T2S

Follow-up on 3rd WS on Market Settlement Efficiency

Evolution of Aged instructions

target | T2S
services

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Analysis: Evolution of Aged instructions (based on data from January 2nd, April 1st and October 1st 2019)

1. Executive summary

The Aged Instruction analysis provides statistics on matched settlement instructions excluding the instructions generated by T2S (e.g. realignment, auto-collateralisation), according to their intended settlement date as per age ranges.

These ranges group aggregated settlement instruction data by Intended Settlement Day (ISD) Age within buckets for each month up to all ISDs greater than a year (< 1 month, < 2 month …. up to > 1 year).

The first step analysis of Aged transaction performed for the WS-MSEI Step 3 has shown a significant portion of unsettled instructions that remain in T2S over time, impacting the settlement efficiency.

A follow-up analysis of the evolution of the aged instructions has been performed, comparing the data from the 2nd of January, 1st of April 2019 and the 1st of October 2019, in order to identify any significant decrease that may have happened upon clean-up actions on the most aged instructions.

This analysis compares the stock of aged instructions and the flow of aged instructions within the data sets. The stock refers to the unsettled instructions with the same ISD, but as they migrate from different buckets across the distinct data sets, while the flow refers to the daily unsettled instructions that permanently increase the volume of unsettled instructions.

In substance, this further analysis of aged transactions shows the following:

- The stock of unsettled instructions – i.e. the unsettled instructions that refer to the same ISD in the January, April and October periods – are decreasing significantly thanks to clean-up actions performed by the CSDs through either the settlement or the cancellation of these pending instructions (see § 2)

- However, the flow of new unsettled instructions increases every day at the level of the daily settlement fail ratio, keeping the global volume and value of unsettled transactions high in January, April and October (see §3)

- As a consequence, the clean-up actions of the unsettled aged transactions are not sufficient in magnitude to obtain a significant decrease of the unsettled instructions nor a noteworthy impact on the settlement efficiency.

- The decrease of unsettled instructions is by the way also obtained due to the decrease observed in the daily settlement (see § 3 with a decrease of the 1 month unsettled instructions from 81.495 in April to 67.095 in October)

- However, most importantly a decrease of the unsettled aged instructions would be obtained with a substantial reduction of the duration of aged instructions that are retained within T2S. Based on the current figures the volume of unsettled transactions would decrease of an additional 20% if only 60 days of unsettled instructions would be kept in the system as is proposed with CR-691 – As a result, the settlement efficiency would gain an additional improvement close to 2% on average (see §4).

2. Evidence of decreasing stock of aged instructions

2.1. Analysis in volume

The intention of this analysis is to assess the reduction in the number of aged instructions. As such, we have focused our attention on the volume of aged instructions.

The evolution of the stock of the number instructions is visible in the tables below by comparing the instructions within the equivalently coloured cells in each table:
- Unsettled instructions with an ISD in 2 Month bucket in January are found in 05 Month bucket in April and in 11 Month bucket in October
- Unsettled instructions with an ISD in 3 Month bucket in January are found in 06 Month bucket in April and in 12 Month bucket in October
- Etc…

A reduction in the volume for each bucket is apparent. This is in line with the clean-up process performed by the CSDs between these 3 periods.

02/01/2019	# Unsettled Inxs	Total # Inxs	01/04/2019	# Unsettled Inxs	Total # Inxs	01/10/2019	# Unsettled Inxs	Total # Inxs
< 01 Mth	79 888	1 230 418	< 01 Mth	81 495	1 214 838	< 01 Mth	67 095	1 135 219
F			F	25 019	1 142 710	F	18 529	1 072 509
T			T	56 476	72 128	T	48 566	62 710
< 02 Mth	5 546	6 248	< 02 Mth	2 555	2 813	< 02 Mth	3 434	3 624
F			F	595	781	F	466	624
T			T	1 960	2 032	T	2 968	3 000
< 03 Mth	2 632	2 860	< 03 Mth	1 600	1 704	< 03 Mth	2 410	2 456
F			F	340	408	F	610	652
T			T	1 260	1 296	T	1 800	1 804
< 04 Mth	1 648	1 698	< 04 Mth	1 709	1 763	< 04 Mth	2 015	2 083
F			F	533	579	F	359	409
T			T	1 176	1 184	T	1 656	1 674
< 05 Mth	1 148	1 170	< 05 Mth	1 441	1 493	< 05 Mth	2 829	2 857
F			F	471	511	F	223	249
T			T	970	982	T	2 606	2 608
< 06 Mth	1 328	1 342	< 06 Mth	1 073	1 099	< 06 Mth	1 329	1 351
F			F	311	327	F	161	177
T			T	762	772	T	1 168	1 174
< 07 Mth	2 052	2 078	< 07 Mth	790	808	< 07 Mth	791	821
F			F	106	118	F	145	165
T			T	684	690	T	646	656
< 08 Mth	2 370	2 384	< 08 Mth	592	602	< 08 Mth	698	716
F			F	110	118	F	176	186
T			T	482	484	T	522	530
< 09 Mth	2 014	2 036	< 09 Mth	782	790	< 09 Mth	728	748
F			F	128	136	F	162	178
T			T	654	654	T	566	570
< 10 Mth	1 412	1 440	< 10 Mth	1 238	1 260	< 10 Mth	1 146	1 158
F			F	150	170	F	388	396
T			T	1 088	1 090	T	758	762
< 11 Mth	1 318	1 322	< 11 Mth	1 682	1 702	< 11 Mth	797	809
F			F	180	198	F	239	247
T			T	1 502	1 504	T	558	562

< 12 Mth	1 714	1 732
F		
T		
> 1 Year	15 006	15 126
F		
T		
Total	118 076	1 269 854

< 12 Mth	1 309	1 335
F	101	123
T	1 208	1 212
<13 Mth		
F		
T		
<14 Mth		
F		
T		
<15 Mth		
F		
T		
<16 Mth		
F		
T		
<17 Mth		
F		
T		
<18 Mth		
F		
T		
> 1 Year	10 096	10176
F	1 952	2 012
T	8 144	8 164
> 18 Mth		
F		
T		
Total	106 362	1 240 383
F	29 996	1 148 191
T	76 366	92 192

< 12 Mth	486	490
F	92	96
T	394	394
<13 Mth	462	470
F	82	86
T	380	384
<14 Mth	363	372
F	107	114
T	256	258
<15 Mth	379	381
F	93	95
T	286	286
<16 Mth	974	994
F	102	118
T	872	876
<17 Mth	1 278	1 282
F	130	132
T	1 148	1 150
<18 Mth	823	839
F	87	99
T	736	740
> 18 Mth	7 176	7 234
F	1 840	1 876
T	5 336	5 358
Total	95 213	1 163 904
F	23 991	1 078 408
T	71 222	85 496

As a result, the total of unsettled instructions has decreased from January to October, however with still a high number of aged unsettled instructions.

Additionally, the break down by Hold from the last two periods shows little change in the ratio of unsettled instructions On Hold (T- true) to those not On Hold (F - false). This remains in the order of 3 to 1 globally and for the majority of the buckets, confirming that the majority of the aged instructions are On Hold.

Last the older unsettled transaction (i-e older than 1 year in January and 18 month in April and October) still remain of a high level despite some decrease. This shows that the clean-up remains insufficient, more specifically for on hold instructions.

3. Evidence of Stable flow of unsettled instructions

Indeed despite the reduction stemming from cancellations by CSDs, it is clear that, across the three periods, the total of unsettled instructions remains high compared to the unsettled instructions having an age of 1 month. This is due to the continual volume of instructions presented for settlement within T2S coupled with the usual observed fail rates.

Furthermore, the decrease observed on the total of unsettled instructions can be attributed to the clean-up actions as well as the recent improved fail rate in October, which also translates to the lower October unsettled instructions aged 1 month.

02/01/2019		
Period	**# Unsettled**	**# Inxs**
< 01 Mth	79 888	1 230 418
Total	118 076	1 269 854

01/04/2019		
Period	**# Unsettled**	**# Inxs**
< 01 Mth	81 495	1 214 838
Total	106 362	1 240 383

01/10/2019		
Period	**# Unsettled**	**# Inxs**
< 01 Mth	67 095	1 135 219
Total	95 213	1 163 904

In simpler terms, it can be surmised that the decrease obtained from the clean-up of aged instructions and from the recent improved fail rate remains insufficient considering the still high number of unsettled instructions in T2S (close to 30.000) with an age between 1 month and the total present in T2S.

4. Evidence for improvements from implementation of recycling period

The data from the three periods shown in §2 are from production, which is currently configured with an unlimited recycling period.
In order to determine the effect of a reduced recycling period the data below is based on an extraction from those tables to clearly demonstrate the expected improvements from the application of CR 691, which intends to configure the recycling period to 60 business days (approximately 3 calendar months).

Such analysis shows that a systematic reduction in the flow of unsettled instructions would reduce by approximately an additional 20% the stock of unsettled instructions. This configuration would have resulted in an additional 1.5% reduction of the settlement fail rate for each of the 3 days analysed.

Global	02/01/2019			01/04/2019			01/10/2019		
Period	#Unsettled	# Instructions	Fail rate	#Unsettled	# Instructions	Fail rate	#Unsettled	# Instructions	Fail rate
Total	118 076	1 269 854	9,30%	106 362	1 240 383	8,57%	95 213	1 163 904	8,18%
1- 3 Mth	88 066	1 239 526	7,10%	85 650	1 219 355	7,02%	72 939	1 141 299	6,39%
Reduction	25,42%			19,47%			23,39%		

5. Conclusion

A clean-up of the aged unsettled instructions is observed between the January and October data. It remains however not sufficient in magnitude to obtain a significant decrease of the volume of unsettled instructions in T2S, provided the safekeeping of those unsettled instructions remains unlimited, as is the case today.

The decreasing volume of unsettled instructions in T2S from January to October shows that the volume of aged instructions cleaned-up by the CSDs (either thru their settlement or thru their cancellation) is balanced by the daily increasing volume of unsettled instructions.

This is a result of the stable constant flow of new unsettled instructions stemming from the daily settlement fail rate and the insufficient reduction of the aged instructions.

The analysis demonstrates that a reduction of the duration of the recycling period of unsettled instructions from the current unlimited period to a reduced and limited period of 3 months as is proposed by CR-691 would significantly decrease the volume of unsettled instructions by 20% on average.

This in turn would bring an additional improved settlement ratio close to 2% on average (MSEI and PSEI as it includes hold and non-hold instructions).