BM&FBOVESPA
A Nova Bolsa

EntryPoint LiNe

Administrator's Manual

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Contacts

Team BVMFSolution (GDS): manages connectivity requests and contracting services and systems.

- E-mail: bvmfsolution@bvmf.com.br
- Phone: +55 11 2565-7102

Superintendence of the Negotiation Support (SSN): provides technical support for utilization of the tool (LiNe).

- E-mail: tradingsupport@bvmf.com.br
- Phone: +55 11 2565-5000 - (option 2)

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1. Introdution

1.1. Description

The EntryPoint LiNe is one of the integrated tools to the PUMA trading platform that allows the brokerage firms to establish trading limits, in a very simple way and with high level computing performance, for customers operating via direct market access (DMA) model.

1.2. Who is Intended

The EntryPoint LiNe intended for brokerage firms who need to use the setting trading limits for its customers.

1.3. How to Hire

To obtain the procedures for hiring of EntryPoint LiNe tool, please contact GDS (connectivity requests management and contracting services at BM&FBOVESPA), by email or phone below:

- E-mail: bvmfsolution@bvmf.com.br; or
- Phone: +55 11 2565-7102.

For technical questions, please contact the Superintendence of Trading Support at BM&FBOVESPA (SSN), by email or phone below:

- E-mail: suporteanegociacao@bvmf.com.br; or
- Phone: +55 11 2565-5000 - Option 2.

1.4. Benefits

One of the main benefits of EntryPoint LiNe tool is that this application be placed at the PUMA's gateways (PUMA communication channels), which makes it possible to evaluate, with very low response time, the trading limits for participants before each order is sent to the core of PUMA, allowing to establish, for each participant, the following trading parameters:

I. Maximum sizes in quantity of contracts of the orders of buy and sell by instrument (contract and expiration/series);
II. Maximum positions in quantity of contracts of the orders of buy and sell by instrument on the trade date; and
III. Maximum position in quantity of contract bought and sold by groups of instruments on the trade date.

1.5. How it Works

The configuration of trading limits is performed by the brokerage firms using the portals EntryPoint LiNe Derivatives (for derivatives market) or EntryPoint LiNe Equities (for the stock market).
The EntryPoint LiNe functioning is also monitored by the BM&FBOVESPA's Trading Support providing the following:

I. The continuous evaluation of the levels of use for each participant enabling quick and efficient diagnosis in case of rejections as a result of violation of such limits.
II. The change of limits per broker request, in case of operational and/or communication failures.
III. Restriction, due to prudential matters, towards the acting of the participants.

The figure below displays the architecture of the EntryPoint LiNe tool for different direct access alternatives, also highlighting the broker's limits configuration and management functions and the BM&FBOVESPA's Trading Support monitoring.

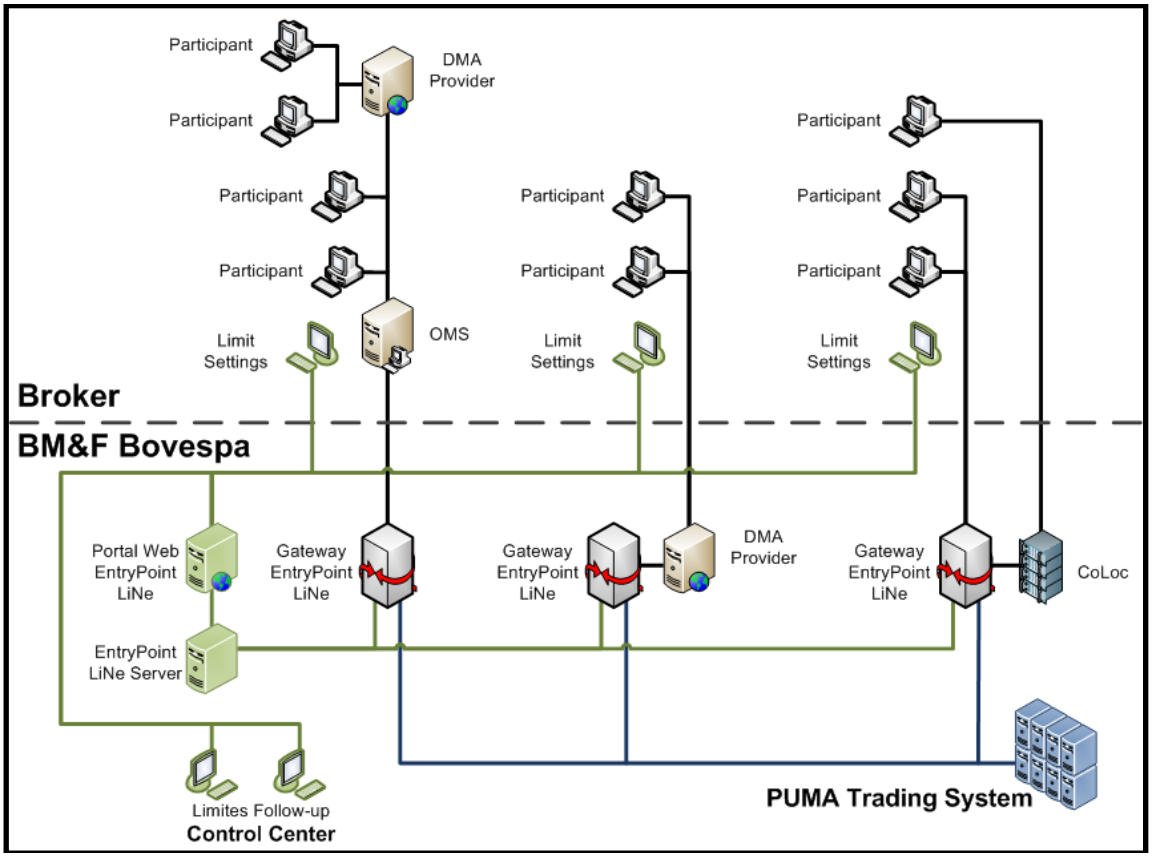


Figure 1 - EntryPoint LiNe architecture

1.6. Technical Pre Requirements

BM&FBOVESPA assures the functioning of the system once it is accessed via Internet Explorer 7 or later, the environment where the tests have been carried out.

2. Definitions

EntryPoint LiNe works with the concepts of Equivalent Instrument, Contract and Instrument, as follows.

2.1. Equivalent Instrument

It is a group of assets parted by liquidity (equities market) or commodities (derivatives market), to be defined according to a criterion established by BM&FBOVESPA, and that might be changed at any time and informed to participants by proper channels. This is a greater group which will have the contracts listed under it.

Equivalent Instrument example:

Derivatives Market:
- Boi Futuro – live cattle commodities;
- Ibovespa Futuro – Ibovespa future index;

Equities Market:
- GRUPO1 – high liquidity assets;
- GRUPO2 – medium liquidity assets;

2.2. Contract

It is a subgroup listed below the Equivalent Instruments groups, parted by company (equities market) or commodities (derivatives market).

Contract groups example:

Derivatives Market:
- BGI-FUT – live cattle commodities;
- IND-FUT – Ibovespa future index;

Equities Market:
- PETROBRAS – Petrobras (Company);
- VALE – Vale (Company);
- GERDAU – Gerdau (Company);

2.3. Instrument

It is an asset subgroup, listed below the Contract groups, parted by market.

Examples of Instrument groups:

Derivatives Market:
- BGIF13, BGIK13 – live cattle commodities;
- INDM14, INDZ15 – Ibovespa future index;

Equities Market:
- PETR3, PETR4, listed options – under PETROBRAS contract;
- VALE3, VALE5, listed options – under VALE contract;
- GGBR3, GGBR4, listed options – under GERDAU contract;

3. EntryPoint LiNe Orders Evaluation

Generally speaking, all orders such as: adding, deleting and changing events, sent to a gateway containing an EntryPoint LiNe application are evaluated based on a process composed by 4 phases.

For Derivatives Market:

First Phase:
Check the existence of registered limits for the identified execution trader in the order. In case there is no participant identification in the order or in case there are no registered limits for an identified participant in the order, the order is rejected.

Second Phase:
Verify the maximum buy and sell order quantities (in contracts) per instrument (contract and expiration/series).

Third Phase:
Verify the maximum long and short positions (in contracts quantity) per instrument on the trading date.

Fourth Phase:
Verify the maximum long and short positions (in contracts quantity) per contract groups (equivalent instrument) on the trading date.

For Equities Market:

First Phase:
Check the existence of registered limits for the identified execution trader in the order. In case there is no participant identification in the order or in case there are no registered limits for an identified participant in the order, the order is rejected.

Second Phase:
Verify the maximum buy and sell order financial quantity per instrument.

Third Phase:
Verify the maximum long and short financial positions per instrument on the trading date.

Fourth Phase:
Verify the maximum long and short financial positions per contract groups (equivalent instrument) on the trading date.

For orders registered in prior outcries (VAC and VAD) and with remaining balance, EntryPoint LiNe will start the day with the already discounted balance for the maximum risk limits for the buy and sell orders per instrument.

The violation of any limits causes inclusion or modification offer rejection. It is important to note that the limits evaluation algorithm will always accept the following events:

I. Qffer cancellation and;
II. Quantity of contracts modification (decrease).

An order cancellation, by definition, does not imply limits verification. It is important to stress, however, that it is necessary to update the buy and sell orders total quantity according to each situation.

The figure below shows an overview of the limits evaluation process executed by the EntryPoint LiNe.

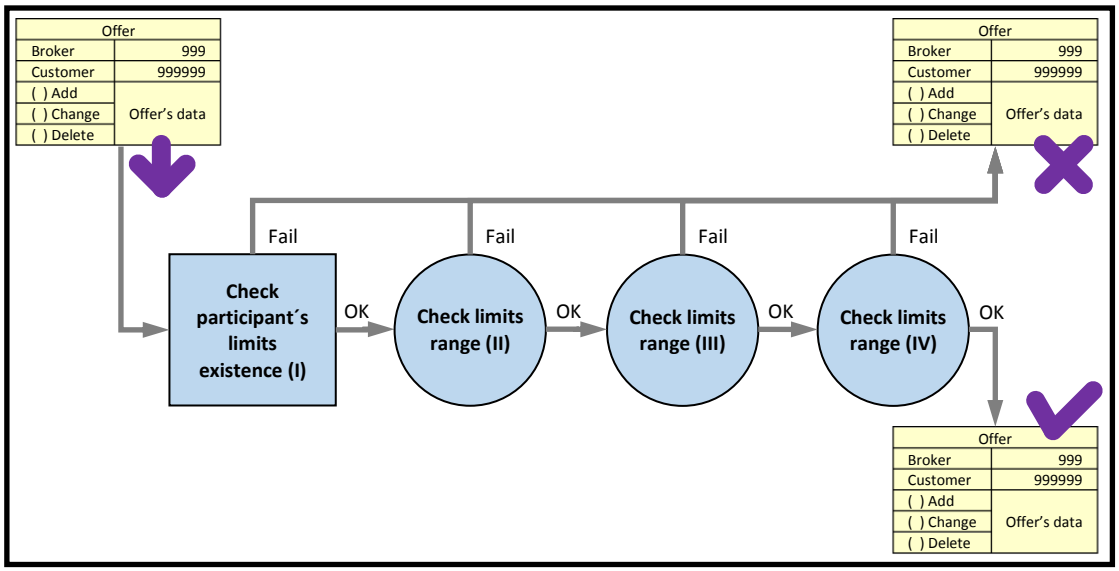


Figure 2 - EntryPoint LiNe orders evaluation process

4. Trading Limits Assessment in Derivatives Market

As aforementioned, EntryPoint LiNe establishes 3 kinds of trading limits in derivatives market. Such limits are represented by the parameters defined in contract numbers, as follows:

I. Maximum quantity for buy order per instrument (TCI);
II. Maximum quantity for sell order per instrument (TVI);
III. Long position limit per instrument (LCI);
IV. Short position limit per instrument (LVI);
V. Long position limit per equivalent instrument (LCC);
VI. Short position limit per equivalent instrument (LVC);

The range of long and short positions' limits – LCI, LVI, LCC and LCV – is granted by the use of concepts of maximum potential long position and maximum potential short position. Essentially, the maximum potential long position, associated to a determined instrument or contract, corresponds to its total long and short operations sum (performed on the date) – that is, its balance – added to its buy offers amount. Analogically, the maximum potential short position, associated to a determined instrument or contract, corresponds to its buy and sell operations already executed on the date, added to its sell offers amount. The figure below shows this concept in relation to the cases in which the executed trades on the date cause the following: (i) long balance; and (ii) short balance.

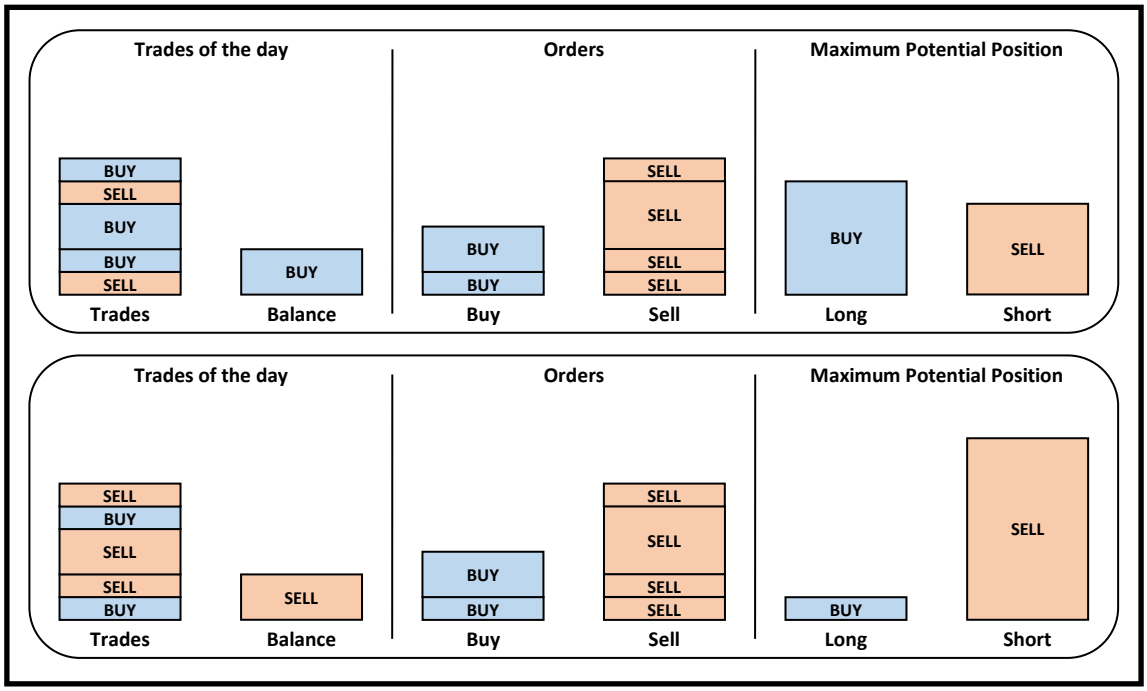


Figure 3 - Determination of the maximum potential position

The following subsections describe in details each of the 3 trading limits used by the EntryPoint LiNe Derivatives.

4.1. Maximum Quantity for Buy and Sell Orders per Instrument

These limits aim to establish maximum sizes in contract numbers for buy and sell orders of an instrument *i* sent by a participant. It is considered that a buy (sell) order is within the maximum limit for a buy (sell) order, if it meets the following criteria:

$$QOC_i \leq TCI_i \qquad (i)$$

$$QOV_i \leq TVI_i \qquad (ii)$$

Where:

TCI_i	Maximum quantity, in number of contracts, for buy order for instrument *i*;
TVI_i	Maximum quantity, in number of contracts, for sell order for instrument *i*;
QOC_i	Quantity of contracts for buy order of the instrument *i*;
QOV_i	Quantity of contracts for sell order of the instrument *i*.

4.2. Long and Short Position Limits per Instrument

These limits aim to establish maximum daily balances in number of contracts for long and short positions of an instrument *i* for each participant. In order to carry this out, the maximum potential long and short positions are computed according to the current balances, and buy and sell offers for the instrument *i*, according to the following formulas:

$$PCI_i = S_i + \sum_{j=1}^{nofc_i} QFC_{ij} \qquad (iii)$$

$$PVI_i = -S_i + \sum_{j=1}^{nofv_i} QFV_{ij} \qquad (iv)$$

An order is regarded as suitable for the limits for the long and short positions for the instrument *i* if it meets the criteria described below:

$$PCI_i \leq LCI_i \quad (v)$$

$$PVI_i \leq LVI_i \quad (vi)$$

Where:

S_i	Net balance, in number of contracts, for instrument *i*; Si > 0: if buy trade balance > sell trade balance Si < 0: if buy trade balance < sell trade balance
QFC_{ij}	Contracts quantity from the *j-th* buy order for the instrument *i*;
QFV_{ij}	Contracts quantity from the *j-th* sell order for the instrument *i*;
$nofc_i$	Number of buy orders for the instrument *i*;
$nofv_i$	Number of sell orders for the instrument *i*;
PCI_i	Maximum potential long position, in number of contracts, for the instrument *i*;
PVI_i	Maximum potential short position, in number of contracts, for the instrument *i*;
LCI_i	Long position limit, in number of contracts, for the instrument *i*;
LVI_i	Short position limit, in number of contracts, for the instrument *i*.

4.3. Long and Short Position Limits per Equivalent Instrument

These limits aim to establish maximum daily balances for long and short positions in each contract group for each participant. This condition allows instrument grouping by similar characteristics and limits establishment for these groups. As for that, the various instrument positions, in number of contracts, associated to each group, are consolidated into one single position for the instrument *c*, called "*equivalent instrument*".

This consolidation follows a weighted risk criterion, thus the risk of the single position for the equivalent instrument c reflects approximately the risk of several positions in the instruments associated to the current equivalent instrument. Generally speaking, for instruments which are referenced in interest rates, the weight factor corresponds to its duration, whereas, for options, their delta is applied.

The positions in the various instruments associated to each contract *c* are consolidated in one single position of the instrument *c*, called "*equivalent instrument*", according to the following formulas:

$$PCC_c = \sum_{i=1}^{ni_c} \max(K_i;0) \times PCI_i - \min(K_i;0) \times PVI_i \quad (vii)$$

$$PCC_c = PVC_c = \sum_{i=1}^{ni_c} K_i \times \max(|PCI_i|;|PVI_i|) \quad (viii)$$

It is assumed that an order is within long and short positions limits in the group ("*equivalent instrument*") *c*, if it meets the criteria, as follows:

$$PCC_c \leq LCC_c \quad (ix)$$

$$PVC_c \leq LVC_c \quad (x)$$

Where:

K_i	Weighted risk factor for the instrument *i*;
PCI_i	Maximum potential long position, in number of contracts, for the instrument *i*, as described by formula *(iii)*;
PVI_i	Maximum potential short position, in number of contracts, for the instrument *i*, as described by formula *(iv)*;
ni_c	Quantity of instruments associated to the equivalent instrument *c*;
PCC_c	Maximum potential long position for the equivalent instrument *c*;
PVC_c	Maximum potential short position for the equivalent instrument *c*;
LCC_c	Long position limit for the equivalent instrument *c*;
LVC_c	Short position limit for the equivalent instrument *c*.

The figure below shows one case where distinct positions in several expirations of the same contract are represented by a single position in one contract for a 1-year maturity (equivalent instrument).

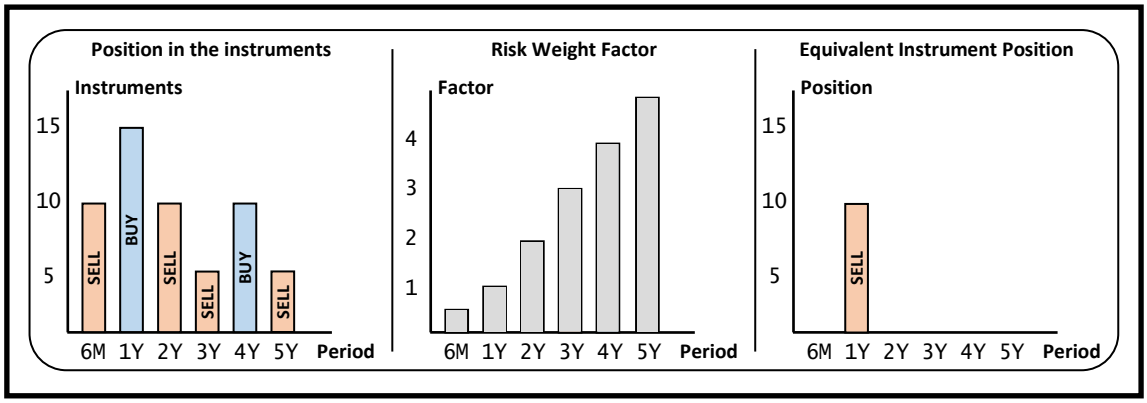


Figure 4 - Consolidation in equivalent instrument

The responsibility for registering equivalent instruments and weight factors lies on BM&FBOVESPA, such information can be checked on the EntryPoint LiNe configuration portal. It is important to highlight that the weight factors are daily updated reflecting the changes in the related weights, especially in the case of options

4.4. Numeric Examples

In this subsection some numeric examples, which demonstrate the functioning of the EntryPoint LiNe limits model in derivatives, are shown. It is important to point out that the described examples are merely illustrative and the values of the weight factors were only approximately set up.

4.4.1. Example A

Imagine a broker has settled the following sizes, related to max size order for the DI contract, for a determined participant: 5,000 contracts for maturities lower than 1 year; 2,500 contracts for maturities between 1 and 5 years and 1,000 contracts for maturities over 5 years. Such limits are valid either for buy and sell orders. Additionally, long and short positions per instrument are settled according to the tables, as follows.

Long Positions (LCI)								
Expiration	DD	Limit	Expiration	DD	Limit	Expiration	DD	Limit
H08	15	150,000	F10	686	27,000	N12	1,598	11,000
J08	46	150,000	J10	776	23,000	V12	1,690	11,000
K08	76	150,000	N10	867	21,000	F13	1,782	10,000
M08	107	150,000	V10	959	19,000	V13	2,055	9,000
N08	137	132,000	F11	1,051	17,000	F14	2,147	9,000
V08	229	79,000	J11	1,141	16,000	F15	2,512	7,000
F09	321	57,000	N11	1,232	15,000	F16	2,877	6,000
J09	411	44,000	V11	1,324	14,000	F17	3,243	6,000
N09	502	36,000	F12	1,416	13,000	F18	3,608	5,000
V09	594	31,000	J12	1,507	12,000	F22	5,069	4,000

Table 1 - LCI for DI contract

Short Positions (LVI)								
Expiration	DD	Limit	Expiration	DD	Limit	Expiration	DD	Limit
H08	15	150,000	F10	686	27,000	N12	1,598	11,000
J08	46	150,000	J10	776	23,000	V12	1,690	11,000
K08	76	150,000	N10	867	21,000	F13	1,782	10,000
M08	107	150,000	V10	959	19,000	V13	2,055	9,000
N08	137	132,000	F11	1,051	17,000	F14	2,147	9,000
V08	229	79,000	J11	1,141	16,000	F15	2,512	7,000
F09	321	57,000	N11	1,232	15,000	F16	2,877	6,000
J09	411	44,000	V11	1,324	14,000	F17	3,243	6,000
N09	502	36,000	F12	1,416	13,000	F18	3,608	5,000
V09	594	31,000	J12	1,507	12,000	F22	5,069	4,000

Table 2 - LVI for DI contract

These limits have been constituted based on a possibility for a maximum year-equivalent position, either long or short, equals to 50,000 contracts, with a limit over or equal to 150,000 contracts.

The table below displays the K weight factors for each considered instrument. The equivalent instrument, reference for such values determination, corresponds to a 1 year maturity contract.

Risk Weight Factor (K)								
Expiration	DD	K	Expiration	DD	K	Expiration	DD	K
H08	15	0.04	F10	686	1.88	N12	1,598	4.38
J08	46	0.13	J10	776	2.13	V12	1,690	4.63
K08	76	0.21	N10	867	2.38	F13	1,782	4.88
M08	107	0.29	V10	959	2.63	V13	2,055	5.63
N08	137	0.38	F11	1,051	2.88	F14	2,147	5.88
V08	229	0.63	J11	1,141	3.13	F15	2,512	6.88
F09	321	0.88	N11	1,232	3.38	F16	2,877	7.88
J09	411	1.13	V11	1,324	3.63	F17	3,243	8.88
N09	502	1.38	F12	1,416	3.88	F18	3,608	9.88
V09	594	1.63	J12	1,507	4.13	F22	5,069	13.89

Table 3 - K Factor for DI contract

Where "DD" displays the number of days until the instrument expiration.

The limits for long and short positions in the DI equivalent instrument (LCC and LVC) are identical and equal to 150,000 contracts.

Imagine that the balances states and the participant offers book are as shown in the table below.

	Instrument	Balance
Instrument´s Balance	FUT-DI1-H08	100,000
	FUT-DI1-N10	-10,000
	FUT-DI1-F18	-5,000

	Instrument	Buy	Sell
Offers	FUT-DI1-H08	50,000	0
	FUT-DI1-N10	5,000	5,000

Table 4 - Initial State

Afterwards, the participant sends a 10,000 DI sell order contracts with expiration N10. The values for the risk limits are shown in the table below.

Sent Order		
Instrument	Operation	Quantity
FUT-DI1-N10	SELL	10,000

Order Quantity Limits					
Maximum Buy Order Quantity			Maximum Sell Order Quantity		
TCI	Accepting the order	Status	TVI	Accepting the order	Status
2,500	0	OK	2,500	10,000	FAIL

Position Limits per Instrument					
Maximum Potential Long Position			Maximum Potential Short Position		
LCI	Accepting the order	Status	LVI	Accepting the order	Status
21,000	-5,000	OK	21,000	25,000	FAIL

Position Limits per Equivalent Instrument					
Maximum Potential Long Position			Maximum Potential Short Position		
LCC	Accepting the order	Status	LVC	Accepting the order	Status
150,000	-55,300	OK	150,000	104,900	OK

Table 5 - Rejected Order (TVI and LVI)

In this case, the order is rejected, once both the maximum sell order size and the short position limit per instrument are violated. Regarding this last limit, it is noticed that the maximum potential short position is reached by the balance sold from 10,000 contracts, plus the 5,000 contracts sell order and the 10,000 contracts sell order, resulting in 25,000 contracts. The 5,000 contracts buy order, for LVI calculation, is not considered once the aim is to determine the highest sold balance as possible.

Afterwards, the participant sends a 200,000 DI sell order contracts with expiration H08. The values for the risk limits are shown in the table below.

Sent Order		
Instrument	Operation	Quantity
FUT-DI1-H08	SELL	200,000

Order Quantity Limits					
Maximum Buy Order Quantity			Maximum Sell Order Quantity		
TCI	Accepting the order	Status	TVI	Accepting the order	Status
5,000	0	OK	5,000	200,000	FALHA

Position Limits per Instrument					
Maximum Potential Long Position			Maximum Potential Short Position		
LCI	Accepting the order	Status	LVI	Accepting the order	Status
150,000	150,000	OK	150,000	100,000	OK

Position Limits per Equivalent Instrument					
Maximum Potential Long Position			Maximum Potential Short Position		
LCC	Accepting the order	Status	LVC	Accepting the order	Status
150,000	-55,300	OK	150,000	89,100	OK

Table 6 - Rejected Order (TVI)

In this case, the order is rejected as it exceeds the maximum sell offer size. It is important to note that the limits for long and short position in the instrument are not violated, once it comprises an inversion operation position inside the interval set up by the broker

Afterwards, the participant sends a 1,000 DI sell order contracts with expiration F18. The values for the risk limits are shown in the table below.

Sent Order		
Instrument	Operation	Quantity
FUT-DI1-H18	BUY	1,000

Order Quantity Limits					
Maximum Buy Order Quantity			Maximum Sell Order Quantity		
TCI	Accepting the order	Status	TVI	Accepting the order	Status
1,000	1,000	OK	1,000	0	OK

Position Limits per Instrument					
Maximum Potential Long Position			Maximum Potential Short Position		
LCI	Accepting the order	Status	LVI	Accepting the order	Status
5,000	-4,000	OK	5,000	5,000	OK

Position Limits per Equivalent Instrument					
Maximum Potential Long Position			Maximum Potential Short Position		
LCC	Accepting the order	Status	LVC	Accepting the order	Status
150,000	-55,300	OK	150,000	89,100	OK

Table 7 - Accepted Order

In this case the order is accepted, as it is within all the limits previously set up.

4.4.2. Example B

Imagine that a broker has set up, for a determined participant, a maximum order limit for the dollar option contract, which expires within 64 days straight, equals to 1,000 contracts. This limit is either valid for buy or sell orders.

Additionally, long and short positions per instrument are set up according to the tables below, in which V and C indicate respectively buy and sell options:

Long Position (LCI)							
Series	Type	Strike	Limit	Series	Type	Strike	Limit
K8DB	V	1,650	2,000	K880	C	1,900	5,000
K8D0	V	1,900	2,000	K881	C	2,000	5,000
K8D5	V	1,800	2,000	K882	C	2,100	5,000
K8D8	V	1,700	2,000	K883	C	2,050	5,000
K8D9	V	1,750	2,000	K885	C	1,800	2,000
				K886	C	1,950	5,000
				K887	C	1,850	2,000
				K888	C	1,700	2,000

Table 8 - LCI for dollar option contract

Short Position (LVI)							
Series	Type	Strike	Limit	Series	Type	Strike	Limit
K8DB	V	1,650	0	K880	C	1,900	0
K8D0	V	1,900	0	K881	C	2,000	0
K8D5	V	1,800	0	K882	C	2,100	0
K8D8	V	1,700	0	K883	C	2,050	0
K8D9	V	1,750	0	K885	C	1,800	0
				K886	C	1,950	0
				K887	C	1,850	0
				K888	C	1,700	0

Table 9 - LVI for dollar option contract

These limits have been constituted based on the possibility that it is not allowed to the participant to have sold positions in option contracts.

The table below shows the K weight factors for each considered instrument. In this case the equivalent instrument corresponds to a buy option (call) with delta equal to 1.

Risk Weight Factors (K)							
Series	Type	Strike	K	Series	Type	Strike	K
K8DB	V	1,650	-0.22	K880	C	1,900	0.05
K8D0	V	1,900	-0.95	K881	C	2,000	0.05
K8D5	V	1,800	-0.76	K882	C	2,100	0.05
K8D8	V	1,700	-0.40	K883	C	2,050	0.05
K8D9	V	1,750	-0.59	K885	C	1,800	0.24
				K886	C	1,950	0.05
				K887	C	1,850	0.12
				K888	C	1,700	0.60

Table 10 - K Factor for option contract

The limits for long and short positions in the dollar option contract (LCC and LVC) are identical and equal to 5,000 contracts.

Imagine the participant's balance states and the participant's orders book is as shown in the table below.

	Instrument	Balance
Instrument´s Balance	OPC-DOL-K8D8	2,000
	OPC-DOL-K8D0	2,000
	OPC-DOL-K8D9	2,000
	OPC-DOL-K8DB	2,000

	Instrument	Buy	Sell
Offers	OPC-DOL-K8D8	0	2,000
	OPC-DOL-K8D0	0	2,000

Table 11 – Initial State

Afterwards, the participant sends a 1000 dollar buy order options contract with K8D5 expiration. The values for the risk limits are shown in the table below.

Sent Order		
Instrument	Operation	Quantity
OPC-DOL-K8D5	BUY	1,000

Order Quantity Limits					
Maximum Buy Order Quantity			Maximum Sell Order Quantity		
TCI	Accepting the order	Status	TVI	Accepting the order	Status
1,000	1,000	OK	1,000	0	OK

Position Limits per Instrument					
Maximum Potential Long Position			Maximum Potential Short Position		
LCI	Accepting the order	Status	LVI	Accepting the order	Status
2,000	1,000	OK	0	0	OK

Position Limits per Equivalent Instrument					
Maximum Potential Long Position			Maximum Potential Short Position		
LCC	Accepting the order	Status	LVC	Accepting the order	Status
5,000	-1,620	OK	5,000	5,080	FAIL

Table 12 - Rejected Order (LVC)

In this case the order is rejected, once the buy order for a sell option violates the limit for sold position in the contract. It is important to note that once the equivalent instrument has been defined as a single buy option delta, the impact of the major potential bought position for sell options is considered in the calculation of the major potential sell position in the contract (LVC).

Afterwards, the participant sends a 1,000 dollar sell order option contract with K888 expiration. The values for the risk limits are shown in the table below.

Sent Order		
Instrument	Operation	Quantity
OPC-DOL-K888	SELL	1,000

Order Quantity Limits					
Maximum Buy Order Quantity			Maximum Sell Order Quantity		
TCI	Accepting the order	Status	TVI	Accepting the order	Status
1,000	0	OK	1,000	1,000	OK

Position Limits per Instrument					
Maximum Potential Long Position			Maximum Potential Short Position		
LCI	Accepting the order	Status	LVI	Accepting the order	Status
2,000	0	OK	0	1,000	FAIL

Position Limits per Equivalent Instrument					
Maximum Potential Long Position			Maximum Potential Short Position		
LCC	Accepting the order	Status	LVC	Accepting the order	Status
5,000	-1,620	OK	5,000	4,920	OK

Table 13 - Rejected Order (LVI)

In this case the order is rejected, once the sell order of a buy option violates the rule which prevents the participant to stay sold in this instrument (LVI).

Afterwards, the participant sends a buy order of 1,000 contracts for dollar option with expiration K885. The risk limit values are shown in the table below.

Sent Order		
Instrument	Operation	Quantity
OPC-DOL-K885	BUY	1,000

Order Quantity Limits					
Maximum Buy Order Quantity			Maximum Sell Order Quantity		
TCI	Accepting the order	Status	TVI	Accepting the order	Status
1,000	1,000	OK	1,000	0	OK

Position Limits per Instrument					
Maximum Potential Long Position			Maximum Potential Short Position		
LCI	Accepting the order	Status	LVI	Accepting the order	Status
2,000	1,000	OK	0	0	OK

Position Limits per Equivalent Instrument					
Maximum Potential Long Position			Maximum Potential Short Position		
LCC	Accepting the order	Status	LVC	Accepting the order	Status
5,000	-1,380	OK	5,000	4,320	OK

Table 14 - Accepted Order

In this case the order is accepted as it is within all the limits previously set up.

5. Trading Limits Assessment in Equities Market

As it is aforementioned, EntryPoint LiNe establishes 3 kinds of trading limits in equities market. Such limits are represented by the parameters defined in financial terms, as follows:

I. Maximum financial quantity for buy order per instrument (TCI);
II. Maximum financial quantity for sell order per instrument (TVI);
III. Financial long position limit per instrument (LCI);
IV. Financial short position limit per instrument (LVI);
V. Financial long position limit per equivalent instrument (LCC);
VI. Financial short position limit per equivalent instrument (LVC);

The following subsections describe in details each of the 3 trading limits used by the EntryPoint LiNe Equities.

5.1. Maximum Financial Quantity for Buy and Sell Orders per Instrument

These limits aim to establish maximum financial sizes, in Reais – R$ (Brazilian currency), for buy and sell orders of an instrument *i* sent by a participant. It is considered that a buy (sell) order is within the maximum limit for a buy (sell) order, if it meets the following criteria:

$$|K_i| \times QOC_i \leq TCI_i \quad \textit{(i)}$$

$$|K_i| \times QOV_i \leq TVI_i \quad \textit{(ii)}$$

Onde:

TCI_i	Maximum financial quantity, in R$, for buy order per instrument *i*;
TVI_i	Maximum financial quantity, in R$, for sell order per instrument *i*;
K_i	Financial conversion factor of instrument *i*;
QOC_i	Quantity of contracts for buy order for instrument *i*;
QOV_i	Quantity of contracts for sell order for instrument *i*.

5.2. Financial Long and Short Position Limits per Instrument

These limits aim to establish maximum financial daily balances for long and short positions of an instrument *i* for each participant. In order to carry it out, the maximum financial potential long and short positions are computed according to the current balances, and the buy and sell offers for the instrument *i* according to the following formulas:

$$PCI_i = S_i + \sum_{j=1}^{nofc_i} QFC_{ij} \quad \textit{(iii)}$$

$$PVI_i = -S_i + \sum_{j=1}^{nofv_i} QFV_{ij} \quad \textit{(iv)}$$

An order is considered suitable for the long and short positions limits for the instrument *i*, if it meets the criteria described below:

$$|K_i| \times PCI_i \leq LCI_i \quad \textit{(v)}$$

$$|K_i| \times PVI_i \leq LVI_i \quad \textit{(vi)}$$

Where:

S_i	Net balance, in financial terms (R$), for instrument *I*, based on the electronic operations performed on the trading system. Si > 0: if buy trade balance > sell trade balance Si < 0: if buy trade balance < sell trade balance
QFC_{ij}	Quantity of contracts of the *j-th* buy order of the instrument *i*;
QFV_{ij}	Quantity of contracts of the *j-th* sell order of the instrument *i*;
$Nofc_i$	Number of buy orders for instrument *i*;
$nofv_i$	Number of sell orders for instrument *i*;
K_i	Financial conversion factor for instrument *i*;
PCI_i	Maximum potential long position, in number of contracts, for instrument *i*;
PVI_i	Maximum potential short position, in number of contracts, for instrument *i*;
LCI_i	Financial long position limit, in *R$*, for instrument *i*;
LVI_i	Financial short position limit, in *R$*, for instrument *i*.

5.3. Financial Long and Short Position Limits per Equivalent Instrument

These limits aim to establish maximum financial daily balances for long and short positions in each "*equivalent instrument*" for each participant. This condition allows grouping instruments with similar characteristics and establishing limits for these groups. Those limits are calculated according the following formulas:

$$PCC_c = \sum_{i=1}^{ni_c} \max(K_i;0) \times PCI_i - \min(K_i;0) \times PVI_i \qquad \textit{(vii)}$$

$$PVC_c = \sum_{i=1}^{ni_c} \max(K_i;0) \times PVI_i - \min(K_i;0) \times PCI_i \qquad \textit{(viii)}$$

It is considered that an order is within long and short positions limits in the group ("*equivalent instrument*") *c*, if it meets the criteria, as follows:

$$PCC_c \leq LCC_c \qquad \textit{(ix)}$$

$$PVC_c \leq LVC_c \qquad \textit{(x)}$$

Where:

K_i	Financial conversion factor of instrument *i*;
PCI_i	Maximum potential long position for instrument *i*, as described by formula *(iii)*;
PVI_i	Maximum potential short position for instrument *i*, as described by formula *(iv)*;
ni_c	Quantity of instruments associated to the equivalent instrument *c*;
PCC_c	Maximum financial potential long position for equivalent instrument *c*;
PVC_c	Maximum financial potential short position for equivalent instrument *c*;
LCC_c	Financial long position limit, in R$, for equivalent instrument *c*;
LVC_c	Financial short position limit, in R$, for equivalent instrument *c*.

6. Characteristics of the Default Limit for the Standard Contract

The *default* limits for a contract have the intention of setting up standard limits for any instruments whose limits are not individually set up. That is, a broker might, if it decides to, set up limits (default and for the instrument – under a mandatory Portal's rule) for a single instrument from a determined contract, which will cause all the other instruments associated to this same standard contract to have this pre-established limit (standard), with no need to set them up individually.

Note that, in case these other instruments are viewed at the Portal, their respective standard contract will already have the value preset, despite the instruments limits being zeroed (but differentiated by color).

It is important to highlight that, in case the standard limits are changed in relation to any instrument in a contract, all the other instruments will use this new value

7. Access and Use of the System

In this section, the EntryPoint LiNe's screens and their pertaining functionalities will be described.

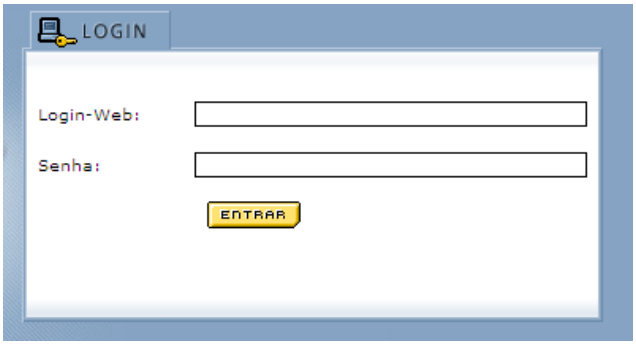
Notice: some screens displayed in this document contain labels and texts in Portuguese language. However, through the legend contents the correspondent English matching keywords can be easily identified.

7.1. Access to the system in Derivatives Market

The EntryPoint LiNe will be accessed through the address below

http://gts.extranet.net.bmf/SegurancaCA/Login.aspx

After the access, user and password will be requested.



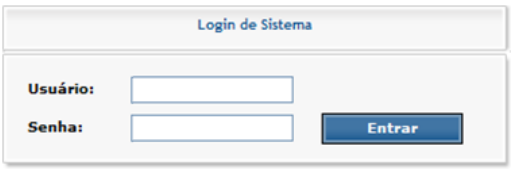
The top left corner menus provide access to the following functionalities for the derivatives market: *"Management"*, *"Monitor"*, *"Weight Factor (K)"*, *"Equivalent Instrument"* and *"FiXML Load"*, as shown in the picture below. for the Forex market, only *"Monitor"* is available.

7.2. Access to the system in Equities Market

The EntryPoint LiNe will be accessed through the address below:

http://trade2.net.bvmf/PortalEPEquities

After the access, user and password will be requested.

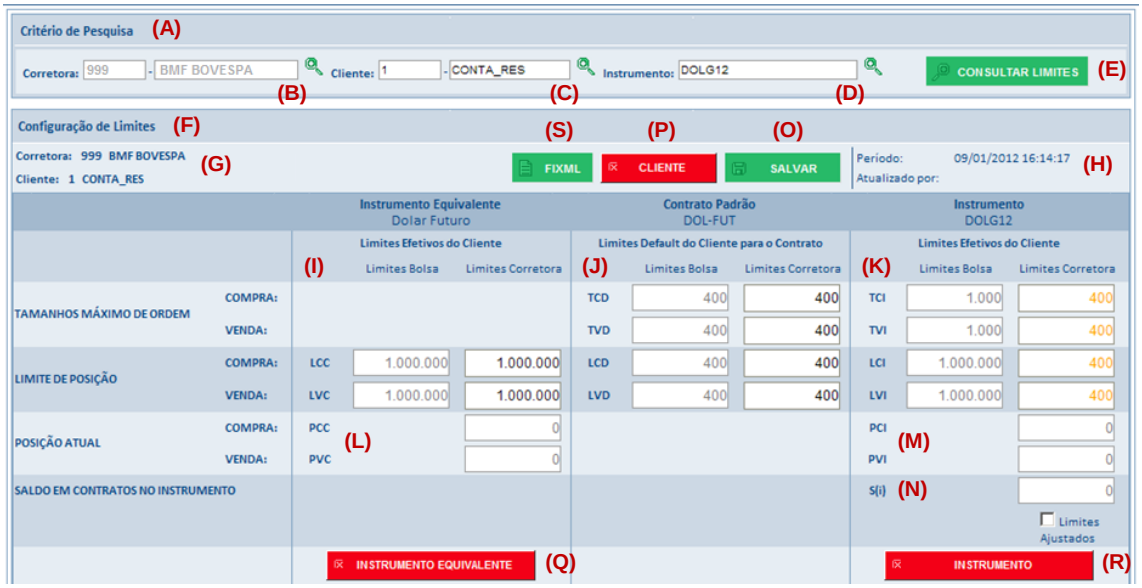


The top left corner menus provide access to the functionalities as follows: *"Management"* (*"Administração"*), *"Monitor"* (*"Monitor"*), *"Weight Factor K"* (*"Fator K"*), *"Equivalent Instrument"* (*"Instrumento Equivalente"*) and *"FiXML Load"* (*"Carga FIXML"*), as shown in the picture below.

Notice: although the pictures displayed in this document reflect the LiNe system for Derivatives Market, they are equivalent for the LiNe system for Equities Market (they have identical screens and functionalities).

7.3. Limits Management and Search by Configuration Screen

The limits management and search is directly accessed through the "*Management*" menu. This screen contains functionalities which allow the efficient registering of limits, and it also provides means of rapid activation for emergencies (*panic keys*). Such functionalities are described, as follows.



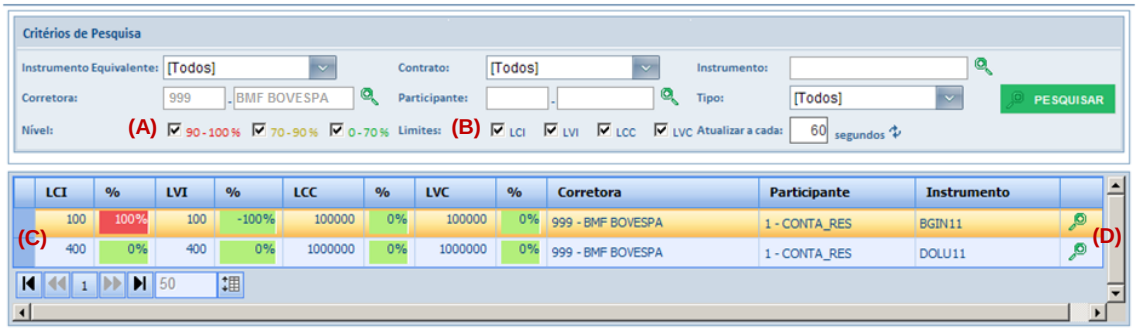
(A)	Search Criterion	Criteria fields used to search limits.
(B)	Brokerage Firm	Field for selecting the broker by informing its code or searching, by using the option to search for a broker (magnifier icon), available beside the field.
(C)	Client	Field for selecting the customer by informing the code or searching, by using the option to search for a customer (magnifier icon), available beside the field.
(D)	Instrument	Field for selecting the instrument by informing its pertaining name or searching, by enabling the option to search for an instrument (magnifier icon), available beside the field.
(E)	"Check Limits" Button	Performs the limits searching based on the information provided in the search criteria fields.
(F)	Limits Configuration	Area for configuration of limits (Equivalent Instrument, Default Contract and Instrument).
(G)	Brokerage Firm / Client	Informs the broker's and client´s codes and names in use.
(H)	Period / Updated by	Displays the date, hour and name of the responsible session for the last update.
(I)	Client Effective Limits – Equivalent Instrument	Allows the configuration of the effective brokerage firm limits LCC e LVC for the selected equivalent instrument.
(J)	Contract Default Limits – Default Contract	Allows the configuration of the effective brokerage firm limits TCD, TVD, LCD e LVD for the selected contract.
(K)	Client Effective Limits – Instrument	Allows the configuration of the effective brokerage firm limits TCI, TVI, LCI e LVI for the selected instrument.
(L)	Current Position PCC / PVC	Informs the current position for the equivalent instrument for the participant.
(M)	Current Position PCI / PVI	Informs the current position for the instrument for the participant.
(N)	Instrument Net Balance	Informs the current net balance for the instrument for the participant.
(O)	"Save" Button	Saves the changes performed until now.
(P)	"Client" Button	*Panic Key* – sets to null (equals to zero) all the limits associated to the participant.
(Q)	"Equivalent Instrument" Button	*Panic Key* – sets to null (equals to zero) all the limits associated to the selected participant and equivalent instrument.
(R)	"Instrument" Button	*Panic Key* – sets to null (equals to zero) all the limits associated to the selected participant and instrument.
(S)	"FilXML" Button	Shows the configured limit as a FIXML example.

Notes:

- The Panic Keys effectiveness is only bound to the current day. All keys are unlocked on the following day.

7.4. Limits Consumption Monitor

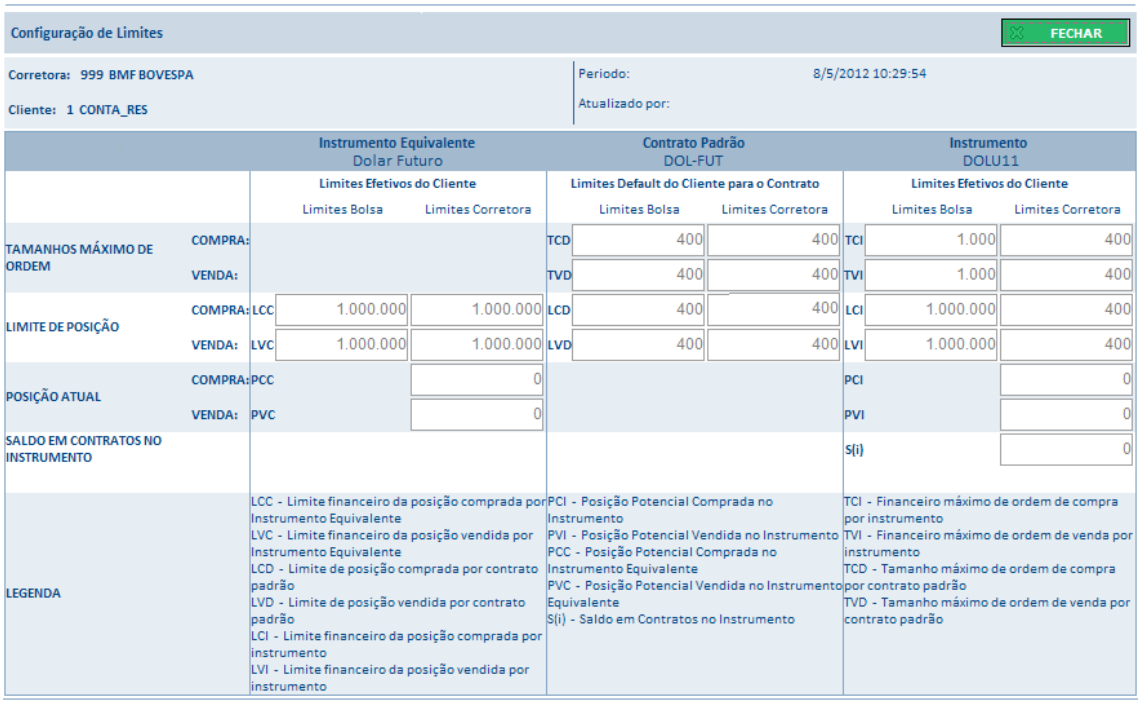
The following screen allows seeing the limits consumption – potential positions (*PCC, PVC, PVI, PCI*) – in a percentage rate related to the maximum limits (*LCC, LVC, LVI, LCI* – respectively) for one or more instruments(*). It can be accessed through the "*Monitor*" menu.



(A) Percentage rate search filter for the consumed limits.
(B) Limit type search filter.
(C) Displayed limits list based on the Search Criterion.
(D) Displays the limit´s details.

(*) The monitor shows up to 100 entries matching the filter settings. Refine your search if the intended results were not displayed.

By clicking on the icon on the previous screen, the system displays the limits according to the screen below.

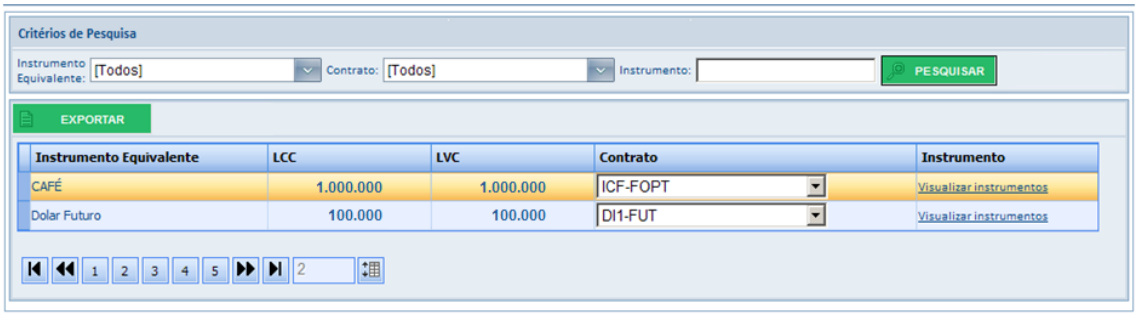


7.5. Search Weight Factors K

The weight factors (K) can be searched and displayed via the screen below. It can be accessed through the "*Weight Factor (K)*" menu.

7.6. Search for Equivalent Instruments

The following screen allows searching: *(a)* the existing equivalent instruments and their *exchange limits* (*LCC* and *LVC*); *(b)* the equivalent instrument´s contents (contracts and instruments that are linked to it), and; *(c)* the instrument´s *exchange limits* (*TCI*, *TVI*, *PCI*, *PVI*). It can be accessed through the *"Equivalent Instrument"* menu.



7.7. Limits Management via load of FIXML File

The brokerage firm may set or change the limits of its customers through a file loading executed on a specific screen on this portal. This screen is accessed through the *"FiXML Load"* menu

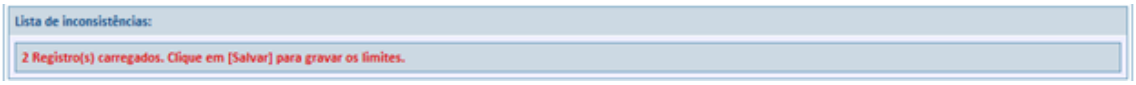
Click on the **Select** button ("*Selecione*"), select the path and the file under FIXML format which contains the limits to be configured. Click on the **Upload File** button ("*Carregar Arquivo*").

The file will then be validated according to:

- The "*Rules of FiXML Upload*", which include:
  - The load must be performed *out of trading hours*.
  - It must obey the *minimum time interval* between two loads;
  - It must obey the defined *maximum number of lines* (limits).
- The XSD layout (see **Error! Reference source not found.**);
- Participants must exist (registered at BM&FBOVESPA);
- The equivalent instrument, contract and instrument must exist;
- The brokerage firm limits values cannot exceed the *exchange limits*.

Existing errors in validation, the inconsistencies will be displayed at the "List of Inconsistencies" panel. Besides that, the loading process is aborted (in the example below, the uploaded file contains `BrkFrmId="broker 999").`

In case of successful validation, a message informing the number of loaded lines will be displayed at the "*List of Inconsistencies*" panel.



To persist the uploaded changes, click on the **Save** button ("*Salvar*").

Wait for your request processing to be finished upon the message "*Financial limits set up successfully*" display.
In case a different message is displayed from the one described, contact the Trading Suport team (SSN on 1.3).

7.7.1. FIX Tags Used

The following tags from the FIX protocol are used in the FIXML file for the quantitative trading limits configuration for a participant (broker + account or operator).

Tag number	FIX tag name	FIXML Abbreviation	Data type	Description
9527	BrokerFirmId	BrkFrmId	Integer	Broker ID code
6939	NoAccounts	NAccts	Integer	Number of participants to have their limits configured
→ 1	Account	Acct	Integer	Strong key for participants
→ 581	AccountType	AcctType	String(3)	Identifies the participant type. The tag is used as string at BM&FBOVESPA, different from FIXML which uses it as an integer instead.
→ 6948	NoEquivalent Instrument LimitsConfig	NEqvIxm LmtCfg	Integer	Number of equivalent instruments whose limits should be configured
→ → 6947	Equivalent Instrument	EqvIxm	String(32)	Equivalent instrument name.
→ → 7993	LongLimit	LongLmt	Integer	New long position limit
→ → 7994	ShortLimit	ShortLmt	Integer	New short position limit
→ → 6951	NoContract LimitsConfig	Ncontrt LmtCfg	Integer	Number of contracts whose limits should be configured
→ → → 6947	Contract	Contrt	String(32)	Standard contract symbol
→ → → 7993	LongLimit	LongLmt	Integer	New limit for long position
→ → → 7994	ShortLimit	ShortLmt	Integer	New limit for short position
→ → → 6941	MaxBidQty	MaxBidQty	Integer	Maximum size for buy orders
→ → → 6942	MaxOfferQty	MaxOfrQty	Integer	Maximum size for sell orders
→ → → 6946	NoInstrumentLimitsConfig	NIxm LmtCfg	Integer	Number of instruments whose limits should be configured
→ → → → 6937	Asset	Asset	String(3)	Identifies the type of asset
→ → → → 167	SecurityType	SecTyp	String(3)	Identifies the type of the market. It's normally filled with "FUT" for operations in the futures market
→ → → → 55	Symbol	Sym	String(100)	Symbol shown in the ticker. It is representative for the type of goods and easy for the participants' understanding
→ → → → 7993	LongLimit	LongLmt	Integer	New limit for long position
→ → → → 7994	ShortLimit	ShortLmt	Integer	New limit for short position
→ → → → 6941	MaxBidQty	MaxBidQty	Integer	Maximum size for buy order
→ → → → 6942	MaxOfferQty	MaxOfrQty	Integer	Maximum size for sell order

7.7.2. FIXML File Layout

The file below represents the simplified layout of the FIXML file that should be built. The FIXML tags are described in the session **Error! Reference source not found.** and are represented with no values under the format *Tag=""*.

It is important to stress that the XML file should be edited in a simple text editor, e.g. Windows Notepad. MS Word or any other similar one should not be used, as that may cause errors.

Construct a block <SetLimReq> with the Broker ID and the quantity of participants whose limits should be configured.

Each participant is represented by a block <AcctLmt>, and the limits are set up in the blocks of limits per Equivalent Instrument <EqvIxmLmt>, Limits per Contract <ContrLmt> and the Limit per Instrument <IxmLmt>. Note that these blocks follow a hierarchy for their configuration.

```
<?xml version="1.0" encoding="iso-8859-1"?>
<FIXML>
 <SetLimRqt BrkFrmId="" NAccts="">
  <AcctLmt Acct="" AcctType="" NEqvIxmLmtCfg="">
   <EqvIxmLmt EqvIxm="" LongLmt="" ShortLmt="" NContrtLmtCfg="">
    <ContrtLmt Contrt="" LongLmt="" ShortLmt="" MaxBidQty="" MaxOfrQty="" NIxmLmtCfg="">
     <IxmLmt    Asset=""    SecTyp=""    Sym=""    LongLmt=""    ShortLmt=""    MaxBidQty=""
MaxOfrQty=""/>
    </ContrtLmt>
   </EqvIxmLmt>
  </AcctLmt>
 </SetLimRqt>
</FIXML>
```

7.7.3. FIXML File Name

Technically, the file name does not have any influence on obtaining the data which will identify either the participants or the limits to be configured. However, as for organization matters and in order to ease future support, we recommend the files to be named under the pattern, as follows: EntryPointLiNeSetLimits[Date and Time].xml

Where:

- EntryPointLiNeSetLimits is literal (fixed text).
- [Date and Time] is a variable value under the format YYYMMDDHHMMSS.
- xml is the file extension which represents the xml standard.

Example: *EntryPointLiNeSetLimits20110808090510.xml*

The extension ".XML" is mandatory, otherwise the upload component does not load the file and causes an exception for invalid XML file.

7.7.4. Referenced XSD

The XSD file performs the validation of the FIXML file, by which it is referenced. It is important to understand that the XSD does not assure the consistence of the data, working as a reference for the expected structure and format. Other validation measures should be implemented by who creates the FIXML to assure its integrity and consistence.

This file can be downloaded on the one of URLs below:

(Derivatives Market) http://gts.extranet.net.bmf/PortalAdministration/XSD/GTSLineFixml.xsd
(Equities Market) http://trade2.net.bvmf/PortalEPEquities/Xsd/MegaLineFixml.xsd

```
<?xml version="1.0" encoding="utf-8" ?>
<xs:schema                          id="GTSLineFixml"                    elementFormDefault="qualified"
      xmlns:xs="http://www.w3.org/2001/XMLSchema">
 <xs:element name="FIXML">
  <xs:complexType>
   <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="SetLimRqt">
     <xs:complexType>
      <xs:sequence>
       <xs:element minOccurs="1" maxOccurs="unbounded" name="AcctLmt">
        <xs:complexType>
         <xs:sequence>
          <xs:element minOccurs="1" maxOccurs="unbounded" name="EqvIxmLmt">
           <xs:complexType>
            <xs:sequence>
             <xs:element minOccurs="1" maxOccurs="unbounded" name="ContrtLmt">
              <xs:complexType>
               <xs:sequence>
                <xs:element minOccurs="1" maxOccurs="unbounded" name="IxmLmt">
                 <xs:complexType>
                  <xs:attribute name="Asset"     type="xs:string"             use="optional" />
                  <xs:attribute name="SecTyp"    type="xs:string"             use="optional" />
                  <xs:attribute name="Sym"       type="xs:string"             use="required" />
                  <xs:attribute name="LongLmt"   type="xs:nonNegativeInteger" use="required" />
                  <xs:attribute name="ShortLmt"  type="xs:nonNegativeInteger" use="required" />
                  <xs:attribute name="MaxBidQty" type="xs:nonNegativeInteger" use="required" />
                  <xs:attribute name="MaxOfrQty" type="xs:nonNegativeInteger" use="required" />
                 </xs:complexType>
                </xs:element>
               </xs:sequence>
               <xs:attribute name="Contrt"     type="xs:string"             use="required" />
               <xs:attribute name="LongLmt"    type="xs:nonNegativeInteger" use="required" />
               <xs:attribute name="ShortLmt"   type="xs:nonNegativeInteger" use="required" />
               <xs:attribute name="MaxBidQty"  type="xs:nonNegativeInteger" use="required" />
               <xs:attribute name="MaxOfrQty"  type="xs:nonNegativeInteger" use="required" />
               <xs:attribute name="NIxmLmtCfg" type="xs:integer"            use="optional" />
              </xs:complexType>
              <xs:unique name="uniqueSym">
               <xs:selector xpath="IxmLmt">
               <xs:field xpath="@Sym">
              </xs:unique>
             </xs:element>
            </xs:sequence>
            <xs:attribute name="EqvIxm"        type="xs:string"             use="required" />
            <xs:attribute name="LongLmt"       type="xs:nonNegativeInteger" use="required" />
            <xs:attribute name="ShortLmt"      type="xs:nonNegativeInteger" use="required" />
            <xs:attribute name="NContrtLmtCfg" type="xs:integer"            use="optional" />
           </xs:complexType>
           <xs:unique name="uniqueContrt">
            <xs:selector xpath="ContrtLmt">
            <xs:field xpath="@Contrt">
           </xs:unique>
          </xs:element>
         </xs:sequence>
         <xs:attribute name="Acct"          type="xs:string"  use="required" />
         <xs:attribute name="AcctType"      type="xs:string"  use="optional" />
         <xs:attribute name="NEqvIxmLmtCfg" type="xs:integer" use="optional" />
        </xs:complexType>
        <xs:unique name="uniqueEqvIxm">
         <xs:selector xpath="EqvIxmLmt">
         <xs:field xpath="@EqvIxm">
        </xs:unique>
       </xs:element>
      </xs:sequence>
      <xs:attribute name="BrkFrmId" type="xs:positiveInteger" use="required" />
      <xs:attribute name="NAccts"   type="xs:integer"         use="optional" />
     </xs:complexType>
     <xs:unique name="uniqueAcct">
      <xs:selector xpath="AcctLmt">
      <xs:field xpath="@Acct">
     </xs:unique>
    </xs:element>
   </xs:sequence>
  </xs:complexType>
 </xs:element>
</xs:schema>
```

7.8. FIXML Example Files

Next, examples of some situations for the FIXML file filling, according to the layout defined in item 7.7.2, are given.

The FIXML tags are composed by elements of *Key="Value"* type. It is important to stress that most of the information shown in the example as "Value" needs to be parsed and replaced by specific data from each broker, instrument, participant or any other data which might be necessarily represented.

```
<?xml version="1.0" encoding="iso-8859-1"?>
<FIXML>
 <SetLimRqt    BrkFrmId="111111"                                    NAccts="">
  <AcctLmt     Acct="222222"      AcctType="CC"                     NEqvIxmLmtCfg="">
   <EqvIxmLmt  EqvIxm="Ibovespa"  LongLmt="1000"   ShortLmt="1000"  NContrtLmtCfg="">
    <ContrtLmt Contrt="PETROBRAS" LongLmt="1000"   ShortLmt="1000"
                                  MaxBidQty="5000" MaxOfrQty="5000" NIxmLmtCfg="">
     <IxmLmt   Sym="PETR3"        LongLmt="2000"   ShortLmt="2000"
                                  MaxBidQty="1000" MaxOfrQty="1000" />
     <IxmLmt   Sym="PETR4"        LongLmt="1000"   ShortLmt="1000"
                                  MaxBidQty="1000" MaxOfrQty="1000" />
    </ContrtLmt>
   </EqvIxmLmt>
  </AcctLmt>
 </SetLimRqt>
</FIXML>
```

7.8.1. Configuring the Limit of an Instrument for a Participant

The following example configures the limit of a single instrument for a single participant:

- **Participant 1**: 1 limit of a single instrument

```
<?xml version="1.0" encoding="iso-8859-1"?>
<FIXML>
 <SetLimRqt    BrkFrmId="111111"                                    NAccts="1">
  <AcctLmt     Acct="222222"      AcctType="CC"                     NEqvIxmLmtCfg="1">
   <EqvIxmLmt  EqvIxm="IBOVESPA"                                    NContrtLmtCfg="1">
    <ContrtLmt Contrt="EMBRAER"                                     NIxmLmtCfg="1">
     <IxmLmt   Sym="EMBR3"        LongLmt="1000"   ShortLmt="1000"
                                  MaxBidQty="5000" MaxOfrQty="10000"/>
    </ContrtLmt>
   </EqvIxmLmt>
  </AcctLmt>
 </SetLimRqt>
</FIXML>
```

7.8.2. Configuring Several Limits for a Participant

The following example configures a financial limit for an equivalent instrument, a contract limit and an instrument limit for the same participant:

- **Participant 1**: 1 limit per equivalent instrument, 1 limit per contract and 1 limit per instrument

```
<?xml version="1.0" encoding="iso-8859-1"?>
<FIXML>
 <SetLimRqt    BrkFrmId="111111"                                    NAccts="1">
  <AcctLmt     Acct="222222"      AcctType="CM"                     NEqvIxmLmtCfg="1">
   <EqvIxmLmt  EqvIxm="IBOVESPA" LongLmt="1000"   ShortLmt="1000"  NContrtLmtCfg="1">
    <ContrtLmt Contrt="EMBRAER"  LongLmt="1000"   ShortLmt="1000"
                                  MaxBidQty="5000" MaxOfrQty="10000" NIxmLmtCfg="1">
     <IxmLmt   Sym="EMBR3"        LongLmt="1000"   ShortLmt="1000"
                                  MaxBidQty="5000" MaxOfrQty="10000"/>
        </ContrtLmt>
      </EqvIxmLmt>
    </AcctLmt>
  </SetLimRqt>
</FIXML>
```

7.8.3. Configuring Several Limits for Several Participants

The following example configures financial limits, default limits and equivalent contract limits for 2 participants:

- **Participant 1**: 1 limit per equivalent instrument. 1 limit per contract and 1 limit per instrument
- **Participant 2**: 2 limits per equivalent instrument, 3 limits per contract and 4 limits per instrument

```
<?xml version="1.0" encoding="iso-8859-1"?>
<FIXML>
 <SetLimRqt    BrkFrmId="111111"                                    NAccts="2">
  <AcctLmt     Acct="222222"      AcctType="CC"                     NEqvIxmLmtCfg="1">
   <EqvIxmLmt  EqvIxm="IBOVESPA"  LongLmt="1000"   ShortLmt="1000"  NContrtLmtCfg="1">
    <ContrtLmt Contrt="EMBRAER"   LongLmt="1000"   ShortLmt="1000"
                                  MaxBidQty="5000" MaxOfrQty="10000" NIxmLmtCfg="1">
     <IxmLmt   Sym="EMBR3"        LongLmt="1000"   ShortLmt="1000"
                                  MaxBidQty="5000" MaxOfrQty="10000"/>
    </ContrtLmt>
   </EqvIxmLmt>
  </AcctLmt>
  <AcctLmt     Acct="333333"      AcctType="CM"                     NEqvIxmLmtCfg="2">
   <EqvIxmLmt  EqvIxm="IBOVESPA"  LongLmt="1000"   ShortLmt="1000"  NContrtLmtCfg="2">
    <ContrtLmt Contrt="PETROBRAS" LongLmt="1000"   ShortLmt="1000"
                                  MaxBidQty="5000" MaxOfrQty="10000" NIxmLmtCfg="2">
     <IxmLmt   Sym="PETR3"        LongLmt="1000"   ShortLmt="1000"
                                  MaxBidQty="5000" MaxOfrQty="10000"/>
     <IxmLmt   Sym="PETR4"        LongLmt="1000"   ShortLmt="1000"
                                  MaxBidQty="5000" MaxOfrQty="10000"/>
    </ContrtLmt>
    <ContrtLmt Contrt="EMBRAER"   LongLmt="10000"  ShortLmt="10000"  NIxmLmtCfg="1">
     <IxmLmt   Sym="EMBR3"        LongLmt="1000"   ShortLmt="1000"
                                  MaxBidQty="5000" MaxOfrQty="10000"/>
    </ContrtLmt>
   </EqvIxmLmt>
   <EqvIxmLmt  EqvIxm="BOLSA"     LongLmt="1000"   ShortLmt="1000"  NContrtLmtCfg="1">
    <ContrtLmt Contrt="ABYARA"    LongLmt="1000"   ShortLmt="1000"
                                  MaxBidQty="5000" MaxOfrQty="10000" NIxmLmtCfg="1">
     <IxmLmt   Sym="ABYA3"        LongLmt="1000"   ShortLmt="1000"
                                  MaxBidQty="5000" MaxOfrQty="10000"/>
    </ContrtLmt>
   </EqvIxmLmt>
  </AcctLmt>
 </SetLimRqt>
</FIXML>
```

8. Order rejections by EntryPoint LiNe

EntryPoint LiNe may reject orders for several reasons. Here are listed all the messages originated by EntryPoint LiNe due to rejections and possible causes for them. In addition, the return FIX message contains the rejection description text (the same ones indicated below). This information is very important for error identification.

8.1. Message "System recovering or starting up"

Orders are rejected for this reason when EntryPoint LiNe is restarting (control executed by the exchange).

8.2. Message "Unknown Market Participant"

Orders are rejected for this reason when the participant is not registered. The cause of this problem may be, as follows:

- Lack of required fields for such identification in the FIX message (which leads to a wrong identification of the participant);
- Participant not registered at the Exchange;
- New participant does not have limits applied to any instruments.

8.3. Message "Unknown Instrument"

Orders are rejected when the instrument is not registered in EntryPoint LiNe. The cause of this problem may be, as follows:

- Lack or inconsistency of the required fields for such identification in the FIX message (which leads to a wrong identification of the instrument);
- Instrument not registered at the Exchange.

8.4. Message "Invalid Quantity"

Orders are rejected for this reason when the buy or sell order quantity, which is identified in the FIX *OrderQty* (tag 38) field, is lower than zero.

8.5. Message "Market Participant is blocked"

Orders are rejected for this reason when the participant (identified by *k1, k2* in the rejection text) operation is blocked. This condition happens when the broker, through the Web EntryPoint LiNe Portal, blocks the participant (*panic key*). To solve this problem, the broker must unblock its participant.

8.6. Message "Instrument is blocked"

Orders are rejected for this reason when the instrument (identified by the following: *symbol, sec_id, sec_exchange, sec_id_source* in the rejection text) use is blocked. This condition happens when the Exchange Surveillance blocks the instrument. Only the Exchange can unblock the instrument.

8.7. Message "Limit is blocked"

Orders are rejected for this reason when the participant's limits (identified by *k1, k2* in the rejection text) for a determined instrument (identified by instrID in the rejection text) are "blocked" for operation. This condition happens when the broker, through the Web EntryPoint LiNe Portal, blocks the limits for this participant. To solve this problem, the limit must be unblocked again.

8.8. Message "Duplicate Order"

The EntryPoint LiNe rejects every duplicate order, thus be sure the order is always unique in the used FIX session.

8.9. Message "No limits configured for instrument"

Orders are rejected for this reason; when there are no configured limits for the instrument (identified by *symbol, sec_id, sec_exchange, sec_id_source* in the rejection text) for the current participant. The cause of this problem might be, as follows:

- Lack or inconsistency of the required fields for identification of the FIX message of the instrument or for the participant (which leads to a wrong identification of them);
- Lack of limits assignment for the instrument by the broker (or standard contract limits related to the instrument, not assigned by the broker yet).

8.10. Message "Equivalent instrument is blocked for market participant"

Orders are rejected for this reason; when there are no configured limits for the equivalent instrument (identified by its internal ID in the rejection text) for the current participant (identified by its values *k1* and *k2* in the rejection text). The cause for this problem might be:

- Lack or inconsistence of the required fields for an identification in the FIX message of the instrument (and as a consequence of the equivalent instrument) or of the participant (which leads to a wrong identification of these ones);
- Lack of limits assignment for the equivalent instrument by the broker.

8.11. Message "Order quantity > TCI (Maximum Bid Quantity) for Instrument"

Orders are rejected for this reason when the quantity in the buy order, identified in the FIX *OrderQty* field (tag 38), exceeds the maximum configured *TCI* value (for both given instrument and participant).

8.12. Message "Order quantity > TVI (Maximum Offer Quantity) for Instrument"

Orders are rejected for this reason when the quantity in the sell order, identified through the FIX *OrderQty* field (tag 38), exceeds the maximum configured *TVI* value (for both given instrument and participant).

8.13. Message "Long position exceeds limit for Instrument"

The orders are rejected for this reason when the quantity in the buy order, identified through the FIX *OrderQty* field (tag 38), exceeds the maximum configured *PCI* value (for the given instrument and participant).

8.14. Message "Short position exceeds limit for Instrument"

Orders are rejected for this reason when the quantity in the sell order, identified through the FIX *OrderQty* (tag 38), exceeds the maximum configured *PVI* value (for the given instrument and participant).

8.15. Message "Long position exceeds limit for Equivalent Instrument"

Orders are rejected for this reason when the quantity in the buy order, identified through the FIX *OrderQty* field (tag 38), exceeds the maximum configured *PCC* value (for the given instrument, equivalent instrument and participant).

8.16. Message "Short position exceeds limit for Equivalent Instrument"

Orders are rejected for this reason when the quantity in the sell order, identified through the FIX *OrderQty* field (tag 38), exceeds the maximum configured *PVC* value (for the given instrument, equivalent instrument and participant).

8.17. Message "OMS: Order not found"

The EntryPoint LiNe rejects all the changes for a non-existing order, therefore be sure the order exists and the identifiers in the change order are coherent with the original order.

8.18. Message "IFM Not Allowed"

The EntryPoint LiNe rejects all the changes for an order which hasn't been confirmed by the trading core.

8.19. Message "Financial long quantity exceeds limit for Instrument"

Orders are rejected for this reason when the quantity in the buy order, identified through the FIX *OrderQty* field (tag 38), exceeds the maximum configured *PCI* value (for the given instrument and participant).

8.20. Message "Financial short quantity exceeds limit for Instrument"

Orders are rejected for this reason when the quantity in the sell order, identified through the FIX *OrderQty* field (tag 38), exceeds the maximum configured *PVI* value (for the given instrument and participant).

8.21. Message "Financial Order quantity > TCI (Maximum Bid Quantity) for Instrument"

Orders are rejected for this reason when the quantity in the buy order, identified through the FIX *OrderQty* field (tag 38), exceeds the maximum configured *TCI* value (for the instrument and given participant).

8.22. Message "Financial Order quantity > TVI (Maximum Offer Quantity) for Instrument"

Orders are rejected for this reason when the quantity in the sell order, identified through the FIX *OrderQty* field (tag 38), exceeds the maximum configured *TVI* value (for the instrument and given participant).