

Automated Reconciliation Procedures with variable Parameters

The parameterisable reconciliation feature in XENTIS allows for periodic reconciliation of data between internal and external sources. In addition, deviations can be analysed and documented and the resulting actions integrated into a workflow. Along with the representation of monitoring tasks such as custodian bank reconciliation, a special focus has been placed on other forms of reconciliation, e.g. the specific reconciliation of externally supplied data or of account balances in the sub-ledger and general ledger.

BASIC CONFIGURATION

The reconciliation setup is based on four code tables:

1. Using the 'Reconciliation Job' the user can define the reconciliation periodicity, for example to allow for the inventory of one fund or mandate group to be reconciled daily while others are reconciled weekly. Trigger conditions, such as the minimum number of existing deliveries, are also set via the 'Reconciliation Job'.

2. In the 'Reconciliation Type' table (Fig. 1) the types of data (positions, transactions or instruments) which are to be reconciled in XENTIS are determined. One 'Reconciliation Type' consists of at least two reconciliation sources, one internal and one external data source or two external data sources. If two external sources are to be reconciled, only criteria that are not directly assigned to a XENTIS item (fund, position, etc.) can be set in the interface, and are therefore completely detached from the data already held in XENTIS.

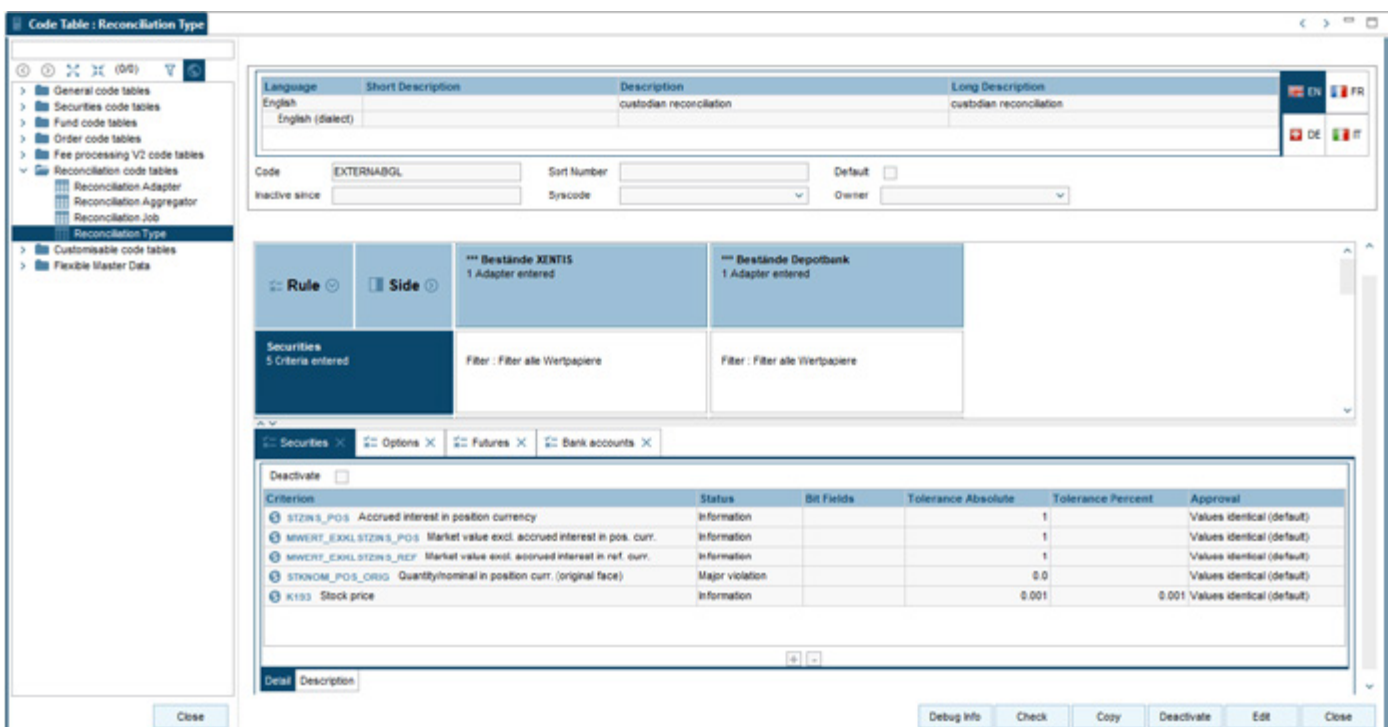


Fig. 1: Code table 'Reconciliation Type'

Further, more than two data sources can be compared with each other in one reconciliation run, e.g. valuation prices in XENTIS with prices from two external data providers.

Several reconciliation rules are definable per 'Reconciliation Type'; for example, different comparison rules should apply to securities positions than to derivatives contracts. Each rule may be characterised according to the following settings:

- Definition of an (optional) filter to limit the rule to specific types of positions or instruments, e.g. equities and bonds
- Comparison criteria
 - Valuation data (quantity/nominal, market values, accrued interest, valuation prices, etc.)
 - All master data, including additional data and key figures on positions, transactions, financial instruments, funds and portfolios
 - Instrument and contract prices
 - Various system criteria, for example, such as those used in the XENTIS decision trees
- Absolute and relative tolerances
- Degree of mismatch (serious or minor) if the discrepancy is outside the (graduated) tolerance:
 - Discrepancy up to 1%: no mismatch
 - Discrepancy between 1% and 2%: minor mismatch
 - Discrepancy over 2%: serious mismatch

3. The 'Reconciliation Adapter' code table includes a precise definition of the data sources assigned to the pages in the 'Reconciliation Type' and the data mapping. There are currently five types of adapters:

· **'SNRECON' Interface**

External data are first imported via the XENTIS standard interface by means of a standalone job and are then available for reconciliation.

· **Instruments**

Using this adapter, master data, (FX) rates and key ratios can be reconciled for both classic securities and derivative financial instruments.

· **Valuation (Positions and Collaterals)**

After the valuation has been carried out in XENTIS the valuation positions are available for reconciliation. The valuation parameters such as details of transaction status, accounting type, due date and valuation prices used are configurable.

The screenshot displays the 'Reconciliation Detail' window for 'Portfolio 1' dated '1. Feb 2019'. The 'Process Status' is 'Processed' and the 'Reconciliation Type' is 'custodian reconciliation'. Below this, there are tabs for 'Runs', 'Additional Data', 'Statistic', and 'Raw Data'. The 'Runs' tab shows two runs, both marked as 'Major violation' and started on '7. Mar 2019'. A search results table below shows five entries, with the first one being a 'Major violation' for 'Bankkonto' (CHF) and the others being 'No violation' for various bonds. At the bottom, a comparison table shows the difference between 'Side 1' and 'Side 2' for various criteria like 'Quantity/nominal in position curr.', 'Accrued interest in position currency', and 'Market value excl. accrued interest in pos. curr.', with values in USD and CHF.

Criterion	Violation Criterion	Side 1	Difference	Difference in Percent	Side 2
Quantity/nominal in position curr. (original face)	Major violation	1.500 USD	100	6.66667	1.400 USD
Accrued interest in position currency	Information	0.0	0.0	100	0.0
Market value excl. accrued interest in pos. curr.	Information	283.410 USD	37.788	13.33333	245.622 USD
Market value excl. accrued interest in ref. curr.	Information	279.413.92 CHF	188.94	100	242.158.73 USD
Stock price	Information	188.94 USD			

Fig. 2: Detailed screen for the analysis and processing of reconciliation results

- **Balance Sheet/Income Statement**

Using this adapter, the internal account balances are determined from the balance sheet/income statement, which are then ready for reconciliation with the balances on the financial accounts of a linked general ledger.

- **Transactions/Movements**

This adapter identifies position changes and calls up the underlying transactions in the form of individual movements. Optionally, it is possible to include only the main position, e.g. in a security, or all the other relevant positions, e.g. on a bank account. In addition to reconciling transaction data (quantity/nominal, price, etc.), it is also possible to carry out a position reconciliation, including pending orders.

4. 'Reconciliation Aggregators' accept data from one or several adapters and concatenate it according to definable criteria (e.g. of positions at fund/ mandate, portfolio or depot level), so that items to be reconciled are created for the internal and external party.

RECONCILIATION ANALYSIS

After a reconciliation run there are several options to retrieve the results. As an alternative to reporting, three GUIs have been implemented for the online search. With the 'Reconciliation Processes' search screen the individual reconciliation processes can be selected, and in the case of a position reconciliation, for example, displayed by fund/mandate. The 'Reconciliation Results' screen provides an institution-wide search for individual mismatches. Thus it is possible to identify very quickly in which funds/mandates a mismatch has occurred on a specific instrument.

The detail screen (**Fig. 2**) provides information on the mismatch criteria per position or instrument. Minor and serious mismatches are marked in different colours for ease of visualisation. The administration of the mismatches arising from the individual reconciliation processes is also carried out here:

- 'Execute' starts a new reconciliation, e.g. after a manual correction has been recorded. All reconciliations are historicised in 'Runs', hence the results of older runs can always be traced.
- 'Close' means that the reconciliation process for one date is deemed to have been completed. A mismatch is then no longer displayed.
- The 'Delete' button allows a reconciliation to be aborted in order to start a new reconciliation process for the same date. The rejected data are however only permanently deleted by the reconciliation reorganisation job.
- Individual mismatches can be approved for a limited period, i.e. if it is clear that a discrepancy is insignificant or explainable but will continue to exist for another few days. The authorisation period is entered manually and the reconciliation process will disregard the discrepancy until the end of the period or until the records become aligned, thereby correcting the discrepancy. If during the authorisation period, however, a reactivation condition defined in the 'Reconciliation Type' is met, the mismatch will once again be displayed. An example of a 'Reconciliation Type' in this instance might be, for example, that the extent of a discrepancy must not change during the authorised period. An 'Approval' effectively means 'no mismatch'. If a mismatch is approved, the respective user and date are recorded. The entry of a comment is mandatory.

The screenshot shows the 'Reconciliation Overview' interface. At the top, there are search criteria fields: 'From/Till Date' set to '5. Feb 2019', 'Grouped by' set to 'According to date', 'Reconciliation Job' (dropdown), and 'Reconciliation Type' (dropdown). Below this, it says 'Search Results: 3'. A table displays the results with columns: Date, Reconciliation Type, Reconciliation Job, Total, Major violation, Minor violation, No violation, Progress, Waiting, Processing, and Processed.

Date	Reconciliation Type	Reconciliation Job	Total	Major violation	Minor violation	No violation	Progress	Waiting	Processing	Processed
5. Feb 2019	custodian reconciliation	custodian reconciliation	1				1	100%		1
6. Feb 2019	custodian reconciliation	custodian reconciliation	1				1	100%		1
7. Feb 2019	custodian reconciliation	custodian reconciliation	1				1	100%		1

Fig. 3: 'Reconciliation Overview'

In order to check the mismatch level and processing status of items to be reconciled as part of several reconciliation processes (as an example, XENTIS will typically process 15,000 funds, each with an average of 200 positions, in under 20 minutes), XENTIS features a 'Reconciliation Overview' (Fig. 3). On this screen reconciliation runs can be grouped by date, job and type. The kick-off of bulk processes such as 'Execute', 'Close' and 'Delete' is also possible and impacts all processes that are summarised on one selected line (e.g. all funds of a custodian bank). Filters can also be applied to determine whether actions are applicable to all processes or only those which currently show a mismatch.

In addition to the reconciliation workflow, it is also possible to set up a process in XENTIS that builds on the reconciliation analysis and performs the automatic comparison of the external with the internal positions. In this reconciliation, transactions, called shadow accounting transactions, are automatically created with the differences of the positions and balances based on the reconciliation data. This reconciliation is of particular interest to asset managers who maintain portfolio accounting and, above all, are dependent on the accurateness of position holdings and balances.

CONCLUSION

Reconciliation in XENTIS provides the means to manage and monitor the entire reconciliation process with a configurable workflow. Potential sources of error can be viewed directly to analyse reconciliation discrepancies, thus significantly minimising the manual workload. The flexibility of XENTIS represents a real asset for the user who needs to generate a global overview on the various reconciliation procedures. It also guarantees that future requirements regarding the data reconciliation can be implemented easily.

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