



Clearing Bourse du Luxembourg

Members testing approach
Meeting 5th December, 2007

Introduction

- This meeting is targeted to introduce members with the testing solution of the Clearing Bourse de Luxembourg project.
- Handled subjects:
 - Tests principles
 - Time frame
 - Guided testing
 - Free testing
 - Next step
- This meeting will be followed by the detailed testing guide dissemination.

Test approach

Objectives

- Help members to test their internal applications and their ability to exchange information with partners and clients.
- Insure all members' for a smooth 14th March 2008 go-live.

Scope

- Luxemburg market

Test principles (as a result of the workshop with pilot CMF and TMF)

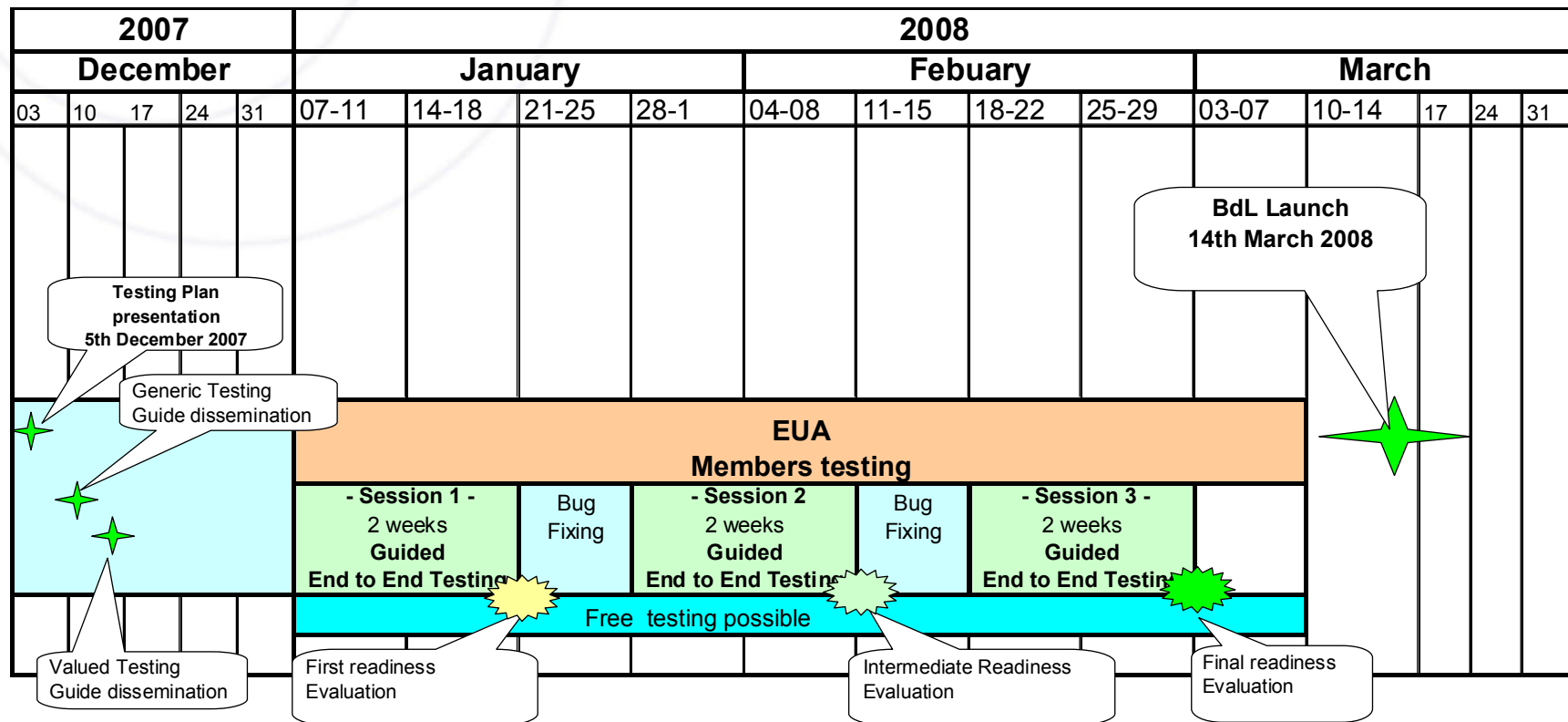
- Testing is mandatory for all participating members, CMF and TMF.
- End to End testing is proposed.
 - From the trading to the settlement, through the clearing.
 - The LCH.Clearnet SA EUA (External User Acceptance) platform is connected to trading and settlement test platforms.

Test approach

- Guided tests and Free tests are offered:
 - **Guided testing:**
 - Built to answer specific functional cases.
 - Cases are to be run following the testing guide's Isin, amounts, quantities, counterparty and schedule.
 - Members have the possibility to choose cases relevant to their business architecture.
 - **Readiness will be evaluated upon those functional cases for CMFs and TMFs.**
 - **Free testing:**
 - Dedicated to run or re-run tests, completing members needs and functionalities.
 - Depending on configuration cases will have to be provided to Trading, Clearing and Settlement 5 days before being run.
 - The free testing cases will be run with dedicated instruments provided by Bourse de Luxembourg.
- Luxemburg Stock exchange will be counterparty for buying or selling orders.
- Volume testing is not possible on the LCH.Clearnet EUA platform.

Time Frame

- Testing platform open from the 7th January 2008 to the 7th March 2008.
- Repetition of 3 sessions of 2 weeks Guided Testing is scheduled.
- All 3 sessions are identical in the cases and the organization.
- A readiness evaluation will be required at the end of each sessions.



Guided Testing

- Orders have to be input at trading level (by TMFs in preference, possible support from Bourse de Luxembourg).
- Bourse de Luxembourg will input the counterparty order(s).
- Inside a session, cases will be run from simple to more complex.
- Cases related to COE will be played.
- For COE cases no buy-in will apply.

Guided Testing

Cases related to current trading, clearing and settlement functionalities, no COE

Simple cases

Case 1	Buy guaranteed to settle (House account).
Case 2	Sell guaranteed to settle (House account).
Case 3	Buy Guaranteed to settle (Client account)
Case 4	Sell Guaranteed to settle (Client account).
Case 5	Buy Pass-through to settle (House account) on same ICSDs
Case 6	Sell Pass-through to settle (House account) on same ICSDs
Case 7	Buy Pass-through to settle (Client account) on same ICSDs
Case 8	Sell Pass-through to settle (Client account) on same ICSDs
Case 9	Buy, pass-through with settlement in different ICSDs
Case 10	Sell, pass-through with settlement in different ICSDs

Complex cases

Case 11	Buy and Sell on the same ISIN, to trigger netting. ICSD shall receive and settle a sell instruction sent to settlement. Ex.: Buy 10, Sell 5 & 7 = Sell 2 sent to settlement.
Case 12	Buy & Sell same day = Cash only sent to settlement
Case 13	Sell & same day cancelation, no instruction sent to settlement.
Case 14	Sell order, answered part in EB and part in CBL.
Case 15	Buy order, counterparty (BdL) is not able to deliver the stocks (fail), buyer will receive
Case 16	Sell order, triggering fails and buy-in process. The seller's account does not have enough stocks.
Case 17	Sell pass-through, failing
Case 18	Buy pass-through, failing

Guided Testing

Cases related to current trading, clearing and settlement functionalities, no COE

Case#	Case typologie				ICSDs Solutions	Definition	Days									
	Post-trade demand	Buy/Sell	Fail & buy-in	ICSDs Solutions			Day 1 Session x	Day 2 Session x	Day 3 Session x	Day 4 Session x	Day 5 Session x	Settlement	Day 6 Session x	Day 7 Session x	Day 8 Session x	Day 9 Session x
Case 1	Guaranteed	Buy	no	Depending of SA solution	Buy guaranteed to settle (House account).		TD		TD+2	SD			TD		TD+2	SD
Case 2	Guaranteed	Sell	no	Depending of SA solution	Sell guaranteed to settle (House account).	TD		TD+2	SD			TD		TD+2	SD	
Case 3	Guaranteed	Buy	no	Depending of SA solution	Buy Guaranteed to settle (Client account)	TD		TD+2	SD			TD		TD+2	SD	
Case 4	Guaranteed	Sell	no	Depending of SA solution	Sell Guaranteed to settle (Client account).		TD		TD+2	SD			TD		TD+2	SD
Case 5	Pass-through	Buy	no	Same ICSD	Buy Pass-through to settle (House account) on same ICSDs			TD				SD				
Case 6	Pass-through	Sell	no	Same ICSD	Sell Pass-through to settle (House account) on same ICSDs		TD			SD		TD				SD
Case 7	Pass-through	Buy	no	Same ICSD	Buy Pass-through to settle (Client account) on same ICSDs		TD			SD		TD				SD
Case 8	Pass-through	Sell	no	Same ICSD	Sell Pass-through to settle (Client account) on same ICSDs			TD				SD				
Case 9	Pass-through	Buy	no	<> ICSD	Buy, pass-through with settlement in different ICSDs		TD			SD		TD				SD
Case 10	Pass-through	Sell	no	<> ICSD	Sell, pass-through with settlement in different ICSDs			TD				SD				
Case 11	Guaranteed	Buy & Sell	no	Same ICSD	Buy and Sell on the same ISIN, to trigger netting. ICSD shall receive and settle a sell instruction sent to settlement. Ex.: Buy 10, Sell 5 & 7 = Sell 2 sent to settlement.							TD 1 buy order 2 sell orders buy < sell		TD+2	SD	
Case 12	Guaranteed	Buy	no	Same ICSD	Buy & Sell same day = Cash only sent to settlement							TD		TD+2	SD	
Case 13	Guaranteed	Buy	no	Same ICSD	Sell & same day cancelation, no instruction sent to settlement.							TD				
Case 14	Pass-through	Sell	no	<> ICSD	Sell order, answered part in EB and part in CBL.								TD 1 Sell order = 1 Buy EB + 1 Buy CBL		TD+2	SD
Case 15	Guaranteed	Buy	yes	Same ICSD	Buy order, counterparty (BdL) is not able to deliver the stocks (fail), buyer will receive cash or stock indemnity.	TD		TD+2	ISD + Fails J1	ISD + Fails J2 (BIF10)	ISD + Fails J3 (BIF20)	Buy-in for seller (SIF 40+50+61)	Buyers receive Securities or cash			
Case 16	Guaranteed	Sell	yes	Same ICSD	Sell order, triggering fails and buy-in process. The seller's account does not have enough stocks.	TD		TD+2	ISD + Fails J1	ISD + Fails J2 (BIF10)	ISD + Fails J3 (BIF20)	Buy-in for seller (SIF 40+50+61)	Buyers receive Securities or cash			
Case 17	Pass-through	Buy	yes	Same ICSD	Sell pass-through, failing			TD								
Case 18	Pass-through	Sell	yes	Same ICSD	Buy pass-through, failing			TD								

*For test purpose buy-in delay is set to 4 days

Guided Testing

Cases related to current trading, clearing and settlement functionalities, with COE

- For each COE the fails process is triggered.
- For each COE orders are input at trading level.
- For each COE Buy and Sell orders are expected.
- Settlement reporting upon anticipated request from members.

OST cases and schedule:

OST ref.	OST CASE	OST short name	Sessions														
			Day 1 Session x	Day 2 Session x	Day 3 Session x	Day 4 Session x	Day 5 Session x	Saturday	Sunday	Day 6 Session x	Day 7 Session x	Day 8 Session x	Day 9 Session x	Day 10 S.			
C1-PARI	Assimilation	PARI									RD	XD					
C1-DVOPI	Detachment of option right (bonds)	DVOPI				XD					RD	PD					
C1-INTR	Cash interest payment	INTR					XD					RD	PD				
C1-REDM	Final redemption - final maturity	REDM									XD		RD	PD			
C1-DVCA	Cash dividend payment	DVCA										XD			RD	PD	

Keys: Trade injection XD Ex-date RD Record-date PD Payment date

Guided Testing

Cases related to current trading, clearing and settlement functionalities, with COE

Case ref.	Post trade attract	Buy/Sell *	Fails & buy-in	ICSD's Solutions	Definition	Day 1 Session x	Day 2 Session x	Day 3 Session x	Day 4 Session x	Day 5 Session x	Day 6 Session x	Day 7 Session x	Day 8 Session x	Day 9 Session x	Day 10 Session x
OST Case 1	Guaranteed	Buy	Yes	Depending of SA solution	Assimilation			TD		TD+2		ISD + Fails J1	ISD + Fails J2 (BIF10)	ISD + Fails J3 (BIF20)	
OST Case 2	Guaranteed	Sell	Yes	Depending of SA solution	Assimilation			TD		TD+2		ISD + Fails J1	ISD + Fails J2 (BIF10)	ISD + Fails J3 (BIF20)	
OST Case 3	Guaranteed	Buy	Yes	Depending of SA solution	Detachment of option right (bonds)			TD		TD+2		ISD + Fails J1	ISD + Fails J2 (BIF10)	ISD + Fails J3 (BIF20)	
OST Case 4	Guaranteed	Sell	Yes	Depending of SA solution	Detachment of option right (bonds)			TD		TD+3		ISD + Fails J2	ISD + Fails J2 (BIF10)	ISD + Fails J3 (BIF20)	
OST Case 5	Guaranteed	Buy	Yes	Depending of SA solution	Cash interest payment			TD			TD+2	ISD + Fails J1	ISD + Fails J2 (BIF10)	ISD + Fails J3 (BIF20)	
OST Case 6	Guaranteed	Sell	Yes	Depending of SA solution	Cash interest payment			TD			TD+3	ISD + Fails J2	ISD + Fails J2 (BIF10)	ISD + Fails J3 (BIF20)	
OST Case 7	Guaranteed	Buy	Yes	Depending of SA solution	Final redemption - final maturity				TD			TD+2	ISD + Fails J1	ISD + Fails J2 (BIF10)	ISD + Fails J3 (BIF20)
OST Case 8	Guaranteed	Sell	Yes	Depending of SA solution	Final redemption - final maturity				TD			TD+3	ISD + Fails J2	ISD + Fails J2 (BIF10)	ISD + Fails J3 (BIF20)
OST Case 9	Guaranteed	Buy	Yes	Depending of SA solution	Cash dividend payment						TD		TD+2	ISD + Fails J1	ISD + Fails J2 (BIF10)
OST Case 10	Guaranteed	Sell	Yes	Depending of SA solution	Cash dividend payment						TD		TD+3	ISD + Fails J2	ISD + Fails J2 (BIF10)

Free testing

- Available from the 7th January till the 7th March 2008.
- **Dedicated values not to disturb guided tests**
- Cases have to be submitted to Trading, Clearing and Settlement 5 days in advance.
- Due to some potential manual processing in ICSDs the number of test cases is to be limited.
- On COE same restrictions as on guided tests apply.

Environment

- Members' access means to clearing → eCCW, CAP, MAP
- Instruments and COE scope are harmonized on Trading, Clearing and Settlement for selected products.
- Trading system: NSC
- Clearing system: LCH.Clearnet SA Clearing Systems
- Settlement platforms:
 - Euroclear Bank
 - Clearstream Banking Luxembourg

Preparation

- Reminder: completed account structures deadline 30th November.
- Status: all CMF membership extensions have been received.
- **Some account structures missing, new firm deadline 10th December.**
After this last date LCH.Clearnet does not guarantee the possibility for concerned members to enter testing period the 7th January.
- LCH.Clearnet SA will create account structures for BdL as a fictive CMF.
- Bourse de Luxembourg will create 2 settlement accounts, in both Euroclear bank and Clearstream Banking Luxembourg.
- For Free testing settlement accounts will have to be initialized in Euroclear Bank and Clearstream Banking Luxembourg by members themselves.
- Simplified POA is needed on the settlement accounts in Euroclear Bank.

Next step

- Documentation to be available next week on the LCH.Clearnet website:
 - Clearing service offer and functional gap analysis
 - Detailed testing guide including readiness form
- Joined (Trading, Clearing, Settlement) form for free tests cases declaration
- Simplified POA template for Euroclear Bank test accounts

Clearing test contacts

Dorothee Fresneau

☉ Phone: +33 1 70 37 66 05

☉ Email: Dorothee.fresneau@lchclearnet.com

Francois Marton

☉ Phone: +33 1 70 37 67 54

☉ Email: francois.marton@lchclearnet.com