

System Administrator Manual

Financial Institutions

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This document is intended for bank or processing center employees responsible for WAY4 setup and contains information on creating and configuring new financial institutions in the system, setting up interbranch routing rules, and using time zone mode.

When working with this document, it is recommended to use the following resources from the OpenWay documentation series:

- · "Accounting Schemes".
- "Products and Contract Subtypes".
- "Standing Payment Orders".
- "Interest accrual".
- · "Global Parameters".
- "Issuing Module. Operation Manual".
- "Documents".
- "Daily Procedures".
- · "Cardholder Statements".
- "Configuring WAY4 for Magnetic Stripe Card Issuing".
- "WAY4 Accounting".

The following notation is used in the document:

- Field labels in screen forms are shown in italics.
- Key combinations are shown in angular brackets, for example, <Ctrl>+<F3>.
- Names of screen form buttons and tabs are shown in square brackets, for example, [Approve].
- Sequences for selecting user menu items or context menu items are shown using arrows as follows: "Issuing → Contracts Input & Update".
- Sequences for selecting system menu items are shown using arrows as follows: Database => Change password.
- Variables that differ for each local instance, such as directory and file names, as well as file paths are shown in angular brackets, as in <OWS_HOME>.

Warnings and information are marked as follows:



Warnings about potentially hazardous situations or actions.



Messages with information about important features, additional options, or the best use of certain system functions.



1. Terms and Definitions

A financial institution (FI) in WAY4 is a credit institution or its branch or affiliated bank registered in a special dictionary. This object is used in the system to reflect financial activities of a credit institution.

Such basic system objects as clients, contracts, Products, contract subtypes, Service Packages, Accounting Schemes, Events, macrotransactions, FX rates, etc. all belong to a specific financial institution.

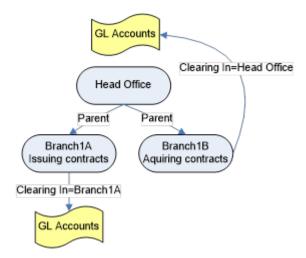
Many procedures, such as document processing, daily closing, data exchange with the bank system and with the card issuing module can be executed both for a particular financial institution as well as for a group of financial institutions.

A financial institution may be subordinate to another financial institution. This allows for the creation of a hierarchical structure of financial institutions in the system. The system supports the creation of several independent hierarchical structures of financial institutions.

Hierarchical structures of financial institutions can be used to configure various types of interaction between financial institutions (various types of subordination).

- 1. The hierarchy "head office bank branch" can have various options for use:
 - The branch is a financial institution in its own right, with its own clients, contracts and General Ledger; however, Products, tariffs and a number of other objects, such as FX rates, etc. are exact copies of the head office's set of configurations. This is the most widespread type of hierarchy.
 - This option also implies the creation of a full-fledged financial institution with its own clients, contracts and General Ledger; but the branch is allowed to set its own independent tariffs, and when necessary, to configure Products.
 - The branch is a financial institution containing records on clients, contracts, Products and tariffs, but does not have a General Ledger. The results of processing this financial institution's financial transactions are reflected in the General Ledger of another financial institution (usually in the head office's General Ledger). This type of hierarchy is used when accounting regulations of a multi-branch bank require accounting to be maintained on the balance of the head office.
- 2. The hierarchy "head office group of branch objects". The subordinate financial institution in this hierarchy is used to group objects (clients, Products, etc.). For example, one bank branch can be represented by two subordinate financial institutions: card Products and contracts are grouped in one, and acquiring Products and contracts in the other. This approach can be used, for example, to separate accounting for branch transactions, when accounting for card operations is maintained in the head office, and accounting for acquiring operations in the branch itself (see the figure below and the description of the *Clearing In* field).





The hierarchy "head office – group of branch objects"

- 3. The hierarchy "sponsor bank - affiliated bank". The sponsor bank interacts with payment systems. In this case, the following options are possible:
 - The affiliated bank has its own transaction processing system. Every day, the affiliated bank exchanges transaction information with the sponsor bank on a Host-to-Host channel. In this case, in the financial institution hierarchy set up in the bank sponsor's system, the subordinate financial institution (corresponding to the affiliated bank) contains only routing bank contracts. Interaction between the sponsor bank and the affiliated bank is additionally set up by configuring Interchange routing mechanisms.
 - Accounting for the affiliated bank's issuing and/or acquiring is maintained in the sponsor bank's system (in WAY4). In this case all data on the affiliated bank's clients, contracts, macrotransactions, etc. are stored in the sponsor bank's system. The financial institution hierarchy for this type of interaction is configured in the same way as the "head office – bank branch hierarchy (according to the second option).

Rules for performing financial transactions between various financial institutions are regulated in WAY4 by means of Interbranch Routing.



2. Financial Institutions in WAY4

This section describes work with financial institutions in WAY4 when the following actions are performed:

- · Adding a financial institution.
- Changing basic FI configurations.
- · Changing additional FI configurations.
- Deleting a financial institution.
- Moving clients and contracts to another FI.
- · Configuring bank branches and divisions.

2.1 Adding Financial Institutions

Adding a financial institution consists of the following steps:

- Creating a new financial institution record.
- Copying configurations.
- · Activating Basic FI Properties.
- · Checking FI parameters.

2.1.1 Registering Financial Institutions

To add a financial institution, select "Full \rightarrow Configuration Setup \rightarrow Main Tables \rightarrow Financial Institutions" from the user menu and click the [Ins] button in the "Financial Institutions" form that opens:



When creating a new financial institution record, configure a minimum set of financial institution parameters – fill in the *Name* field (name of the financial institution) and specify FI identifiers (*Bank Code* and *Branch Code*; for more information, see the section "Basic FI Parameters"). It is recommended that the remaining parameters be set up after standard FI parameters are copied since this process copies the values of all fields in forms "Financial Institutions" and "Details..." of the standard financial institution except for the above ones.

For information on how to change financial institution parameters and for a description of fields of the "Financial Institutions" form, see sections "Basic Fl Parameters" and "Additional Fl Parameters".



The form contains the following buttons:

- [Check] used to verify FI parameters (see the section "Checking FI Parameters").
- [Init Settings] used to copy basic configurations from another financial institution (see the section "Copying Basic FI Configurations").
- [Refr Settings] used to partially copy configurations from another financial institution (see the section "Partial Copying of Configurations for a Specific FI").
- [Children Refr] used to copy the parameters of the parent FI to all subordinate FIs (see the section "Selective Copying of Parent FI Settings for all Child FIs").
- [Currency] used to change the local currency (see the section "Changing the Local Currency").
- [Routing] used to change routing configurations (see the section "Changing Interchange Routing Configurations").
- [Interbranch] used to set up Interbranch routing (see the section "Configuring Interbranch Routing").
- [Messages] used to access the form containing system messages generated as a result of
 executing the previous operation (for example, results of FI check see the section "Checking FI
 Parameters").
- [Details] used to access the form with additional FI data (see the section "Additional FI Parameters").

2.1.2 Copying FI Configurations

This section describes actions for the following activities:

- Copying basic FI configurations.
- Partial copying of configurations for a specific Fl.
- Selective copying of parent FI settings for all child FIs.

2.1.2.1 Copying Basic FI Configurations

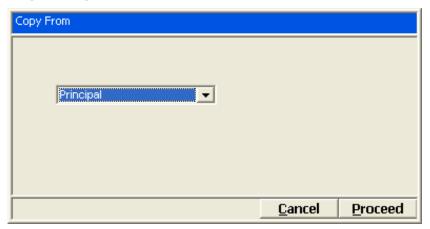
After registering a new financial institution, it is necessary to copy basic configurations from another financial institution that has already been set up (standard FI).

To copy configurations, select a new financial institution in the "Financial Institutions" form (see the section "Registering Financial Institutions") and click the [Init Settings] button. In the "Init Settings for <name of new FI>" dialogue box that opens (see the figure below), make sure that copying will take place for the new FI and click the [Setup] button.





In the "Copy From" form that opens, select the FI from which configurations must be copied and click the [Proceed] button.



During this procedure, the following objects are copied to the new FI:

- Client types
- Service groups
- Contract subtypes
- Event types
- Behaviour groups and behaviour types
- Accounting Schemes
- Service Packages
- Products
- Bank divisions
- Bank accounting contracts
- · Stat diagrams
- FX Schemes



When configurations are copied, values of fields of the "Financial Institutions" form are copied. If necessary, change the copied configurations in the new FI after copying. For information on how to change parameter values, see the section "Changing FI Parameters". Local currency values are changed in special mode – see the section "Changing the Local Currency".



After copying, Service Packages and Accounting Schemes of the new FI contain a link to the standard setup (fields *Parent Pack, Parent Scheme*, respectively). A link to the standard setup in other (child) objects copied from the standard configurations is a record code, which is the same as the record code of the corresponding standard object. All child objects inherit changes in the parameters of standard objects:

- When configurations of a standard Accounting Scheme or Service Package change, the parameters are synchronised when the standard object is approved. When users attempt to change child object parameters without changing the standard object, the modified parameters are automatically rolled back and synchronised with the standard parameters when the changes in the child object are approved.
- When other standard objects (Products, contact subtypes, Events, etc.) change,
 parameters are synchronised during the partial copying procedure (see the section
 "Partial Copying of Configurations for a Specific FI"). If child object parameters are
 changed without changing the standard object, the modified parameters are rolled
 back and synchronised with the standard parameters during the partial copying
 procedure.

To switch off inheritance of changes, proceed as follows:

- For Accounting Schemes and Service Packages: clear the *Parent Pack* field of a child Accounting Scheme or Service Package.
- For Products, inheritance of their components can be switched off; to do so, specify the "NO_COPY;" tag in the *Custom Data* field of a child Product. When copying selected parameters of a template financial institution, the tag makes it possible for the Product of a child financial institution to not copy the Accounting Scheme, Service Package, Report Type, etc.
- All copied objects can be unlinked from their standard object by changing the record code. However, new copies of standard objects will be created during partial copying in this case.

The way partial FI update is performed depends on how inheritance of changes is switched off (see the section "Partial Copying of Configurations for a Specific FI").

When copying a financial institution's settings, consider the *Branch Code* parameter of the original institution. This code is used when generating a prefix in the names of the institution's bank contracts, Accounting Schemes and Service Packages (with consideration of the rules set using the *Numeration Scheme* parameter – for more information, see the section "Basic FI Parameters"). If a name does not contain this prefix (or the prefix was changed manually by a user), duplicate names may be created when copying.



For example:

- In the source institution with the code "001", there is a Service Package with a name that does not start with the institution's code. For example "L_001-Our Priv Visa".
- In the source institution with the code "001", there is a Service Package with the name "001-Our Priv Visa".
- After copying to a new institution (for example, with the code "777"), both Service Packages will be created with the name "777-Our Priv Visa".

This may lead to the user incorrectly choosing a Service Package in a Product, and, consequently, to the use of incorrect tariffs for a contract.

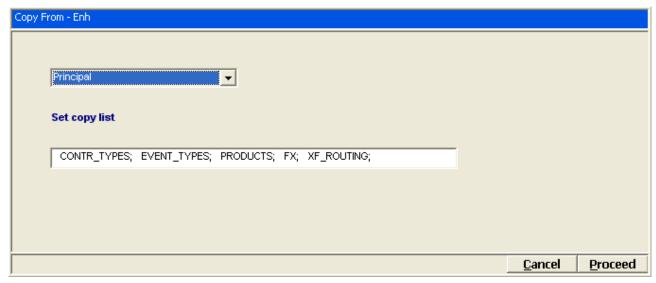
If the *Branch Code* parameter is not set for the target institution, copied objects in the target institution will be created with the same names as in the original institution. Without filtering by institution, this may be inconvenient, for example, for viewing Service Packages.

2.1.2.2 Partial Copying of Configurations for a Specific FI

In WAY4, it is possible to partially copy configurations of a source FI without changing the other configurations of the FI to be updated.

For example, during setup of FI 2, configurations were copied from FI 1. After this, some changes were made to the configurations of FI 2. Then, one of bank contracts changed and a Product was added to FI 1. To copy the changes to FI 2 without changing its own configurations, the partial copying procedure is used.

To do so, select the target institution in the "Financial Institutions" form and click the [Refr Settings] button. In the "Refr Settings for <name of FI>" dialogue box, make sure that additional copying will take place for the necessary FI and click the [Refresh] button. In the "Copy From" form that opens, select the FI from which configurations must be copied, if necessary, delete objects from the list of copied objects in the *Set copy list* field and click the [Proceed] button.



After partial copying:

• Copies will be created for all selected objects of the standard FI that have no copies in the updated FI.



 Found object copies will be synchronised with the standard objects (except for Accounting Schemes and Service Packages, which are synchronised when objects are approved) if inheritance of parameters is not switched off. For information on switching off inheritance, see the section "Copying Basic FI Configurations".



A search for copies is made as follows – copies are searched for by record code (the codes of copied records are the same as the codes of standard records) and parameters of found records are checked:

- For Service Packages and Accounting Schemes:
 - If the *Parent* field is filled in, the copy is recognised, and a new copy of the standard object is not created.
 - If the *Parent* field is left blank, the copy is not linked to the standard object. A
 new copy of the corresponding Service Package or Accounting Scheme is
 created.
- For Products if the "NO_COPY;" tag is specified in the *Custom Data* field of a child Product, changes in components of the standard (template) Product (Accounting Scheme, Service Package, report type, etc.) will not be inherited, but the parameters of the Product will be synchronised with the standard one.

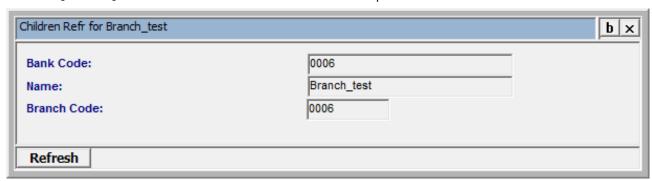
 The "NO_COPY;" tag can be specified in the properties of a child Product. When copying the main Product's settings, this child Product will not be synchronised with the standard one.

2.1.2.3 Selective Copying of Parent FI Settings for all Child FIs

In WAY4 it is possible to copy changes in the parameters of a parent FI to all child (subordinate) institutions. A link to the parent institution is specified in the *Parent Institution* field of the child institution (see the section "Basic FI Parameters").

To synchronise settings in the "Financial Institutions" form, select the parent institution and click the [Children Refr] button.

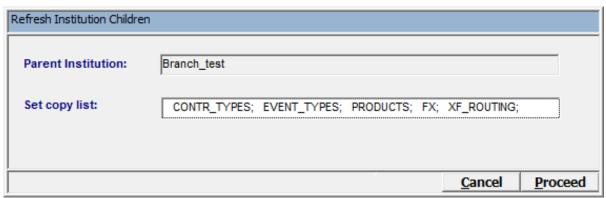
Click the [Refresh] button in the confirmation window that opens.





If the institution is not the parent for any financial institution (no financial institution has a link to this institution in the *Parent Institution* field), an error message will be displayed.

Clicking the [Refresh] button opens a form to select objects for copying:



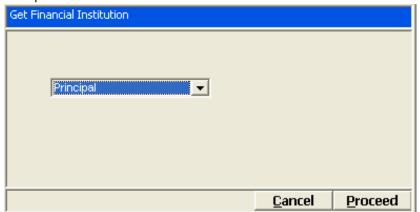
If necessary, in this form delete objects from the list of objects to be copied in the *Set copy list* field and click the [Proceed] button. Parameters of these objects of the parent financial institution are copied to all child financial institutions.

If copying is successful, the "All Branches copied" message will be displayed. If an error occurred while copying data to a child financial institution, the "During copying, some errors occurred. See process log" message will be displayed.

2.1.3 Activating Basic FI Properties

After configurations are copied, the created objects (Accounting Schemes, Service Packages, contracts and Products) of the new FI have the "Not Ready" status. To activate the objects created for the new institution, do as follows:

Run the "Renew All For Institution" procedure (Full → Configuration Setup → Main Tables →
Renew All For Institution). When this menu item is selected, the "Get Financial Institution" form
will open:



2. In the "Get Financial Institution" form, select the new FI from the list of registered FIs and click the [Proceed] button.



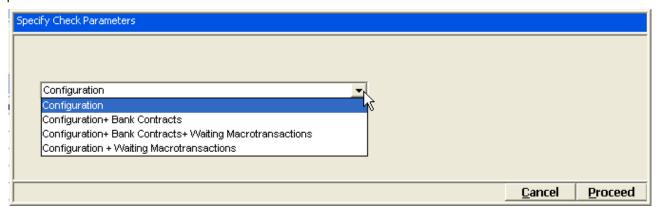
3. In the "Date From" form that opens, specify the date starting with which the configurations of the new FI must be active and click the [Proceed] button:



2.1.4 Checking FI Parameters

After setup, it is necessary to check the parameters of the new FI. To do so, select the new institution in the "Financial Institutions" form (see the section "Registering Financial Institutions") and click the [Check] button.

As a result, the "Specify Check Parameters" form will be displayed. It is used to specify check parameters:



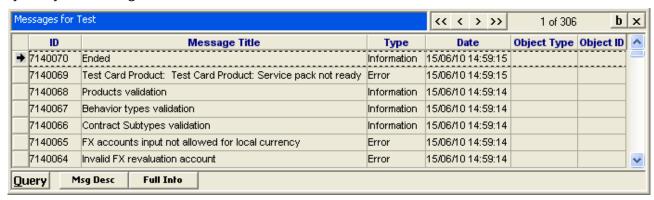
The following options are available:

- *Configuration* FI parameters are checked (see a list of checked objects in the section "Copying Basic FI Configurations"); this is the default value.
- Configuration + Bank Contracts FI parameters and bank contract parameters are checked.
- Configuration + Bank Contracts + Waiting Macrotransactions FI parameters, bank contract parameters and waiting macrotransactions are checked.
- Configuration + Waiting Macrotransactions FI parameters and waiting macrotransactions are checked.

Select the necessary type of check and click the [Proceed] button.



To analyse errors that occurred during FI check, click the [Messages] button in the "Financial Institutions" form. This will open the "Messages for <name of FI>" form containing messages generated by the system during FI check:



This form contains all system messages generated during check of the new FI. It is necessary to fix all errors that generated messages of "Fatal Error" and "Error" types and some of the messages of the "Warning" type.

After a new banking day is opened and currency conversion rates are set (see the section "Start of Day procedure" of the document "Daily Procedures"), the new financial institution is ready.



2.2 Changing Basic FI Configurations

After copying of standard FI's settings, the following changes can be made to:

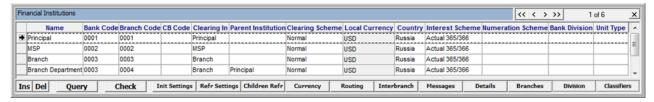
- FI parameters.
- Calculation of the debited amount (USE_TRANS_AMOUNT tag).
- · Local currency.
- Interchange routing settings.
- Default contract classifiers for financial institutions.

2.2.1 Changing FI Parameters

This section describes the procedure for changing basic and additional parameters of the financial institution.

2.2.1.1 Basic FI Parameters

To modify FI parameters, select the "Full \rightarrow Configuration Setup \rightarrow Main Tables \rightarrow Financial Institutions" user menu item and edit the parameters of the necessary FI in the "Financial Institutions" form that opens.



The "Financial Institutions" form contains the following fields:

- Name Fl name.
- Bank Code auxiliary internal FI identifier up to 6 characters long (does not need to be unique). This identifier may be used to name exported files (these files can be generated to issue cards or to exchange data with the banking system).

This identifier is also used to set up parameters of online operation (see the section "Changing Additional FI Configurations").

The *Bank Code* identifier may also be used for specific redefined procedures or custom packages/pipes.

- Branch Code unique internal FI identifier up to 6 characters long; this identifier is used to number bank contracts, Accounting Schemes, Service Packages, when a prefix for the contract subtype RBS Code field is generated (also see the description of the Numeration Scheme parameter). This ID may be used to name exported files (e.g. such files are generated to issue cards). The identifier may also be used for specific redefined procedures or custom packages/pipes.
- CB Code code that may be used in a custom procedure that is used to number this FI's accounts.
- The *Clearing In* field specifies the FI in whose General Ledger accounting is maintained for the transactions of this FI. Usually, in this field the same financial institution is selected (generally, the financial institution has its own accounting and reporting). When configuring bank branch



parameters, the head financial institution can be specified in this field. This option is applied when accounting regulations of a multi-branch bank require accounting to be maintained on the balance of the head office.



Note that for a branch that does not have its own General Ledger (branch operations are recorded in the head financial institution), FX schemes should not be configured (see the section "Setting up Main FX Schemes" of the document "Currency Conversion"). Otherwise, when the financial institution is checked, the error "Entry of FX Schemes is not allowed for this institution" will be generated.

- Parent Institution FI to which the current FI is subordinate. A link to a parent FI affects processing
 of transactions between financial institutions (see the section "Rules for Creating
 Macrotransactions for Interbranch Transactions"). Moreover, a link to the parent FI allows
 synchronisation of changes in parent FI parameters with the parameters of child FIs (see the
 section "Selective Copying of Parent FI Settings for all Child FIs").
- Clearing Scheme clearing scheme; this field must contain the Normal value; values Mirror and
 Mirror with memory are not used in the current version and are only present for backward
 compatibility.
- Local Currency local currency of the FI (for information on how to change this parameter, see the section "Changing the Local Currency").
- Country country of the Fl.
- Interest Scheme this parameter is used to calculate a daily interest rate using an annual interest rate. For details on daily rate calculation, see the document "Interest accrual". The field can have one of the following values:
 - "Default" this value is specified by default when a financial institution is created. When checking institution parameters, this value will be changed to the value of the *Days In Year* parameter in the "Global Constants" form (Full → Configuration Setup → Main Tables → Global Constants).
 - "Actual 365/366" to determine the daily interest rate, the length of a year will be equal to the actual number of calendar days in the year (either 365 or 366 days).
 - "360" to calculate the daily interest rate, the length of a year will be affected by the value of the USE_MONTH_WEIGHT global parameter (see the document "Global Parameters") and the description of the USE_MONTH_WEIGHT parameter in the sections "Number of Days in a Year" and "Determining a Daily Interest Rate" of the document "Interest Accrual".
 - "-360" to calculate the daily interest rate, the number of calendar days in a month will be considered to be 30, and the number of calendar days in a year will be considered to be 360.
 - "Fixed 365" fixed value for the number of calendar days in the year (365).
 - "Fixed 366" fixed value for the number of calendar days in the year (366).
 - "360 with USE_MONTH_WEIGHT=Y" to determine the daily interest rate, each month is considered to have the same weight, equal to 1/12 of a year. For example, more interest is accrued for one day of February than is accrued for the same amount on one day in January.



- "360 with USE_MONTH_WEIGHT=N" for calculating the daily interest rate it is assumed there are 360 days in a year. Months are considered to have different weights depending on the number of days in the month. For example, the same amount of interest is accrued for one day in February as is accrued for the same amount on one day in January.
 For more information about the USE_MONTH_WEIGHT global parameter, see the sections "Number of Days in a Year" and "Determining a Daily Interest Rate" of the document "Interest Accrual".
- Numeration Scheme determines how a prefix is generated for the names of Service Packages and Accounting Schemes, contract subtype's RBS Codefield, and bank contract numbers according to a financial institution's identifier (Branch Code). A prefix is based on the value of the Branch Code field. The Numeration Scheme field contains a value in the <N1>:<N2> format; the value of the Branch Code field from symbol N1 to symbol N2 will be used to generate the prefix.

Example.

- The "1209" value is specified in the *Branch Code* field. The *Numeration Scheme* field contains the value "2:4". The second, the third and the fourth symbols in the *Branch Code* field will be used to generate the prefix, and its value will be "209".
- Division a bank's structural unit corresponding to this institution (for example, department). To fill
 in this field, create a new record in the "Bank Divisions" form (Full → Configuration Setup →
 Accounting Setup → Bank Divisions) and select it in this field. A record in the "Bank Divisions" form
 contains additional information about a branch. See the section "Bank Divisions" Form.
- Unit Type type of structural unit specified in the Division field. Selected from the list configured in the form "Full → Configuration Setup → Main Tables → Unit Types", see the section ""Unit Types" Form".

The [Branches] button is used to view bank branches (see the section "Branches" Form).

The [Division] button is used to view additional information about an institution (see the section "Bank Divisions" Form).

2.2.1.2 Additional FI Parameters

To access additional information about a FI, use the "Details for <name of FI>" form. It is opened by clicking the [Details] button in the "Financial Institutions" form (see the section "Basic FI Parameters"):





This form contains fields absent from the parent form:

- Parent FI Routing when the "Yes" value is set, Interchange routing settings of the parent FI specified in the Parent Institution field will be used for this FI (see the section "Basic FI Parameters"). If "No" is set (the default value), this FI's interchange routing settings are used.
- Calendar Type business calendar type; the specified calendar type will be used to calculate due dates for accounts of contracts created within the FI (see the section "Business Calendar" of the document "Dictionaries").
- Time Zone time zone shift of the FI (in hours) from the base FI (as a rule, the base FI is the head office). A shift to the west is a positive value, and a shift to the east is a negative value. The value of the field affects closing of a banking day in time zone mode. This functionality is supplied according to a separate agreement with OpenWay. For more details on time zone mode, see the document "Time Zones".
- *Tariff Domain* a tariff domain registered in WAY4 can be specified in the *Tariff Domain* field for each financial institution. A value can be selected in this field if the delivery includes the tariff management module, which is supplied according to a separate agreement with OpenWay.
- Fields *Dispute Contract, Liability Contract, Deposit Contract, Min Deposit, Usage* % are used to set up bank contracts of the Fl. See description of the fields in section "Configuring Institution Specifications".
- *Interest in Cycle* determines the billing cycle in which an interest accrual entry is registered and can have the following values:
 - Empty (null) the value of the "Interest in Cycle" parameter specified using the INTEREST_IN_CYCLE global parameter is used (see the document "Global Parameters").
 - "End of cycle" interest is accrued on the last day of a closing billing cycle, that is, the local date (the date when accounting entries are reflected in the General Ledger) is the last day of the closing billing cycle, and the corresponding entry is reflected in the account statement for that cycle.
 - "First End of Day" interest is accrued on the first day of an opening billing cycle, that is, the local date (the date when accounting entries are reflected in the General Ledger) is the first day of the opening billing cycle, and the corresponding entries is reflected in the account statement for that cycle.
 - "Last Working Day" interest is accrued on the last business day of a closing billing cycle, that is, the local date (the date when accounting entries are reflected in the General Ledger) is the last business day of the closing billing cycle, and the corresponding entry is reflected in the account statement for that cycle.
 - "First Working Day" interest is accrued on the first business day of the opening billing cycle, and the corresponding entry is reflected in the account statement for that cycle.
- *Post Due Mode* determines how waiting due normalisation macrotransactions are posted when a billing cycle is opened (determines the date the macrotransaction is reflected on General Ledger accounts (local date)). This parameter can have the following values:
 - Empty (null) the value specified in the POST_DUE global parameter is used (see the document "Global Parameters").

- "End of Cycle" waiting macrotransactions with due normalisation types "End Cycle Due" or
 "Quarter" (see the section "Ageing" of the document "Accounting Schemes") and a posting
 date that is the same as the opening date of a new billing cycle are posted on the closing date
 of the previous billing cycle: the local date (GL Date) of the macrotransactions will correspond
 to the closing date of the previous billing cycle.
- "First End of Day" waiting macrotransactions with the posting date that is the same as the opening date of a new billing cycle are posted on the first business day of the new billing cycle and will not affect the balance of the closing billing cycle: the local date (GL Date) of the macrotransactions will correspond to the first working day of the new billing cycle.
- "Last Working Day" waiting macrotransactions with the posting date that is the same as the opening date of a new billing cycle are posted on the last business day of the previous billing cycle: the local date (Gl Date) of the macrotransactions will correspond to the last business day of the previous billing cycle.
- "Start of Cycle" waiting macrotransactions with the posting date that is the same as the opening date of a new billing cycle will be posted on the first day of the new billing cycle, even if this is not a business day: the local date (GL Date) of the macrotransactions will correspond to the first day of the new billing cycle.
- Cr Lim Posting determines whether credit limits are reflected in issuing contract accounts. When a
 credit limit is set, an authorisation document is generated in the system. Credit limits are reflected
 in contract accounts by generating for this authorisation document a macrotransaction
 transferring funds from a bank contract to the corresponding account of the issuing contract.
 The field is filled in by selecting possible values from a list and depends on the
 CREDIT_LIMIT_POSTING global parameter (see the document "Global Parameters"):
 - If the global parameter CREDIT_LIMIT_POSTING is set (the parameter's value is "Y" or "N"), the financial institution's *Cr Lim Posting* field is not analysed.
 - If the CREDIT_LIMIT_POSTING global parameter is disabled (if the parameter is not set or the value is empty (NULL)), the mode for showing credit limits in accounts can be enabled in the financial institution's *Cr Lim Posting* field:
 - "No" or empty credit limits are not shown in contract accounts.
 - "Yes" credit limits are shown in contract accounts.
 - A financial institution's *Cr Lim Posting* field can be redefined in an Accounting Scheme's *Cr Lim Posting* field.
 - If the CREDIT_LIMIT_POSTING global parameter is not set and the *CR Lim Posting* field is not filled in for either a Scheme or financial institution, credit limits are not shown in contract accounts.
- FX in HO determines whether settlement between the clearing center (head office) and other FIs may be made in a financial institution's contract currency that is different from the settlement currency of a financial document. Currency exchange is in this case performed in the clearing center, not in the branch (affiliated bank).

 Values of the FX in HO parameter:

- "No" or empty settlement in the currency of a financial document; this is the default value.
- "Yes" settlement in the currency of a financial institution's contract.

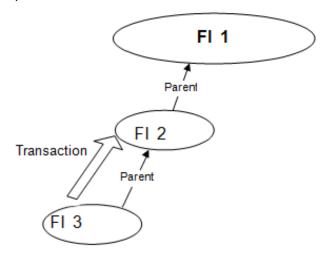
For example, if a transaction was made on a device of the head financial institution to withdraw cash in a foreign currency with a branch card using accounts in a local currency (the card account currency differs from the settlement currency), entries in the branch will be made in the local currency using a correspondent account in the local currency. FX for the branch will take place in the head financial institution.

When this transaction is processed, two macrotransactions are generated:

- A source macrotransaction between the device contract account and the routing contract
 correspondent account. The transaction amount will be converted into an amount in the target
 contract currency in the branch; this is done using standard FX accounts of the head financial
 institution's bank contract.
- The target contract's currency (card account currency) is used as the target macrotransaction currency. The amount of the target macrotransaction is the amount in the currency of the target contract account at the head financial institution's FX rate. The target macrotransaction correspondent account is the routing contract's standard account (in the currency of the target account).

The procedure for calculating (and recording) the debited amount and the procedure for generating macrotransactions is affected by the following parameters: the global parameter CHANGE_CURRENCY and the corresponding settings (see the section CHANGE_CURRENCY of the document "Global Parameters"), and the "USE_TRANS_AMOUNT" tag (see the section "Tags used when working with financial institutions" of the document "Setup Tags").

An exception is the situation when a transaction takes place between two subordinate bank branches in one branch of the hierarchy, and the source financial institution is subordinate to the card's financial institution, see the figure below (transaction with a card registered in FI 2 is made on the device of FI 3; for FI 2 and FI 3 the value of the *FX in HO* parameter is "Yes"). In this case, the *FX in HO* parameter does not work, conversion is made in standard mode (in the example in the figure, conversion is made in FI 3).



Configuration disabling the parameter FX in HO



• Special Parms – this field is used for additional configuration of the financial institution using the following tags. For more information, see the section "Tags used when working with financial institutions" of the document "Setup Tags".

2.2.2 Calculating the Debited Amount (USE_TRANS_AMOUNT tag)

The USE_TRANS_AMOUNT=<value>; tag set in the *Special Parms* field of the financial institution is used to specify the method for calculating the amount debited from "on-us" card accounts when processing a financial document imported from a payment system, as well as the amount of funds blocked when processing an authorisation request.



These settings do not work for secondary transactions. I.e., these settings do not influence, for example, calculation of the amounts of secondary financial documents in a dispute cycle (Chargeback, Representment).

To enable this mode, do as follows:

- Set the CHANGE_CURRENCY global parameter; for more information, see the document "Global Parameters".
 - The value of the global parameter is the code of the account type used to record the difference between Transaction Amount and Settlement Amount when these amounts are in the same currency (see the section "Generating Macrotransactions").
 - The account code specified as the CHANGE_CURRENCY parameter value is used to search for an account only when Transaction Amount and Settlement Amount differ but are in the same currency. To determine the debited/blocked amount in other cases (see the section "Generating Macrotransactions") this value of the CHANGE_CURRENCY global parameter will be considered exclusively as enabling the mode for checking the USE_TRANS_AMOUNT tag.
- Enable the USE_TRANS_AMOUNT; tag. Possible values for the tag:
 - If the value is "F", the transaction amount is blocked and debited if the card has an account in the transaction currency. If the source contract (device contract) does not have an account in the transaction currency, the source contract will be debited for the settlement amount converted to the contract currency at the rate specified in the FX Rate Type field of the device contract's Service (if there is no Service, the "Middle" rate is used).
 - If the value is "Y", the transaction amount is always blocked and debited from the contract.
 - If the tag is **not set** or has the **"N"** value, the settlement amount will be debited from the contract. If the source contract (device contract) does not have an account in the settlement currency, the source contract will be debited for the settlement amount converted to the contract currency at the rate specified in the *FX Rate Type* field of the device contract's Service (if there is no Service, the "Middle" rate is used).

The USE_TRANS_AMOUNT=<value>; tag can be redefined on the Product or Service Package level (a tag on the Product level has a higher priority than a tag on the Service Package level).

To use the USE_TRANS_AMOUNT=<value>; tag, special accounts must be configured under the bank FX account (see the section "Configuring Accounts").

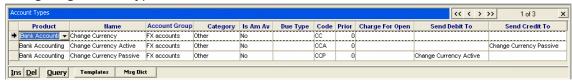


Examples of macrotransactions for different values of the USE_TRANS_AMOUNT tag are given in the section "Generating Macrotransactions".

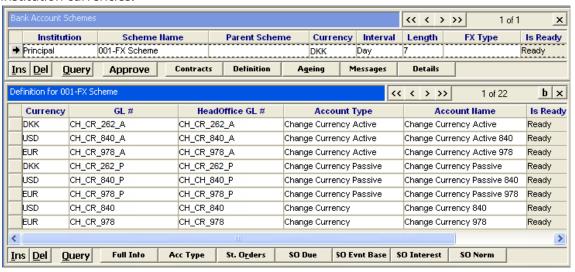
2.2.2.1 Configuring Accounts

When the USE_TRANS_AMOUNT=<value>; tag is activated, special accounts must be configured under the bank FX account:

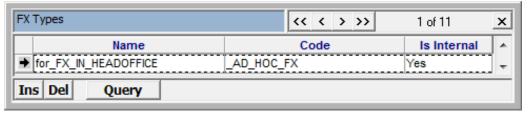
- 1. Create an asset/liability pair of accounts and a standard account:
 - · Configuring account types:



• Create account templates in the Account Scheme of the bank FX contract for all financial institution currencies:



- 2. Configure an FX type:
 - Register the FX type with the hardcoded code _AD_HOC_FX with the marker "Is Internal"="Yes" (Full → Configuration Setup → Accounting Setup → FX Types):



Configure an FX type for the FX scheme (Full → Configuration Setup → Accounting Setup → FX Scheme) specifying the accounts configured earlier (*Trade Account, Reval Account* fields)



and the FX type with the hardcoded code _AD_HOC_FX:



In an FX type for an FX scheme, accounts must be specified as follows: in the Trade Account field – the account from the asset/liability pair, in the Reval Account field – the account not from the asset/liability pair (the standard account configured above). Note that when adding an FX type, the [Do] → [Check] command should be used to check the changes. If the check is successful, the "Foreign" value will automatically be set in the Is Local field, indicating that the scheme is ready for use. See the section "Dependent FX Types" of the document "Currency Conversion". In addition, currency rates should be loaded for the main FX scheme for which the FX type was set up (Reset FX Rates, see the section "Entering Local to Foreign Currency Rates" of the document "Currency Conversion").

2.2.2.2 Generating Macrotransactions



The following notation is used in the figures of this section:

- "CH_CR_A", "CH_CR_P" specially configured asset/liability account pair (see the section "Configuring Accounts").
- "Reval Active", Reval Passive", "Trade Passive" "Trade Active" standard bank contract FX accounts.
- CH_CR specially configured standard account (see the section "Configuring") Accounts").

Generation of macrotransactions for different values of the USE_TRANS_AMOUNT tag:

- If the tag is **not set** or **set to the "N"** value, the settlement amount will be debited from the contract. If the settlement currency differs from the contract currency, the settlement amount will be converted in standard mode (using standard FX accounts) into an amount expressed in the contract currency.
- If the value is "Y", the transaction amount is always blocked and debited from the contract.

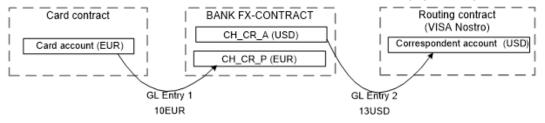


• Example 1. A transaction with a card on a "foreign" device was made with the following parameters:

Trans. Curr./Amount	Settl. Curr./Amount	Contract Curr.	FI Curr.
10 EUR	13 USD	EUR	DKK

One macrotransaction is created, a macrotransaction for the direct transfer of funds from the card account to the payment system's nostro contract account. Two entries are generated in the macrotransaction – see the figure below:

- For the transaction amount from the document received from the payment system.
- For the settlement amount from the document received from the payment system.



Scheme of entries when using the tag USE_TRANS_AMOUNT=Y;. Example 1.



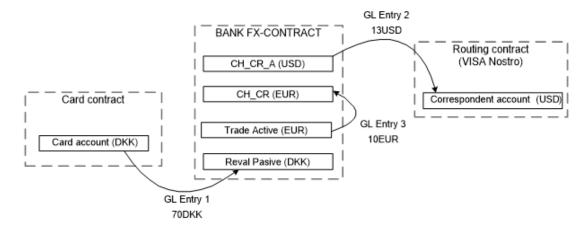
When processing this macrotransaction, standard conversion using FX rates set in WAY4 does not take place.

• Example 2. A transaction with a card on a "foreign" device was made with the following parameters:

Trans. Curr./Amount	Settl. Curr./Amount	Contract Curr.	FI Curr.
10 EUR	13 USD	DKK	DKK

The card does not have an account in the transaction currency with the type specified in the Service describing this transaction, therefore the card will be debited for the transaction amount converted into the contract currency.

One macrotransaction is created, a macrotransaction for the direct transfer of funds from the card account to the payment system's nostro contract account. Three entries are generated in the macrotransaction – see the figure below:

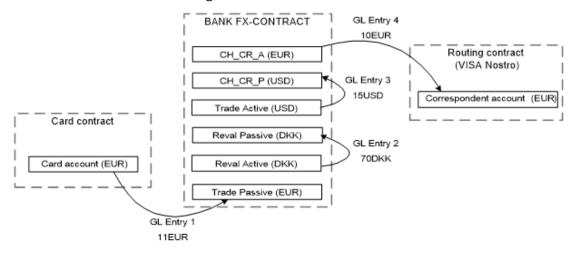


Scheme of entries when using the tag USE_TRANS_AMOUNT=Y;. Example 2.

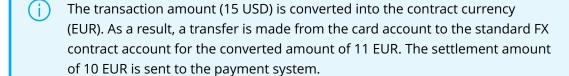
• Example 3. A transaction with a card on a "foreign" device was made with the following parameters:

Trans. Curr./Amount	Settl. Curr./Amount	Contract Curr.	FI Curr.
15 USD	10 EUR	EUR	DKK

One macrotransaction is created, a macrotransaction for the direct transfer of funds from the card account to the payment system's nostro contract account. Four entries are generated in the macrotransaction – see the figure:



Scheme of entries when using the tag USE_TRANS_AMOUNT=Y;. Example 3.





- If the value is "F" the transaction amount is blocked and debited from the contract if the card has an account in the transaction currency. Macrotransactions will be generated in the same way as when the USE_TRANS_AMOUNT; tag value is "Y".
 - If the account in the transaction currency is absent, the settlement amount converted into the contract currency will be debited.
- An **exception** is when the "Y" value of the USE_TRANS_AMOUNT; tag is set, the currency is the same, but the transaction amount and settlement amount differ.
 - A situation when the currency is the same but the transaction amount and settlement amount differ may arise when a fee charged by the payment system to the issuing bank is included in the settlement amount. For entries to be correctly generated in this case:
 - Configure a special account under the bank routing contract.
 - Set the code of this account as the value of the CHANGE_CURRENCY global parameter for more information, see the document "Global Parameters".



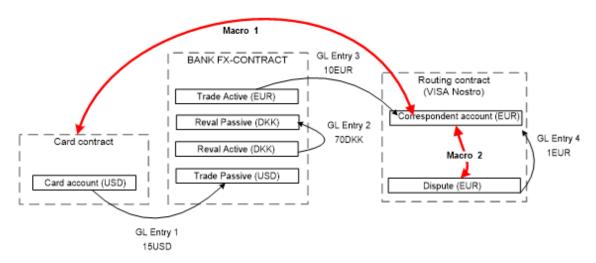
The code of the account set as the CHANGE_CURRENCY parameter value is used to search for an account in exceptional situations only. When executing the standard operations described above, this value will be considered as enabling checking mode of the USE_TRANS_AMOUNT tag.

Example 4. A transaction with a card on a "foreign" device was made with the following parameters:

Trans. Curr./Amount	Settl. Curr./Amount	Contract Curr.	FI Curr.
10 EUR	11 EUR	USD	DKK

Two macrotransactions are generated:

- Macrotransaction for the direct transfer of funds from the card account to the payment system's Nostro contract account for the transaction amount. Entries in the macrotransaction are generated as shown in the figure below.
- Macrotransaction for the amount of the difference between the transaction amount and settlement amount (for the fee amount). This amount is debited from a specially configured account under the bank routing contract, set using the global parameter CHANGE_CURRENCY.



Scheme of entries when using the tag USE TRANS AMOUNT=Y;. Example 4.

2.2.3 Changing the Local Currency

After configurations of a new FI have been successfully copied, its local currency may be changed.



After copying configurations, clear the *Parent Scheme* field of all Accounting Schemes of the new FI before changing the local currency.

To change the currency, select the FI in the "Financial Institutions" form (see the section "Basic FI Parameters") and click the [Currency] button. In the dialog box that opens, make sure that the currency will be changed for the necessary FI and click the [Change] button.

In the dialog box, select a new FI currency and click the [Proceed] button. As a result, the value of the *Local Currency* field in the "Financial Institutions" form will change as well as the values of the following fields (if they were set to the local currency when the procedure was run):

- Currency of Accounting Schemes and account templates registered in the FI (the Currency field).
- Currency of contracts registered in the FI and their accounts (the Curr field).
- In services registered in the FI:
 - Fee currency (the Fee Curr field)
 - Account currency for generating document posting rules (the Account Curr field)
 - Settlement currency (the Settl Curr field).
- In FX schemes registered in the institution (the Currency field in the "Full → Configuration Setup → Accounting Setup → FX Scheme" form).



The local currency of an institution for which contracts have already been created and transactions performed cannot be changed. If an attempt is made to do so, an error message will be displayed ("There has already been GL activity for this institution. Transformation can not be done. Use clear balance procedure").



2.2.4 Changing Interchange Routing Configurations

Interchange routing contracts are used during settlement with international payment systems as counterparty contracts to post of documents generated as a result of transactions involving cards, devices and financial institutions not registered in the system, etc. (see the document "Interchange Routing"). To set up routing contracts in WAY4, use the "Interchange Routing Contracts" form (Full \rightarrow Configuration Setup \rightarrow Routing \rightarrow Interchange Routing Contracts).

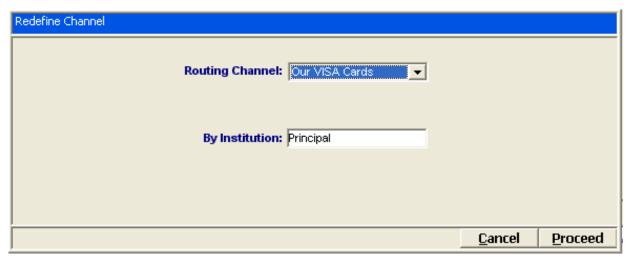
When basic configurations are copied to a new FI, Interchange routing contracts are set up according to the parameters of the source financial institution.

To change the message channel and the FI through which settlement will be performed, select the FI in the "Financial Institutions" form and click the [Routing] button.

In the "Routing for <name of FI>" dialog box, make sure that routing parameters will be changed for the necessary FI and click the [Routing] button.

In the "Redefine Channel" dialog box (see the figure below), specify:

- In the Routing Channel field a channel from the list of channels registered in the system (Full →
 Configuration Setup → Main Tables → Message Channels).
- In the By Institution field the FI through which settlement will be performed.



After the [Proceed] button is clicked, the system will change the channel to the specified one. When the procedure is completed, the "Channel has been redefined" message will be generated.

2.2.5 Default Contract Classifiers for Financial Institutions

A default classifier that is set up for a financial institution is used if this classifier is not set for a contract.

The list of default contract classifiers for a financial institution is configured in the form "Classifiers for \prec financial institution name>" (Full \rightarrow Configuration Setup \rightarrow Main Tables \rightarrow Financial Institutions \rightarrow [Classifiers]).

For more information, see the section "Configuring default classifiers" of the document "Client and Contract Classifiers".



2.3 Changing Additional FI Configurations

Depending on the modules used, the following configurations may be set up for a new FI:

- · Card production parameters.
- Contract types and subtypes.
- Parameters of interaction between affiliated banks and payment systems.

2.3.1 Card Production Parameters

To issue cards, it is necessary to specify a card number range. Card production parameters are set up in the "Bank Production Parameters" form (Full → Configuration Setup → Card Production Setup → Bank Production Parameters) and in child forms of the "Bank Production Parameters form. For more information about these settings, see the document "Configuring WAY4 for Magnetic Stripe Card Issuing".

2.3.2 Configuring Contract Types and Subtypes

It is necessary to specify issuing contract types and subtypes. For more details on configuring contract subtypes, see the section "Entering Contract Subtype Data" of the document "Products and Contract Subtypes".

2.3.3 Configuring Online Interaction between Affiliated Banks and Payment Systems

The "Bank Acquiring Parameters" form (Full \rightarrow Configuration Setup \rightarrow Main Tables \rightarrow Bank Acquiring Parameters) is used to set up online interaction between affiliated banks and payment systems:



Click the [Ins] button in the "Bank Acquiring Parameters" form and fill in the following fields:

- Acq ID FI identifier; specify in this field the FI identifier used during online message exchange; the
 value in this field must be the same as the value in the financial institution's Bank Code field in the
 "Financial Institutions" table.
- In the *Institution* field, select a financial institution (sponsor bank) from the list of FIs registered in the system.
- Is On Us drop-down list containing the following values:
 - "Yes" the device belongs to a FI registered in WAY4



- "No" the device is connected to an external system with which a host-to-host interface is set up
- Fields VISA AID, VISA FID, VISA ATM AID, SMS FID, SMS Settl ID, SMS PMC, and SMS AWK are filled in according to the identifiers assigned to the FI by payment systems.



The *Euro AID* field is only used for backward compatibility.

Parameters of online interaction with other payment systems are set up using tags specified in the *Additional Parms* field of the form containing full information about parameters and opened by clicking the [Full Info] button.

2.3.3.1 Configuring Identifiers

For a new institution, it is necessary to set up the FI identifier according to the classification system used by the corresponding payment system (Member ID for Mastercard, Center BIN for VISA, etc.), as well as the acquirer BIN assigned to the financial institution by the payment system. To configure these parameters in WAY4, use the "Interchange Routing Contracts" form (for information about working with the "Interchange Routing Contracts" form, see the document "Interchange Routing").

2.3.3.2 Configuring Institution Specifications

The "Institution Specifications" form ("Full \rightarrow Configuration Setup \rightarrow Accounting Setup \rightarrow Institution Specifications") is used to specify the bank contracts whose accounts will be used to record dispute amounts, closed contracts and other operations – see the figure below. This form can also be used to manage liabilities.



The "Institution Specifications" form contains the following fields:

- Institution name of a registered financial institution.
- *Dispute Contract* bank contract whose accounts will be used to keep track of documents with processing errors. For example, this contract will be used as a target contract if a target could not be found in the database for an outgoing message from the payment system. This example and other examples involving dispute contracts are described in the document "Documents".
- Deposit Contract bank contract whose accounts are used for the following operations:
 - To transfer funds from issuing accounts when they are closed (see the document "Issuing Module. Operation Manual").
 - To keep off-balance accounting of credit limits (see the section "Off-Balance Accounting Subsystem" of the document "Accounting Schemes").



- *Liability Contract* bank contract through which liability is managed. When an authorisation request for the FI's card is processed, the system will check the contract's balance and usage limiters. A liability contract may be either a special bank contract or a standard bank contract (NNN-Branch Nostro, NNN-Deposit). It should be possible to set a minimum deposit amount on this contract (see a description of fields *Min Deposit* и *Usage* %).
- *Min Deposit* minimum limit on the amount available that may be set for a contract specified in the *Liability Contract* field. If it is found during processing of an authorisation request that the amount available of the contract specified in the *Liability Contract* field is less than the minimum limit, the system will return a negative response code.
- *Usage* % percentage of the amount available of the contract specified in the *Liability Contract* field. If it is found during processing of an authorisation request that the amount available after the authorisation amount is withdrawn is less than this percentage of the current balance, the system will return a negative response code.

2.3.3.3 Configuring FI Interbranch Routing

It is necessary to set up Interbranch routing between the configured FI and the ones already registered in the system. To do this, use the "Interbranch Routing" form (Full \rightarrow Configuration Setup \rightarrow Routing \rightarrow Interbranch Routing). For more details about setting up Interbranch routing, see the section "Configuring Interbranch Routing".

2.4 Deleting Financial Institutions

Financial institutions are deleted in two steps in the following order:

1. First, delete all objects belonging to this FI. To do this, execute the special procedure "Clear Financial Institution". As a result of this procedure, all objects belonging to the FI (clients, contracts, Products, Accounting Schemes, Service Packages, macrotransactions, etc.) are deleted from the database. After the procedure is completed, the "Branch Purged" message will appear.



If another financial institution is set in the *Clearing In* field for the FI being deleted, the "Clear Financial Institution" procedure can only be executed after all financial documents referring to accounts, account templates, and accounting entries of the FI being deleted have been moved to an archive. This is done using standard "Housekeeping" module tools (see the document "Housekeeping").

2. In the "Financial Institutions" form (see the section "Basic FI Parameters"), delete the FI entry by clicking the [Del] button.



It is forbidden to clear a configured FI from the "Financial Institutions" form without running the "Clear Financial Institution" procedure first.



2.5 Moving Clients and Contracts to Another Fl

When moving a client and contract record (contract tree) from one independent financial institution to another independent financial institution, note the following:

- The move is made manually using a special menu item.
- It is not possible to move a subcontract without moving the parent one.
- In order for a record to be moved, the values of the Clearing In fields in the "Financial Institutions" form (Full → Configuration Setup → Main Tables → Financial Institutions) of the two financial institutions involved must match.
- Entries for transferring funds between old and new GL accounts are generated automatically only if accounts were renumbered when the contract was moved (for more information, see the section "Changing Account Numbers" of the document "WAY4 Accounting").

To move a client and contract record (contract tree) from one FI to another, do as follows:

In the "Financial Institutions" form check that Clearing In field values are the same for both financial institutions. If necessary, set the values manually (Full → Configuration Setup → Main Tables → Financial Institutions). This action does not require additional checks of financial institution parameters using the [Check] button in the "Financial Institutions" form.



All processes that are run during daily procedures and leading to the creation of accounting entries (for more information, see the document "Daily Procedures") must be stopped while the *Clearing In* value is changed, since otherwise entries may be generated incorrectly.

The value of the *Clearing In* field is changed only for the period during which objects are being moved. At the end of this period, the field value must be restored.

Select the user menu item "Full → DB Administrator Utilities → Special Contract Utilities →
Change Contracts Institution". As a result, the "Change Contracts Institution" form will be
displayed. A contract can be selected in this form:



Note that in the "Change Contracts Institution" form, a list of contracts that do not have parent contracts is shown, since this procedure cannot be used to transfer a subordinate contract without transferring the parent contract.

In this form, select the necessary contract and click the [Change] button. In the "Get Financial Institution" form that opens, select the financial institution to which objects will be moved and



click the [Proceed] button. If data are moved successfully, the "Contract moved" message will be displayed on the screen.

After this operation is executed, only the client record will remain in the source FI, and the system will create the client record, its contract (contract tree) and its history in the target FI.



When a client record is created in the new FI, WAY4 performs the following actions:

- If the UNIQUENESS_CLIENT_REG_NUMBER parameter is set to "Y" (see the document "WAY4™ Global Parameters"), a new client record will not be created when WAY4 finds a client with the same registration number in the target FI, and the contracts (contract tree) will be linked with the existing client record.
- If the UNIQUENESS_CLIENT_NUMBER parameter is set to "Y" (see the document "WAY4™ Global Parameters"), a new client record will not be created when WAY4 finds a client with the same number in the target FI, and the contracts (contract tree) will be linked with the existing client record.
- In other cases, the system checks for a client record by short name, registration number, and client number. If there is no corresponding client record in the target financial institution, a new client record will be created and contracts (contract tree) will be linked with it.
- 3. Restore the original value in the *Clearing In* field of the FI where it was changed (see item 1).

For a client and contract record (contract tree) to be successfully moved from one financial institution to another, the following conditions must be met in each financial institution:

- Values of Clearing In fields in the "Financial Institutions" form must match (Full → Configuration Setup → Main Tables → Financial Institutions).
- Client categories must match (for the list of registered client categories see the *Client Category* field in the "Client Types" form; "Client Types" – "Full → Configuration Setup → Client Classifiers → Client Types").
- Products must have the same code; the value of the Code field in the "Products" form (Full →
 Configuration Setup → Products → Product Definition → Products). A check is made if the Product
 field is filled in for the contract that is being moved.
- Subordinate Products must have the same parent Product or the same Product template.
- In Service Package settings in the "Service Packs" form, the contract type for a "new" subtype must be the same as for the contract that is being moved (Full → Configuration Setup → Products → Service Packs).
- Contract subtypes card contract, device contract or account contract must have the same code
 (Full → Configuration Setup → Contract Types" → [Sub Types]).
- Service Packages must have a common "parent" Package (*Parent Pack* field in the "Service Packs" form) and/or the same code (*Code* field) if the *Product* field is not filled in for the contract that is being moved (Full → Configuration Setup → Products → Service Packs). Moreover, the Service Package in the new financial institution must have been approved at least once, meaning that an



- active record about this Service Package (SERVICE_PACK_APPROVED) must be registered in WAY4. Then it is possible to move a record for a client and contract when the Service Package in the new financial institution has the status Is Ready=Not Ready.
- Accounting Schemes must have a common "parent" Accounting Scheme (*Parent Scheme* field in the
 "Account Schemes" form) and/or the same code (*Code* field) if the *Product* field is not filled in for
 the contract that is being moved (Full → Configuration Setup → Products → Account Schemes).
 The Accounting Scheme in the new financial institution must be approved (the field Is
 Ready=Ready).

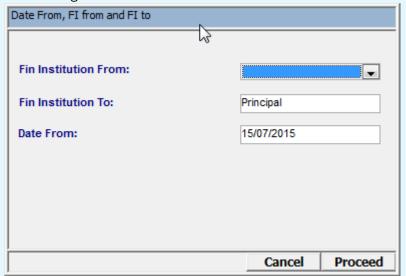
Also note that if the new financial institution has more than one Service Package/Accounting Scheme with the same code, a contract will not be moved and WAY4 displays the message: "Can not find compatible service pack"/"Can not find compatible account scheme", respectively.

Possible system error messages that occur during data transfer are described below:

- "Enabled only for intraclearing": it is only possible to move a record about a client and their contract (contract tree) from one independent financial institution to another if the values of the *Clearing In* fields in the "Financial Institutions" form of both financial institutions involved are the same. To resolve the error, check the specified settings.
- "Can not find compatible Product": when searching for an appropriate Product in the target financial institution, no required Product was found.
- "Contract number does not match its range": when searching for an appropriate Product in the target financial institution, no Product with the required contract subtype was found.
- "Can not find compatible account scheme": an appropriate Accounting Scheme for the contract being moved was not found in the new financial institution. This error message occurs if the *Product* field is not filled in for the contract being moved. To resolve the error, check the settings of the *Parent Scheme* and *Code* fields in the "Account Schemes" form (Full → Configuration Setup → Products → Account Schemes).
- "Can not find compatible service pack": an appropriate Service Package for the contract being moved was not found in the new financial institution. This error message occurs if the *Product* field is not filled in for the contract being moved. To resolve the error, check the following in the "Service Packs" form (Full → Configuration Setup → Products → Service Packs):
 - Parent Pack and Code field settings.
 - Contract Type and Client Category.
 - Make sure that the Service Package in the new financial institution has been approved at least once.
- "Can not find compatible contract subtype": an appropriate contract subtype for the contract being moved was not found in the new financial institution. This error message occurs if the *Product* field is not filled in for the contract being moved. To resolve the error, check the following in the "Card Contract Types"/"Device Contract Types"/"Accounting Contract Types" form (Full → Configuration Setup → Contract Types):
 - RBS Code field settings.
 - · Client Category.
 - Make sure that the contract types for this subtype are the same.



If contracts are being copied to a new institution, FX rates can be copied from the old institution to the new one (for example, for the appropriate rates to be used when reversing a transaction). To do so, run the menu item "Full \rightarrow DB Administrator Utilities \rightarrow Special OpenWay Utilities \rightarrow FX Rates copy for FI". A form will open to select the date on which rates are being copied, the institution from which the rates are being copied and the target institution.



Fill in the fields of this form and click the [Proceed] button.

2.6 Configuring Bank Branches and Divisions

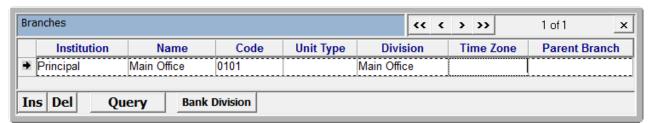
Bank branches and divisions are configured in the following forms:

- "Branches".
- "Bank Divisions".
- "Unit Types".

For detailed description of forms, see the corresponding sections.

2.6.1 "Branches" Form

Branches are configured in the "Branches" form (Full → Main Tables → Branches):



The form contains the following fields:

• *Institution* – the financial institution to which the branch belongs.



- Name branch name.
- Code branch code. The code must be unique.
- Unit Type type of structural unit specified in the Division field. Selected from the list configured in the form "Full → Configuration Setup → Main Tables → Unit Types", see the "Unit Types" Form".
- Division bank structural unit (for example, a department) for this branch (used to register additional information about a bank branch). To fill in this field, click the [New Bank Division] button. A new record will be created in the "Bank Divisions" form (Full → Configuration Setup → Accounting Setup → Bank Divisions) and an informational message will open: "Bank Division was created". After clicking [OK] in the message window, the "New Division..." form will open. Specify additional information about the bank branch in this form (see the section "Bank Divisions" Form).
- Time Zone sets the shift in the time messages generated by Events can be sent (see the
 document "Configuration of Client Messages"). This field does not influence the daily opening
 procedure.
- Parent Branch parent branch. This field allows a branch hierarchy to be configured.
 The [Bank Division] button is used to create additional information for a branch. The button is available if a record was not created for the branch in the "Bank Divisions" form.
 The [Bank Division] button is used to view additional information for a branch created earlier with the [New Bank Division] button. The button is available if the Division field is filled in for the branch record.

2.6.2 "Bank Divisions" Form

The "Bank Divisions" form (Full \rightarrow Configuration Setup \rightarrow Accounting Setup \rightarrow Bank Divisions) is used to keep records of a bank's structural divisions:



The form contains the following records:

- Records created manually in the "Branches" form. These records contain additional information about bank branches.
- Records created manually in the "Bank Divisions" form for linking to financial institutions. These records contain additional information about financial institutions.

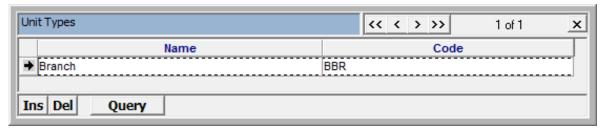


• Technical records created on the basis of bank contracts. These records are not used when configuring additional information for financial institutions and branches.

Records of additional information about a financial institution and institution branches are used, in particular, to register addresses. For example, a special type of address can be registered for an institution, in which the institution's municipality code, used when gathering statistics, is specified.

2.6.3 "Unit Types" Form

The "Unit Types" form (Full \rightarrow Configuration Setup \rightarrow Accounting Setup \rightarrow Unit Types) is used to keep records of the bank's structural unit types (for example, department types):



The form contains the following fields:

- Name bank structural unit name.
- Code bank structural unit code.

These records are used when filling in the *Unit Type* field of the "Branches" form ("Full \rightarrow Main Tables \rightarrow Branches", see the section "Branches" Form").



3. Interbranch Transactions

This section contains a detailed description of Interbranch routing setup, rules for generating macrotransactions for interbranch transactions, and examples of typical tasks and the way they are performed.

The section describes the following:

- Interbranch routing configuration.
- Settings for migrating to new Interbranch routing standards (starting from version 03.36.30).
- Rules for creating macrotransactions for Interbranch transactions.
- · Routing on-us transactions through a payment system.
- Charging fees in favour of the parent FI.
- Deferred settlement with branches or affiliated banks.

3.1 Configuring Interbranch Routing

This section contains information about the following:

- "Interbranch Routing" table that is used when making interbranch transactions.
- Methods of interbranch routing setup.
- Typical interbranch routing contracts.

3.1.1 "Interbranch Routing" Table

The Interbranch routing table is set up in the "Interbranch Routing" form (Full \rightarrow Configuration Setup \rightarrow Routing \rightarrow Interbranch Routing):



The "Interbranch Routing" form contains the following fields:

- Source Institution transaction information source.
- *Target Institution* transaction information target.
- Source Tr Account source institution's account in which transactions are reflected.

The account has the following format: "<name of bank contract> – <name of contract account> <name of account currency – <code of account currency>".

For example, the entry "002-Branch Nostro – Outgoing Passive USD-840" means that transactions



- will be reflected in the source institution's dollar account "Outgoing Passive" of the "002-Branch Nostro" contract.
- *Target Tr Account* target institution's account in which transactions are reflected. The field has the same format as the *Source Tr Account* field.
- Fields *Source Tr Institution* and *Target Tr Institution* are filled in if there is no direct "Parent" relationship between the source institution and target institution. They are used as follows:
 - The institution specified in the *Source Tr Institution* field will be the source institution for macrotransactions of the "Transit" type (on types of macrotransactions, see the section"Posting Macrotransactions" of the document "Documents").
 - The institution specified in the *Target Tr Institution* field will be the target institution for macrotransactions of the "Transit" type.
- Is Allowed permits or prohibits interbranch routing according to this rule. Possible values:
 - "Yes" routing according to this rule is permitted.
 - "No" routing according to this rule is not permitted.
 - "Custom" if this value is set, when searching for a routing rule, and additional check of the
 rule is made according to parameters set in the custom function
 CUST_INST_ROUT_ALLOWED. The "Custom" value can only be set after agreement with
 OpenWay.

The remaining fields are used to specify additional details of Interbranch routing rules:

- *Currency* transaction currency (the currency specified in this field is compared with the document's *Settlement Currency*).
- Target Category target category (e.g. "Device", "Account" or "Card").
- *Target Type* type of target contract, the dictionary of all registered contract types may be found at "Full → Configuration Setup → Contract Types".
- Terminal Category device type ("ATM", "POS", "Imprinter", or "Infokiosk").
- Transaction Type- transaction type; a drop-down list for this field becomes accessible after the target category is configured (see the Target Category field). The list is generated by selecting from the list of all transaction types the types with the corresponding target contract type (see the Target field in the "Full → Configuration Setup → Transaction Types → Transactions All" form).
- For Online:
 - "Yes" when this value is set, inter-branch routing will be used for both financial documents and authorisation documents.
 - "No" when this value is set, inter-branch routing will only be used for financial documents; routing for authorisation documents will be determined according to Interchange routing rules.
- For Trans CondFor Trans Cond list for selecting transaction conditions.

3.1.2 Methods of Interbranch Routing Setup

In WAY4, there are several ways to set up Interbranch routing (i.e. to fill in the "Interbranch Routing" table):



 The "Full → Configuration Setup → Routing → Set Default Interbranch Routing" procedure generates a complete Interbranch routing scheme that describes rules for performing transactions between all institutions registered in the system.



The "Set Default Interbranch Routing" procedure generates a complete scheme of Interbranch routing rules and deletes all configurations made in the "Interbranch Routing" form manually.

- 2. Standard routing can be set up for a separate FI. To do so, do as follows:
 - In the "Financial Institutions" form (see the section "Basic FI Parameters"), select the necessary FI and click the [Interbranch] button.
 - In the dialogue box, make sure that routing is set up for the necessary institution, click the [Redefine] button and select "Set Default" from the context menu. After the procedure is executed, the "Routing set as Default" message will be generated.



The procedure configuring Interbranch routing for a separate FI deletes all configurations manually made for the FI in the "Interbranch Routing" form and generates configurations based on standard rules.

- 3. Routing configurations can be copied from another FI. To do so, do as follows:
 - In the "Financial Institutions" form (see the section "Basic FI Parameters"), select the necessary FI and click the [Interbranch] button.
 - In the dialogue box, make sure that routing is set up for the necessary institution, click the [Redefine] button and select "Copy From" from the context menu.



Note that all routing parameters except accounts in the *Source Tr Account* and *Target Tr Account* fields are copied from the other financial institution. The "Outgoing Passive" and "Incoming Active" accounts are specified in these fields.

4. Manual setup (adding or changing records) when custom accounting of various types of interbranch transactions is necessary.

3.1.3 Typical Interbranch Routing Contracts

Interbranch routing contracts are subcontracts of the FI's Branch Nostro contract.

For example, the "002-BRANCH_NOSTRO" contract (Branch Nostro) has the following subcontracts:

- 002-BRANCH_ATM (Branch ATM) contract for another branch's ATMs.
- 002-BRANCH_IMPRINTER (Branch Imprinter) contract for another branch's imprinters.
- 002-BRANCH_POS (Branch POS) contract for another branch's POS terminals.
- 002-BRANCH_VISA (Branch VISA) contract for this branch's Visa cards.



- 002-BRANCH EP (Branch E/P) contract for this branch's Electron/Plus cards.
- 002-BRANCH_ECMC (Branch EC/MC) contract for this branch's Mastercard cards.
- 002-BRANCH CIRRUS (Branch Cirrus/Maestro) contract for this branch's Cirrus/Maestro cards.
- 002-BRANCH_LOCAL_CARD (Branch Local Card) contract for this branch's cards of another payment systems (not VISA, Electron Plus, Mastercard, or Cirrus/Maestro).
- 002-BRANCH_CLIENT (Branch Client) contract representing all issuing/acquiring contracts of other branches.
- 002-BRANCH_ACQ_FEES (Branch Acquiring Fees) and 002-BRANCH_ISS_FEES (Branch Issuing Fees) contracts for accounting interbranch settlement fees.



When interbranch transactions are performed, the Branch Nostro contract of the highest FI in a hierarchy is never used.

3.2 Settings for Migrating to New Interbranch Routing Standards (Starting from Version 03.36.30)



To automate migration to new Interbranch routing standards, contact WAY4 customer support.

Starting from version 03.36.30, new Interbranch routing standards are available in WAY4 that allow Interbranch entries to be posted in the head financial institution's bank contract accounts. Until version 03.36.30, entries were not posted in the head financial institution's bank routing contracts (001-BRANCH-NOSTRO).

To support new Interbranch routing standards (for the generation of GL entries in the head financial institution when Interbranch transactions are executed), the following settings must be made for the head financial institution:

- Configure a special Accounting Scheme for the head financial institution (see the section "Configuring an Accounting Scheme for the Head Financial Institution").
- Based on the Accounting Scheme that has been created; create bank contracts for all subsidiary financial institutions (see the section "Configuring Interbranch Routing Bank Contracts for the Head Financial Institution").
- In the "Interbranch Routing" table, specify the accounts of the created contracts (see the section "Configuring the "Interbranch Routing" Table").
- Enable the new mode for posting entries for Interbranch routing (see the section "Enabling the New Interbranch Routing Mode").



Interbranch entries can be posted in the old mode (see the section "Enabling the New Interbranch Routing Mode"). It is not recommended to retain the old mode of working with Interbranch entries.

3.2.1 Configuring an Accounting Scheme for the Head Financial Institution

In the head financial institution, create a new independent Accounting Scheme for routing (001-Interbranch Loro/Nostro HO) according to which routing contracts for all subsidiary financial institutions will be created. This Accounting Scheme can be created by duplicating an existing (original) Accounting Scheme for routing (001-Interbranch Loro/Nostro).



A new Accounting Scheme should be created since the parameters of an existing Accounting Scheme for Interbranch routing are inherited by branches.

In the new Accounting Scheme (001-Interbranch Loro/Nostro HO), the following parameters must be changed for all accounts participating in routing:

- The value of the Numeration Type parameter should be set to "First Approval".
- The value of the *Aggregate GL For* parameter should be set to "Sub GL" each bank contract account for Interbranch routing must have its own GL number as it corresponds to a specific GL account in the ABS.

3.2.2 Configuring Interbranch Routing Bank Contracts for the Head Financial Institution

Based on the new Accounting Scheme (001-Interbranch Loro/Nostro HO; see the section "Configuring an Accounting Scheme for the Head Financial Institution"), new Interbranch routing bank contracts must be created in the head financial institution:

- For each branch, a separate bank contract is created (001-BRANCH_NOSTRO-XXX), where XXX is
 the branch code used for numbering the contracts of the corresponding branch: 002, 003, 112,
 etc.
- After approving new Interbranch routing bank contracts, specify actual account numbers for them that will be used for entries in the head financial institution. These correspond to numbers in the HeadOffice GL# (HD_GL_NUMBER) field of accounts opened under XXX-BRANCH_NOSTRO branch contracts (the HeadOffice GL# field is present in the account template in Accounting Schemes for bank contracts). Account numbers can be specified using the procedure "Renumber Subsidiary GL Accounts" (Full → DB Administrator Utilities → Special Contract Utilities → Renumber Subsidiary GL Account).

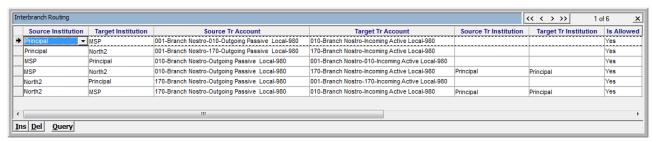


When specifying account numbers corresponding to numbers in the *HeadOffice GL#* field, observe the "mirrored" correspondence of accounts: "Incoming"/"Outgoing" and "Active"/"Passive".

3.2.3 Configuring the "Interbranch Routing" Table

After new Interbranch routing bank contracts have been created (see the sections "Configuring an Accounting Scheme for the Head Financial Institution", "Configuring Interbranch Routing Bank Contracts for the Head Financial Institution"), the "Interbranch Routing" table must be reconfigured (Full → Configuration Setup → Routing → Interbranch Routing). To support Interbranch routing standards, both fields must be filled in: Source Tr Account and Target Tr Account. I.e. in existing Interbranch routing records, fill in the Source Tr Account or Target Tr Account field, respectively.

For an example of a configuration between two branches (MSP and North2) and the head financial institution (Principal), see the figure below:





New routing settings become effective immediately for documents whose "Source" or "Target" contract is in the head office. Transit entries will be generated correctly only after the new Interbranch routing mode is enabled (see the section "Enabling the New Interbranch Routing Mode").

3.2.4 Enabling the New Interbranch Routing Mode

To enable the new Interbranch routing mode for transit entries, set the global parameter NEW_INTERBRANCH_ROUTING to "Y" (the parameter's default value is "N" – by default, the new Interbanch routing mode is not enabled). See a description of the NEW_INTERBRANCH_ROUTING global parameter in the document "Global Parameters".



Starting from version 03.40.10, settings for support of new interbranch routing standards (for example, creation of separate accounting schemes, contracts) are made automatically during initial installation of WAY4. From this version onward, the value of the global parameter NEW_INTERBRANCH_ROUTING is "Y" by default in standard configurations. When upgrading WAY4 to version 03.40.10, settings to upgrade to the new standards are not made automatically (the original interbranch routing settings are kept).



3.3 Rules for Creating Macrotransactions for Interbranch Transactions

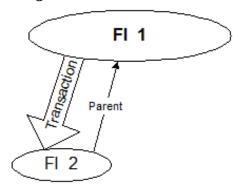
For general principles of creating macrotransactions in WAY4, see the document "Documents".

Rules for creating macrotransactions for interbranch transactions are shown in the examples that follow.

- Example 1. A child institution's card is used in a parent institution's device.
- Example 2. A child FI's card is used at an ATM of another child FI.
- Example 3. FI 4's card is used in FI 1's ATM.
- Example 4. FI 4's card is used in FI 3's ATM.

3.3.1 Example 1. A child institution's card is used in a parent institution's device

A Visa card belonging to FI 2 is used in a device belonging to FI 1. In this way, FI 1 is a source, and FI 2 is a target.

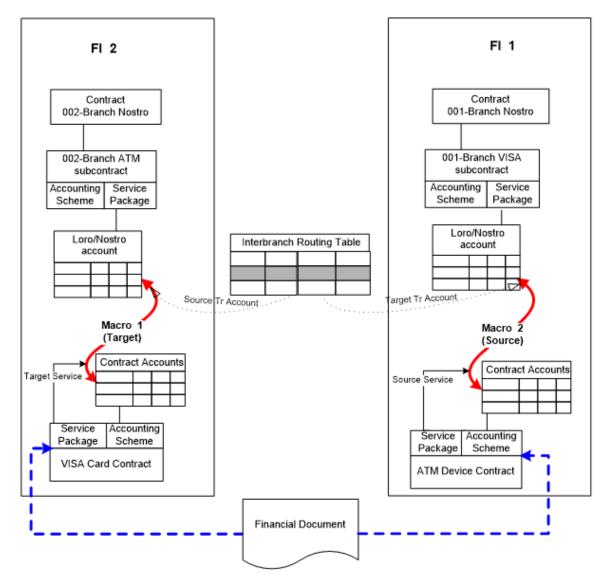


A child institution's card is used in a parent institution's device

This transaction creates two macrotransactions (see the figure below):

- 1. Macrotransaction Macro 1 has the "Target" type (the *Entry Type* field of the macrotransaction), belongs to FI 2 and occurs between the card contract and the "002-Branch ATM" contract, which is a subcontract of the "002-Branch Nostro" contract.
- 2. Macrotransaction Macro 2 has the "Source" type, belongs to FI 1 and occurs between the ATM contract and the "001-Branch VISA" contract.





Macrotransactions generated when a child institution's card is used in a parent institution's ATM

Below is the algorithm by which WAY4 determines which contract is the Nostro account contract, to which institution the macrotransaction will belong, and to which contract accounts posting will be made:

- 1. In the "Interbranch Routing" table, the system searches for an entry with the following transaction parameters:
 - The Source Institution field contains "FI 1".
 - The Target Institution field contains "FI 2".
 - The *Currency* field contains the transaction currency (*Settlement Currency* from the document).
 - Fields *Target Category, Target Type, Terminal Category,* and *Transaction Type* correspond to the document parameters or are left blank.

If an entry matching these parameters is not found, the transaction is not allowed.



- 2. The accounts specified in the *Source Tr Account* and *Target Tr Account* fields of the found entry are considered. These are accounts of the corresponding financial institution's "Branch Nostro" contract. In our example, the *Target Tr Account* field can contain the value "001-Branch Nostro-Incoming Active Local-810", which is an account of the "001-Branch Nostro" contract.
- 3. The system selects a corresponding subcontract of the "Branch Nostro" contract by the type of counterparty contract (target contract). This is the rule that determines that "002-Branch ATM" is selected as the pair for "VISA Card Contract" and "001-Branch VISA", for "ATM Device Contract".
- 4. Accounts to which macrotransactions must be posted are determined as follows:
 - For macrotransaction Macro 1 (Target):
 - A target contract account is determined by the card contract's target service.
 - A source contract account is determined by the value of the *Source Tr Account* field in the Interbranch routing table.



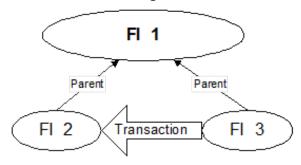
The DEFAULT_INST_ROUTING global parameter affects generation of macrotransactions (macrotransaction Macro 1) in branches. The parameter determines the need to search for an interbranch routing contract Service. For more information, see the section "DEFAULT_INST_ROUTING" of the document "Global Parameters".

- For macrotransaction Macro 2 (Source):
 - A source contract account is determined by the device contract's source service.
 - A target contract account is determined by the target service of the "001-Branch VISA" subcontract. If the account is not specified in the Service or the Service is not used at all, and the "001-Branch VISA" contract's Service Package contains the value "For All" in the Use Def Service field, then the account specified in the Target Tr Account field in the Interbranch routing table will be used.
- 5. An entry is created using the numbers of accounts involved in the macrotransaction. The entry will belong to the FI of the corresponding macrotransaction.



3.3.2 Example 2. A child FI's card is used at an ATM of another child FI

Assume that a Visa card belonging to FI 2 is used in a device belonging to FI 3. In this case, FI 3 is a source, and FI 2 is a target:



A child FI's card is used in an ATM of another child FI

This transaction creates three macrotransactions (see the figure below):

- Macrotransaction Macro 1 (Target) belongs to FI 2 and occurs between the card contract and the "002-Branch POS" contract, which is a subcontract of the "002-Branch Nostro" contract.
 For macrotransaction Macro 1 (Target):
 - A target contract account is determined by the card contract's target service.
 - The source contract account is determined by the value of the *Target Tr Account* (transit account) field in the Interbranch routing table.

The following entries in WAY4 are made for macrotransaction Macro 1:

- Debit Target Account: 002-Our Visa contract Cl Deposit account.
- Credit Source Account: 002-Branch POS contract (subcontract of the 002-Branch Nostro) Incoming Passive account.
- 2. Macrotransaction Macro 2 (Source) belongs to FI 3 and occurs between the device contract and the "003-Branch VISA" contract that is the subcontract of the "003-Branch Nostro" contract. For macrotransaction Macro 2 (Source):
 - A source contract account is determined by the device contract's source service.
 - The target contract account is determined by the value of the *Source Tr Account* (transit account) field in the Interbranch routing table.



The DEFAULT_INST_ROUTING global parameter affects generation of macrotransactions (Macro 1 and Macro 2) in branches. The parameter determines the need to search for an interbranch routing contract Service. For more information, see the section "DEFAULT_INST_ROUTING" of the document "Global Parameters".

The following entries in WAY4 are made for macrotransaction Macro 2:

• Debit Target Account: 003-Branch Visa contract (subcontract of the 003-Branch Nostro contract) Outgoing Active account.

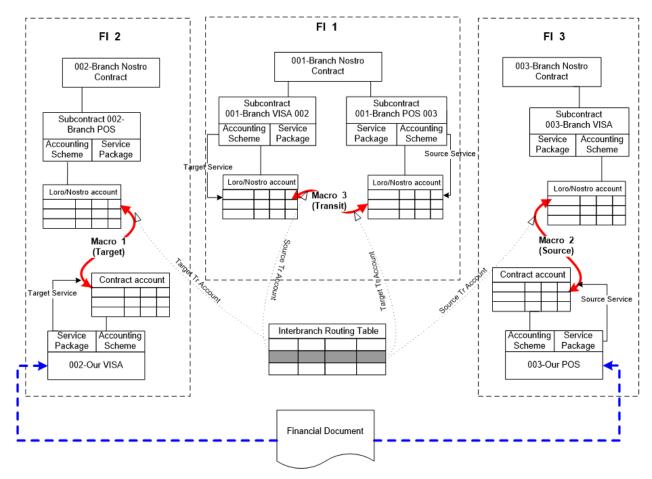


- Credit Source Account: 003-Our POS contract Merchant Receivable account.
- 3. Transit macrotransaction(s) Macro 3 (Transit).
 - Option 1. Old interbranch routing mode in which entries are not recorded in the head financial institution FI 1 routing bank contract (001-BRANCH_NOSTRO). A macrotransaction is generated between the contracts of FI 2 and FI 3 using contracts and accounts of the corresponding record in the Interbranch Routing table. The following entries are generated:
 - Debit Target Account: 002-Branch Visa contract (subcontract of the 002-Branch Nostro contract) Incoming Active account.
 - Credit Source Account: 003-Branch POS contract (subcontract of the 003-Branch Nostro contract) Outgoing Passive account.
 - Option 2. New interbranch routing mode (see the section "Settings for Migrating to New Interbranch Routing Standards (Starting from Version 03.36.30)"). A macrotransaction is generated between the contracts of FI 1 using the corresponding records in the Interbranch Routing table (records "between" FI 2 and FI 1 and records "between" FI 3 and FI 1).
 A search for accounts is made as follows:
 - The source contract account is determined by the corresponding Service of the "001-Branch POS 003" subcontract. If no account is specified in the Service, or the Service is not provided for at all and the Service Package that uses the "001-Branch POS" contract has "For All" in the *Use Def Service* field, the account from the *Target Tr Account* field (transit account) in the Interbranch routing table will be used.
 - The target contract account is determined by the "001-Branch VISA 002" subcontract's Service. If no account is specified in the Service, or the Service is not provided for at all and the Service Package that uses the "001-Branch VISA" contract has "For All" in the Use Def Service field, the account from the Source Tr Account field (transit account) in the Interbranch routing table will be used.

The following entries are generated:

- Debit Source Tr Account of the routing table (Target Account): 001-Branch Nostro 002 Visa contract Outgoing Active account.
- Credit Target Tr Account of the routing table (Source Account): 001-Branch Nostro POS 003 contract Outgoing Passive account.

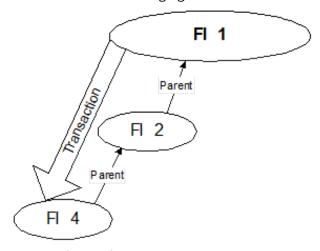




Macrotransactions generated when a child FI's card is used in an ATM belonging to another child FI

3.3.3 Example 3. Fl 4's card is used in Fl 1's ATM

Let us consider an example when an interbranch transaction takes place between financial institutions as shown in the following figure:



FI 4's card is used in FI 1's ATM



In this case, three macrotransactions are created:

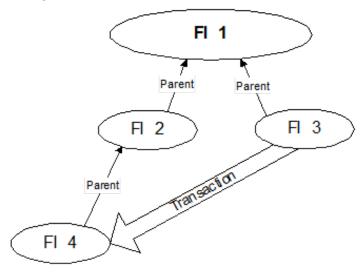
- 1. The first macrotransaction has the "Source" type, belongs to FI 1 and occurs between the device contract and the "001-Branch VISA" contract, which is a subcontract of the "001-Branch Nostro" contract. This macrotransaction is different in the way a target contract account is determined:
 - In the "Interbranch Routing" table, a search is made for an entry with the following parameters:
 - The Source Institution field contains "FI 1".
 - The Target Institution field contains "FI 4".
 - The *Currency* field contains the transaction currency (*Settlement Currency* from the document).
 - The *Target Category, Target Type, Terminal Category*, and *Transaction* fields correspond to the parameters of the document or are left blank.
 - The value of the *Target Tr Institution* field in the found entry is considered. This FI's contract will be a target contract, that is, this field will contain "FI 2".
- 2. The second macrotransaction has the "Transit" type, belongs to FI 2 and occurs between subcontracts of the "002-Branch Nostro" contract.
 - In the "Interbranch Routing" table, a search is made for an entry with the following parameters:
 - The Source Institution field contains "FI 1".
 - The Target Institution field contains "FI 2".
 - The *Currency* field contains the transaction currency (*Settlement Currency* from the document).
 - The *Target Category, Target Type, Terminal Category*, and *Transaction* fields correspond to the parameters of the document or are left blank.
 - The accounts in the *Source Tr Account* and *Target Tr Account* fields of the found record are considered. These are "Branch Nostro" contract accounts. In our example, the *Target Tr Account* field can contain the value "002-Branch Nostro-Incoming Active Local-810", which is an account of the "002-Branch Nostro" contract.
 - According to the counterparty contract type, the system selects the corresponding subcontract of the "002-Branch Nostro" contract. It is this rule that determines that the "002-Branch ATM" and "002-Branch VISA" contracts will be selected.
- 3. The third macrotransaction has the "Target" type, belongs to FI 4 and occurs between the card contract and a subcontract of the "002-Branch Nostro" contract. A source contract account is determined in the same way as the target contract in the first macrotransaction.



The DEFAULT_INST_ROUTING global parameter affects generation of macrotransactions in branches. The parameter determines the need to search for an interbranch routing contract Service. For more information, see the section "DEFAULT_INST_ROUTING" of the document "Global Parameters".

3.3.4 Example 4. FI 4's card is used in FI 3's ATM

Let us consider one more example of an interbranch transaction, where two contracts of unrelated FIs through transit FIs.



FI 4's card is used in FI 3's ATM

In this case, four macrotransactions are created:

- The first macrotransaction belongs to FI 3, has the "Source" type and occurs between the device contract and a subcontract of the "003-Branch Nostro" contract. A target contract account is determined according to the Interbranch routing table.
- 2. The second macrotransaction belongs to FI 1, has the "Transit" type and occurs between subcontracts of the "001-Branch Nostro" contract. Rules for generating the macrotransaction are the same as those for generating "Transit" type macrotransactions in "Example 2. A child FI's card is used at an ATM of another child FI".
- 3. The third macrotransaction belongs to FI 2, has the "Transit" type and occurs between subcontracts of the "002-Branch Nostro" contract.
- 4. The fourth macrotransaction belongs to Fl 4, has the "Target" type and occurs between the card contract and a subcontract of the "004-Branch Nostro" contract. A source contract account is determined in the same way as the target contract in the first macrotransaction.
- The DEFAULT_INST_ROUTING global parameter affects generation of macrotransactions in branches. The parameter determines the need to search for an interbranch routing contract Service. For more information, see the section "DEFAULT_INST_ROUTING" of the document "Global Parameters".



3.4 Routing On-Us Transactions through a Payment System

In a number of cases, on-us transactions made in one financial institution (transaction between a card and a device that belong to the same financial institution) must be routed through a payment system To do so, the following settings should be made:

- 1. Set the tag CHECK_IBR=Y; for the appropriate card contract subtype.
- 2. Configure a record in the "Interbranch Routing" table ("Full → Configuration Setup → Routing → Interbranch Routing"):



- The financial institution to which the card and device belong are specified in the *Source Institution* and *Target Institution* fields.
- "No" is specified in the *Is Allowed* field.
- In the *For Online* field it is possible to specify which transactions should be routed through the payment system (authorisations and financial documents or only financial documents).

Routing through a payment system is performed according to standard WAY4 Interchange routing rules (see the document "Interchange Routing").

3.5 Charging Fees in Favour of the Parent FI

When a transaction is performed between a parent FI's device and a child FI's card, fees are charged to an account of the "NNN-BRANCH_ISS_FEES" (Branch Issuing Fees) contract of the child FI. Correspondingly, when a transaction is performed between a parent FI's card and a child FI's device, fees are charged to an account of the "NNN-BRANCH_ACQ_FEES" (Branch Acquiring Fees) contract of the child FI.

If it is necessary to transfer fees to an account of the "NNN-BRANCH_ACQ_FEES" contract of the parent FI, the system must be configured by one of two ways:

- The parent FI must be specified in the account template with the Financial Institution attribute in the Accounting Scheme used by the contract of the branch to which fees are charged (Full → Configuration Setup → Accounting Setup → Bank Account Schemes). Then macrotransaction between the child FI's device contract or card and the same FI's Branch Nostro contract will belong to the parent FI. The GL entry will be registered for the account whose number is specified in the HeadOffice GL# field. In this way, the fee will only be reflected in the parent FI's accounts.
- A standing payment order with the "Interbranch" value in the *Date Event* field is set up in the fee account of the child FI (e.g. the "Client Fees Passive" account of the "NNN-CLIENT_FEE" contract. It transfers charged fees to the parent FI. In this case, fees will be reflected in the child FI's accounts, and the sum total of all fee entries will be reflected in the accounts of the parent FI. For standing



payment order parameters, see the section "Configuring Standing Payment Orders" of the document "Standing Payment Orders".

3.6 Deferred Settlement with Branches or Affiliated Banks

Settlement with bank branches or affiliated banks is usually deferred for transactions performed in a bank branch's or affiliated bank's devices.

Assume that a card belonging to a head office is acquired in a bank branch's device. According to the institution hierarchy, in this case, a card belonging to a parent FI is acquired in a child FI.

To settle with branch (affiliated banks) with a delay corresponding to the "Value Days" value, it is necessary to modify the "Interbranch Loro/Nostro" Accounting Scheme of the affiliated banks by adding a transit account template similar to the "Receivable" account template of acquiring contracts' Accounting Schemes.

The following configurations must be set up for the transit account template:

- The account must belong to the parent institution (*Fin Institution* field of the corresponding Accounting Schemes template must contain the parent FI).
- The "Value Date Due" value must be specified in the *Due Type* field.
- The affiliated bank's correspondent account must be specified in the Due Template field.

Values of the *Value Days* field must be specified in the corresponding services of the Service Package of the affiliated bank's contract.

When interbranch transactions are performed, all necessary macrotransactions will be created at once, including a macrotransaction between the device contract registered in the branch and the Branch Nostro contract of the branch. When an interbranch transaction document is posted, the following macrotransactions will be generated:

- A macrotransaction between the card contract's account of the parent FI and a transit account of the child FI's Branch Nostro contract.
- A macrotransaction transferring funds from the transit account to the affiliated bank's correspondent account. After generation, this macrotransaction will have the "Waiting" status and will be posted after an actual interbranch financial transaction takes place in the number of days specified in the *Value Days* field of the corresponding service.

This scheme may be applied for deferred settlement in the event that a card and a device are registered in different affiliated banks.