**CCMA**

**TMX – PTMP- Advisory Council**

**May 24, 2018 – 11:00 AM Eastern/8:00 AM Pacific**

**Agenda**

1. ***Introductions***
2. ***Review and approve the*** [***minutes from the meeting on March 21, 2018***](#Minutes)
3. [***CCMA Funding***](#Funding)
4. ***Oversight Committee Update***
   1. [***TMX – Response to Questions and Comments letter.***](#TMXLetter)
   2. ***[Paramax – Atlas Impact Assessment](#Paramax)***
   3. ***PTMP - Portal***
5. ***Questions***
6. ***Next Meeting June 28, 2018 at 11:00 AM ET***

**TMX – Post Trade Modernization Project - Advisory Council**

**(PTMP- AC)**

**March 21, 2018 –** **Minutes**

1. ***Introductions***

Keith Evans of CCMA welcomed all to the meeting of the CCMA Post Trade Modernization Project Advisory Council (PTMP-AC). He asked that all members email their attendance at this meeting.

1. ***Review/Approve the Minutes from the February 21, 2018 meeting.***

Keith reported that the minutes from the last meeting, held on February 21, 2018 had been distributed with the meeting package. There were no additions, subtractions or corrections requested by members, therefore, the minutes were approved as presented.

1. ***Oversight Committee Update***

Keith Evans reported that the next meeting of the Oversight Committee was scheduled for later today and that there was nothing material to report at this time, in terms of the project performance. He said that there were some structural changes being made to the project set up, and that he expected them to be approved. The first was that two Consultative Committees were be consolidated into one or more of the other five. Both the Corporate Actions and Entitlements CC, along with the Risk CC would no longer be separate consultative committees. The primary reason given, was that these items will be covered by either the Operations and GUI CC, or the System to System CC.

There were a number of questions raised by members. Most of the questions were wanting to ensure that the proper skills (i.e. Corporate Action specialist, etc.) will be present when these issues are being discussed. Both John Packwood (First North) and Daniel Farley (TMX) said that the meeting materials will clearly identify the issues to be discussed at each of the future meetings. This will allow for members to line up the appropriate skills to address those issues.

A second questions was asked to ensure that those members who had signed up for these two CC will be notified of the changes and that they will be added to the other CC. Daniel Farley from TMX confirmed that this was the case.

1. ***Project Organization Overview***

Keith Evans referred to the attached organization chart, distributed with the meeting packed, and reported that in addition to the discussion above, that there was further clarifications being provided to ensure all members understood the various roles each organization will play. In particular Keith noted that the left side of the Participant Engagement Chart now reflects the external (to the project) committees, included this Advisory Council will continue to operate independent of the TMX project. However, there will definitely be shared information between all of the committees.

1. ***Project Change Review Process***

John Packwood referenced the two attached documents included in the meeting package. He said that these provided an overview of the Change Process to be employed by the TMX project. John said that these were still to be reviewed and accepted by the Oversight Committee that he expected would take place later today. In addition, he said that a detailed description is also being presented to the Oversight Committee, and will be made available to the Advisory Council, once it is accepted and finalized. This should be available by the next meeting.

John then described the two charts, the first is the Solution Analysis process, that

* identifies the gaps between the existing system and the new system,
* describes what the impact is expected to be,
* and finally the discussion with the members of CDS and CDCC.

The second chart describes the Deployment and Testing process. This process will

* identify the technical requirements
* the impact of that technical change
* and finally the discussion with the members of CDS and CDCC.

1. ***Questions***

Both documents described above resulted in a number of questions from members. They are generally as follows.

* There were several questions around the timing of the initial phase (Solution Analysis). In particular, when did the 9 month period commence. John Packwood and Howard Bayne (First North) said that the commencement of this process was last summer and is expected to be complete soon.
* There were several discussions about the identified 42 BRSs. Howard reported that about 7 of the 42 had been completed and that the remaining ones would be completed in the next couple of months.
* There was a question and a concern around the time being allocated for testing. John said that testing will be further evaluated once the first phase (Solution Analysis) is completed.

1. ***Next Meeting***

The next meeting of the Post Tarde Modernization Project - Advisory Council is scheduled for Wednesday April 25, 2018 at 11:00 AM Eastern.

|  |  |  |
| --- | --- | --- |
| **Attended** | **Firm** | **Name** |
|  |  |  |
| X | CCMA | Keith Evans Co-Chair |
| X | CIBC | Greg Holmes Co-Chair |
|  | AMF | Martin Picard |
|  |  | Francis Coche |
| X |  | Tan Herman |
|  | AST Trust | Mark Cohen |
|  | Bank of Canada | Christian Belisle |
|  |  | Benoit Genest |
|  |  | Fuwad Siddiqi |
| X |  | Eric Chouinard |
| X |  | Danika Cheff |
| X | BBS | Deborah Carlyle |
|  | BLC | Sylvain Morissette |
|  | Broadridge | Mary-Beth Law |
| X |  | Doug Gifford |
|  |  | Sahil Duggal |
|  | Canaccord | John Coyle |
|  |  | Sheera Badial |
|  |  | Brenda McIntyre |
| X |  | Simon Whitney |
| X | Casgrain | Pierre Mital |
|  | CDS | Anne Fiddes |
|  |  | Johann Lochner |
| X |  | Daniel Farley |
|  |  | Paul Barbara |
|  |  | Margaret Reid |
| X |  | Lucy Mullins |
| X |  | Sergio Zanga |
| X | CETFA | Pat Dunwoody |
|  | CGI | Steven Dulhanty |
|  | CIBC | Narry Teemal |
| X | CIBC Mellon | Carol Revoredo |
| X |  | Louis Lesnika |
|  | Computershare | Donna McLaughlin |
|  | Credit Suisse | Wayne Cowel |
| X |  | Sam Ferrell |
| X | Edward Jones | Paul Camarata |
|  | ETC | Dianne Graham |
| X | ETF | Nathan Picard |
|  | E&Y | Jennifer Liu |
| X |  | Matthew Fischer |
| X | Fidelity | Stephanie Leblanc-Mchenry |
| X |  | Rob Argue |
| X |  | John Little |
| X | Firstnorth | John Packwood |
| X |  | Howard Bayne |
| X | IIROC | Marsha Gerhart |
| X | Leede/Jones | Lynn Higgins |
|  | National Bank | Nelson Dugre-Sasserville |
| X | Northern Trust | Domenic Sgambelluri |
|  | OSC | Emily Sutlic |
|  |  | Aaron Ferguson |
|  |  | Youssef Sekal |
| X |  | Frank Baron |
|  | Paramax | Gary Stephenson |
| X |  | Allyn Howe |
|  | Pershing | Scott Reifer |
| X | PWC | Tony Kalvik |
| X | RBC-IS | David Moore |
| X |  | Chris Strong |
| X |  | Doug Allard |
| X |  | Allan Tonner |
|  |  | Jill Morrison |
|  | RBC-WM | Jason O’Born |
| X | Scotiabank | Mike Bieley |
| X | SS&C | Paul Skuriat |
| X | Statestreet | Denny Mendoca |
| X |  | Maggie Salisbury |
| X |  | Robert Bauer |
|  |  | Adrian Chicayah |
|  | TD Bank | Michael Kenney |
| X |  | Geoff Baxter |
|  |  | Gustavo Garcia-Herreros |
| X |  | Rob Candido |
| X | Consultant | Dave O’Marra |

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To all CDS Participants

The Board of Directors of the Canadian Capital Markets Association (CCMA) has approved a CCMA initiative to support the investment industry in working with the TMX/CDS to modernize its clearing and settlement systems, as well as its entitlement and corporate action systems. The CCMA is a federally incorporated, not-for-profit organization, launched to identify, analyze and recommend ways to meet the challenges and opportunities facing Canadian and international capital markets.

Due to its mandate to communicate, educate and help co-ordinate the investment industry on matters spanning multiple industry segments, the CCMA was chosen to support this important TMX/CDS project. These systems are critical to Canadian capital markets because CDS is the hub connecting investment dealers, custodians, exchanges and other parts of Canada’s clearing and settlement infrastructure and, indirectly, the buy-side, including pension plans, fund managers and others. To help ensure a smooth transition to modernized systems, the CCMA has established the Post Trade Modernization Project - Advisory Council, or PTMP-AC.

In April 2018, the CCMA Board approved the funding needs of the association for the initial period of this initiative.

As was the case with funding for the T+2 project, it was agreed that the collection of these funds would be most efficiently collected through the facilities of the CDS billing system in June 2018.

The individual contribution will be on a percentage basis (??????%), based on the usage of the services used during the period of November 2017 to April 2018. A separate billing line ‘CCMA Funding’ will appear under the ‘Other’ category, for each CUID and distributed to participants as part of the CDS May 2018 billing cycle.

Once the funds are collected, they will be moved to the CCMA bank account for utilization by the association during the next 12-month period.

For further information, please contact Keith Evans, Executive Director, CCMA at [kevans@ccma-acmc.ca](mailto:kevans@ccma-acmc.ca).

Keith Evans Bruce Macdonald

Executive Director, CCMA Chair, CCMA Board of Directors

***TMX – Response to Questions and Comments Letter***

May 16th, 2018

From: Brian Gelfand, Chief Commercial Officer CDS/CDCC

To: Participant Engagement Oversight Committee

Date: May 15, 2018

Subject: Participant Engagement Process - Response to Questions and Comments

We have received several questions and comments regarding the Post-Trade Modernization project from participants in our consultative process, particularly around timelines, progress, and the respective roles of TMX personnel and First North personnel. Rather than address each of these enquiries individually with participants, I thought it wise to prepare a general update to the Oversight Committee and the participants who are engaged in the Consultative Committees. This note will be posted to the Post-Trade Modernization Portal for general information.

First, we acknowledge that the process that we have adopted has not been comfortable for all of our participants. Our decision to engage with participants during the solutions analysis process rather than waiting until the entire analysis is complete is not an approach that is familiar to everyone; however we believe that it is the most efficient way to get through the process in a timely fashion and address participant impacts and

concerns on a case-by-case basis. We estimate that we have completed approximately 70% of the business requirements, and the consultation process is scheduled within 60 days following the business requirements being complete. This is the time necessary to complete the impact analysis and communicate with the consultative committees. More on the participant engagement and consultation process later.

Second, some participants in the process have questioned how the project team is identifying and qualifying participant impacts resulting from the migration to the new system. The team that is preparing business requirements and taking an initial cut at participant impact is a team with many years of combined experience at CDS, CDCC and among our participants. Our project team is assisted by First North, who have assembled a first-class team with more than 100 years of combined experience working at CDS participant firms. All in all, we have a very experienced group of individuals assessing potential participant impacts.

Finally, our assessments of participant impact are not made in a vacuum, but rather provided to our participants for discussion and validation. The change review process begins with Participants/Providers reviewing the initial Change Review documents prepared and attending the Consultative Committee meetings. There have been 7 meetings conducted to date, mainly around OPS/GUI. This process will continue until Participants have fully assessed and validated the impact to them, the Change Review documents are updated, and either or both TMX and its Participants take whatever actions may be required to close each and every change.

There is strong evidence that this process has been very effective to date in allowing Participants (and not TMX, or First North) to determine their impacts and either plan to address internally, or request TMX to address, including:

1. Participants have clearly stated when they do not see impact to them. In cases where they determine impact to them, they have been clear as to their intended follow-up or actions and have been equally clear as to what follow-up or actions they expect from TMX. This includes to date;

a. 38 individual follow-up meetings have been held with Participants in addition to the OPS/GUI Consultative Committee meetings themselves, and several calls have been conducted with email communication follow-up.

b. 25 individual follow-up meetings have been held for the CUID change alone. This clearly signifies that TMX Participants affected view this change as a “high-

priority”. Some larger firms have had 3-4 meetings with us that have also included many of their own personnel at times.

2. Change Review with Participants has resulted in TMX having to address impacts as they are identified by participants. In doing so, TMX discusses solution alternatives with their vendor (TCS) and defines operational processes the Participants may use to address the impact, both at the Participants request. Furthermore, these alternatives are brought back to Participants for additional review and subsequent close, if agreed upon. This process is a clear validation that Participants are defining their impact and that TMX is addressing the impact accordingly.

3. The engagement “process” as defined and presented has been accepted by the Oversight Committee that includes senior members of the Participants themselves. This process, as accepted, is structured to allow TMX to provide the software product (by TCS) they have chosen, while ensuring Participants determine the impact to their operations and supporting technologies when using this solution. First North participates in this process given their knowledge and experience of these Participants, however this knowledge and experience also allows us to fully understand that “Participants and only Participants” can ultimately define and address their own impacts. Given reasonable timelines, we are very confident this process will fully address all

Participant impacts, because the participants themselves will have the final word on whether they are impacted or not.

On the subject of First North, I think that it is important to clarify their role in the project. First North has been given a mandate for five elements of the participant engagement process:

1. Advisory: Serve as advisor to Participant Engagement Office (Chaired by Keith Evans of CCMA) including engagement process, and serve as advisor on Oversight Committee.

2. Review: Review TMX BRS documents upon completion and signoff by TMX internal solution team that includes the vendor (TCS).

3. Soft Audit: Discuss with TMX the changes that TMX has stated will occur that are external to CDS/CDCC. While TMX and First North may forecast or even describe the potential impacts to Participants, it is ultimately the Participants that will evaluate impact to them through the consultation process.

4. Prepare Change Review Document: To be used as a baseline to begin analysis and discussion with the Participants and their Primary Service Providers, so they can

determine the impact to their operations and technology ecosystems. The document is intended, in effect, to elicit the Participant’s own requirements for their use of the new software product. Therefore, current state / future state process flows are captured, followed by functional gaps between current and future processes and systems. The process of determining and addressing Participant Impact through the use of the Change Review documents must be “iterative”, given the approach TMX has taken regarding the delivery of a software product driven solution.

5. Facilitate/SME: Lead OPS/GUI, System to System and Data Delivery & Reporting

Consultative Committee Meetings and provide ongoing Subject Matter Expertise (SME) during the process. Provide status reporting to both TMX and Participants (Dashboard every two weeks).

First North are an integral part of the participant engagement process, and provide valuable input and assistance. But TMX Post-Trade is the product and project owner, and we are responsible for program management, project management, business requirements, project decisions and the participant engagement process, not First North. We have engaged them to assist us and provide their expertise. All that to say - if anyone has comments or questions around the way that the project is set up or being managed, that is our responsibility at TMX and we would be happy to hear and respond to your concerns.

In conclusion, I think that we have a very robust change identification and change review process in place. We have more than 300 participant representatives taking part in our consultation committees, and we are dedicating the time and resources required in consulting with our participants and working with them to mitigate and manage participant impacts.

Best regards,

Brian Gelfand

Chief Commercial Officer

**TMX/CDS** **Atlas Change Impact on Paramax Arrow**

**May 23, 2018**

TMX/CDS is proposing to make a number of changes to the clearing and settlement of securities transactions through their project “Atlas”. This is the SECOND in a series of impact assessments of those changes on the products/services provided by Paramax Solutions (Arrow).

At present, there isn’t enough detailed documentation for us to conduct an assessment of the impacts to Arrow and all of the Straight-Through-Processing (STP) interfaces at our clients and to the clients’ own in-house systems that utilize Arrow. The notes below are an initial/preliminary assessment only and are intended to provide our clients with some idea of the size/scope of impact of the changes proposed by the Atlas project.

# General Comments

1. Based on recent discussions at the Atlas review sessions, it has become clear that TMX/CDS does not plan to provide the CDS customers with detailed design/process flow documents for Atlas or Mercury (Entitlements). Instead, the TMX/CDS approach is to decide what they believe is a change between the current CDSX processing and the similar processing in Atlas.

We believe that the TMX/CDS approach is very high risk to developing a system that is critical to our clients’ business, as well as the Canadian Capital markets generally. By not providing the detailed designs/process flows for the system as a whole to the TMX/CDS customers, there will be critical functions and details that will be missed until it’s too far late or too costly to be properly addressed. The reasons we believe this will occur are:

* 1. CDSX itself is over 25 years old. As with any system of that vintage, there will be processes and logic that are not well documented or even understood by the current TMX/CDS or First North staff themselves. That is not a criticism of TMX/CDS or First North, that is something that results from the starting point of a large, complex system that have undergone many revisions over a 25 year period. Providing detailed design documents to the hundreds of experts at CDS’ customers would go a long way to identifying those “changes” that neither TMX/CDS nor First North are even aware of themselves.

* 1. TMX/CDS and First North do not understand how all of CDS’ customers actually use CDSX. So while TMX/CDSX and First North may not think something is a change between CDSX and Atlas, it may actually be critical to one or more of CDS’ customers. Only TMX/CDS’ customers and their vendors/suppliers can identify the changes between the current CDSX and Atlas. And the customers can’t identify these issues unless TMX/CDS provides them with the details of the Atlas design and processing. There have already been several examples of this during the first six months of the Atlas reviews where TMX/CDS and First North thought something was not a change that actually was. Again, that is not a criticism of TMX/CDS or First North’s people. It’s simply impossible for anyone to expect that they will be able to identify every item that might be a change and that might be critical to the processing of one or more of their customers. The complexity and breadth of individual processing at each customer requires the customer’s themselves to have a deeper understanding of how Atlas/Mercury is going to process their transactions.

* 1. Finally, there does not appear to be any logical reason to not want the actual CDSX and Atlas customers/users to understand the complete design and process flow of Atlas and Mercury. So not providing those details to the CDSX customers/users does and should make our clients uncomfortable.

1. **Timelines**: The TMX/CDS Atlas Impact review has now been running for approximately 6 months. By our estimation, less than 1% of the CDSX/Atlas functionality has been reviewed and discussed with TMX/CDS’ customers. At this pace, there is no possibility that the remaining 99% of the functionality can be properly reviewed for its impacts on our customers various systems; built by CDS; properly tested by CDS and properly tested by us and our customers in time for a June 2019 implementation date.

Our 1% estimate is based on the fact that, to date, none of the critical CDSX/Atlas functions such as Trade, Pledge, Real Time Settlement, Batch Net Settlement, Risk Management, Entitlements/Corp Actions and interface Messaging impacts, etc. have even been reviewed with the industry during the first six months of Atlas reviews. It may be that TMX/CDS is further along in their analysis and have decided that there is nothing changing in those functions that they need to tell their customers about. If that’s the case, then it would be useful for TMX/CDS and First North to tell the industry that those functions in Atlas will work exactly, in every respect, as they do today in CDSX.

1. **Analysis:** We now understand that TMX/CDS is going to provide the customers and their vendors with what TMX/CDS believe the customers of CDSX need to know about the changes from CDSX to Atlas. Paramax will proceed on that assumption. We will adapt our clients’ systems for all of the changes that TMX/CDS identifies and we will make sure our systems accommodate those changes identified by TMX/CDS and First North. We obviously can’t make allowances for items that are not identified by them. Our customers will have to take TMX/CDS’ assurances that all of the processing that they have not formally documented as a change will work in Atlas exactly as it does today in CDSX. As a result, Paramax will not ever be able to provide our clients with an assurance that all of our client’s interfaces will work properly in Atlas/Mercury.

1. **Testing:** Given the critical reliance on CDSX/Atlas, we believe that TMX/CDS should have started testing Atlas/Mercury long ago to achieve a June 2019 implementation. The recent T+2 settlement cycle change required very little code change by anyone. For example, Paramax made no changes to its core Arrow platform for T+2. We understand some other vendors made some minor changes. And yet the move to T+2 took over 18 months to plan and execute an “industry test”. In comparison, the move to Atlas/Mercury is exponentially more complex and would require significantly more testing by both TMX/CDS and the industry. In the absence of a fully-defined, customer-supported testing strategy and plan, a target implementation date for Atlas/Mercury is meaningless.

Paramax clients’ should understand that Paramax itself will NOT be testing any of Atlas or Mercury that is not specifically identified as a change by TMX/CDS. For example, if there are no changes specifically documented for the Pledge function in Atlas, then Paramax will not be conducting any tests of that function at all. We will target test only the specific changes identified by TMX/CDS and First North. Paramax expects that the testing that it will perform on the identified changes will not commence until after TMX/CDS has signed off on their own user acceptance test of Atlas/Mercury.

Paramax’ clients must either accept TMX/CDS’ assurances that other functions have not changed and/or that TMX/CDS’ own testing has been sufficiently comprehensive. Or, Paramax’ clients must plan and execute your own acceptance tests of Atlas/Mercury to verify that it works as expected – expected being either as documented by TMX/CDS and First North as an approved change or exactly as that function works today in CDSX. No one should under-estimate the time and resources required to properly plan and execute such a test. We would expect that, if fully resourced by experienced and knowledgeable staff, it would take each of our clients at least 6-9 months to plan their own tests and subsequent 9-12 months to execute those tests after the TMX/CDS themselves have completed and signed off on their own user acceptance test.

1. **Conversion/Implementation**: To date, there have been no discussions with the customers about a CDSX to Atlas/Mercury conversion/implementation plan. The planning alone for that task is something that could take upwards of a year. Any conversion/implementation will require special systems to be developed both by Paramax and potentially the vendors of systems that Paramax interfaces with at our clients. We would estimate that for Paramax’ interface alone there are over 60 such systems. The type of conversion/implementation chosen will be dependent upon an understanding of the scope and thoroughness of both TMX/CDSX’ own testing and the ability for the customers to conduct their own testing. A more thorough user acceptance test by TMX/CDS and a greater opportunity for more individual and “industry” testing by the customers themselves, will allow for more “big bang\less protracted” conversions. But since there has been no discussion to date about testing, nor the conversion/implementation, Paramax cannot estimate the number and scope of any conversion or implementation developments that will be required for our individual clients.

The following are Paramax’ current impact assessment of the specific changes identified to date by TMX/CDS and First North:

# Change PI-0001: Transaction Identifier

TMX/CDSX proposes to change the format of the transaction ID to remove the year/Julian date and replace it with a simple sequence number but not change the length of the transaction ID itself. Arrow can accommodate the proposed change relatively easily however the following impacts should be noted:

* The current transaction CDSX transaction IDs are unique forever because of the inclusion of the (entry) date. The proposed Atlas format for the transaction ID might not be unique (depending on when/how TMX/CDS decides to “re-cycle/re-use” the transaction Ids). If the transaction ids are re-used any time within a 7 year period, this would be a major impact to the historical transactions retained in various systems. As long as TMX/CDS assures the customers that they will not re-use transaction IDs within a 7 year period, under any circumstances, then we do not foresee any major issues with this change.

* Several Arrow exchange trade reconciliation processes use the current transaction format and would need to be changed because of the new Atlas transaction ID format.

* There are hundreds of CDSX Pledge transaction Ids that were issued more than 10 years ago (some issued over 15 years ago). We assume that Atlas will be tested to ensure that duplicate transaction IDs will never be issued even in those circumstances.

* The loss of the “date” portion of a transaction ID means that the transaction ID, when passed to our customers’ inhouse systems, is less useful (the current CDSX Transaction ID provided the date when the transaction was submitted; the Atlas-format transaction ID will not provide that)

**Change PI-0002: Exchange Trade Correction/Cancellation**

* No impact on Arrow

# Change PI-0003 CBS Mode/Ineligible Securities

* Removing the CBS (Certificated based Settlement) mode would have no impact on Arrow
* Changing the way security eligibility is handled to remove the distinction between “eligibility” (e.g. preliminary issues) would have a major impact on the Arrow auto-match interfaces. In the current system if a trade is in CDSX then it can be confirmed but might have to wait to settle. With the proposed changes there would be no way to distinguish which unconfirmed trades could be confirmed and which could not be confirmed until you actually tried to confirm a trade and then received an error. And there was no proposed method of notifying systems when a security did become eligible.

# Change PI-0005 Trade Matching

 Removal of the M2 match and Lock-in process will have minimal impact on Arrow (some changes will be required to the criteria used in Arrow to identify these)

# Change PI-0006 Cross Trades

* No Impact on Arrow
* TMX/CDSX documentation on this was incorrect – CDSX does NOT allow a participant to submit a Trade to its own CUID. That is why some participants had multiple CUIDs attached to the same ledger (to allow these sorts

of “cross” trades). For those participants that currently use the multiple CUIDs/one ledger structure there are other ways to process these affiliate/subsidiary transactions but they would require fairly significant changes to this particular process flow.

* The inability to do a “cross” trade (a trade where the buyer and seller are the same CUID/Business partner) unless the business partner has a ledger position would be a major problem –especially for exchange trades that are processed Trade-for-Trade (e.g. when CDS makes securities temporarily ineligible for CNS). TMX/CDSX documentation on this was incorrect - in the current CDSX, “cross” trades do not require a ledger position to settle.

# Change PI-0008 Interest Amount field

* Removal of the Interest Amount field would require minor changes to Arrow.
* It was unclear how the removal of the interest payment field will affect the Interlink messages.

**Change PI-0009 Matching Eligibility**

* No Impact on Arrow

# Change PI-0010 removal of ESIR

* No Impact on Arrow
* ESIR was never used by Arrow in CDSX – minor impacts from its removal depending on how TMX/CDS handles the removal of those fields from the Interlink Trade messages.

**Change PI-0011 Participant Holiday Calendar**  No impact on Arrow.

* Arrow already runs on ay day in which CDS, DTC or overseas markets are open.

# Change PI-0012 CUID Ledger relationship

* Minor impact on Arrow
* There could be impacts on some of the processing done for Arrow clients that use the multiple CUID to one ledger arrangement, depending on how they decide to arrange their business under the one CUID-one ledger Atlas arrangement.

**Change PI-0013 Company Code and FISN Name**

* No impact on Arrow

**Change PI-0014 Company, ledger, CUID and User Structure**

* Minor impacts on Arrow depending on how the user structure impacts the Interlink messaging

**Change PI-0015 Federated participant Category**

* No Impact on Arrow

# Change PI-0016 user Dollar Limit

* No impact on Arrow systems directly
* Major impact to customers’ ability to implement tighter controls over users’ access and ability (in recent years several Arrow clients have been asked to further restrict the ability of users to access certain functions and even transactions (e.g. the so called “four eyes” requirement for at least 2 users to approve a given transaction).

**Change PI-0017Auto Segregation**

* No impact on Arrow

# Change PI-0018 Account Types

 Minor impact to Arrow from the removal of RA accounts