# MORNINGSTAR Wealth

# CI Universal Integration Guide

Document Version:                              2

Document Issue Date:                           June 26, 2013

Technical Support:    (866) 856-4951

Web:                  byallaccounts.morningstar.com

# Table of Contents

## ABOUT THIS GUIDE

### Purpose of this guide

This guide describes recommended practice for utilizing CI Universal output files when delivering that data to a portfolio management system, reconciliation system, or other accounting system.

## KEY PRACTICES

### Transaction File

#### Transaction Types

Transaction data from each custodial source is normalized into a standard transaction model with 27 transaction type codes (BUY, SELL, CREDIT, etc.). Additional type information is provided in a transaction subtype field for certain transaction types.

Transaction information originally reported by the custodian is also included in several fields in the transaction file, namely: FI_SUPPLIED_TX_TYPE, FI_SUPPLIED_TX_TYPE2, FI_SUPPLIED_TX_TYPE_CODE, DESCRIPTION, and FI_SUPPLIED_DESCRIPTION.

It is recommended that you use information in the following preference order when building business rules to map from the CI transaction type model to your target system model:

1.  **Primary/Preferred –** you should always consult these fields

    Fields: TX_TYPE and TX_SUBTYPE, augmented with SECURITY_TYPE and less frequently with FI_ID.

    To facilitate this usage we created the TX_COMPOSITE_TYPE field. This is a customizable field that allows you to concatenate any of TX_TYPE, TX_SUBTYPE, SECURITY_TYPE, and FI_ID in any order and with a delimiter of your choice. For example, if TX_TYPE is "BUY" and TX_SUBTYPE is "ACCRUED", and TX_COMPOSITE_TYPE is defined to be TX_TYPE concatenated with TX_SUBTYPE using hyphen as a delimiter, then TX_COMPOSITE_TYPE would contain the text "BUY-ACCRUED".

2.  **Secondary –** depending on your system needs you may need to consult these fields periodically, or not at all

    Fields: FI_SUPPLIED_TX_TYPE, FI_SUPPLIED_TX_TYPE2, FI_SUPPLIED_TX_TYPE_CODE, DESCRIPTION, and FI_SUPPLIED_DESCRIPTION.

    In some situations you may need to use extended information to properly assign the transaction type code for your target system. We strongly recommend that you use this information sparingly because it varies greatly by custodial data source, including the situation where the field from a given custodian may contain no value at all.

A custom transaction translation facility is available in CI that can be used to effect transaction mappings. Please contact Technical Support for more information about this facility.

The following table shows the valid values for the **TX_TYPE** column and also lists transaction subtypes applicable to that type:

| TX_TYPE Value | Description | Possible TX_SUBTYPE values |
|---|---|---|
| **ATM** | ATM debit or credit (depends on signage of amount) | **IN** **OUT** |
| **BUY** | Buy a Security | **ACCRUED** |
| **CHECK** | Check written | |
| **CLOSURE** | Close a position for an option | |
| **CREDIT** | Generic credit | **TAX** **FOREIGNTAX** |
| **DEBIT** | Generic debit | **TAX** **FOREIGNTAX** |
| **DEPOSIT** | Deposit | |
| **DIRECT_DEBIT** | Merchant initiated debit | |
| **DIRECT_DEPOSIT** | Direct deposit | |
| **DIVIDEND** | Dividend paid | **SHORTTERMGAIN** **LONGTERMGAIN** **UNCLASSIFIEDGAIN** **MIDTERMGAIN** |
| **FEE** | Financial Institution fee | |
| **INCOME** | Investment income is realized as cash into the investment Account | **IN** **OUT** |
| **INTEREST** | Interest earned or paid (depends on signage of amount) | **IN** **OUT** |
| **INVESTMENT_EXPENSE** | Miscellaneous investment expense that is associated with a specific Security | |
| **JOURNAL** | Journal cash or Securities between Sub-Accounts within the same investment Account | **IN** **OUT** |
| **MARGIN_INTEREST** | Margin interest expense | |
| **OTHER** | Other | |

| PAYMENT | Electronic payment | |
|---|---|---|
| POINT_OF_SALE | Point of sale debit or credit (depends on signage of amount) | **IN** <br> **OUT** |
| REINVESTMENT | Reinvestment of income | **SHORTTERMGAIN** <br> **LONGTERMGAIN** <br> **UNCLASSIFIEDGAIN** <br> **MIDTERMGAIN** |
| REPEAT_PAYMENT | Repeating payment/standing order | |
| RETURN_OF_CAPITAL | Return of capital | |
| SELL | Sell a Security | **ACCRUED** <br> **MATURITY** |
| SERVICE_CHARGE | Service charge | |
| SPLIT | Stock or Mutual Fund split | |
| TRANSFER | Transfer cash or Holdings in or out (depends on signage of amount) | **IN** <br> **OUT** |
| WITHDRAWAL | Withdraw funds from Account | |

**Numeric Sign**

The numeric sign on certain fields may be significant to your system's interpretation of a transaction. The most important transaction fields where sign is considered are UNITS and TOTAL_AMOUNT. In CI's transaction file output, the sign of the original custodian-reported values for UNITS and TOTAL_AMOUNT are maintained.

CI provides a way for you to request that you always receive the absolute value of these two fields. You can customize this setting in the Setup->Advanced area, under the Transactions Tab, by selecting the field you want to customize, checking the 'Absolute Value' option, and then clicking 'Apply'.

Alternatively, you can use the FLOW_UNITS and FLOW_AMOUNT fields. The FLOW_UNITS field provides a sign-normalized UNITS value for the transaction. For example, fields provide the UNITS and TOTAL_AMOUNT fields respectively but adjust the sign according to the transaction type. For example, a transaction with TX_TYPE of "BUY" (simple buy) will have FLOW_UNITS that are positive whereas one with a TX_TYPE of "SELL" (simple sell) will have FLOW_UNITS that are negative. The FLOW_AMOUNT field provides the total amount of the cash flow for the transaction relative to the cash balance of the account. Similarly, the FLOW_AMOUNT for a TX_TYPE of "BUY" will be negative and the FLOW_AMOUNT for a TX_TYPE of "SELL" will be positive. Please refer to the CI Universal User Guide, pp. 21, for a complete listing of the value and sign of the FLOW_AMOUNT and FLOW_UNITS fields.

Finally, the NET_AMOUNT field may provide just what you need. This field is set by examining the values of several other fields within the transaction. For all transactions EXCEPT Reinvestment transactions on cash equivalents, the NET_AMOUNT is set to the absolute value of the first non-null of the following:

- PRINCIPAL_TOTAL_AMOUNT+INCOME_TOTAL_AMOUNT

- FLOW_AMOUNT

- TOTAL_AMOUNT

For Reinvestment transactions on cash equivalents, NET_AMOUNT is set to the absolute value of the first non-null of the following:

- PRINCIPAL_TOTAL_AMOUNT_LOCAL + INCOME_TOTAL_AMOUNT_LOCAL

- FLOW_AMOUNT

- TOTAL_AMOUNT

### Reversals

Reversal transactions are detected by data gathering from the source and special treatment is provided:

1. CI provides a REVERSAL column.  A 1 in this column indicates that the transaction is a reversal.  A 0 indicates the transaction is not a reversal.

2. The ORIG_TX_TYPE is set to the transaction type code of the original transaction (the transaction that this transaction is reversing).

3. The TX_TYPE field is set to the "opposite" transaction type of the original.

Most systems will want to ignore the TX_TYPE for a transaction where REVERSAL is set to 1 and instead use the ORIG_TX_TYPE. Here are a few examples of simple reversals and how they output fields in CI will be set:

| Transaction Activity | TX_TYPE | REVERSAL | ORIG_TX_TYPE |
|---|---|---|---|
| Reversal of a BUY | SELL | 1 | BUY |
| Reversal of a SELL | BUY | 1 | SELL |
| Reversal of a DEBIT | CREDIT | 1 | DEBIT |