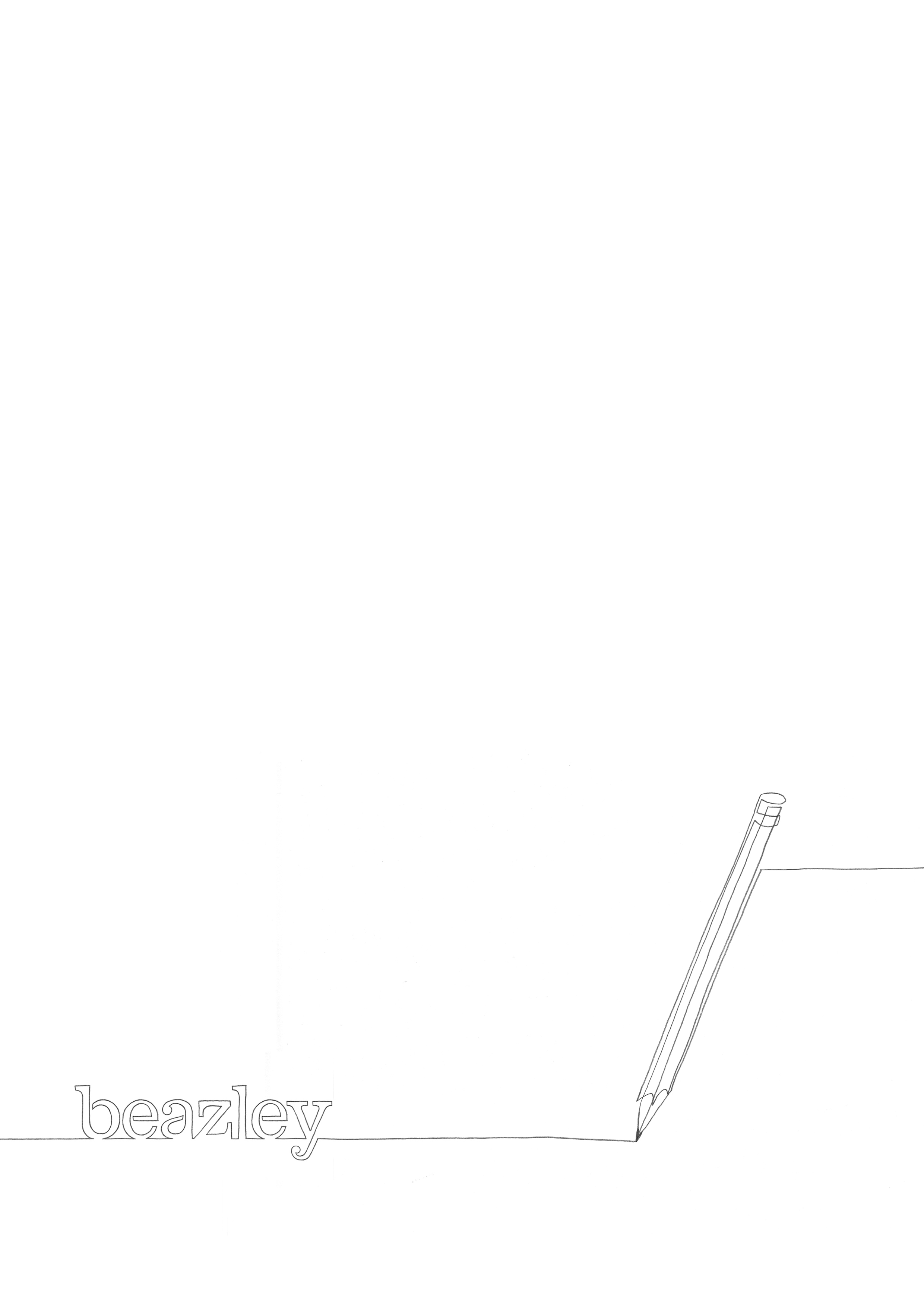
Technical Hub Data Flow Controls

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| Document authors: | Richard Diamond |
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Document review and approval

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| 1.0 |  | Juliet Drake | Y | Y |

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# Purpose

The purpose of this document is to illustrate the flow of data through the Technical Hub solution from source systems including extract selection criteria, any critical transformations and how the process is logged and controlled for success and accuracy.

# Overview

The Technical Hub database is populated from Eurobase. The Premium Forecast Template and Finance Data Mart. The import routines are orchestrated by the solution’s ‘Scheduling Hub’.

‘Finance Landing’ tables are truncated and repopulated each time a given SSIS routine is run. These tables are designed to exactly replicate the source data with little or no transformation of the data at this stage.

Data is then ‘conformed’ (restructured) into the ‘Finance Data Contract’ to prepare it for ready aggregation and consumption by the Technical Hub database and cube solutions.

Each procedure used to extract, transform and load data through the solution includes detailed transaction logging to dedicated log tables in a separate database. Failed routines are proactively notified to the FDM Support function. A validation dashboard provides Business Managers with further insight into data quality.

# Technical Hub Data Flow



Figure - Technical Hub Data Flow

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | The Eurobase solution includes standard routing tables, 3 of which are extracted by SSIS into Finance Landing. The tables are provided by Eurobase and predefined to contain all policy records for **open years only**.   |  |  |  | | --- | --- | --- | | Eurobase Table Name | Columns Selected | Filter | | policy\_deductions | All | WHERE ded\_qual = ''X'' | | epi\_view\_bbr2 | All | None | | policy\_cube' | Policyref  Status  Area  Cob  Stats  MOP  Account  Lpsodate  origpolicyref  renewalfrom | None |   Deduction Qualifier ‘X’ indicates the deductions selected are for Lloyd’s Brussels (LBS) only. |
|  | Premium Forecast Template (PFT) data is published by Management Information Business Management following Peer Review:  cid:image001.png@01D59301.583F6E20  Figure - PFT publishing UI  The PFT generates the table “[FDM\_Export].[PFT\_SYND\_WITH\_CEDE]” (see sample - Appendix A) with details for the current review cycle only which is extracted with no filters. The extract routine is run daily regardless of source table update frequency. |
|  | As part of the FDM US entity premium extract routine (see ‘D’ below) US policies are allocated account, entity and trifocus details according to the Premium Allocation rules each time the routine runs. A snapshot of this list is supplied in Appendix B. The list is referenced directly as a SharePoint List:  Finance/FDM/DataMapping/Lists/Premium Allocation Rules  The rules are maintained manually by Randall Hastings in the US. System Sercurity Permissions for editing this list are inherited from the ‘Finance Data Mart’ SharePoint user group; |
|  | Finance Data Mart Premiums queried for **US entities of USSYND & USBICI**:   |  |  | | --- | --- | | Columns Selected | Filter | | EntityCode  t.TrifocusCode  YOAName  ProductCode  LocationCode  ProjectCode  AgressoSectionReference  e.InceptionDate  e.ExpiryDate  AllocationGroup  AccountCode  Value  fk\_AccountingPeriod  Scenario  ProcessCode  currency | AllocationGroup = 'US Premium', 'US Premium History'  ProcessCode = 'UA'  fk\_Account IN = 10100, 30100)  fk\_AccountingPeriod <= 201905  EntityCode <> '6107'  FriendlyName = 'Actual' | |
|  | Finance Data Contract ‘inbound’ dataset overwritten with Eurobase/FDM US Premium (flagged ‘Actual’) and Premium Forecast records (flagged ‘Forecast).    Figure - Example variance only update  Routines append records to an ‘outbound’ dataset and allocate a unique batch number. These routines compare inbound and outbound records, only appending outbound entries for new records plus entries where value variances are identified compared to previous batches. This ensures that all new records are appended where they have the highest batch number and that the Technical Hub is able to provide latest and historical positions for all values. |
|  | Eurobase & FDM US premium dataset is pushed to the Technical Hub Database. This routine **excludes 6107 SPV entities**.  **US Binder records are excluded** to account for policy level US records from the FDM. |
|  | Technical Hub Database routines derive values such as premium and brokerage for 6107 entities or earnings. These calculations are outside the scope of this document. |
|  | Transactional logs are updated in all routines to include errors and expected vs actual outcomes such as value sums. Mismatching sum values trigger failure-error reporting and data is rolled back to its previous state. All such failures are automatically communicated to FDM Support.  Business Managers use the Variation Dashboard (see example screen shot in Appendix C) to monitor and highlight exceptions where there has been a successful load but values fall outside expected parameters. |

* + - * 1. - Sample Premium Forecast Template extract from [FDM\_Export].[PFT\_SYND\_WITH\_CEDE]

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Extract Date | PFTDate | Premium Month | Review Cycle | MoP | Tri Focus Name | Tri Focus Code | Department | YOA | Tran Curr | Entity | Platform | Office Channel | Synd Premium GIC | Synd Premium NIC | GGP |
| 53:29.0 | 01/09/2019 | 1 | 2019Q3 | Binder | Aviation Liab | TRI00090 | TFD Marine | 2019 | EUR | 2623 | Lloyds | LDN | 39493.2575 | 39493.2575 | 50632.38 |
| 53:29.0 | 01/09/2019 | 1 | 2019Q3 | Binder | Aviation Liab | TRI00090 | TFD Marine | 2019 | EUR | 623 | Lloyds | LDN | 8669.2516 | 8669.2516 | 11114.43 |
| 53:29.0 | 01/09/2019 | 1 | 2019Q3 | Binder | Aviation Liab | TRI00090 | TFD Marine | 2019 | EUR | BIFR | BID | BIFR | 5437.4908 | 5437.4908 | 5437.491 |
| 53:29.0 | 01/09/2019 | 1 | 2019Q3 | Binder | Aviation Liab | TRI00090 | TFD Marine | 2019 | USD | 2623 | Lloyds | LDN | 256198.0577 | 256198.0577 | 328459 |
| 53:29.0 | 01/09/2019 | 1 | 2019Q3 | Binder | Aviation Liab | TRI00090 | TFD Marine | 2019 | USD | 623 | Lloyds | LDN | 56238.598 | 56238.598 | 72100.77 |
| 53:29.0 | 01/09/2019 | 1 | 2019Q3 | Binder | Aviation PD | TRI00089 | TFD Marine | 2019 | USD | 2623 | Lloyds | LDN | 391805.0455 | 391805.0455 | 508837.7 |
| 53:29.0 | 01/09/2019 | 1 | 2019Q3 | Binder | Aviation PD | TRI00089 | TFD Marine | 2019 | USD | 623 | Lloyds | LDN | 86005.9856 | 86005.9856 | 111696.1 |
| 53:29.0 | 01/09/2019 | 1 | 2019Q3 | Binder | BBR Services Int (Exc PE) | 742 | TFD Specialty Lines | 2019 | EUR | 2623 | Lloyds | LDN | 106785.4423 | 106785.4423 | 146141.3 |
| 53:29.0 | 01/09/2019 | 1 | 2019Q3 | Binder | BBR Services Int (Exc PE) | 742 | TFD Specialty Lines | 2019 | EUR | 623 | Lloyds | LDN | 23440.7068 | 23440.7068 | 32079.8 |
| 53:29.0 | 01/09/2019 | 1 | 2019Q3 | Binder | BBR Services Int (Exc PE) | 742 | TFD Specialty Lines | 2019 | EUR | BIDE | BID | BIDE | 41.3735 | 41.3735 | 41.3735 |
| 53:29.0 | 01/09/2019 | 1 | 2019Q3 | Binder | BBR Services Int (Exc PE) | 742 | TFD Specialty Lines | 2019 | EUR | BIFR | BID | BIFR | 6084.3417 | 6084.3417 | 6084.342 |
| 53:29.0 | 01/09/2019 | 1 | 2019Q3 | Binder | BBR Services Int (Exc PE) | 742 | TFD Specialty Lines | 2019 | EUR | BISP | BID | BISP | 12168.6834 | 12168.6834 | 12168.68 |
| 53:29.0 | 01/09/2019 | 1 | 2019Q3 | Binder | BBR Services Int (Exc PE) | 742 | TFD Specialty Lines | 2019 | EUR | BIUK | BID | BIUK | 6042.9682 | 6042.9682 | 6042.968 |
| 53:29.0 | 01/09/2019 | 1 | 2019Q3 | Binder | BBR Services Int (Exc PE) | 742 | TFD Specialty Lines | 2019 | GBP | 2623 | Lloyds | LDN | 22266.4807 | 22266.4807 | 30472.81 |
| 53:29.0 | 01/09/2019 | 1 | 2019Q3 | Binder | BBR Services Int (Exc PE) | 742 | TFD Specialty Lines | 2019 | GBP | 623 | Lloyds | LDN | 4887.764 | 4887.764 | 6689.153 |
| 53:29.0 | 01/09/2019 | 1 | 2019Q3 | Binder | BBR Services Int (Exc PE) | 742 | TFD Specialty Lines | 2019 | GBP | BIDE | BID | BIDE | 4.3325 | 4.3325 | 4.3325 |
| 53:29.0 | 01/09/2019 | 1 | 2019Q3 | Binder | BBR Services Int (Exc PE) | 742 | TFD Specialty Lines | 2019 | GBP | BIFR | BID | BIFR | 636.3441 | 636.3441 | 636.3441 |
| 53:29.0 | 01/09/2019 | 1 | 2019Q3 | Binder | BBR Services Int (Exc PE) | 742 | TFD Specialty Lines | 2019 | GBP | BISP | BID | BISP | 1272.6882 | 1272.6882 | 1272.688 |
| 53:29.0 | 01/09/2019 | 1 | 2019Q3 | Binder | BBR Services Int (Exc PE) | 742 | TFD Specialty Lines | 2019 | GBP | BIUK | BID | BIUK | 632.017 | 632.017 | 632.017 |
| 53:29.0 | 01/09/2019 | 1 | 2019Q3 | Binder | BBR Services Int (Exc PE) | 742 | TFD Specialty Lines | 2019 | USD | 2623 | Lloyds | ASIA | 5094.2559 | 5094.2559 | 6971.748 |
| 53:29.0 | 01/09/2019 | 1 | 2019Q3 | Binder | BBR Services Int (Exc PE) | 742 | TFD Specialty Lines | 2019 | USD | 2623 | Lloyds | LDN | 119009.3529 | 119009.3529 | 162870.3 |
| 53:29.0 | 01/09/2019 | 1 | 2019Q3 | Binder | BBR Services Int (Exc PE) | 742 | TFD Specialty Lines | 2019 | USD | 623 | Lloyds | ASIA | 1118.2512 | 1118.2512 | 1530.384 |
| 53:29.0 | 01/09/2019 | 1 | 2019Q3 | Binder | BBR Services Int (Exc PE) | 742 | TFD Specialty Lines | 2019 | USD | 623 | Lloyds | LDN | 26124.0042 | 26124.0042 | 35752.02 |
| 53:29.0 | 01/09/2019 | 1 | 2019Q3 | Binder | BBR Services Int (Exc PE) | 742 | TFD Specialty Lines | 2019 | USD | BIDE | BID | BIDE | 149.8555 | 149.8555 | 149.8555 |

* + - * 1. - Premium Allocations Rules Snapshot (04/11/2019)

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Account** | **Entity Code** | **Trifocus From** | **Trifocus To** | **YOA From** | **YOA To** | **Account Dest** | **Trifocus Dest** | **Entity Code Dest** | **Allocation Percentage** | **Item Type** |
| 10100 | USSYND | FS | FSZZZZZZ | 2017 | 2019 | 10100 | 796 | 2623 | 82 | Item |
| 10100 | USSYND | FS | FSZZZZZZ | 2017 | 2019 | 10100 | 796 | 623 | 18 | Item |
| 10100 | USSYND | 10 | FRZZZZZZ | 2017 | 2019 | 10100 |  | 2623 | 82 | Item |
| 10100 | USSYND | 10 | FRZZZZZZ | 2017 | 2019 | 10100 |  | 623 | 18 | Item |
| 10100 | USSYND | FT | TRI00067 | 2017 | 2019 | 10100 |  | 2623 | 82 | Item |
| 10100 | USSYND | TRI00069 | ZZ | 2017 | 2019 | 10100 |  | 2623 | 82 | Item |
| 10100 | USSYND | FT | TRI00067 | 2017 | 2019 | 10100 |  | 623 | 18 | Item |
| 10100 | USSYND | TRI00069 | ZZ | 2017 | 2019 | 10100 |  | 623 | 18 | Item |
| 10100 | USSYND | TRI00068 | TRI00068 | 2017 | 2019 | 10100 | TRI00082 | 623 | 18 | Item |
| 10100 | USSYND | TRI00068 | TRI00068 | 2017 | 2019 | 10100 | TRI00082 | 2623 | 82 | Item |
| 11110 | USBICI | TRI00046 | TRI00046 | 2017 | 2019 | 10100 | TRI00046 | 2623 | -82 | Item |
| 11110 | USBICI | TRI00046 | TRI00046 | 2017 | 2019 | 10100 | TRI00046 | 623 | -18 | Item |
| 11110 | USBICI | TRI00046 | TRI00046 | 2017 | 2019 | 30100 | TRI00046 | 2623 | 0 | Item |
| 11110 | USBICI | TRI00046 | TRI00046 | 2017 | 2019 | 30100 | TRI00046 | 623 | 0 | Item |
| 11110 | USBICI | TRI00068 | TRI00068 | 2017 | 2019 | 10100 | TRI00082 | 3623 | -100 | Item |
| 11110 | USBICI | 10 | TRI00045 | 2017 | 2019 | 10100 |  | 3623 | -100 | Item |
| 11110 | USBICI | TRI00047 | TRI00067 | 2017 | 2019 | 10100 |  | 3623 | -100 | Item |
| 11110 | USBICI | TRI00069 | ZZ | 2017 | 2019 | 10100 |  | 3623 | -100 | Item |
| 11110 | USBICI | TRI00068 | TRI00068 | 2016 | 2017 | 30100 | TRI00082 | 3623 | -16 | Item |
| 11110 | USBICI | 10 | 726 | 2016 | 2017 | 30100 |  | 3623 | -18 | Item |
| 11110 | USBICI | 727 | 727 | 2016 | 2017 | 30100 |  | 3623 | -13 | Item |
| 11110 | USBICI | 728 | TRI00045 | 2016 | 2017 | 30100 |  | 3623 | -18 | Item |
| 11110 | USBICI | TRI00047 | TRI00067 | 2016 | 2017 | 30100 |  | 3623 | -18 | Item |
| 11110 | USBICI | TRI00069 | ZZ | 2016 | 2017 | 30100 |  | 3623 | -18 | Item |
| 30100 | USSYND | FS | FSZZZZZZ | 2017 | 2019 | 30100 | 796 | 2623 | 82 | Item |
| 30100 | USSYND | FS | FSZZZZZZ | 2017 | 2019 | 30100 | 796 | 623 | 18 | Item |
| 30100 | USSYND | 10 | FRZZZZZZ | 2017 | 2019 | 30100 |  | 2623 | 82 | Item |
| 30100 | USSYND | 10 | FRZZZZZZ | 2017 | 2019 | 30100 |  | 623 | 18 | Item |
| 30100 | USSYND | FT | TRI00067 | 2017 | 2019 | 30100 |  | 2623 | 82 | Item |
| 30100 | USSYND | TRI00069 | ZZ | 2017 | 2019 | 30100 |  | 2623 | 82 | Item |
| 30100 | USSYND | FT | TRI00067 | 2017 | 2019 | 30100 |  | 623 | 18 | Item |
| 30100 | USSYND | TRI00069 | ZZ | 2017 | 2019 | 30100 |  | 623 | 18 | Item |
| 30100 | USSYND | TRI00068 | TRI00068 | 2016 | 2019 | 30100 | TRI00082 | 2623 | 82 | Item |
| 30100 | USSYND | TRI00068 | TRI00068 | 2017 | 2019 | 30100 | TRI00082 | 623 | 18 | Item |
| 30510 | USBICI | TRI00046 | TRI00046 | 2017 | 2019 | 30100 | TRI00046 | 2623 | -82 | Item |
| 30510 | USBICI | TRI00046 | TRI00046 | 2017 | 2019 | 30100 | TRI00046 | 623 | -18 | Item |
| 30510 | USBICI | TRI00068 | TRI00068 | 2016 | 2017 | 30100 | TRI00082 | 3623 | -100 | Item |
| 30510 | USBICI | 10 | TRI00045 | 2016 | 2017 | 30100 |  | 3623 | -100 | Item |
| 30510 | USBICI | TRI00047 | TRI00067 | 2016 | 2017 | 30100 |  | 3623 | -100 | Item |
| 30510 | USBICI | TRI00069 | ZZ | 2016 | 2017 | 30100 |  | 3623 | -100 | Item |

* + - * 1. - Example Validation Dashboard

