total Traded Buy Value + Total Traded Sell Value	New order entry and order amend rejected. Order cancel supported. Open Orders Canceled.[1]
		Total Traded Buy Value	The value of buy transactions.	New Order Entry and Order Amend Rejected on Buy Side. Buy order cancel supported. Open Buy Orders Canceled.[1]
		Total Traded Sell Value	The value of sell transactions.	New Order Entry and Order Amend Rejected on Sell Side. Sell order cancel supported. Open Sell Orders Canceled.[1]

Notation

[1] According to section 6.2.2 the Risk Manager defining the limits decides if unexecuted orders are to be cancelled or to remain on the order book.

Category	Risk Metric	Methodology
Traded Value Controls	Total Traded Value	Total Traded Buy Value + Total Traded Sell Value
	Total Traded Buy Value	Running sum of the value of all buy transactions performed
	Total Traded Sell Value	Running sum of the value of all sell transactions performed

Example: In the table below we illustrate the utilization of a Total Buy Traded Value limit set to 1,000,000.

Transaction #	Trans. Value	Limit Usage	Remaining limit slack
start of session	0	0	1 000 000
1	400 000	400 000	600 000
2	100 000	500 000	500 000
3	300 000	800 000	200 000
4	300 000	1 100 000	0

- At start of session Total Traded Buy Value limit is 1,000,000,

- The first 3 transactions do not exhaust the limit,
- Transaction 4 causes limit breach. This causes:
    a) New Order Entry and Order Amend Rejected,
    b) Order cancel supported ,
    c) Open Buy Orders Canceled (if this functionality is switched on by the Risk Manager at the limit definition stage).

Below is shown the configuration of the CS message for defining Traded Value Controls:

- RiskLimitType (FIX Tag 1530) – choose the appropriate limit:
    a) 315 = Total Buy Traded Value,
    b) 316 = Total Sell Traded Value,
    c) 317 = Total Traded Value.
- RiskLimitAmount (FIX Tag 1531) = value of limit,
    d) enter whole number greater than 0, for example 10,000,000.
- RiskLimitAction (FIX Tag 1767) – indicate if unexecuted orders are to be cancelled after breach. To remove unexecuted orders enter 2 (Reject), otherwise leave empty,
- FIX Tag 1766, 1765 are left empty.

Tag	Field Name	Values	Example
	RiskLimitTypesGrp		
1529	**NoRiskLimitTypes**	Must be 1	1
1530	**RiskLimitType**	315 = Per Total Buy Traded Value 316 = Per Total Sell Traded Value 317 = Per Total Traded Value	315 = Per Total Buy Traded Value
1531	**RiskLimitAmount**	Limit amount	10000000
1767	**RiskLimitAction**	2 = Reject or none	2 = Reject
1766	**RiskLimitUtilizationAmount**		none
1765	**RiskLimitUtilizationPercent**		none

6.5. Open Orders Value Controls

Order value control tracks the value of open orders placed by a Participant. These controls are computed separately for the buy and sell sides. The table below presents the Order Value controls implemented within GPW WATS RM.

Category	Risk Measure	Trading Side Risk Measure	Definition	Breach Action
Open Orders Value Controls	Total Open Orders Value		Total Open Buy Orders Value + Total Open Sell Orders Value	New Order Entry and Order Amend Rejected. Order cancel supported.
		Total Open Buy Orders Value	The value of open buy orders	New Order Entry and Order Amend Rejected on Buy Side. Buy order cancel supported.
		Total Open Sell Orders Value	The value of open sell orders.	New Order Entry and Order Amend Rejected on Sell Side. Sell order cancel supported.

Total Open Orders Value is the value of all open orders in the order book.

Category	Risk Metric	Methodology
Open Orders Value Controls	Total Open Orders Value	Total Open Buy Orders Value + Total Open Sell Orders Value
	Total Open Buy Orders Value	Sum of the value of all open buy orders
	Total Open Buy Orders Value	Sum of the value of all open sell orders

Separate value limits may be applied to buy and sell orders.

The following methodology is used when calculating the Total Open Buy Orders Value and Total Open Sell Orders Value metrics. The Total Open Orders Value risk measure is calculated using values of these metrics.

Order category	Order Messages	Methodology
Order entry	NewOrderSingle (D) OrderAdd	Each order entry message increases Total Open Buy Orders Value or Total Open Sell Orders Value
Order modifications	OrderCancelReplaceRequest (G) OrderModify	Each order entry modification may change Total Open Buy Orders Value or Total Open Sell Orders Value
Order rejections	BusinessMessageReject (j) Reject	Each order rejection leaves Total Open Buy Orders Value and Total Open Sell Orders Value unchanged
Order cancels	OrderCancelRequest (F) OrderCancel	Each order cancellation decreases Total Open Buy Orders Value or Total Open Sell Orders Value

Below is shown the configuration of the CS messge for defining Open Orders Value Controls:

- In RiskLimitType field (FIX Tag 1530) choose the appropriate limit:
    a) 318 = Total Buy Open Orders Value,
    b) 319 = Total Sell Open Orders Value,
    c) 320 = Total Open Orders Value.
- RiskLimitAmount (FIX Tag 1531) = enter the value of the limit,
- enter whole number greater than 0, for example 1,000,000.FIX Tag 1767, 1766, 1765 are left empty.

Tag	Field Name	Values	Example
	RiskLimitTypesGrp		
1529	NoRiskLimitTypes	Must be 1	1
1530	RiskLimitType	318 = Per Total Buy Open Orders Value 319 = Per Total Sell Open Orders Value 320 = Per Total Open Orders Value	318 = Per Total Buy Open Orders Value
1531	RiskLimitAmount	Limit amount	100000
1767	RiskLimitAction	2 = Reject or none	none
1766	RiskLimitUtilizationAmount		none
1765	RiskLimitUtilizationPercent		none

6.6. Risk Value Controls

Traded value control tracks the total value of transactions made by a Participant. Their purpose is to manage the overall risk of a market Participant. It is measured as the sum of the Traded Value and Open Orders controls. These controls are calculated separately for the buy and sell sides. The table below presents the Traded Value controls implemented within GPW WATS RM.

Category	Risk Measure	Trading Side Risk Measure	Definition	Breach Action
Risk Value Controls	Total Risk Value		Total Buy Risk Value + Total Sell Risk Value	New order entry and order amend rejected. Order cancel supported.
	Total Net Risk Value		| Total Buy Risk Value - Total Sell Risk Value |	New order entry and order amend rejected. Order cancel supported.
		Total Buy Risk Value	Total Traded Buy Value + Total Open Buy Orders Value	New order entry and order amend rejected on buy side. Buy order cancel supported.
		Total Sell Risk Value	Total Traded Sell Value + Total Open Sell Orders Value	New order entry and order amend rejected on sell side. Sell order cancel supported.

The following methodology is used to calculate the risk metrics. Note that the Risk Value risk metrics are a function of Traded Value and Open Orders Value metrics.

Order category	Order Messages	Methodology
Order entry	NewOrderSingle [type 'D'] OrderAdd	Each order entry message may increases or decreases risk metrics
Order modifications	OrderCancelReplaceRequest [type 'G'] OrderModify	Each order entry modification may change risk metrics
Order rejections	BusinessMessageReject [type 'j']	Each order rejection leaves risk metrics unchanged

Order category	Order Messages	Methodology
	Reject	
Order cancels	OrderCancelRequest [type 'F'] OrderCancel	Each order cancellation increase or decreases risk metrics

Below is shown the configuration of the CS message for defining Risk Value Controls:

- RiskLimitType (FIX Tag 1530) - choose the appropriate limit:
  a) 321 = Total Buy Risk Value,
  b) 322 = Total Sell Risk Value,
  c) 323 = Total Risk Value,
  d) 324 = Total Net Risk Value.
- RiskLimitAmount (FIX Tag 1531) – enter the value of the limit:
  a) enter whole number greater than 0, for example 10,000,000.
- FIX Tag 1767, 1766, 1765 are left empty.

Tag	Field Name	Values	Example
	RiskLimitTypesGrp		
1529	**NoRiskLimitTypes**	Must be 1	1
1530	**RiskLimitType**	321 = Per Total Buy Risk Value 322 = Per Total Sell Risk Value 323 = Per Total Risk Value 324 = Per Total Net Risk Value	321 = Per Total Buy Risk Value
1531	**RiskLimitAmount**	Limit amount	1000000
1767	**RiskLimitAction**	2 = Reject or none	none
1766	**RiskLimitUtilizationAmount**		none
1765	**RiskLimitUtilizationPercent**		none

6.7. Total Number of Orders

This control limits the total number of orders submitted by Exchange Member. If the Total Number of Orders limit for the day is breached all open orders will automatically be deleted and the entering of new orders will be rejected. The Total Number of Orders takes into account new order entries, order amendments and order rejects. Order cancellations are not included in the limit count.

Below is shown the configuration of the CS message for defining a limit on the Total Number of Orders:

- In field RiskLimitType (FIX Tag 1530) - enter 325 = Total Daily Number of Orders,
- RiskLimitAmount (FIX Tag 1531) – enter limit value:
  a) enter whole number greater than 0, for example 100,000.
- FIX Tag 1767, 1766, 1765 are left empty.

Tag	Field Name	Values	Example
	RiskLimitTypesGrp		
1529	NoRiskLimitTypes	Must be 1	1
1530	RiskLimitType	325 = Per Total Daily Number Of Orders	325 = Per Total Daily Number Of Orders
1531	RiskLimitAmount	Limit amount	100000
1767	RiskLimitAction	2 = Reject or none	none
1766	RiskLimitUtilizationAmount		none
1765	RiskLimitUtilizationPercent		none

6.8. Requesting Limit Usage Reports

The Risk Controller can interrogate WATS RM on the kind of limits configured, their size and utilization. The Risk Controller will use the CL message to formulate a report request and receive a CM message with a risk limit report.

The configuration of the CL message is as follows:

1. In fieldRiskLimitRequestType (FIX Tag 1760) - chose:
    a) 1 (Definition) to request limit definitions,
    b) 3 (Definitions and utilization) to request limit definitions and their utilization.
2. In the RequestingPartyGrp group enter Risk Manager related data.
3. In the Parties group enter the data of the Exchange Member and/or institutional Client.
4. InstrumentScopeSecurityExchange (FIX Tag 1616) = MIC code.

The above fields are mandatory. WATS RM replies with a series of CM messages containing information on limits defined by the Risk Manager on the Exchange Member or institutional Client on the market defined by the MIC code. Each CM message contains information about one limit (one limit per CM message). The number of CM messages will correspond to the number of limits configured by the Risk Controller.

The remaining fields in the CL message are optional and can be used to narrow the query.

A CM message on limit usage contains:

- RiskLimitID (FIX Tag 1670) – limit identifier, and RiskLimitType (FIX Tag 1530) - type of limit,
- RiskLimitAmount (FIX Tag 1531) shows the configured value of the limit,
- RiskLimitUtilizationAmount (FIX Tag 1766) shows the current limit utilization, and RiskLimitUtilizationPercent (FIX Tag 1765) shows the usage in %,
- RiskLimitAction (FIX Tag 1767) is left empty.

Below is an example CM message informing about the usage of a Buy Traded Value. Limit with ID 100.The value of the limit is 10,000,000, its current utilization is 5,000,000 or 50%.

Tag	Field Name	Example
	PartyRiskLimitsGrp	
1670	RiskLimitID	100
	RiskLimitsGrp	
	RiskLimitTypesGrp	
1530	RiskLimitType	315 = Per Total Buy Traded Value
1531	RiskLimitAmount	10000000
1767	RiskLimitAction	10 = Halt trading
1766	RiskLimitUtilizationAmount	5000000
1765	RiskLimitUtilizationPercent	50

6.9. Risk Limits Definition Acknowledgement (CT)

The acknowledgement to a CS risk limit definition message is a CT message.

If the CS message was correctly defined, then the RiskLimitRequestStatus (FIX Tag 1762) tag in the CT message will carry the value 0 (Accepted).

If the CS message was not properly defined, the CT message will contain:

- RiskLimitRequestStatus (FIX Tag 1762) = 2 (Rejected),
- RiskLimitRequestResult (FIX Tag 1761) - relevant error code.

Error codes	Description
1=Invalid Party	User not defined in WATs entered in the RequestingPartyGrp or PartyDetailGrp.
2=Invalid Risk Limit Type	Wrong limit ID (in RiskLimitType (FIX Tag 1530)).
3=Invalid Risk Limit	Wrong limit ID or wrong limit definition. The error can occur when a CS message is used to modify or delete a limit.
4=Invalid Risk Limit Amount	Incorrect limit value
5=Invalid Instrument	Instrument does not exist in WATS. (refers to fields InstrumentScopeSecurityID (FIX Tag 1538) and InstrumentScopeSecurityIDSource (FIX Tag 1539)).
6=Invalid Market Structure	Market Segment does not exist in WATS. (relates to fields MarketSegmentID (FIX Tag 1300)) and/or MIC is not defined in WATS (relates to field InstrumentScopeSecurityExchange (FIX Tag 1616)).
7=Risk Limit Not Approved For Party	The Risk Manager is not authorized to control the selected Exchange Member.
8=Risk Limit Already Defined For Party	An attempt was made to create a limit that already exists.
9=Missing Mic Code	Required MIC code not entered in field InstrumentScopeSecurityExchange (FIX Tag 1616).

7. KILL SWITCH

GPW WATS implements a Kill Switch facility within the scope of the RMA service. The Kill Switch enables a risk controller to:

- Suspend – new order entries, order amendments and order cancellations rejected,
- Halt Trading – new order entries, order amendments and order cancellations rejected and open orders canceled.

Enabling and disabling the Kill Switch is performer by means of the Cs message. The Kill Switch is implemented as another Risk Limit identified in the CS message by Risk Limit (RiskLimitType (Fix Tag: 1530) = 400 (Kill Switch).

The Kill Switch can be configured on the same hierarchy as Pre-Trade limits.

To enable the Kill Switch in Halt Trading mode the CS message needs to be configured with RiskLimitAction (Fix Tag: 1767) = 2 (Reject). To enable it in the Suspend mode, RiskLimitAction (Fix Tag: 1767) should be left empty.

The Kill Switch is turned off by sending a CS message to delete limit ID 400 with ListUpdateAction (Fix Tag: 1324) = D (Delete). Limit ID 400 is the Kill Switch implementation in WATS RM.

The Kill Switch is the only limit which does not require supplying a limit value in the RiskLimitAmount (Fix Tag: 1531).

After enabling the Kill Switch, new orders, order cancellations and modification are rejected. The table below features the list of FIX and Native protocol rejection messages related to Kill Switch functionality.

Incoming order message	Rejection message
NewOrderSingle (D)	Execution Report (8), with fields ExecType [150]: 8 (Rejected) OrdRejReason [103]: 7022 – Rejected due to Kill Switch
OrderCancelReplaceRequest (G)	OrderCancelReject (9), with fields OrdStatus [39]: 8 (Rejected) CxlRejReason [102] : 7022 – Rejected due to Kill Switch

Incoming order message	Rejection message
OrderAdd	OrderAddResponse status = Rejected
OrderModify	OrderModifyResponse status = Rejected

Below is shown the configuration of the CS message for defining the Kill Switch:

- ListUpdateAction (FIX Tag 1324) – add limit A (Add),
- in PartyDetailGrp group define on whom the Kill Switch should be defined, that is on the relevant Exchange Member and/or institutional Client. Capacity of the Exchange Member should be

entered in OrderCapacity (FIX Tag 528). If the capacity is principal then fields OrderAttributeType (FIX Tag 2594) and OrderAttributeValue (FIX Tag 2595) should indicate if the Exchange Member's activity includes Market Making or not,

- RiskLimitType (FIX Tag 1530) = 400 (Kill Switch),
- RiskLimitAmount (FIX Tag 1531) – left empty,
- RiskLimitAction (FIX Tag 1767) = 2 (Reject) for Halt Trading or to be left empty for Suspend,
- InstrumentScope group – the instruments covered by the Kill Switch.

Below is an example of CS message configured to enable the Kill Switch:

- The Kill Switch is enabled on Exchange Member with LEI 8889999EXECUTINGFIRM in Market Maker capacity,
- Kill Switch will work in Halt Trading mode and cover all instruments under the XWAR MIC code,
- Kill Switch is configured by a Clearing Firm with LEI 11112222ClearingFirm,
- The defined Kill Switch obtains LimitID: 100.

Tag	Field name	Value
1666	**RiskLimitRequestID**	111
	RequestingPartyGrp	
1657	**NoRequestingPartyIDs**	1
1658	**RequestingPartyID**	11112222ClearingFirm
1659	**RequestingPartyIDSource**	N = LEI
	RequestingPartyRole	4 = Clearing Firm
	PartyRiskLimitsUpdateGrp	
1677	**NoPartyRiskLimits**	1
1324	**ListUpdateAction**	A = Add
2329	**PartyActionType**	null
1670	**RiskLimitID**	100
	PartyDetailGrp	
1671	**NoPartyDetails**	1
1691	**PartyDetailID**	8889999EXECUTINGFIRM
1692	**PartyDetailIDSource**	N = LEI
1693	**PartyDetailRole**	1 = Executing Firm
1674	**PartyDetailRoleQualifier**	null
	RiskLimitsGrp	
1669	**NoRiskLimits**	1
528	**OrdeCapacity**	P

Tag	Field name	Value
	OrderAttributeGrp	
2593	NoOrderAttributes	1
2594	OrderAttributeType	2 = Liquidity Provision Activity Order
2595	OrderAttributeValue	Y = Yes
	RiskLimitTypesGrp	
1529	NoRiskLimitTypes	1
1530	RiskLimitType	400 = KILL SWITCH
1531	RiskLimitAmount	null
1767	RiskLimitAction	2 = Reject
1766	RiskLimitUtilizationAmount	null
1765	RiskLimitUtilizationPercent	null
	RiskWarningLevelGrp	
1559	NoRiskWarningLevels	null
1769	RiskWarningLevelAction	null
1560	RiskWarningLevelPercent	null
1561	RiskWarningLevelName	null
	RiskInstrumentScopeGrp	
1534	NoRiskInstrumentScopes	
	InstrumentScope	
1616	InstrumentScopeSecurityExchange	XWAR
1538	InstrumentScopeSecurityID	null
1539	InstrumentScopeSecurityIDSource	null
1300	MarketSegmentID	null

8. RM Protocol

The RM protocol consists of the following FIX protocol messages.

Message	Description
PartyRiskLimitsDefinitionRequest [CS]	Message enabling the definition of a risk limit.
PartyRiskLimitsDefinitionRequestAck [CT]	Acknowledgment to a PartyRiskLimitsDefinitionRequest [CS] message, Will contain the acknowledgement of a risk limit or the reason for rejecting a risk limit definition.
PartyRiskLimitsRequest [CL]	Message used to request the state of risk limits configured in the system.
PartyRiskLimitsReport [CM]	Response to a PartyRiskLimitsRequest [CL] message. It displays the state of the risk limit settings and the utilization of risk limits for a particular user.

8.1. FIX RM Protocol Messages

8.1.1. PARTYRISKLIMITSDEFINITIONREQUEST[CS]

Tag	Field Name	Req	Conditional	Description	Type	Length	Values
1666	RiskLimitRequestID	R		Identifier of the Risk Limit request. User generated	int		
	RequestingPartyGrp	R		This group defines the Clearing Member responsible for the risk limits			
1657	NoRequestingPartyIDs	R			NUMINGROUP	1 character	Must be 1 - only one party requests the limit
1658	RequestingPartyID	R		Legal Entity Identifier (LEI)	string		LEI of Clearing Member.
1659	RequestingPartyIDSource	R			char	1 character	N = LEI
1660	RequestingPartyRole	R		Identifies the type or role of the RequestingPartyID(1658) specified.	int	1 character	1 = Executing Firm 4 = Clearing Firm 19 = Sponsoring Firm
	PartyRiskLimitsUpdateGrp	R		This group defines the number of limits being defined			

Tag	Field Name	Req	Conditional	Description	Type	Length	Values
1677	NoPartyRiskLimits	R		Number of limits in the request	NUMINGROUP		Must be 1
1324	ListUpdateAction	R		Risk management action: add, delete or modify a limit	char	1 character	A = Add D = Delete M = Modify
2329	PartyActionType	O		Optionally applies if ListUpdateAction (1324) = M (Modify).	int		2 = Reinstate (re-enable trading)
1670	RiskLimitID	R		Unique reference identifier for a specific risk limit defined for the specified party.	int		
	PartyDetailGrp	R		This group defines the Exchange Member or Client on which the limit is imposed			
1671	NoPartyDetails	R		Number of party details	NUMINGROUP		Must be 1 or 2 The first repeating group defines the Exchange Member The second repeating group defines the Client. If Client is not being defined, NoPartyDetails=1
1691	PartyDetailID	R		Identifier of the party	string		LEI of Exchange Member or Short Code of Institutional Client
1692	PartyDetailIDSource	R		Source of the identifier of the PartyDetailID (1691)	char	1 character	P = Short Code N = LEI
1693	PartyDetailRole	R		Identifies the type or role of PartyDetailID (1691)	int		1 = Executing Firm 3 = Client ID 19 = Sponsoring Firm
1674	PartyDetailRoleQualifier	C	Conditionally required if PartyDetailedRole(1693) = 3 (Client ID)	Qualifies the value of PartyDetailRole (1693)	int		23 = Firm or Legal Entity
	RiskLimitsGrp	R		This group specifies the limits			
1669	NoRiskLimits			Number of limits defined in the message	NUMINGROUP		Must be 1

Tag	Field Name	Req	Conditional	Description	Type	Length	Values
528	OrderCapacity	R		Designates the capacity of the firm on which the limit is imposed	char	1 character	A = Agency P = Principal
	OrderAttributeGrp	C	Conditionally required if OrderCapacity(528) = Principal				
2593	NoOrderAttributes	C		Number of order attribute entries	NUMINGROUP	1 byte	Must be 1
2594	OrderAttributeType	C		The type of order attribute	int		2 = Liquidity Provision Activity Order
2595	OrderAttributeValue	C		The value associated with the order attribute type specified in OrderAttributeType (2594)	string		Y = Yes N = No
	RiskLimitTypesGrp	R		This group specifies the type of limit			
1529	NoRiskLimitTypes	R		The number of risk limit types defined in the message	NUMINGROUP		Must be 1
1530	RiskLimitType	R		The specific limit being defined	int		301 = PER ORDER VOLUME CONTINUOUS 302 = PER ORDER NOTIONAL VALUE CONTINUOUS 303 = PER ORDER DYNAMIC PRICE LIMIT CONTINUOUS 304 = PER ORDER DYNAMIC PRICE LIMIT AUCTION 311 = PER ORDER VOLUME AUCTION 312 = PER ORDER NOTIONAL VALUE AUCTION 313 = PER ORDER STATIC PRICE LIMIT CONTINUOUS 314 = PER ORDER STATIC PRICE LIMIT AUCTION 315 = PER TOTAL BUY TRADED VALUE 316 = PER TOTAL SELL TRADED VALUE 317 = PER TOTAL TRADED VALUE 318 = PER TOTAL BUY OPEN ORDERS VALUE 319 = PER TOTAL SELL OPEN ORDERS VALUE 320 = PER TOTAL OPEN ORDERS VALUE 321 = PER TOTAL BUY RISK VALUE 322 = PER TOTAL SELL RISK VALUE

Tag	Field Name	Req	Conditional	Description	Type	Length	Values
							323 = PER TOTAL RISK VALUE 324 = PER TOTAL NET RISK VALUE 325 = PER TOTAL DAILY NUMBER OF ORDERS 400 = KILL SWITCH
1531	RiskLimitAmount	C	Conditionally required if RiskLimitType(1530) <> 400	The limit amount to be allocated. Depending on type of limit it is a notional value or quantity.	AMT		
1767	RiskLimitAction	O		Cancellation of unexecuted orders when the limit is breached. Applies to the following risk limits: 315, 316, 317, 400	int		2 = Reject
1766	RiskLimitUtilizationAmount	O		Not applicable	AMT		
1765	RiskLimitUtilizationPercent	O		Not applicable	percentage		
	RiskWarningLevelGrp	O		Not applicable			
1559	NoRiskWarningLevels	O		Not applicable	NUMINGROUP		
1769	RiskWarningLevelAction	O		Not applicable	int		
1560	RiskWarningLevelPercent	O		Not applicable	percentage		
1561	RiskWarningLevelName	O		Not applicable	string		
	RiskInstrumentScopeGrp	R		This group defines the instrument (if any) to which the limit is applied			
1534	NoRiskInstrumentScopes	R		The number of instrument scopes	NUMINGROUP		Must be 1
	InstrumentScope	R					
1616	InstrumentScopeSecurityExchange	R		The trading venue to which limit is applied	Exchange		MIC code
1538	InstrumentScopeSecurityID	O	Available only for RiskLimitType(1530) = 301; 302; 311; 312; 313; 314; 400	The ID of the security to which limit is applied	string		InstrumentID

Tag	Field Name	Req	Conditional	Description	Type	Length	Values
1539	InstrumentScopeSecurityIDSource	O	Available only for RiskLimitType(1530) = 301; 302; 311; 312; 313; 315; 400	The source of security ID (1538)	string		8 = Exchange Symbol
1300	MarketSegmentID	O		The ID of the market segment to which the limit is applied	string		Market Segment ID

8.1.2. PARTYRISKLIMITSDEFINITIONREQUESTACK[CT]

Tag	Field Name	Req	Conditional	Description	Type	Length	Values
1666	RiskLimitRequestID	R		Identifier of the Risk Limit request. User generated	int		
1761	RiskLimitRequestResult	C	Conditionally required if RiskLimitRequestStatus (1762) = 2 (Rejected)	Result of risk limit definition request	int		1 - InvalidParty 2 - InvalidRiskLimitType 3 - InvalidRiskLimit 4 - InvalidRiskLimitAmount 5 - InvalidInstrument 6 - InvalidMarketStructure 7 - RiskLimitNotApprovedForParty 8 - RiskLimitAlreadyDefinedForParty 9 – MissingMicCode 10 - Operation forbidden during NoTradingClosed 11 - Duplicate RiskLimitID (1670)
1762	RiskLimitRequestStatus	R		Status of risk limit definition request	int		0 = Accepted 2 = Rejected
	PartyRiskLimitsAckGrp	R		This group defines the number of limits being defined			
1677	NoPartyRiskLimits	R		Number of limits in the request	NUMINGROUP		Must be 1
1324	ListUpdateAction	R		Risk management action: add, delete or modify a limit	char	1 character	A = Add D = Delete M = Modify
2329	PartyActionType	O		Optionally applies if ListUpdateAction (1324) = M (Modify).	int		2 = Reinstate (re-enable trading)

Tag	Field Name	Req	Conditional	Description	Type	Length	Values
1670	RiskLimitID	R		Unique reference identifier for a specific risk limit defined for the specified party.	int		
	PartyDetailGrp	R		This group defines the Exchange Member or Client on which the limit is imposed			
1671	NoPartyDetails	R		Number of party details	NUMINGROUP		Must be 1 or 2 The first repeating group defines the Exchange Member The second repeating group defines the Client. If Client is not being defined, NoPartyDetails=1
1691	PartyDetailID	R		Identifier of the party	string		LEI of Exchange Member or Short Code of Institutional Client
1692	PartyDetailIDSource	R		Source of the identifier of the PartyDetailID (1691)	char	1 character	P = Short Code N = LEI
1693	PartyDetailRole	R		Identifies the type or role of PartyDetailID (1691)	int		1 = Executing Firm 3 = Client ID 19 = Sponsoring Firm
1674	PartyDetailRoleQualifier	C	Conditionally required if PartyDetailedRole(1693) = 3 (Client ID)	Qualifies the value of PartyDetailRole (1693)	int		23 = Firm or Legal Entity
	RiskLimitsGrp	R		This group specifies the limits			
1669	NoRiskLimits			Number of limits defined in the message	NUMINGROUP		Must be 1
528	OrderCapacity	R		Designates the capacity of the firm on which the limit is imposed	char	1 character	A = Agency P = Principal
	OrderAttributeGrp	C	Conditionally required if OrderCapacity(528) = Principal				
2593	NoOrderAttributes	C		Number of order attribute entries	NUMINGROUP	1 byte	Must be 1
2594	OrderAttributeType	C		The type of order attribute	int		2 = Liquidity Provision Activity Order
2595	OrderAttributeValue	C		The value associated with the order attribute type specified in	string		Y = Yes N = No

Tag	Field Name	Req	Conditional	Description	Type	Length	Values
				OrderAttributeType (2594)			
	RiskLimitTypesGrp	R		This group specifies the type of limit			
1529	NoRiskLimitTypes	R		The number of risk limit types defined in the message	NUMINGROUP		Must be 1
1530	RiskLimitType	R		The specific limit being defined	int		301 = PER ORDER VOLUME CONTINUOUS 302 = PER ORDER NOTIONAL VALUE CONTINUOUS 303 = PER ORDER DYNAMIC PRICE LIMIT CONTINUOUS 304 = PER ORDER DYNAMIC PRICE LIMIT AUCTION 311 = PER ORDER VOLUME AUCTION 312 = PER ORDER NOTIONAL VALUE AUCTION 313 = PER ORDER STATIC PRICE LIMIT CONTINUOUS 314 = PER ORDER STATIC PRICE LIMIT AUCTION 315 = PER TOTAL BUY TRADED VALUE 316 = PER TOTAL SELL TRADED VALUE 317 = PER TOTAL TRADED VALUE 318 = PER TOTAL BUY OPEN ORDERS VALUE 319 = PER TOTAL SELL OPEN ORDERS VALUE 320 = PER TOTAL OPEN ORDERS VALUE 321 = PER TOTAL BUY RISK VALUE 322 = PER TOTAL SELL RISK VALUE 323 = PER TOTAL RISK VALUE 324 = PER TOTAL NET RISK VALUE 325 = PER TOTAL DAILY NUMBER OF ORDERS 400 = KILL SWITCH

Tag	Field Name	Req	Conditional	Description	Type	Length	Values
1531	RiskLimitAmount	C	Conditionally required if RiskLimitType(1530) <> 400	The limit amount to be allocated. Depending on type of limit it is a notional value or quantity.	AMT		
1767	RiskLimitAction	O		Cancellation of unexecuted orders when the limit is breached. Applies to the following risk limits: 315, 316, 317, 400	int		2 = Reject
1766	RiskLimitUtilizationAmount	O		Not applicable	AMT		
1765	RiskLimitUtilizationPercent	O		Not applicable	percentage		
	RiskWarningLevelGrp	O		Not applicable			
1559	NoRiskWarningLevels	O		Not applicable	NUMINGROUP		
1769	RiskWarningLevelAction	O		Not applicable	int		
1560	RiskWarningLevelPercent	O		Not applicable	percentage		
1561	RiskWarningLevelName	O		Not applicable	string		
	RiskInstrumentScopeGrp	R		This group defines the instrument (if any) to which the limit is applied			
1534	NoRiskInstrumentScopes	R		The number of instrument scopes	NUMINGROUP		Must be 1
	InstrumentScope	R					
1616	InstrumentScopeSecurityExchange	R		The trading venue to which limit is applied	Exchange		MIC code
1538	InstrumentScopeSecurityID	O		The ID of the security to which limit is applied	string		InstrumentID
1539	InstrumentScopeSecurityIDSource	O		The source of security ID (1538)	string		8 = Exchange Symbol
1300	MarketSegmentID	O		The ID of the market segment to which the limit is applied	string		Market Segment ID

8.1.3. PARTYRISKLIMITSREQUEST[CL]

Tag	Field Name	Req	Conditional	Description	Type	Length	Values
1666	RiskLimitRequestID	R		Unique identifier for the PartyRiskLimitsRequest	int		

Tag	Field Name	Req	Conditional	Description	Type	Length	Values
1760	RiskLimitRequestType	R		The type of request relative to risk limits.	int		1 = Definitions 3 = Definitions and utilization
	RequestingPartyGrp	R		This group defines the Clearing Member making the request. Responsible for risk limits			
1657	NoRequestingPartyIDs	R			NUMINGROUP	1 character	Must be 1 - only one party requests the limit
1658	RequestingPartyID	R		Legal Entity Identifier (LEI)	string		LEI of Clearing Member.
1659	RequestingPartyIDSource	R			char	1 character	N = LEI
1660	RequestingPartyRole	R		Identifies the type or role of the RequestingPartyID(1658) specified.	int	1 character	1 = Executing Firm 4 = Clearing Firm 19 = Sponsoring Firm
	Parties						
453	NoPartyIDs	R		Number of PartyIDs.	NUMINGROUP		Must be 1 or 2 The first repeating group defines the Exchange Member The second repeating group defines the Client. If Client is not being defined, NoPartyDetails=1
448	PartyID	R		Identifier of the party	string		LEI of Exchange Member or Short Code of Institutional Client
447	PartyIDSource	R		Identifies class or source of the PartyID (448)	char	1 character	P = Short Code N = LEI
452	PartyRole	R		Identifies the type or role of the PartyID (448).	int		1 = Executing Firm 3 = Client ID 19 = Sponsoring Firm
2376	PartyRoleQualifier	C	Conditionally required if PartyRole(452) = 3 (Client ID)	Qualifies the value of PartyRole(452).	int		23 = Firm or Legal Entity
	RequestedRiskLimitTypesGrp	O					
1668	NoRequestedRiskLimitType	O		Number of risk limit types requested.	NUMINGROUP		Must be 1

Tag	Field Name	Req	Conditional	Description	Type	Length	Values
528	OrderCapacity	O		Designates the capacity of the firm on which the limit is imposed	char	1 character	A = Agency P = Principal
	OrderAttributeGrp	C	Conditionally required if OrderCapacity(528) = Principal				
2593	NoOrderAttributes	C		Number of order attribute entries	NUMINGROUP	1 byte	Must be 1
2594	OrderAttributeType	C		The type of order attribute	int		2 = Liquidity Provision Activity Order
2595	OrderAttributeValue	C		The value associated with the order attribute type specified in OrderAttributeType (2594)	string		Y = Yes N = No
1530	RiskLimitType	O		Used to specify the type of risk limit amount or position limit quantity or margin requirement amounts.	int		301 = PER ORDER VOLUME CONTINUOUS 302 = PER ORDER NOTIONAL VALUE CONTINUOUS 303 = PER ORDER DYNAMIC PRICE LIMIT CONTINUOUS 304 = PER ORDER DYNAMIC PRICE LIMIT AUCTION 311 = PER ORDER VOLUME AUCTION 312 = PER ORDER NOTIONAL VALUE AUCTION 313 = PER ORDER STATIC PRICE LIMIT CONTINUOUS 314 = PER ORDER STATIC PRICE LIMIT AUCTION 315 = PER TOTAL BUY TRADED VALUE 316 = PER TOTAL SELL TRADED VALUE 317 = PER TOTAL TRADED VALUE 318 = PER TOTAL BUY OPEN ORDERS VALUE 319 = PER TOTAL SELL OPEN ORDERS VALUE 320 = PER TOTAL OPEN ORDERS VALUE 321 = PER TOTAL BUY RISK VALUE 322 = PER TOTAL SELL RISK VALUE 323 = PER TOTAL RISK VALUE 324 = PER TOTAL NET RISK VALUE 325 = PER TOTAL DAILY NUMBER OF ORDERS
	RiskInstrumentScopeGrp	O		This group defines the instrument (if any) to which the limit is applied			
1534	NoRiskInstrumentScopes	O		The number of instrument scopes	NUMINGROUP		Must be 1

Tag	Field Name	Req	Conditional	Description	Type	Length	Values
	InstrumentScope	O					
1616	InstrumentScopeSecurityExchange	O		The trading venue to which limit is applied	Exchange		MIC code
1538	InstrumentScopeSecurityID	O	Available only for RiskLimitType(1530) = 301; 302; 311; 312; 313; 314; 400	The ID of the security to which limit is applied	string		InstrumentID
1539	InstrumentScopeSecurityIDSource	O	Available only for RiskLimitType(1530) = 301; 302; 311; 312; 313; 315; 400	The source of security ID (1538)	string		8 = Exchange Symbol
1300	MarketSegmentID	O		The ID of the market segment to which the limit is applied	string		Market Segment ID

8.1.4. PARTYRISKLIMITSREPORT[CM]

Tag	Field Name	Req	Conditional	Description	Type	Length	Values
1667	RiskLimitReportID	R		Identifier for the PartyRiskLimitsReport	string		
1666	RiskLimitRequestID	C	Conditionally required when responding to Party Risk Limits Request	Unique identifier for the PartyRiskLimitsRequest	int		
1760	RiskLimitRequestType	C	Conditionally required when responding to Party Risk Limits Request	Type of risk limit information	int		1 = Definitions 3 = Definitions and utilization
1511	RequestResult	C	Conditionally required when responding to Party Risk Limits Request	Result of a request as identified by the appropriate request ID field	int		0 = Valid request 2 = No data found that match selection criteria 99 = Other
325	UnsolicitedIndicator	R		Indicates whether or not message is being sent as a result of a subscription request or not	Boolean		N = Message is being sent as a result of a prior request Y = Message is being sent unsolicited
	PartyRiskLimitsGrp	R		This group defines the number of limits being defined			
1677	NoPartyRiskLimits	R		Number of party risk limits	NUMINGROUP		
1670	RiskLimitID	R		Unique reference identifier for a specific risk limit defined for the specified party.	int		

Tag	Field Name	Req	Conditional	Description	Type	Length	Values
	PartyDetailGrp	R		This group defines the Exchange Member or Client on which the limit is imposed			
1671	NoPartyDetails	R		Number of party details	NUMINGROUP		Must be 1 or 2 The first repeating group defines the Exchange Member The second repeating group defines the Client. If Client is not being defined, NoPartyDetails=1
1691	PartyDetailID	R		Identifier of the party	string		LEI of Exchange Member or Short Code of Institutional Client
1692	PartyDetailIDSource	R		Source of the identifier of the PartyDetailID (1691)	char	1 character	P = Short Code N = LEI
1693	PartyDetailRole	R		Identifies the type or role of PartyDetailID (1691)	int		1 = Executing Firm 3 = Client ID 19 = Sponsoring Firm
1674	PartyDetailRoleQualifier	C	Conditionally required if PartyDetailedRole(1693) = 3 (Client ID)	Qualifies the value of PartyDetailRole (1693)	int		23 = Firm or Legal Entity
	RiskLimitsGrp	R		This group specifies the limits			
1669	NoRiskLimits			Number of limits defined in the message	NUMINGROUP		Must be 1
528	OrderCapacity	R		Designates the capacity of the firm on which the limit is imposed	char	1 character	A = Agency P = Principal
	OrderAttributeGrp	C	Conditionally required if OrderCapacity(528) = Principal				
2593	NoOrderAttributes	C		Number of order attribute entries	NUMINGROUP	1 byte	Must be 1
2594	OrderAttributeType	C		The type of order attribute	int		2 = Liquidity Provision Activity Order
2595	OrderAttributeValue	C		The value associated with the order attribute type specified in OrderAttributeType (2594)	string		Y = Yes N = No
	RiskLimitTypesGrp	R		This group specifies the type of limit			
1529	NoRiskLimitTypes	R		The number of risk limit types defined in the message	NUMINGROUP		Must be 1

Tag	Field Name	Req	Conditional	Description	Type	Length	Values
1530	RiskLimitType	R		The specific limit being defined	int		301 = PER ORDER VOLUME CONTINUOUS 302 = PER ORDER NOTIONAL VALUE CONTINUOUS 303 = PER ORDER DYNAMIC PRICE LIMIT CONTINUOUS 304 = PER ORDER DYNAMIC PRICE LIMIT AUCTION 311 = PER ORDER VOLUME AUCTION 312 = PER ORDER NOTIONAL VALUE AUCTION 313 = PER ORDER STATIC PRICE LIMIT CONTINUOUS 314 = PER ORDER STATIC PRICE LIMIT AUCTION 315 = PER TOTAL BUY TRADED VALUE 316 = PER TOTAL SELL TRADED VALUE 317 = PER TOTAL TRADED VALUE 318 = PER TOTAL BUY OPEN ORDERS VALUE 319 = PER TOTAL SELL OPEN ORDERS VALUE 320 = PER TOTAL OPEN ORDERS VALUE 321 = PER TOTAL BUY RISK VALUE 322 = PER TOTAL SELL RISK VALUE 323 = PER TOTAL RISK VALUE 324 = PER TOTAL NET RISK VALUE 325 = PER TOTAL DAILY NUMBER OF ORDERS
1531	RiskLimitAmount	C	Conditionally required if RiskLimitType(1530) <> 400	The limit amount to be allocated. Depending on type of limit it is a notional value or quantity.	AMT		

Tag	Field Name	Req	Conditional	Description	Type	Length	Values
1767	RiskLimitAction	C	Conditionally required if UnsolicitedIndicator (325) = Y (Message is being sent unsolicited)	The action to be taken in the case the limit is breached	int		4 = Warning 9 = Suspend 10 = Halt trading
1766	RiskLimitUtilizationAmount	C	Conditionally required if RiskLimitRequestType (1760) = 3 (Definitions and utilization)	Risk Limit Utilization Amount	AMT		
1765	RiskLimitUtilizationPercent	C	Conditionally required if: - RiskLimitRequestType (1760) = 3 (Definitions and utilization) or - UnsolicitedIndicator (325) = Y (Message is being sent unsolicited)	Risk Limit Utilization Percent	percentage		
	RiskWarningLevelGrp	C					
1559	NoRiskWarningLevels	C	Conditionally required if RiskLimitAction (1767) = 4 (Warning)	Number of risk warning levels	NUMINGROUP		Must be 1
1769	RiskWarningLevelAction	C	Conditionally required if RiskLimitAction (1767) = 4 (Warning)	Action to take should warning level be exceeded	int		4 = Warning
1560	RiskWarningLevelPercent	C	Conditionally required if RiskLimitAction (1767) = 4 (Warning)		percentage		
1561	RiskWarningLevelName	C	Conditionally required if RiskLimitAction (1767) = 4 (Warning)	Name associated with the risk warning level	string		Valid values: 1 = Warning Level 1 Breach 2 = Warning Level 2 Breach
	RiskInstrumentScopeGrp	R		This group defines the instrument (if any) to which the limit is applied			
1534	NoRiskInstrumentScopes	R		The number of instrument scopes	NUMINGROUP		Must be 1
	InstrumentScope	R					
1616	InstrumentScopeSecurityExchange	R		The trading venue to which limit is applied	Exchange		MIC code
1538	InstrumentScopeSecurityID	O		The ID of the security to which limit is applied	string		InstrumentID
1539	InstrumentScopeSecurityIDSource	O		The source of security ID (1538)	string		8 = Exchange Symbol

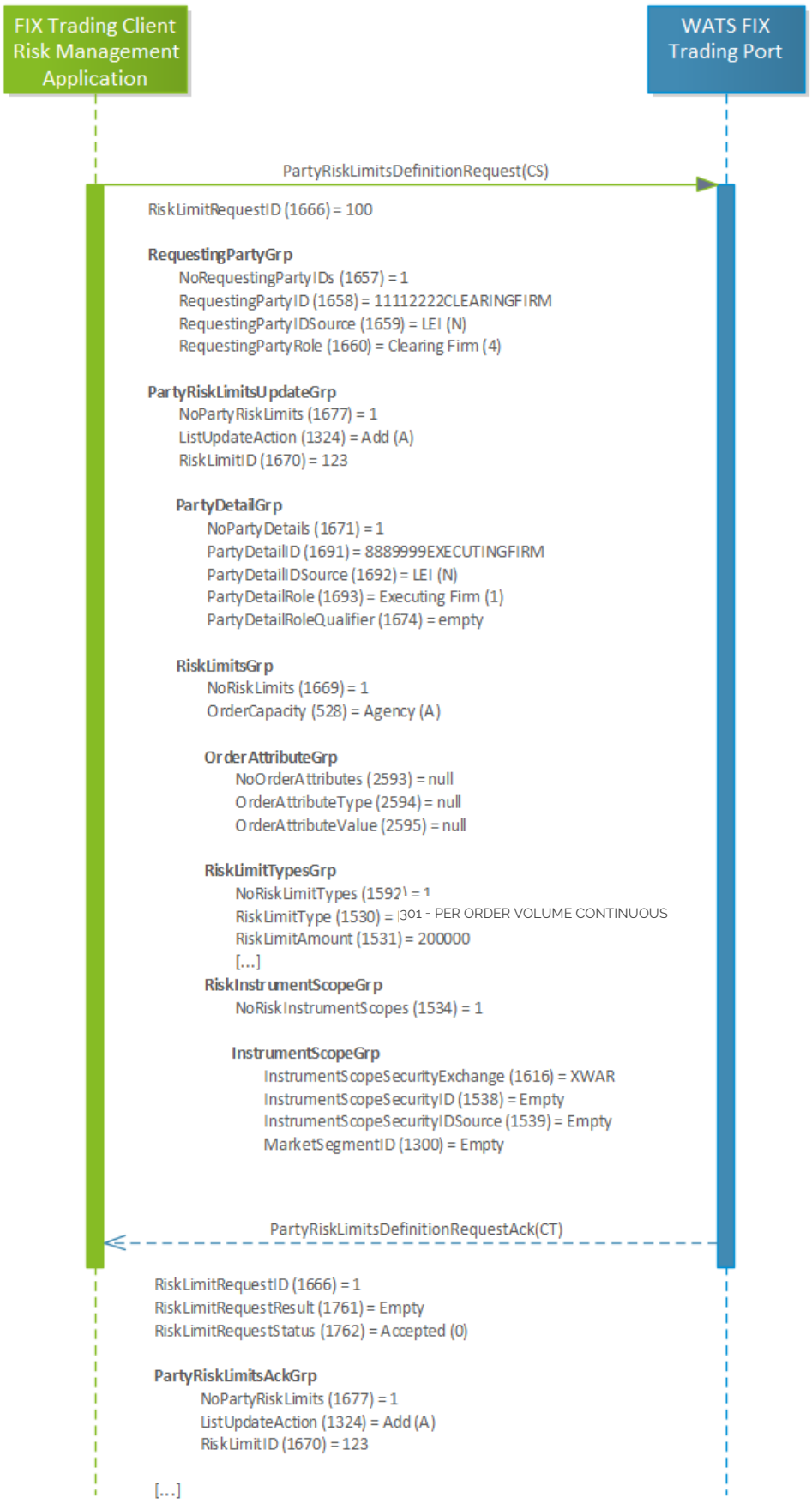
Tag	Field Name	Req	Conditional	Description	Type	Length	Values
1300	MarketSegmentID	O		The ID of the market segment to which the limit is applied	string		Market Segment ID

8.2. Message Kinematics

8.2.1. DEFINING A RISK LIMIT

This example shows the kinematics of defining a Maximum Order Volume limit for Continuous phase. The kinematics show a PartyRiskLimitsDefinitionRequestAck (CT) Message being returned in response to a PartyRiskLimitsDefinitionRequest (CS) message.

1. The limit is defined by a clearing firm | LEI code (FIXTag: 1658) = 11112222ClearingFirm,
2. The limit applies to:
    a) orders submitted by Exchange Member | LEI (FIXTag: 1691) = 8889999EXECUTINGFIRM,
    b) which concern Clients | OrderCapacity (FIXTag: 528) = AGENCY (A),
    c) apply to shares listed on the Regulated Market | MICCode (FIXTag: 1616) = XWAR.
3. The value of the limit is set to 200,000 currency units | RiskLimitAmount (FIXTag: 1531) = 200000.


FIX Trading Client Risk Management Application
WATS FIX Trading Port
PartyRiskLimitsDefinitionRequest(CS)
RiskLimitRequestID (1666) = 100
RequestingPartyGrp
NoRequestingPartyIDs (1657) = 1
RequestingPartyID (1658) = 11112222CLEARINGFIRM
RequestingPartyIDSource (1659) = LEI (N)
RequestingPartyRole (1660) = Clearing Firm (4)
PartyRiskLimitsUpdateGrp
NoPartyRiskLimits (1677) = 1
ListUpdateAction (1324) = Add (A)
RiskLimitID (1670) = 123
PartyDetailGrp
NoPartyDetails (1671) = 1
PartyDetailID (1691) = 8889999EXECUTINGFIRM
PartyDetailIDSource (1692) = LEI (N)
PartyDetailRole (1693) = Executing Firm (1)
PartyDetailRoleQualifier (1674) = empty
RiskLimitsGrp
NoRiskLimits (1669) = 1
OrderCapacity (528) = Agency (A)
OrderAttributeGrp
NoOrderAttributes (2593) = null
OrderAttributeType (2594) = null
OrderAttributeValue (2595) = null
RiskLimitTypesGrp
NoRiskLimitTypes (1592) = 1
RiskLimitType (1530) = 301 = PER ORDER VOLUME CONTINUOUS
RiskLimitAmount (1531) = 200000
[...]
RiskInstrumentScopeGrp
NoRiskInstrumentScopes (1534) = 1
InstrumentScopeGrp
InstrumentScopeSecurityExchange (1616) = XWAR
InstrumentScopeSecurityID (1538) = Empty
InstrumentScopeSecurityIDSource (1539) = Empty
MarketSegmentID (1300) = Empty
PartyRiskLimitsDefinitionRequestAck(CT)
RiskLimitRequestID (1666) = 1
RiskLimitRequestResult (1761) = Empty
RiskLimitRequestStatus (1762) = Accepted (0)
PartyRiskLimitsAckGrp
NoPartyRiskLimits (1677) = 1
ListUpdateAction (1324) = Add (A)
RiskLimitID (1670) = 123
[...]

8.2.1.1. Other cases of configuring risk limits across an Exchange Member's activity

Tag	Field name	Agency orders	Principal / Dealer orders	Market maker orders
	RiskLimitsGrp			
1669	NoRiskLimits	1	1	1
528	OrdeCapacity	A	P	P
	OrderAttributeGrp			
2593	NoOrderAttributes	none	1	1
2594	OrderAttributeType	none	2	2
2595	OrderAttributeValue	none	N	Y

8.2.1.2. Example of configuring a risk limit for an institutional Client

The Client is identified by Short Code = 100.

Tag	Field name	Value
PartyDetailGrp		
1671	NoPartyDetails	2
First repeating group: Exchange Member		
1691	PartyDetailID	8889999EXECUTINGFIRM
1692	PartyDetailIDSource	LEI (N)
1693	PartyDetailRole	Executing Firm (1)
1694	PartyDetailRoleQualifier	Empty
Second repeating group: institutional Client		
1691	PartyDetailID	100
1692	PartyDetailIDSource	Short Code (P)
1693	PartyDetailRole	ClientID (3)
1694	PartyDetailRoleQualifier	Firm or Legal Entity (23)
RiskLimitsGrp		
1669	NoRiskLimits	1
528	OrdeCapacity	A
OrderAttributeGrp		
2593	NoOrderAttributes	none
2594	OrderAttributeType	none
2595	OrderAttributeValue	none

8.2.1.3. Example of configuring a risk limit for an Sponsored Client

Sponsored Client is identified by Short Code = 200

Tag	Field name	Value
PartyDetailGrp		
1671	NoPartyDetails	2
First repeating group: Exchange Member		
1691	PartyDetailID	888999SPONSORINGFIRM
1692	PartyDetailIDSource	LEI (N)
1693	PartyDetailRole	Sponsoring Firm (19)
1694	PartyDetailRoleQualifier	Empty
Second repeating group: institutional Client		
1691	PartyDetailID	200

1692	PartyDetailIDSource	Short Code (P)
1693	PartyDetailRole	ClientID (3)
1694	PartyDetailRoleQualifier	Firm or Legal Entity (23)
RiskLimitsGrp		
1669	NoRiskLimits	1
528	OrdeCapacity	A
OrderAttributeGrp		
2593	NoOrderAttributes	none
2594	OrderAttributeType	none
2595	OrderAttributeValue	none

8.2.1.4. Other cases of configuring risk limits across the market structure

Example 1. Risk limit configured at the level of an individual financial instrument using InstrumentID

Tag	Field name	Value
	RiskInstrumentScopeGroup	
1534	NoRiskInstrumentScopes	1
	InstrumentScopeGrp	
1616	InstrumentScopeSecurityExchange	XWAR
1538	InstrumentScopeSecurityID	1598
1539	InstrumentScopeSecurityIDSource	Exchange Symbol (8)
1300	MarketSegmentID	Empty

Example 2. Risk limit configured at the level of a Market Segment using SegmentID

Tag	Field name	Value
	RiskInstrumentScopeGroup	
1534	NoRiskInstrumentScopes	1
	InstrumentScopeGrp	
1300	InstrumentScopeSecurityExchange	XWAR
1616	InstrumentScopeSecurityID	Empty
1538	InstrumentScopeSecurityIDSource	Empty
1539	MarketSegmentID	201

8.2.2. BREACHING OF RISK LIMIT

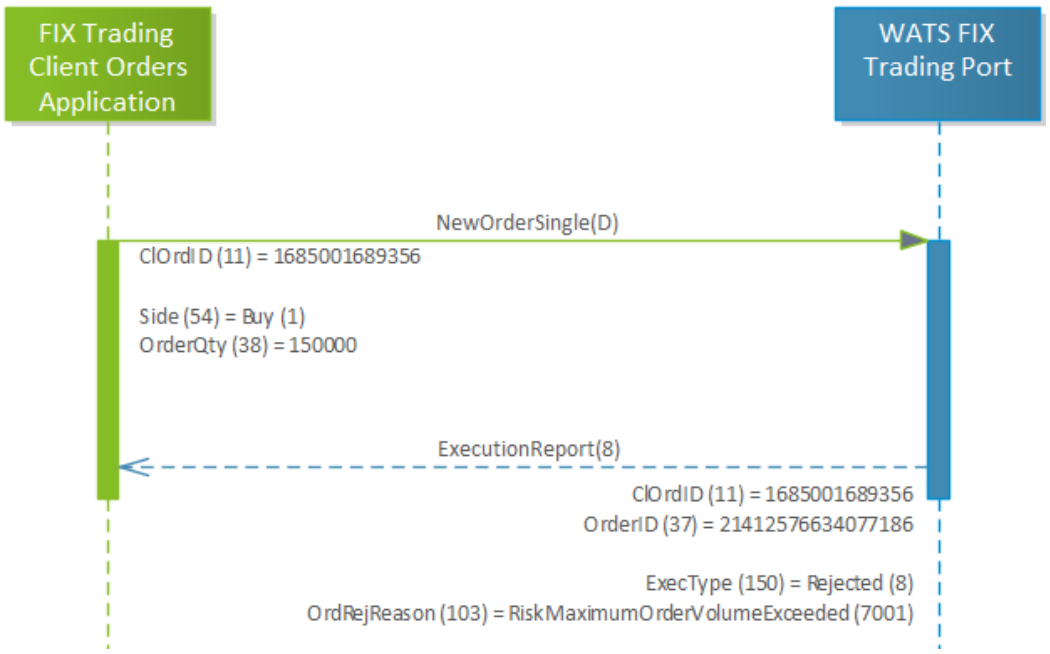
This example shows the breaching action when an order exceeds the Maximum Order Volume Limit for Continuous phase. An ExecutionReport (8) follows a NewOrderSingle (D) in breach of a pre-trade check.

Example details:

a) The Maximum Order Volume Limit for Continuous phase is assumed 100,000,

b) The LotSize is assumed to be 1,

c) An order is entered to buy 150,000 units.



8.2.2.1. RM rejection codes which can appear in OrdRejReason (FIXTag: 103)

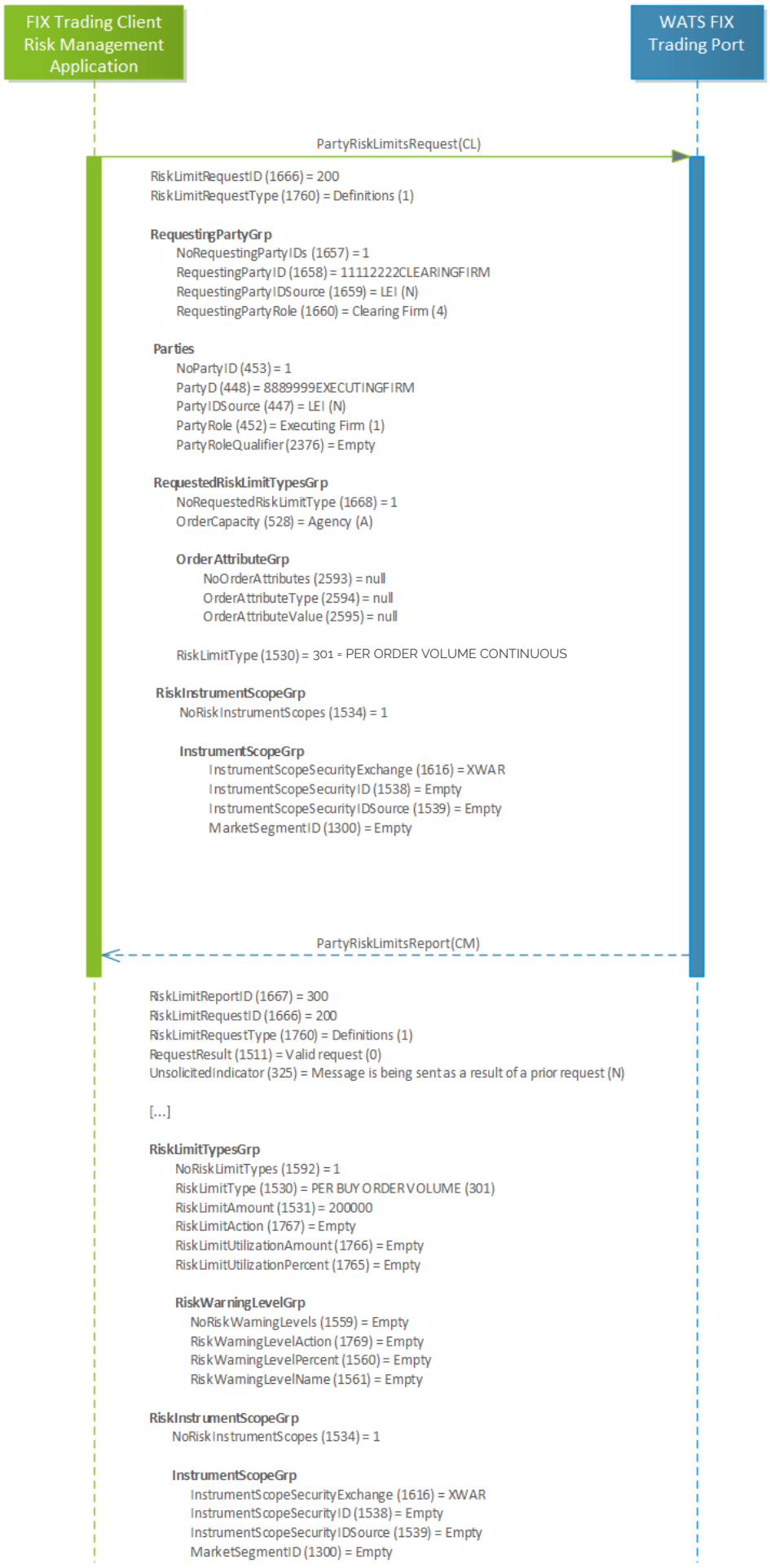
	Value
OrdRejReason (FIXTag: 103)	RiskLimitNotDefined (7000). This error appears in the case if no Pre-Trade limits have been defined.
	RiskMaximumOrderVolumeExceeded (7001)
	RiskMaximumOrderValueExceeded (7002)
	RiskOrderPriceCollarExceeded (7004)

8.2.3. RISK LIMIT INTERROGATION REQUEST 1A

This example shows the kinematics of requesting the value of a Maximum Order Volume limit for Continuous phase. The status and values of the risk limit are requested through a PartyRiskLimitsRequest (CL) and details are returned by a PartyRiskLimitsReport (CM).

The details of the PartyRiskLimitsDefinitionRequest (CS) limit definition used in this example are as follows:

1. The limit is defined by a clearing firm | LEIcode (FIXTag: 1658) = 11112222ClearingFirm,
2. The limit applies to:,
    a) orders submitted by Exchange Member | LEI (FIXTag: 1691) = 8889999EXECUTINGFIRM,
    b) which concern Clients | OrderCapacity (FIXTag: 528) = AGENCY (A),
    c) apply to shares listed on the Regulated Market | MICCode (FIXTag: 1616) = XWAR,
3. the limit is for order volume entered during the Continuous phase | RiskLimitType (FIXTag: 1530) PER ORDER VOLUME CONTINUOUS (301),
4. The value of the limit is set to 200,000 currency units | RiskLimitAmount (FIXTag: 1531) = 200000.

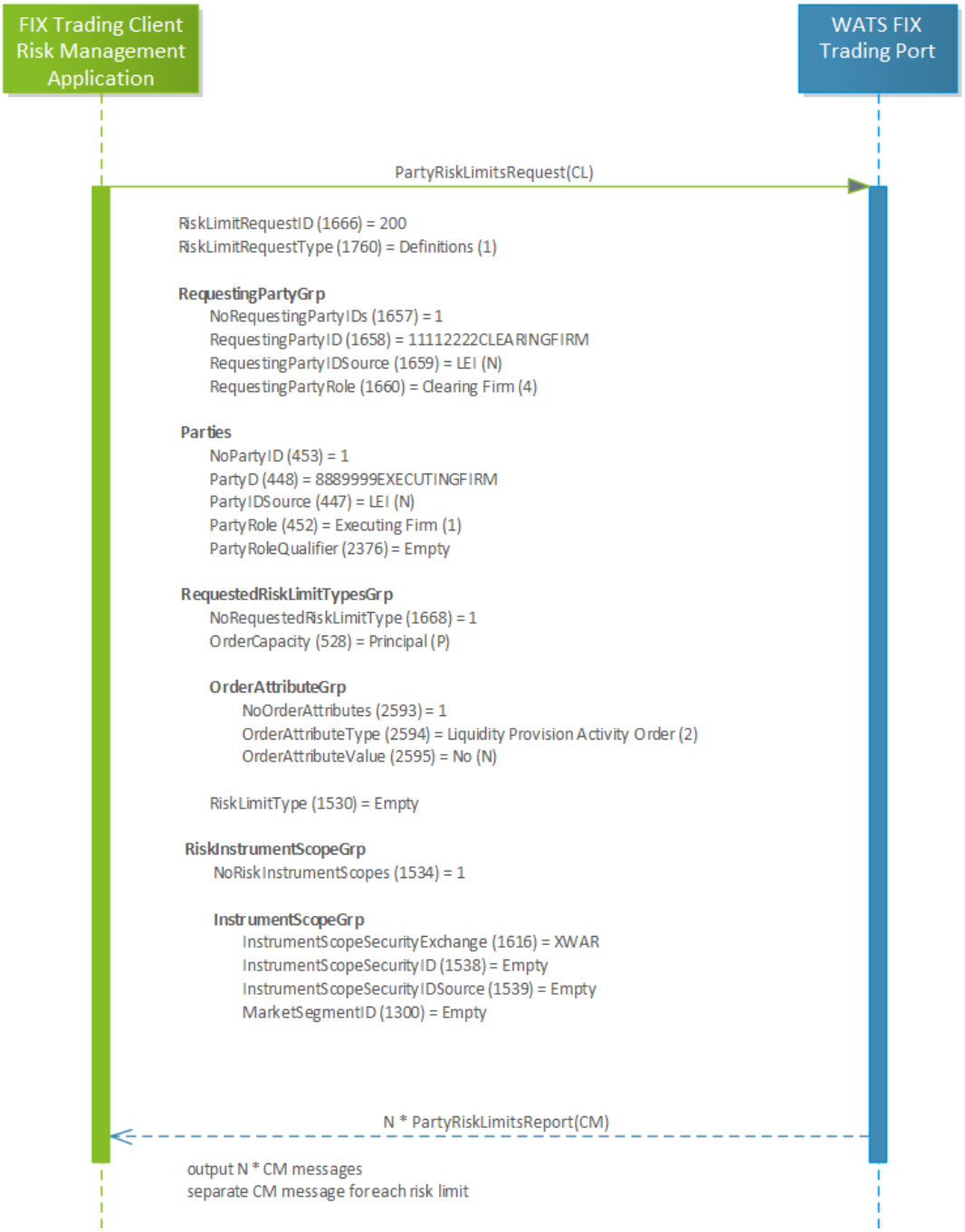

FIX Trading Client Risk Management Application
WATS FIX Trading Port
PartyRiskLimitsRequest(CL)
RiskLimitRequestID (1666) = 200
RiskLimitRequestType (1760) = Definitions (1)
RequestingPartyGrp
NoRequestingPartyIDs (1657) = 1
RequestingPartyID (1658) = 11112222CLEARINGFIRM
RequestingPartyIDSource (1659) = LEI (N)
RequestingPartyRole (1660) = Clearing Firm (4)
Parties
NoPartyID (453) = 1
PartyID (448) = 8889999EXECUTINGFIRM
PartyIDSource (447) = LEI (N)
PartyRole (452) = Executing Firm (1)
PartyRoleQualifier (2376) = Empty
RequestedRiskLimitTypesGrp
NoRequestedRiskLimitType (1668) = 1
OrderCapacity (528) = Agency (A)
OrderAttributeGrp
NoOrderAttributes (2593) = null
OrderAttributeType (2594) = null
OrderAttributeValue (2595) = null
RiskLimitType (1530) = 301 - PER ORDER VOLUME CONTINUOUS
RiskInstrumentScopeGrp
NoRiskInstrumentScopes (1534) = 1
InstrumentScopeGrp
InstrumentScopeSecurityExchange (1616) = XWAR
InstrumentScopeSecurityID (1538) = Empty
InstrumentScopeSecurityIDSource (1539) = Empty
MarketSegmentID (1300) = Empty
PartyRiskLimitsReport(CM)
RiskLimitReportID (1667) = 300
RiskLimitRequestID (1666) = 200
RiskLimitRequestType (1760) = Definitions (1)
RequestResult (1511) = Valid request (0)
UnsolicitedIndicator (325) = Message is being sent as a result of a prior request (N)
[...]
RiskLimitTypesGrp
NoRiskLimitTypes (1592) = 1
RiskLimitType (1530) = PER BUY ORDER VOLUME (301)
RiskLimitAmount (1531) = 200000
RiskLimitAction (1767) = Empty
RiskLimitUtilizationAmount (1766) = Empty
RiskLimitUtilizationPercent (1765) = Empty
RiskWarningLevelGrp
NoRiskWarningLevels (1559) = Empty
RiskWarningLevelAction (1769) = Empty
RiskWarningLevelPercent (1560) = Empty
RiskWarningLevelName (1561) = Empty
RiskInstrumentScopeGrp
NoRiskInstrumentScopes (1534) = 1
InstrumentScopeGrp
InstrumentScopeSecurityExchange (1616) = XWAR
InstrumentScopeSecurityID (1538) = Empty
InstrumentScopeSecurityIDSource (1539) = Empty
MarketSegmentID (1300) = Empty

8.2.4. RISK LIMIT INTERROGATION REQUEST 1B

This example shows the kinematics of requesting the value of any and all limits defined for Exchange Member with LEI 8889999EXECUTINGFIRM. The status and values of the risk limits are requested through a PartyRiskLimitsRequest (CL) and details are returned in a series of PartyRiskLimitsReport (CM) messages each containing details of a single limit.

The PartyRiskLimitsRequest (CL) request refers to the limits:

1. defined by clearing firm | LEIcode (FIXTag: 1658) = 11112222ClearingFirm,
2. and which apply to:
    a) orders submitted by Exchange Member | LEI (FIXTag: 1691) = 8889999EXECUTINGFIRM,
    b) which concern principal / dealer | OrderCapacity (FIXTag: 528) = PRINCIPAL (P),
    c) who do not act as market makers | OrderAttribute (FIXTag: 2594) = Liquidity Provision Activity Order (2) and OrderAttributeValue (FIXTag: 2595) = No (N),
    d) apply to shares listed on the Regulated Market | MICCode (FIXTag: 1616) = XWAR.


FIX Trading Client Risk Management Application
WATS FIX Trading Port
PartyRiskLimitsRequest(CL)
RiskLimitRequestID (1666) = 200
RiskLimitRequestType (1760) = Definitions (1)
RequestingPartyGrp
NoRequestingPartyIDs (1657) = 1
RequestingPartyID (1658) = 11112222CLEARINGFIRM
RequestingPartyIDSource (1659) = LEI (N)
RequestingPartyRole (1660) = Clearing Firm (4)
Parties
NoPartyID (453) = 1
PartyID (448) = 8889999EXECUTINGFIRM
PartyIDSource (447) = LEI (N)
PartyRole (452) = Executing Firm (1)
PartyRoleQualifier (2376) = Empty
RequestedRiskLimitTypesGrp
NoRequestedRiskLimitType (1668) = 1
OrderCapacity (528) = Principal (P)
OrderAttributeGrp
NoOrderAttributes (2593) = 1
OrderAttributeType (2594) = Liquidity Provision Activity Order (2)
OrderAttributeValue (2595) = No (N)
RiskLimitType (1530) = Empty
RiskInstrumentScopeGrp
NoRiskInstrumentScopes (1534) = 1
InstrumentScopeGrp
InstrumentScopeSecurityExchange (1616) = XWAR
InstrumentScopeSecurityID (1538) = Empty
InstrumentScopeSecurityIDSource (1539) = Empty
MarketSegmentID (1300) = Empty
N * PartyRiskLimitsReport(CM)
output N * CM messages
separate CM message for each risk limit

8.2.4.1. Examples of requests which can be constructed using PartyRiskLimitsRequest (CL)

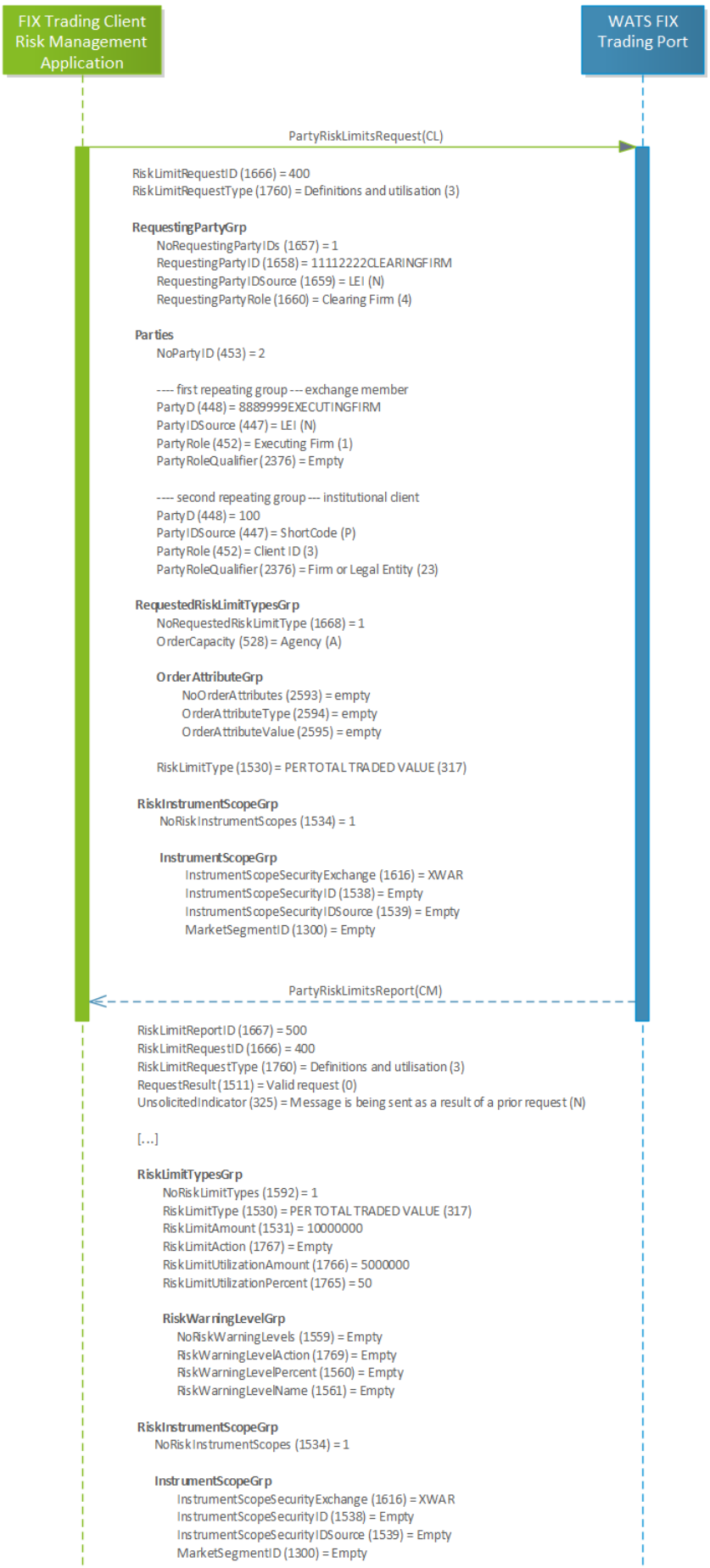
Tag	Field name	Request for risk limits defined for: Agency orders Market: XWAR	Request for risk limits defined for: Market Maker Market Segment ID: 100
	RequestedRiskLimitTypesGrp		
1668	NoRequestedRiskLimitType	1	1
528	OrderCapacity	A	P
	OrderAttributeGrp		
2593	NoOrderAttributes	Empty	1
2594	OrderAttributeType	Empty	2
2595	OrderAttributeValue	Empty	Y
1530	RiskLimitType	Empty	Empty
	RiskInstrumentScopeGrp		
1534	NoRiskInstrumentScopes	1	1
	InstrumentScopeGrp		
1616	InstrumentScopeSecurityexchange	XWAR	XWAR
1538	InstrumentScopeSecurityID	Empty	Empty
1539	InstrumentScopeSecurityIDSource	Empty	Empty
1300	MarketSegmentID	Empty	100

8.2.5. RISK LIMIT INTERROGATION REQUEST 2

This example shows the kinematics of requesting the value of a Total Traded Value limit and its utilization. The status and values of the risk limit are requested through a PartyRiskLimitsRequest (CL) and details are returned by a PartyRiskLimitsReport (CM). The report message shows a utilization of 5,000,000 (FIXTag: 1766) and the utilization percentage of 50% (FIXTag: 1766).

The details of the PartyRiskLimitsDefinitionRequest (CS) limit definition used to define this context are:

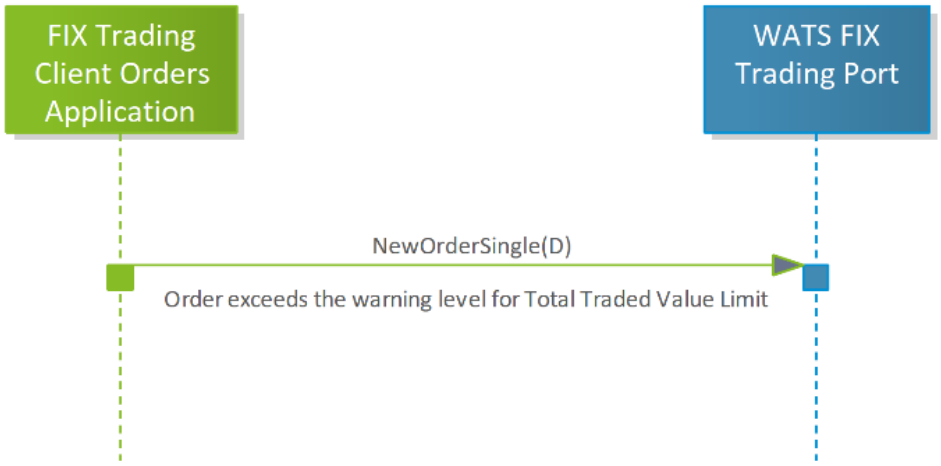
1. The limit is defined by a clearing firm | LEIcode (FIXTag: 1658) = 11112222ClearingFirm,
2. The limit applies to:
    a) orders submitted by Exchange Member | LEI (FIXTag: 1691) = 8889999EXECUTINGFIRM,
    b) which concern the institutional Client with Short Code 100 | PartyDetailID (1691) = 100 and PartyDetailIDSourde (FIXTag: 1692) = ShortCode (P),
    c) apply to shares listed on the Regulated Market | MICCode (FIXTag: 1616) = XWAR.
3. the limit is for buy order volume | RiskLimitType (FIXTag: 1530) PER TOTAL TRADED VALUE (317),
4. The value of the limit is set to 10,000,000 | RiskLimitAmount (FIXTag: 1531) = 10,000,000.


FIX Trading Client Risk Management Application
WATS FIX Trading Port
PartyRiskLimitsRequest(CL)
RiskLimitRequestID (1666) = 400
RiskLimitRequestType (1760) = Definitions and utilisation (3)
RequestingPartyGrp
NoRequestingPartyIDs (1657) = 1
RequestingPartyID (1658) = 11112222CLEARINGFIRM
RequestingPartyIDSource (1659) = LEI (N)
RequestingPartyRole (1660) = Clearing Firm (4)
Parties
NoPartyID (453) = 2
---- first repeating group --- exchange member
PartyID (448) = 8889999EXECUTINGFIRM
PartyIDSource (447) = LEI (N)
PartyRole (452) = Executing Firm (1)
PartyRoleQualifier (2376) = Empty
---- second repeating group --- institutional client
PartyID (448) = 100
PartyIDSource (447) = ShortCode (P)
PartyRole (452) = Client ID (3)
PartyRoleQualifier (2376) = Firm or Legal Entity (23)
RequestedRiskLimitTypesGrp
NoRequestedRiskLimitType (1668) = 1
OrderCapacity (528) = Agency (A)
OrderAttributeGrp
NoOrderAttributes (2593) = empty
OrderAttributeType (2594) = empty
OrderAttributeValue (2595) = empty
RiskLimitType (1530) = PER TOTAL TRADED VALUE (317)
RiskInstrumentScopeGrp
NoRiskInstrumentScopes (1534) = 1
InstrumentScopeGrp
InstrumentScopeSecurityExchange (1616) = XWAR
InstrumentScopeSecurityID (1538) = Empty
InstrumentScopeSecurityIDSource (1539) = Empty
MarketSegmentID (1300) = Empty
PartyRiskLimitsReport(CM)
RiskLimitReportID (1667) = 500
RiskLimitRequestID (1666) = 400
RiskLimitRequestType (1760) = Definitions and utilisation (3)
RequestResult (1511) = Valid request (0)
UnsolicitedIndicator (325) = Message is being sent as a result of a prior request (N)
[...]
RiskLimitTypesGrp
NoRiskLimitTypes (1592) = 1
RiskLimitType (1530) = PER TOTAL TRADED VALUE (317)
RiskLimitAmount (1531) = 10000000
RiskLimitAction (1767) = Empty
RiskLimitUtilizationAmount (1766) = 5000000
RiskLimitUtilizationPercent (1765) = 50
RiskWarningLevelGrp
NoRiskWarningLevels (1559) = Empty
RiskWarningLevelAction (1769) = Empty
RiskWarningLevelPercent (1560) = Empty
RiskWarningLevelName (1561) = Empty
RiskInstrumentScopeGrp
NoRiskInstrumentScopes (1534) = 1
InstrumentScopeGrp
InstrumentScopeSecurityExchange (1616) = XWAR
InstrumentScopeSecurityID (1538) = Empty
InstrumentScopeSecurityIDSource (1539) = Empty
MarketSegmentID (1300) = Empty

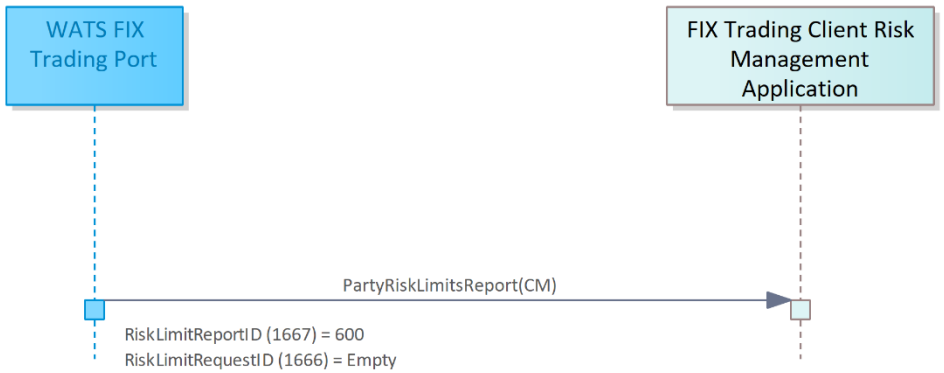
8.2.6. RISK LIMIT INTERROGATION REQUEST 3

This example shows the kinematics of WATS sending an unsolicited PartyRiskLimitsReport (CM) message following the breach of a warning level by a NewOrderSingle (D) order message. In this example, the warning level was set to 70%.

Step1: a NewOrderSingle (D) order message results in the breach of a warning level.



Step2: an unsolicited PartyRiskLimitsReport (CM) warns the user that a warning level was breached.



RiskLimitReportID (1667) = 600
RiskLimitRequestID (1666) = Empty
RiskLimitRequestType (1760) = Empty
RequestResult (1511) = Empty
UnsolicitedIndicator (325) = Message is being sent unsolicited (Y)

[…]

RiskLimitTypesGrp
NoRiskLimitTypes (1529) = 1
RiskLimitType (1530) = PER TOTAL TRADED VALUE (317)
RiskLimitAmount (1531) = 10000000
RiskLimitAction (1767) = Warning (4)
RiskLimitUtilizationAmount (1766) = 7500000
RiskLimitUtilizationPercent (1765) = 75

RiskWarningLevelGrp
NoRiskWarningLevels (1559) = 1
RiskWarningLevelAction (1769) = Warning (4)
RiskWarningLevelPercent (1560) = 70
RiskWarningLevelName (1561) = Warning Level 1 Breach (1)

[…]

8.2.7. RISK LIMIT INTERROGATION REQUEST 4

This example shows the kinematics of WATS sending an unsolicited PartyRiskLimitsReport (CM) message in response to the breach of a post-trade risk limit by a NewOrderSingle (D) order message. In this example, the Total Traded Value limit was set to 10,000,000. The order is accepted and is followed by a PartyRiskLimitsReport (CM) message to the user. Subsequent orders are rejected by the RM subsystem.