Operation Manual

Instalment Loans in Way4

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Contents

Way4 supports work with instalment loans through the Way4 Instalments module, which is used to generate and service instalment plans.

While working with this document, it is recommended that users refer to the following resources from the Way4 documentation series:

- Way4 Service Packages
- Way4 Accounting Schemes
- Events
- Standing Payment Orders
- Way4 Invoices
- Way4 Advanced Tariff Management
- Daily Procedures
- Way4 Reports

The following notation is used in this document:

- Field labels in screen forms are shown in *italics*.
- Button labels used in screen forms are shown in square brackets, such as [Approve].
- Sequences for selecting user menu items are shown with arrows, such as Issuing →Contracts Input & Update.
- Sequences for selecting system menu items are shown with another type of arrow, as in Database => Change password.
- Key combinations used while working with DB Manager are shown in angular brackets such as <Ctrl>+<F3>.
- The names of directories and/or files that vary for each local instance of the program are also displayed in angular brackets, like <OWS_HOME>.


Warnings about potentially hazardous situations or actions.


Information about important features, additional options or the best use of certain system functions.

1 Main Terms and Definitions

An instalment loan is a loan granted to a client by a bank, with a mutually agreed payment schedule for repayment in instalments.

An instalment scheme is a set of parameters used to generate an instalment plan.

An instalment plan is a set of instalments with an amount, an effective date and a due date for each instalment.

An instalment is an instalment plan component whose status changes on an effective date, a due date, when the client credits the loan account, etc. An instalment consists of a portion of the main loan (Principal Amount) and the remuneration – the fee (or interest on the loan) paid to the bank for granting the loan (Fee Amount).

An effective date is the start date of the period during which the corresponding instalment must be paid. The end date of this period is the due date.

A due date is the date by which the corresponding instalment must be paid. If no payment is made by this date, the instalment will be considered overdue. Penalties may be set up on the principal amount and interest from the overdue instalment: interest rate increase, extra fee, etc.

2 Principles of Operation

The main functions of the module are:

- Generating an instalment plan
- Servicing an instalment plan

2.1 Generating an Instalment Plan

An instalment plan is generated when a financial or authorisation document is processed using a Service with the corresponding parameter. This parameter is the INVOICE_ACTION=INSTALMENT; tag specified in the *Service Details* field of the Service.

When this parameter is found, the system searches for an instalment scheme (see the section "Configuring Instalment Schemes"). The search is carried out according to the following rules:

- The instalment scheme's *Service Code* field value must be the same as the value of the INST_CODE tag specified in the document's *Add Data* field or the Service's *Service Details* field.
- The transaction amount and currency, the instalment amount, as well as the number of instalment periods (Tenor) must be the same as the instalment scheme parameters.

An instalment plan is generated from an instalment scheme and additional parameters specified in the document's *Add Data* field or the Service's *Service Details* field (tags are described in the section "Configuring Service Packages"; the list of tags that can be set in a document corresponds to the list of tags set in the Service). A parameter value is first searched for in the document, then in the Service, and finally, in the instalment scheme. It does not matter where a parameter is specified; it is only required that parameters are sufficient to generate an instalment plan.

An instalment plan is a set of instalments with an amount, an effective date and a due date specified for each instalment.

Each instalment, like the whole loan, is divided into components corresponding to the principal amount and the fee amount.

If the system cannot find a suitable instalment scheme during instalment plan generation, the "Instalment Scheme not found" error message will be generated in the process log.

An instalment plan can be generated according to a document that has already been processed (a document with the "Posted" status). For more information, see the section "Creating an Instalment Plan according to a Document" of the document "Customer Service Manual".

The procedure for generating an instalment plan when processing a financial or authorisation document is regulated using global parameters (see the section "Configuring Global Parameters").

2.2 Servicing an Instalment Plan

While servicing an instalment plan, the Contracts Daily Update procedure (see the section "Contracts Daily Update Procedure" of the document "Daily Procedures") changes instalment statuses when an effective date or a due date arrives. Instalment statuses also change after the system processes financial documents crediting the loan account (see the section "Repaying a Loan").

The module allows users to configure Events opened when instalment statuses change. Such Events are the main tool for interaction between Way4 Instalments and Way4 Issuing. For instance, they are used to generate documents for a standing payment order to transfer funds from one account to another, e.g. from a loan account to an overdue loan account.

When a payment order linked to an Event is used to pay a loan, the account to which funds are transferred must have the tag INVOICE_CODE=<payment scheme Invoice Code> in the *Template Details* field. The account from which funds are being transferred must not contain this tag. In this case, the funds transfer will be considered as payment of a loan with the specified code.

If funds must be transferred using a "Normalization" payment order, and the transfer is made between two accounts with the INVOICE_CODE tag specified, indicate the transaction type for this payment order (*Trans Type* field) so that the transfer is not considered as a loan payment.

2.3 Repaying a Loan

To repay an instalment loan, it is necessary to credit an account whose template contains the "INVOICE_CODE=<instalment scheme Invoice Code>" tag in the *Template Details* field. The account from which funds are transferred must not contain this marker.

When this account is credited, the system searches for the instalment plan generated from the instalment scheme referred to by the account template; after which the status of the corresponding instalments (see "Servicing an Instalment Plan") changes.

The order of repaying instalments and components of an instalment (fee and principal amount) is determined during instalment plan generation and can be changed when a loan payment is processed (see the section "Working with Instalment Plans"). The following order is recommended:

- First, all fees of all overdue portions of all plans are paid.
- The principal amount of all overdue portions of all plans is paid.
- Effective (Open) interest of all plans is paid.
- Effective (Open) principal amount of all plans is paid.

 To use the recommended order of repaying, use the custom procedure cust_inv_pmnt.sql.

By default (without using the aforementioned procedure) first overdue instalments are paid and then effective (Open) instalments. Moreover, fees are paid first and then the principal amount from each portion. That is, first the fee of the oldest overdue portion is paid; then the principal amount of the oldest overdue portion, then the next portion is moved on to.

Overdue and effective debt is paid using limit normalization settings (Upper Limit Normalization) from the account to which funds enter for repaying the loan (Cl Deposit).

 Crediting contract accounts whose templates do not contain the INVOICE_CODE tag does not result in loan repayment.

3 System Configuration

The system must be configured accordingly for Way4 Instalments to operate.

3.1 Configuring Global Parameters

Global parameters are configured in the "Additional Global Parameters" form (Full →Configuration Setup →Main Tables →Additional Global Parameters).

3.1.1 Filtering Transactions for which Instalment Plans can be Created

The global parameter INST_MAX_DAYS_TO_CONVERT makes it possible to set the maximum number of days from a transaction date (or from a balance date, to create a plan for a balance in a closed billing cycle) during which an instalment plan can be created for this transaction (balance). Documents (transactions) for which an instalment plan can be created are filtered on the basis of the INST_MAX_DAYS_TO_CONVERT parameter.

The "0" value (default value) means there are no limitations.

The number of days from the date of a transaction (balance) during which an instalment plan can be created can be additionally configured in a particular instalment scheme. This is done using the MAX_DAYS_TO_CONVERT tag in the instalment scheme's *Special Parms* field. This setting will only work if the value specified with the tag is less than the value of the global parameter (first transactions are filtered according to the global parameter's settings and then the tag is checked when a plan is created for a particular instalment scheme).

See the sections "Creating a Plan for a Transaction or Balance", "Creating an Instalment Plan for a Transaction or Balance in a Closed Billing Cycle".

3.1.2 Configuring "AuthCheck" Preauthorisation Document Processing (Automatic Creation of a Plan)

The global parameter "INST_AUTHCHECK_ACTION" is used to configure generation of an instalment plan based on an "AuthCheck" preauthorisation document. Parameter values"

- "CHECK" – the ability to generate an instalment plan is checked but an instalment plan is not generated. This is the default value.
- "CREATE_INACTIVE" – an instalment plan is generated in an inactive state (invoices generated on the basis of an instalment plan have the "Inactive" invoice status).

- "CREATE_PREVIEW" – an instalment plan is generated in the "Preview" status and requires manual approval. The plan's status after approval ("Inactive" or "Waiting") depends on the value of the global parameter INST_START_STATUS.
- "SIMULATE" – when an authorisation document is received, possible instalment plans for this document are generated (see the section "Configuring Instalment Plan Simulation"). Plans are generated in the "Simulated" status and are of an informational nature.
- "SKIP" – no plan is created.

  For more information about the statuses of plans (loans) and their parts, see the section ""Invoice Events" Form".

The global parameter can be redefined using the tag with the same name in a financial institution, Service, or document.

3.1.3 Configuring Authorisation Document Processing (Automatic Creation of a Plan)

To configure generation of an instalment plan based on an authorisation document, the global parameter "INST_AUTH_ACTION" is used. Parameter values:

- CHECK – the possibility to generate an instalment plan is checked. An instalment plan is not generated. This is the default value.
- CREATE_INACTIVE – an instalment plan is generated in an inactive state (invoices generated on the basis of an instalment plan have the status (Invoice Status) "Inactive"). In this case, the instalment plan can be activated automatically when the corresponding financial document is posted (see the section "Configuring Financial Document Processing (Automatic Creation of a Plan)"). To do so, set the "ACTIVATE" value of the "INST_FIN_ACTION" global parameter.

  If an instalment plan created when processing an authorisation must not have an effect on limit amounts in accounts (see the section "Recording Limits in Contract Accounts (in GL Accounts)"), use the CREATE_INACTIVE value.
- CREATE_PREVIEW – an instalment plan is generated in the "Preview" status and requires manual approval. The status of the plan after approval ("Inactive" or "Waiting") depends on the value of the global parameter INT_START_STATUS.
- "SIMULATE" – when an authorisation document is received, possible instalment plans for this document are generated (see the section

"Configuring Instalment Plan Simulation"). Plans are generated in the "Simulated" status and are of an informational nature.

- "SKIP" – no plan is created.

For more information about the statuses of a plan (loan) and its parts, see the section ""Invoice Events" Form".

The global parameter can be redefined using the tag with the same name in a financial institution, Service or document.

3.1.4 Configuring Financial Document Processing (Automatic Creation of a Plan)

To configure generation of an instalment plan based on a financial document, the global parameter "INST_FIN_ACTION" is used. Parameter values:

- CHECK – the possibility to generate an instalment plan is checked. An instalment plan is not generated.
- ACTIVATE – this value makes it possible when a financial document is received to activate an instalment plan created in an inactive state on the basis of an authorization document (invoices generated on the basis of the instalment plan change the status (Invoice Status) from "Inactive" to "Waiting"). This value is used together with the "CREATE_INACTIVE" value of the global parameter "INST_AUTH_ACTION".
- CREATE INACTIVE – an instalment plan is generated in an inactive state (invoices generated on the basis of the instalment plan have the status (Invoice Status) "Inactive").
- CREATE ACTIVE – an instalment plan is generated in an active state (invoices generated on the basis of the instalment plan have the status (Invoice Status) "Waiting"). This is the default value.
- CREATE_PREVIEW – an instalment plan is generated in the "Preview" status and requires manual approval. The status of the plan after approval ("Inactive" or "Waiting") depends on the value of the global parameter INT_START_STATUS.
- "ACTIVATE_RECALC" – when a financial document is received, an instalment plan that was created in an inactive state on the basis of an authorization document can be **recalculated** and activated. The instalment plan is recalculated according to parameters from the financial document. If a plan created on the basis of an authorization was closed before a financial document was received (for example, when unblocking authorizations using the "Clear Old Pendings" procedure; "Full → Daily Procedures →

Document Processing Step by Step →Clear Old Pendings"), a new plan will be created when the financial document is received.

This value is used together with the "CREATE_INACTIVE" or "CREATE_PREVIEW" value of the global parameter "INST_AUTH_ACTION".


The "ACTIVATE_RECALC" value must be set when the value of the INST_CREATE_ON_ADJUSTMENT parameter is "Y".

- "SKIP" – when this value is specified, a plan is not created, and actions related to instalment plans are not performed.

  For example, when the value of the global parameter INST_AUTH_ACTION is "SIMULATE" and the value of the global parameter INST_FIN_ACTION is "SKIP", an instalment plan with the "Simulated" status is generated for an authorization, but when a financial document is received, an instalment plan using the simulated plan is not generated. This setting can be used if an instalment plan based on a simulated plan is created using other methods. For example, an active plan is created on authorization when a client selects a simulated plan by sending an SMS.

  When activated, the invoice status of invoices generated on the basis of an instalment plan changes from "Inactive" or "Preview" to "Waiting".

  Instalment limits are analysed in recalculation, see the section "Configuring Instalment Limits". A financial document will be rejected if when posting the document it is discovered that the limit has been exceeded.

For more information about the statuses of a plan (loan) and its parts, see the section ""Invoice Events" Form".

The global parameter can be redefined using the tag with the same name in a financial institution, Service, or document.

3.1.5 Configuring Creation of an Instalment Plan using a Financial Document for Which No Authorisation Document was Found

To configure generation of an instalment plan based on a financial document for which no authorisation document was found, the "INST_UNAUTHORIZED_ACTION" global parameter is used. Parameter values:

- "CHECK" – the possibility to generate an instalment plan is checked. An instalment plan is not generated.
- "CREATE_INACTIVE" – an instalment plan is generated in an inactive state (invoices generated on the basis of the instalment plan have the status (Invoice Status) "Inactive").

- "CREATE_ACTIVE" – an instalment plan is generated in an active state (invoices generated on the basis of the instalment plan have the status (Invoice Status) "Waiting"). This is the default value.
- "CREATE_PREVIEW" – an instalment plan is generated in the "Preview" status and requires manual approval. The status of the plan after approval ("Inactive" or "Waiting") depends on the INST_START_STATUS global parameter value.
- "SKIP" – no plan is created.

If the parameter is not set, the INST_FIN_ACTION global parameter value is used.

The global parameter can be redefined using the tag with the same name in a financial institution, Service, or document.

3.1.6 Configuring the Number of Possible Plans in the "Simulated" Status

The global parameter INST_MAX_SIMULATED_PLANS is used to limit the maximum number of instalment plans in the "Simulated" status that can be calculated for a contract for one transaction.

The parameter can be redefined using a tag with the same name in a financial institution.

The parameter's default value is "12".

3.1.7 Configuring Creation of an Instalment Plan using a Plan in the "Simulated" Status

To configure creation of an instalment plan when a financial document is received using an instalment plan in the "Simulated" status created earlier for an authorisation document, set the value of the global parameter INST_CREATE_FROM_SIMULATION to "Y".

The global parameter INST_FIN_ACTION (or the corresponding tag) must have one of the following values: "CREATE_INACTIVE", "CREATE_ACTIVE" or "CREATE_PREVIEW" (see the section "Configuring Financial Document Processing (Automatic Creation of a Plan)".

The status of the plan for the financial document depends on the value of the global parameter INST_FIN_ACTION ("Inactive", "Waiting" or "Preview"; see the section "Configuring Financial Document Processing (Automatic Creation of a Plan)").

The global parameter INST_CREATE_FROM_SIMULATION can be redefined using a tag with the same name in a financial institution.

3.1.8 Configuring Creation of an Instalment Plan when an Adjustment is Received

To automatically create an instalment plan when an adjustment is received, do as follows:

- Set the value of the global parameter INST_CREATE_ON_ADJUSTMENT to "Y".
- Set the value of the global parameter INST_FIN_ACTION to ACTIVATE_RECALC.

A new instalment plan will be created for the corrected amount.

This mode is disabled by default – by default the value of the global parameter INST_CREATE_ON_ADJUSTMENT is "N".

If the value of the global parameter INST_CREATE_ON_ADJUSTMENT is "Y" and the loan has a non-renewable limit (see the section "Configuring Non-Renewable Limits"), when an adjustment document is received, a new plan for the adjusted amount will be created within the initial limit. If the value of INST_CREATE_ON_ADJUSTMENT is "N", the original plan is closed, and the non-renewable amount is written off. A new plan for the adjusted amount is not created.

3.1.9 Advanced options for working with an instalment plan when an adjustment or reversal document is received

3.1.9.1 Without the Reversal Management module

- In this case, the global parameter INST_CREATE_ON_ADJUSTMENT with the "N" value is used (default behavior). An instalment plan is not automatically created when an adjustment or reversal document is received. The original plan is not canceled.
- To define rules for working with an original instalment plan when an adjustment or reversal is received:
  - Configure the global parameter INST_SEC_ACTION. Possible values:
    - "REJECT" (default value) – the original instalment plan is closed (the plan gets the "Closed" status).
    - "EARLY_REPAYMENT" – early repayment is made for the original plan (the old plan is closed and a new one created). In this case, the amount of the adjustment document is considered as the repayment amount (as a credit operation). Early repayment is made fully or partially, depending on the repayment amount.

The global parameter INST_SEC_ACTION can be redefined using the same tag in a Service or financial institution. If the tag is not found in the Service or financial institution, the global parameter is checked if the Service has the tag INVOICE_ACTION=INSTALMENT;.

For a reversal document, rules for working with an instalment plan can be configured separately. To do so, the global parameter INST_REV_ACTION is used (see the section "INST_REV_ACTION" of the document "Way4 Global Parameters").

- If early repayment for an adjustment/reversal document is enabled (if the value of the INST_SEC_ACTION parameter is "EARLY_REPAYMENT") set the following tags in the Service:
  - The tag SEC_ACC_CODE=<account type code> defines a technical account from which early repayment for an adjustment or reversal document is made. For reversal documents, the account can be defined separately using the tag REV_ACC_CODE=<account type code>. If the REV_ACC_CODE tag is not specified, the value of the SEC_ACC_CODE tag is used.
  - The tag INV_OVERPAYMENT_ORDER=<order code – value of the order's ORDER_CODE field>;. If the amount of repayment is not fully used, the remaining funds are transferred to another account using the order specified in the INV_OVERPAYMENT_ORDER tag and configured in the account for early repayment.
  - The amount of a custom fee for an adjustment or reversal document can be included in the amount of early repayment. To do so, add the tag INST_SEC_ACTION=EARLY_REPAYMENT for the corresponding Services for custom fees. As the account for recording the fee, specify the account used for early repayment. This is done using the SEC_ACC_CODE and or REV_ACC_CODE tags in the Services for custom fees, similar to the setting in main Services (see above). See the section "Excluding a custom fee and Misc fee from the principal amount".
- The tag FROM_ORIG_MODE=SERVICE; can be set in a Service. This makes it possible to inherit the Service parameters from the original document when processing an adjustment document (i.e. when processing a secondary document, no search will be made for a Service).
- Set up records in the "Invoice Events" form for early repayment when there are no settings for the "Early Repayment" value of the *Action* field. See the section "Configuring Execution of Actions when the Status of a Loan or its Components Changes".

3.1.9.2 With the Reversal Management module

- In this case, the global parameter INST_CREATE_ON_ADJUSTMENT is used with the "Y" value. An instalment plan is created automatically when an adjustment or reversal document is received. The old plan is canceled and then recalculated using the corrected amount.
- The tag FROM_ORIG_MODE=SERVICE,INST; can be set in a Service. This makes it possible, in addition to inheriting Service parameters from the original document, to use the instalment plan parameters from the original document when creating a plan for an adjustment. Tags from the original document are not copied to the adjustment document, parameters are inherited within internal system processes. If several adjustment documents are received, parameters will be taken from the original document each time.

3.1.10 Configuring Manual Creation of an Instalment Plan

3.1.10.1 Creating a Plan for a Transaction or Balance

When manually creating an instalment plan for a transaction or balance, it is possible to define the plan's initial status (and, accordingly, the procedure for processing the plan). This setting is regulated using the following global parameters:

- INST_APPROVE_PLANS – this parameter defines whether it is necessary to manually approve the plan:
  - When the value is "Y", the plan is created in "Preview" status and requires manual approval.
  - "When the value is "N" (default value), the plan is created in "Waiting" or "Inactive" status and does not require manual approval. In this case, the plan's initial status ("Waiting" or "Inactive") is set using the global parameter INST_START_STATUS.

    The parameter can be redefined using a tag with the same name in a financial institution.
- INST_START_STATUS (see the section "Configuring a Plan's Status when Manually Creating a Plan or after a Plan has been Approved (INST_START_STATUS)"):
  - When manually creating an instalment plan for a transaction or balance, if the value is "W", the plan is assigned the "Waiting" status.
  - When manually creating an instalment plan for a transaction or balance, if the value is "I", the plan is assigned the "Inactive" status.

For more information about the statuses of a plan (loan) and its parts, see the section ""Invoice Events" Form".

- If it is necessary to recalculate a contract lifecycle when creating an instalment plan for a transaction in the current billing cycle (that is, when it is necessary to recalculate interest from the transaction date), set the "Y" value for the INST_STORNO_CURRENT_CYCLE parameter. The parameter's default value is "N" (that is, recalculation is not performed by default). The global parameter can be redefined in the financial institution using the tag with the same name. See the section "Creating an Instalment Plan for a Transaction".

> This functionality is available if the Reversal Management module is used. The module is supplied according to a separate agreement with OpenWay.

The global parameter STORNO_INST_BALANCE_LOCK with the "Y" value is used in working with the Reversal Management module and the Way4 Instalments module when creating an instalment plan for a balance. In recalculating an instalment plan during correction of transactions with Reversal Management module tools, the global parameter makes it possible to recreate a plan using the plan's original amount, even if the balance amount changed.

3.1.10.2 Creating an Instalment Plan for a Transaction or Balance in a Closed Billing Cycle

> This functionality is available if the Reversal Management module is used. The module is supplied according to a separate agreement with OpenWay.

To enable the ability to create a plan for a transaction or balance in a closed billing cycle, set the global parameter INST_ALLOW_CLOSED_CYCLE to "Y".

3.1.10.3 Creating a New Instalment Plan for Partial Early Repayment, Changes to Instalment Plan, Payment Holidays

For manual partial early repayment, changes to an instalment plan, or granting payment holidays, the new plan is assigned the status determined by the global parameter INST_APPROVE_PLANS:

- When the value is "Y", the plan is created in "Preview" status and requires manual approval.
- When the value is "N" (default value), the plan is created in the "Waiting" status.

For more information about the statuses of a plan (loan) and its parts, see the section ""Invoice Events" Form".

3.1.10.4 Creating an Instalment Plan for an Authorisation

When an instalment plan is created manually for an authorisation, the plan's initial status can be defined (and accordingly, the procedure for processing the plan). This setup is regulated by the global parameter INST_APPROVE_PLANS:

- "Y" value – a plan is created with the "Preview" status and requires manual approval. After approval, the plan's status becomes "Inactive".
- "N" value – a plan is created with the "Inactive" status.

The plan is activated automatically when the corresponding financial document is processed. Depending on the value of the INST_FIN_ACTION (ACTIVATE, ACTIVATE_RECALC), the plan will either be simply activated, or a new plan will be created based on the financial document (and the old plan will be closed).

3.1.11 Configuring a Plan's Status when Manually Creating a Plan or after a Plan has been Approved (INST_START_STATUS)

An instalment plan's status assigned when a plan in the "Preview" status is approved or when a plan is created manually for a transaction or balance is configured using the global parameter INST_START_STATUS.

INST_START_STATUS parameter values:

- When the value is "W" (default value), the plan is assigned the "Waiting" status.
- When the value is "I", the plan is assigned the "Inactive" status.

The global parameter can be redefined using a tag with the same name in a financial institution.

For more information about statuses of plans (loans) and their parts, see the section ""Invoice Events" Form").

3.1.12 Configuring Rules for Working with "Advance Fee"

The global parameter INST_ADV_FEE_OPEN is used to set rules for working with the "Advance Fee" fee (fee from the start of the current billing cycle to the due date) in early repayment.

- If an "Advance Fee" must be accrued and made effective for early repayment, set the value of the parameter to "Y". The paid "Advance Fee" will be included in the principal amount and will be shown in the "Early Repayment" technical record (see the section "Viewing Instalments").

- If the value is "N", the "Advance Fee" will be transferred to the first instalment of the new instalment plan.
- If the value is "W", the "Advance Fee" will be waived when early repayment is made or when the instalment plan is recalculated.

The default value of the parameter is "N".

The INST_ADV_FEE_OPEN global parameter can be redefined using a tag with the same name in a financial institution.

The global parameter INST_ADV_FEE_WAIVE_ON_CLOSE is used to set rules for working with the "Advance Fee" fee (fee from the start of the current billing cycle to the payment date) when closing an active instalment plan.

- If the "Advance Fee" must be waived when closing the plan, set the parameter value to "Y".
- When the value is "N", the "Advance Fee" will become effective according to settings in the instalment scheme. This is the default value.
- When the value is "A", all unpaid fees for the plan in all cycles become effective, including Advance Fee.
- When the value is "1", "Advance Fee" from the start of the current billing cycle to the payment date becomes effective, as well as "Advance Fee" for the next instalment.

The INST_ADV_FEE_WAIVE_ON_CLOSE global parameter can be redefined using the tag INST_ADV_FEE_WAIVE_ON_CLOSE=Y; in a Product or financial institution.

The INST_ADV_FEE_WAIVE_ON_CLOSE parameter can be redefined when closing a specific instalment plan in the "Close instalment plan" form (see the section "Closing an Active Plan").

The CHANGE_INST_ADV_FEE global parameter regulates how advance fees are charged when an instalment plan is changed. The parameter works like the INST_ADV_FEE_OPEN parameter, but is used when changing an instalment plan, for example, due to partial early repayment or payment holidays, etc.

Fees from the start of the current billing cycle (advance fees) to the date of changes are not charged for standard fees, such as "Flat Fee", "Annual Fee", and "Portion Fee". For other fees, the procedure for charging advance fees when an instalment plan is changed can be regulated. If the CHANGE_INST_ADV_FEE global parameter has the "Y" value, fees become effective on the current date. If the parameter's value is "N" (default value) or not set, fees become effective along with the first instalment of a new instalment plan.

The CHANGE_INST_ADV_FEE global parameter can be redefined in a financial institution.

3.1.13 Configuring Payment Holidays

The global parameter INST_MAX_HOLIDAYS_LEN is used to set the maximum number of billing cycles for which payment holidays can be granted.

The default value of the parameter is "0". When the value is "0", payment holidays cannot be granted.

The global parameter can be redefined on the instalment scheme level (in the *Special Parms* field) using the MAX_HOLIDAYS_LEN tag.

The status of a new instalment plan generated resulting from payment holidays being granted is determined by the global parameter INST_APPROVE_PLANS (see the section "Creating a New Instalment Plan for Partial Early Repayment, Changes to Instalment Plan, Payment Holidays").

The INST_HOLIDAYS_FOR_OPEN global parameter regulates work with a plan's instalments that have the "Open", "Partially Paid", and "Overdue" statuses when payment holidays are granted:

- When the value is "Y" (the default value) – instalments will be restructured and will be assigned the "Waiting" status in a new plan.
- When the value is "N" – instalments with the "Open", "Partially Paid", and "Overdue" statuses are transferred to a new instalment plan with no changes (i.e. with the same status and amount).

3.1.14 Configuring Fee Capitalization Dates

If a fee is capitalized (the fee amount is added to the principal) the capitalization date depends on the value of the INST_INTEREST_TO_DUE global parameter:

- When the value is "Y", the fee is capitalized on the Due Date.
- If the parameter is not set, the fee is capitalized on the Effective Date.

  The global parameter can be defined on the financial institution level using the same-name tag.

  On the instalment scheme level, the global parameter can be redefined using the INT_TO_DUE tag.

See the sections "Capitalizing Interest for a Shift Period" and ""Extra Fee Into Principal" Fee Capitalization".

3.1.15 Configuring Recalculation of Plans when Rates Change

The global parameter INST_RENEW_RATES determines which rates for fees from an Instalment Scheme will be used when secondary plans are created – current

rates or the rate that were used when the original plan was created. Secondary instalment plans are created when an instalment plan is changed, when granting payment holidays, partial repayment, when a plan is recalculated due to a shift in the Billing Date, when the business calendar is changed. Rates can be changed in any way: through tariffs, or in the Instalment Scheme.

The parameter can have one of the following values:

- When the value is "Y", the parameter makes it possible to apply new interest rates to existing instalment plans when secondary instalment plans are created.

  The global parameter INST_RENEW_RATES with the "Y" value makes it possible to save the original instalment plan's number of portions when the plan is recalculated due to a shift in the Billing Date or in early repayment. In other cases, the portion amount is saved. The parameter is used if the tag (contract parameter) AUTO_ER_KEEP is not set.

- When the value is "K", the parameter makes it possible to use the original interest rates when secondary instalment plans are created.

  When the activity to change an instalment plan is performed (Change Instalment Terms), the original interest rates are applied if the following conditions are met:

  - If only the number or size of portions are being changed.
  - If the instalment Scheme and Instalment Option do not change.

- If the parameter is not set (or its value is "N"), the original rates will be used. This is the default value, with the exception of the activity to change an instalment plan (Change Instalment Terms). In this case, when the parameter's value is "N", new rates are used.

A tag with the same name can be used to redefine the global parameter for a financial institution.

The Way4 Instalments module (module for managing instalment loans) is not included in the basic configuration of Way4 and requires a separate license from OpenWay.

3.1.16 Configuring Calculation of Fees for Open Instalments

Starting from version 03.42.30 it is possible to calculate (accrue) interest for an open instalment of the principal (in the "Open" status, for more information about statuses of plans (loans) and their parts, see the section ""Invoice Events" Form"). This mode is enabled when the value of the global parameter

INST_INTEREST_FOR_OPEN is "Y". The instalment plan will include a fee for an instalment in the "Waiting" status and for an instalment in the "Open" status.

By default, interest for an instalment of the principal in the "Open" status is accrued (calculated in the instalment plan) from the date the instalment opened until the "Due Date". If a principal instalment in the "Open" status is paid before the "Due Date", the instalment plan is recalculated.

3.1.17 Daily Accrual of Interest on Instalment Loans

The global parameter INST_DAILY_INTEREST_CODES is used to enable daily accrual of interest on instalment loans. The codes of fees (value of the *Fee Code* field of the instalment scheme fee) that must be accrued daily should be specified, separated by commas, as the value of the global parameter INST_DAILY_INTEREST_CODES.

The global parameter can be redefined for a financial institution using the tag of the same name.

To enable daily accrual of interest, configure records in the "Invoice Events" form with the "Interest Accrual" type, fill in the *Fee Code* field for them, and configure the corresponding account activity using payment orders (see ""Invoice Events" Form").

3.1.18 Configuring Saving Simulated Instalment Plans

The global parameter INST_SIM_SAVE makes it possible to configure how the data of simulated plans are saved. Possible values:

- "F" – a plan's full data are saved (this is the default value).
- "P" – plans are partially saved. If this value is used, a plan's main record is saved as well as detailed information about the plan's components – Principal and Fee amounts, interest rate used in calculation, etc. (see the "Subtotals" form; "Instalments →Instalments for Contracts →[Simulated] → [Subtotals]). Information about a plan's instalments is not saved in this mode.
- "M" – a plan's minimum data are saved. If this value is used, the plan's main record is saved (without detailed information about the plan's components, and without information about instalments).
- "N" – plans are not saved.
- "A" – plan is not saved (similar to the "N" value) but main parameters of the plan are saved to Addendum with the "IU" type.

  Parameters for each plan are saved in tags in the following format: INST_NUM_[N] (number of portions), INST_AMNT_[N] (portion amount), INST_INF_RATE_[N] (interest rate), INST_INF_FEE_[N] (fee total amount),

INST_FAMNT_[N] (first payment amount), INST_FDATE_[N] (first payment date), INST_CODE_[N] (code of instalment scheme), TOTAL_[N] (total amount of the principal), where "N" is a plan's number. The PLANS_COUNT tag contains the number of simulated plans.

By default, full data for simulated plans are saved (the value of the INST_SIM_SAVE parameter is "F"). To optimize the process of simulating plans, it is recommended to set the value of the global parameter INST_SI M_SAVE to "P".

If the "M" value of the INST_SIM_SAVE parameter is specified, when a plan is created according to a simulated plan, current system parameters are used if these parameters are not obtained from a financial document (for example, interest rate). For this reason, amounts for the components of the original simulated plan and the real plan may differ.

The global parameter INST_SIM_SAVE can be redefined using the tag of the same name in a Service or in a financial institution.

3.1.19 Configuring messages sent along with information about simulated plans

The global parameter INST_ISSUER_TEXT makes it possible to set an arbitrary text message that will be sent in an authorization request response along with information about simulated instalment plans.

The global parameter can be redefined with the same tag for a financial institution.

By default, the parameter is not set, and a text message is not sent.

The text message is not saved in a document.

3.1.20 Configuring Inheritance of Tags from an Instalment Plan to a Document

The global parameter INST_EVENT_INHERIT_TAGS is used to configure inheritance of tags from an instalment plan (tags from the POSTING_DETAILS field of the INVOICE_LOG table) to a document. Tags that should be inherited are specified (separated by commas) as the parameter's value.

When a document is generated for a record in the "Invoice Events" form, or for a record in the "Instalment Events Fees" form, if the instalment plan contains this tag, the tag is added to the document's *Add Data* field.

The global parameter can be redefined in a financial institution by the tag of the same name.

3.1.21 Configuring Early Repayment

To configure early repayment, the INST_AUTO_ER_BAL and INST_SCHEDULED_ER_BAL global parameters are used:

- INST_AUTO_ER_BAL – used for automatic early repayment if a balance type other than the default balance type is used (balance type with a code other than INST_ER). For example, if different accounts are used for automatic and scheduled early repayment, different balance types must be configured. The code of the configured balance type used for automatic early repayment (other than INST_ER) must be set as the INST_AUTO_ER_BAL global parameter value or as the INST_AUTO_ER_BAL tag value in the Accounting Scheme's *Special Parameters* field or in the Financial Institution's *Special Parms* field. See the section "Automatic Early Payment with Recalculation of a Plan".

  If the default balance type is used (with the INST_ER code), additional settings in the Accounting Scheme or global parameter are not required.

- INST_SCHEDULED_ER_BAL – used for scheduled early repayment if a balance type other than the default balance type is used (balance type with a code other than INST_ER). For example, if different accounts are used for automatic and scheduled early repayment, different balance types must be configured. The code of the configured balance type used for automatic early repayment (other than INST_ER) must be set as the INST_SCHEDULED_ER_BAL global parameter value or as the INST_SCHEDULED_ER_BAL tag value in the Accounting Scheme's *Special Parameters* field or in the Financial Institution's *Special Parms* field. See the section "Manual Early Loan Repayment (Scheduled Early Repayment)".

  If the default balance type is used (with the INST_ER code), additional settings in the Accounting Scheme or global parameter are not required.

3.1.22 Limiting Due Date Shift for a Plan with the "Extra Fee from Principal" Attribute

The INST_MAX_DUE_DATE_GAP global parameter makes it possible to limit the due date shift for an open portion of a plan with the "Extra Fee from Principal" attribute. The maximum number of calendar days from the current date for which the due date can be shifted is set as the parameter value.

For detailed information, see the section "Shifting Due Date for an Instalment Plan with the "Extra Fee from Principal" Attribute".

3.1.23 Limiting Changes to an Instalment Plan

When changing an instalment plan, a check is made for the same code in the *Invoice Code* field in the new and old instalment schemes.

This limitation can be disabled using the INST_ALLOW_CODE_CHANGE global parameter with the "Y" value.

By default, the parameter can be set to "N".

The global parameter can be redefined using a tag with the same name in a financial institution.

3.1.24 Calculating a fee for a period from the end date of a shift to the effective date of the first portion of a plan in early repayment

The global parameter INST_CHARGE_BEF_EFF_DATE is used when a shift period for a plan's effective date is set in the *Plan Shift* field and the "Do Not Charge Shift Fees" is set in the *Shift Fee Charge Mode* field (see the section "Instalment Plan").The global parameter INST_CHARGE_BEF_EFF_DATE determines how to charge a fee for the period from the end of the shift date to the effective date of the plan's first portion if early repayment is made in this period.

Parameter values:

- If the parameter is not set or its value is "Y" (default value):
  - In full repayment, interest is charged for the entire period (from the shift's end date to the effective date of the plan's first portion) and becomes effective on the payment date.
  - In partial repayment, a plan is created for the remaining amount on the payment date. The fee for the period until the first portion becomes effective is calculated in two parts: before the payment date, the fee is calculated for the plan's original amount; and starting from the date of early repayment, for the amount remaining after payment.

    For example, on 1 February, a plan is generated for 1000 USD, with a 1-month shift.

    - No fee is charged for February. By default, the first portion of the plan, which becomes effective 1 April will include the fee (interest) for the entire month of March (31 days). The fee is charged on 1000 USD.
    - When early repayment of 400 USD is made on 15 March, a plan is generated for the remaining 600 USD. The plan is generated for 15 марта. Interest for the period from 1 to 15 March is charged on 1000 USD, and from 16 to 31 March, interest is charged on 600 USD.
- When the value of INST_CHARGE_BEF_EFF_DATE is "N":
  - In full early repayment, a fee is not charged for the period from a shift's end date to the effective date of the plan's first portion.
  - In partial early repayment, a new plan is generated for the remaining amount. The new plan is generated for the shift's end date (for the start

of the current month, not the payment date like in default settings).The fee for the period until the first portion becomes effective is also calculated from the start of the month for the amount remaining after payment (from the same date for which the fee for the original plan should have been charged).

For example, 1 February an instalment plan is created for 1000 USD, with a shirt of one month.

- A fee is not charged for February. By default, the first portion of the plan, which becomes effective 1 April will include the fee (interest) for the entire month of March (for 31 days). The fee is charged on 1000 USD.
- In early partial repayment of 400 USD on 15 March, a plan is generated for the remaining 6000 USD. A fee is charged on 600 USD for the month (from 1 to 31 March).

The global parameter can be redefined using a tag with the same name in a financial institution.

3.2 Configuring Calculation of Functional Dates

3.2.1 Functional Dates

Contract functional dates are dates used to work with credit cards (work with contract loan debt).

Contract functional dates include the following main dates (dates of the "Due Dates" group): "Due Date", "Full Payment Date", "Late Payment Date", and "Delinquency Date" (for more information, see the section "Functional Dates" of the document "Products and Contract Subtypes").

When working with instalment loans, the following functional dates (dates of the "Instalment Dates" group) are additionally used in the Way4 Instalments module:

- "Instalment Effective Date" (INSTL_EFF_DATE) – date an instalment becomes effective.
- "Instalment Due Date" (INSTL_DUE_DATE) – scheduled due date of instalment (date by which the instalment must actually be paid).
- Instalment Report Date" (INSTL_REP_DATE) – scheduled date of payment shown in a report for the client. Generally corresponds to "Instalment Due Date".

Dates in the "Instalment Dates" group are calculated when generating an instalment plan.

3.2.2 Configuring Rules for Calculating "Instalment Dates" Group Functional Dates

"Instalment Dates" group functional dates are set up as follows:

- In the "Dates Schemes" form ("Full → Configuration Setup → Products → Date Schemes" or "Instalments → Instalment Configuration → Date Schemes"), see Fig. 1:
  - A separate scheme can be set up to calculate dates for the "Instalment Dates" group.
  - Dates of the "Instalment Dates" group can be set up in a common scheme that includes main functional dates.

Fig. 1 shows setup of a separate scheme for dates of the "Instalment Dates" Group.

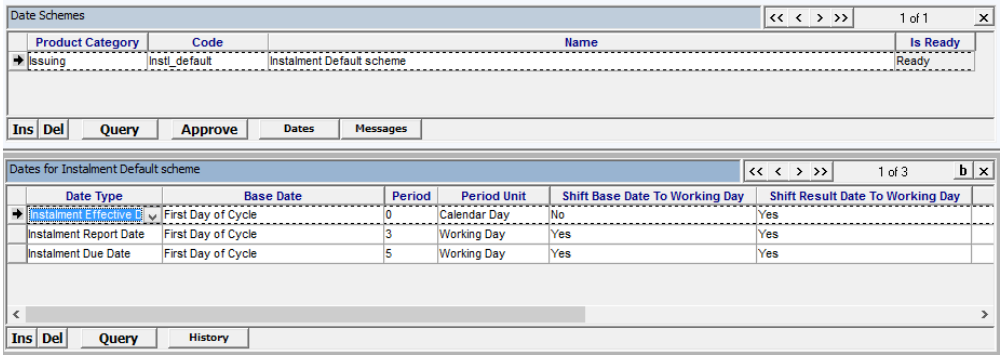

Fig. 1. "Date Schemes" form

A description of "Date Schemes" form fields and "Dates for <name of date scheme>" form fields (this form is opened by clicking the [Dates] button in the "Date Schemes" form) is provided in the section "Configuring Rules for Calculating Functional Dates" of the document "Products and Contract Subtypes".

- Specifics for configuring dates of the "Instalment Dates" group:
  - It is mandatory to configure "Instalment Due Date" and "Instalment Effective Date" dates. When approving a date scheme, if any date from the "Instalment Dates" group is configured, a check is made that "Instalment Due Date" and "Instalment Effective Date" dates are configured.
  - Dates of the "Instalment Dates" group can be calculated on the basis of contract dates, for example, on the basis of a contract's "Due Date", billing cycle start date, date of the transaction for which the instalment

plan is being calculated (see the description of the "Dates for..." form's *Base Date* field in the document "Contract Functional Dates").

- A configured date scheme is set:
  - If a general date scheme is configured that includes dates of the "Due Date" group and dates of the "Instalment Dates" group, this scheme is set on the Product level. The "By Contract" value of the *Dates Mode* parameter should be set in instalment schemes that will use these rules for calculating dates.
  - If a separate date scheme is configured for dates of the "Instalment Dates" group, this scheme is sent on the instalment scheme level. Specify the "By Date Scheme" value in the *Dates Mode* parameter of this instalment scheme.

3.3 Configuring Instalment Schemes

Instalment schemes are configured in the "Instalment Schemes" grid form (see Fig. 3) opened by selecting the "Instalments → Instalment Configuration → Instalment Schemes" menu item. This form contains all registered instalment schemes.

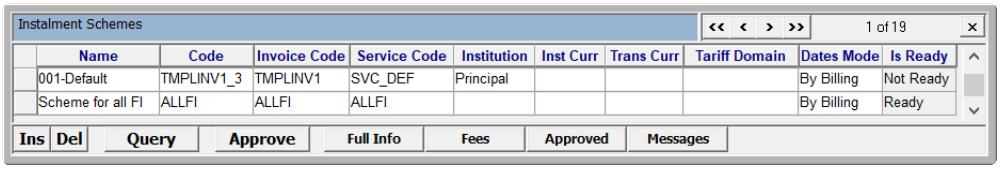

Fig. 2. Instalment scheme

For a description of the form's fields, see the description of the form with full information about an instalment scheme (Fig. 3).

To access full information about an instalment scheme, click the [Full Info] button (see Fig. 3).

Clicking the [Fees] button opens the "Fees for <name of instalment scheme>" form that is used to configure fee and repayment method parameters (see the section "Fee and Repayment Method Parameters").

Clicking the [Approved] button opens the "Approved for <name of instalment scheme>" child form that contains the history of changes to the instalment scheme. This is a list of previously approved versions of the instalment scheme. Detailed information for each previously approved instalment scheme can be viewed by clicking the [Full Info] button, and the list of fees can be viewed by clicking the [Fees] button.

The [Messages] button is used to open a grid table with messages, including error messages, generated by Way4 when the instalment scheme was approved.

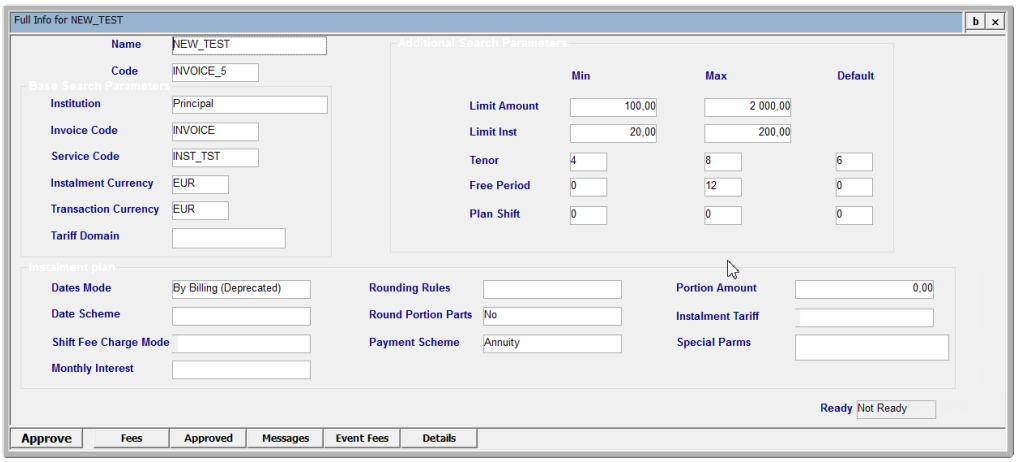

Fig. 3. Full information about an instalment scheme

The "Full Info" form's fields are separated into the following groups:

- Scheme name (*Name*) field and unique scheme code (*Code* field).
- Base Search Parameters
- Additional Search Parameters
- Instalment Plan

3.3.1.1 Base Search Parameters

This group of fields contains the main parameters for identifying the instalment scheme:

- *Institution* – the financial institution for which the instalment scheme is configured. This field may be left empty; in this case, the instalment scheme will be used for all financial institutions.
- *Service Code* – identifier for linking a scheme to a financial document or Service (see "Configuring Service Packages").

  When approving an instalment scheme, the uniqueness of the value in this field can be checked. To enable the check, set the value of the global parameter UNIQUE_INST_SERVICE_CODE to "Y" or specify the UNIQUE_INST_SERVICE_CODE=Y tag in the *Special Parms* field of the financial institution. By default, no check is made.

- *Invoice Code* – identifier for linking a scheme to account templates; this field value is used as a prefix in the *Invoice Code* field during Event setup

(see "Configuring Execution of Actions when the Status of a Loan or its Components Changes").

When filling in the *Invoice Code* field, do not use the underline character "_". Otherwise, rules for opening Events will be processed incorrectly.

- *Instalment Currency* – the currency used to calculate an instalment plan (in which limits are set for an instalment, etc.). This currency must be the same as the contract currency.
- *Transaction Curr* – this field is compared with the transaction currency set in the document. If the *Transaction Curr* field is filled in, a document will be processed and an instalment plan will be created on its basis only if the document transaction currency and currency in the *Transaction Curr* field are the same. If an instalment plan is generated without a document, this field does not affect its generation.
- *Tariff Domain* – the tariff domain; specifying a tariff domain on the instalment scheme level makes it possible to determine the set of instalment schemes available for a contract (for example, when modifying an instalment plan. See the section "Modifying an Instalment Plan"). Availability of instalment schemes belonging to the specified domain can be configured on various levels; for example, on the financial institution level (for all contracts), on the Product level (for contracts using the Product), etc.

The Advanced Tariff Management module is not included in the Way4 basic configuration and is supplied according to a separate agreement with OpenWay.

- *Is Ready* – shows whether changes entered in this instalment scheme were approved.
  - The "Ready" value is shown in this field if changes made in this scheme were approved.
  - The "Not Ready" value is shown in this field if changes made in this scheme were not approved.

3.3.1.2 Additional Search Parameters

This group of fields contains additional parameters to identify instalment schemes. A maximum and minimum value can be set for these parameters, and

for the *Tenor*, *Free Period*, and *Plan Shift* parameters, a default value can also be set.

- *Limit Amount* – limit on original transaction amount.

  The amount set in the *Limit Amount* field is compared with the amount of the document's *Settlement Amount* (i.e. by default, the currency of the limit on the original transaction will be the document's *Settlement Currency* amount). Usually *Settlement Currency* is the same as the contract currency).

- *Limit Inst* – limit on instalment amount in instalment plan.
- *Tenor* – limit on number of instalment periods.
- *Plan Shift* – number of periods by which an instalment plan is shifted (number of periods during which the principal will not become effective); the default value is "0" (no shift). This parameter is used to set up deferred payment of the principal after a transaction. The procedure for charging fees for these periods is configured in the *Shift Fee Charge Mode* field.

  The *Plan Shift* parameter can be redefined using a tariff with the "Instalment Scheme" role. The Advanced Tariff Management module is not included in the basic Way4 configuration and is provided according to a separate agreement with OpenWay.

  Capitalization of interest for a Shift Period can be set up. See the section "Capitalizing Interest for a Shift Period".

- *Free Period* – number of instalments for which no remuneration is accrued or payable. I.e. only the principal amount is effective in these periods.

  The *Free Period* parameter can be redefined using a tariff with the "Instalment Scheme" role. The Advanced Tariff Management module is not included in the basic Way4 configuration and is provided according to a separate agreement with OpenWay.

  A reduced fee rate can be set for a *Free Period* period. The reduced rate differs from the base fee rate defined in an instalment scheme. Use of a reduced fee rate is enabled by setting the instalment scheme's *Free Period Rate* field (set for a fee) or by configuring a tariff with the "Instalment Fee" role (the section "Tariffs with the "Instalment Fee" Role" of the document "Way4 Advanced Tariff Management"), or by setting the INST_IRATE_FREE tag in a document (see the section "Tags used when processing documents" of the document "Setup Tags"). By default, the size of all instalment portions (including portions for a *Free Period* period) will be the same. The fee amount will differ (it will be calculated based on the rate for a specific

portion). For instalment portions for a *Free Period* period to differ from the other portions in a plan, the FREE_PERIOD_OWN_AMOUNT tag should be set in the *Special Parms* field for the instalment scheme.

The FREE_PERIOD_OWN_AMOUNT tag cannot be used for fees calculated on the basis of a daily interest rate ("Interest" using the parameter MONTHLY_INTEREST, "Interest 365" etc.).

The default values specified for the *Tenor*, *Plan Shift*, and *Free Period* parameters are used when generating an instalment plan if the values of these parameters are absent from the document and Service (see the section "Configuring Service Packages").

3.3.1.3 Instalment Plan

This group of fields is used to enter parameters according to which an instalment plan is generated:

- *Dates Mode* – defines which rules should be used to calculate functional dates for instalment loans (dates of the "Instalment Dates" group):
  - "By Date Scheme" – the date scheme set in the instalment scheme is used to calculate dates (this date scheme is configured separately for dates of the "Instalment Dates" group).

    In this case, only dates of the "Instalment Dates" group are calculated, even if calculation of dates for the "Due Dates" group is configured in the scheme.
  - "By Contract" – the contract's general date scheme is used to calculate dates (date scheme set on the Product level). This general scheme contains a contract's main functional dates ("Due Date", etc.) and dates of the "Instalment Dates" group.

    In this case, the date scheme is not set on the instalment scheme level.
  - "Custom" – effective date is determined using a custom procedure.
- *Date Scheme* – used to select the date scheme that will be used to calculate functional dates for instalment loans (dates of the "Instalment Dates" group). The *Date Scheme* field is filled in if the "By Date Scheme" value is selected in the *Dates Mode* field.
- *Portion Amount* – the amount of the instalment in the instalment plan.

- *Monthly Interest* – this field is only filled in if the billing cycle start date does not coincide with the start of the calendar month and it is necessary to split interest accrued for a cycle into two portions (from the beginning of the cycle to the start of the next calendar month and from the start of the next calendar month to the end of the cycle). In this case, each portion of the accrued interest becomes effective separately:
  - "Do Not Split Interest" – accrued interest is not split. This value corresponds to an empty *Monthly Interest* field.
  - "Split Interest" – the effective date of the first portion of interest is always the first working day of the next month.

    Posting Date and GL Date shifts for entries being generated are determined by Accounting Scheme settings (INTEREST_IN_CYCLE, EOM_INT_MODE parameters).

    
    When this mode is used, it is recommended to simultaneously shift the Effective Date to a working day (see the description of the *Adjust Eff Date* field).
- *Shift Fee Charge Mode* – sets how fee amounts become effective that are charged from the time the loan begins to be used during which payments of the principal are deferred (the period for deferring payment is configured in the *Plan Shift* field). Parameter values:
  - "Charge Fees Every Month" – this fee becomes effective during periods specified with the *Shift Num* field. Part of the fee without the principal will become effective in each period. For more information, see the section "Charging Fees").
  - "Include Fees in First Portion Fees" – a fee for this period of time is added to the fee amount of the first effective payment. This is the default value (if the field is not filled in). For more information, see the section "Charging Fees").
  - "Do Not Charge Shift Fees" – no fee is charged for the specified time segment.
  - "Capitalize Fees Every Month" – interest for a Shift Period is added to the principal in each period for the entire term of the shift monthly on the Due Date. See the section "Capitalizing Interest for a Shift Period".
  - "Capitalize Fees on First Portion" – interest for a Shift Period is added to the principal in the first portion. See the section "Capitalizing Interest for a Shift Period".

- *Rounding Rules* – rounding rules that must be used while calculating instalment amounts in an instalment plan; for information on filling in this field, see the description of the ROUND tag in section "Tags used when configuring Service Packages and Services" of the document "Setup Tags"; the accumulated rounding error is taken into account when the last instalment amount is calculated.

- *Round Portion Parts* – when this parameter has the "Yes" value, the rounding rules specified in the *Rounding Rules* field are not only applied to the instalment amount, but to its components (to the principal amount portion and fee amount portion(s)).

- *Payment Scheme*:
  - "Annuity" – annuity scheme. When an instalment plan is generated, monthly payments are the same size.
  - "Differentiated" – scheme for calculating differentiated payment. When an instalment plan is generated, the principal is divided into equal portions by the number for instalment months, the interest amount is calculated for the remainder on the loan.
  - "Fees First" – when an instalment plan is generated, the entire amount of the fee calculated is included in the first instalment (if the fee amount does not exceed the instalment amount). Further instalments include only the principal. I.e., first the fee is paid and then the principal. This scheme is only used for Annual Fees, Flat Fees, and Portion Fees. Early repayment is not available for these plans.

- *Special Parms* – field for specifying additional instalment scheme parameters; the following tags may be used in this field:
  - INT_DELAY – this tag redefines the global parameter INTEREST_DELAY. If the INT_DELAY tag is not set, the value of the global parameter is used. INT_DELAY tag values:
    - "N" – interest is accrued beginning on the transaction date (i.e. from the date the instalment plan was created and funds were transferred). For example, a transaction was made on the first day of the month; interest was accrued from the transaction date (from the first date) for all days of the month (for example, until the 30th, if there are 30 days in the month). Interest becomes effective on the first day of the next month (Effective Date). Further, interest is accrued form the "Effective Date" (from the first of the month) to the last day of the month and becomes effective on the first day of the next month, etc.

- "Y" – interest is accrued beginning on the day after the transaction date. The date until which interest will be accrued can be regulated (regulate, include interest for the "Effective Date" date in the current effective instalment, or in the next instalment).

  When the global parameter INST_ACCOUNTING_INT_DELAY value is "Y", interest for the "Effective Date" is included in the current effective instalment. This is the default value.

  When the global parameter INST_ACCOUNTING_INT_DELAY value is "N", interest for the "Effective Date" is included in the next instalment (until version 03.42.30 this was the default behaviour; beginning from version 03.42.30, the parameter's default value is "Y").

When recalculating an instalment plan (for example, in partial early repayment), the "Advance Fee" is calculated up to the date of payment (i.e. interest is accrued for the payment date). When calculating a new plan, an instalment's interest begins to be accrued from the date after payment. The "Advance Fee" becomes effective immediately or together with the new instalment of the new plan plan (depending on the settings of the global parameter INST_ADV_FEE_OPEN, see the section "Configuring Rules for Working with "Advance Fee").

- START_SHIFT=<N_DAYS>; – this tag makes it possible to shift the start date of the instalment plan (the start date is the date of the original transaction based on which the plan is calculated). The shift is specified in calendar days.
- MAX_HOLIDAYS_LEN=<number of billing cycles> - this tag redefines the global parameter INST_MAX_HOLIDAYS_LEN. The maximum number of billing cycles for which payment holidays can be granted is set. When the value is "0", payment holidays cannot be granted.
- MAX_DAYS_TO_CONVERT=<number of days>; – the number of days from the transaction date during which an instalment plan can be created for the transaction according to this scheme (see the section "Filtering Transactions for which Instalment Plans").
- MIN_FEE_RATE, MAX_FEE_RATE – minimum and maximum rates for "Annual Fee", "Flat Fee", "Portion Fee" fees in a document (the value is set as a percentage).
- MIN_INT_FEE_RATE, MAX_INT_FEE_RATE – minimum and maximum rates for "Interest..." fees in a document (the value is set as a percentage).

- WAIVE_INT_ROUNDING – redefines the value of the same global parameter (see the section "WAIVE_INT_ROUNDING" of the document "Way4 Global Parameters"), affecting interest accrual when the *Monthly Interest* field is filled in. When the value is "Y" (default value), each part of a fee in a portion is rounded separately (the total fee amount is calculated by adding the rounded parts together). When the value is "N", the total fee amount and first part is rounded. The amount of the second part is calculated by subtracting the rounded fee of the first part from the rounded total amount.
- ER_ALLOWED – determines whether early repayment is possible for this instalment scheme. Possible values:
  - "Y" – manual and automatic early repayment are possible. This is the default value.
  - "M" – manual early repayment is possible.
  - "N" – early repayment is not possible.
- HOLIDAYS_DECISION=<decision code> – the tag sets the decision that is checked when granting payment holidays. Also see the section "Permitting/Prohibiting Payment Holidays".

See the document "Instalments Setup Tags".

- *Instalment Tariff* – drop-down list of registered tariff types with the "Instalment Scheme" role. This field is available if the delivery package includes the Advanced Tariff Management Module.

> The USE_CONTRA_TRF tag set in an instalment scheme's *Special Parms* field allows a tariff for a merchant contract to be used (i.e. search for the tariff on the Source side).
>
> The Advanced Tariff Management module is not included in the Way4 base configuration and is supplied according to a separate agreement with OpenWay.

For backward compatibility, fields used earlier (before version 03.41.30) to calculate effective dates and due dates have been moved to a separate form opened by clicking the [Details] button in the "Instalment Schemes" form. *Details* form fields:

- *Billing Mode* – mode of calculating the effective date of each instalment in an instalment plan. This field's list duplicates the *Dates Mode* field's list and

additionally contains values supporting calculation of dates in the old mode:

  - "By Billing" – the effective date of an instalment is determined by the start date of the corresponding billing cycle; this is the default value.
  - "By Trans Date" – the effective date of an instalment is calculated in months from the original transaction date: if a transaction date is 14 February, the effective date will be calculated from 14 February, 14 March, 14 April, etc.

- *Due Mode* – mode of calculating the due date of each instalment in an instalment plan; in this field, specify a unit for calculating the interval between an effective date and a due date:
  - "Billing" – the interval is measured in billing cycles; this is the default value.
  - "Month" – the interval is measured in calendar months.
  - "Working Day" – the period is measured in working days.
  - "Fixed Day of Month" – the due date is determined as a fixed day of the month, specified in the *Due Period* field.
  - "Day" – the interval is measured in calendar days.
  - "Custom" – the due date is determined by a custom procedure.
- *Due Period* – interval between an effective date and a due date in units specified in the *Due Mode* field.
- *Adjust Eff Date* – this parameter makes it possible to shift the effective date to the closest working day corresponding to the selected value:
  - "Previous working day" – to the previous working day regardless of whether the effective date falls on a working day or weekend/holiday.
  - "Last working day" – to the last working day before the weekend/holiday if the effective date falls on a weekend/holiday (if the effective date falls on a working day, no shift occurs when this parameter value is specified).
  - "Next working day" – to the next working day regardless of whether the effective date falls on a working day or weekend/holiday.
  - "Following working day" – to the first working day after a weekend/holiday if the effective date falls on a weekend/holiday (if the effective date falls on a working day, no shift occurs when this parameter value is specified).

- *Adjust Due Date* – this parameter makes it possible to shift a due date to the closest working day corresponding to the specified value. The values of this parameter are the same as those of the *Adjust Eff Date* parameter.

To configure limits for the creation of instalment schemes for a contract (for example, a limit on the total amount of the contract's loans, on the number of active instalment plans for a contract), tariffs can be used. For more information, see the section "Configuring Instalment Limits".

The Advanced Tariff Management module is not included in the basic Way4 configuration and is provided according to a separate agreement with OpenWay.

After configuring the instalment scheme, validate the entered data:

- Click the [Approve] button in the "Instalment Schemes" form (see Fig. 3 in the section "Configuring Instalment Schemes"). A window will open for entering the start and end dates of the scheme's validity.
- After entering the scheme's terms of validity, click the [Proceed] button. The entered data will be checked. If any of the scheme parameters is found to have been entered incorrectly, a corresponding message will appear on the screen.

Clicking the [Fees] button in the "Instalment Schemes" form opens the "Fees for <name of instalment scheme>" child form. It is used to set up fee and repayment method parameters (see "Fee and Repayment Method Parameters").

Clicking the [Approved] button in the "Instalment Schemes" form opens the "Approved for <name of instalment scheme>" containing the history of changes to the scheme, shown as a list of earlier approved versions of the instalment scheme. For each earlier approved instalment scheme it is possible to view detailed information by clicking the [Full Info] button and to view the list of fees by clicking the [Fees] button.

Clicking the [Event Fees] button in the "Instalment Scheme" form opens the "Event Fees for <name of instalment scheme>" child form used to specify "Instalment Event Fees" fees that can be charged at certain times in the lifecycle of an instalment plan created according to this scheme (for more information, see the section ""Instalment Event Fees"").

3.3.2 Fee and Repayment Method Parameters

Parameters of fees (or interest accrued on a loan) are set up in the "Fees for <name of instalment scheme>" form (see Fig. 4) opened from the form for configuring instalment scheme parameters (see Fig. 3 in the section "Configuring Instalment Schemes").

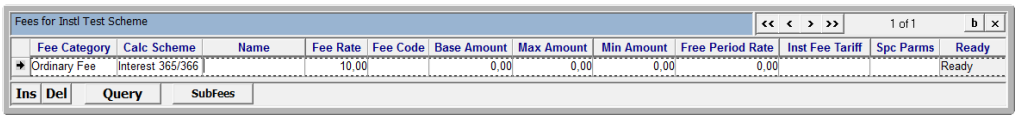

Fig. 4. Configuring fee parameters

This form contains the following fields:

- *Fee Category* – fee category:
  - "Ordinary Fee" – fee charged for using a loan.
  - "Extra Fee Into Principal" – additional fee that increases the instalment plan's principal loan amount by a specified percentage.
  - "Extra Fee Immediate" – additional fee included in the first instalment of the principal.
  - "Extra Fee from Principal" – this setting makes it possible to make the entire principal amount effective (without division into portions). The principal is split into two parts that become effective on the same Effective Date:
    - Part that is "mandatory" for payment (if this amount is not paid by the Due Date, an additional fee is charged when the amount is transferred to a delinquency account).
    - Optional part (if this amount is not paid by the Due Date and is transferred to a delinquency account, no additional fee is charged).

    The "mandatory" part of the principal is determined as a percentage (percentage of the main principal amount) in the Fee Rate field, or as n the amount set in the *Base Amount* field.

    When using this feature, it is recommended to set up the instalment scheme (or functional dates used by the scheme) in such a way so that Effective Date is the date of the transaction for which the instalment plan is being calculated.

    The percentage or amount that is mandatory for payment can be set using the document tags INST_EXTRAF_FRATE and INST_EXTRAF_FTOTAL, respectively.

    Early repayment for a plan calculated with this type of fee is not provided for (early repayment is not possible).
  - "Merchant Fee" – fee charged to a merchant. This fee is not included in an instalment and in a plan's total amount. When the effective date

arrives, the entire amount of the corresponding invoice is written off (assigned the "Written-Off" status).

A tariff for a merchant contract (on the Source side) can be used for the "Merchant Fee". To do so, set the USE_CONTRA_TRF tag in the fee's *Spc Parms* field.

- "Supplier Fee" – fee charged to a supplier of goods or services when processing an original transaction document; this value is reserved for future use.

> Note that for the "Extra Fee Immediate", "Source Fee" and "Supplier Fee" values, the corresponding fee types must be set up. Fee types with Message Type codes "FEE_EXTRA", "FEE_SOURCE", and "FEE_SUPPLIER", respectively, are set up for these fees. The fees must be specified in the list of miscellaneous services of the Service Packages of Target, Source, and Supplier contracts, respectively (see the section "Miscellaneous Services" in the document "Way4 Service Packages").

- "Custom Fee" – this value is used to calculate fees with a custom procedure. See the section "Configuring "Custom Fee" Fees".

- *Calc Scheme* – method (scheme) for calculating remuneration for granting a loan:
  - "Annual Fee" – remuneration is calculated as a percentage of the transaction amount. The fee is calculated on the basis of the annual interest rate, the fee portion is calculated based on the number of months in the year (monthly payment).
  - "Flat Fee" – remuneration is calculated as a percentage of the transaction amount. Calculation on the basis of an annual interest rate. The fee portion is calculated based on the number of instalments in the instalment plan (to be paid in each instalment).
  - "Portion Fee" – when this value is specified, "Fee Rate" and "Base Amount" fee parameters determine the fee amount for one portion. This calculation method should be used with the "Ordinary Fee" fee type.
  - "Interest" – remuneration is calculated depending on the value of the global parameter USE_MONTH_WEIGHT. This parameter is described in the document "Interest Accrual".

    When the USE_MONTH_WEIGHT parameter value is "B", interest for the first portion is not calculated on a daily basis, but as for an entire period (for a full portion).

- "Interest 365"/366 – remuneration is calculated as annual loan interest based on the exact (actual) number of days in a year.
- "Interest 365 Fixed" – remuneration is calculated as annual loan interest based on 365 days in a year (regardless of the actual number of days in the year).
- "Interest 366 Fixed" – remuneration is calculated as annual loan interest based on 366 days in a year (regardless of the actual number of days in the year).
- "Interest -360" – remuneration is calculated as annual loan interest as follows: the number of calendar days in a month is taken as 30 calendar days and the number of calendar days in the year as 360. The following conditions are observed:
  - The amount of interest for the last day of February is calculated as follows:
    - If February has 28 days, interest for three days is accrued on 28 February.
    - If February has 29 days, interest for two days is accrued on 29 February.
  - Interest is not accrued for the 31st.
- "Interest with USE_MONTH_WEIGHT = Y" – when interest is accrued, 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 for one day of January.
- "Interest with USE_MONTH_WEIGHT = N" – interest is accrued assuming there are 360 days in a year. When accruing interest, months 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 for one day in January.

  For more information, see the description of the global parameter USE_MONTH_WEIGHT in the document "Interest Accrual".
- "Interest with USE_MONTH_WEIGHT = B" – interest for the first portion is calculated not on a daily basis, but as for an entire period (for a full portion).

  In early repayment before the end of the first period, no "Advance Fee" is charged.

The parameter USE_MONTH_WEIGHT specified globally or for an Account Scheme or financial institution affects the algorithm for accruing interest on an account balance (see the document "Interest Accrual"). The parameter USE_MONTH_WEIGHT set up in an instalment scheme (Interest with USE_MONTH_WEIGHT = <>) affects calculation of loan interest. That means these settings are usually used independently. If to calculate loan interest a value of the USE_MONTH_WEIGHT parameter must be used (or a parameter in an Account Scheme/financial institution), specify "Interest" in the *Calc Scheme* field.

- "Daily Interest" – the daily interest rate will be specified in the fee's *Fee Rate* field.

The *Calc Scheme* and *Category* fields determine the repayment method (distribution of fee amounts in instalments of an instalment plan) (until version 03.42.30, distribution of reimbursement was determined by the *Amortization* field; starting from version 03.42.30, the *Amortization* field is not used):

- For "Ordinary Fee" fees:
  - For "Annual Fee" and "Flat Fee" schemes, reimbursement is distributed in equal portions in each instalment.
  - For other schemes, reimbursement is paid in decreasing portions as the loan is repaid (fee on the remaining portion of the principal loan amount).
- In all schemes, "Extra Fee Immediate", "Source Fee", and "Supplier Fee" fees are included in the first instalment.

"Extra Fee Into Principal", **"**Extra Fee Immediate**"** , "Source Fee" and "Supplier Fee" fees are not used with the "Interest 366 Fixed", "Interest 365 Fixed**",** "Interest 365/366" schemes for calculating reimbursement. Instalment schemes with these settings will not be approved.

Only one fee with an "Interest..." calculation method (*Calc Scheme*) and only one "Flat Fee" fee type may be added to an instalment scheme. This relates to "Ordinary Fee" fees.

- *Name* – fee name.
- *Fee Rate* – the fee percentage, i.e. the percentage of the fee from the transaction amount or the annual percentage on the loan, depending on

the selected means of calculation (see the section "Instalment Plan Calculation Features").

- *Fee Code* – fee identification code.
- *Base Amount* – base amount of remuneration.
- *Max Amount* – maximum amount of remuneration.
- *Min Amount* – minimum amount of remuneration.
- *Free Period Rate* – reduced fee rate for an instalment plan's *Free Period*.
- *Inst Fee Tariff* – drop-down list of registered tariff types with the "Instalment Fee" role. A value can be selected in this field if the delivery package includes the Advanced Tariff Management module.

> The Advanced Tariff Management module is not included in the Way4 base configuration and is supplied according to a separate agreement with OpenWay.

- *Spc Parms* – field for specifying additional parameters; see the document "Instalments Setup Tags".

The system provides for the use of sub-fees which are calculated as a percentage of the main fee (sub-fees are applied, for example, when charging tax on interest). To configure sub-fees, select the main fee in the "Fees for <name of instalment scheme>" form (see Fig. 4) and click the [SubFees] button. The "SubFees for <scheme name>" form will open (see Fig. 5).

The [SubFees] button is available for "Ordinary" and "Extra Fee Immediate" main fees (see the *Fee Category* field).

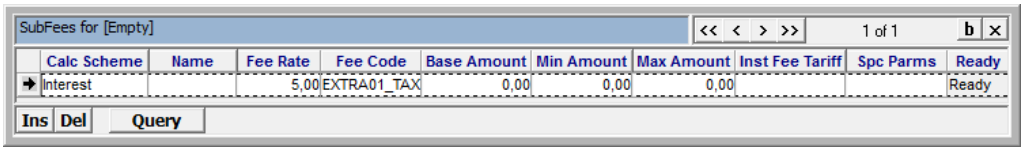

Fig. 5. Configuring sub-fee parameters

> During interest accrual, rounding errors may occur (related to rounding to the minimum fractional currency unit; for example, for dollars this is two digits after the comma). The global parameter WAIVE_INT_ROUNDING with the "N" value allows the amount of the rounding error not previously considered during interest accrual to be added to the calculated amount of the next accrual of interest. This scheme only works if interest is accrued several times in one billing cycle. When

the value of this global parameter is “Y”, the amount of the rounding error is not taken into consideration.

3.3.3 Configuring "Custom Fee" Fees

A fee can be calculated using the custom procedure CUST_INSTL_POST_PLAN.

To configure a fee, do as follows:

- In the "Fees for <instalment scheme>" form (see Fig. 4 in the section "Fee and Repayment Method Parameters"), configure a fee with the "Custom Fee" value in the *Fee Category* field.
- A fee is calculated using the custom procedure CUST_INSTL_POST_PLAN. For detailed information about setup, contact the OpenWay representative.

When calculating an instalment plan for a scheme that contains the "Custom Fee" fee, a separate invoice is generated for this fee

3.4 Configuring Instalment Scheme Groups

Instalment schemes are grouped for the following reasons:

- To configure available instalment schemes, balance types, and transaction types for manual creation of an instalment plan (see the section "Configuring Available Instalment Schemes, Balance Types, and Transaction Types for Manual Creation of an Instalment Plan".
- To configure automatic closing of an instalment plan (see the section "Configuring Automatic Closing of an Instalment Plan").
- To configure permission/prohibition for creating an instalment plan (see the section "Permitting/Prohibiting Creation of an Instalment Plan for a Contract Based on Calculated Classifiers").

Instalment scheme groups are configured in the "Instalment Scheme Groups" form (Instalments → Instalment Configuration → Instalment Schemes Groups → Instalment Schemes Groups), see Fig. 6.

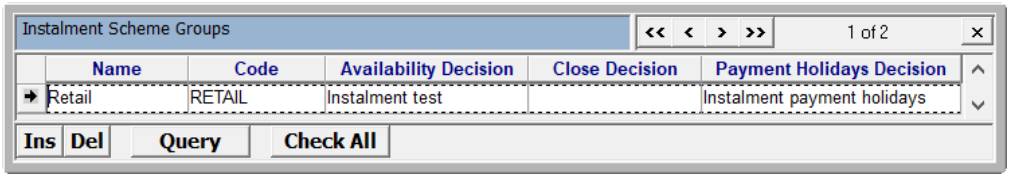

Fig. 6. Configuring instalment scheme groups

The form contains the following fields:

- *Name* – group name.
- *Code* – group code.
- *Availability Decision* – calculated classifier that is checked when creating an instalment plan (see the section "Permitting/Prohibiting Creation of an Instalment Plan for a Contract Based on Calculated Classifiers").
- *Close Decision* – calculated classifier based on which an instalment plan is automatically closed (see the section "Configuring Automatic Closing of an Instalment Plan").
- *Payment Holidays Decision* – decision that is checked when granting payment holidays. This decision can be set using the HOLIDAYS_DECISION=<code> tag in an instalment scheme.

An instalment plan can only belong to one group at any one time. This condition is checked with the [Check All] button.

3.5 Configuring Automatic Closing of an Instalment Plan

An instalment plan can be closed automatically depending on a contract's current state (parameters). For example, if the contract has delinquency. In this case, the level of delinquency can be set at which the contract will be closed.

Setup procedure:

- Conditions for closing a plan are set using calculated classifiers (Decisions). A separate classifier can be configured for each instalment scheme (or for a group of instalment schemes).
  - Create a calculated classifier (Full → Configuration Setup → Common Handbooks →Decision).
  - Two values are set for the classifier, with the predefined codes "Y" and "N" (in the example in Fig. 7, these are the values "Close" and "Do Nothing").

  Conditions for closing a plan are usually configured based on the "DLQ_LEVEL" system classifier, determining a contract's delinquency level (see Fig. 7). For more information about the "DLQ_LEVEL" classifier, see the section "Configuring the "DLQ_LEVEL" System Classifier" of the document "Way4 Client and Contract Classifiers").

  Conditions for closing a plan can be configured using other client and contract classifiers. Note that calculated classifiers (Decisions) will only be

checked when delinquency arises for a contract (if a contract is assigned a "DLQ_LEVEL" classifier values greater than "0").

The general procedure for configuring calculated classifiers is described in the section "Calculated Classifiers (Decisions)" of the document "Way4 Client and Contract Classifiers").

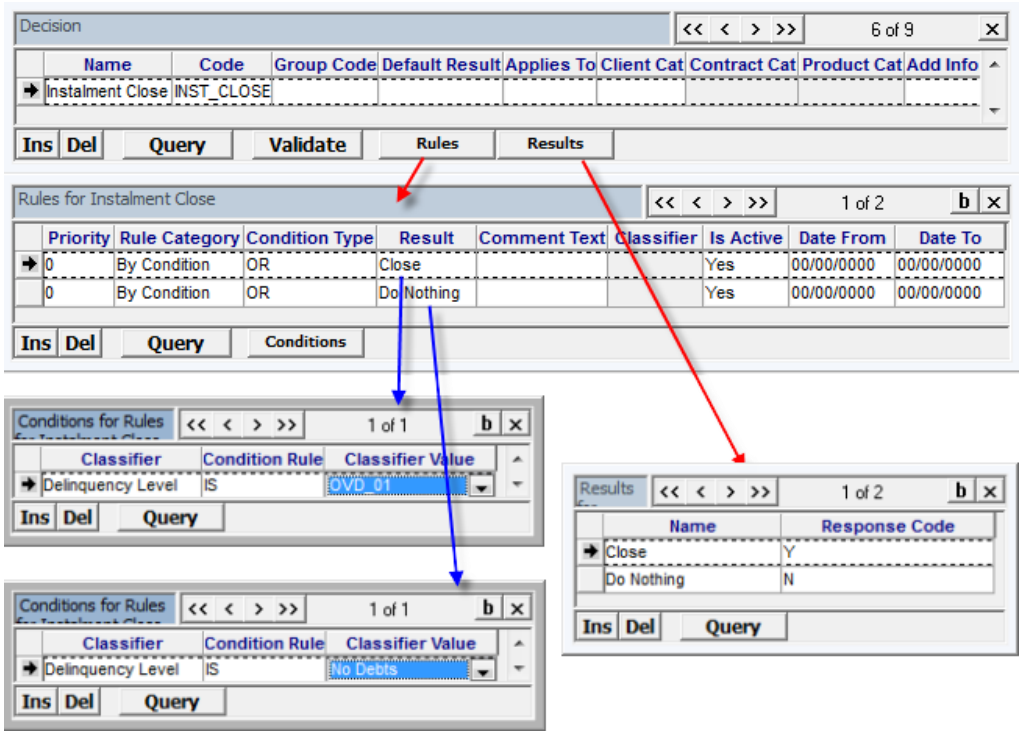

Fig. 7. Configuring calculated classifiers

- A configured calculated classifier should be specified:
  - For instalment scheme groups (see Fig. 8). The classifier is specified in the *Close Decision* field of the instalment scheme group (Instalments → Instalment Configuration → Instalment Schemes Groups → Instalment Schemes Groups), see Fig. 8.

    or

  - For a particular instalment scheme, A classifier is specified using the CLOSE_DECISION=<code of the calculated classifier>; tag in the instalment scheme's *Special Parms* field (Instalments → Instalment Configuration →Instalment Schemes).

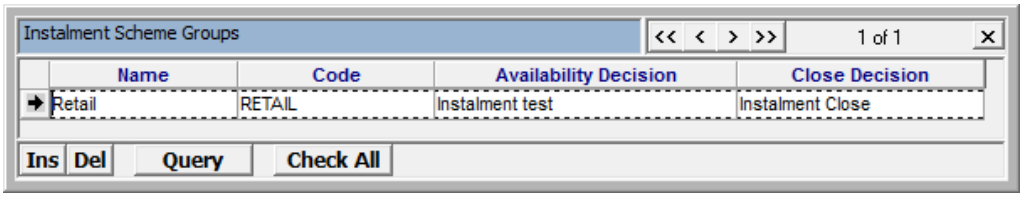

Fig. 8. Configuring instalment scheme groups

When performing daily procedures if a contract has delinquency and active instalment plans, "Decisions" classifiers are calculated for the contract. Depending on the results of calculation, the instalment plan is either closed or remains active.

Configuration so that instalment plans are closed automatically using calculated classifiers is recommended for due normalisation (i.e. when funds are transferred to overdue) during the "Contracts – Daily Update" evening procedure. If this configuration is used and due normalisation is performed during the "Contracts – Daily Update" morning procedure, instalment plans will be closed on the next day after the funds have been transferred to overdue.

3.6 Permitting/Prohibiting Creation of an Instalment Plan for a Contract Based on Calculated Classifiers

The ability to create an instalment plan for a contract may depend on contract parameters. For example, creation of a plan for a contract with delinquency may be prohibited.

Setup procedure:

- Conditions determining whether creation of an instalment plan is permitted or prohibited are configured using calculated classifiers (Decisions). A separate classifier can be configured for each instalment scheme (or for a group of instalment schemes).
  - Create a calculated classifier (Full → Configuration Setup → Common Handbooks →Decision).
  - Two values are set for the classifier, with the predefined codes "Y" and "N" (in the example in Fig. 9, these are the values "Instalments Available" and "Instalments Forbidden").

    Conditions for creating a plan are configured based on client and contract classifiers. For example, based on the "DLQ_LEVEL" system classifier (if it is necessary to prohibit creating an instalment plan for a contract with delinquency). For more information about the "DLQ_LEVEL"

classifier, see the section "Configuring the "DLQ_LEVEL" System Classifier" of the document "Way4 Client and Contract Classifiers").

The general procedure for configuring calculated classifiers is described in the section "Calculated Classifiers (Decisions)" of the document "Way4 Client and Contract Classifiers").

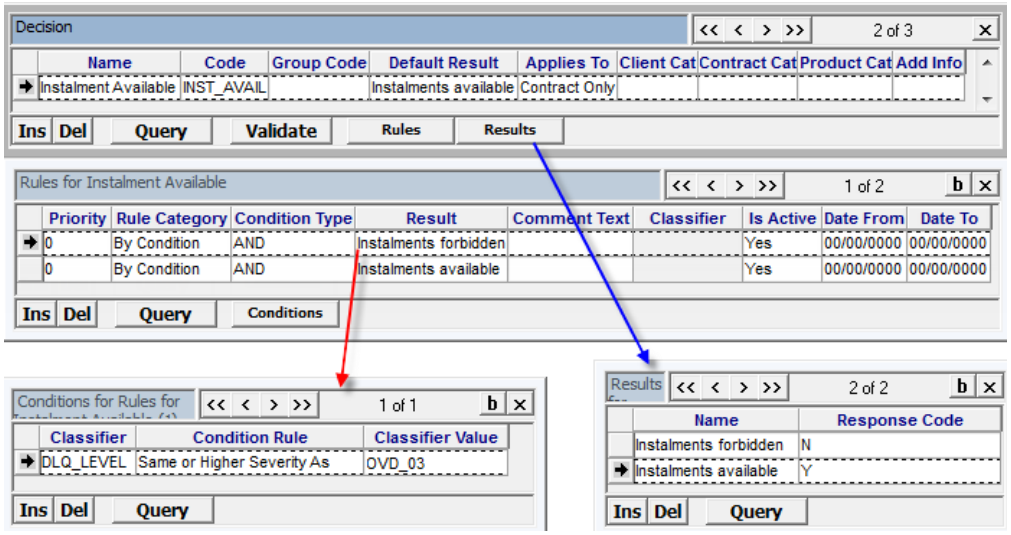

Fig. 9. Configuring calculated classifiers

- A configured calculated classifier should be specified:
  - For instalment scheme groups. The classifier is specified in the *Available Decision* field of the instalment scheme group (Instalments → Instalment Configuration → Instalment Schemes Groups → Instalment Schemes Groups), see Fig. 8 in the section "Configuring Instalment Scheme Groups".

    or

    For a particular instalment scheme, A classifier is specified using the AVAIL_DECISION=<code of the calculated classifier>; tag in the instalment scheme's *Special Parms* field (Instalments →Instalment Configuration → Instalment Schemes).

This setting is checked for both manual and automatic creation of an instalment scheme.

3.7 Permitting/Prohibiting Payment Holidays

Conditions for permitting/prohibiting the granting of payment holidays are configured using decisions (calculated classifiers):

- Create a decision (Full → Configuration Setup → Common Handbooks → Decision).

  A separate decision can be configured for each instalment scheme (or for an instalment scheme group).

- For the classifier, two hardcoded values "Y" and "N" are configured (in the example in Fig. 10, these are the values "Payment holidays allowed" and "Payment holidays forbidden".

  Conditions for granting payment holidays are configured on the basis of client and contract classifiers.

  The general procedure for configuring decisions is described in the section "Calculated Classifiers (Decisions)" of the document "Way4 Client and Contract Classifiers".

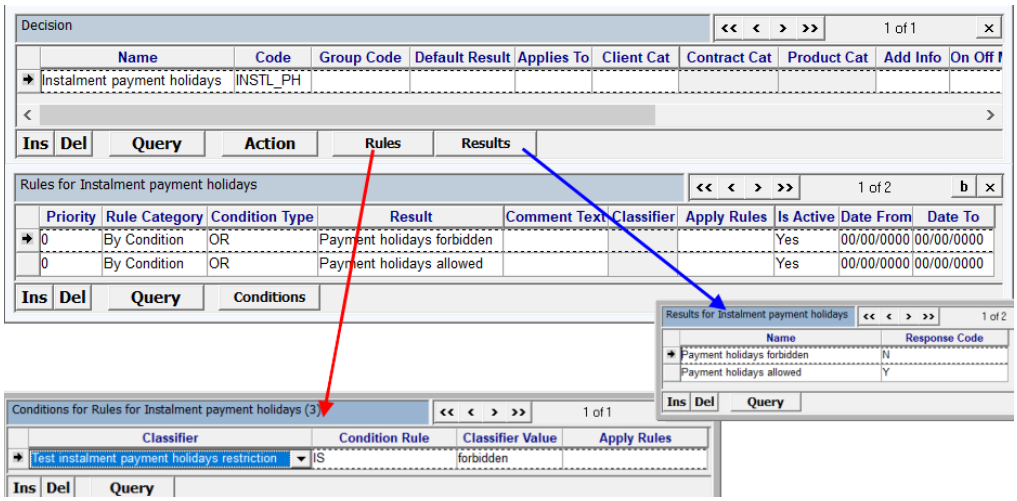

Fig. 10. Configuring decisions for permitting/prohibiting payment holidays

A configured decision can be set in an instalment scheme's *Special Parms* field using the tag HOLIDAYS_DECISION=<decision code>;.

Conditions for granting payment holidays can be configured, for example, depending on delinquency level (based on a system classifier with the "DLQ_LEVEL" code. For more information about the "DLQ_LEVEL" classifier, see the section "Configuring the "DLQ_LEVEL" System Classifier" of the document document "Way4 Client and Contract Classifiers".

3.8 Configuring Instalment Limits

Way4 makes it possible to configure various limits on creating instalment plans for a contract (Instalment Limits). These limits may be related, for example, to a

contract's total loan amount, a contract's unpaid loan amount, or the number of active instalment plans for a contract. For example, if the unpaid amount for all this contract's loans exceeds a set value, a new instalment plan will not be created.

"Instalments Limits" may be configured for a particular instalment scheme or for instalment scheme groups.

"Instalments Limits" have the following counters: used limit, unused limit, amount by which the limit is exceeded.

"Instalments Limits" types (see the *Personal* field of the "Instalment Limit Types" form in the section "Configuring Limit Types"):

- General limits – template values for general limiters set up with tariffs are inherited by a contract the first time the limit (tariff) is set, and when template values change. When a limit is redefined in a certain contract inheritance of changes in tariff template values stops.
- Individual limits – template values of individual limits set up with tariffs are inherited by a contract when the limit is initially set up. If template values change, this change is not inherited by the contract. The value of an individual limit can only be changed for a particular contract.

"Instalments Limits" limits are configured using tariffs.

General scheme:

- Configure "Instalments Limits" types (see the section "Configuring Limit Types").
- Link "Instalment Limits" types with instalment schemes (see the section "Configuring Available Limits").
- If limits must be recorded in contract accounts, make the corresponding Account Scheme settings in the "Invoice Events" form (see the section "Recording Limits in Contract Accounts (in GL Accounts)").
- Configure tariffs with the "Threshold" and "Technical" roles, with codes that correspond to the "Instalment Limits" type codes and set numeric values for tariffs (see the section "Configuring Tariffs").
- The corresponding tariff domain must be specified in the Product (see the section "Configuring a Product").
- After contracts have been approved, configure individual limits for a contract, if necessary (see the section "Setting Limits in a Contract").
- When an attempt is made to create an instalment plan, the contract's used limit is checked (with consideration of the new instalment plan's parameters). Calculation is performed for plans in the "Inactive", "Waiting",

"Open", "Partially Paid", and "Overdue" status. Creation of a plan is permitted/prohibited according to the results of the check.

- A document is created when a limit changes:
  - A document is created when a contract is approved for which a template limit value is set or changed.
  - When setting an individual limit (see the section "Setting Limits in a Contract").

Documents are created in the same way as documents for changing a credit limit. A document is created with the "Credit Limit" value of the *Service Class* parameter. The limit type code is specified in the *Source Fee Code* field (the value of the *Code* field in the "Instalment Limit Types" field, see the section "Configuring Limit Types"). If limits recorded in contract accounts are changed, the corresponding entries are made when posting a document (see the section "Recording Limits in Contract Accounts (in GL Accounts)").

3.8.1 Configuring Limit Types

Limit types are configured in the "Instalment Limit Types" form (Instalments → Instalment Configuration →Instalment Scheme Groups →Instalment Limit Types), see Fig. 11.

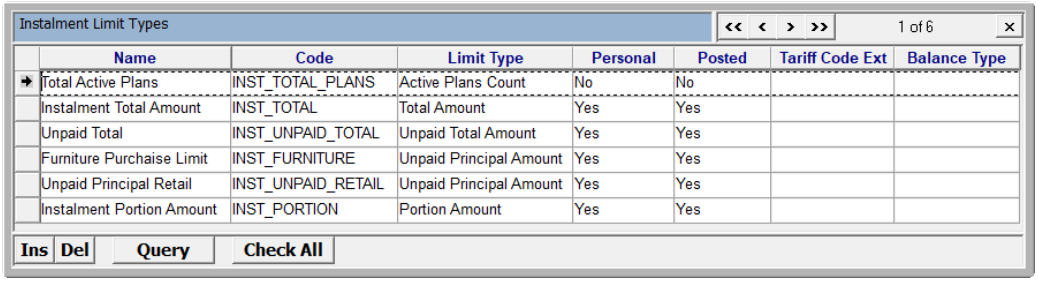

Fig. 11. Configuring limit types

The "Instalment Limit Types" form contains the following fields:

- *Name* – limit type name. The name must be unique.
- *Code* – limit type code. The code must be unique.
- *Limit Type* – determines how a used limit is calculated (how the value is calculated that will be compared with the threshold value):
  - "Total Amount" – a contract's total amount of loans is calculated (for specified instalment schemes, see the section "Configuring Available Limits").

- "Unpaid Total Amount" – a contract's total unpaid amount of loans is calculated (for specified instalment schemes, see the section "Configuring Available Limits").

> Note that a capitalized fee changes the amount of the "Unpaid Total Amount" limit when the status of the corresponding invoice is changed to "Written Off (i.e. directly in capitalization). "Total Principal Amount – the total principal for the contract is calculated.

- "Unpaid Principal Amount" – a contract's total unpaid amount of principal is calculated (for specified instalment schemes, see the section "Configuring Available Limits").
- "Portion Amount" – this limit type sets the maximum size of a portion for a contract.
- "Active Plans Count" – the number of active plans for a contract is counted (for specified instalment schemes, see the section "Configuring Available Limits").

The limits configured in this form are renewable by default. This means that when repaying a loan and closing a plan, such limits are restored – the available limit in the *Available* field of the "Limits for..." form is recalculated according to the repayment amount (see the section "Viewing Limit Counters"). In doing so:

- The used limit (the *Used* field value) is decreased by the repayment amount.
- The available limit (the *Available* field value) is increased by the repayment amount.
- The amount in the *Limit Value* field does not change.

When configuring limits, note that the *Limit Type* field value influences the procedure for limit renewal and recalculation of limit counters:

- For limits with the "Total Amount" and "Total Principal Amount" values in the *Limit Type* field, limits are only renewed (counters are changed in the "Limits for..." form, see the section "Viewing Limit Counters") if a plan is fully repaid or closed.
- For limits with the "Unpaid Total Amount", "Unpaid Principal Amount", and "Portion Amount" values in the *Limit Type* field, limits are renewed (counters are changed) when a plan is repaid in part, in full, or is closed.

Limits can be non-renewable. In this case, an available limit (the *Available* field in the "Limits for..." form, see the section "Viewing Limit Counters") is

not restored. This requires additional settings (for additional information about non-renewable limits and their configuration, see the section "Configuring Non-Renewable Limits").

When configuring non-renewable limits, the *Limit Type* field value must correspond to the amount type (the *Amount Type* field) of the record in the "Invoice Events" form for which this limiter will be used (see the section "Configuring Non-Renewable Limits").

- *Personal* – indicates whether the limit is general or individual.
  - "No" – the threshold value is set in the Product (using tariffs) and is used for all contracts created on the basis of this Product. If the template values of limits configured with tariffs change, these changes are inherited in the contract. When a limit is manually redefined for a specific contract, changes in template values are no longer inherited.
  - "Yes" – the threshold value is set in the Product (using tariffs) and is inherited for contracts when they are approved. If template values change, this change is not inherited by the contract. The value of an individual limit can be changed for a specific contract.
- *Posted* – the field determines whether limits can be recorded in contract accounts.
  - "No" – a limit will not be recorded in contract accounts.
  - "Yes" – a limit can be recorded in contract accounts (for setup, see the section "Recording Limits in Contract Accounts (in GL Accounts)").
- *Tariff Type Ext* – a tariff's unique identifier must match the tariff's *Tariff Code Ext* field value. The field is filled in if a tariff template domain is used to store numeric values for this limit type. This field should be left empty if a tariff template domain is not used. See the section "Configuring Personal Tariff Domains" of the document "Way4™ Advanced Tariff Management".
- *Balance Type* – code of the balance type whose value must be additionally checked when checking a limit. A negative balance value will reduce the limit available for creating a plan (*Available* field of the "Limits for ..." form, see the section "Viewing Limit Counters"), a positive balance will increase the limit available for creating a plan.

Only individual limits (with "Yes" in the *Personal* field) can be recorded in contract accounts.

3.8.2 Configuring Tariffs

Configure tariffs with the "Threshold" and "Technical" roles with codes corresponding to limit type codes (see Fig. 12).

Tariffs with the "Technical" role are used to configure "Active Plans Count" limits on creating instalment plans for a contract. For other limit types, tariffs with the "Threshold" role are used.

For tariffs configured for individual limits (with "Yes" in the *Personal* field), specify "Yes" in the *Can Be personalized by Application* field of the "Tariff Types" form.

For individual limits, additional threshold values can be configured that will limit the range of values that can be set for a specific contract (the limit's minimum and maximum value is set). To do so, additional tariff types are configure whose codes are specified in the format <tariff type code corresponding to the code of the record in the "Instalment Limit Types" form MIN>,<tariff type code corresponding the code of the record in the "Instalment Limit Types" form MAX> (see Fig. 12).

For contracts created for different Products, different limits can be set. To do so, configure several tariffs with the "Threshold" (and/or "Technical") role with one code, and set various numeric values for them. These tariffs are then specified for the corresponding Products (see the section "Configuring a Product").

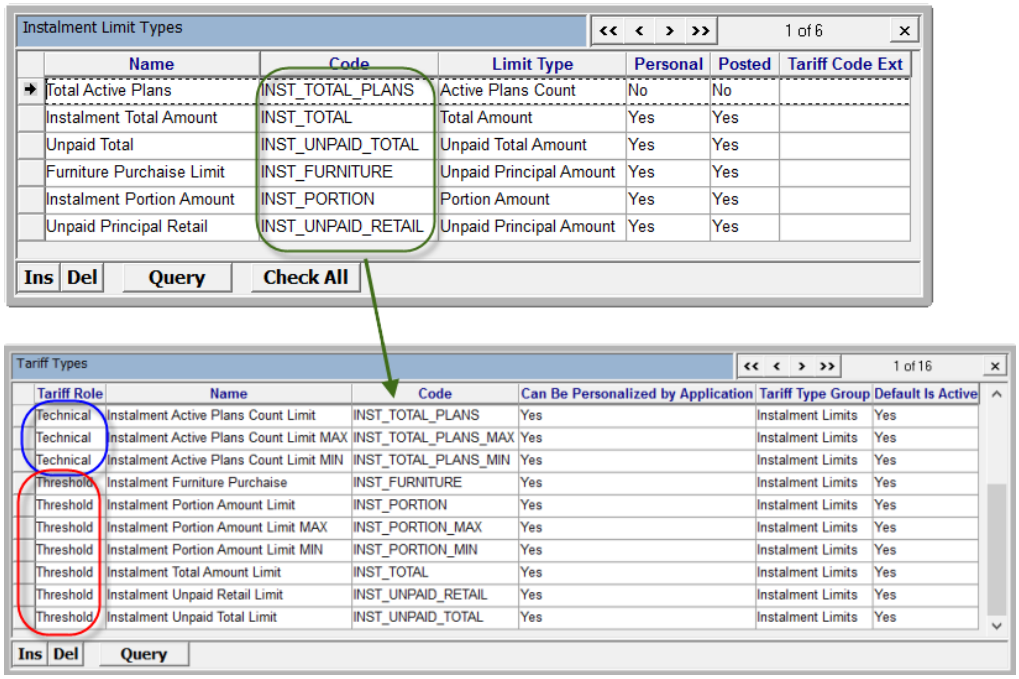

Fig. 12. Configuring tariff types

Set numeric values for tariffs that have been configured.

For individual limits that were redefined in a contract, default values must be set (template values) that will be inherited for a contract when it is approved. These may be null values. I.e. numeric values must be specified for the corresponding tariffs.

For more information, see the sections "Configuring Instalment Limits" and "Tariffs with the "Technical" Role" of the document "Way4 Advanced Tariff Management".

3.8.3 Configuring Available Limits

Linking limits to an instalment scheme group (or to a particular scheme) makes it possible to determine the contract's instalment plans for which limit counters will be calculated. Links are made as follows:

- Limits are linked to an instalment scheme group in the "Available Instalment Limits" form (Full →Instalments →Instalment Configuration → Instalment Scheme Groups →Available Instalment Limits), see Fig. 13.

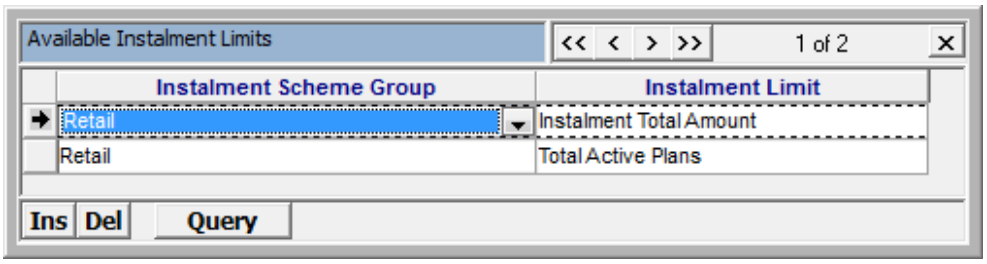

Fig. 13. "Available Instalment Limits" form

The "Available Instalment Limits" form contains the following fields:

- *Instalment Scheme Group* – instalment scheme group from the list of schemes configured in Way4 (see the section "Configuring Instalment Scheme Groups".
- *Instalment Limit* –limit type from the list of limits configured in Way4 (see the section "Configuring Limit Types").

- Limits are linked with a certain instalment scheme using the tag LIMIT=<limit type1 code, limit type2 code, limit typeN code> in an instalment scheme's *Special Parms* field.

Limits may be linked with an instalment scheme through an instalment group or with the LIMIT tag.

3.8.4 Configuring a Product

Tariffs containing "Instalment Limits" parameters must be included in the tariff domain set on the Product level (*Tariff Domain* field). These tariffs must contain

numeric values even if they are null values (this setup can be used for tariffs with template limits that are redefined in a contract).

Note that a domain containing tariffs with template limits cannot be assigned to a contract using an Event.

3.8.5 Setting Limits in a Contract

Limits are set in a contract in the "Inst Set Limit Input" form (see Fig. 14) opened by clicking the [Limits] button in the "Instalments for <client name>" ("Instalments →Instalments for Contracts" →[Instalments] →[Limits]), see Fig. 19 in the section "Viewing Limit Counters".

This form shows general limits and individual limits set for a contract using tariffs.

To change the value of a limit, select the desired record and click the [Set Limit] button. The "Inst Set Limit Input" form will open, see Fig. 14.

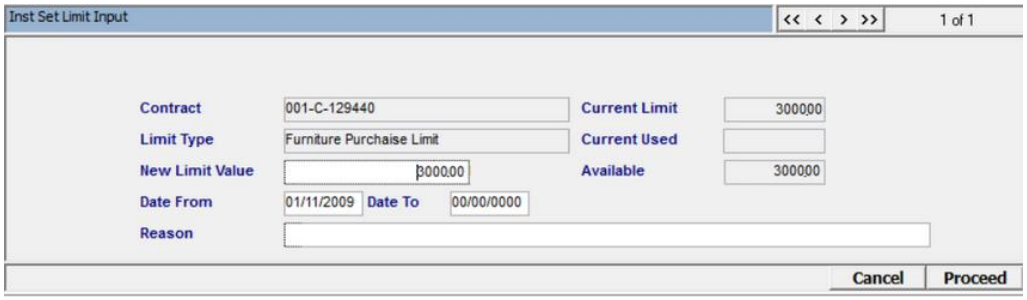

Fig. 14. "Inst Set Limit Input" form

In the *New Limit Value* field of the "Inst Set Limit Input" form, set a new value for the limit. In the *Reason* field, specify the reason for changing the limit's value.

A limit can be set for a specific period (temporary limit). To do so, fill in the *Date From* and *Date To* fields.

After filling in the fields, click the [Proceed] button.

A document will be created to change the limit (in the same way as documents to change a credit limit). This document is created with the "Credit Limit" value of the *Service Class* field. The limit type code (value of the *Code* field in the "Instalment Limit Types" form, see the section "Configuring Limit Types") is specified in the document's *Source Fee Code* field. If limits that are recorded in contract accounts are changed, the corresponding entries are made (see the section "Recording Limits in Contract Accounts (in GL Accounts)"). If a future date was specified in the *Date From* field when entering parameters, a document is created with the "Waiting" status, specifying the posting date. When posting this document, a second document is automatically created with a posting date equal to the date in

the *Date To* field and with an amount corresponding to the amount of the first document, but with the opposite sign.

After the limit expires, a renewable limit will be set to "0" and a non-renewable limit will be set according to the limiter's current value.

Note that a temporary limit does not add to a permanent limit of the same type (limit set without specifying a date in *Date To*) but redefines it. After the temporary limit expires, the limit's previous value is not restored.

When a temporary limit with a future date in the *Date From* field is set in the form, a check is made that the terms of other scheduled limits that have the same type do not overlap. A similar check is made when setting a temporary limit with applications or in the Product Inspector module.

3.8.6 Recording Limits in Contract Accounts (in GL Accounts)

To record a limit in contract accounts (in GL accounts), make the following Account Scheme settings:

- Configure special account types with the "Full Instalment Limit" (to record the total set limit) and "Unused Instalment Limit" roles (to record the unused limit), see Fig. 15.

  If only the total limit or only the unused limit must be recorded, configure one account type with the appropriate role.

- Account templates of this type must be created for Account Schemes, see Fig. 16.

- For the bank counterparty contract (contract specified in the Account Scheme's *Interest Contract* field), special account types must be set up with the "Full Instalment Limit" and "Unused Instalment Limit" roles, see Fig. 15. Account templates of this type must be configured for Account Schemes.

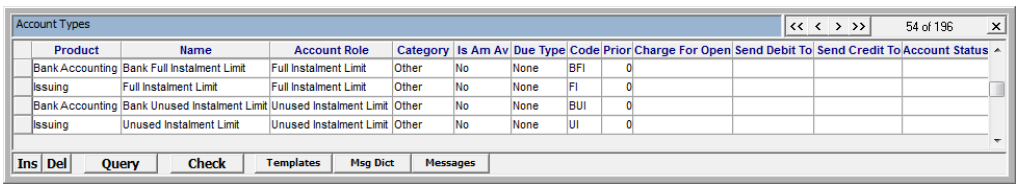

Fig. 15. Configuring account types

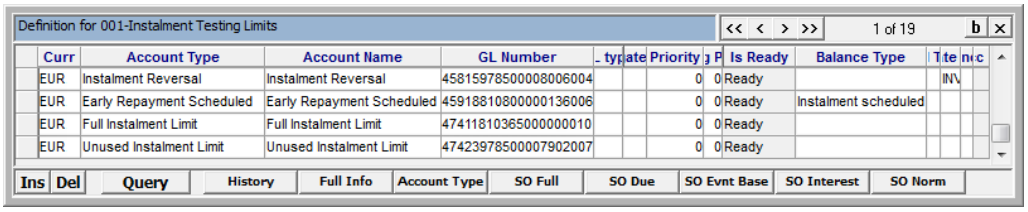

Fig. 16. Configuring account templates

When a limit or its counters is set/changed (when the unused limit amount changes), a check is made that the contract has accounts with the "Full Instalment Limit" and/or "Unused Instalment Limit" roles. If an account is found, the limit is recorded. If no account is found, nothing is recorded.

When a limit is set/changed, a document is created (see the section "Configuring Instalment Limits"). When this document is posted, account entries are generated.

If unused limit amounts change (for example, when creating an instalment plan), a separate document is not generated, entries are generated without creating a document.

Instalment plans with the "Inactive" status do not affect the amount of an unused limit in accounts.

When checking for an unused limit during plan creation, the amount of an inactive plan will be taken into account.

If an instalment plan created when processing an authorisation must not affect limit amounts in accounts, the INST_AUTH_ACTION global parameter must be set to CREATE_INACTIVE. The parameter can be redefined on the Service level using the same tag.

3.8.7 Configuring Non-Renewable Limits

Non-renewable limits can be configured in Way4. These are limits for which the available limit in the *Available* field of the "Limits for..." form (see the section "Viewing Limit Counters") will not be restored when a loan is repaid or a plan is closed. In doing so:

- The used limit (the *Used* field value) is decreased by the repayment amount.
- The amount in the *Limit Value* field is decreased by the repayment amount.
- The available limit (the *Available* field value) does not change.

Such limits can be used, for example, to grant a separate limit for the purchase of certain goods. When the purchase is made and the loan has been repaid, the limit is considered to have been used up.

Non-renewable limits are configured as follows:

- The limit type is configured and set for the instalment scheme according to the standard scheme (see the section "Configuring Instalment Limits"). It is recommended to set a non-renewable limit for an instalment scheme with which other (renewable) limits are not linked.
- In order for the limit to not be renewed, perform additional setup in the "Details for Invoice Events" form ("Instalments → Instalment Configuration → Invoice Events → [Details]", see the section ""Invoice Events" Form"). For the corresponding Events to transfer funds between contract accounts (Events related to the payment of instalments or other changes in an instalment plan), set the type of the appropriate non-renewable limit in the *Inst Limit Type* field. When such an Event activates, the limit will be decreased by the Event amount. I.e. when repayment is made, the available limit is increased by the repayment amount by default, and when an Event activates, this amount is subtracted from the available limit amount, and the available limit does not change.

Only one non-renewable limit can be set for each record in the "Invoice Events" form. If several non-renewable limits must be set up for one Event (for example, when paying loan instalments), set up several Events (records) in the "Invoice Events" form.

An example of setting up and using a non-renewable limit:

- Conditions: set a credit limit that must be decreased when instalments are paid.
- Settings:
  - Set up a limit type with the "Unpaid Principal Amount" value in the *Limit Type* field, see Fig. 17.

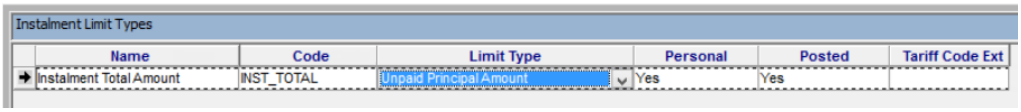

Fig. 17. Setting up a limit type

  - In the "Invoice Events" form, specify the configured limit type in the *Instalment Limit* field for the corresponding records related to the plan's instalments (or to a part of an instalment principal) – i.e. for the records with the "Principal" value in the *Amount Type* field.

Invoice Events

Action	Status Before	Status After	Invoice Code	Amount Type	Instalment Limit	Is Ready
Any	Any	Closed	BCCBT	Principal	Instalment Total Amount	Ready
Any	Any	Closed	BCCR	Principal	Instalment Total Amount	Ready
Any	Any	Closed	BCCC	Principal	Instalment Total Amount	Ready
Any	Any	Closed	BCCB	Principal	Instalment Total Amount	Ready
Any	Any	Paid	BCCC	Principal	Instalment Total Amount	Ready
Any	Any	Paid	BCCBT	Principal	Instalment Total Amount	Ready
Any	Any	Paid	BCCB	Principal	Instalment Total Amount	Ready
Any	Any	Paid	BCCR	Principal	Instalment Total Amount	Ready
Any	Any	Partially Paid	BCCB	Principal	Instalment Total Amount	Ready
Any	Any	Partially Paid	BCCC	Principal	Instalment Total Amount	Ready
Any	Any	Partially Paid	BCCR	Principal	Instalment Total Amount	Ready
Any	Any	Partially Paid	BCCBT	Principal	Instalment Total Amount	Ready

Fig. 18. Settings in the "Invoice Events" form

    - A limit of 10 000 USD is set on the contract level.
- Usage:
    - A transaction for the amount of 6 000 USD is made, and an instalment plan is generated for this amount (three instalments, 2 000 USD each).
    - When a plan is generated, the limit counters are as follows:
        - *Limit Value* – 10 000 USD
        - *Used* – 6 000 USD
        - *Available* – 4 000 USD
    - When the first instalment of the plan is repaid, the limit counters are as follows:
        - *Limit Value* – 8 000 USD
        - *Used* – 4 000 USD
        - *Available* – 4 000 USD (does not change)

3.8.8 Automatically "Closing" Individual Limits

A limit can be closed by an Event. To do so, the required limit code is set in the Event type. Note that both permanent and temporary limits with this code are closed.

Required settings in the Event type's *Special Parameters* field:

- Set the CLOSE_INST_LIMITS tag.
- The codes of limits that must be closed are set as CLOSE_BY_LIM_CODE tag values. If the tag is not set, all individual limits for a contract are closed.

When closed, a renewable limit will be set to "0", and a non-renewable limit will be set according to the limit's current value.

An Event can be opened when a classifier value changes, for example, when a certain level of delinquency is reached (see the description of the DLQ_LEVEL

system classifier in the section "Configuring the "DLQ_LEVEL" System Classifier" of the document "Way4 Client and Contract Classifiers").

3.8.9 Viewing Limit Counters

The current state of limit counters can be viewed in the "Limits for..." form opened by clicking the [Limits] button in the "Instalments for <client name>" form ("Instalments →Instalments for Contracts" →[Instalments] →[Limits]), see Fig. 19.

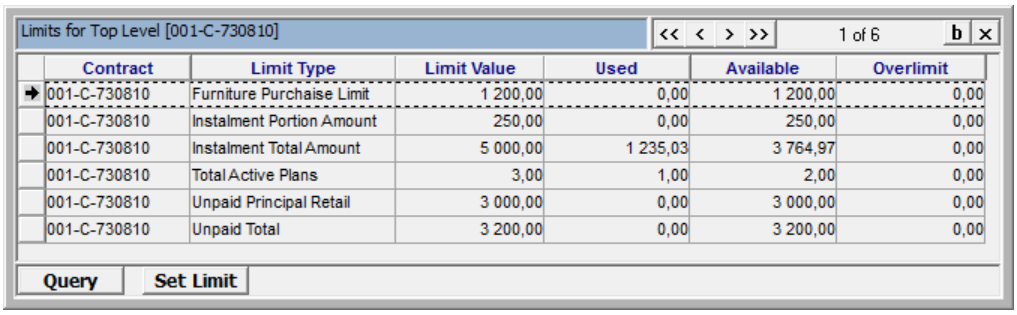

Fig. 19. "Limits for..." form

The form contains the following fields:

- *Contract* – contract number.
- *Limit Type* – limit type.
- *Limit Value* – limit size (set when configuring the limit).
- *Used* – used limit.
- *Available* – unused limit.
- *Overlimit* – amount by which the limit is exceeded (may occur when the limit value is changed).

Instalment Limits counters (the *Limit Value, Used*, *Available*, and *Overlimit* fields) are reset when a new instalment plan is created for a contract, when a loan is repaid, or when the value of a limit is changed. The counters are changed depending on the following settings:

- The way a limit is calculated for a limiter defines whether the limit will be recalculated when the repayment is partial or only when it is full:
  - For limits with the "Total Amount" and "Total Principal Amount" values in the *Limit Type* field (see Fig. 11 in the section "Configuring Limit Types"), counters only change when a plan is fully repaid or closed.
  - For limits with the "Unpaid Total Amount", "Unpaid Principal Amount", and "Portion Amount" values (see Fig. 11 in the section "Configuring Limit Types"), counters change when a plan is repaid partially, fully, or closed.

- A limit type (renewable or non-renewable limit) defines which counters (fields) are recalculated and which stay unchanged. For detailed information, see the sections "Configuring Limit Types" and "Configuring Non-Renewable Limits".

Counter values are not stored in Way4, and are calculated dynamically when checking a limit.

3.9 Configuring Available Instalment Schemes, Balance Types, and Transaction Types for Manual Creation of an Instalment Plan

Configuration of available instalment schemes, transaction types and balance types to create instalment plans for a balance and for a transaction make it possible, for example, to use some instalment schemes for retail transactions, and others for cash withdrawal transactions.

General scheme of configuration:

- Instalment scheme groups are configured in the "Instalment Scheme Groups" form (see Fig. 6 in the section "Configuring Instalment Scheme Groups").
- Instalment schemes, balance types and transaction types are linked to the instalment scheme group. I.e., instalment schemes configured in a group will be available for transaction types and balance types configured in the same group.
  - See the section "Configuring Available Instalment Schemes" for the procedure to configure available instalment schemes.
  - See the section "Configuring Available Balance Types" for the procedure to configure available balance types.
  - See the section "Configuring Available Transaction Types" for the procedure to configure available transaction types.

3.9.1 Configuring Available Instalment Schemes

Instalment schemes are linked to a group in the "Available Instalment Schemes" form (Instalments → Instalment Configuration → Instalment Schemes Groups → Available Instalment Schemes), see Fig. 20.

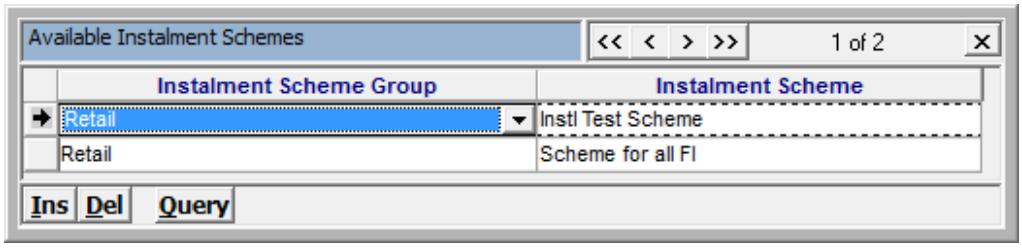

Fig. 20. Linking an instalment scheme to a group

The form contains the following fields:

- *Instalment Scheme Group* – instalment scheme group. Selected from the list configured in the "Instalment Schemes Group" form (see the section "Configuring Instalment Scheme Groups").
- *Instalment Scheme* – instalment scheme. Selected from the list of schemes configured in Way4 (see the section "Configuring Instalment Schemes").

  One instalment scheme can belong to several groups.

Instalment schemes configured in a group will be available for transaction types and balance types configured in the same group (see the sections "Configuring Available Transaction Types" and "Configuring Available Balance Types").

3.9.2 Configuring Available Balance Types

Available balance types are configured in the "Available Instalment Balance" form (Instalments →Instalment Configuration →Instalment Schemes Groups →Available Instalment Balance), see Fig. 21.

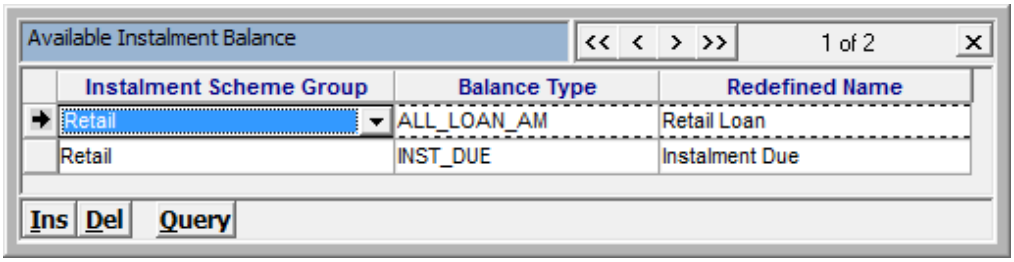

Fig. 21. Configuring available balance types

The form contains the following fields:

- *Instalment Scheme Group* – instalment scheme group. Selected from the list configured in the "Instalment Scheme Groups" form (see the section "Configuring Instalment Scheme Groups").
- *Balance Type* – balance type code.
- *Redefine Name* – name of the balance type that will be shown in the interface when an instalment plan is created.

When manually creating an instalment plan for a certain balance type (in the *Balance Type* field), only those instalment schemes from the corresponding instalment scheme group will be available (from the *Instalment Scheme Group* field).

3.9.3 Configuring Available Transaction Types

Available transaction types are configured in the "Available Instalment Trans Type" form (Instalments → Instalment Configuration → Instalment Schemes Groups → Available Instalment Trans Type), see Fig. 22.

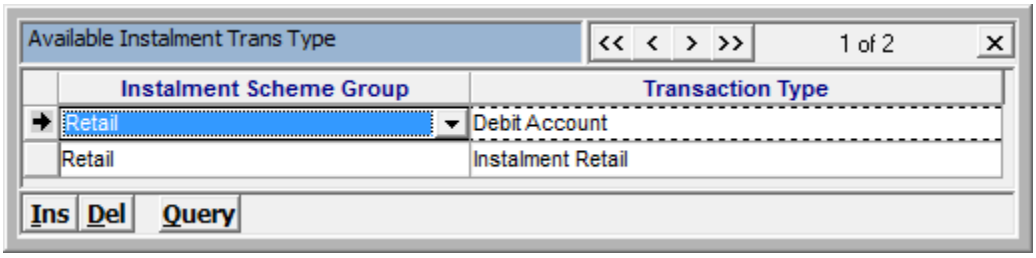

Fig. 22. Configuring available transaction types

The form contains the following fields:

- *Instalment Scheme Group* – instalment scheme group. Selected from the list configured in the "Instalment Scheme Groups" form (see the section "Configuring Instalment Scheme Groups").
- *Transaction Type* – transaction type. Selected from the list of transactions configured in Way4.

  When manually creating a plan for a transaction of a certain type (*Transaction Type* field), the instalment schemes belonging to the group specified in the *Instalment Scheme Group* field can be selected.

3.10 Configuring Execution of Actions when the Status of a Loan or its Components Changes

3.10.1 General Information

Events and payment orders are the main tools for interaction between Way4 Instalments and Way4 Issuing.

Events and payment orders configured in the module activate when statuses of an entire loan, its instalments and components change. These statuses may change for various reasons; for example, when an instalment plan is generated, on a due date, or when a loan is partially repaid. This is also considered when configuring conditions for opening Events and activating payment orders.

- Events can be used to generate documents for standing payment orders to transfer funds from one account to another. They can also be used to generate client notifications on due payment.

  Until version 03.39, payment orders activated by a change in loan status were configured using Events. Starting from version 03.39, it is recommended to make this setup using the *Standing Order* field in the "Invoice Events" form, without the participation of Events (the earlier setup scheme is also supported). It is recommended to use Events to generate client notifications.

  To set up Way4 Instalments Events, register the corresponding Event type.

  To do so, select the "Instalments →Instalment Configuration Instalment Events and Fees →Issuing Event Types" user menu item.

  Selecting this menu item opens the "Issuing Event Types" form (see Fig. *23*). In the form, register an Event type, specify the contract type (accounting, since fund activity according for the plan is recorded on the accounting contract level) for which the Event will be used, Event name and code, and select the "Unique" value in the *Duration Type* field.

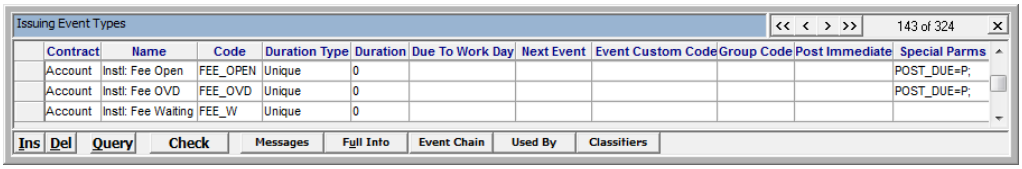

Fig. 23. Event type registration form

Events can be set up for the Way4 Instalments module in the following ways:

- Registration of an Event type in the "Issuing Event Types" form.
- Configuration of conditions for opening the Event in the "Invoice Events" form (see the section ""Invoice Events" Form").

Note that when configuring an Event type in the "Invoice Events" form, this Event type must be registered in a Service Package (see the section "Configuring Events" in the document "Way4 Service Packages"); otherwise, the system will not open Events of this type for contracts using this Service Package.

The option for configuring Events in the instalment scheme (in the "Events for <name of instalment scheme>" form) makes it possible to configure various types of Events for contracts using one Service Package and different instalment schemes (in this configuration Event types are not registered in the Service Package).

- Standing payment orders are used to create documents to transfer funds from one account to another.
  - Standing payment orders are created according to the standard procedure (see the document "Standing Payment Orders").
  - Activation of a standing payment order when the status of a loan changes is set up in the "Invoice Events" form (see the section ""Invoice Events" Form").

3.10.2 "Issuing Event Types" Form

When registering an Event type in the "Issuing Event Types" form (see Fig. 23 in the section "Configuring Execution of Actions when the Status of a Loan or its Components Changes"), in the *Code* field, specify the Event code in free form.

In the module's current implementation, it is recommended to configure rules for opening Events in the "Invoice Events" or "Events for <name of instalment scheme"> form. Support of configuring rules for opening Events in the *Code* field of the "Issuing Event Types" form has been left for backward compatibility – in this case, fill in the *Code* field in the following format: <INVOICE CODE>_<AMOUNT TYPE>_<PREVIOUS STATUS>_<NEW STATUS>,

where INVOICE CODE is an instalment scheme code, and AMOUNT TYPE is a payment subtotal type:

- TOTAL – total loan amount including remuneration.
- PORTION – specific instalment.
- TOTAL_FEE – total remuneration amount.
- TOTAL_PRINCIPAL – principal loan.
- PORTION_FEE – remuneration portion of a specific instalment.
- PORTION_PRINCIPAL – principal loan portion of a specific instalment.
- PORTION_PTP_PER – amount of partial early loan repayment.
- PORTION_PTP_FER – amount of full early loan repayment.
- ADV_WAIVED_FEE – amount of the fee to be waived due to early loan repayment.

PREVIOUS STATUS, NEW STATUS – the status of the loan or its components before and after a change, respectively. For values, see the description of the *Status Before* and *Status After* fields in the section ""Invoice Events" Form".

Examples of specifying Event codes:

- INST_PORTION_FEE_OPEN_PAID – this Event will be opened when an the fee portion of an instalment from an instalment plan calculated for the scheme with the "INST" code is paid on time.
- INST_PORTION_FEE_OVD_PAID – this Event will be opened when the same payment is made after its due date.

3.10.3 "Invoice Events" Form

The "Invoice Events" form (see Fig. 24) is opened by selecting the "Instalments → Instalment Configuration →Invoice Events" user menu item.

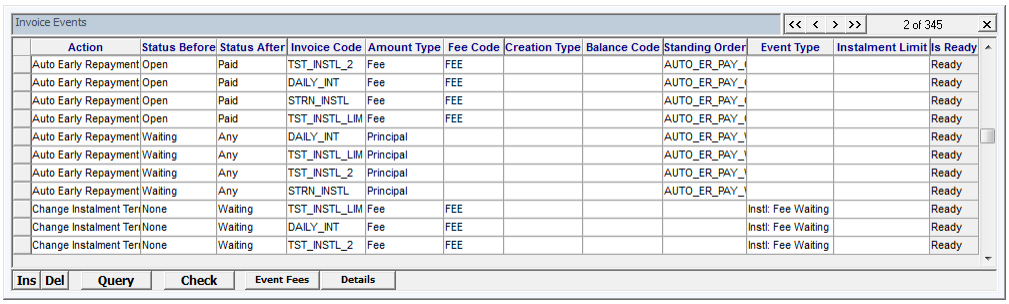

Fig. 24. Form for configuring opening Events and/or activation of payment orders

To set up Events and/or conditions for activating payment orders for the Way4 Instalments module in the "Invoice Events" form, fill in the following fields:

- *Action* – field for specifying the reason for changing a loan or instalment status:
  - "Any" – system event, e.g. daily contract update.

    This "Invoice Events" form record can be used for initial opening of portions during the "Contracts – Daily Update" procedure, or when opening a secondary plan's portions (when secondary actions are performed with a plan – Early Repayment, Change Terms, Auto Early Repayment). Only portion statuses *Status Before*, *Status After* are analysed.
  - "Reject" – reverse the original transaction for which the loan was granted, and an instalment plan was generated.
  - "Close" – close an instalment plan manually.

    Beginning from version 03.39.00 the "Close" value is used to close an instalment plan. Earlier, the "Reject" value was used to close a plan.
  - "Payment" – loan payment.
  - "Payment Reject" – reversal of loan payment.

- "Revise" – restructure instalment plan.
- "Write-Off" – write off loan
- "Waiving" – waive interest or a fee.
- "Request" – by client agreement, a payment presentment to transfer funds was generated after the loan or an instalment became effective.
- "Advice" – by client agreement, after the loan or its portion became effective for payment, a payment presentment to transfer funds was generated and a loan payment was registered (see "Viewing Active Instalment Plans").
- "Create Active" – creation of instalment components in the instalment plan (principal loan portion, fee portion) in the "Active" state.
- "Create Inactive" – creation of instalment components in the instalment plan (principal loan portion, fee portion) in the "Inactive" state.
- "Instalment" – reserved for future use.
- "Activate" – activate an instalment plan.
- "Early Repayment" – manual early repayment of the loan.
- "Auto Early Repayment" – automatic early repayment of the loan.
- "Change Instalment Terms" – change an instalment plan.
- "Payment Holidays" – this value is used to grant payment holidays.

Before version 03.43.30 the "Change Instalment Terms" value was used to grant payment holidays. It is necessary to configure records in the "Invoice Events" form with consideration of the new "Payment Holidays" value and the ability to change the status of principal portions when a plan is restructured (see the section "Granting Payment Holidays").

- "Interest Accrual" – daily accrual of interest. Interest is accrued for portions in the "Waiting" status for all active instalment plans. Interest is not accrued for portions in the "Open", "Paid", and "Overdue" status. The "Invoice Events" form is used to set up recording of accrued interest in the appropriate contract account.

To enable daily accrual of interest, configure records with the "Interest Accrual" type, fill in the *Fee Code* field for them, and configure the corresponding account activity using payment orders. Fee codes

(value of the *Fee Code* field for fees accrued daily) for fees that must be accrued daily should be specified as the value of the global parameter INST_DAILY_INTEREST_CODES. Accrual takes place during daily procedures, before the mail procedures. For invoices to be split correctly at the end of the month use the *Monthly Interest* field in the instalment scheme.

- "Interest Close" – when an instalment plan is closed (when the plan is assigned the "Closed" status), interest accrued for the current day is debited using settings in the "Invoice Events" form. I.e. the "Invoice Events" form is used to set up transfer of accrued interest when closing a plan to the appropriate contract account.
- "Interest Reject" – if the original transaction is reversed, when an instalment plan is assigned the "Rejected" status (i.e. when a reversal or adjustment document is received), interest accrued for the current day is debited using settings in the "Invoice Events" form. I.e. the "Invoice Events" form is used to set up transfer of accrued interest when closing a plan to the appropriate contract account).
- If the *Action* field is not filled in, this record will only be processed when a portion's status changes during the "Contracts – Daily Update" procedure (i.e. for initial opening of the portion). For secondary actions with the plan (Early Repayment, Change Terms, Auto Early Repayment etc.), the record will not be used.

- *Status Before* (may be left blank), *Status After* – the status of a loan or its components before and after a change, respectively:
  - "None" – no status is set. Used:
    - When creating an instalment plan. For example, transfer from the "None" status, to the "Waiting" status when creating an active instalment plan, or transfer from the "None" status to the "Inactive" status when creating an inactive instalment plan.
    - When transferring from the "Preview" status to the "Waiting" or "Inactive" status. This initial status is assigned to a plan if the plan must be approved manually (see the section "Configuring Global Parameters"). A plan in this status (before approval) is not a working plan, therefore when setting up a transfer from this status to other statuses, specify the "None" value in the *Status Before* field.

      The new "Preview" status is used beginning from version 03.41.30. It is necessary to configure records in the "Invoice Events" form for

transfer from the "Preview" status to the "Waiting" and "Inactive" status.

It is assumed that when creating or closing a plan in the "Preview" status, there is no need for an Event or order to activate. I.e., for these transfers, records are not configured in the "Invoice Events" form.

In earlier versions of Way4, the "Inactive" status could be used when preliminary check of a plan was necessary. In this case, reconfigure the corresponding records in the "Invoice Events" form (i.e. old records for transferring from the "Inactive" status to the "Waiting" status must be reconfigured.

- "Any" – any status.
- "Waiting" – waiting to become effective.
- "Inactive" – status set when an instalment plan is created in an inactive state (it is assumed that a plan in this status has already been approved and is waiting for activation, for example, at the end of a billing cycle).
- "Open" – effective.
- "Partially Paid" – partially paid.
- "Overdue" – overdue payment.
- "Paid" – paid.
- "Closed" – status set when an instalment plan is closed manually, when a reversal/adjustment is received for the document according to which the instalment plan was calculated.
- "Written Off" – status set when a debt is written off.
- "Revised" – status set when an instalment plan is restructured.
- "Waived" – status set when interest accrual or a fee is waived.

When the status of a loan or its components changes, the Event or payment order specified in the "Invoice Events" form activates. These payment orders and Events are used to transfer funds according to the change in loan status.

- *Invoice Code* – value of the instalment scheme's *Invoice* Code field (see the section "Configuring Instalment Schemes"
- *Amount Type* - specifies the loan portion whose status change opens the Event:
  - "Total" – total loan amount including remuneration.
  - "Total principal" – principal loan.

- "Total Fee" – total remuneration amount.
- "Portion" – specific instalment.
- "Principal" – principal loan portion of an instalment.
- "Fee" – fee portion of an instalment.
- The "Invoice", "Batch Invoice", and "Batch Entry" values are not used in the Way4 Instalments module (these values are used when generating other types of invoice that are not related to instalment loans, see the document "Way4 Invoices").
- "Fee Capitalization" – capitalized interest.
- "Merchant Fee" – fee charged to a merchant for an instalment (used for the "Merchant Fee" fee category).
- "Total Merchant Fee" – total amount of the fee charged to a merchant (used for the "Merchant Fee" fee category).

If the *Amount Type* field is not filled in, the Event will be used for changes in any part of the loan.

- *Fee Code* (the fee code is taken from the Fee Code field of the fee for the instalment scheme, see Fig. 25). Specifics of filling in the field:
  - The field is filled in if several fees that should be reflected in different accounts are set up for an instalment scheme. To assign a payment order (Event) to a particular fee, specify the fee code in the *Fee Code* field.
  - If fees set up for an instalment scheme are reflected in one account (i.e. one payment order is used for them), the field is not filled in.
  - If one fee is set up for the scheme, the field is not filled in.
  - If several fees are set up for the scheme that must be reflected in different accounts, and a code is not set for one of the fees, the "Fee" value in the *Fee Code* field should be used for the fee without a code.
  - If the fee rate is passed in document tags (INST_IRATE, INST_FRATE, PORT_FRATE, PORT_FTOTAL), the code is taken from the appropriate type of fee set up for the instalment scheme. If several fees with the same type are set up for a scheme, the code of the first fee will be used. If there are no fees set up in the scheme, or no code is set for them, the "FEE" value will be used as the code for this fee.

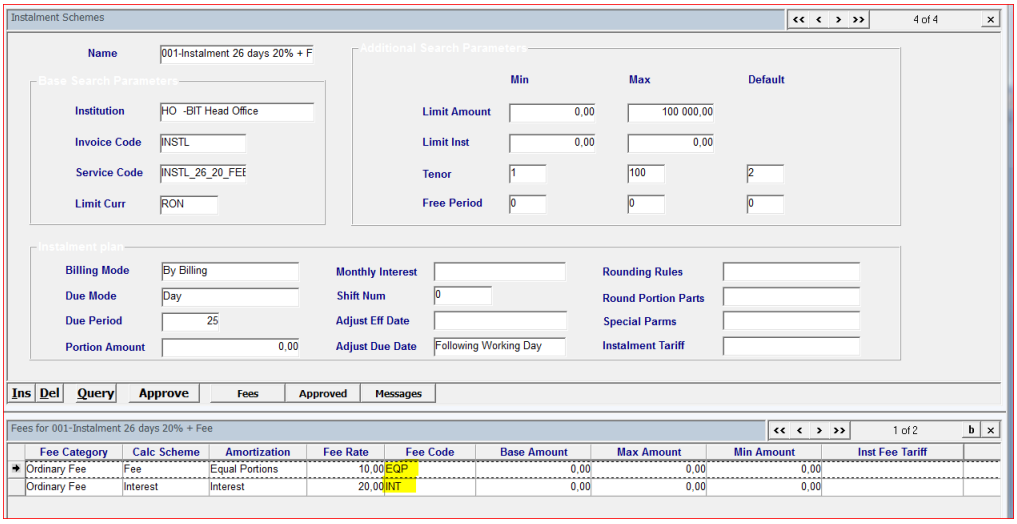

Fig. 25. Fee code used when configuring Events

- *Creation Type* – classifier of instalment plans depending on how they were created:
  - "By Service" – the instalment plan was created automatically while processing the transaction (document).
  - "By Transaction" – the instalment plan was created after processing the transaction (document). The plan is created manually based on the processed document (see the section "Creating an Instalment Plan for a Transaction").
  - "By Balance" – the plan was created based on a balance type (see the section "Creating an Instalment Plan for a Balance").

  The *Creation Type* field is used to apply record settings (opening an Event and/or activating a payment order) for a certain instalment plan group. If the field is empty, record settings can be applied to all instalment plan groups (regardless of how they were created).

  This classification makes it possible to generate various entries for contract accounts when processing various (according to how they were created) instalment plans. For example, two instalment plans were created for a contract: one plan was created automatically when processing the transaction and the other manually. For these instalment plans, it is possible to store funds in different contract accounts and make entries from different contract accounts when a plan is activated, or canceled.
- *Balance Code* – balance type code of the balance type for which the plan was created. The *Balance Code* field is used to apply record settings for plans created on the basis of a certain balance type.
- *Event Type* – drop-down list of Event types registered for Way4 Instalments.

- *Standing Order* – code of the standing payment order (the order's *Order Code* field) that will activate for the specified status change.

  Until version 03.39, payment orders activated when a status changed were set up using Events. Starting from version 03.39, it is recommended to make these settings using the *Standing Order* field, without the participation of Events (the earlier configuration scheme is also supported).

  A payment order with the same code can be used in records for different parts of a loan, to change different statuses.

- *Is Ready* – used to get information about the results of checking record parameters in the "Invoice Events" form. The [Check] button is used to perform the check.

[Check] button – check the parameters of a record in the "Invoice Events" form. If the check is successful, the "Ready" value is set in the *Is Ready* field.

[Event Fees] button – calls the "Instalment Event Fees" form for linking fees. See the section "Instalment Event Fees".

Clicking the [Details] button in the "Invoice Events" form opens the "Details for Invoice Events" form, see Fig. 26.

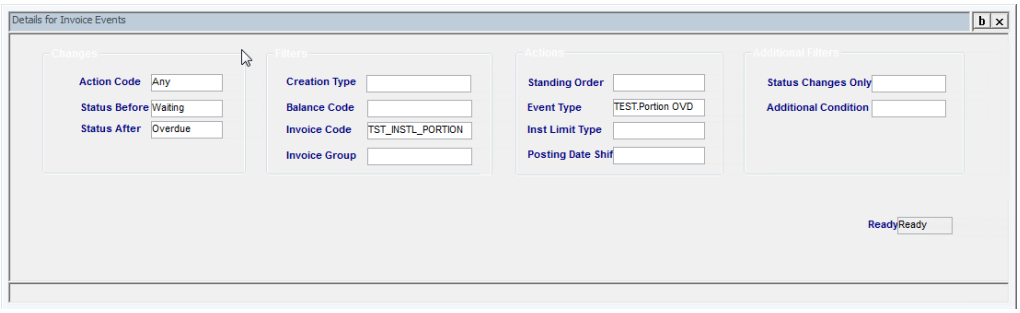

Fig. 26. "Details for Invoice Events" form

This form contains the following fields that are absent in the parent form:

- *Inst Limit Type* – type of non-renewable limit, see the section "Configuring Non-Renewable Limits"
- *Posting Date Shift* – this parameter makes it possible to shift the Posting Date and GL Date of entries for accounts resulting from the activation of an Event (from the *Event Type* field) or a payment order (from the *Standing Order*) field. Parameter values:
  - "No Shift" – Posting Date and GL Date are set to the current banking date.
  - "Previous Working Day" – Posting Date and GL Date are set to the previous working date.

- "End of Cycle Rule" – Posting Date and GL Date are set to the previous calendar date. An exception is the case when an entry is posted on the first calendar day of a new billing cycle. In this case, Posting Date and GL Date are set to the current calendar date.
- "Instalment Start Date" – this value is only used for "Instalment Event Fee" fees (see the section "Configuring "Instalment Event Fees"").

  If the value of the *Posting Date Shift* parameter is not set, the Posting Date and GL Date for entries are determined according to the values of the following settings in descending order of priority:

  - The POST_DUE tag set in the Event type's *Special Parameters* field.

  If a payment order is called without using an Event (the order is specified in the "Invoice Events" field), this method for shifting dates cannot be used.

  - INVOICE_POST_DUE global parameter. See the section "INVOICE_POST_DUE" of the document "Way4 Global Parameters".
  - *Post Due Mode* parameter specified in financial institution parameters. See the section "Additional FI Parameters" of the document "Financial Institutions".

  POST_DUE global parameter. See the section "POST_DUE" of the document "Way4 Global Parameters".

- *Status Changes Only* – when the "Yes" value is specified in this field, an Event is only opened when the status of a loan or its components changes. If the status does not change, the Event does not open.
- *Additional Condition* – this field is used to specify tagged parameters. Possible tags are described in the document "Instalments Setup Tags".

Note that rules for opening an Event depending on the parameters of the invoice (rules are set in the *Additional Condition* field of the "Invoice Event" record and are compared with the content of the invoice's POSTING_DETAILS field) are not analysed in the "Instalment Management" module. These rules are only used when configuring invoices (see the document "Way4 Invoices").

Note that Events whose configuration is described in this section save in the USAGE_ACTION table the amount and currency of the payments whose processing caused them to open. If a standing payment order to transfer a payment amount between accounts is set up for an Event, a document for the standing payment

order will be generated with the currency and amount values that were saved in the USAGE_ACTION table when the Event was opened.

3.11 "Instalment Event Fees"

In addition to interest accrued on a loan (see the section "Fee and Repayment Method Parameters"), fees can be configured that are charged at certain times in an instalment plan's lifecycle (Instalment Event Fees). For these fees, a separate document is generated that can be reversed when the instalment plan is closed.

3.11.1 Configuring "Instalment Event Fees"

Rules for charging "Instalment Event Fees" fees are set up in the "Instalment Event Fees" form (Instalments → Instalment Configuration → Instalment Events and Fees →Instalment Event Fees), see Fig. 27.

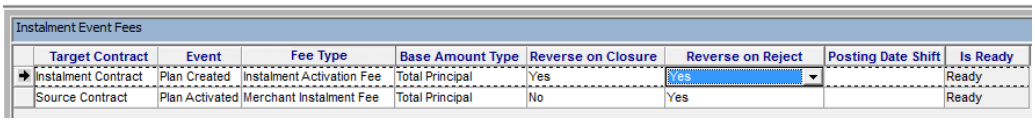

Fig. 27. "Instalment Event Fees" form

The form contains the following fields:

- *Target Contract* – contract from which the fee is charged:
  - "Source Contract" – source contract from the document.
  - "Target Contract" – target contract from the document.
  - "Instalment Contract" – contract in which the loan is recorded (for which the instalment plan is calculated). This contract usually corresponds to the Target Contract.
- *Event* – the Event according to which this fee is charged:
  - "Plan Created" – creation of an instalment plan.
  - "Plan Activated" –activation of an instalment plan.
  - "Plan Closed" – closing of an instalment plan.
  - "Invoice Event" – when an Invoice event occurs.

  Fees with the "Plan Created", "Plan Activated", and "Plan Closed" values of the *Event* field are linked to an instalment scheme (see the section "Linking a Fee to an Instalment Plan or to a Record in the "Invoice Events" Form").

  Fees with the "Invoice Event" value of the *Event* field are linked to a record in the "Invoice Events" form (see the section "Linking a Fee to an Instalment Plan or to a Record in the "Invoice Events" Form").

The time for charging fees linked with a record in the "Invoice Events" form is determined by conditions set in the "Invoice Events" form.

- *Fee Type* – fee type. Chosen from the list of the form "Full →Configuration Setup →Transaction Types →Fee Types".

> The fee type specified for an "Instalment Event Fees" fee should not be used to set up other types of fee charged for a contract (for example, to set up fees charged when an Event opens). Otherwise, fees may be incorrectly processed by Reversal Management module tools.

- *Base Amount Type* – type of amount from which the fee will be taken (if fees are set up as a percentage of an amount):
  - "Total Principal" – principal part of the loan
  - "Total" – entire loan including remuneration
  - "Total Fee" – total amount of remuneration
  - "Invoice Event" – fee is taken from an amount according to an "Invoice Event" Event (based on an "Invoice Event" record). For example, if a loan portion is transferred to overdue, the fee will be calculated from the transferred amount.
- *Reverse on Closure*:
  - When the value is "Yes", a fee will be reversed if the instalment plan closes (see the "Close" value of the *Action* field in the section ""Invoice Events" Form").
  - If the value is "No", a fee will not be reversed if the instalment plan closes (see the "Close" value of the *Action* field in the section ""Invoice Events" Form").
- *Reverse on Reject*:
  - When the value is "Yes", a fee will be reversed if the instalment plan closes due to reversal of the original transaction (see the "Payment Reject" value of the *Action* field in the section ""Invoice Events" Form").
  - When the value is "No", a fee will not be reversed if the instalment plan closes due to reversal of the original transaction (see the "Payment Reject" value of the *Action* field in the section ""Invoice Events" Form").
- *Posting Date Shift* – makes it possible to shift the Posting Date and GL Date of fee entries. For the list of field values, see the description of the *Posting Date Shift* field in the section ""Invoice Events" Form.

For "Instalment Event Fee" fees, the "Instalment Start Date" value can be additionally set in the *Posting Date Shift* field. This value can be selected when the value of the *Event* field is "Plan Created". In this case, when an instalment plan is created for a transaction that was made in a closed billing cycle (see the section "Creating an Instalment Plan for a Transaction or Balance in a Closed Billing Cycle"), the "Instalment Event Fee" fee is posted with the Posting Date that is equal to the current banking date (i.e. the plan's creation date), not the date of the original transaction.

3.11.2 Linking a Fee to an Instalment Plan or to a Record in the "Invoice Events" Form

Fees set up in the "Instalment Event Fees" form are linked to an instalment scheme or to a record in the "Invoice Events" form:

To link a fee to an instalment scheme, click the [Events Fees] button in the "Instalment Schemes" form (see Fig. 3 in the section "Configuring Instalment Schemes"). The "Event Fees" form will open (see Fig. 28).

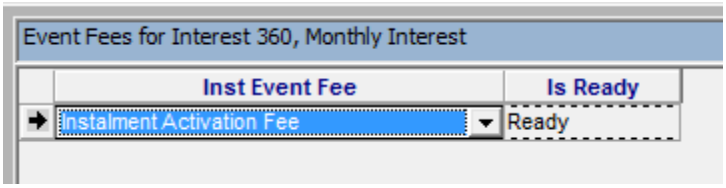

Fig. 28. "Event Fees" form

In the "Event Fees" form (see Fig. 28), in the *Inst Event Fee* field, choose a fee from the list of fees set up in the "Instalment Event Fees" form. This fee will be charged when the Event in the *Event* field of the "Instalment Event Fees" form for instalment plans created according to this scheme occurs.

- To link a fee to a record in the "Invoice Events" form, click the [Events Fees] button in the "Invoice Events" form (see Fig. 24 in the section ""Invoice Events" Form"). The "Event Fees" form will open, identical to the form in Fig. 28.

  The fee set in this form will be charged when the corresponding Event from the "Invoice Events" form occurs (for all instalment plans).

When a document for a fee is generated, information is stored in it about the number of instalment periods (the INST_TENOR tag in the ADD_INFO field). The DOC_TAG and DOC_TAG_VALUE tags can be used in Services to configure the dependence of the fee amount on the number of instalment periods in an instalment plan.

3.12 Product, Classifier Setup

To ensure interaction between Way4 Instalments and Way4 Issuing, set up Product components for contracts that will be granted instalment loans.

This setup concerns Services and account templates. Standing payment orders can also be set up.

3.12.1 Configuring Service Packages

In a Service that is used when processing operations with granting instalment loans, specify the INVOICE_ACTION=INSTALMENT; tag in the *Service Details* field. For example:

- In the Service for a card contract selected automatically when processing a transaction (see Fig. 29).
- In a Service for an accounting contract (for example, use of a subordinate accounting contract in a "Liability" hierarchy for recording instalments; payment is made from a client's debit card that is subordinate to the same main account contract).

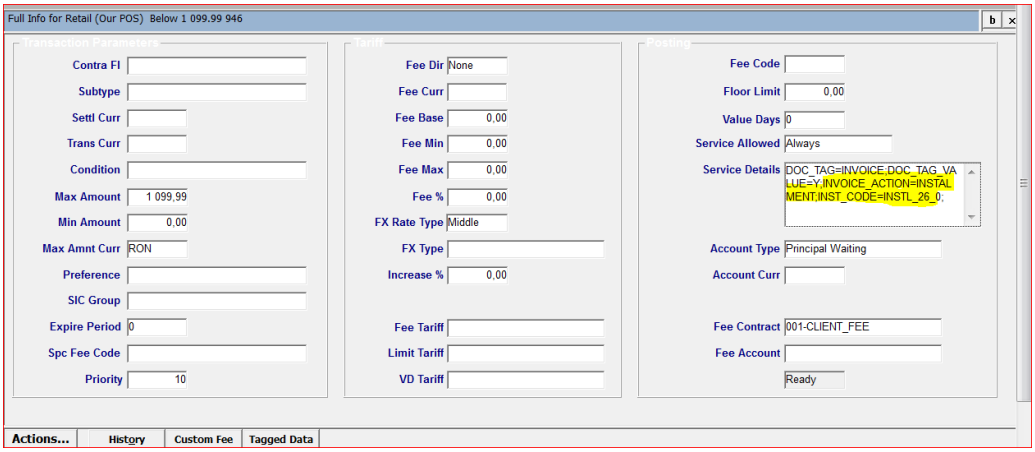

Fig. 29. Configuring a Service

In the Service Package of the accounting contract to be granted instalment loans, register Event types used by Way4 Instalments (see the section "Configuring Execution of Actions when the Status of a Loan or its Components Changes").

In Services used to process instalment loan transactions, specify the INVOICE_ACTION=INSTALMENT; tag in the *Service Details* field.

Additionally, the following tags can be specified in the Service's *Service Details* field:

- INST_CODE – instalment scheme code (value of the instalment scheme's *Service Code* field), see Fig. 29.
- INST_NUM – number of instalments in the loan.

- DATE_MODE – mode of calculating the effective date of each instalment in the instalment plan:
  - "BILLING" – the effective date of each instalment is calculated from the start date of the corresponding billing cycle.
  - "TRANS_DATE" – the effective date of each instalment is calculated in months from the original transaction date: if the transaction date is 14 February, the effective date will be calculated from 14 February, 14 March, 14 April, etc.
- INST_FREE_PERIOD – number of billing cycles/instalments free of remuneration.
- SHIFT_NUM – number of cycles by which the instalment plan is shifted (see the *Plan Shift* field in the instalment scheme).
- INST_IRATE – interest rate for calculating a fee. The tag redefines settings in the instalment scheme for "Interest" fees (*Calc Scheme* field value). I.e. the fee size is taken from the tag, and the calculation scheme from fee settings for the instalment scheme. If the INST_IRATE tag is set but the instalment scheme doesn't have an "Interest" fee, the fee percentage will be calculated according to the "Interest 360" scheme.
- INST_FRATE – loan fee rate (as a percentage of the transaction amount). The tag redefines settings in the instalment scheme for "Annual Fee" and "Flat Fee" fees (*Calc Scheme* field value) with the "Ordinary Fee" category. I.e. the fee size is taken from the tag and the calculation scheme from fee settings for the instalment scheme. If the INST_FRATE tag is set but the instalment scheme doesn't have "Annual Fee" or Flat Rate" fees, the fee will be calculated according to the "Annual Fee" scheme.
- INST_FTOTAL – basic amount of remuneration. The tag redefines settings in the instalment scheme for the "Annual Fee" and "Flat Fee" fee types (*Calc Scheme* field's value) with the "Ordinary Fee" category. That is, a fee amount is taken from the tag, and calculation scheme is taken from the fee settings in the instalment scheme. If the INST_FTOTAL tag is set, and "Annual Fee" or "Flat Fee" fee type is not specified in the instalment scheme, the fee will be calculated according to the "Annual Fee" scheme.

If the INST_FTOTAL and INST_FRATE tags are set at the same time, both tags will be processed. For example, the *Base Amount* and *Fee Rate* fields of the corresponding fee (for example "Flat Fee") for the instalment scheme will be redefined.

- PORT_FRATE – fee rate (as a percentage of the transaction amount) for each instalment. The tag redefines an instalment scheme's settings for "Annual" Fee" and "Flat Fee" fees (*Calc Scheme* field value). This tag is used as an alternative to INST_FRATE: If the value INST_FRATE=10 is set and the loan is paid in five instalments, it is necessary to specify PORT_FRATE=2 to obtain the same remuneration amount.

> An interest rate is set in the tags INST_IRATE, INST_FRATE, INST_FTOTAL, and PORT_FRATE as a decimal. For example, the rate "3%" is specified as "0.03".

- PORT_FTOTAL – fixed fee amount in each portion (see the description of the *Base Amount* field in the instalment scheme). The tag redefines settings for "Annual Fee" and "Flat Fee" fees in an instalment scheme (*Calc Scheme* field value).

  If the PORT_FRATE or PORT_FTOTAL tag is set, an "Annual Fee" and/or "Flat Fee" fee set up in an instalment scheme is redefined and calculated as a fee for one portion of the loan. If in addition to a "Flat Fee" fee, an "Interest..." fee is set up in the instalment scheme, these tags do not affect calculation of the "Interest..." fee.

- INST_FWAIVE_N – number of instalments for which no remuneration is charged; this tag is only used together with the PORT_FRATE tag described above.
- INST_AMNT – amount of one instalment in the instalment plan.

> At any one time, either the number of instalment periods or the amount of an instalment can be changed. If the INST_AMOUNT and INST_NUM tags are specified, only the value of the INST_AMOUNT tag will be used to calculate the plan.

- INST_FROM_TRANS_DATE – the tag makes it possible when posting a document for this Service to calculate the fee for the instalment plan from the transaction date (by default, a fee is calculated from financial document's posting date). If the billing cycle to which the transaction date belongs is already closed, system behaviour depends on the values of the instalment scheme's *Dates Mode*/*Billing Mode* field. If the mode for calculating dates is based on billing cycle, dates are calculated from the start of the current billing cycle. If calculation starts from the transaction date ("By Trans Date" mode) and no shift is set for the instalment plan, the first portion may become effective immediately when a financial document

is posted, and may already be overdue. The tag can be set in transaction subtype parameters (see the section "Configuring Transaction Types").

When setting up fees in an instalment scheme, several different types of fee can be set up from one scheme (for example, rates for an "Interest..." fee and a "Flat Fee" fee). When redefining fee parameters using tags, two tags can be set (in our example, INST_IRATE and INST_FRATE) to redefine the rates for these fees. I.e. the INST_IRATE tag may be used together with the INST_FRATE, INST_FTOTAL, PORT_FRATE, and PORT_FTOTAL tags.

Note that the above tags can be specified in the *Add Data* field of the original transaction document. Values specified in a document have priority over values specified in a Service. Parameters specified in an instalment scheme have lower priority than the same parameters specified in a Service or a document.

If special fees are charged (see the section "Fee and Repayment Method Parameters" and ""Instalment Event Fees""), they must be specified in the list of miscellaneous services in the Service Packages of the corresponding contracts.

It is recommended to configure Services used when processing operations with granting instalment schemes as follows:

- If a contract to which a loan will be granted is a subordinate contract in a "Liability" hierarchy, Services are configured in the main Service Package.
- In other cases (for example, instalments are recorded in the same account contract under which the credit card is registered, it is recommended to configure an additional Service Package).

If an instalment plan is calculated when processing an authorisation document (according to system settings (see the section "Configuring Global Parameters")), specify the tag INST_PLAN_TO_ADDENDUM; in the parameters of the corresponding Service. When this tag is set, an instalment plan calculated for this Service is converted into a tag string and placed in Addendum Doc. This tag can be used to send an instalment plan calculated for an authorisation document to a POS.

The list of tags that can be set in a document corresponds to the list of tags set in the Service.

3.12.2 Configuring Transaction Types

A special transaction type must be set up in Way4 (Full →Configuration Setup → Transaction Types), see Fig. 30.

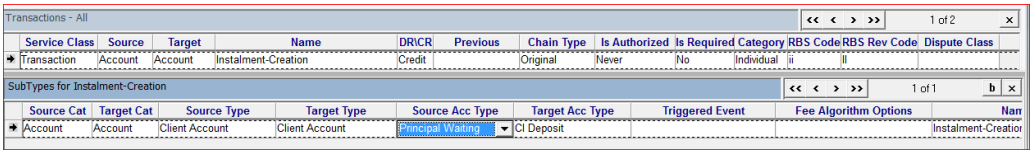

Fig. 30. Configuring a transaction type

On the transaction sub-type level, account types to record granting the loan are set. For the source contract, a specially configured account type is specified, on which the instalment amount will be recorded (in the example in Fig. 30 – "Principal Waiting"), for more information, see the section "Configuring Accounting Schemes".

3.12.3 Configuring Accounting Schemes

Templates of accounts used for instalment loan transfers (used to pay loans) must contain the INVOICE_CODE=<code specified in the *Invoice Code* field of an instalment scheme> tag (see the section "Configuring Instalment Schemes") in the *Template Details* field (see the section "GL Properties" in the document "Way4 Accounting Schemes").

General recommendations for configuring account templates (account template names are given as examples):

- Create a general account "Principal Waiting" on which the entire debt amount is shown (the entire amount of the debt awaiting payment).
- Create two account types: "Open" and "OVD".
  - For the main debt (Principal Amount).
  - For fees (Fee Amount). According to the bank's accounting requirements, fees with different payment types can be recorded on different accounts. In this case, two account types should be created ("Open" and "OVD"):
    - For a fee that is distributed in equal portions in each instalment.
    - For a fee with payment in decreasing portions as the loan is repaid.
- Create a "Fee Waiting" account to record the total fee amount to be paid according to the schedule. This account is created with the bank's revenue account number.
- Create technical accounts for early repayment, instalment plan recalculation and debit.

For examples of configurations of account templates for working with instalment loans, see 6Configuration Examples, section "Account Template Configurations".

3.12.4 Configuring Standing Payment Orders

When configuring standing payment orders, the following recommendations should be considered.

Depending on the purpose of a payment order or an Event causing activation of a payment order (making an amount effective for payment, transferring to overdue, etc.) in the corresponding Accounting Scheme accounts, payment orders are set up to generate the required accounting entries with the following parameters (see the section "Parameters of General/Template Standing Payment Orders" of the document "Standing Payment Orders").

- In the *Order Type* field, select the value "Debit Amount" or "Credit Amount" depending on the direction of the operation.
- In the *Order Category* field – "General".
- In the *Date Event* field – "Event Opened".
- In the *May Be Partial* field – "No".
- In the *Check Target* field – "No check".
- In the *Is Active* field – "Yes".
- Specify the corresponding account in one of the following ways:
  - Fill in the *Target Template* field.
  - Fill in the *Target Number* and *Target Acc Type* field.

If it is necessary to account for remuneration in a separate account, it is advisable that a payment order with the following parameters be set up for this account:

- The *Order Type* field should contain the "Debit Amount" value.
- The *Date Event* field should contain the "Event Opened" value.
- The *Target Number* and *Target Account Type* fields should contain the number of the bank contract where loan remuneration is accounted for and its account type, respectively
- The *Event Type* field should contain the name of the Event type whose activation parameters are set up for Way4 Instalments (see the section "Configuring Execution of Actions when the Status of a Loan or its Components Changes").
- The *Check Target* field should contain the "Advice" value.

If the Event specified in payment order parameters is opened as a result of instalment plan generation and its "Invoice Code" parameter is set to "<code>_TOTAL_FEE" (see the section "Configuring Execution of Actions when the

Status of a Loan or its Components Changes"), this payment order will generate a document transferring funds from a remuneration account to a bank contract account.

The amount of a payment order (defined automatically by default) can be redefined – see the *Additional Condition* field of the section ""Invoice Events" Form".

For manual creation of an instalment plan according to a document (see the section "Creating an Instalment Plan for a Document" of the document "Customer Service User Manual"), set up a payment order with the following parameters in the account for the total amount of the debt waiting for payment to become effective (see Fig. 31).

- In the *Order Code* field, specify the predefined code MANUAL_INSTALMENT.
- In the payment order, the account must be specified to which the amount for which the instalment is calculated must be transferred. The following options are possible:
  - The account is specified in the *Target Template* field.
  - The account is specified using the *Target Number* and *Target Acc Type* fields.
  - The account is specified using the *Use Liability* and *Target Acc Type* fields (see Fig. 31).

Fig. 31. Configuring a payment order for manual creation of an instalment plan

3.12.5 Configuring a Balance Type for Early Repayment

For early repayment, configure a special balance type with the code INST_ER and use it to mark account templates that will be used for repayment (see the document "Balance Types" and the section "Early Repayment").

3.12.6 Configuring Creation of an Instalment Plan Based on a Balance Type

Configure the list of balance types based on which instalment plans can be created. This setting is made in "Custom Handbooks" user handbook (Full → Configuration Setup →Client Classifiers →Custom Handbook), see Fig. 32.

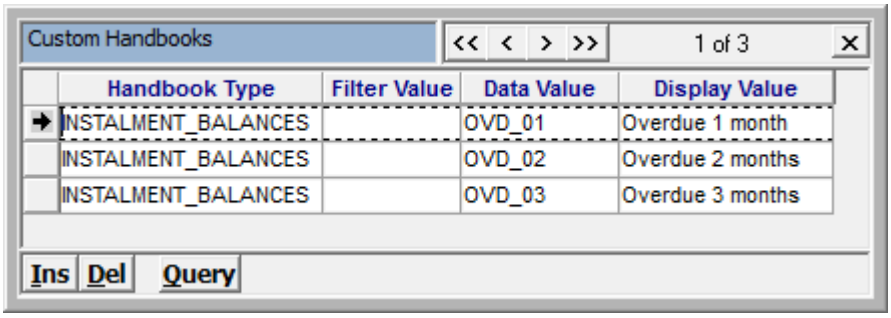

Fig. 32. Configuring the "Custom Handbooks" user handbook

A balance type that can be used to create an instalment plan is configured as follows:

- Specify the value "INSTALMENT_BALANCES" in the *Handbook Type* field.
- Specify the balance type code in the *Data Value* field.
- In the *Display Value* field, specify the name of the balance type that will be shown in the *Balance* field of the form for creating a balance type (see Fig. 39 in the section "Creating an Instalment Plan for a Balance").

3.13 Configuring Instalment Plan Simulation

Instalment plan simulation makes it possible to offer clients information about possible instalment plans (possible instalment options) for a transaction.

Instalment plans can be simulated in the following cases:

- When an authorisation is received from a POS. Possible instalment plans can be generated according to the authorisation, and information on plans sent back to the POS.
- When a preauthorisation request ("AuthCheck" category) is received. When making a "Retail" or "ATM" transaction, a client can request (for example, through Web services) to see all possible instalment plans for the transaction.

Plan simulation does not result in generation of an actual instalment plan, i.e. plans are of an informational nature.

Plans can be simulated for specific documents or for transactions processed using specific Services.

Plans can be simulated for all available instalment schemes, or for specific schemes (see the section "Plan Simulation").

Different instalment plans for one instalment scheme (for example, with different numbers of instalments) can be created for the contracts of different Products.

A simulated instalment plan created according to an authorisation can be used in Way4 to generate a real instalment plan. This functionality requires additional settings (see the section "Setup for Creation of a Plan using a Simulated Plan").

3.13.1 Plan Simulation Setup

To set up plan simulation, the following settings are required (in addition to standard settings for generating instalment plans):

- If necessary, enable plan simulation mode in global parameters:
  - To simulate plans for a preauthorisation document ("AuthCheck" category), specify "SIMULATE" as the value of the global parameter INST_AUTHCHECK_ACTION (for more information, see the section "Configuring "AuthCheck" Preauthorisation Document Processing (Automatic Creation of a Plan)").

    or

  - To simulate plans for an authorisation document, specify "SIMULATE" as the value of the global parameter "INST_AUTH_ACTION" (for more information, see the section "Configuring Authorisation Document Processing (Automatic Creation of a Plan)").
- Plan simulation can be enabled for a Service or a specific document. To do so, use the INST_AUTHCHECK_ACTION=SIMULATE; or INST_AUTH_ACTION=SIMULATE; tags in a document's *Add Data* field or Service's *Service Details* field.

  Plans cannot be simulated manually.
- By default, instalment plans are calculated (simulated) for all available instalment schemes. In order for a plan to be calculated for a specific scheme (schemes), specify the codes of the required schemes by using the INST_CODE tag in the document or Service (see the section "Generating an Instalment Plan").
- Instalment plans are calculated in standard mode – either according to parameters specified in an instalment scheme or in a Service or document (if they meet conditions set in the instalment scheme). It is additionally possible to set the number of instalments (*Tenor*) and the number of periods by which the instalment plan is shifted (*Plan Shift*) in a Product/contract.

This setting can be used to create different possible instalment plans (for example, with different numbers of instalments) for one instalment scheme for the contracts of different Products.

Setup is performed as follows:

- In the Product's *Custom Data* field, set parameters for calculation. This is done using the following contract custom parameters:
  - INST_NUM_S=<options for the number of instalments, separated by commas>;
  - SHIFT_NUM_S=<options for the number of instalments by which the instalment plan is shifted, separated by commas>;

  Instalment plans for each specific value will be calculated for the Product.

  INST_NUM_S and SHIFT_NUM_S parameter values can be taken from a Product, contract, settlement contract, etc. depending on settings of the contract's corresponding custom parameters (see the section "Contract Custom Parameters" of the document "Way4 Client and Contract Classifiers").
- In the *Service Details* field of the Service with which documents with simulated instalment plans will be processed, set the tag INST_SIM_MODE including one of the modes described above:
  - "INST_NUM" – values from the INST_NUM_S tag in the Product will be used when calculating plans for a document.
  - "SHIFT_NUM" – values from the SHIFT_NUM_S tag in the Product will be used when calculating plans.

  The INST_SIM_MODE tag with an instalment simulation mode specified can be redefined in a document's (authorization or preauthorization) *Add Data* field. The tag in a document has a higher priority than the tag in a Service.

  Information about instalment plans simulated for a document can be sent to a client in a message. The variable %INST_PLAN_LIST:[separator]:<repeatable line>% can be used in message setup, where

  [separator] – separator of lines whose format is defined in the parameter <repeatable line>. A separator is not mandatory for setup. A separator is only added between lines and is not added at the beginning or end of the list. Any characters can be used as a separator. "CR" is replaced with a carriage return.

<repeatable line> – formal of the line that will be repeated for the number of simulated plans. Format is mandatory for setup. The following tags can be used to set up format: INST_NUM (number of instalments in the loan), INST_CODE (instalment scheme code), INST_CURR (loan currency), INST_INF_RATE (total annual interest rate used for the plan), INST_FDATE (date of the first payment), INST_AMNT (amount of one instalment in the instalment plan), INST_INF_FEE (total fee amount), INST_FAMNT (amount of the first payment), INST_TOTAL (total loan amount). These tags will be replaced with the corresponding data calculated for the instalment plan.

Sample setup of the variable:

%INST_PLAN_LIST:,CR:INST_NUM months (INST_AMNT INST_CUR per month)%

Sample message generated using this setup:

3 months (33 USD per month),

5 months (20 USD per month),

6 months (17 USD per month),

7 months (14 USD per month),

8 months (12 USD per month),

12 months (8 USD per month)

3.13.2 Setup for Creation of a Plan using a Simulated Plan

In Way4 an instalment plan for a financial document can be created using a plan in the "Simulated" status, created earlier for a linked authorisation document.

If a plan in the "Simulated" status was created for a preauthorisation document ("AuthCheck" category), this functionality is not available.

Setup procedure:

- Set the value of the global parameter INST_CREATE_FROM_SIMULATION to "Y" (see the section "Configuring Creation of an Instalment Plan using a Plan in the "Simulated" Status").
- A plan can be created based on a plan in the "Simulated" status if the value of the global parameter INST_FIN_ACTION (or of the corresponding tag) is "CREATE_INACTIVE", "CREATE_ACTIVE" or "CREATE_PREVIEW".
- The financial document must contain parameters corresponding to those of the plan in the "Simulated" status that was created earlier. Matching the parameters of a financial document and plan parameters whose

verification is mandatory depends on the value of the document's INST_VER tag.

- If the tag is not set (default behaviour), verification is performed according to the following document tags:
  - INST_NUM=<number of instalments into which the loan is split>;
  - INST_AMNT=<amount of one instalment in an instalment plan>;
  - INST_TOTAL=<total amount of the loan>;
- If INST_VER=MC_INST; verification is performed according to the following document tags:
  - INST_TYPE – this document tag must contain the value "20" (Issuer-Financed).
  - INST_NUM=<number of instalments into which the loan is split>;
  - INST_INF_RATE – total annual interest rate used when calculating the plan
  - INST_FEE – total fee amount for the plan.
- A document can contain the following additional tags that will be matched with plan parameters for a more concise selection:
  - INST_INF_FEE – total Ordinary Fee fee amount for a plan
  - SHIFT_NUM – number of instalments by which the plan is shifted (see the *Plan Shift* field in the instalment scheme).
  - INST_FREE_PERIOD – number of cycles/instalments free of remuneration.
  - INST_CODE – instalment scheme code (*Service Code* field value).

If a financial document's tags match the parameters of a plan in the "Simulated" status that was generated for the corresponding authorisation document:

- The plan in the "Simulated" status is copied; it is assigned a status according to the value of the global parameter INST_FIN_ACTION ("Inactive", "Waiting" or "Preview"; see the section "Configuring Financial Document Processing (Automatic Creation of a Plan)"). By default, a plan is not calculated according to the current date, i.e. all dates (dates instalments become effective, payment dates, etc.) remain unchanged.
- The instalment plan in the "Simulated" status based on which a plan was generated for a financial document remains available for viewing, see the section "Viewing Simulated Instalment Plans".

3.13.3 Configuring Functionality to Pay for Transactions using Simulated Instalment Plans (MasterCard Instalment)

In Way4 it is possible to send possible payment methods in a response to an authorisation request: standard payment and/or payment using an instalment loan.

This functionality is available for terminals supporting MasterCard Instalments.

The global parameter INST_PAYIN is used for setup. The parameter can be redefined with the tag of the same name according to the following priorities (in descending order):

- Tag in the Service for instalment plan simulation.
- Tag in the card's Product (custom_data).
- Tag in the financial institution.
- Global parameter.

Possible values for the INST_PAYIN global parameter/tag:

- "I" – only generation of an instalment plan is possible (default value).
- "B" – standard payment and payment in an instalment is possible.

The parameter/tag value is sent in response to an authorization request.

Note that the INST_PAYIN parameter is only used in simulation of instalment plans. If a document does not have simulated plans, the INST_PAYIN parameter is not checked, and information about possible payment methods is not sent in response to the authorisation request. If the INST_VER=MC_INST tag is present in the document, the "F" value of the INST_PAYIN parameter (only regular payment, without using instalment plans) will be sent in response to the authorisation request. When the INST_VER=MC_INST tag is set and there are simulated plans, the "I" or "B" value is exported, depending on INST_PAYIN parameter settings.

3.14 Capitalizing Interest for a Shift Period

In Way4 it is possible to capitalize interest accrued for a period during which payment of the principal was deferred – i.e. add the amount of interest accrued during a Shift Period to the principal. To do so, additional setup is required. By default capitalization is not performed.

Capitalization of interest can be used for annuity payment schemes (see the *Payment Scheme* field of the section "Instalment Plan").

This section describes rules for calculating plan portions when capitalization is used for "Interest" fee calculation schemes without the MONTHLY_INTEREST parameter.

For capitalization of interest for a shift period, the amount of one instalment portion is calculated as the sum of the components shown in Fig. 33:

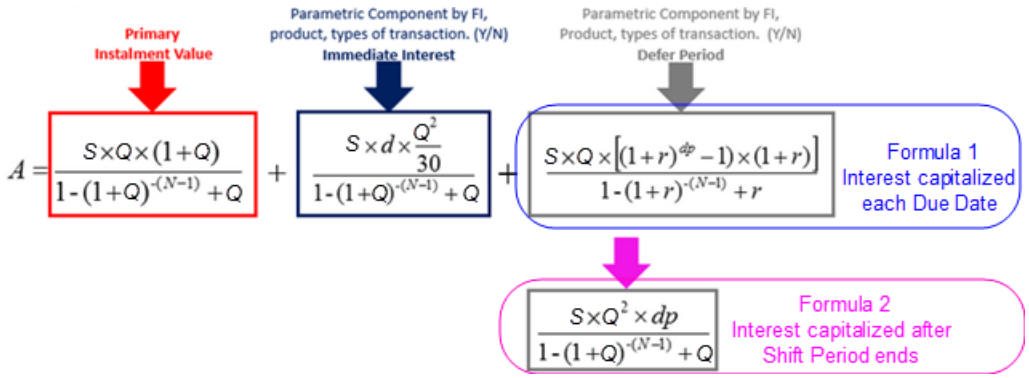

Fig. 33. Formula for calculating an instalment portion when interest is capitalized

The following symbols are used in the formulas:

A – amount of one instalment.

S – transaction amount (principal amount).

Q – monthly interest rate.

d – number of days between the transaction date and Due Date.

dp – number of Shift Periods.

N – number of portions into which the loan is divided.

Description of components used in calculating an instalment portion when interest is capitalized for a Shift Period.

- "Primary Instalment Value" – standard annuity payment (the formula is the same as that for calculating one instalment portion without capitalization, see the section "Instalment Plan Calculation Features".
- "Additional Shift Period" – this component is calculated if interest is calculated for an additional Shift Period set using the SHIFT_ADD tag in the instalment scheme. See the section "Capitalization for an Additional Shift Period".
- "Shift Period" – the component is calculated is interest is calculated for the Shift Period set in the instalment scheme's *Plan Shift* field. The following options for capitalization are possible:
  - Capitalization in each Shift Period – for the entire term of the shift. In this case, the component is calculated according to formula 1 (see Fig. 33).

- Interest is capitalized at the end of a Shift Period. Interest for a Shift Period is added to the principal in the first portion. In this case, the component is calculated according to formula 2 (see Fig. 33).

  The capitalization method is determined by the *Shift Fee Charge Mode* field value – "Capitalize Fees Every Month" and "Capitalize Fees on First Portion", respectively. See the section "Instalment Plan".

If an instalment scheme contains settings for interest capitalization (the *Shift Fee Charge Mode* field is filled in), when calculating an instalment plan if the number of portions (Tenor) is not set in the scheme, mathematic rounding will be used when calculating the number of portions. If there are no settings for capitalization of interest, the number will be rounded up.

The specific formulas shown in Fig. 33 for the "Additional Shift Period" and "Shift Period" components (Formula 2) are used because interest in these modes is actually capitalized at the end of the effective period for a plan's first portion, i.e. one month after the Shift Period ends.

The formula shown in Fig. 33 for calculating an instalment portion is only used if "Capitalize Fees Every Month" or "Capitalize Fees on First Portion" is set in the *Shift Fee Charge Mode* field.

To capitalize interest on Due Date, the mode for calculating interest linked to Due Date (calculation from/to Due Date) must be enabled. To enable this mode, set the value of the global parameters INST_INTEREST_TO_DO to "Y". In this mode:

- When the value of the *Shift Fee Charge Mode* field is "Capitalize Fees Every Month" interest accrued during a Shift Period is added to the principal on each scheduled Due Date during the entire term of the shift for the plan. I.e. the total amount of the principal increases on each Due Date.
- When the value of the *Shift Fee Charge Mode* field is "Capitalize Fees on First Portion" interest for the entire Shift Period (for all Shift Periods) is added to the principal on the Due Date of the plan's first portion. I.e. one month after the Shift Period ends.

  If the value of INST_INTEREST_TO_DUE is "Y" when the value "Capitalize Fees Every Month" or "Capitalize Fees on First Portion" is used, the interval between the effective date and due period cannot be one month or more. This check is made when approving an account scheme. The scheme's *Due Period* and *Due Mode* fields are checked or the *Period Unit* and *Period* fields in the "Dates for..." form, if the due period is calculated based on an "Instalment Due Date" functional date.

Special technical invoices are created for capitalization of interest for a Shift Period. The amount of these invoices is not included in the amount for a portion or in the total amount for a plan. These invoices are not paid. When a plan is activated, the invoices are assigned the "Waiting" status, the status changes to "Open" on the Effective Date and to "Written Off" on the Due Date. Interest is capitalized when the status changes to "Written Off".

Additional records for capitalized interest are created in the "Invoice Events" form with "Fee Capitalization" in the *Amount Type* field. Records are created to activate, write off these invoices, etc.

The same payment orders are used for "Fee Capitalization" records as for "Principal" records (for example, the same payment order to activate the "Fee Capitalization" part of the loan and the "Principal" part).

A payment order with the same code can be used in records for different parts of a loan, for different changes in status. For example, one payment order is used when closing the "Fee Capitalization" part of the loan (transfer to "Closed" status) regardless of its current status (for example, when closing a plan due to reversal of the original transaction).

In early repayment of a plan for which interest capitalization was used, the following takes place:

- In full early repayment, interest to the current date is calculated and becomes effective; interest for an Additional Shift Period also becomes effective, if it has not yet been paid. Capitalized interest and interest scheduled for capitalization is paid as the principal (added to the principal, if this has not yet been done).
- In partial early repayment during a Shift Period:
  - Interest for an Additional Shift Period becomes effective immediately.
  - The following rule applies to other interest for a Shift Period: if the period for calculating interest is over, interest is paid (even if their capitalization in the first portion after the Shift Period was originally planned). If the calculation period is not over, interest will be capitalized on the same date as before, but the amount will be recalculated on a daily basis.
  - In early partial repayment, after a Shift Period has ended, the new amount of the principal is only considered when calculating the next portion and is considered from the Due Date of the current portion, not from the date of early repayment. Interest from the time the current portion opened until the Due Date is not recalculated.

3.14.1 Capitalization for an Additional Shift Period

An Additional Shift Period (Periods) can be set using the SHIFT_ADD=<number of shift periods> tag in an instalment scheme. Interest for a specific period (periods) can be capitalized when the following conditions (settings) are met:

- Interest is capitalized if "Capitalize Fees Every Month" or "Capitalize Fees on First Portion" is specified in the *Shift Fee Charge Mode* field.
- The tag ADVANCE_FEE_ADD=F; must be set in the instalment scheme. In this case, interest will be capitalized on the Due Date of the instalment scheme's first portion (Capitalize Fees on First Portion).

  If the tag is not set, interest is capitalized in the mode set for the main Shift Period defined in the *Shift Fee Charge Mode* field of the scheme ("Capitalize Fees Every Month" or "Capitalize Fees on First Portion").

  If interest should not be accrued for the period, set the tag value to "W".
- The same payment orders are used for "Fee Capitalization" records as for "Principal" records (for example, the same payment order to activate the "Fee Capitalization" part of the loan and the "Principal" part).
- A payment order with the same code can be used in records for different parts of a loan, for different changes in status. For example, one payment order is used when closing the "Fee Capitalization" part of the loan (transfer to "Closed" status) regardless of its current status (for example, when closing a plan due to reversal of the original transaction).

3.14.2 Subtracting Capitalized Interest from the Principal before the Capitalization Date

By default, an instalment plan in capitalization mode is created so that all amounts in it are already calculated as they must be paid, i.e. the principal amount (corresponding invoices) already included capitalized interest, when the plan is activated, accounts show the entire amount of interest including capitalized interest.

If only the uncapitalized amount of the principal must be shown in accounts on a plan's creation date, and capitalized interest must not be shown until the capitalization date (until a certain Due Date), additional setup is required:

- In additional records with the "Fee Capitalization" type, set the NEGATIVE; tag in the *Additional Condition* field. In this case, the amount of capitalized interest will be taken with a negative sign and will be excluded from the main invoices (from the principal amount).

- Note that for "Fee Capitalization" records, the same payment orders are used as for "Principal" records (the same payment order is used to activate parts of the principal and capitalized interest.

The NEGATIVE; tag can be used not only in activating a plan. The tag can be set in "Fee Capitalization" records that determine the procedure for working with capitalized interest, for example, when closing a plan because the original transaction was reversed. Similarly, the same payment order is used for "Fee Capitalization" and "Principal"; one order can be used to subtract capitalized interest from the principal amount for different changes in the status of the "Fee Capitalization" part of the loan.

3.15 "Extra Fee Into Principal" Fee Capitalization

By default, the "Extra Fee Into Principal" fee is capitalized (i.e. the fee amount is added to the principal) when an instalment plan is activated.

The capitalization date depends on the value of the INST_INTEREST_TO_DUE global parameter (see the section "Configuring Fee Capitalization Dates").

For capitalized interest, create records with "Fee Capitalization" in the *Amount Type* field of the "Invoice Events" form for activating, writing off these invoices, etc.

Information about a capitalized "Extra Fee Into Principal" fee can be viewed in the "Subtotals" form (see Fig. 34). The fee amount (see the "FEETOPR, capitalization" record in Fig. 34) is added to the principal (see the "Principal" record in Fig. 34) after capitalization.

The amount written off will be shown in the *Written Off* field of the fee's record.

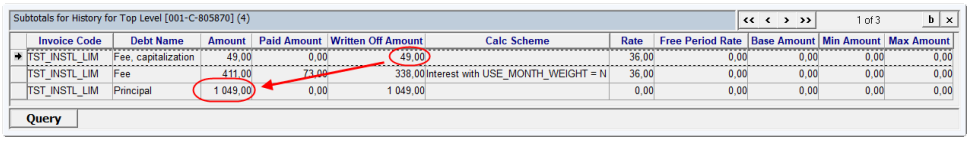

Fig. 34. "Subtotals" form

3.16 Excluding a custom fee and Misc fee from the principal amount

Prior to Way4 versions 03.49.30.45 and 03.48.30.76, when an instalment plan was generated for a transaction for which a custom fee or misc fee was involved, the following was performed: the amount of the custom fee was by default included in the principal amount, and the amount of the Misc fee was included in the

principal amount on certain conditions (the Misc fee was included in the principal amount if a separate document was not created for it, for example using the MTR_FEE tag).

Starting from versions 03.49.30.45 and 03.48.30.76, the following conditions apply for including/excluding these fees from the principal amount:

- By default, a Misc fee is not included in the principal amount, including if a separate document was not created for it (for example, using the MTR_FEE tag), and a macrotransaction to charge the fee is created for the transaction's financial document.
- A custom fee is not included in the principal amount if for the corresponding Service a separate code is specified in the *Fee Code* field. If the *Fee Code* field is not filled in and the fee is posted to the same account as the main transaction, the fee will be included in the principal amount.

In early repayment when an adjustment or reversal document is received, the amount of the custom fee can be included in the amount of early repayment. To doc so, add the tag INST_SEC_ACTION=EARLY_REPAYMENT for the additional fees' corresponding Services. As the fee account, specify the account that is used for early repayment. This is done with the REV_ACC_CODE and/or SEC_ACC_CODE in additional fees' services. For more information about this mode, see the section "Advanced options for working with an instalment plan when an adjustment or reversal document is received".

3.17 Instalment Options

Instalment options are sets of parameters configured separately from an instalment scheme and attached to the scheme. Options optimise instalment scheme settings by allowing the number of configured schemes to be minimised. An option is set up using a tariff with the "Instalment Scheme" role and/or a tariff with the "Instalment Fee" role.

Setup is performed as follows:

- Configure a list of instalment options (Instalments → Instalment Configuration → Instalment Scheme Groups → Available Instalment Options), see the sample setup in Fig. 35.

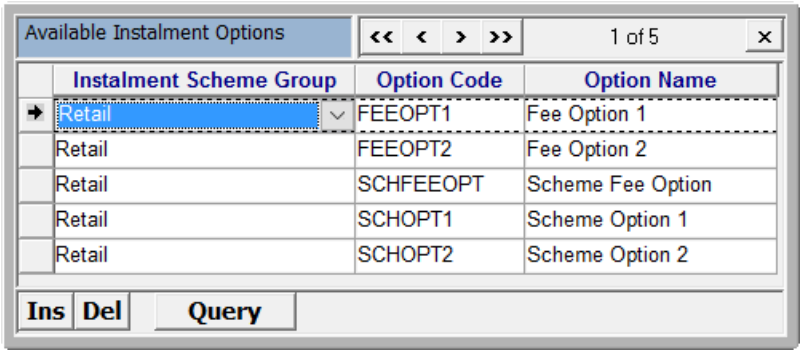

Fig. 35. List of instalment options

The form contains the following fields:

- *Instalment Scheme Group* – instalment scheme group. Selected from the list set up in the "Instalment Scheme Groups" form (Instalments → Instalment Configuration → Instalment Schemes Groups → Instalment Schemes Groups).

  Setup of options in an instalment scheme group allows available options to be filtered when manually creating a plan for a balance or transaction (i.e. when using a form to create a plan), see the sections "Configuring Instalment Scheme Groups", "Creating an Instalment Plan for a Balance", Creating an Instalment Plan for a Transaction".

- *Option Code* – option code.

- *Option Name* – option name.

- Set up option parameters – set up tariffs with the "Instalment Scheme" and/or "Instalment Fee" role. Sample setup is shown in Fig. 36

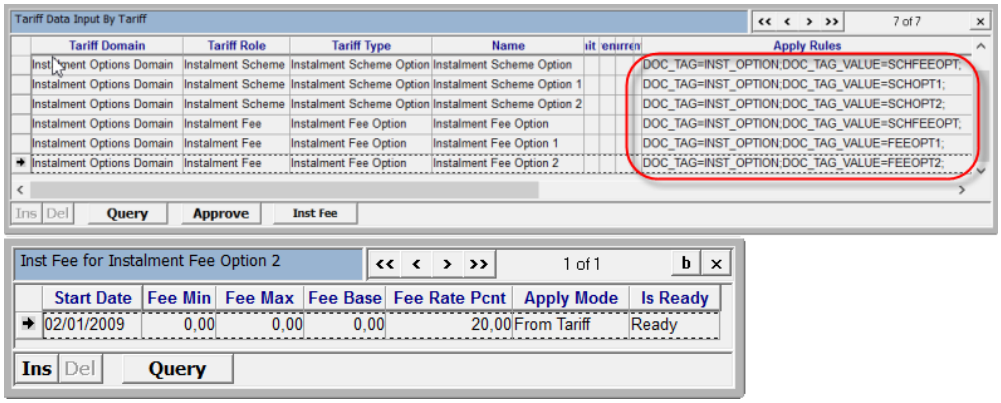

Fig. 36. Tariff setup

- A tariff in an option is marked with DOC_TAG=INST_OPTION; DOC_TAG_VALUE="option code" tags, see Fig. 36.

- In the instalment scheme, specify the tariff type (types) for selection in an Instalment Scheme (*Instalment Tariff* field of the instalment scheme and/or *Inst Fee Tariff* in instalment scheme fee properties), see the section "Configuring Instalment Schemes".
- The option code is used to search for a tariff when creating an instalment plan:
  - When manually creating a new plan for a balance or transaction, one of the options can be selected; it will be used when searching for tariffs (the option code will automatically be specified as the value of the document's INST_OPTION tag). See the sections "Creating an Instalment Plan for a Balance", "Creating an Instalment Plan for a Transaction".
  - When automatically creating an instalment plan for a transaction (for a Service) the INST_OPTION tag with the option code used in searching for tariffs may be present in the document.

When creating secondary plans (partial early repayment, granting payment holidays), options from the original plan are used. When changing a plan, an option must be specified explicitly (when the form for changing the plan is opened, the *Option* field is automatically filled in with the value that was used when calculating the original plan).

4 Instalment Plan Calculation Features

4.1 Calculating Instalments

When an instalment plan is generated according to an annuity scheme (when the granted loan is divided into equal instalments, see the description of the *Payment Scheme* field in the section "Instalment Plan"). A single instalment amount is calculated as follows:

$$Amount_{Inst} = \frac{Amount_{Trans} + Amount_{Fee}}{Tenor},$$

where

$Amount_{Inst}$ is the amount of one instalment in the instalment plan.

$Amount_{Trans}$ is the original transaction amount.

$Amount_{Fee}$ is the remuneration amount.

Tenor is the number of instalments in a loan.

There are several ways to calculate the remuneration amount ($Amount_{Fee}$). The following calculation methods are used in Way4.

- Remuneration is calculated as a percentage of the transaction amount (Fee). To do so, specify the "Annual Fee" (a fee portion is calculated based on the number of months in the year) or "Flat Fee" (a fee portion is calculated based on the number of instalments in the instalment plan) value in the *Calc Scheme* field of the fee parameters form (see the section "Fee and Repayment Method Parameters") during instalment scheme setup. When this calculation method is used, it is necessary to specify a fee value in the *Fee Rate* field of the fee parameters form or the INST_FRATE tag in Service or document parameters (see the section "Configuring Service Packages").

  A fee amount can be specified for a single instalment (using the "Portion Fee" value of the *Calc Scheme* field or the PORT_FRATE and PORT_FTOTAL tags), see the section "Fee and Repayment Method Parameters".

  The INST_FWAIVE_N tag may also be set, determining the number of instalments for which no fee is charged (only used with the PORT_FRATE tag).

- Remuneration is calculated as annual interest for a loan with 360 days in a year (Interest). In this case, specify the "Interest" value in the

Calculation Scheme field of the fee parameters form during instalment scheme setup. The annual loan interest rate is specified in the *Fee Rate* field of the fee parameters form or using the INST_IRATE tag in Service or document parameters.

- Remuneration is calculated as annual interest for a loan with the exact number of days in a year (Interest 365/366). In this case, specify the "Interest 365/366" value in the *Calculation Scheme* field of the fee parameters form during instalment scheme setup. The annual loan interest rate is specified in the *Fee Rate* field of the fee parameters form or using the INST_IRATE tag in Service or document parameters.
- Remuneration is calculated as annual interest for a loan with a fixed number of days in the year (365 or 366). In this case, specify the value "Interest 365 Fixed" or "Interest 366 Fixed" in the *Calculation Scheme* field of the fee parameters form during instalment scheme setup. The annual loan interest rate is specified in the *Fee Rate* field of the fee parameters form or using the INST_IRATE tag in Service or document parameters.
- Remuneration can also be specified using the INST_FTOTAL tag in Service or document parameters. This tag specifies the total loan remuneration amount. This amount is divided by the number of instalments to calculate the remuneration part of an instalment.

When generating and instalment plan according to the "Differentiated" scheme (see the description of the *Payment Scheme* field in the section "Instalment Plan"), the principal is divided into equal portions by the number for instalment months, the interest amount is calculated for the remainder on the loan. Interest is calculated as for the annuity scheme.

4.2 Formulas for Calculating Instalment and Remuneration Amounts

Formulas for calculating instalment and remuneration amounts are shown in Table 1.

Table 1. Calculation formulas

Remuneration calculation method (Calculation Scheme)	Formula	Total remuneration amount

Annual Fee	$A = S \cdot (1 + Q \cdot N) \cdot \frac{1}{N}$ $A_{FEE} = S \cdot Q$	$F = S \cdot Q \cdot N$
Flat fee	$A = S \cdot (1 + \frac{R}{100}) \cdot \frac{1}{N}$ $A_{FEE} = S \cdot \frac{R}{100} \cdot \frac{1}{N}$	$F = S \cdot \frac{R}{100}$
Interest	If the MONTHLY_INTEREST parameter is not used: $A = \frac{(S \cdot (1 + Q_1) + G) \cdot Q}{(1 - \frac{1}{(1+Q)^N}) \cdot (1+Q)}$ $A_{FEE} = A - \frac{S}{N}$	$F = A \cdot N - S$
	If the MONTHLY_INTEREST parameter is used: $A = \frac{S}{\sum_{i=1}^{N} \prod_{j=1}^{i} \frac{1}{1+Q_j}}$ $A_{FEE} = S_{Rem} \cdot Q_j$	
Interest 365/366	$A = \frac{S}{\sum_{i=1}^{N} \prod_{j=1}^{i} \frac{1}{1+Q_j}}$ $A_{FEE} = S_{Rem} \cdot Q_j$	$F = A \cdot N - S$

Note that the formulas in the table are shown for cases when no payment shift is applied to a plan (see the description of the Plan Shift field). Settings for charging fees for a shift period may influence interest calculation. For more information, see the section "Charging Fees").

The following symbols are used in this table:

S – principal loan amount.

A – single instalment amount.

A_{FEE} – remuneration part of the instalment.

S_{Rem} – remaining principal loan amount.

N – number of instalments (portions) into which the loan is divided.

F – total remuneration amount.

G – "Advance Fee" amount from the previous plan. The fee that remains after an instalment plan has been closed, when an instalment plan is changed, in early repayment of the plan, or when payment holidays are granted). The "Advance Fee" is transferred to the first part of the new plan when the value of the global parameter ISNT_ADV_FEE_OPEN is "Y".

$Q = \frac{R}{12 \cdot 100}$, where *R* is the annual interest rate (%)

$Q_j = \frac{R}{100} \cdot \frac{D_j}{DaysInYear}$, where

Qj – rate for a portion calculated according to the number of each calendar month's days in the portion.

Dj– number of the calculated period's days in a plan's portion.

DaysInYear is the number of days in the year.

In interest accrual according to the Interest scheme, the value of the *DaysInYear* parameter is specified as the number of days in the current month (for which calculation is being made), multiplied by 12.

In formulas for the "Fee" calculation scheme, the symbols *Q* and *R* denote fee amounts specified by the parameter INST_FRATE or PORT_FRATE. In formulas for the "Interest" and "Interest 365/366" calculation schemes, these symbols denote the loan interest rate specified by the INST_IRATE parameter.

When calculating instalment amounts in the instalment scheme, the cumulative error is considered when calculating the amount of the final instalment (see the description of the instalment scheme's *Rounding Rules* field).

5 Working with Instalment Plans

5.1 Viewing Loan Data

To access the list of contracts for which instalment plans have been generated, use the "Invoice Log" form (see Fig. 37), opened by selecting the "Instalments → Instalments for Contracts " user menu item.

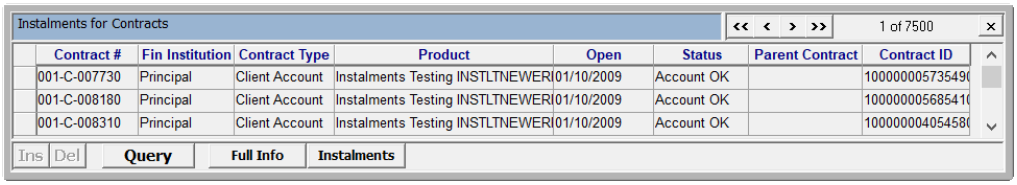

Fig. 37. List of contracts with an instalment loan

To access information on instalment loans granted to a contract, click the [Instalments] button. This will open the "Instalments for <name of client>, Top Level<contract number>" grid form (see Fig. 38).

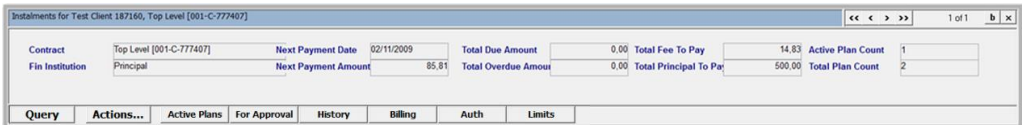

Fig. 38. List of instalment loans granted to a contract

The form contains general information about a loan for a contract.

This form contains the following fields:

- *Contract* – contract number.
- *Fin Institution* – financial institution.
- *Next Payment Date* – due date of the next instalment.
- *Next Payment Amount* – amount of the next payment.
- *Total Due Amount* – total due amount of the loan.
- *Total Overdue Amount* – total overdue amount of the loan.
- *Total Fee To Pay* – total amount of the fee that is due.
- *Total Principal To Pay* – total amount of the principal that is due.
- *Active Plan Count* – number of active instalment plans for the contract (in "Waiting", "Open", "Partially Paid", "Inactive", "OVD" status).

- *Total Plan Count* – total number of instalment plans for the contract (in the "Waiting, "Open", "OVD", "Partially Paid", "Inactive", "Closed", "Paid", "Revised" status).

The "Instalments for <name of client>" form contains the following control buttons:

- [Action] → "New Instalment Plan by Balance" – manually create an instalment plan based on a set contract balance. See the section "Creating an Instalment Plan for a Balance".
- [Action] →"Payment Holidays" – open a form to set up payment holidays for all a contract's active instalment plans (see the section "Configuring Payment Holidays"). This command is shown when a contract has an active instalment plan.
- [Active Plans] – open a form with information about active instalment plans (see the section "Viewing Active Instalment Plans").
- [For Approval] – open a form with information about instalment plans in the "Preview" status (plans requiring approval), see the section "Approving an Instalment Plan in the "Preview" Status".
- [Transactions] – open a form with information about transactions for the current billing period, for which instalment plans can be created (see the section "Creating an Instalment Plan for a Transaction").
- [Billing] – this button is shown instead of the [Transactions] button if the ability is enabled to create instalment plans for transactions or balances in a closed billing period. This functionality is available if the Reversal Management module is used. The module is supplied according to a separate agreement with OpenWay.
- [Auth] – opens a form to manually create a plan for an authorisation. See the section "Creating an Instalment Plan for an Authorisation".
- [History] – information about closed instalment plans for a contract: about loans that have been fully paid and closed instalment plans, and about restructured instalment plans (instalment plans in the "Revised" status, closed as the result of partial early repayment, changes in an instalment plan, payment holidays).
- [Simulated] – information about simulated instalment plans for a contract (see the section "Configuring Instalment Plan Simulation".
- [Limits] – view the current state of limiter counters (Instalment Limits). See the sections "Configuring Instalment Limits" and "Viewing Limit Counters".

5.2 Creating an Instalment Plan for a Balance

To manually create an instalment plan based on a specific contract balance, click the [Actions] button in the "Instalments for <client name> form (see Fig. 38 in the section "Viewing Loan Data"), and select the command "New Instalment Plan by Balance". The "Inst by Balance Input" form will open (see Fig. 39).

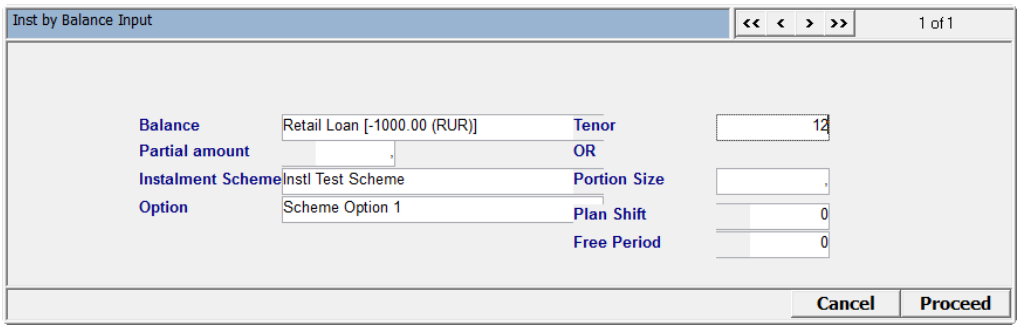

Fig. 39. "Inst by Balance Input" form

The form contains the following fields:

- *Balance* – balance type for which the instalment plan will be calculated. The list in this field shows predefined balance types (see the section "Configuring Available Instalment Schemes, Balance Types, and Transaction Types for Manual Creation of an Instalment Plan").
- *Partial Amount* – amount for which an instalment plan will be created. The field is filled in if a plan must be created for part of an account balance. If the field is empty ("0" is specified in the field), the plan will be calculated for the entire balance amount.

  A positive value should always be specified in this field, even if the balance is negative.
- *Instalment Scheme* – instalment scheme according to which the plan will be calculated. The list of instalment schemes available for this balance type is predefined (see the section "Configuring Available Instalment Schemes, Balance Types, and Transaction Types for Manual Creation of an Instalment Plan".
- *Option* – instalment option. The list of possible values for this field is generated (filtered) after the *Instalment Scheme* field has been filled in. See the section "Instalment Options".
- *Tenor* – number of instalment periods.

- *Portion Size* – size of instalment in the instalment plan. When creating a plan, a check is made that the instalment amount specified for the plan does not exceed the amount of the principal.

  At any one time, either the number of instalment periods or the instalment size may be specified.

  If both the *Tenor* and *Portion Size* fields are filled in, the value of the *Portion Size* field will be used to recalculate the plan. The value of the *Tenor* field will not be used.

- *Plan Shift* – number of instalment periods by which an instalment plan is shifted (number of periods during which the principal will not become effective). For more information, see the description of the *Plan Shift* parameter in the section "Additional Search Parameters".

- *Free Period* – number of loan portions for which no fee is charged or payable. For more information, see the description of the *Free Period* parameter in the section "Additional Search Parameters".

After entering parameters, click the [Proceed] button.

If the value of the global parameter INST_APPROVE_PLANS is "Y" (see the section "Creating a Plan for a Transaction or Balance"), an instalment plan will be created in the "Preview" status and will require manual approval (see the section "Approving an Instalment Plan in the "Preview" Status").

5.3 Creating an Instalment Plan for a Transaction

An instalment plan for a transaction is configured in the "Current Billing Transactions for Top Level [<contract number>]" form (see Fig. 40), opened by clicking the [Transactions] button in the "Instalments for <client name>, Top Level <contract number>" form (see Fig. 38 in the section "Viewing Loan Data").

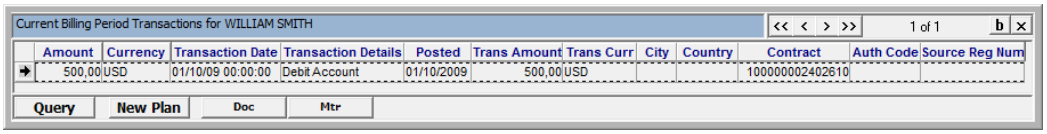

Fig. 40. Transactions for the current billing cycle

This form contains transactions filtered by the following characteristics:

- Transactions with types set in the "Available Instalment Trans Type" form (see "Configuring Available Transaction Types").

- Transactions made in the current billing cycle, for which there are no active instalment plans, and no closed instalment plans for which payment was made.

The form contains the following fields:

- *Amount* – total amount of funds for this transaction.
- *Transaction Date* – transaction date.
- *Transaction Details* – description of the transaction as received by the client in the statement.
- *Posted* – transaction posting date.
- *Trans Amount* – transaction amount.
- *Trans Curr* – transaction currency.
- *City* – city in which the transaction was made.
- *Country* – country in which the transaction was made.
- *Contract* – number of the account/card contract.
- *Auth Code* – authorization code; the transaction identifier generated by the issuer.
- *Source Reg Num* – document registration number assigned by the sender (*Source Registration Number*).

The [Doc] button is used to open the "Doc for Transactions" form containing full information about the document generated for a specific transaction.

To create an instalment plan, select a transaction from the list and click the [New Plans] button.

The "Inst by Transaction Input" form will open (see Fig. 41).

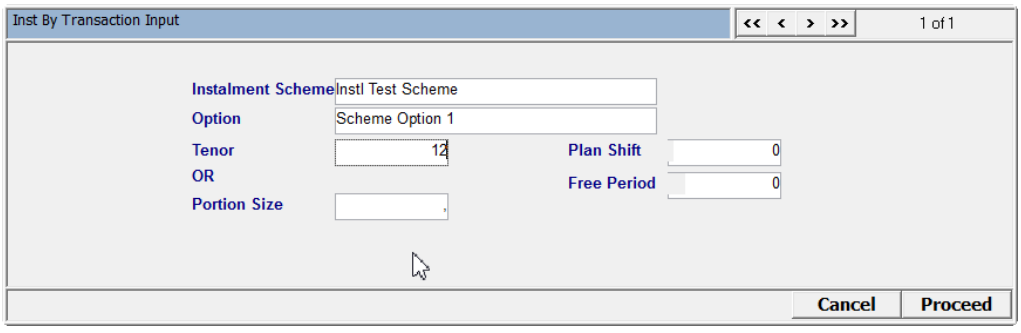

Fig. 41. "Inst by Transaction Input" form

The form contains the following fields:

- Instalment Scheme – drop-down list to select the instalment scheme that will be used to calculate the instalment plan. The list of instalment schemes available for this transaction type is predefined (see the section "Configuring Available Instalment Schemes, Balance Types, and Transaction Types for Manual Creation of an Instalment Plan").

  If the delivery package includes the Advanced Tariff Management module, the set of available instalment schemes can be defined using tariff domains specified on the instalment scheme level.

- *Option* – instalment option. The list of possible values for this field is generated (filtered) after the *Instalment Scheme* field has been filled in. See the section "Instalment Options".
- *Tenor* – number of instalment periods.
- *Portion Size* – amount of an instalment in an instalment plan. When creating a plan, a check is made that the instalment amount specified for the plan does not exceed the amount of the principal.

  

  At any one time, either the number of instalment periods or the instalment size may be specified. If both the *Tenor* and *Portion Size* fields are filled in, the value of the *Portion Size* field will be used to recalculate the plan. The value of the *Tenor* field will not be used.

- *Plan Shift* – number of instalment periods by which an instalment plan is shifted (number of periods during which the principal will not become effective). For more information, see the description of the *Plan Shift* parameter in the section "Additional Search Parameters".
- *Free Period* – number of loan portions for which no fee is charged or payable. For more information, see the description of the *Free Period* parameter in the section "Additional Search Parameters".

After entering parameters, click the [Proceed] button to verify data and apply changes. If Way4 finds that a parameter was entered incorrectly, the corresponding message will be displayed.

To calculate an instalment plan, the transaction amount posted in the contract account is used. That is, if the transaction amount is converted to the contract currency when processing a document, the amount that has already been converted is used to calculate an instalment plan. If the transaction was recorded in the contract account in a currency other than the contract currency, when the plan is calculated, the transaction amount is converted to the contract currency at the current rate.

If the value of the global parameter INST_APPROVE_PLANS is "Y" (see the section "Creating a Plan for a Transaction or Balance"), a form for previewing the plan will be displayed. Clicking the [Proceed] button automatically activates (approves) the plan. See the section "Approving an Instalment Plan in the "Preview" Status".

Note that when calculating a plan, an additional fee with the MARKUP code (if any) is automatically added to the loan principal amount.

If it is necessary to recalculate a contract lifecycle when creating an instalment plan for the transaction (that is, when it is necessary to recalculate interest from the transaction date), set the "Y" value for the INST_STORNO_CURRENT_CYCLE parameter (see the section "Creating a Plan for a Transaction or Balance").

5.4 Creating an Instalment Plan for an Authorisation

To manually create an instalment plan based on an authorisation, click the [Auth] button in the "Instalments for <client name>" form (see Fig. 38 in the section "Viewing Loan Data"). The "Auth for <contract name> form will open (see Fig. 42). This form contains a contract's authorisation documents with the "Active" status.

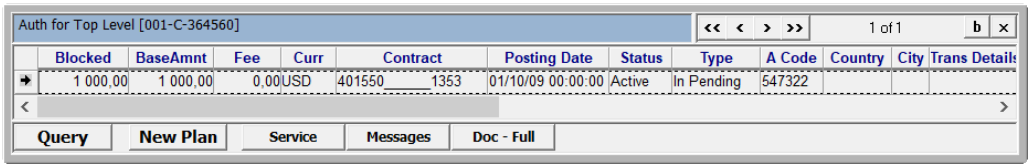

Fig. 42. "Auth for <contract name>" form

In this form, select an authorisation document and click the [New Plan] button. The "Inst by Transaction Input" form will open, that is identical to the form in Fig. 41 of the section "Creating an Instalment Plan for a Transaction". In the form, specify parameters for calculating the plan and click the [Proceed] button (see the description of the form's fields in the section "Creating an Instalment Plan for a Transaction").

To calculate an instalment plan, the amount blocked in the contract as a result of authorisation document processing is used. That is, if the transaction amount is converted to the contract currency when processing an authorisation, the amount that has already been converted is used to calculate an instalment plan. If the authorisation amount was blocked in the contract account in a currency

other than the contract currency, when the plan is calculated, the transaction amount is converted to the contract currency at the current rate.

5.5 Creating an Instalment Plan for a Transaction or Balance in a Closed Billing Cycle

This mode is available if the Reversal Management module is used. The module is supplied according to a separate agreement with OpenWay.

When an instalment plan is generated for a transaction/balance in a closed billing cycle (when the contract life cycle is recalculated using the Reversal Management module) if at the time of corrections the "Contracts – Daily Update" procedure has not been completed for the contract:

- If the FORCE_CDU global parameter is not set, corrections are not made, and an error message is generated.
- If the FORCE_CDU global parameter is set, corrections are made after the "Contracts – Daily Update" procedure has been completed for the contract (completion of the "Contracts – Daily Update" procedure for this contract is forced before this procedure is completed for other contracts).

When the value of the global parameter INST_ALLOW_CLOSED_CYCLE is "Y", the [Billing] button is shown instead of the [Transactions] button in the "Instalments for <client name>" form (Instalments →Instalments for Contracts" →[Instalments]) (see Fig. 43).

Clicking the [Billing] button opens the "Billing for..." form with a list of billing cycles for the contract (the current billing cycle and closed billing cycles), see Fig. 43.

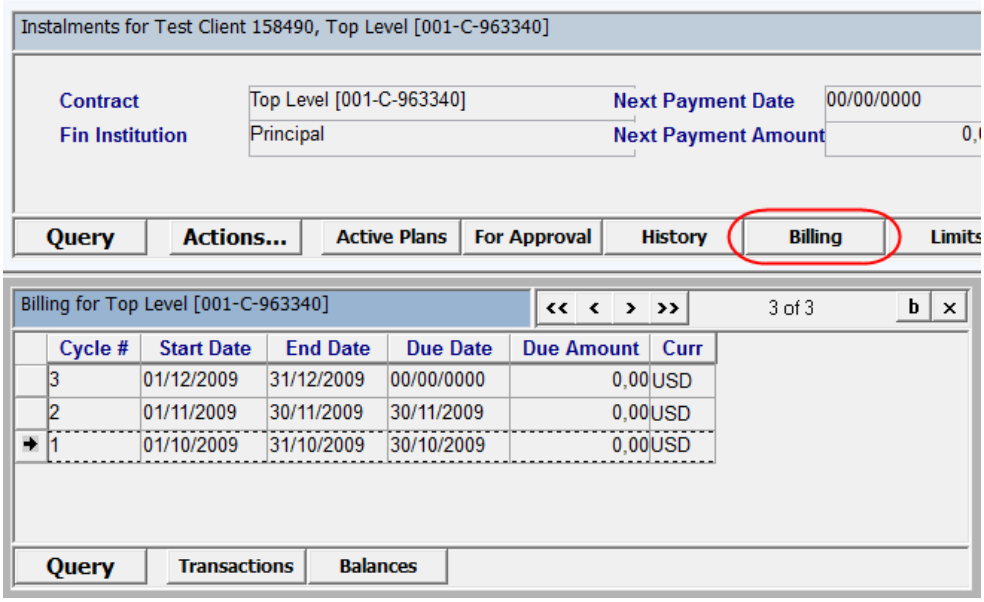

Fig. 43. "Billing for..." form

The [Transactions] button of the "Billing for..." form is used to create an instalment plan, both in a current billing cycle and in closed billing cycles. An instalment plan in a current billing cycle is created in the same way as in the "Current Billing Transactions for <contract name>" form (see the section "Creating an Instalment Plan for a Transaction"). For the procedure to create a plan for a transaction in a closed billing cycle, see the section "Creating a Plan for a Transaction in a Closed Billing Cycle".

The [Balances] button of the "Billing for..." form is used to create an instalment plan for a balance in a closed billing cycle. For more information, see the section "Creating a Plan for a Balance in a Closed Billing Cycle".

When an instalment plan is created in a closed billing cycle, the Reversal Management module is used to recalculate the contract's lifecycle from the specified date (the corresponding Events and entries are posted with a past *Posting Date*, interest is recalculated, etc.). For more information, see the document "Reversal Management".

For a plan generated in a closed billing cycle, the plan's start date is calculated from the current date (with consideration of the *Plan Shift* parameter). I.e. after a plan has been created, portion effective dates and payment dates will be in the future.

5.5.1 Creating a Plan for a Transaction in a Closed Billing Cycle

Clicking the [Transactions] button in the "Billing for..." form (see Fig. 43 in the section "Creating an Instalment Plan for a Transaction or Balance in a Closed Billing Cycle") opens the "Transactions" form with a list of transactions in the

selected billing cycle, for which an instalment plan can be generated (for the current billing cycle or for a closed billing cycle), see Fig. 44.

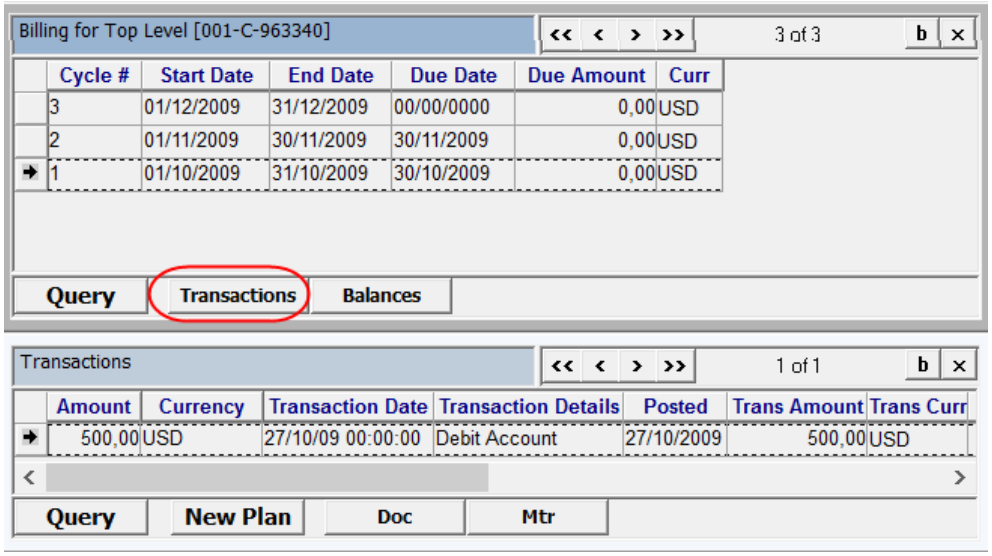

Fig. 44. "Transactions" form

To create an instalment plan for a transaction in a closed billing cycle:

- Select the transaction in the "Transactions" form and click the [New Plan] button. The "Inst By Transaction Input" form will open. This form is used to enter instalment plan parameters. Plan parameters are entered in the same way as for generating an instalment plan in the current billing cycle, see Fig. 41 in the section "Creating an Instalment Plan for a Transaction".
- After entering the parameters for generating an instalment plan and clicking the [Proceed] button, the "Instalment Plan Preview" form automatically opens with the generated plan in the "Preview" status, see Fig. 45.
- Approve the plan by clicking the [Proceed] button in the "Instalment Plan Preview" form.

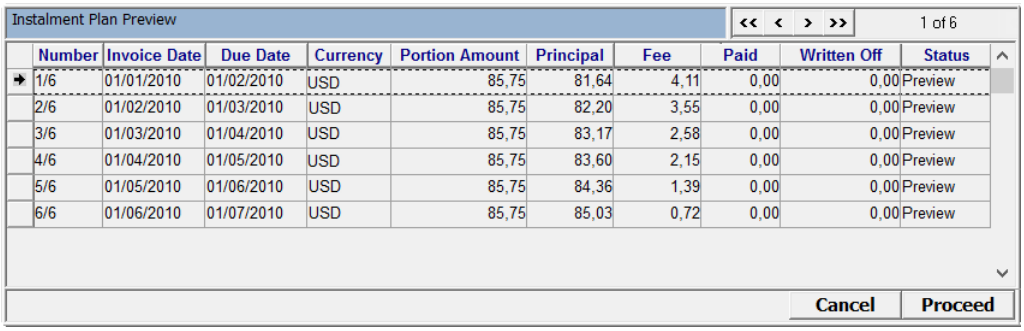

Fig. 45. "Instalment Plan Preview" form

An instalment plan created for a transaction from the current billing cycle is created in the standard mode.

5.5.2 Creating a Plan for a Balance in a Closed Billing Cycle

Clicking the [Balances] button in the "Billing for..." form (see Fig. 43 in the section "Creating an Instalment Plan for a Transaction or Balance in a Closed Billing Cycle") opens a form containing data for available balances (see the section "Configuring Available Balance Types") for each date of the selected billing cycle, see Fig. 46.

The [Balances] button is only shown for closed billing cycles.

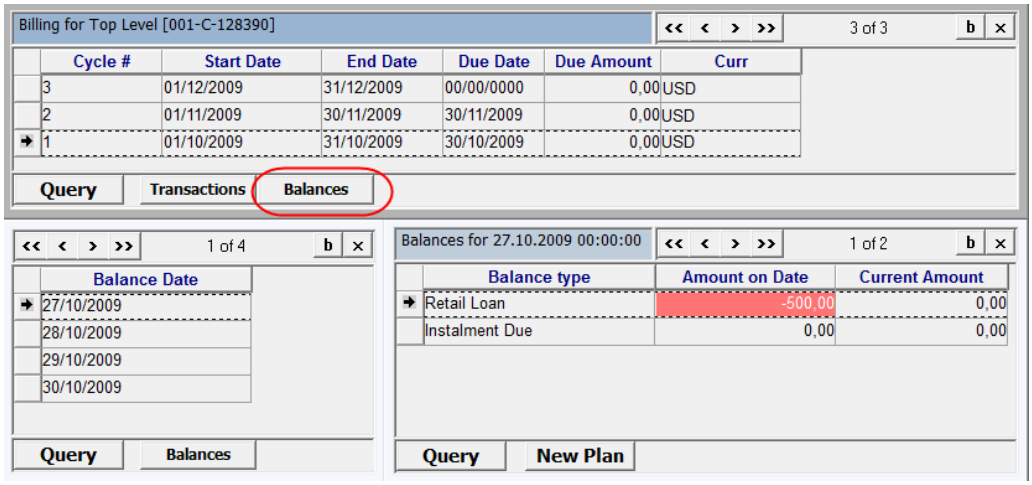

Fig. 46. "Balances for..." form

The "Balances for..." form contains the following fields:

- *Balance Type* – balance type.
- *Amount on Date* – balance amount on a selected date in a closed cycle.
- *Current Amount* – balance amount for the current date.

  If the balance amount for a selected date in a closed period is larger than the amount for the current date, the amount is highlighted in red in the *Amount on Date* field. In this case, the balance's current value is substituted as the partial amount in the form for setting plan parameters (see the *Amount* field in Fig. 47).

To create an instalment plan for a balance in a closed billing cycle:

- Select the balance in the "Balances for..." form and click the [New Plan] button. The "Inst By Transaction Input" form will open, used to enter instalment plan parameters, see Fig. 47.

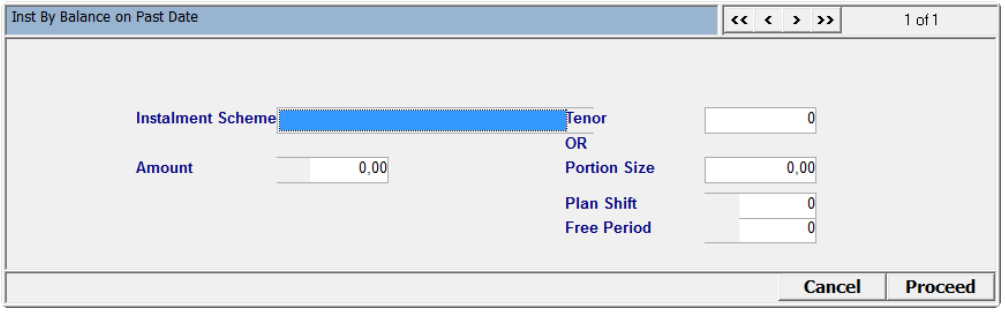

Fig. 47. "Inst By Transaction Input", creation of a plan in a closed cycle

Parameters in this form are entered in the same was as when creating a plan for a balance in a current billing cycle, see Fig. 39 in the section "Creating an Instalment Plan for a Balance".

- After entering parameters for generating an instalment plan, click the [Proceed] button. A check will be made: the amount for which the instalment plan must be generated (specified in the *Amount* field in in the section "Creating an Instalment Plan for a Balance") may not exceed the balance amount for the current date (*Current Amount*) and the balance amount for the selected date (*Amount on Date*).

  If the amount for generating the plan was not specified when entering parameters, the plan will be generated for the lesser of the *Current Amount* and *Amount on Date* amounts.

- If the check is successful, the "Instalment Plan Preview" form automatically opens with the generated plan in the "Preview" status, see a similar form in Fig. 45 in the section "Creating an Instalment Plan for a Transaction or Balance in a Closed Billing Cycle".

- Approve the plan by clicking the [Proceed] button in the "Instalment Plan Preview" form. The plan will be assigned the "Waiting" status.

5.6 Viewing Active Instalment Plans

To view active instalment plans, click the [Active Plans] button in the "Instalments for <contract name>" form (see Fig. 38 in the section "Viewing Loan Data"). The "Active Plans for <contract name>" form will open (see Fig. 48).

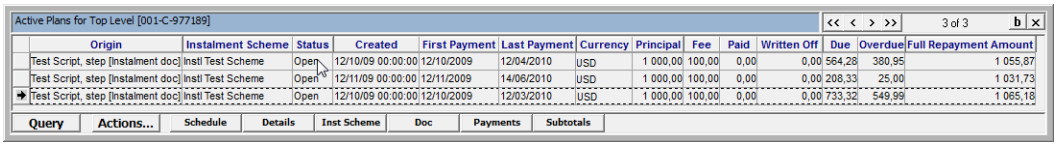

Fig. 48. Active instalment plans

The form contains active instalment plans for a contract – plans in the "Waiting", "Open", "Partially Paid", and "Inactive" status.

The form contains the following fields:

- *Origin* – transaction description. Information from the INST_DESC tag of the document (from the *Add Data* field) is written to this field. If this tag is not set in the document, information is taken from the *Trans Details* field. For instalment plans created by a balance, this field shows the text "Instalment by balance <balance type name>".
- *Created* – instalment plan creation date.
- *First Payment* – date of first payment according to the instalment plan.
- *Last Payment* – date of last payment according to the instalment plan.
- *Currency* – currency used to calculate the instalment plan.
- *Principal* – principal amount according to the instalment plan.
- *Fee* – fee amount according to the instalment plan.
- *Paid* – amount paid according to the instalment plan.
- *Written-Off* – amount written off according to the instalment plan.
- *Due* – due amount.
- *Overdue* – overdue amount.
- *Full Repayment Amount* – full amount of early repayment (if early repayment is currently being made).

The form contains the following buttons:

- [Actions] – button for working with an instalment plan. Contains the following context menu items:
  - "Change Instalment Terms" – opens a form for making changes to an instalment plan (see the section "Modifying an Instalment Plan").
  - "Partial Early Repayment" – opens a form for entering parameters of partial early repayment (see the section "Partial Repayment").
  - "Full Early Repayment" – opens a form for entering parameters of full early repayment (see the section "Full Repayment").
  - "Payment Holidays" – opens a form to set up payment holidays for the instalment plan (see the section "Configuring Payment Holidays").
  - "Activate" – activate the instalment plan (see the section "Activating an Instalment Plan in the "Inactive" Status").

- "Close" – close the instalment plan (see the section "Closing an Instalment Plan").

[Schedule] – opens a form with an instalment plan containing a list of instalments specifying the effective date, planned payment date, payment status, etc. (see the section "Viewing Active Instalment Plans").

- [Details] – detailed information about an instalment plan (see the section "Detailed Information about a Plan").
- [Inst Scheme] – opens a form with the instalment scheme based on which the instalment plan was created.
- [Doc] – opens a form with parameters of the document whose posting resulted the granting of the loan.
- [Payments] – view payments for a plan.
- [Chain] – view the history of changes to the instalment plan. Clicking this button opens a form with a list of restructured instalment plans (plans closed in the "Revised" status resulting from partial early repayment, changes to the instalment plan, payment holidays).
- [Subtotals] – view detailed information about a plan's components (principal amount and fee amount) and information about parameters that were used when generating (calculating) an instalment plan: interest rate (*Fee Rate*), reduced fee rate for *Free Period* of an instalment plan (*Free Period Rate*), base fee amount (*Base Amount*), maximum/minimum fee amount (*Max/Min Amount*), fee calculation method (*Calc Scheme*).

5.6.1 Detailed Information about a Plan

To view detailed information about an instalment plan, click the [Details] button in the "Active Plans for Top Level <contract number>" form (see Fig. 48 in the section

"Viewing Active Instalment Plans"). The "Details for Instalment Active Plans" form will open (see Fig. 49).

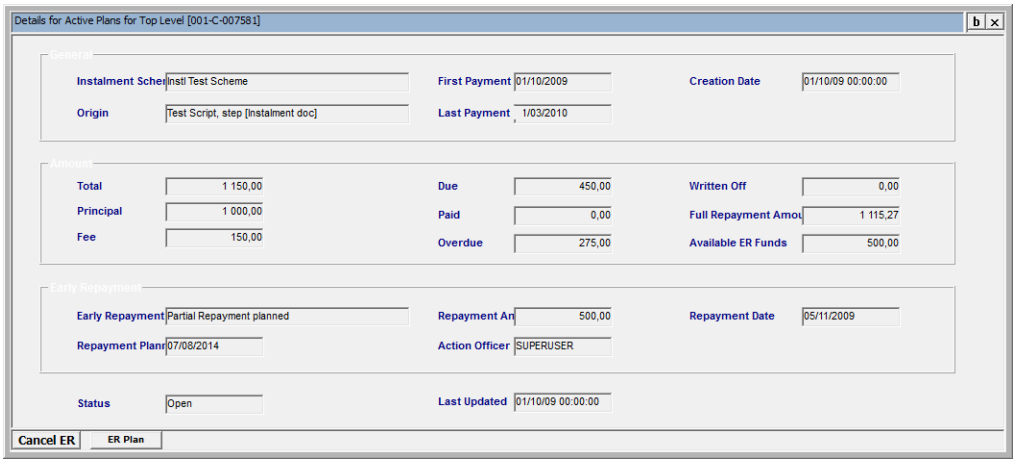

Fig. 49. Full information about active instalment plans

In addition to the instalment plan's main parameters (see the section "Viewing Active Instalment Plans"), this form contains the following fields:

- *Available ER Funds* – amount of funds available for early repayment (calculated on the basis of the INST_ER balance, see the section "Manual Early Loan Repayment (Scheduled Early Repayment)").
- *Early Repayment Status* – early repayment status.
- *Repayment Planned* – date on which early repayment was scheduled.
- *Repayment Amount* – early repayment amount.
- *Action Officer* – employee who scheduled early repayment.
- *Repayment Date* – date of scheduled early repayment.
- *Status* – loan status:
  - "Waiting" – status of the loan before the date specified in the *First Payment* field.
  - "Open" – amount due (the date specified in the *First Payment* field has arrived) but not paid.
  - "Paid" – the loan is fully paid.
  - "Partially Paid" – the loan is partially paid; this status is used if the global parameter EXCL_PARTIAL_STATUS_FOR_<Invoice Code>=Y; is not set. If this parameter is set, a partially paid loan will have the "OPEN" status.
  - "Overdue" – the loan is overdue; i.e. not fully paid by the date specified in the DUE_DATE field (field not shown in the form).

  - "Closed" – loan status when the original transaction was reversed.
  - "Revised" – status set when restructuring an instalment plan.
- *Last Updated* – date of the instalment plan's last update (modification).
- *Creation Date* – instalment plan's creation date. For secondary plans (for example, created as the result of partial early repayment or when a plan is changed), this date is inherited from the original plan.

The [Cancel ER] button is used to cancel early repayment (see the section "Canceling Scheduled Early Repayment"). The button is available if early repayment is scheduled for an instalment plan.

The [ER Plan] button is used to view a new instalment plan that will be activated after partial early repayment has been made. The button is available if partial early repayment is scheduled.

5.6.2 Viewing Instalments

Instalments for an instalment plan can be viewed in the "Schedule for Active Plans ..." form (see Fig. 50) opened by clicking the [Schedule] button in the form containing the list of loans for a contract (see Fig. 38 in the section "Viewing Loan Data").

Schedule for Active Plans for Top Level [001-C-474039] << < > >> 1 of 7

Number	Invoice Date	Report Date	Due Date	Currency	Portion Amount	Principal	Fee	Paid	Written Off	Status
1/6	02/11/2009	02/12/2009	02/12/2009	USD	170,32	168,95	1,37	170,32	0,00	Paid
Early Repayment	02/11/2009	02/12/2009	02/11/2009	USD	229,68	229,68	0,00	229,68	0,00	Paid
2/6	01/12/2009	01/01/2010	01/01/2010	USD	123,45	118,61	4,84	0,00	0,00	Waiting
3/6	01/01/2010	01/02/2010	01/02/2010	USD	123,22	119,12	4,10	0,00	0,00	Waiting
4/6	01/02/2010	01/03/2010	01/03/2010	USD	123,22	120,13	3,09	0,00	0,00	Waiting
5/6	01/03/2010	01/04/2010	01/04/2010	USD	123,22	121,35	1,87	0,00	0,00	Waiting
6/6	01/04/2010	01/05/2010	01/05/2010	USD	123,20	122,16	1,04	0,00	0,00	Waiting

Query | Invoices | Payments

Fig. 50. Instalment plan

If a plan was created resulting from actions with an existing plan (resulting from partial early repayment, changes to the instalment plan, granting payment holidays), the new plan will include the processed portions from the old instalment plan, as well as open portions from the old plan. This makes it possible to view the instalment plan's entire history within one general list of portions (see Fig. 50). When making partial early repayment, changing an instalment plan, granting payment holidays for a loan, a record of this action is added to the list. For early repayment, this record contains the principal amount paid (the principal amount includes the "Advance Fee" when the value of the INST_ADV_FEE_OPEN global parameter is "Y").

A record for full early repayment contains the paid principal amount and paid fee amount.

The instalment plan form contains the following fields:

- *Number* – serial number of the instalment in the plan.

> Instalment payment priorities are determined by a custom procedure run when an instalment plan is generated. In the standard module setup, the payment priority corresponds to the serial number of the instalment in the plan.

- *Invoice Date* – effective date.
- *Due Date* – actual planned payment date.
- *Report Date* – payment date shown in a client statement.
- *Currency* – currency.
- *Portion Amount* – due amount.
- *Principal* – principal amount in an instalment.
- *Fee* – fee amount in an instalment.
- *Paid* – paid amount.
- *Written Off* – amount written off.
- *Status* – instalment status
  - "Waiting" – the instalment has not yet become effective; all records have this status when an instalment plan is generated.
  - "Inactive" – instalment of an inactive loan.
  - "Open" – the instalment is effective but not paid.
  - "Paid", "Partially Paid" – the instalment is paid or partially paid, respectively.
  - "Overdue" – the instalment is overdue.
  - "Closed" – instalment status set when an original transaction is reversed.
  - "Written Off" – the instalment has been written off.
  - "Revised" – status set when restructuring an instalment plan.
  - "Waived" – payment of principal waived.

Note that when the *Monthly Interest* parameter of an instalment scheme is used, within one instalment, remuneration can become effective in two parts on different dates.

Note that when processing a loan payment document, a custom procedure is executed that can redefine the priority for payment of instalments and subtotals that was set when the instalment plan was generated.

The [Invoices] button is used for access to invoices generated on the basis of an instalment (see Fig. 51).

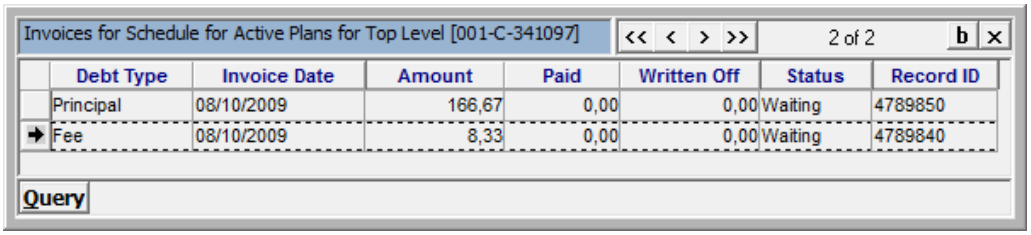

Fig. 51. Invoices generated for an instalment

Invoices are generated for instalment components – one inoice for the principal, and another for the fee.

The form contains the following fields:

- *Debt Type* – debt type.
  - "Principal"
  - "Fee"
  - If posting fees with different codes to different accounts is set up in the "Invoice Events" form (*Fee Code* field in the Invoice Events form is filled in), or if the fee rate is obtained from document tags (INST_IRATE, INST_FRATE, PORT_FRATE, PORT_FTOTAL) when the fee code is taken from the fee for the instalment scheme (see the description of the *Fee Code* field in the "Invoice Events" form). In this case, the *Debt Type* field shows the name of the fee with the corresponding code (*Name* field in the "Fees for <instalment scheme name>" form, see Fig. 4 in the section "Fee and Repayment Method Parameters").
- *Amount* – invoice amount.
- *Paid* – invoice amount paid.
- *Written-Off* – invoice amount written off.

- *Status* – invoice status (see the description of the *Status* field for an instalment). In addition, an invoice for an instalment may have the "Moved" status – this status is set, for example, for partial early repayment if the component is moved to another instalment.

The [Payments] button is used to view payments for a plan.

5.7 Viewing Simulated Instalment Plans

To view simulated instalment plans for a contract (plans in the "Simulated" status, see the section "Configuring Instalment Plan Simulation"), click the [Simulated] button in the "Instalments for <contract name>" form (see Fig. 38 in the section "Viewing Loan Data". The following forms open (see Fig. 52):

The [Simulated] button is only shown when there are plans in the "Simulated" status.

- The "Docs with simulated plans..." form containing documents for which instalment plans in the "Simulated" status were created.
- The "Inst. Plans for Docs..." form showing instalment plans in the "Simulated" status for the selected document. The form opens automatically. If it is closed, it can be reopened using the [Inst. Plans] button in the "Docs with simulated plans..." form.
- The "Schedule for Inst. Plans for Docs..." form showing the list of instalments for a selected instalment plan in the "Simulated" status. The form opens automatically. If it is closed, it can be reopened using the [Schedule] button in the "Inst. Plans for Docs..." form.

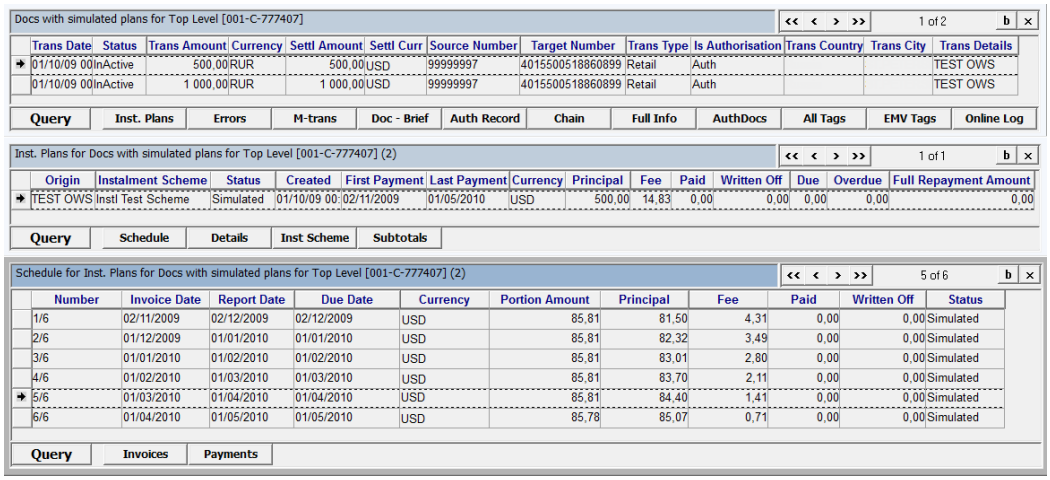

Fig. 52. Viewing simulated (possible) instalment plans

The "Inst. Plans for Docs" form is similar to the "Active Plans for <contract name:" form (see Fig. 48 in the section "Viewing Instalments").

The "Schedule for Inst. Plans for Docs..." form is similar to the "Schedule for Active Plans..." form (see Fig. 50 in the section "Viewing Instalments").

5.8 Granting Payment Holidays

Way4 makes it possible to defer loan payments for several cycles (payment holidays). Payment holiday parameters are entered in the "Holidays for <instalment scheme name>" form (see Fig. 53) opened by clicking the [Holidays] button in the form with the list of loans for a contract (see Fig. 38 in the section "Working with Instalment Plans").

A payment holiday may be granted for all a contract's active instalment plans. To do so, execute the [Actions] →"Payment Holidays" command in the "Instalments for <client name>" form (see Fig. 38 in the section "Viewing Loan Data"). The "Inst Payment Holidays Input" form will open (Fig. 53).

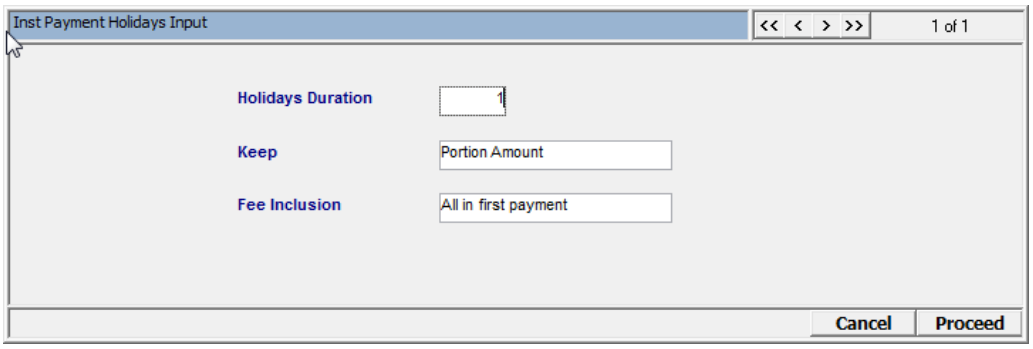

Fig. 53. Form for entering payment holiday parameters

The form contains the following fields:

- *Holiday Duration* – number of payment holiday periods (number of billing cycles).
- *Keep* – name of the parameter (*Tenor* or *Portion Size*) whose current value (value in the current instalment scheme) will be used when calculating a new instalment scheme.
- *Fee Inclusion* – procedure to charge the fee portion for the principal's payment holiday:
  - "All in first payment" – the entire fee accrued for the specified holiday periods, including fee portions that are already effective at the time the payment holiday is granted will be charged in the first payment after the end of the payment holidays. I.e. if at the time a payment holiday is granted there are effective fee portions (for example, in the "Open" or "OVD" status), these fees will be restructured and will be included in the first portion of the new plan in the "Waiting" status.

A fee is charged according to the "All in first payment" scheme for fees with the "Interest 365/366" and "Interest" methods of calculation (value of the *Calc Scheme* field in the "Fees for <instalment scheme name>" form").

- "Every Period" – during the specified periods, a fee is charged according to the instalment plan. I.e. if at the time a payment holiday is granted there are effective fee portions (for example, in the "Open" or "OVD" status), the payment holiday will not affect the status and deadlines for paying these portions.
- "No Fee" – a fee is not charged during the specified periods.

After parameters have been configured, click the [Approve] button to apply the settings to the instalment plan. A new instalment plan will be created. The old instalment plan is closed with the "Revised" status.

If payment holidays are granted for a plan for which a shift was already made using the *Plan Shift* parameter, the remaining period of the shift will be preserved and will be effective after the payment holidays end.

If payment holidays are granted for a plan for which a shift was already made using the *Plan Shift* parameter, the list of available values in the *Fee Inclusion* field depends on the shift's parameters:

- If a shift using the *Plan Shift* field was not granted or has already ended, all values are available in the *Fee Inclusion* field.
- If capitalization for a shift period is set up for a plan, only "No Fee" will be available in the *Fee Inclusion* field when a shift according to the *Plan Shift* field is effective

In other cases, when a shift according to the *Plan Shift* field is effective, the same method for charging interest for the payment holiday period that was set for the fee for the shift period, and the "No Fee" value will be available in *Fee Inclusion*.

By default, when creating a new plan, the same fee rates are used as for calculating the old plan. If fee rates from a document were used when calculating the original plan, the new plan will use the same rates (from the document).

When the value of the INST_RENEW_RATES global parameter is "Y", current rates from the instalment scheme (or from the corresponding tariffs) will be used in calculating the new plan. See the section "Configuring Recalculation of Plans when Rates ".

When creating secondary plans (partial early repayment, granting payment holidays), options from the original plan are used.

If the value of the global parameter INST_APPROVE_PLANS is "Y" (see the section "Creating a New Instalment Plan for Partial Early Repayment, Changes to Instalment Plan, Payment Holidays"), the new instalment plan generated in early partial repayment is assigned the "Preview" status. This plan requires manual approval (see the section "Approving an Instalment Plan in the "Preview" Status").

If any changes are made to the instalment plan (early repayment or manual changes to the plan) during a payment holiday, payment holidays are cancelled.

When a payment holiday for a plan is granted, all unpaid portions of the principal are assigned the "Revised" status. By default (if the INST_HOLIDAYS_FOR_OPEN global parameter is set to "Y"), if at the time of granting the payment holiday, portions of the principal are effective, including overdue portions (i.e. with the "Open", "Partially Paid", and "Overdue" statuses), these portions will be restructured and will be assigned the "Waiting" status in the new plan. This behaviour can be changed using the "N" value of the INST_HOLIDAYS_FOR_OPEN global parameter (see the section "Configuring Payment Holidays"), and these portions are transferred to a new instalment plan with no changes.

Starting from version 03.43.00, existing settings in the "Invoice Events" form should be changed due to the possibility of changing the status of principal portions when a plan is restructured (the appropriate payment orders, etc. must be set up), and due to the use of the "Payment Holidays" value in the *Action* field of the "Invoice Events" form for records related to a payment holiday, see Fig. 54 and the section ""Invoice Events" Form".

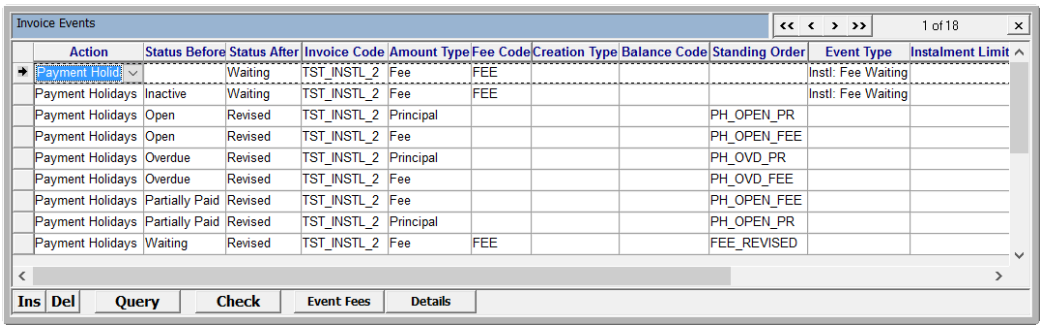

Fig. 54. Configuring the "Invoice Events" form for granting a payment holiday

5.9 Modifying an Instalment Plan

To modify the parameters of an instalment plan, click the [Action] button in the form with the list of loans for a contract and execute the context menu command

"Change Instalment Terms" (see Fig. 38 in the section "Viewing Loan DataWorking with Instalment Plans"). The "Inst Change Terms Input" form will open (see Fig. 55).

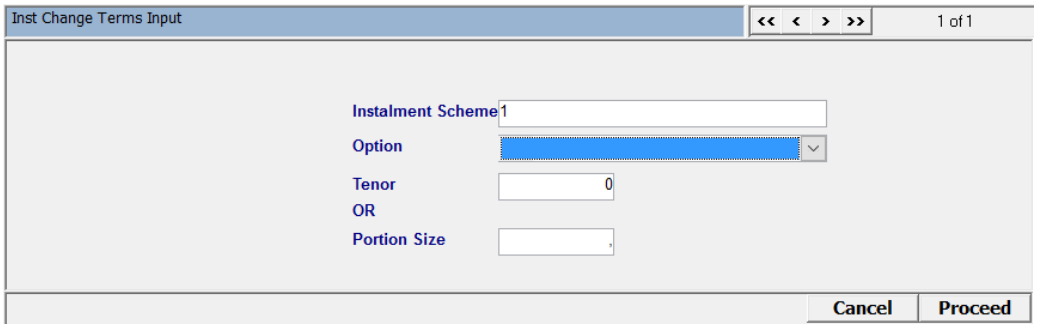

Fig. 55. Modifying an instalment plan

This form contains the following fields:

- *Instalment Scheme* – drop-down list to select the instalment scheme that will be used to calculate a new instalment plan.

  When changing the parameters of an instalment plan created on the basis of a transaction or balance, the list in this field will show instalment schemes available for this transaction type or balance type (see the section "Configuring Available Instalment Schemes, Balance Types, and Transaction Types for Manual Creation of an Instalment Plan").

  If the delivery package contains the Advanced Tariff Management module, the set of available schemes may be determined using the tariff domain specified on the instalment scheme level.

- *Option* – instalment option. The list of possible values for this field is generated (filtered) after the *Instalment Scheme* field has been filled in. See the section "Instalment Options".

  When the form to change a plan is opened, by default the *Option* field shows the option that was used when calculating the original instalment plan.

- *Tenor* – new value for the number of instalment periods.
- *Portion Size* – new value for instalment amount.

  At any one time, either the number of instalment periods or the instalment amount can be modified. If the *Tenor* and *Portion Size* fields are filled in, the value of the *Portion Size* field will be used to recalculate the plan. The value of the *Tenor* field will not be used.

After entering the parameters, click the [Proceed] button to verify the entered data and apply changes. If the system finds any parameter to have been entered incorrectly, a corresponding message will be displayed on the screen.

After changes are applied, the current instalment plan will be assigned the "Revised" status, and a new plan is generated according to the specified parameters.

The new plan will include the processed portions from the old instalment plan, as well as open portions from the old plan (see the section "Viewing Instalments").

If the value of the global parameter INST_APPROVE_PLANS is "Y" (see the section "Creating a New Instalment Plan for Partial Early Repayment, Changes to Instalment Plan, Payment Holidays"), the new instalment plan generated after early partial repayment is assigned the "Preview" status. This plan requires manual approval (see the section "Approving an Instalment Plan in the "Preview" Status").

When calculating a new instalment plan, limits are checked in the corresponding instalment scheme (on portion amount, minimum and maximum number of portions; see the section "Additional Search Parameters"). A check is also made that the portion amount (instalment) set for a new plan does not exceed the amount of the principal. If the portion amount set for a new plan exceeds the principal amount, a plan with one portion will be created, which will include the entire principal.

When the *Tenor* or *Portion Size* parameters are changed, when a new instalment plan is created, fee rates are taken that were used when calculating the original instalment plan (i.e. in this case, the change in the instalment scheme's or tariff's fee parameters does not influence calculation of the instalment plan). Limits on the maximum and minimum fee amount are not checked.

If the value of the global parameter INST_RENEW_RATES is "Y", when calculating a new plan, current rates from the instalment scheme (or from the corresponding tariffs) will be used. See the section "Configuring Recalculation of Plans when Rates ".

If a new instalment scheme is specified (the *Instalment Scheme* parameter changes) when changes are made to an instalment scheme, fee rates from the new instalment scheme will be used in calculating the plan. If fee rates from a document were used when calculating the original plan, when the instalment scheme is changed, rates will be taken from the new instalment scheme, those from the original document will not be used.

When creating a new instalment plan (if the instalment scheme doesn't change, but the *Tenor* or *Portion Size* parameters change), the amount of simple fees such as "Flat Fee", "Annual Fee", and "Portion Fee" is calculated based on the original amount of the loan (with consideration of the fee amount already paid).

Fees from the start of the current billing cycle (Advance Fee) to the date of changes are not charged for simple fees such as "Flat Fee", "Annual Fee", and "Portion Fee" since these amounts will be considered when the new instalment plan is calculated (see the previous item).

For other fees, the way fees from the beginning of a cycle become effective (Advance Fee) can be regulated when a plan is changed. To do so, use the CHANGE_INST_ADV_FEE global parameter: when this parameter has the "Y" value, interest becomes effective on the current date; when the value is "N" (default value), this interest becomes effective together with the first instalment of the new plan.

5.10 Shifting Due Date for an Instalment Plan with the "Extra Fee from Principal" Attribute

It is possible to shift a due date for an open portion (with the "Open" status) in an instalment plan with the "Extra Fee from Principal" attribute (i.e. when the entire principal amount becomes effective without division into portions).

In the form with active instalment plans for the contract, select an instalment plan, click on the [Actions] button and execute the "Change Due Date" command from the context menu. The form for entering a new due date for an open portion will open.

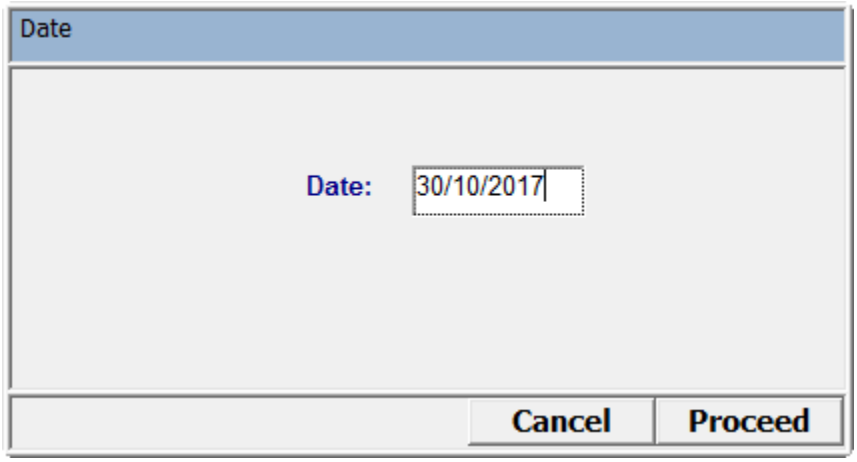

Fig. 56. Entering a new due date

The new date must be greater than the current due date.

A due date shift can be limited using the INST_MAX_DUE_DATE_GAP global parameter or the tag with the same name in the financial institution. The maximum number of calendar days from the current date for which the due date can be shifted is set as the parameter value.

5.11 Manual Early Loan Repayment (Scheduled Early Repayment)

It is possible to effect early repayment of a loan. Moreover, early repayment can be planned for in advance.

When configuring early repayment parameters, it is necessary to consider the following conditions:

- It is necessary to configure a balance type that will be used to determine available funds in early repayment. Account templates must be marked that will be used for payment with this balance type (see the document "Balance Types"):
  - By default, the balance type with the code INST_ER is used.

    The INST_ER balance type is used as the default balance type both for scheduled early repayment and automatic early repayment (i.e. the same accounts are used for automatic and scheduled early repayment).
  - For planned early repayment, a bala nce type can be configured that differs from the default balance type (a balance type with a code that differs from INST_ER). For example, if different accounts are used for automatic and scheduled early repayment, different balance types are configured for them. The code of the balance type set up for scheduled early repayment (that differs from INST_ER) must be specified as the value of the global parameter INST_SCHEDULED_ER_BAL or as the value of the tag INST_SCHEDULED_ER_BAL in the *Special Parameters* field of the Accounting Scheme or in the financial institution's *Special Parms* field.

    If the default balance type is used (with the code ISNT_ER), additional settings with the Accounting Scheme or global parameter are not necessary.
- To transfer paid or waived funds to other contract accounts after early repayment (after the status of the loan or its parts changes) set up the corresponding payment orders in one of the following ways:
  - These payment orders can be specified directly in the "Invoice Events" form (*Standing Order* field) for records with "Early Repayment" specified for the corresponding cases.

- In the parameters of these payment orders, Event types can be specified that activate payment orders when opened. These Events are specified in the "Invoice Events" form (*Event Type* field) for records with "Early Repayment" specified for the corresponding cases.

  Until version 03.39, payment orders activated when a loan status changed were configured using Events. Beginning from version 03.39, it is recommended to make these configurations using the *Standing Order* field, without using Events (the previous scheme is also supported).

- In early repayment, the following is checked:
  - Available funds in accounts with the specified balance type are checked, if funds are sufficient, payment is made. If a special balance type is not set up, an error message will be received when an attempt is made to make early repayment. For partial early repayment, a new instalment plan is automatically created (unpaid funds, i.e. those that do not change status, are not moved from the "Principal Waiting" account to recalculate the plan).
  - A check is made that the early repayment amount exceeds the amount of open instalments. Otherwise, early repayment is not made, and open instalments are paid as usual.
- In early repayment, fees that are not effective due to early repayment of the loan are waived automatically.
- When effecting early repayment of a loan, a special technical invoice is created, in which the total amount of payment and payment date is registered.

Early repayment is made in the "Contracts – Daily Update" procedure on the date of early repayment or by clicking the [Approve] →"Apply" button in the form for full or early repayment (if the entered date for early repayment is the same as the current banking date). By default, all portions of the principal and fees become effective.

5.11.1 Partial Repayment

In partial early repayment, a portion of the loan is repaid, and a new instalment plan is calculated for the remaining portion.

To enter parameters for partial early repayment of a loan, click the [Actions] button in the form with information about active instalment plans (see the section "Viewing Active Instalment Plans") and execute the "Partial Early Repayment"

command (see Fig. 38 in the section "Viewing Loan Data"). The "Inst Partial ER Input" form will open (see Fig. 57).

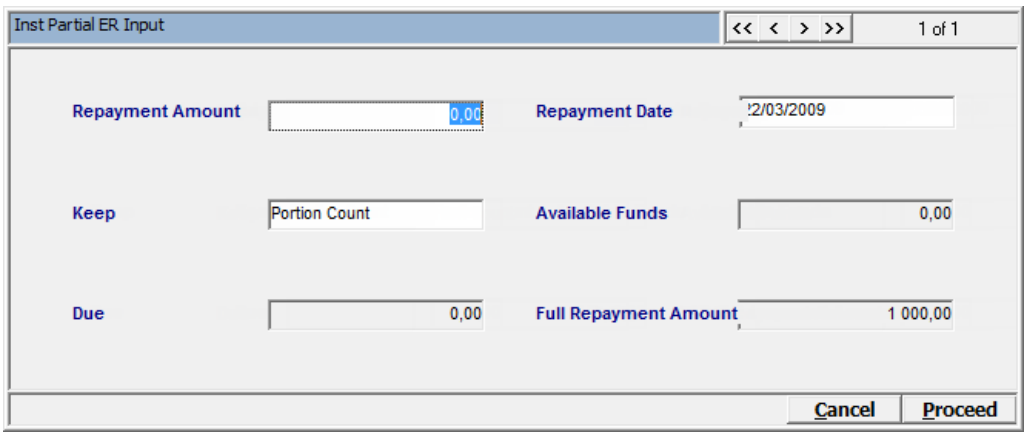

Fig. 57. Form for entering parameters of partial early repayment of a loan

The following fields can be edited in this form:

- *Repayment Amount* – the amount of partial repayment of the loan; the size of the paid amount cannot be less than the size of the next instalment in the instalment plan.
- *Keep* – field to select the name of the parameter (*Tenor* or *Portion Size*), whose current value (the value in the current instalment scheme) will be used to calculate a new instalment plan.
- *Repayment Date* – the date of partial repayment. This can be any date between the current date and the date of the next payment according to the plan, inclusively.

After entering parameters, click the [Proceed] button. If the current date was selected in the *Repayment Date* field, early repayment will be made immediately after the button is clicked.

When the payment date arrives:

1. Early payment is made when the full amount for payment is available in client accounts marked with a special balance type.
2. All instalments from the old plan are assigned the "Revised" status.
3. If the value of the global parameter INST_ADV_FEE_OPEN is "Y", early repayment is made if the amount in accounts from which payment is made is more than or equal to the amount of the fee from the start of the current billing period to the date of payment (Advance Fee). If the amount for early repayment is less than the "Advance Fee" amount, repayment is not made.

4. A new instalment plan is generated with consideration of the parameters specified in the "Inst Partial ER Input" form. The new plan will include:
   - Processed instalments from the old plan (instalments from the old plan that were paid earlier and had the "Paid" status at the time of payment).
   - Instalments from the old instalment plan (instalments that had the "Open" or "Waiting" status in the old plan at the time of payment, for which funds were insufficient for payment. These instalments have the "Paid" status in the new plan.
   - A record of early repayment – when a new plan is calculated, a record of early partial repayment containing the paid principal amount (this amount includes the "Advance Fee" if it was effective) is added to the list of instalments for the plan.
   - Recalculated instalments of the principal (including the recalculated fee) in the "Waiting" status – the remaining unpaid principal is recalculated.
5. When a new instalment plan is created, the amount of simple fees such as "Flat Fee", "Annual Fee", and "Portion Fee" is calculated based on the original amount of the loan (with consideration of the fee amount already paid).
6. Fees from the start of the current billing cycle (Advance Fee) to the due date for simple fees such as "Flat Fee", "Annual Fee", and "Portion Fee" are not charged since these amounts will be considered when calculating a new instalment plan (see the previous item).
7. For other fees from the start of the current billing cycle (Advance Fee) to the due date is by default transferred to the first instalment of the new instalment plan in the "Open" or "Waiting" status. This is regulated with the global parameter INST_ADV_FEE_OPEN, see the section "Configuring Rules for Working with "Advance Fee"" (the default value is "N"). If the "Advance Fee" must be additionally accrued and made effective when early repayment is made, set the parameter value to "Y".
8. When calculating a new instalment plan, the fee rate is used that was used for calculating the old plan. Limits on the maximum and minimum fee amount are not checked. If, for example, fee rates from a document were used when calculating the original plan, the same rates (from the document) will be used when calculating the new plan.
9. Maximum and minimum fee amount limits are not checked.

If the value of the global parameter INST_RENEW_RATES is "Y", when calculating a new plan, current rates from the instalment scheme (or from the corresponding tariffs) will be used. See the section "Configuring Recalculation of Plans when Rates ".

When creating secondary plans (partial early repayment, granting payment holidays), options from the original plan are used (see the section "Instalment Options").

10. If the value of the global parameter INST_APPROVE_PLANS is "Y" (see the section "Creating a New Instalment Plan for Partial Early Repayment, Changes to Instalment Plan, Payment Holidays"), the new instalment plan generated after early partial repayment is assigned the "Preview" status. This plan requires manual approval (see the section "Approving an Instalment Plan in the "Preview" Status").

When calculating a new instalment plan, limits are checked in the corresponding instalment scheme (on portion amount, minimum and maximum number of portions; see the section "Additional Search Parameters"). A check is also made that the portion amount (instalment) set for a new plan does not exceed the amount of the principal.

5.11.2 Full Repayment

In full repayment, the entire amount of the remaining loan is paid in a lump sum.

To enter full early repayment parameters, click the [Actions] button in the form with the list of loans for the contract and execute the context menu command "Full Early Repayment" (see Fig. 38 in the section "Viewing Loan Data"). The "Inst Full ER Input" form will open (see Fig. 58).

The *Full Repayment Amount* field shows the payment amount – the entire remaining principal that was not yet effective becomes payable, as well as interest accrued from the start of the period and the amount of fees for future instalments (when the FULL_PAY tag is set).

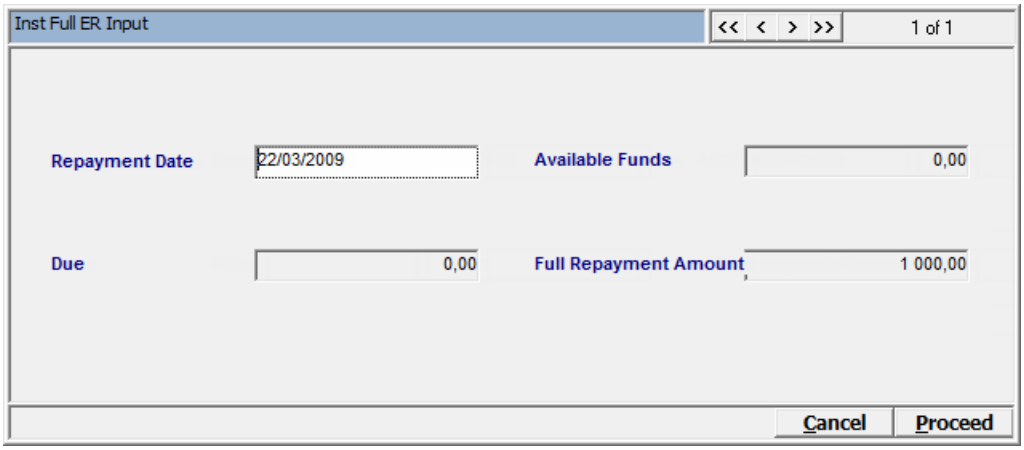

Fig. 58. Form for entering full early repayment parameters

In the *Repayment Date* field, specify the date of early repayment. This can be any date in the interval between the current date and the date of the next payment according to the plan, inclusively.

To enter early repayment in the instalment plan, click the [Proceed] button. If the current date is selected in the *Repayment Date* field, early repayment will be made immediately after the button is clicked.

When interest from the beginning of the cycle becomes effective, the INT_DELAY parameter is considered. See the section "Instalment Plan".

In full early repayment:

- When the payment date arrives, early repayment is made using a special payment order if the full amount for repayment is available on the corresponding client accounts marked with the INST_ER balance type (see the section "Configuring Standing Payment Orders"). If the full amount of funds is not available, payment will not be made.
- Portions of the principal are assigned the "Open" status (portions become effective).
- Fees of future portions are waived automatically.
- Fees are accrued up to the payment date (Advance Fee) and assigned the "Open" status.
- The fee amount is calculated from the number of days for "Annual Fee". For Portion Fee" fees, the full amount of the fee for the current instalment (with the "Waiting" status, for the current month) is used. The remaining fee amount for the plan is taken for flat fees.

If the entire planned fee amount must be made effective (i.e. together with fees for future instalments), specify the FULL_PAY tag in the *Spc Parms* field of the corresponding fee under the instalment scheme. Note that when the FULL_PAY tag is set for a fee, partial early repayment is not available for a plan. If this tag is set, only full early repayment is possible.

The tag WAIVE_ON_FER in the *Spc Parms* field of the corresponding fee allows all fee portions with the "Waiting" status to be waived. I.e. the fee for future instalments is waived, as is the fee for the current instalment (with the "Waiting" status, for the current month).

- Effective amounts (in the "Open" status) are paid from accounts with the INST_ER marker. Portions of the plan and paid fee portions are assigned the "Paid" status, portions of the waived fee are assigned the "Waived" status.
- When full early repayment is made, a new instalment plan is created, to which the record of full early repayment is added containing the paid principal amount and paid fee amount.

5.12 Canceling Scheduled Early Repayment

To cancel scheduled early repayment, in the window with detailed information about an instalment plan, click the [Cancel ER] button (see Fig. 49 in the section "Detailed Information about a Plan").(

5.12.1 Viewing a New Plan for Scheduled Early Repayment

To view an instalment plan that will be activated after scheduled early repayment, in the window with detailed information about an instalment plan (see Fig. 49 in the section "Detailed Information about a Plan"), click the [ER Plan] button.

The "Early Repayment: New Plan" form will open (see Fig. 59).

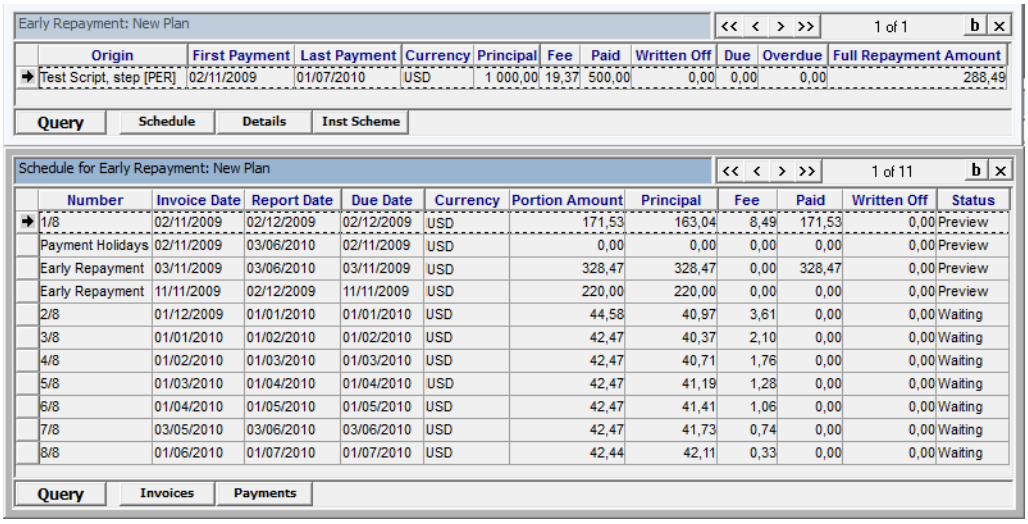

Fig. 59. Viewing a new plan for scheduled early repayment

5.13 Recalculating A Plan with Consideration of Weekends and Holidays or a Change in Rates

An existing instalment plan may have to be recalculated in the following cases:

- Due to annual changes in the business calendar.

  An instalment plan should be recalculated according to new settings for weekends/holidays and working days if a shift of the effective date (*Adjust Effective Date*) and/or due date (*Adjust Due Date*) to the next working day is set.

- When interest rates are changed in instalment schemes (or in the corresponding tariffs). To use this functionality, set the value of the INST_RENEW_RATES global parameter to "Y" (see the section "Configuring Recalculation of Plans when Rates ").

Recalculation can be performed for plans with the "Waiting", "Open", "Overdue", "Partially Paid", "Inactive" and "Preview" statuses.

To recalculate instalment plans, select one of the following user menu items:

- "Instalments →Instalment Tools →Recalc Instalment Plans" – to recalculate all instalment plans for all institutions registered in Way4.
- "Instalments → Instalment Tools → Recalc Instalment Plans FI" – to recalculate all instalment plans for a certain institution. When this menu item is executed, a form will open to select the institution for which instalment plans will be recalculated. After doing so, click [Proceed].

When a plan is recalculated with consideration of changed rates, a new instalment plan is created.

When a plan is recalculated with consideration of weekends/holidays, a new instalment plan is created or the current instalment plan's dates are updated.

- If a shift is made in the effective date and fees calculated on the basis of a daily interest rate are set up for the plan (i.e. a fee must be recalculated), a new instalment plan is created.
- If a shift is only made in the due date and/or the report date, the corresponding dates are updated in the current plan (a new plan is not created).
- When calculating a new plan, fee rates are used that were used when calculating the old plan. Limits on the maximum and minimum fee amount are not checked.

5.14 Automatically Recalculating a Plan after a Change in Billing Date or Due Date Contract Dates

When a contract's Billing Date or Due Date changes, the contract's instalment plan is recalculated when all of the following conditions are met:

- If the plan's Effective Date and Due Date dates ("Instalment Dates" group dates) depend on the contract's Billing Date/Due Date dates (see the section "Configuring Rules for Calculating "Instalment Dates" Group Functional Dates").
- If a shift in the contract's Billing Date or Due Date dates causes a change in the plan's Effective Date or Due Date dates. I.e. if the plan's dates don't change, the plan will not be recalculated (a new plan will not be created).

If a plan does not depend on the contract's Billing Date or Due Date dates, the plan is not recalculated.

A new instalment plan is created when a plan is recalculated.

Plans with the "Waiting", "Open", "Overdue", "Partially Paid", "Inactive", and "Preview" statuses can be recalculated.

When Billing Date is shifted for a new instalment plan, the number of portions or portion size from the original instalment plan is kept. This is regulated by the following parameters:

- Custom contract parameter AUTO_ER_KEEP (Full →Configuration Setup → Common Handbooks →Contract Parameters Setup) lined with the tag of the same name.

- If the AUTO_ER_KEEP parameter is not registered in the "Contract Parameters Setup" list, the corresponding tag will be checked in the contract and Product.
- If the tag is not set, system behaviour depends on the global parameter INST_RENEW_RATES. When the value of INST_RENEW_RATES is "Y", the number of portions is saved when calculating a new plan. In other cases, portion amount is saved.

5.15 Closing an Instalment Plan

5.15.1 Closing an Active Plan

To close an active instalment plan manually, click the [Actions] button in the form with active instalment plans (see Fig. 48 in the section "Viewing Active Instalment Plans") and select the item "Close" from the context menu.

The "Close instalment plan" form will open (see Fig. 60).

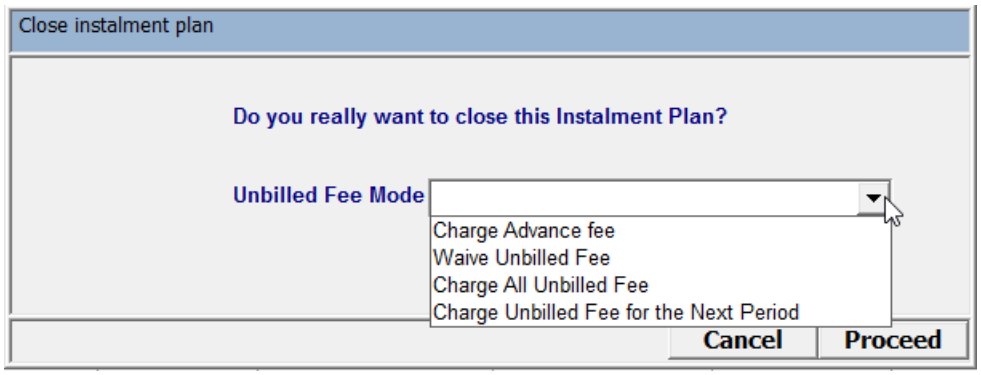

Fig. 60. Selecting rules for processing "Advance Fee" when closing a plan

The value of the global parameter INST_ADV_FEE_WAIVE_ON_CLOSE or the tag of the same name in the Product can be redefined in the "Unbilled Fee Mode" field of the "Close instalment plan" form (see the section "Configuring Rules for Working with "Advance Fee""). INST_ADV_WAIVE_ON_CLOSE determines the rule for processing the fee from the start of the current billing system up to the current banking date (Advance Fee).

To use global settings, the field should be left empty.

The "Unbilled Fee Mode" field contains the following values:

- "Charge Advance fee" – corresponds to the "N" value of the global parameter. "Advance Fee" will become effective according to settings in the instalment scheme.

- "Waive Unbilled Fee" – corresponds to the "Y" value of the global parameter. If "Advance Fee" must be waived when closing the plan, set the parameter value to "Y".
- "Charge All Unbilled Fee" – corresponds to the "A" value of the global parameter. All unpaid fees for a plan, including Advance Fee become effective for all cycles.
- "Charge Unbilled Fee for the Next Period" – corresponds to the "1" value of the global parameter. "Advance Fee" from the start of the current billing cycle to the payment date, and "Advance Fee" for the next instalment become effective.

This fee will become effective as a result. The remaining fee from the current banking date to the end of the current billing cycle is waived and the instalment plan will be given the "Closed" status.

See 6Configuration Examples, section "Closing a Plan" for the required setup.

5.15.2 Closing a Plan in the "Preview" Status

To close a plan in the "Preview" status, click on the [Actions] button in the "Instalment Plans for Approval..." form (Instalments →Instalments for Contracts → [Instalments] →[For Approval]) and select the "Close" item from the context menu.

5.15.3 Automatically Closing a Plan

An instalment plan is closed automatically during daily procedures. For contracts with delinquency and with active instalment plans, "Decisions" classifiers set up for instalment schemes are calculated (see the section "Configuring Automatic Closing of an Instalment Plan").

Depending on classifier values, an instalment scheme is either closed or remains open.

An instalment plan for a contract can be closed when an Event with the CLOSE_INST_PLANS=Y tag opens. To close certain plans for a contract, set the codes of these plans in the Event type (the *Service Code* field value of the corresponding instalment schemes). Using the CLOSE_BY_SERV_CODE tag. If the CLOSE_BY_SERV_CODE tag is not set, all instalment plans for the contract will be closed. See the description of tags in the section "Tags used when working with Events" of the document "Setup Tags".

5.15.4 Automatically Rejecting a Plan

A plan is automatically rejected in the following cases:

- A plan is rejected when a reversal is received for the document according to which the instalment plan was calculated. The plan is assigned the "Closed" status.
- A plan is rejected when an adjustment is received for the document according to which the instalment plan was calculated. The plan is assigned the "Closed" status. By default the plan is not recalculated. If the value of the global parameter INST_CREATE_ON_ADJUSTMENT is set to "Y", a new instalment plan will be created for the adjusted amount.

5.16 Automatic Early Payment with Recalculation of a Plan

To make automatic payment, do as follows:

- Set up the balance type that will be used to determine available finds in early repayment. Mark the templates of accounts that will be used for payment with this balance type (see the document "Balance Types"):
  - By default, the balance type with the code INST_ER is used.

    The INST_ER balance type is used as the default balance type both for scheduled early repayment and automatic early repayment (i.e. the same accounts are used for automatic and scheduled early repayment).
  - For automatic early repayment, a balance type can be configured that differs from the default balance type (a balance type with a code that differs from INST_ER). For example, if different accounts are used for automatic and scheduled early repayment, different balance types are configured for them. The code of the balance type set up for automatic early repayment (that differs from INST_ER) must be specified as the value of the global parameter INST_AUTO_ER_BAL or as the value of the tag INST_AUTO_ER_BAL in the *Special Parameters* field of the Accounting Scheme or in the financial institution's *Special Parms* field.

  If the default balance type is used (with the code ISNT_ER), additional settings with the Accounting Scheme or global parameter are not necessary.
- In automatic early repayment, limits can be set for the minimum amount available required for automatic repayment. I.e. repayment will be made if the amount available is more or equal to the specified amount. The minimum amount is set as the value of the INST_MIN_AUTO_ER_AMOUNT

tag in a Product's *Custom Data* field. For more information, see the section "Classifiers without a Fixed List of Values" of the document "Way4™ Client and Contract Classifiers".

- If the value of the global parameter INST_ADV_FEE_OPEN is "Y", early repayment is made if the amount in accounts from which payment is made is more than or equal to the amount of the fee from the start of the current billing period to the date of payment (Advance Fee). If the amount for early repayment is less than the "Advance Fee" amount, repayment is not made.
- In automatic partial early repayment, a new instalment plan can be calculated keeping the number of portions or size of portions from the original instalment scheme. To do so, set the AUTO_ER_KEEP contract custom parameter with one of the following values in the Product's *Custom Parms* field:
  - "T" – to keep the number of instalment periods.
  - "P" – to keep the instalment amount in an instalment plan.

The value of the AUTO_ER_KEEP parameter can be taken from a Product, contract, settlement contract, etc., depending on the settings of the contract's corresponding custom parameter (see the section "Contract Custom Parameters" of the document Way4™ Client and Contract Classifiers).

When the "Contracts – Daily Update" procedure is run, the amount on accounts with the INST_ER marker is used for payment (full or partial, depending on the amount).

- If amounts in accounts with the INST_ER tag are insufficient for full repayment, amounts in accounts with the INST_ER tag are matched with the set minimum amount of funds required for automatic repayment (see the parameter "INST_MIN_AUTO_ER_AMOUNT"). If the amount in accounts is less than this amount, an error message is displayed. If the amount in accounts is equal to or greater than this amount, partial repayment is made.
- In partial repayment, instalments from the old plan are assigned the "Revised" status. A new instalment plan is created (see the section "Partial Repayment").

The default order for repaying plans can be redefined with the custom procedure CUST_INSTL_AUTO_ER. By default, plans for repayment are sorted by the effective date of the plan's first portion (instalment plan's eff_date field). I.e. an instalment plan that became effective earlier will be repaid first.

The procedure for working with a plan in full repayment is described in the section "Full Repayment".

5.17 Automatic Early Repayment by a Document

For early repayment of a plan by a document (i.e. at the same time funds are transferred), the Service for early repayment must contain the INVOICE_ACTION=EARLY_REPAYMENT tag.

To pay a certain plan, the document must contain the INST_PLAN_IDT=<plan identifier (inst_chain_idt)> tag. If the tag is not present, all a contract's instalment plans will be paid according to the order in which they were created.

If the specified plan was not found or payment did not use the entire amount of the document, funds remain in the account. I.e the document is posted even if the plan is absent.

5.18 Activating an Instalment Plan in the "Inactive" Status

An instalment plan in the "Inactive" status created on the basis of an authorisation document can be automatically activated when a financial document is received (if the value of the global parameter INST_FIN_ACTION is "ACTIVATE").

To manually activate an instalment plan in the "Inactive" status, click the [Actions] button in the "Active Plans" form (see Fig. 48 in the section "Viewing Active Instalment Plans") and select the "Activate" context menu command.

When activating a plan, a check is made: the "Due Date" of plan instalments must be later than the current date. Otherwise, the plan cannot be activated.

If the INST_FIN_ACTION global parameter is set to "ACTIVATE_RECALC", when a financial document is received, an instalment plan is automatically **recalculated** and activated. The following checks are made: amount and tags of an authorisation and financial documents are compared, instalment amount (can be changed when rates are changed). If all amounts and tags match, and there are no portions to which the "Open" status is assigned immediately, a new plan will not be created, instead the plan created during authorisation will be activated. The following tags are compared during the check: INST_CODE, INST_NUM, INST_AMNT, SHIFT_NUM, SHIFT_ADD, SHIFT_DATE, INST_FREE_PERIOD, INST_FWAIVE_N, INST_IRATE, INST_IRATE_FREE, INST_FRATE, PORT_FRATE, INST_FTOTAL, PORT_FTOTAL. If discrepancies are found in tags or amounts, or the

plan was not created during authorisation or no authorisation was found, a new plan is created in the active status.

5.19 Approving an Instalment Plan in the "Preview" Status

Instalment plans created in the "Preview" status must be approved. System settings determine the creation of plans in this status (see the section "Configuring Global Parameters").

To approve an instalment plan, click the [Actions] button in the "Instalment Plans for Approval..." form (Instalments →Instalments for Contracts →[Instalments] → [For Approval]) and select the appropriate command from the context menu:

- "Approve" – approve an instalment plan created for a transaction automatically or manually.
- "Confirm Early Repayment" – approve a new plan created when partial early repayment has been made.
- "Confirm Changing Instalment Terms" – approve a new plan generated when changes have been made to the instalment plan.
- "Confirm Payment Holidays" – approve a new plan generated when payment holidays have been granted.

When an instalment plan is approved, the status (status of instalments) changes from "Preview" to "Waiting" or "Inactive". A plan's status after approval depends on the value of the global parameter INST_START_STATUS (see the section "Configuring Global Parameters".

When approving an instalment plan, a check is made: the "Due Date" of plan instalments must be later than the current date. Otherwise, the plan will not be approved.

5.20 Viewing the Instalment Plan History for a Contract

To view transactions for a contract for the current billing cycle, click the [History] button in the "Instalments for <contract name" form (see Fig. 38 in the section "Viewing Loan Data"). The "History for <contract name>" form will open, containing closed and fully paid instalment plans for a contract, as well as restructured instalment plans (plans in the "Revised" status, closed as the result of partial early repayment, changes to the instalment plan, payment holidays).

This form's fields and management elements are the same as those in the "Active Plans for Top Level <contract number>" form (see Fig. 48 in the section "Viewing Active Instalment Plans"), with the exception of the [Actions] button (this button is missing from the form for viewing the history).

6 Configuration Examples

6.1 Account Template Configurations

Examples of configurations for account template parameters to work with instalment loans are shown in the tables below.

Table 2. Account templates with the number of the subsidiary GL account corresponding to the Loan Balance account.

Account Type	Account Name	Code	Description
Principal Waiting	Principal Waiting	L1	Total amount of debt waiting for payment to become effective.
Principal Open	Principal Open	L2	Principal effective for payment.

Table 3. Account templates with the number of the subsidiary GL account corresponding to the "Interests" account.

Account Type	Account Name	Code	Description
Fee Int Open	Fee Int Open	-1	Fee with the "Interest" payment method, effective for payment.

Table 4. Account templates with the number of the subsidiary GL account corresponding to the "Fee" account.

Account Type	Account Name	Code	Description
Fee Equal Open	Fee Equal Open	-3	Fee with the "Fee" payment method, effective for payment.

Table 5. Account templates with the number of the subsidiary GL account corresponding to the "Interests Overdue" account.

Account Type	Account Name	Code	Description
Fee Int OVD	Fee Int OVD	!I1	Fee with the "Interest" payment method, assigned to overdue.

Table 6. Account templates with the number of the subsidiary GL account corresponding to the "Fee Overdue" account.

Account Type	Account Name	Code	Description
Fee Equal OVD	Fee Equal OVD	!I3	Fee with the "Fee" payment method, assigned to overdue.

Table 7. Account templates with the number of the subsidiary GL account corresponding to the "Loan Interest Revenue" account.

Account Type	Account Name	Code	Description
Fee Waiting	Fee Waiting	Br1	Total amount of the fee and interest charged as part of am instalment waiting to become effective. Each month instalment fee and interest amounts are transferred from this account to the "Fee Open" and "Interest Open" accounts, respectively.

Table 8. Account templates with the number of the subsidiary GL account corresponding to the "Penalty Revenue" account.

Account Type	Account Name	Code	Description
Penalty Instalment	Penalty Instalment	S1	Penalties charged for overdue principal..

6.2 Configuring Recording of Pending Fees

The total amount of reimbursement scheduled to be paid according to a plan should be assigned to the "Fee Waiting" account (see the section "Account Template") with the bank revenue account number. To do so, the following configurations should be made:

- If only one fee type is used in the instalment plan:
  - Setup using Events:
    - Create an Event and register it in the accounting contract Service Package (see Fig. 61):

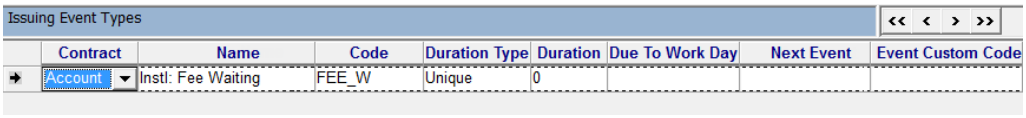

Fig. 61. Registering an Event type

- Configure opening the Event when an instalment plan is generated, when the total fee portion is generated with the "Waiting" status (see Fig. 62). In the example shown in Fig. 62, "TMPLINV1" is the instalment scheme code.

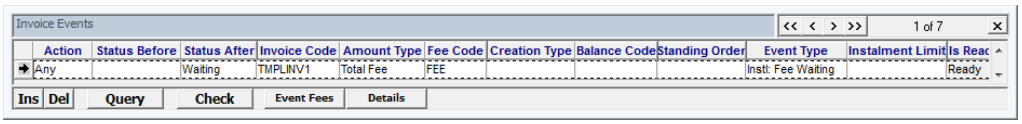

Fig. 62. Configuring rules for opening an Event

- In the "Fee Waiting" account, set up a payment order that will activate when this Event opens, see Fig. 63.

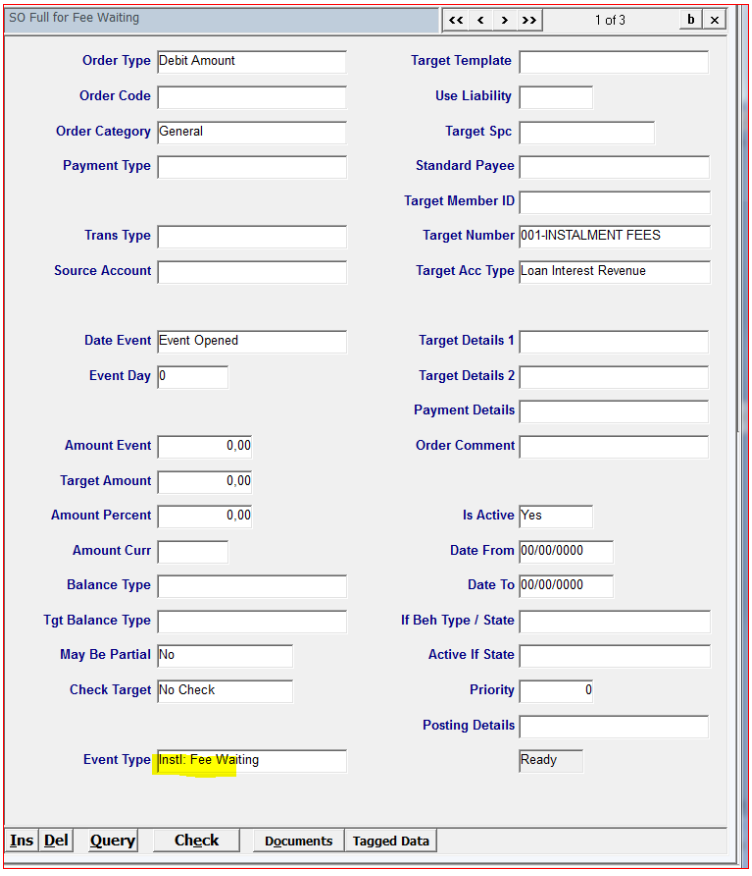

Fig. 63. Payment order in the "Fee Waiting" account

- Setup without using Events:
  - Configure a payment order in the "Fee Waiting" account (see Fig. 63, without using an Event).

- For this payment order to be activated when an instalment plan is generated, when the total fee portion is generated with the "Waiting" status. Specify this order directly in the "Invoice Events' form in the *Standing Order* field for the corresponding record (see Fig. 62).

- If each instalment portion contains several fees that are recorded in different accounts (for example fees with different means of payment: a fee that is distributed in equal portions in each instalment (Equal Portions) and a fee paid in decreasing portions as the loan is repaid).
  - Setup with Events.
    - Create the same number of Event types as the number of fees and register them in the accounting contract Service Package (see Fig. 64).

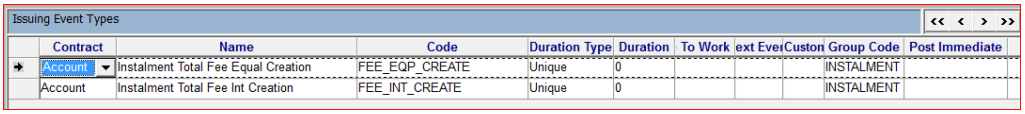

Fig. 64. Registering Event types

- Set up opening the Event when an instalment plan is generated, when the total portion of the fee with the corresponding payment method is generated (see Fig. 65). In the example shown in Fig. 65, "INSTL" is the instalment scheme code (Invoice Code).

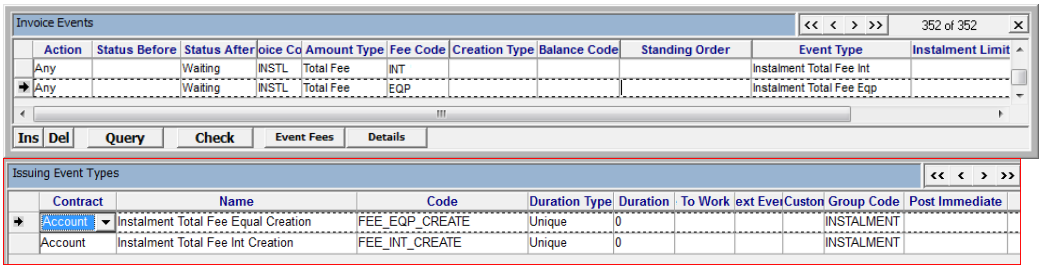

Fig. 65. Configuring rules for opening Events

If settings have been made in Way4 to create a plan during authorisation, add rules for opening an Event when the status changes from "INACTIVE" to "WAITING".

- Set up payment orders in the "Fee Waiting" account that activate when these Events open (see Fig. 66, Fig. 67).

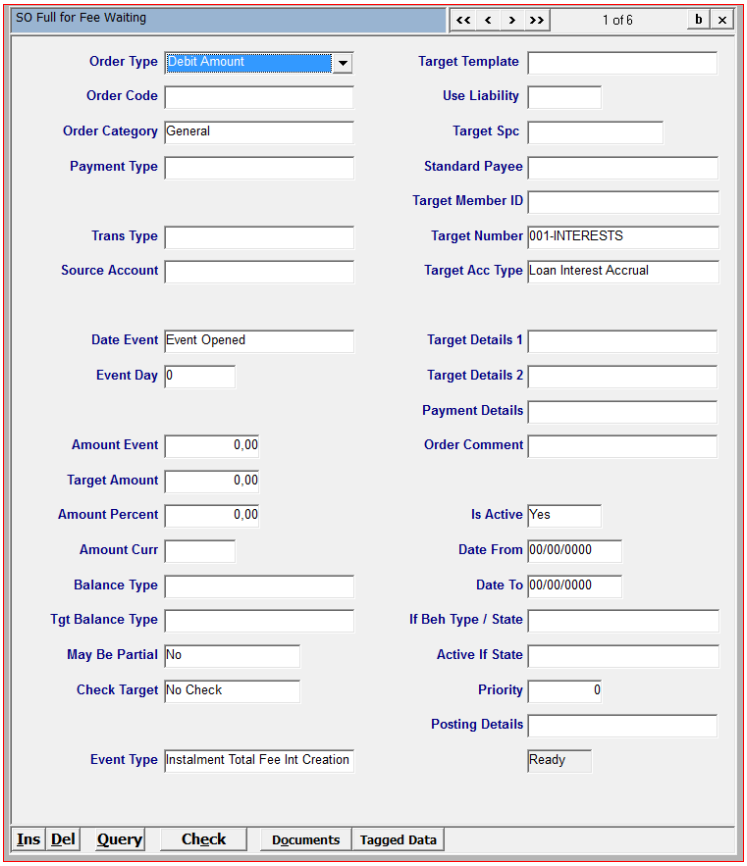

Fig. 66. Payment order in the "Fee Waiting" account to create the total portion of a fee with the "Interest" type

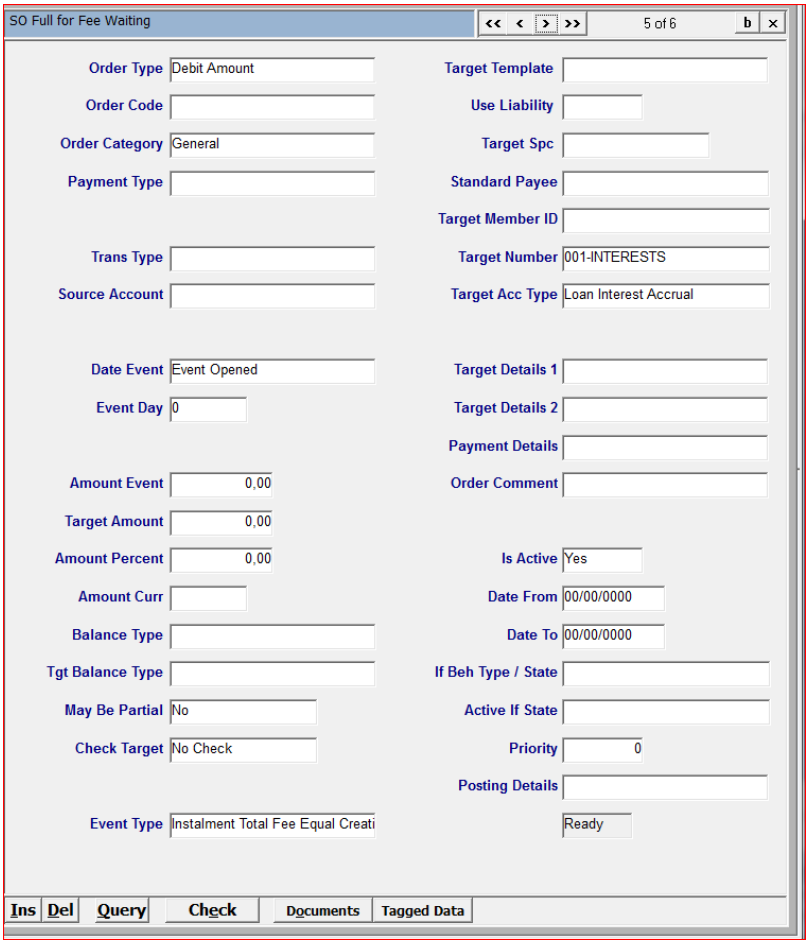

Fig. 67. Payment order in the "Fee Waiting" account to create the total portion of a fee with the "Fee" type

- Setup without Events:
  - Configure payment orders in the "Fee Waiting" account for the aforementioned cases (see Fig. 66, Fig. 67, without using Events).
  - For these orders to be activated when an instalment plan is generated, when the total portion of the fee with the "Interest" and "Equal Portions" type with the "Waiting" status is generated (see Fig. 65). Specify this order directly in the "Invoice Events" form in the *Standing Order* field for the corresponding records.

6.3 Generating an Instalment Plan according to an Authorisation Document

- Configuration of global parameters for generating an instalment plan according to an authorisation document is shown in Fig. 68.

Additional Global Parameters

Name	Value
INST_AUTH_ACTION	CREATE_INACTIVE
INST_FIN_ACTION	ACTIVATE

Fig. 68. Global parameters for generating an instalment plan according to an authorisation document

- In the parameters of the corresponding Service, specify the tag INST_PLAN_TO_ADDENDUM;, see Fig. 69.

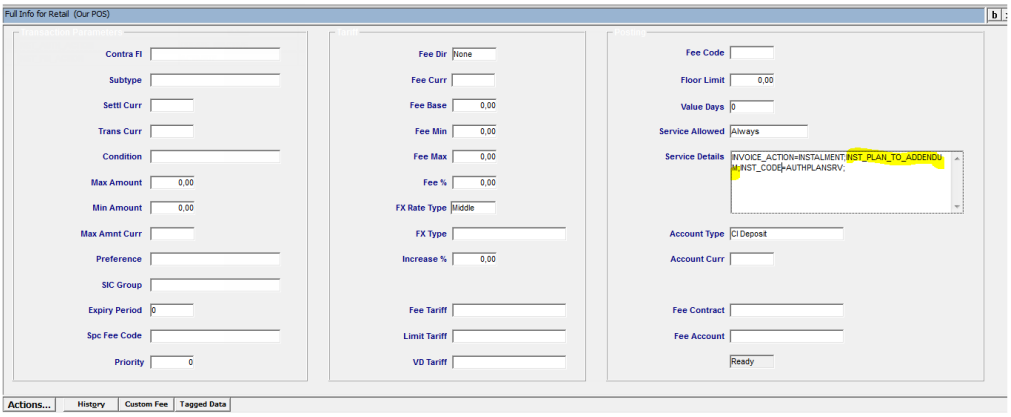

Fig. 69. Configuring a Service for generating an instalment plan according to an authorisation document

During authorisation, a plan will be created in the "Inactive" status and will be activated when the financial document is posted.

6.4 Generating Account Activity

This section provides an example of settings for transferring to effective payment. Transferring to overdue is done in the same way as transferring to effective payment.

- Transferring loan debt to effective payment:
  - Create an Event (see Fig. 70) and register it in the accounting contract's Service Package.

ssuing Event Types

Contract	Name	Code	Duration Type	Duration	To Work	ext Evei	Custon	Group Code	Post Immediate
Account	Instalment Principal Open	PRINCIPAL_OPEN	Unique	0				INSTALMENT	Post Later

Fig. 70. Creating an Event type

In the example in Fig. 70, the marker "Post Later" is set for processing the Event in the Contracts Daily Update procedure. The Event processing date can be configured using the POST_DUE tag in the *Special Parms* field (see Fig. 71).

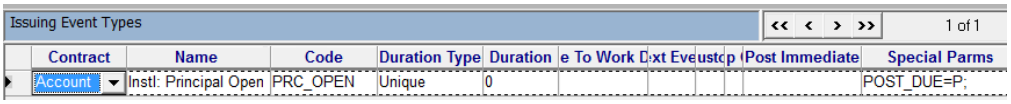

Fig. 71. Registering an Event type, the POST_DUE tag

- Configure rules for opening the Event (see Fig. 72).

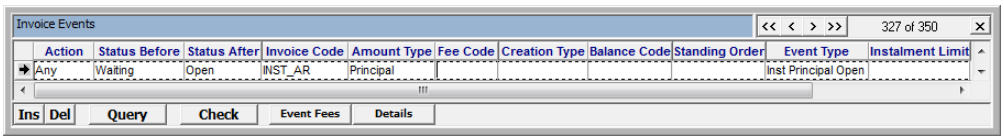

Fig. 72. Configuring rules for opening an Event

- Configure a payment order in the "Principal Waiting" account that will activate when this Event opens (see Fig. 73).

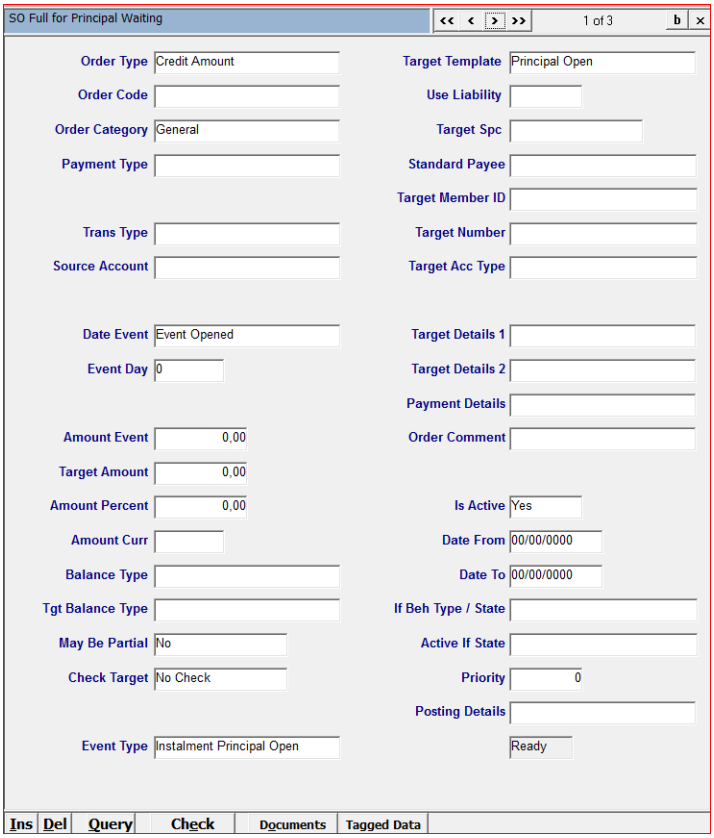

Fig. 73. Payment order in the "Principal Waiting" account

A payment order can be configured without using an Event:

- Configure payment orders in the "Principal Waiting" account (see Fig. 73, without specifying the Event in the *Event Type* field).
- Specify this payment order directly in the "Invoice Events" form in the *Standing Order* field for the corresponding record (Fig. 72).

- Accrual of fees (interest) and transferring the fee to effective payment – transfer of funds between the "Fee Waiting" and "Fee Open" accounts:
  - Create an Event (see Fig. 74) and register it in the accounting contract's Service Package.

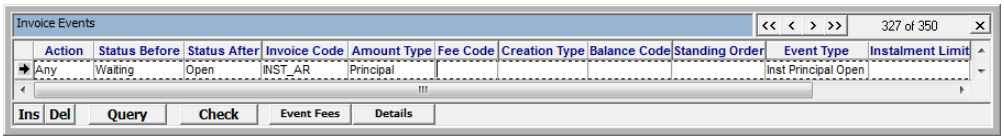

Fig. 74. Creating an Event type

  - Configure rules for opening an Event (see Fig. 75).

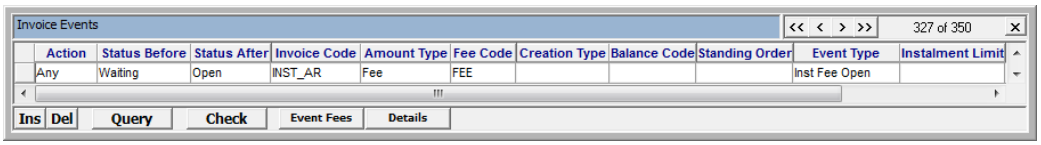

Fig. 75. Configuring rules for opening an Event

  - Set up a payment order in the "Fee Waiting" account that activates when this Event opens, to accrue (make effective) fees (see Fig. 76).

Fig. 76. Payment order in the "Fee Waiting" account

A payment order can be configured without using an Event:

- Configure payment orders in the "Fee Waiting" account (see Fig. 76, without specifying an Event in the *Event Type* field).
- Specify this order directly in the "Invoice Events" field in the *Standing Order* field for the corresponding record (Fig. 75).

- Transferring to overdue is done when closing the banking date set by the DUE_DATE parameter. The settings are the same as for transferring to effective payment.

  Transferring to overdue can be done from the "Open" and "PaidPart" statuses, therefore several rules for transferring to overdue should be set using Events (see Fig. 77) or directly using payment orders (in the *Standing Orders* field).

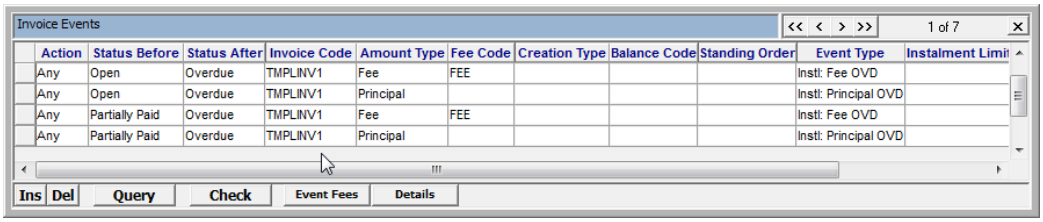

Fig. 77. Configuring rules for opening Events

An Event's processing date (and the date of the entry, respectively) can be configured using the POST_DUE tag in the *Special Parms* field.

When accruing a fee at the end of a calendar month (end of a billing cycle), it may become necessary to reflect the fee for a new cycle on one account and transfer the fee to payment for a past cycle – on a different account. To do so, set up an intermediate account with the "End Cycle Due" value of the *Due Type* parameter and to this account transfer the fee with the status "Open" and then using due normalization settings transfer the total amount to the "Fee Open"/"Interest Open" account.

6.5 Closing a Plan

To close a plan, the following settings are required:

- Create Event types with the predefined codes <Invoice Code>_FEE_CLOSE and <Invoice Code>_PRINCIPAL_CLOSE (see Fig. 78). These Events must be registered in the accounting contract's Service Package.

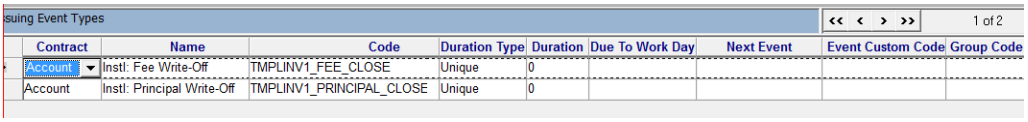

Fig. 78. Creating Event types for closing an instalment plan

- When Events open, they transfer principal and fee amounts remaining in the "Waiting" status, subtracting fees on the closing date.
- According to these Events, payment orders can be set up that transfer the remaining funds of the principal and fees, for example, for waiving – to a special bank contract. The fee amount on the current day is shown in the "Fee Open" and/or "Int Open" account (according to settings).

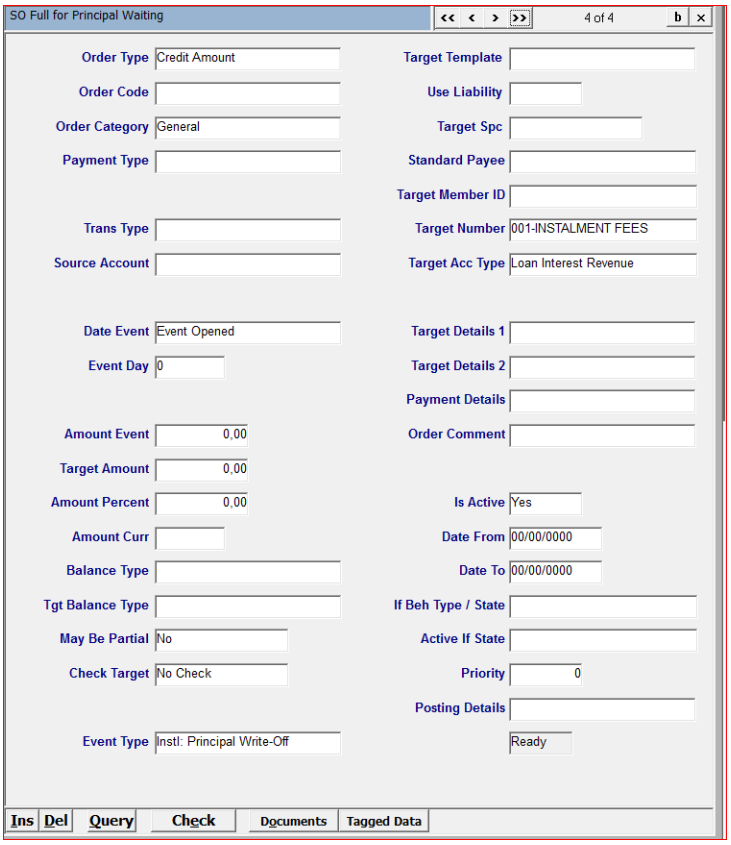

Fig. 79. Payment order for transferring the remaining funds of the principal

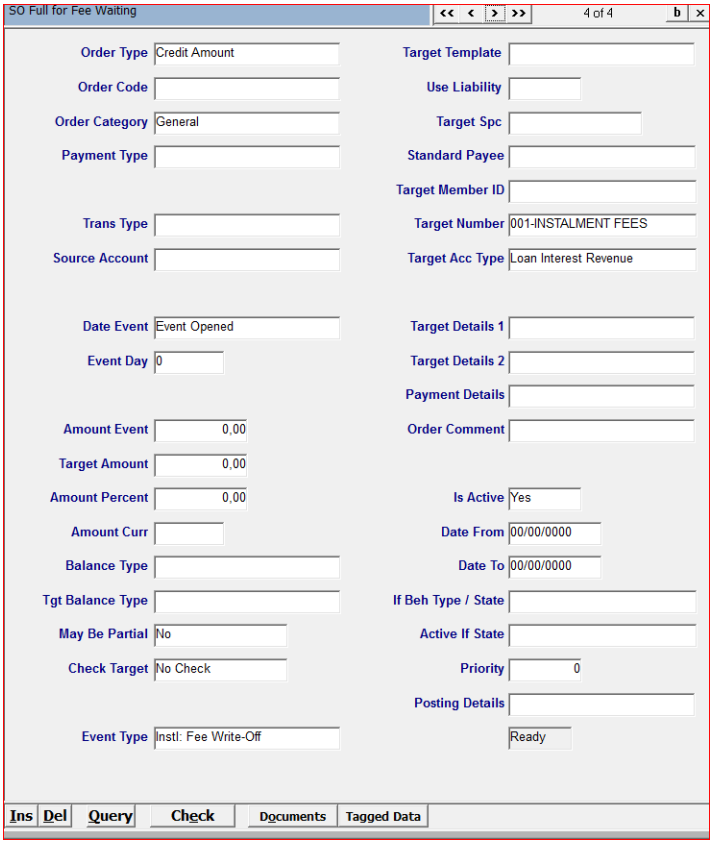

Fig. 80. Payment order for transferring the remaining funds of a fee

- All portions of the plan, including those that are effective (in the "Open" status) and overdue (in the "Overdue" status) will be assigned the "Closed" status.

7 Charging Fees

Starting from version 03.42.10, the approach has changed for charging fees when payment deferrals are granted in "By Trans Date" mode (mode for calculating the effective date of instalments; see the description of the *Billing Mode* field).

In "By Trans Date" mode, if no payment deferral is granted, the first instalment of the principal becomes effective on the day of the transaction. The fee portion becomes effective together with the first instalment of the principal if the fee is calculated according to the "Flat Fee" or "Annual Fee" scheme. If a fee is calculated according to an "Interest..." scheme, the fee will be null for this first period (since the billing period will be equal to null) and, respectively, the fee will not become effective together with the first instalment of the principal.

If fee deferral is granted in "By Trans Date" mode (see the description of the *Plan Shift* field):

- When the value of the *Shift Fee Charge Mode* parameter is "Charge Fees Every Month", a fee for the deferral period is charged (see Table 9, Table 10):
  - If the *Plan Shift* parameter is assigned the value "1", the first instalment of the principal becomes effective one month after the transaction date. The fee portion for the first deferral period becomes effective on the date the transaction is made if the fee is calculated according to the "Flat Fee" or "Annual Fee" scheme. If the fee is calculated according to an "Interest..." scheme, the fee amount for this first deferral period will be null (since the billing period will be equal to null) and, respectively, the fee will not become effective together with the first instalment of the principal.
  - If the *Plan Shift* parameter is assigned the value "2" (or more), the first loan instalment will be effective two months (or more, according to the specified shift). The fee amount becomes effective for each deferral period (the first fee portion becomes effective on the day of the transaction, the second portion, after one month, etc.). A fee for the first deferral period becomes effective if the fee is calculated according to the "Flat Fee" or "Annual Fee" scheme (like *Plan Shift*=1, see above).

    When the value of the *Shift Fee Charge Mode* parameters is "Charge Fees Every Month", the total fee amount increases (depending on the number of deferral periods) for the "Annual Fee" scheme and for "Interest" schemes. The total fee amount does not change for the "Flat Fee"

schemes, but the amount of a fee portion depends on the number of deferral periods. For "Flat Fee", distribution of the fee by instalments is made in equal portions in each instalment.

Until version 03.42.10, in "By Trans Date" mode, no fee was charged for the first deferral period. Starting from version 03.42.10, the fee for the deferral periods in "By Trans Date" mode and in "By Billing" mode is calculated per scheme (see Table 9). To restore previous system behaviour, set the "Include Fees in First Portion Fees" value in the *Shift Fee Charge Mode* field of the instalment scheme.

- When the value of the *Shift Fee Charge Mode* parameter is "Include Fees in First Portion Fees", a fee for the deferral period becomes effective starting from the first instalment of the principal, and:
  - With this setting, the total fee amount increases (depending on the number of deferral periods) for the "Annual Fee" scheme and for "Interest" schemes. The total fee amount does not change for the "Flat Fee" scheme.
  - Note that for the "Annual Fee" scheme, the fee for the deferral period does not become effective in full together with the first instalment of the principal. All portions of the plan's fee increase proportionally.

For "Interest 360" schemes ("Interest", "Interest -360", "Interest with USE_MONTH_WEIGHT = N", "Interest with USE_MONTH_WEIGHT = Y"), the fee for the first instalment is not calculated on the basis of the daily interest rate in the following cases:

- When an instalment plan is first created for a transaction ("TransDate" mode), when the value of the *Plan Shift* field is "1" and the value of the *Shift Fee Charge Mode* field is "Include Fees in First Portion Fees" (the "Advance Fee" for the period payments are shifted for the principal is taken in the first instalment that becomes effective). In this case, the first period is considered equal to one month.
- In initial and secondary creation of an instalment plan, when there is a shift in the *Plan Shift* field (*Plan Shift*>0) and when the value of the *Shift Fee Charge Mode* field is "Do Not Charge Shift Fees (an "Advance Fee is not taken for the period of the shift). In this case, the first period is considered to be equal to one month.

Table 9. Calculating fees for a deferral period in "TransDate"/"Billing" modes, when the value of the Shift Fee Charge Mode parameter is "Charge Fees Every Month" and the value of the Plan Shift parameter is "1"

Calculation Scheme	Total remuneration amount	Fee for the first deferral period, becoming effective on the transaction date	Fee instalment as part of the first plan instalment
Annual Fee	S*R/100*(N +1)/12	S*R/(12*100)	S*R/(12*100)
Flat Fee	S*R/100	S*R/100*1/(N+1)	S*R/100*1/(N +1)
Interest if the MONTHLY_INTEREST parameter is not used	Calculated according to an annuity formula (see Table 1).	0	S Rem*R/(12* 100)
Interest, if the MONTHLY_INTEREST parameter is used	Based on calculation of a daily interest rate	0	Based on calculation of a daily interest rate
Interest 365 etc.	Based on calculation of a daily interest rate	0	Based on calculation of a daily interest rate

Table 10. Calculating fees for a deferral period in "TransDate" mode when the value of the Shift Fee Charge Mode parameter is "Charge Fees Every Month" and the value of the Plan Shift parameter is "2"

Calculation Scheme	Total remuneration amount	Fee for the first two deferral periods	Fee portion as part of the first plan instalment
Annual Fee	S*R/100*(N +2)/12	S*R/(12*100)	S*R/(12*100)
Flat Fee	S*R/100	S*R/100* 1/(N+2)	S*R/100* 1/(N+2)
Interest, Interest if the MONTHLY_INTEREST parameter is not used	Calculated according to an annuity formula (see Table 1).	Based on calculation of a daily interest rate	S Rem*R/(12* 100)
Interest, if the MONTHLY_INTER	Based on calculation of a daily interest rate	Based on calculation of a daily interest rate	Based on calculation of

Calculation Scheme	Total remuneration amount	Fee for the first two deferral periods	Fee portion as part of the first plan instalment
EST parameter is used			a daily interest rate
Interest 365 etc.	Based on calculation of a daily interest rate	Based on calculation of a daily interest rate	Based on calculation of a daily interest rate

Table 11. Calculating fees for a deferral period in "TransDate" mode when the value of the Shift Fee Charge Mode parameter is "Include Fees in First Portion Fees" and the value of the Plan Shift parameter is "1"

Calculation Scheme	Total remuneration amount	Fee for the first deferral period, becoming effective on the transaction date	Fee portion as part of the first instalment
Annual Fee	S*R/100*(N +1)/12	None	S*R/100*(N +1)/(12*N)
Flat Fee	S*R/100		S*R/100*1/N
Interest, if the MONTHLY_INTEREST parameter is not used	Calculated according to an annuity formula (see Table 1).		S Rem*R/(100* 12)
Interest if the MONTHLY_INTEREST parameter is used	Based on calculation of a daily interest rate		Based on calculation of a daily interest rate
Interest 365 etc.	Based on calculation of a daily interest rate		Based on calculation of a daily interest rate

The following notation is used in the tables:

S – principal amount.

A – amount of one instalment.

S_{Rem} – remaining principal.

N – number of instalments (portions) into which the loan is divided.

R – annual interest rate (in %).