

T2S Community testing and migration

LCH.Clearnet SA Cash Markets

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Abbreviations

| | |
|----------------------------|---|
| BIF | Buy-In Information File reporting sent by LCH.SA to CMFs |
| BRS | Belgium Registered Shares |
| CA | Corporate Actions |
| CET | Central European Time |
| CMF | Clearing Member firm of LCH.SA |
| CNS | Continuous Net Settlement |
| DA | Delivery Account: aggregation of positions from the PA's of the CMF/TMF into one netted position: The Original ISD is kept in the DA, One DA is linked to one SAC in T2S |
| DCA | Dedicated Cash Account in T2S |
| DVP | Delivery versus Payment |
| DWP | Delivery with Payment |
| EB | Euroclear Bank |
| EBE | Euroclear Belgium |
| EF | Euroclear France |
| ENL | Euroclear Nederland |
| ESES | Euroclear Settlement for Euronext zone Securities |
| EUA | End User Acceptance |
| FoP | Free of Payment |
| IBLS | Interbolsa |
| ISD | Intended Settlement Date: the original ISD is kept in the DA, whilst the ISD of the settlement instruction according to the CNS process receive always the next business settlement day |
| LCH.SA | LCH.Clearnet SA |
| MWDR | Migration Weekend Dress Rehearsal |
| NBB-SSS | National Bank of Belgium - Securities Settlement System |
| Payment Bank/ Paying Agent | The Payment Bank is the entity to which the cash account in T2 belongs; the final sweep from the DCA in T2S will occur on the RTGS account of the payment Bank |
| PFoD | Payment Free of Delivery |
| PonR | Point of No Return |
| PR3 | Position Resume 3 (PA's positions) |
| SA | Settlement Agent: entity taking care of the security account open in T2S |
| SAC | Securities Account in T2S |
| SDN | Settlement Date Netting |
| SIF | Settlement Instructions File reporting sent by LCH.SA to CMFs |
| STP | Straight Through Processing: automated process with no intervention of the CMF |

| | |
|------|--|
| TDGS | Trade Date Gross Settlement |
| T2S | TARGET 2 securities |
| TCS | Trade confirmation service |
| TDN | Trade Date Netting |
| TLRF | Trade Leg Reconciliation File (private File from LCH.SA) |
| TMF | Trading Member Firm |

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2 Introduction

Following the “T2S Adaptation plan V1.1” published in February 2015 and its appendix version 1.3 published in October 2015, this document aims at informing our Clearing Members of:

- What LCH.SA recommends its members to test with LCH.SA
- LCH.SA migration and launch strategy for Wave 2 go live

This document does not intend to duplicate the various documents CSDs issue to their participants' community. However, some overlap of information cannot be avoided.

In particular, this document constitutes a Clearing Member T2S test guide but cannot replace a Clearing Member's own test strategy.



Please note that for Cash Equities, LCH.SA will use BACFRPPEQ1 (for standard trades) and BACFRPPEQ2 (for buy-ins) across all CSDs migrated to T2S; including NBB-SSS for which BACFRPPXXX was previously used.

3 Community testing

3.1 Community testing platform organisation

Community testing is organized for CSDs (and their participants) in the current T2S migration wave on ECB's MIG2 platform.

Since Euroclear announced it will delay its migration to T2S to 12 September 2016, Euroclear has disconnected from the T2S Community Testing platform on December 4th. LCH.SA, on the ESES perimeter only, has also disconnected from T2S Community Testing platform.

ECB announced a new migration wave planning. For LCH.SA Cash Equity business, this means:

- Wave 2 : 29 March 2016 for NBB-SSS and IBLs
- Wave 3 :12 September 2016 for ESES CSD

As a result and so as to ensure its Clearing Members are able to test their future production setup (T2S for some CSDs and legacy platforms for others), LCH.SA has reconnected itself to Euroclear's PH platform on December 10th

For NBB-SSS and Interbolsa, the testing and migration schedule remains unchanged.

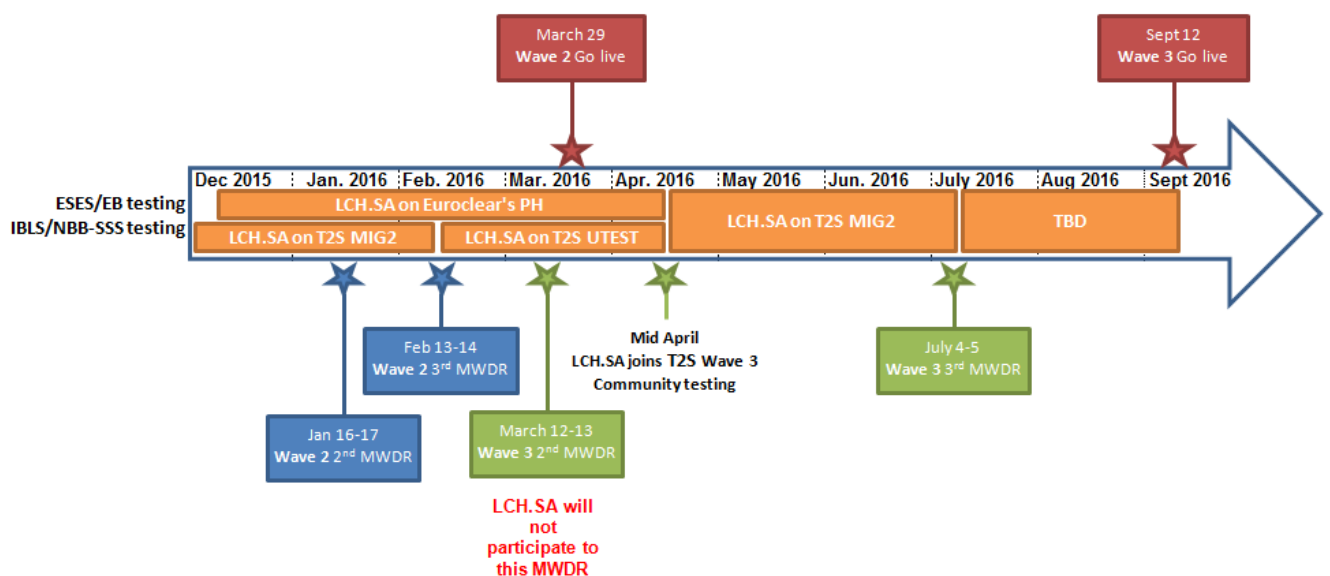


In order to secure the production migration of Wave2 to T2S in 29th March 2016, LCH.SA chooses to focus its efforts on testing IBLs and NBB-SSS migration.

As a result, LCH.SA will not possess the capacity to participate in the second Wave 3 ESES MWDR scheduled on 12th/13th March 2016.

LCH.SA will resume its testing with ESES after completion of Wave 2 migration, around mid April 2016. More information will be provided in an updated version of this document.

The following diagram present LCH.SA connections' to the CSD's test platforms for Wave 2 and Wave 3.



During the 12-13 February 2016 weekend, LCH.SA along with IBLIS, NBB-SSS and market participants will take part to Wave 2 3rd MWDR. LCH.SA will disconnect from T2S' Mig2 platform to connect to T2S' UTest platform. LCH.SA will remain on UTest until the launch and stabilisation period. **Therefore we request our Clearing Members to remain on UTest to test their cleared activity. Those of them who are ICPs participant in NBB-SSS, should ensure their activity is routed by NBB-SSS to UTest.**

3.2 Community testing purposes

Even though LCH.SA does not impose nor organize any testing, we recommend our Clearing Members to carry out a minimum testing with us.

To that effect LCH.SA has chosen to present those tests by order of complexity:

1. LCH.SA reporting test concern the member's ability to process LCH.SA clearing and settlement reporting integration (SIF and BIF).
2. Reconciliation of settlement information with LCH.SA reporting
3. Buy-ins
4. Corporate action on flows.

TRLF and PR3 reporting are not impacted by T2S developments and will be available, as usual, on our EUA test environment.

Clearing Members or their TMF are responsible for:

- Order injection in Euronext test platform ;
- Test case creation based on recommended ISIN

Clearing Members or their Settlement/Paying Agent are responsible for:

- Availability of resources (cash and security) at CSD/NCB to ensure efficient testing.

LCH.SA will roll out its software for T2S in two releases:

1. Release 1 was rolled out on November 9th 2015 excludes buy-ins, non-guaranteed and corporate action. As a consequence, LCH.SA will not be producing BIF files until the rollout of release 2.
2. Release 2, scheduled for early February 2016, will incorporate buy-ins, non-guaranteed and corporate actions

As described in the adaptation plan, LCH.SA will upgrade its SIF/BIF reporting to a new format for CSDs migrated to T2S. In particular LCH.SA will continue to use the "old" SIF/BIF format for:

- All trades settling in Bourse du Luxembourg
- CSDs that have already announced they will not migrate in Wave 2 (at this stage ESES)
- Any Wave 2 CSD that would declare a "No Go" during the T2S migration week-end.

3.3 Release 1: Guaranteed activity in T2S

3.3.1 SIF Reporting

LCH.SA has provided Clearing Members with generic SIF file sample on October 5th 2015. The purpose of this sample is to allow members to check their ability to parse the new SIF file formats.



3.3.2 Core settlement testing

LCH.SA recommends members test their ability to reconcile LCH.SA's reporting with settlement information stemming from CSDs, T2S directly or third parties such as settlement agents or ISVs.

LCH.SA recommends to test against the variety of:

- Netting, including strange net (4 cases : DvP, DwP, FoP and PFoD) (4 scenarios)
- Settlement outcome: settled, partially settled and unsettled (3 scenarios)
- Side : buy, sell (2 scenarios)
- Expression of the quantity : UNIT/FAMT (2 scenarios)

This amounts to 48 scenarios per CSD (4x3x2x2).

LCH.SA recommends to

- a) reconcile trading information stemming from their systems and/or Euronext's with the one provided by LCH.SA's.
- b) reconcile settlement information stemming from LCH.SA with settlement information provided by CSDs / T2S / 3rd party

In particular, LCH.SA recommends the following steps be checked:

- Order input in Euronext test platform
- Netting reconciliation with LCH.SA (SIF record 110) for guaranteed trades posted in their PAs and TLRf (if relevant)
- Consistency checks between SIF records 110+120 and SIF record 160
- Consistency checks between fully or partially unsettled instructions with LCH.SA's SIF record 120

Wave 3 testing

For ESES, some testing with LCH.SA already took place from 9th November 2015 till 4th December 2015. Core T2S settlement testing with LCH.SA will resume around mid April 2016.

3.4 Release 2: Non-guaranteed, buy-ins and corporate actions in T2S

3.4.1 SIF/BIF Reporting

Samples of "new" BIF will be provided in mid January 2016 as well as additional sample records for SIF reporting (records 125, 161, 162 and 165).

3.4.2 Non-guaranteed securities testing

For those securities, LCH.SA instructs a gross DvP transaction against the buyer's DA and the seller's DA (without novation). In particular, LCH.SA reports to its members the instruction sent (SIF record 165) but does not give settlement feedback for this type of trade.

LCH.SA recommends to test against the variety of:

- Side : buy, sell (2 scenarios)
- Expression of the quantity : UNIT/FAMT (2 scenarios)

This amounts to 4 scenarios per CSD.

For Wave 2, the only market for which there are non-guaranteed securities is Euronext Lisbon and has selected a list of securities (cf. **0**). Clearing Members are invited to test early February 2016,

For Euronext Paris, Amsterdam and Brussels, LCH.SA will be ready for member testing around mid April 2016 and will select a list of securities in a later version of this document.

3.4.3 Buy-in testing

LCH.SA recommends to enter trades whose net will fail to settle because of a lack of securities and to leave them as fails for until ISD+4 so as to trigger the buy-in procedure. LCH.SA will also be available to test the “impacted buyer” scenario with members.

For members who have opened dedicated buy-in accounts, LCH.SA recommends a particular focus on this new feature.

LCH.SA recommends to test against the variety of:

- Side : buy, sell (2 scenarios)
- Expression of the quantity : UNIT/FAMT (2 scenarios)

This amounts to 4 scenarios per CSD

For Wave 2, Clearing Members are invited to test in early February 2016,

Wave 3 testing

For ESES and EB (I)CSDs, LCH.SA will be ready for member testing around mid April 2016.

3.4.4 Corporate actions testing

LCH.SA manages corporate actions on flows when it operates under a **CNS model**. In order to test CA on flows against CCP transactions, you are requested to be in fail status by end of record date of the CA.

For Interbolsa, LCH.SA will handle corporate actions on flows as of early February 2016. We invite our members to refer to Interbolsa’s Corporate Action calendar for Q1 2016.

For NBB-SSS (in **SDN model**), CA on flow testing is already possible and operated by NBB-SSS. We have selected ISINs for our members to tests in **7.1**

Wave 3 testing

For ESES and EB (I)CSDs, LCH.SA will be ready for member testing around mid April 2016 and will coordinate with Euroclear to provide a list of securities and Corporate Actions, published in a later version of this document.

3.5 Migration Weekend Dress Rehearsals

3.5.1 Principles

LCH.SA has chosen to proceed to MWDRs with test data through the following steps:

1. A few days before a MWDR and for the CSDs it concerns, LCH.SA will revert to its EUA test environment to the current production-like setup. During that process and for the concerned CSDs only, LCH.SA will purge its EUA test environment with all dynamic data, such as positions, fails, manual book entries etc;
2. Clearing Members and their TMFs inject as many trades in Euronext test platform as possible and manage their own resources (cash & securities) so as to have a maximum number of fails migrated from the legacy platform to T2S. LCH.SA will run its CNS/SDN as usual.

-
- LCH.SA requests its Clearing Members to use the list of ISINs it has prepared to insure liquidity on Euronext's test platform;
3. After the PoNR, LCH.SA sends settlement instructions corresponding to its usual processing (CNS or SDN) based on its EUA positions.
 4. SIF & BIF files – in the new format – will be available in the usual LCAPs early Sunday morning

The below CSDs will proceed as follows:

- IBLs will use production data
- NBB-SSS will use “production like” data e.g. production data slightly adjusted
- ESES/EB : will be detailed in a updated version of this document

As a result, LCH.SA asks its Clearing Members to take into account those different approaches when analyzing their MWDR outcome:

- For stocks and balances; as per each CSD methodology
- For historic fails: as LCH.SA instructs T2S
- For new positions: as LCH.SA instructs T2S

3.5.2 Wave 2 2nd MWDR: 16-17 January 2016 for IBLs and NBB-SSS

The T2S test environment for this migration is **MIG2**.

As of January 11th 2016, LCH.SA will revert its EUA test environment to the current production-like setup as described above.

So as to insure liquidity on Euronext's test platform, LCH.SA recommends all its members use the list of ISINs detailed in 7.1 for their testing with us.

LCH.SA reminds its Clearing Members it will instruct from its EUA test environment to T2S test environment MIG2:

- For IBLs, LCH.SA will consider all EUA test environment positions with an $ISD \leq$ February 15th as fails and will instruct T2S accordingly through its CNS. IBLs will migrate production balances as Friday 15th CoB.
- For NBB-SSS, LCH.SA will consider all EUA test environment positions with an $ISD \leq$ February 15th as fails. LCH.SA will instruct MIG2 under BACPFRRPEQ1 with EUA test environment positions of January 18th ISD and the EUA fails. NBB-SSS will migrate production like balances and fails as Friday 15th CoB using LCH.SA under BACPFRRPXXX. Those fails against BACPFRRPXXX will be in error in MIG2 and will be discarded.

As a DCP participant, LCH.SA will only be able to send T2S its instructions after the Point of No Return. SIF files – in the new format – will be available in the usual LCAPs and eCCWs early Sunday 17th morning.

3.5.3 Wave 2 3rd MWDR: 13-14 February 2016 for IBLs and NBB-SSS

The T2S test environment for this migration is **Utest**.

LCH.SA' will use the same migration procedure same as in the Wave 2 2nd MWDR.

For IBLs, LCH.SA will have rolled out its second release, including corporate actions and buy-ins management. Please refer to IBLs' Corporate Action calendar so that LCH.SA process Market Claims on members' behalf.

3.5.4 Wave 3 2nd MWDR: 12-13 March 2016 for ESES

LCH.SA chooses to focus on the go live on Wave 2. As a result, LCH.SA will not participate to this MWDR and will join T2S Community Testing on MIG2 in mid April 2016.

LCH.SA will update this document at a later stage and will give more information on Wave 3 MWDRs.

4 Wave 2 production migration principles

The migration weekend starts on **Thursday march 24th 2016 CoB** and ends on **Tuesday march 29th 2016 EoD**. LCH.SA has designed its migration and software on a per CSD basis. As a consequence, LCH.SA is also ready to deal with a CSD cancelling its migration to T2S during the migration weekend.

4.1 Interbolsa

4.1.1 Guaranteed trades in CNS mode: Interbolsa

As usual, all previous fails (ISD \leq March 24th) in the legacy CSD's platform will be cancelled.

Through its CNS, LCH.SA will make sure that the settlement instructions after the CNS are sent to the relevant settlement engine for first T2S accounting day (Tuesday March 29th 2016). Should Interbolsa decide not to proceed with the migration, LCH.SA would act as if the migration weekend did not happen and will instruct on the legacy platform.

4.1.2 Non-guaranteed trades: Euronext Lisbon settling in Interbolsa

LCH.SA currently has a per market procedure for sending non-guaranteed transactions to settlement. When T2S goes live and for all markets, LCH.SA will send all non-guaranteed transactions to settlement at Trade Date.

For Euronext Lisbon, both the CSD and LCH.SA face technical migration issues preventing them to send the non-guaranteed securities traded on **March 23rd 2016** to settlement.

However, non-guaranteed traded until March 22nd 2016 included or as of March 24th 2016 are handled by LCH.SA.

Exceptionally for Trade date of March 23rd 2016:

After the Point of No Return, LCH.SA kindly requests its members to instruct T2S for matching the non-guaranteed trades as if they were OTC transactions with an ISD of **Tuesday March 29th 2016**. The **identity of the counterpart is given in both 5011 message: the counterparty's TMF is given in position 546 and counterparty's CMF in position 556**.

4.1.3 Non-clearable securities: Euronext Lisbon

Two days ahead of the migration weekend, non-clearable securities traded on the Euronext Lisbon will be flagged by Euronext as such in dedicated trading groups.

LCH.SA will no longer receive transactions on those securities as of **Wednesday March 23rd 2016 opening of market**. Therefore LCH.SA invites its Clearing Members to inform their Trading Members to handle the settlement of trades on such securities.

| | Trade date \leq March 22 nd | Trade date = March 23 rd | Trade date \geq March 24 th |
|-----------------------|---|--|---|
| Non-guaranteed trades | Sent by LCH.SA to IBLIS | OTCs in T2S | Sent by LCH.SA to T2S |
| Non-clearable trades | Do not exist | Not received by LCH.SA | Not received by LCH.SA |

4.2 NBB-SSS

4.2.1 Guaranteed trades in SDN mode: for NBB-SSS

As of today, only Belgium corporate and government bonds are netted in a "Settlement Day Netting" mode.

LCH.SA will change its T2S BIC code for Belgium bonds during the migration weekend and will entirely handle the procedure. LCH.SA will instruct new positions and reinstruct all historic fails as BACPFRPPEQ1. Those fails will be in error in MIG2 and will be discarded.

Should NBB-SSS decide not to proceed with the migration, LCH.SA would act as if the migration weekend did not happen and will continue to instruct, as BACPFRPPXXX, on the legacy platform.

4.2.2 Collateral account

LCH.SA collateral account at NBB-SSS in T2S will be **NBBE100899951078** operated under **BACPFRPPBRU** BIC code.

5 Between Wave 2 and Wave 3

5.1 SIF/BIF reporting

As Euroclear has delayed its migration to 12th September 2016 and assuming IBLs and NBB-SSS migrate during the March 24th week-end,

1. LCH.SA **requires** its Clearing Members are able to deal with both “new” and “old” SIF/BIF file formats
2. LCH.SA has summed up in the table below the type of reporting that will be used in production

| | Business date ≤ March 24 th 2016 | March 29 th 2016 ≤ Business date ≤ Sept 9 th 2016 | Business date ≥ Sept 12 th 2016 |
|--|---|---|--|
| IBLS | Old SIF/BIF | | New SIF/BIF |
| NBB-SSS | Old SIF/BIF | | New SIF/BIF |
| ESES | | Old SIF/BIF | New SIF/BIF |
| Euroclear Bank (ICSD) | | Old SIF/BIF | New SIF/BIF |
| Clearstream Banking Luxembourg (ICSD) | | Old SIF/BIF | |

5.2 Buy-in procedures for both migrated and non migrated CSDs

Until all CSDs migrate to T2S, LCH.SA will have two different pieces of software for its cash equity business: one targeting the legacy platforms, the other targeting T2S. As a result, the buy-in procedure will slightly differ for T2S migrated CSDs from non-T2S migrated CSD, the difference being summed up below.

LCH.SA provides its member with a comprehensive description of the new procedure in its Adaptation Plan, and only highlights the major differences in this present document.

| | Migrated CSD | Non migrated CSD |
|------------------|---|--|
| ISD+4 EoD | LCH.SA cancels the positions under the buy-in process and will reinstruct buy-ins as a DvP instruction on LCH.SA's buy-in account. If the member has specified a buy-in account, LCH.SA will use the member's buy-in DA otherwise the member's standard DA. | LCH.SA cancels the positions under the buy-in process. |
| ISD+5 | This applies to both the defaulting seller and the waiting buyer(s) Security providers have to instruct their leg in as a DvP | This applies to both the defaulting seller and the waiting buyer(s) Security providers must deliver the securities on LCH.SA's buy in |

| | Migrated CSD | Non migrated CSD |
|-------|---|--|
| ISD+6 | <p>instruction against LCH.SA's buy-in account.</p> <p>LCH.SA will match against the new seller(s) so that the instruction can settle.</p> <p>When securities are delivered, LCH.SA will deliver them to the waiting buyer(s) as DvP instructions</p> | <p>account through a FoP instruction</p> <p>When securities are found at, LCH will deliver to the waiting buyer(s) as FoP instructions</p> |
| | <p>LCH.SA instructs cash compensation through a PFoD instruction.</p> | <p>LCH.SA instructs cash movements (including securities payment and compensation) through a PFoD instruction.</p> |

6 Wave 3 production migration principles

The migration weekend starts on **Friday September 9th 2016 COB** and ends on **Monday September 12th 2016 EoD**. LCH.SA has designed its migration and software on a per CSD basis. As a consequence, LCH.SA is also ready to deal with a CSD cancelling its migration T2S during the migration weekend.

6.1 Guaranteed trades in CNS mode: EF, EBE, ENL and EB

Through its CNS, LCH.SA will make sure that in any case the settlement instructions after the CNS will be sent to the relevant settlement engine for first T2S accounting day (Monday September 12th 2016).

In all cases and as usual, all previous fails (ISD ≤ September 9th) in the legacy CSD's platform will be cancelled.

Should a CSD decide not to proceed with the migration, LCH.SA would act as if the migration weekend did not happen and will continue to instruct on the legacy platform.

6.2 Non-guaranteed trades

LCH.SA currently has a per market procedure for sending non-guaranteed transactions to settlement. When T2S goes live and for all markets, LCH.SA will send all non-guaranteed transactions to settlement at Trade Date.

The impacts of this change are detailed below.

6.2.1 Euronext Paris

For Euronext Paris, both the CSD and LCH.SA face technical migration issues preventing them to migrate the non-guaranteed securities traded on Thursday **September 8th 2016** to settlement.

However, non-guaranteed traded until **September 7th 2016** included or starting at September 12th 2016 are handled by LCH.SA.

Exceptionally for Trade date of Thursday September 8th 2016:

After the Point of No Return, LCH.SA kindly requests its members to instruct T2S for matching the non-guaranteed trades as if they were OTC transactions with an ISD of **Monday September 12th 2016**. **The identity of the counterpart is given in both 5011 message: the counterpart's TMF is given in position 546 and counterpart's CMF in position 556.**

6.2.2 Euronext Amsterdam

As of today, LCH.SA does not send non-guaranteed trades negotiated in Euronext Amsterdam to settlement, leaving this to Clearing Member. Starting at trade date **September 12th 2016**, LCH.SA will send them to the relevant settlement platform.

6.2.3 Euronext Brussels

The only non-guaranteed securities tradable in Euronext Brussels are Belgian Registered Shares which will be considered as non-clearable and which Euronext Brussels will send as gross trades for settlement.

Until the trade date Wednesday September 7th 2016 included, LCH.SA will send gross trades on those securities to settlement in EBE.

6.3 Non-clearable securities

Two days ahead of the migration weekend, non-clearable securities traded on the Euronext Amsterdam will be flagged by Euronext as such in dedicated trading groups.

LCH.SA will no longer receive transactions on those securities as of **Thursday September 8th 2016 opening of market**. Therefore LCH.SA invites its Clearing Members to inform their Trading Members to handle the settlement of trades on such securities.

| | Trade date ≤ Sept 7 th | Trade date = Sept 8 th | Trade date = Sept 9 th | Trade date ≥ Sept 12 th |
|---|-----------------------------------|--|--|--|
| Non guaranteed traded in Euronext Paris | Sent by LCH.SA to for settlement | OTCs in T2S/EB | Sent by LCH.SA to T2S/EB | Sent by LCH.SA to T2S/EB |
| Non guaranteed traded in Euronext Amsterdam | OTCs in the T2S/EB | OTCs in the T2S/EB | OTCs in the T2S/EB | Sent by LCH.SA to T2S/EB |
| Non guaranteed traded in Euronext Brussels | Sent by LCH.SA for settlement | Sent by Euronext for settlement and no longer received by LCH.SA | Sent by Euronext for settlement and no longer received by LCH.SA | Sent by Euronext for settlement and no longer received by LCH.SA |
| Non clearable trades | Do not exist | Not received by LCH.SA | Not received by LCH.SA | Not received by LCH.SA |

7 Appendices

7.1 Test ISINs from December 4th and onward

| Trading Code | ISIN | Long Name | Clearing Currency | CSD | CoE Type | Record date |
|---------------|---------------|--------------------|-------------------|------|------------------|-------------|
| LU0444605215 | LU0444605215 | COMSTAGE PSI20 | EUR | IBLS | N/A | N/A |
| PTEDP0AM0009 | PTEDP0AM0009 | EDP | EUR | IBLS | N/A | N/A |
| PTOTEA0E0021 | PTOTEA0E0021 | OT4,95%25OCT23 | EUR | IBLS | N/A | N/A |
| PTPTC0AM0008 | PTPTC0AM0009 | PHAROL | EUR | IBLS | N/A | N/A |
| PTRELOAM0008 | PTRELOAM0008 | REN | EUR | IBLS | N/A | N/A |
| PTTD10AM0000 | PTTD10AM0000 | TEIXEIRA DUARTE | EUR | IBLS | N/A | N/A |
| PTTRVA0E0001 | PTTRVA0E0001 | T.VIDA FRN19DEC22 | EUR | IBLS | N/A | N/A |
| PTTRVBOE0000 | PTTRVBOE0000 | TRANQ.VIDA FRNPL | EUR | IBLS | N/A | N/A |
| ES0127797019 | ES0127797019 | EDP RENOVAVEIS | EUR | IBLS | N/A | N/A |
| PTALT0AE0002 | PTALT0AE0002 | ALTRI SGPS | EUR | IBLS | N/A | N/A |
| PTMEN0AE0005 | PTMEN0AE0005 | MOTA ENGIL | EUR | IBLS | N/A | N/A |
| PTJMT0AE0001 | PTJMT0AE0001 | J.MARTINS,SGPS | EUR | IBLS | N/A | N/A |
| PTIPR0AM0000 | PTIPR0AM0000 | IMPRESA,SGPS | EUR | IBLS | N/A | N/A |
| PTOTE6OE0006 | PTOTE6OE0006 | OT4,2%15OCT16 | EUR | IBLS | N/A | N/A |
| PTOTECO0E0029 | PTOTECO0E0029 | OT 4,8% 15JUN20 | EUR | IBLS | N/A | N/A |
| PTPTI0AM0006 | PTPTI0AM0006 | PORTUCEL | EUR | IBLS | N/A | N/A |
| PTCOR0AE0006 | PTCOR0AE0006 | CORTICEIRA AMORIM | EUR | IBLS | N/A | N/A |
| PTGAL0AM0009 | PTGAL0AM0009 | GALP ENERGIA-NOM | EUR | IBLS | N/A | N/A |
| BE0000321308 | BE0000321308 | OLO4,25%28SEP21 | EUR | NBB | N/A | N/A |
| BE0000323320 | BE0000323320 | OLO3,50%28JUN17 | EUR | NBB | N/A | N/A |
| BE0002301704 | BE0002301704 | ATRIUM1-A2 16 731 | EUR | NBB | Coupon | 07/01/2016 |
| BE0002364363 | BE0002364363 | BMI CLASS A 08-54 | EUR | NBB | Coupon | 14/01/2016 |
| BE0002365378 | BE0002365378 | BMI CLASS B 08-57 | EUR | NBB | Coupon | 14/01/2016 |
| BE0002366384 | BE0002366384 | BMI CLASS C 08-54 | EUR | NBB | Coupon | 14/01/2016 |
| BE0002367390 | BE0002367390 | BMI CLASS D 08-54 | EUR | NBB | Coupon | 14/01/2016 |
| BE0002368406 | BE0002368406 | BMI CLASS E 08-54 | EUR | NBB | Coupon | 14/01/2016 |
| BE0002469444 | BE0002469444 | MERC1A2.75%24APR35 | EUR | NBB | Coupon | 22/01/2016 |
| BE0001712638 | BE0001712638 | RWALLO 4%28JAN19 | EUR | NBB | Coupon | 27/01/2016 |
| BE0002459346 | BE0002459346 | BELFIU1.25%28JAN19 | EUR | NBB | Coupon | 27/01/2016 |
| BE0002210764 | BE0002210764 | HAMON5.5%30JAN20 | EUR | NBB | Coupon | 29/01/2016 |
| BE0002220862 | BE0002220862 | INTEGR6.25%31JAN25 | EUR | NBB | Coupon | 29/01/2016 |
| BE0002460351 | BE0002460351 | BELFIUS1%11FEB19 | EUR | NBB | Coupon | 10/02/2016 |
| BE0000322314 | BE0000322314 | OLO FRN 15FEB16 | EUR | NBB | Coupon | 12/02/2016 |
| BE0000322314 | BE0000322314 | OLO FRN 15FEB16 | EUR | NBB | Total Redemption | 12/02/2016 |
| BE0002190560 | BE0002190560 | DEME 4.145%14FEB19 | EUR | NBB | Coupon | 12/02/2016 |
| BE0002461367 | BE0002461367 | BELFIU2.83%17FEB34 | EUR | NBB | Coupon | 16/02/2016 |
| BE0002222884 | BE0002222884 | BANIMM4,25%19FEB20 | EUR | NBB | Coupon | 18/02/2016 |
| BE0002469444 | BE0002469444 | MERC1A2.75%24APR35 | EUR | NBB | Coupon | 23/02/2016 |
| BE0002462373 | BE0002462373 | KBCBANK1%25FEB19 | EUR | NBB | Coupon | 24/02/2016 |

| | | | | | | |
|--------------|--------------|--------------------|-----|-----|---------------------|------------|
| BE6254212408 | BE6254212408 | IRC6.25%28FEB18 | EUR | NBB | Coupon | 26/02/2016 |
| BE0000996265 | BE0000996265 | BELG3,75%4MAR16 | EUR | NBB | Coupon | 03/03/2016 |
| BE0000996265 | BE0000996265 | BELG3,75%4MAR16 | EUR | NBB | Total Redemption | 03/03/2016 |
| BE3871215427 | BE3871215427 | BELG3,75%4MAR17 | EUR | NBB | Coupon | 03/03/2016 |
| BE3871224510 | BE3871224510 | BELG3,25%4MAR18 | EUR | NBB | Coupon | 03/03/2016 |
| BE3871232596 | BE3871232596 | BELG3,20%4MAR16 | EUR | NBB | Coupon | 03/03/2016 |
| BE3871232596 | BE3871232596 | BELG3,20%4MAR16 | EUR | NBB | Total Redemption | 03/03/2016 |
| BE3871233602 | BE3871233602 | BELG3,75%4MAR19 | EUR | NBB | Coupon | 03/03/2016 |
| BE3871258856 | BE3871258856 | BELG0.9%4MAR19 | EUR | NBB | Coupon | 03/03/2016 |
| BE3871259862 | BE3871259862 | BELG1.75%4MAR22 | EUR | NBB | Coupon | 03/03/2016 |
| BE0002211770 | BE0002211770 | EANDIS3.55%5MAR44 | EUR | NBB | Coupon | 04/03/2016 |
| BE0002212786 | BE0002212786 | EANDIS3.55%5MAR36 | EUR | NBB | Coupon | 04/03/2016 |
| BE0001709600 | BE0001709600 | VLAGE3.65%10MAR20 | EUR | NBB | Coupon | 09/03/2016 |
| BE0002309780 | BE0002309780 | ATRIUM2-A2 17 637 | EUR | NBB | Coupon | 18/03/2016 |
| BE0002463389 | BE0002463389 | KBCGROEP5.625%PERP | EUR | NBB | Coupon | 18/03/2016 |

7.2 Sample list of Portuguese non-guaranteed securities

| Trading Code | ISIN | Long Name | CSD |
|--------------|--------------|--------------------|------|
| PTCPN0AE0002 | PTCPN0AE0002 | CIPAN | IBLS |
| PTFEN0AP0006 | PTFEN0AP0006 | FENALU | IBLS |
| PTBCPMOM0002 | PTBCPMOM0002 | BCP FRNPLD | IBLS |
| PTCDU0AE0003 | PTCDU0AE0003 | CONDURIL | IBLS |
| PTHOVBOE0007 | PTHOVBOE0007 | HOVIONE FRN02OCT23 | IBLS |
| PTSCB0AM0001 | PTSCB0AM0001 | S.CLUBE BRAGA | IBLS |
| PTCMKOXE0001 | PTCMKOXE0001 | CEMG 6,153% 18 | IBLS |
| PTLIT0AE0005 | PTLIT0AE0005 | LITHO FORMAS | IBLS |

7.3 Non clearable securities as of March 23rd 2016

| Trading Code | ISIN | Long Name | CSD |
|--------------|--------------|--------------------------------------|------|
| PTCMLAOE0007 | PTCMLAOE0007 | Câmara Municipal Lisboa | IBLS |
| PTEIECOM0008 | PTEIECOM0008 | EDIA Guaranteed Notes 2010/2030 | IBLS |
| PTPEPEOE0004 | PTPEPEOE0004 | PARQUE EXPO TV10 | IBLS |
| PTRAMMOE0009 | PTRAMMOE0009 | RAM FRN 03JUN28 | IBLS |
| PTGAMMOM0010 | PTGAMMOM0010 | ATLANT4AFRN26DEC43 | IBLS |
| PTGAMNOM0019 | PTGAMNOM0019 | ATLANT4BFRN26DEC43 | IBLS |
| PTGAM3OM0008 | PTGAM3OM0008 | ATLANT6 FRN20JAN33 | IBLS |
| PTGAMAOM0014 | PTGAMAOM0014 | Atlantes nº 7 - Class A | IBLS |
| PTBSSHOM0008 | PTBSSHOM0008 | Brisa CR FRN7JUN20 | IBLS |
| PTSSCAOM0004 | PTSSCAOM0004 | Class A Mortgage Backed FRN 2062 | IBLS |
| PTSSCBOM0003 | PTSSCBOM0003 | Class B Mortgage Backed FRN 2062 | IBLS |
| PTSSCDOM0001 | PTSSCDOM0001 | Class D Notes 2062 | IBLS |
| PTSSCMOM0000 | PTSSCMOM0000 | Douro SME nº 2 - Class A | IBLS |
| PTTGUAOM0005 | PTTGUAOM0005 | EnergyOn nº1 Securitisation Notes | IBLS |
| PTRELKOM0008 | PTRELKOM0008 | REN FRN16JAN20 | IBLS |
| PTSSC8OM0001 | PTSSC8OM0001 | THETISA1.1%25JUL38 | IBLS |
| PTSSCAOM0004 | PTSSCAOM0004 | SAGRES AFRN16JUL62 | IBLS |
| PTSSCBOM0003 | PTSSCBOM0003 | SAGRES BFRN16JUL62 | IBLS |
| PTSSCDOM0001 | PTSSCDOM0001 | SAGRES D16JUL62 | IBLS |
| PTSSCMOM0000 | PTSSCMOM0000 | DOURO 2FRN21DEC39 | IBLS |
| PTSSCQOM0006 | PTSSCQOM0006 | PELICAN6FRN26DEC63 | IBLS |
| PTSSCWOM0008 | PTSSCWOM0008 | PELIC A FRN25FEB43 | IBLS |
| PTSSCXOM0007 | PTSSCXOM0007 | PELIC B FRN25FEB43 | IBLS |
| PTSSCYOM0006 | PTSSCYOM0006 | PELIC C FRN25FEB43 | IBLS |
| PTTGUAOM0005 | PTTGUAOM0005 | TAGUS FRN 12MAY25 | IBLS |
| PTTGUDOM0002 | PTTGUDOM0002 | TAGUS A FRN12MAY25 | IBLS |
| PTTGUFOM0018 | PTTGUFOM0018 | VOLTA 2.98%16FEB18 | IBLS |
| PTTGUIOM0007 | PTTGUIOM0007 | NOSTRUM N2-CLASSA | IBLS |

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|--------------|--------------|--------------------|------|
| PTTGUNOM0018 | PTTGUNOM0018 | VOLTA4.172%16FEB17 | IBLS |
| PTTGUOOM0017 | PTTGUOOM0017 | VOLTA 1,99%12FEB19 | IBLS |
| PTTGUYOM0015 | PTTGUYOM0015 | PELICAN3%25DEC28 | IBLS |
| PTBEROOM0030 | PTBEROOM0030 | BES USD 8%PLD | IBLS |