



# OPENCBS User Guide

Adaptive, open source software for microfinance

## Updated for 14.14

### *Preliminary info:*

- This guide is a reference for the free core software OPENCBS and is the only document for that purpose.
- It gives an introduction to the modules and services that OPENCBS sells.
- We recommend you follow along with this guide when first using OPENCBS. It is designed to give you a comprehensive idea of how the software works in the shortest amount of time.
- You will need the annexes to perform a complete implementation and configuration.
- Our forum ("opencbs.freeforum.com") may also be useful, especially for common troubleshooting issues. Search previous threads or submit your own questions to the community.
- To contact us, send an email to [contact@opencbs.com](mailto:contact@opencbs.com) or Skype us at info.opencbs.

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# 1. Get started

## 1.1 Download & install OPENCBS

Download the “.msi” file from the following address:

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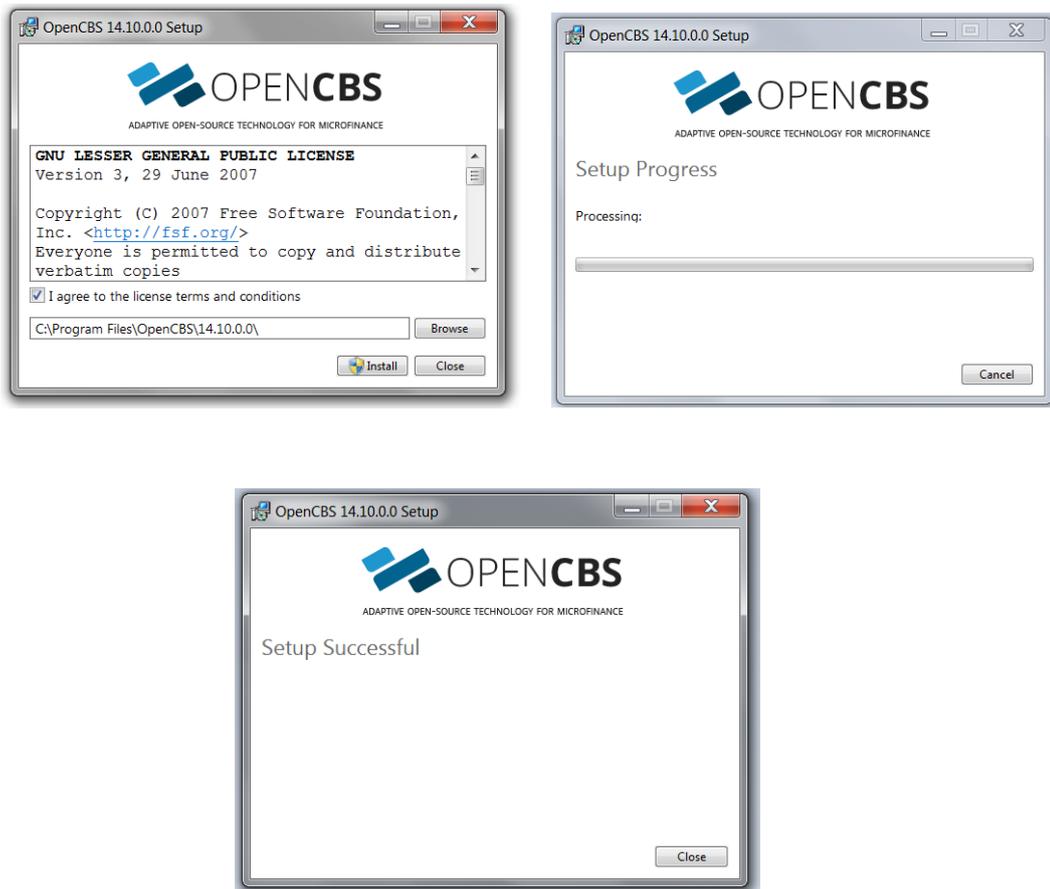
<http://sourceforge.net/projects/OPENCBS/files/latest/download>.

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*If you are using a 32-bit machine (x86), please follow this link:*

<http://sourceforge.net/projects/opencbs/files/opencbs-14.10/opencbs-14.10.835.e608813-release-x86.exe/download>

Once downloaded, click the .exe to launch the setup and follow the default installation of the system:



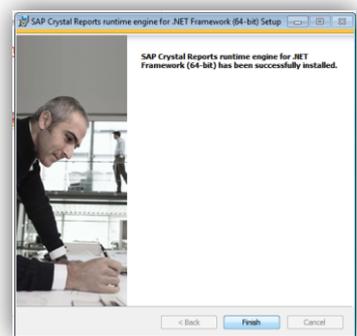
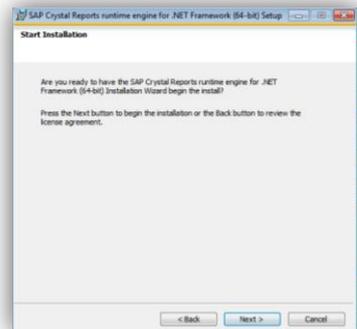
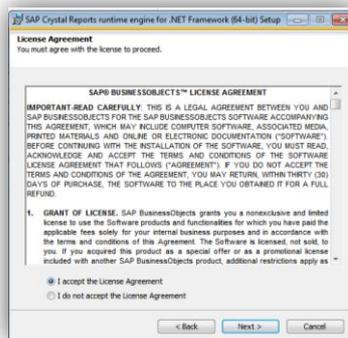
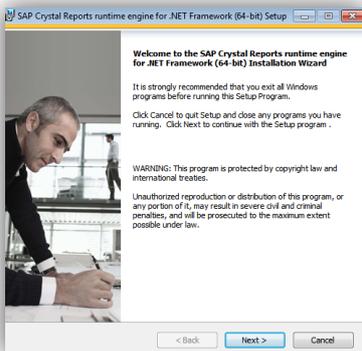
## 1.2 Download Crystal Reports

Crystal Reports is not strictly necessary to run OPENCBS, but it will allow you to export ready-to-print forms and reports. Excel and Word forms and reports are also available. If you don't think you need it now, go to 1.3 "Start OPENCBS". Crystal Report Reader can be downloaded for free from the following links:

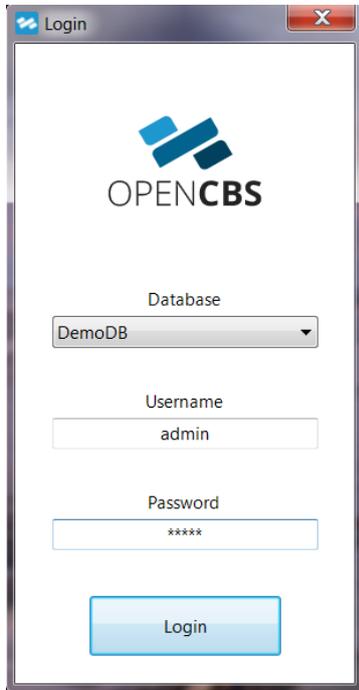
[Crystal Reports Viewer 2013 x64](#)

[Crystal Reports Viewer 2013 x86](#)

Make sure you download the version required by your operating system (x64 or x86). Once downloaded, unzip it and launch the setup (click on the .exe), then follow the default installation (see the screenshots below). No product ID is required because the software is free. However, if you want to create your own reports, you will need Crystal Reports Creator available at the following address: <http://www54.sap.com/solution/sme/software/analytics/crystal-reports/index.html>



## 1.3 Start OPENCBS



The screenshot shows a web browser window titled "Login". At the top center is the OPENCBS logo. Below the logo is a "Database" dropdown menu with "DemoDB" selected. Underneath are "Username" and "Password" text input fields. The "Username" field contains "admin" and the "Password" field contains "\*\*\*\*\*". A blue "Login" button is positioned at the bottom of the form.

Launch OPENCBS. If it is the first time you have done so, it should automatically display “DemoDB”, a test database. If not, open the drop-down list under Database and click on DemoDB.

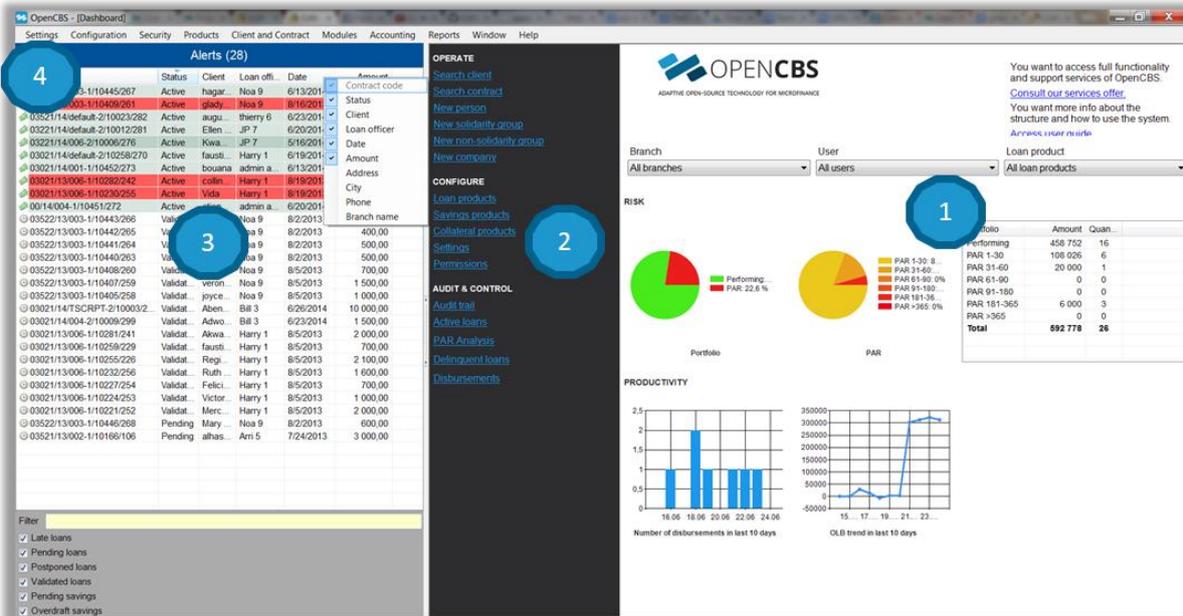
Enter **“admin”** for username and **“admin”** for password, and click **“Login”**.

The system is now ready to go.

*Once you have configured your default database, the launch process will be the same, but it will automatically show your work database. The databases can be stored locally (like DemoDB) or on an SQL Server instance accessible from multiple computers. You can learn more about this in 10.1.3 Database Control Panel (p. 73) and 11. SQL Server (p. 86).*

## 2. First steps

### 2.1 Interface



1. **Operations Dashboard.** Gives key performance indicators on risk and productivity for all or part of the loan portfolio.
2. **Fast menu access.** Direct links to the most commonly used parts of the system.
3. **Alert window.** Displays and gives access to all the loans and savings requiring specific attention.
4. **Top menu bar.** Allows the user to access the whole system. Menu items are organized in this manner:
  - a. **Configuration tabs:**
    - i. **Settings.** General system parameters that are usually configured upon initial setup and are rarely modified afterwards. They are configured to the laws and regulations of the region where the company operates.
    - ii. **Configuration.** Includes settings more specific to the institution or office using the system.
    - iii. **Security.** Where roles and user profiles are defined.
    - iv. **Products.** The most important step of system configuration. Here you configure your loans, savings and collateral products.
  - b. **Client and contract.** Here you can create and search for every type of contract and client and also reassign contracts from one user to another.
  - c. **Extensions.** Here you can find all available software extensions. Extensions that are included in the free version are limited in functionality. Full functionality for extensions can be purchased by contacting our commercial team.
  - d. **Accounting.** You can manually configure your accounting rules in the free version or access a preconfigured integrated accounting module if one has been developed for you by our team.
  - e. **Reports.** The free version of OPENCBS includes standard reports that can be exported to both Crystal Reports and Excel.

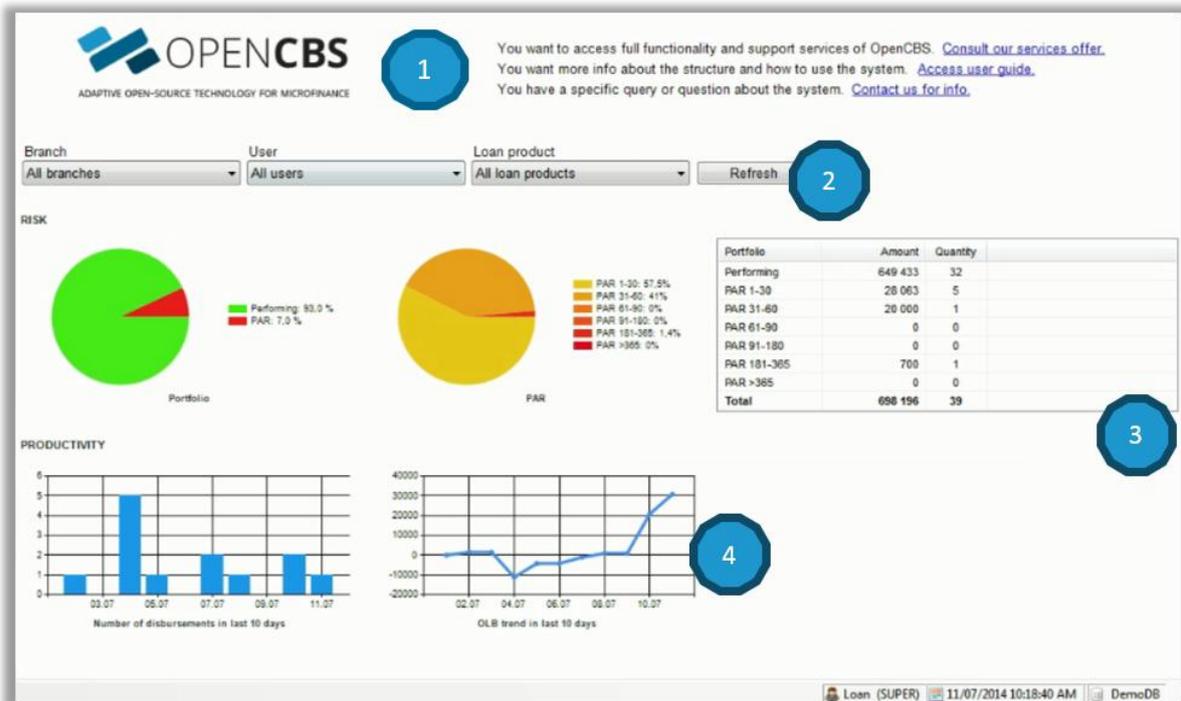
## 2.2 Dashboard

### 2.2.1 Purpose

The dashboard's primary role is to give to loan employees a straightforward overview of key performance indicators related to the portfolio they supervise.

Using filters, the dashboard also allows supervisors or managers to simply and quickly review the performance of different offices, employees or loan products they oversee.

### 2.2.2 Description and user guidance



The dashboard includes:

1. **Header.** The OPENCBS logo and links to useful services.
2. **Filter.** Filter the data displayed by branch, user and loan product. Use the filter by:
  - a. Refresh after selecting one specific portfolio portion.
  - b. Combine filters to search more accurately. Note: You cannot combine *Branch* and *User* because users are not organized by branch.
3. **Risk section.**
  - a. 1<sup>st</sup> Chart. Displays the proportion (in amount) of the late portfolio (in red) in comparison to one that is performing (in green).
  - b. 2<sup>nd</sup> Chart. Displays portions of the late portfolio defined by ranges. Please note that these ranges can be modified in the database by OPENCBS upon request.
  - c. Table. Details the amount per different delinquency ranges as well as the number of late clients these amounts represent.
4. **Productivity section.**

- a. 1<sup>st</sup> Graph. The number of disbursements performed in the previous 10 days for the selected portion of the portfolio. If nothing appears, it means nothing has been disbursed in the last 10 days. In case disbursements did occur, blue bars will appear corresponding in height to the number of disbursements.
- b. 2<sup>nd</sup> Graph. The evolution of the portfolio size (OLB) in the last 10 days. It starts at 0 and rises or decreases depending on the growth or decline of the portfolio size. It calculates disbursements minus capital repaid. In addition to the first graph, the second gives a clearer idea of the actual growth performance of the portfolio, as often big institutions actually disburse quite a bit while decreasing the sizes of their portfolios.

## 2.3 Alert System

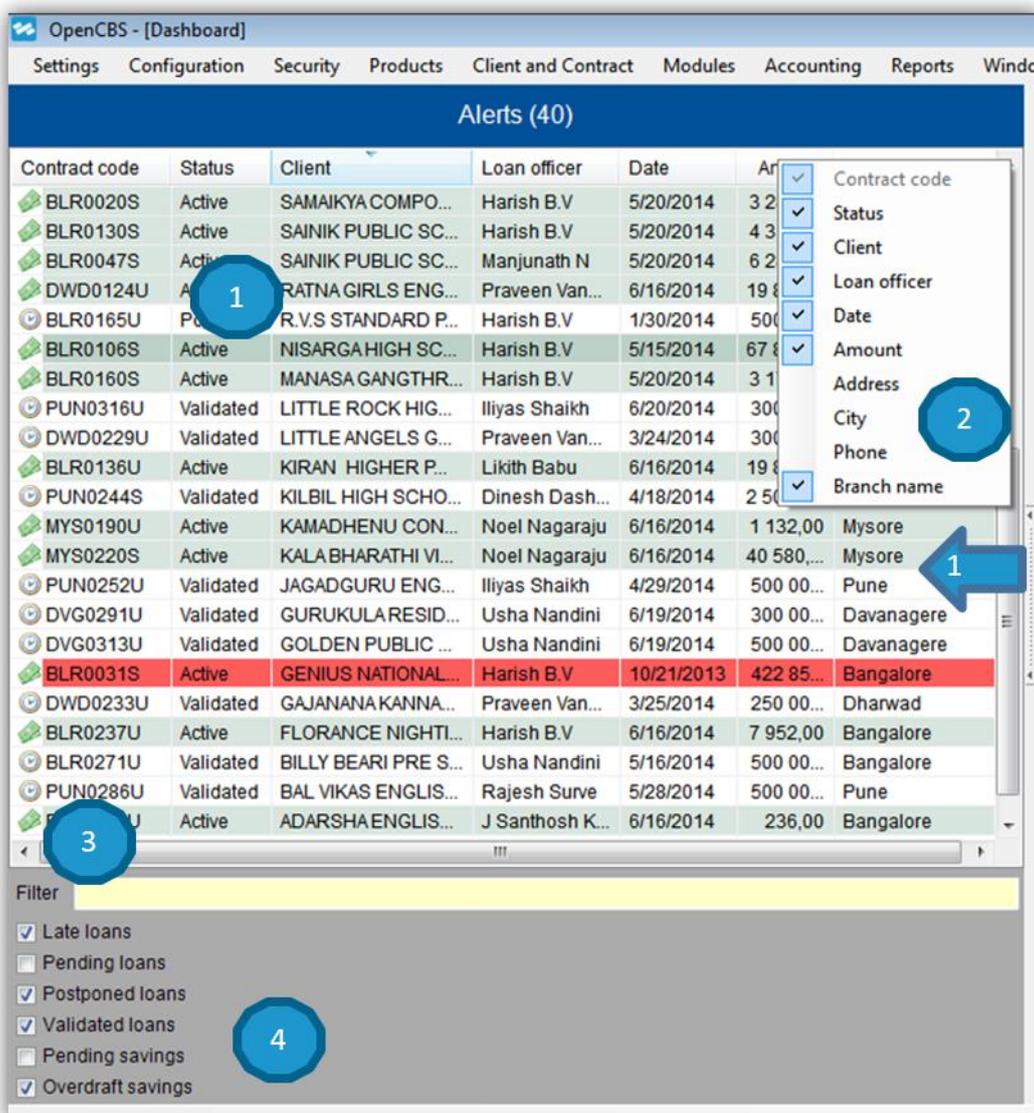
### 2.3.1 Purpose

The role of the alert system is to notify the user of all contracts that require immediate attention. Details:

- Late loan contracts in need of careful attention.
- Loan contracts left in a temporary status:
  - Pending
  - Validated
  - Postponed
- Savings contracts created but still pending.
- Overdraft savings to be closely monitored.

This section is designed to enable operations employees to save time when performing actions on contracts.

### 2.3.2 Description and user guidance



1. The loan and savings contracts are displayed line by line. You can see a contract’s details by clicking on one. You can hide or unhide the window by clicking on the small bar on the right side of the window and dragging it in the direction that the blue arrow points.
2. You can select the columns you want to appear in this list. You may choose between 10 information fields related to contracts.
3. The filter located just below the displayed contracts enables you to search by contract code, client name and loan officer name.
4. The bottom section allows you to filter the type of contracts you want to see by ticking or un-ticking the options as you wish.

## 2.4 Configuration overview

Configuration is a lengthy but important process. We suggest you have a sufficient understanding of the system before beginning a complete configuration. The DemoDB is preconfigured, and even if you are trying the software with an empty database, you can use the software immediately while all options are set to default.

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To perform a complete configuration, see [10. System configuration \(p.69\)](#).

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To begin with, you may want check out [10.1.3 Database control panel](#), [10.1.4 Change application date](#) and [10.1.5 Language](#), as these are useful settings for testing purposes (p. 73).

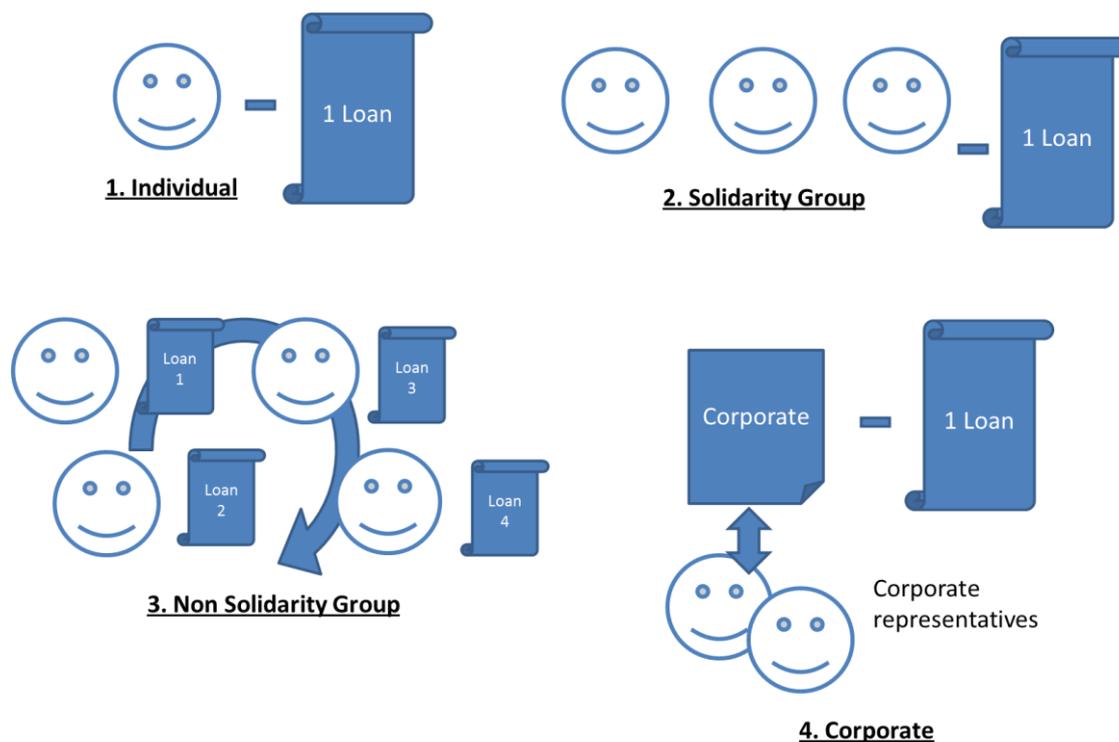
## 3. Client mapping (Know-Your-Customer)

### 3.1 Individual, Solidarity Group (or simply “Group”), Non-Solidarity Group (NSG) and Corporate

You can access client data through the tab in the top menu bar called “Client and contract”, or from the Dashboard menu on the left of the screen. Your options will be to “Create client/group” or “Search client”.

OPENCBS can track four (4) different types of clients:

1. **Individual clients.** One physical person to whom you are providing loan and/or savings products.
2. **Solidarity Group.** A group of individuals to whom you are providing products. The contracts are not given to specific members of the group, but to the group as whole. With loans for example, repayments are always made in the name of the whole group. It is however possible to note what portion of the product falls to which member.
3. **Non-Solidarity Group.** A group of individuals bound together by agreement, but who receive products individually. This section can also be described as a batch contract management section.
4. **Corporate.** This is when you provide loan or savings products to a legal entity. The legal entity is connected to individuals who are the corporate representatives of the legal entity.



### 3.2 Data fields

Each type of client has different default data fields:

#### 3.2.1 Individual clients

1 Ruth ASHEFIA - 03021/13/006-1/10232/256

2

3

4

5

6

Name	Group type	Establishment date	Joined date	Left date
Blessed Mogpa Ladies	NSG	5/23/2013	7/23/2013	

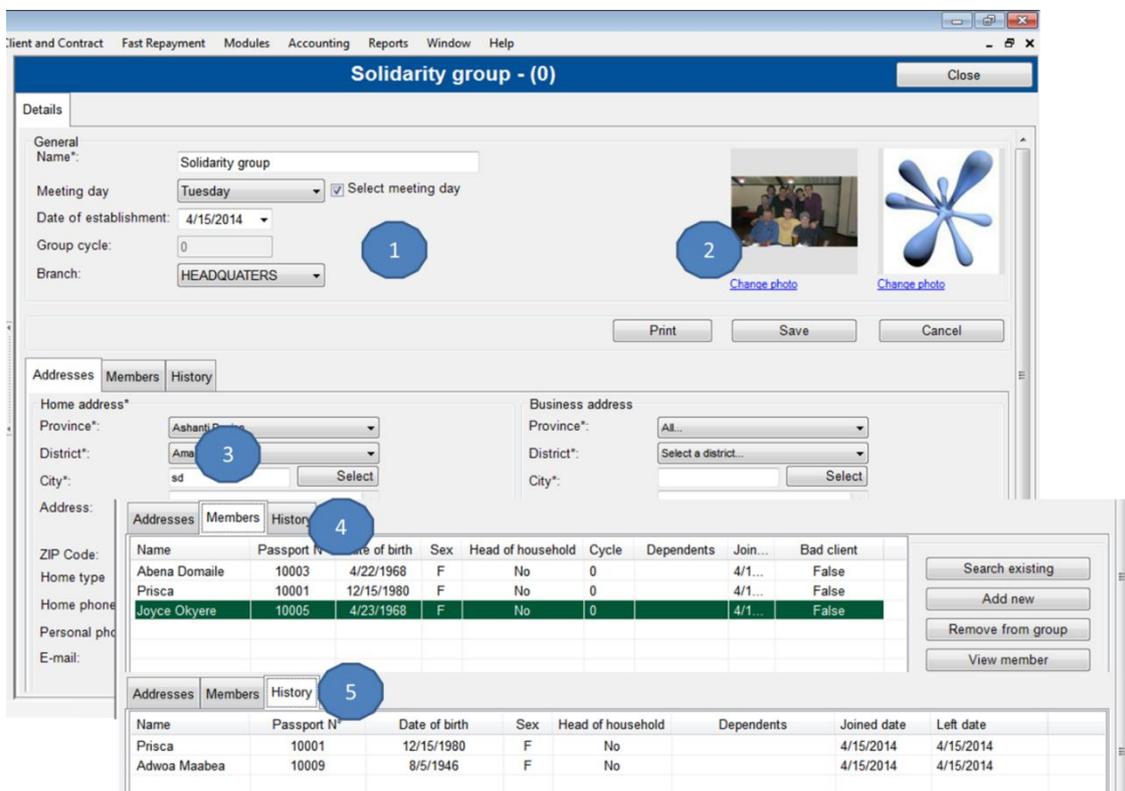
lat: 52,052490476001  
lng: 130,4296875  
GoogleMap

Default individual client data fields include:

1. Client profile data fields
  - First name
  - Last Name
  - Date of birth
  - Gender
  - ID Number
  - Economic activity
  - Loan Cycle (Automatically calculated)
  - Head of household. (Yes/No)
  - Place of birth
  - Father's name
  - Citizenship
  - Branch
2. Two (2) Pictures
3. Primary and secondary address fields
  - Province, District, City, Address
  - Zip code
  - Home type
  - Home phone
  - Personal phone
  - Email
4. Group to which the individual belongs
5. Client location (See 8.1 "Client location" for more information)
6. Print option allowing you to print clients' personal information on single page

Mandatory fields are marked with asterisks. Click the Save/Update button to save what you have entered. After saving the contract, a tab will appear at the top of the page where you can designate a loan or savings product to this individual.

### 3.2.2 Solidarity Group



1. Group profile data fields:

- Name
- Meeting day
- Date of establishment
- Economic activity
- Group cycle
- Branch

2. Two (2) Pictures

3. Home and secondary business address fields

- Province, District, City, Address

- Zip code
- Home type
- Home phone
- Personal phone
- Email

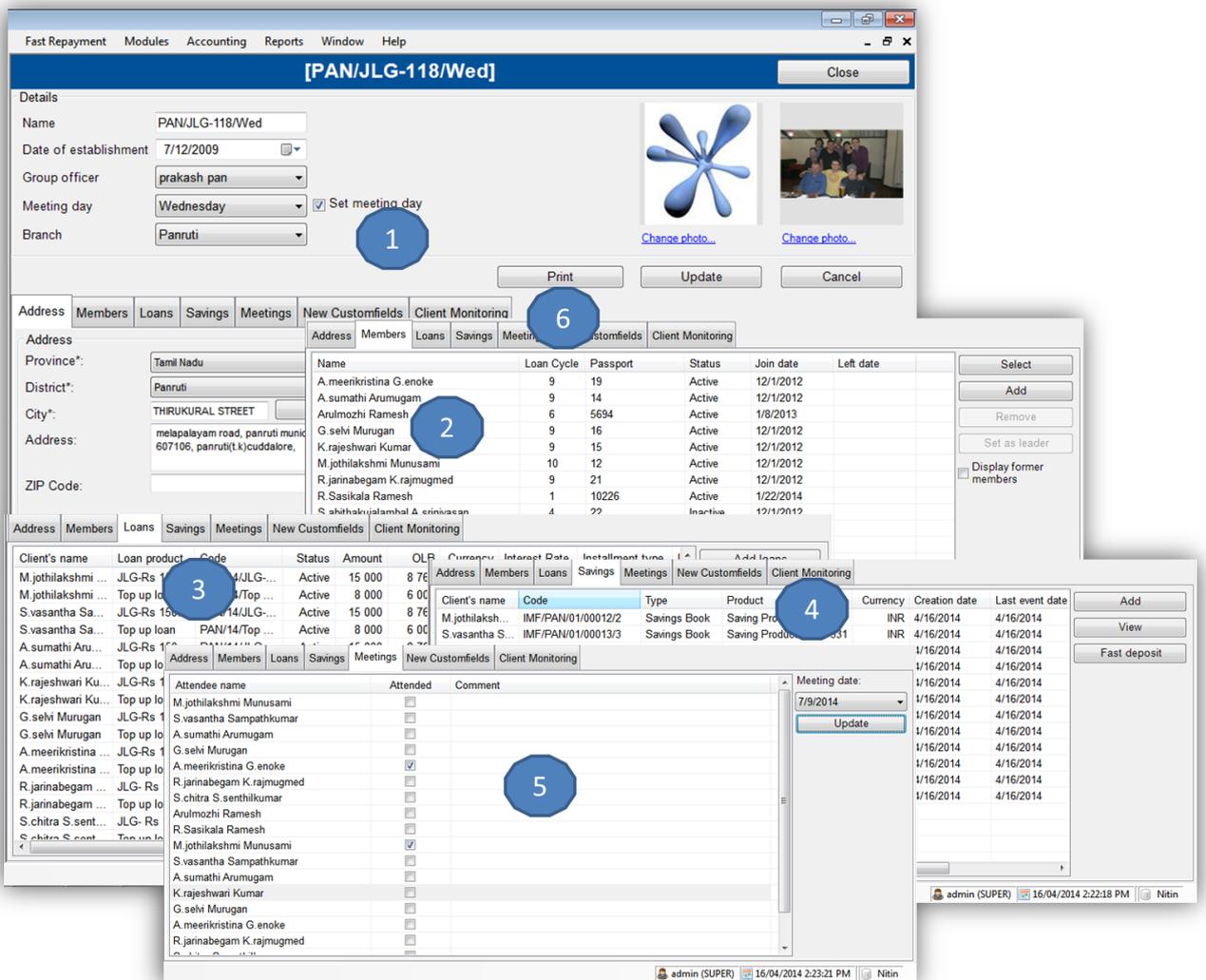
4. Group members with group leader marked in green

5. History sheet – A list of former group members

6. Print button that can be used to print internal forms

Individuals new or existing in the system can be added to a group. After saving, the Contract tab will appear at the top of the page.

### 3.2.3 Non-Solidarity Groups (NSG)



1. Group profile data fields:

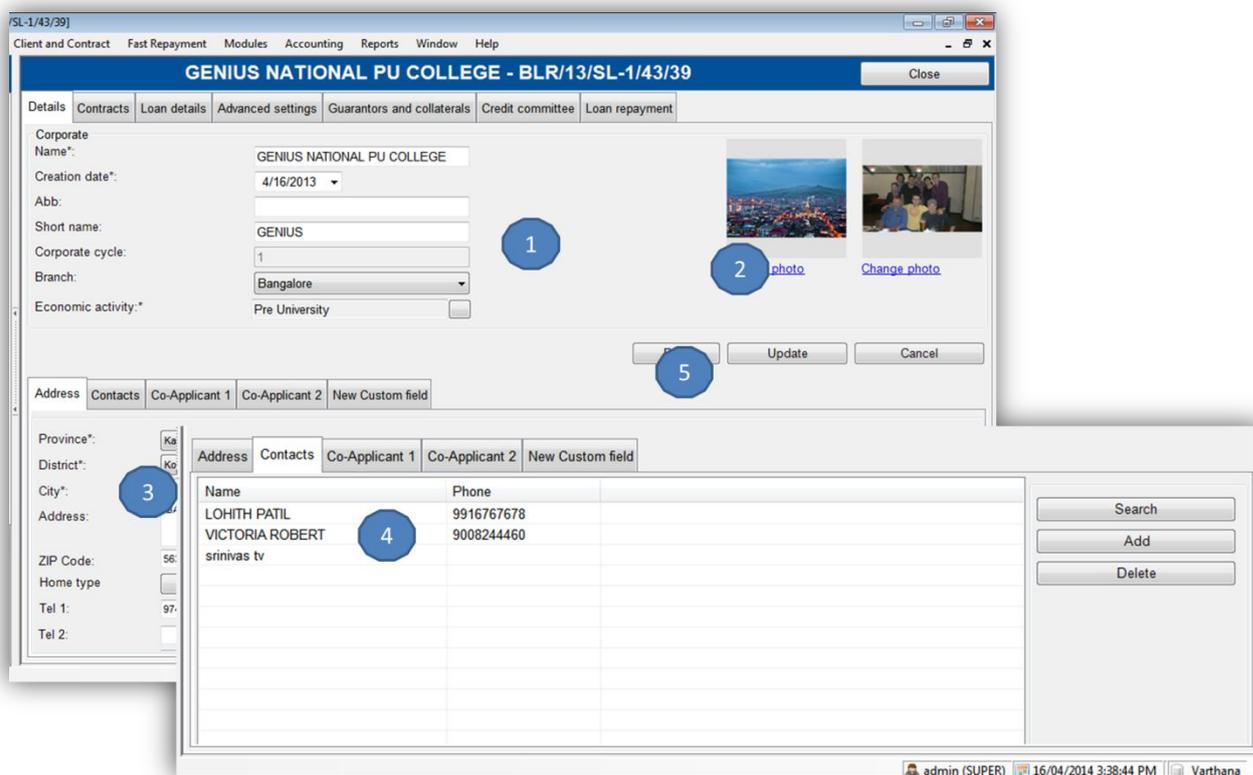
- Name
- Date of establishment
- Group officer
- Meeting day
- Branch
- Two (2) Pictures
- Primary address
- Province, District, City, Address
- Zip code
- Home type
- Home phone

- Personal phone
- Email

2. Group members with the leader marked in green
3. Loan sheet with all the loans received by group members
4. Savings sheet with all the savings received by group members
5. Meetings. Group members' attendance to each meeting
6. Print button to print reports on NSG activity

**Note:** Loan and savings tabs will also enable you to batch manage products provided to NSG members via the "Loans" and "Savings" tabs. This is a significant advantage of NSG clients.

### 3.2.4 Corporate



1. Corporate profile data fields

- Name
- Date of establishment

- Personal phone
- Email

4. Individual corporate contact to

- Abbreviation
  - Short name
  - Corporate cycle
  - Branch
  - Economic activity
2. Two (2) Pictures
  3. Primary address
    - Province, District, City, Address
    - Zip code
    - Home type
    - Home phone

be designated in the database or added later

5. Print button for reports displaying corporate information

### 3.3 Additional fields

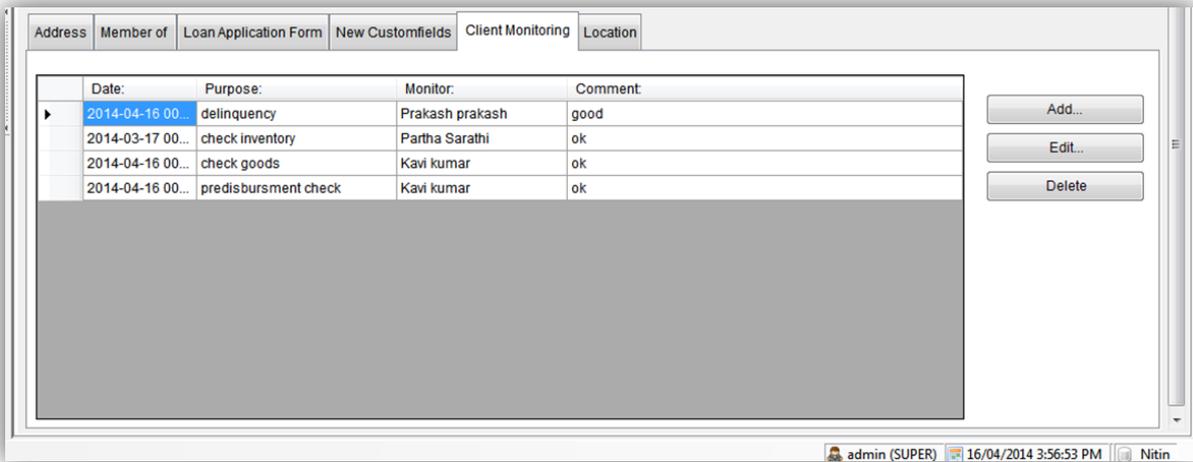
OPENCBS can add additional data fields for any type of information or client if and when you need more than the default fields. Here are a few examples of additional data fields we've created:

The screenshot shows a web application interface with a tabbed menu at the top containing 'Address', 'Contacts', 'Co-Applicant 1', 'Co-Applicant 2', and 'New Custom field'. The 'New Custom field' tab is active, displaying a form with the following fields:

- First Name\* (text input)
- Last Name\* (text input)
- Father Name (text input)
- Date of Birth\* (date picker showing 4/16/2014)
- Place of Birth\* (text input)
- Gender\* (dropdown menu showing 'Female')
- Citizenship (text input)
- Economic Activity\* (dropdown menu)
- Branch (dropdown menu)
- Residence Type\* (dropdown menu)
- Email ID (text input)
- ID Proof\* (dropdown menu)
- Address Proof\* (dropdown menu)
- Sign Proof (text input)
- Educational Qualification\* (dropdown menu)
- Caste\* (text input)

At the bottom right of the form, there is a status bar showing 'admin (SUPER)', a clock icon with '16/04/2014 3:53:10 PM', and a user icon with 'Varthana'.

**Co-Applicant tabs.** A simple list of additional fields to store information on individuals in charge of the loan application for a corporate client.



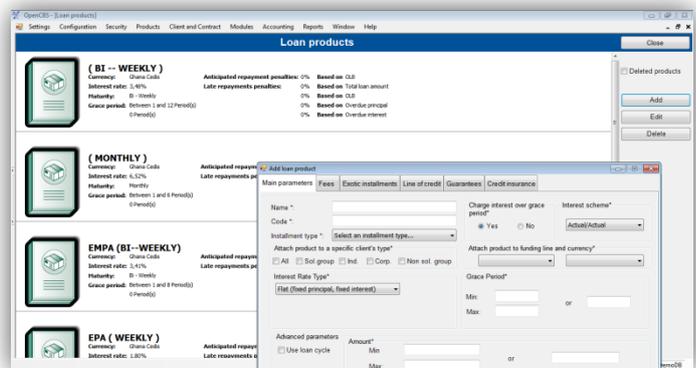
**Client Monitoring tabs.** Created to track staff visits to clients.

You can try out limited versions of these tabs through the Custom Events and Custom fields extensions (See Extensions).

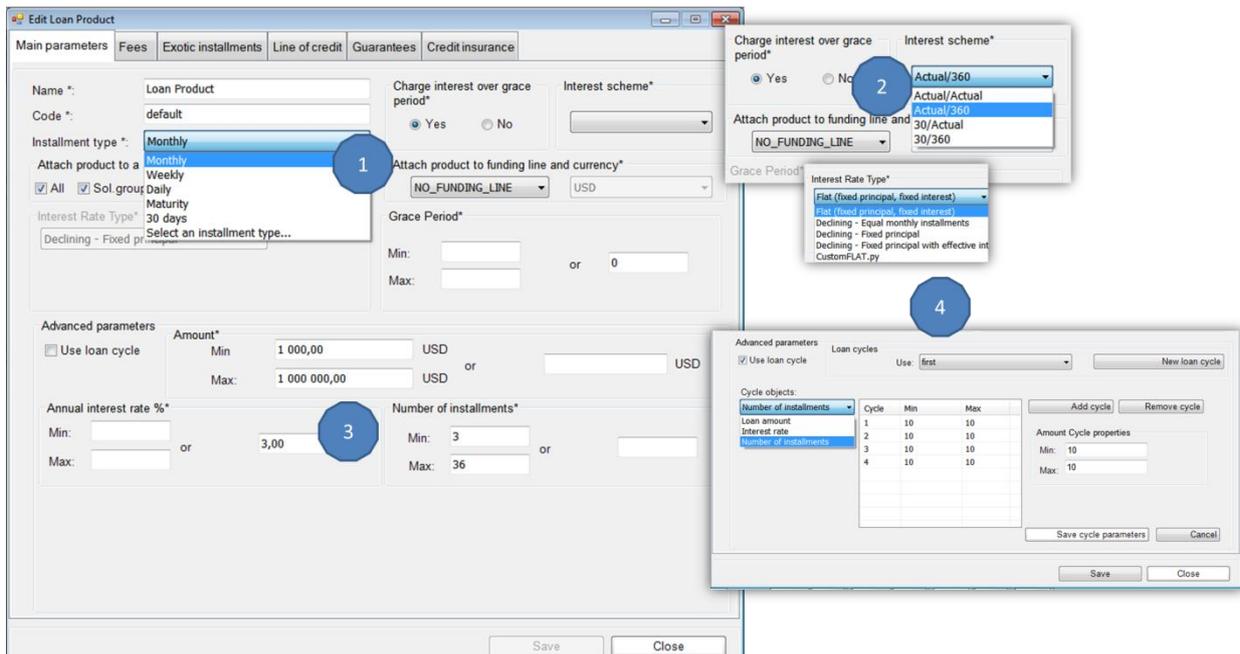
## 4. Loan Management

### 4.1 Product definition

To add a new loan product or edit an existing one, click the top menu tab labeled “Products” and then select “Loan products”. Having done so, you can see all of the loan products in the database. Click “Add” to create a new product, or click “Edit” to modify an existing product. In both cases, the product editor window appears. The product editor window contains six (6) tabs. Their content is detailed below:



### 4.1.1 Main settings



#### Main product info

1. In the Main parameters tab, you can adjust the following:

- **Name.** Name of the product. This will also be displayed in all reports.
- **Code.** Will appear wherever a contract’s code is listed.
- **Installment type.** Defined in Configurations->Installments periodicity.
- **Funding line.** Choose the funding line to which you want to attach your product. Choose “No funding line” if you are not using a funding line for this product.
- **Grace Period.** Define how many installments without principal repayment can be set at the beginning of the loan cycle. You can define a range of values to then be chosen at loan definition level by using the min/max cells, or if you want to define one value for the grace periods of all loans of this type, fill the field located after “or”.

**Note:** A grace period is a period of time defined by a certain number of installments during which the clients won’t have to repay principal, and in some cases, won’t even have to repay interest. This practice is usually used by businesses that need some time to allow their initial investment to start generating revenues.

Repayment schedule		Events				
N°	Date	Expected interests	Expected principal	Installment total	OLB	Pai
1	5/23/2014	98,63	0,00	98,63	10 000,00	
2	6/23/2014	101,92	0,00	101,92	10 000,00	
3	7/23/2014	98,63	1 250,00	1 348,63	8 750,00	
4	8/22/2014	89,18	1 250,00	1 339,18	7 500,00	
5	9/23/2014	76,44	1 250,00	1 326,44	6 250,00	
6	10/23/2014	61,64	1 250,00	1 311,64	5 000,00	
7	11/21/2014	50,96	1 250,00	1 300,96	3 750,00	
8	12/23/2014	36,99	1 250,00	1 286,99	2 500,00	
9	1/23/2015	25,48	1 250,00	1 275,48	1 250,00	
10	2/23/2015	12,74	1 250,00	1 262,74	0,00	

*Loan schedule with 2 months grace period on principal*

*Interest*

This section enables you to define three (3) things:

- **Interest rate type.** This section gives you the choice between at least three (3) modes of distribution of the interest and principal over the repayment schedule:
  - **Flat (Fixed Principal, Fixed Interest).** The interest and the principal to be paid over the schedule are the same for each installment. The principal is equal to the amount disbursed divided by the number of installments and the interest is equal to the amount disbursed multiplied by the defined interest rate. As such, a flat interest rate is always equivalent to a higher declining interest rate in terms of cost for the client.

Installments		New Custom field				
N°	Date	Interest payment	Principal repayment	Installment Total	OLB	
1	5/2/2014	200.00	1 000.00	1 200.00	9 000.00	
2	5/9/2014	200.00	1 000.00	1 200.00	8 000.00	
3	5/16/2014	200.00	1 000.00	1 200.00	7 000.00	
4	5/23/2014	200.00	1 000.00	1 200.00	6 000.00	
5	5/30/2014	200.00	1 000.00	1 200.00	5 000.00	
6	6/6/2014	200.00	1 000.00	1 200.00	4 000.00	
7	6/13/2014	200.00	1 000.00	1 200.00	3 000.00	
8	6/20/2014	200.00	1 000.00	1 200.00	2 000.00	
9	6/27/2014	200.00	1 000.00	1 200.00	1 000.00	
10	7/4/2014	200.00	1 000.00	1 200.00	0.00	
		2 000.00	10 000.00	12 000.00		

*Schedule Flat (Fixed Interest, fixed principal)*

- **Declining – Fixed Principal.** The client pays the same principal on every installment, but the interest declines as the OLB declines. The client will pay less at the end of this cycle than at the beginning.

Repayment schedule		Events				
N°	Date	Expected interests	Expected principal	Installment total	OLB	
1	5/23/2014	92,05	1 000,00	1 092,05	9 000,00	
2	6/25/2014	91,73	1 000,00	1 091,73	8 000,00	
3	7/25/2014	78,90	1 000,00	1 078,90	7 000,00	
4	8/25/2014	71,34	1 000,00	1 071,34	6 000,00	
5	9/25/2014	61,15	1 000,00	1 061,15	5 000,00	
6	10/24/2014	49,32	1 000,00	1 049,32	4 000,00	
7	11/25/2014	40,77	1 000,00	1 040,77	3 000,00	
8	12/25/2014	29,59	1 000,00	1 029,59	2 000,00	
9	1/23/2015	20,38	1 000,00	1 020,38	1 000,00	
10	2/25/2015	10,19	1 000,00	1 010,19	0,00	

Schedule Declining - Fixed Principal

- Declining – Equal Monthly Installments.** The client pays less principal at the beginning than at the end to compensate for the fact that interest will decline as the OLB decreases.

Repayment schedule		Events				
N°	Date	Expected interests	Expected principal	Installment total	OLB	
1	5/23/2014	13,03	28,30	41,33	171,70	
2	6/25/2014	11,19	30,14	41,33	141,56	
3	7/25/2014	9,22	32,11	41,33	109,45	
4	8/25/2014	7,13	34,20	41,33	75,25	
5	9/25/2014	4,90	36,43	41,33	38,82	
6	10/24/2014	2,53	38,82	41,35	0,00	

Declining – Equal monthly Installments

- Customized schedule.** If one of your schedules doesn't fall into one of the categories above, contact us and we'll create a schedule tailored to your needs. For example, below is a flat schedule with installment dates set to the last Sunday of each month.

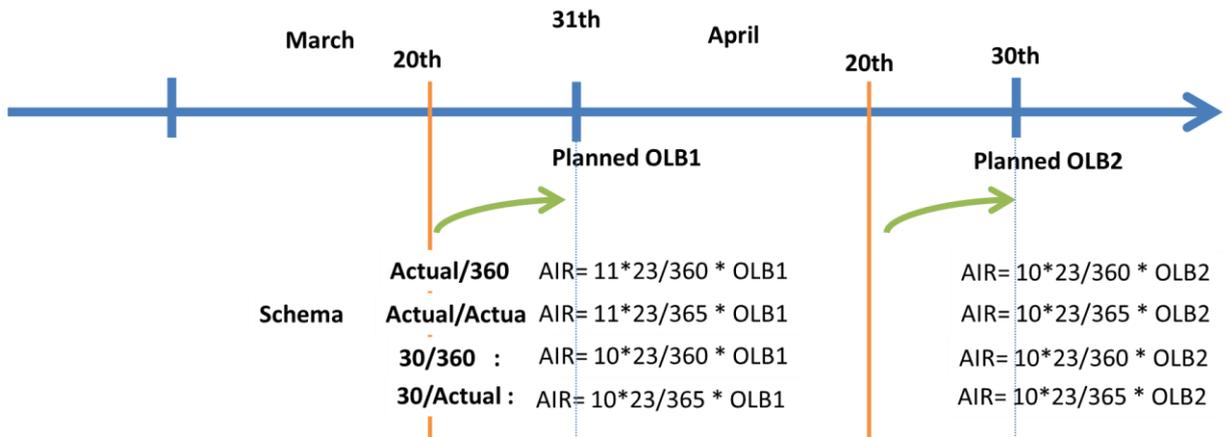
Installments		Loan Info		Monitoring	
N°	Date	Interest payment	Principal repayment	Interest	OLB
1	5/25/2014	100,00	1 000,00		
2	6/22/2014	100,00	1 000,00	1 100,00	8 000,00
3	7/27/2014	100,00	1 000,00	1 100,00	7 000,00
4	8/24/2014	100,00	1 000,00	1 100,00	6 000,00
5	9/28/2014	100,00	1 000,00	1 100,00	5 000,00
6	10/26/2014	100,00	1 000,00	1 100,00	4 000,00
7	11/23/2014	100,00	1 000,00	1 100,00	3 000,00
8	12/28/2014	100,00	1 000,00	1 100,00	2 000,00
9	1/25/2015	100,00	1 000,00	1 100,00	1 000,00
10	2/22/2015	100,00	1 000,00	1 100,00	0,00
		1 000,00	10 000,00	11 000,00	

Customized schedule type

Interest Rate Type\*

- Flat (fixed principal, fixed interest)
- Flat (fixed principal, fixed interest)
- Declining - Fixed principal
- Declining - Equal monthly installments
- Declining - Fixed principal with effective int
- CustomFLAT.py
- OdedDecliningEquallyMonthlyInstallment.py

- Interest scheme.** To activate this section, you first need to set the "Accounting Process" option in General Settings to accrual. This section will then ask you to choose which type of interest accrual you want to use for your loan product. Four (4) types of calculations are available: Actual/360, Actual/Actual, 30/360 or 30/Actual. The graph below explains the difference between these four (4) types:



This graph shows how accrued interest is calculated using each of the four loan schemas for a loan with repayments on the 20<sup>th</sup> of each month.

- In Actual/360, interest is accrued according to the real number of days in each month and 360 days in the year. In our case, that means that the accruals between a March 20<sup>th</sup> date of last repayment and the end of month would be the real number of days (11 in this case) divided by the number of days in a year (360 according to this model), multiplied by the yearly interest rate (here 23%) and then multiplied again by the OLB at that time (OLB1). In April, we would take 10 days instead of 11 as the month is shorter and the OLB would instead fall into OLB2.
  - In Actual/Actual, we consider the real number of days for both months and years. The difference with the previous system is that we divide by 365 and not 360.
  - In 30/360, we always consider there to be 30 days in a month. In the 30/360 example above, we'll accrue interest for 10 days of each month.
  - In 30/Actual, we assume there are 30 days in every month, but the real number of days in a year.
- **Interest over grace period.** You can decide whether you want to accrue interest over the grace period or not. If you don't, the client will pay neither interest nor principal during the grace period.

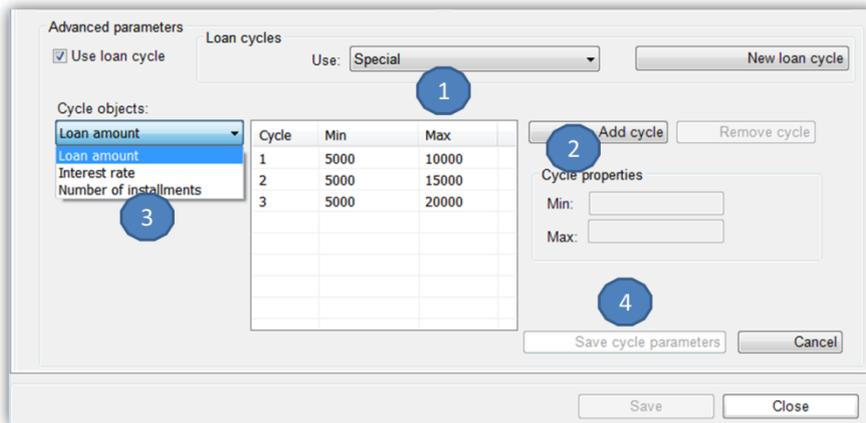
### Advanced options

In this section, you can adjust the following characteristics for your loan product:

- **Amount.** The unique value or the range of values inside which any disbursed loan under this definition will have to be.
- **Interest Rate.** The unique value or range of values the interest rate can have for this type of loan product. **Important!** The interest rate in our example is calculated per year.
- **Number of installments.** The number of repayment in which the client will have to repay his loan.

### Loan Cycle

By clicking the button to the left of "Advanced options", you can define advanced parameters attributed to the loan cycle of the client. Many institutions apply more flexibility in their loan products for clients who have already been through a certain number of loan cycles.



**Loan advanced parameters as per loan cycle**

Once clicked, an additional window displaying the loan cycle settings will appear. You can attribute certain options to specific loan cycles by doing the following:

- If it is the first time you are using feature, you should choose “New loan cycle” to configure a new loan cycle (“1”).
- You then need to adjust three things: “Loan amount”, “Interest rate” and “Number of installments” for the number of loan cycles you choose. (“2” & “3”) You need to have at least the loan cycle one defined for all three objects to be able to save a configuration (“4”).
- To be able to save, you will need to configure all three options for at least the first cycle.
- Here you will configure loan cycles in order (Loan Cycle 1, Loan Cycle 2, Loan Cycle 3 and so on). The properties related to the latest loan cycle you define will apply for all subsequent cycles. For example, in the image above loan cycle three is defined by loan amounts between 5000 and 20000, and all loan cycles greater than three will also share the same loan amount range.

### 4.1.2 Fees

**Entry fees (up to 10 items)**

Use loan cycle    Loan cycle: 1    From 2       

Name	Min	Max	Value	Rate
Starting fee			300	False
Admin Fee			500	False

**Late fees (% of base per day)**

on total loan amount\*    on OLB\*

Min:     or    value : 0    Min:     or    value : 0

Max:     Max:     or    value : 0

on Overdue principal\*    on Overdue interest\*

Min:     or    value : 0,1    Min:     or    value : 0,1

Max:     Max:     or    value : 0,1

Grace period of late fees \*:

**Anticipated Total Repayment (ATR) and Anticipated Partial Repayment (APR) Fees**

ATR fees\*    Base for ATR fees\*

Min:     or    value : 0     % on OLB     % on interest

Max:      % on interest

APR fees\*    Base for APR fees\*

Min:     or    value : 0     % on OLB     % on prepaid principal

Max:      % on interest

#### Loan product fee definition

Through this section you can define the fee structure of the loan product. Three (3) types of fees can be configured here:

1. **Entry Fees.** They are applied to the loan at the disbursement level. You give these fees a name and attach to them either a range of possible values or a fixed value like for previous settings. Additionally, the “rate” column enables you to define these fees either as a fixed value (rate=false) or as a percentage of the disbursed amount (rate=true). Like advanced options, these fees can also be configured according to loan cycles. For example, in the screenshot above, we see that all loans with a loan cycle of 2 will be applied one starting fee of 300 and one admin fee of 500.
2. **Late fees.** Late fees are applied to clients who make late repayments. They are accrued on a daily basis as a percentage of the following loan parameters:
  - Total Loan Amount
  - OLB
  - Overdue Principal

- Overdue Interest

Like with previous settings, the user can define either a range of values or a fixed value. The global late fee consists of the sum of the four previous fees.

3. **Fee grace period.** You can define grace periods during which the client will not receive penalties. For example, if this number is defined as three (3), then a client coming 1, 2 or 3 days after the planned repayment date will not receive a penalty. However, if the client is four (4) days late, four (4) days of penalties will be applied.
4. **Anticipated repayments.** In case of payments before the expected date of repayment, the system can charge the client an additional fee. These fees can be defined at the bottom of the window:

- **Anticipated total repayment.** This is the amount charged if the client pays off his full loan before the expected date. It is defined as a percentage of OLB closed off or as a percentage part of the percentage not paid. In this example, the client is charged 1% of all remaining OLB

- **Anticipated partial repayment.** This happens when the client pays only one portion of the principal still expected to be paid. A fee is applied as a percentage of the OLB at the moment of prepayment, as a percentage of the prepaid principal or as a percentage of the interest that should have been paid. In the example below, the client is charged 1% on the prepaid principal.

**Note:** If the kinds of fees you use don't correspond to the types described above, OPENCBS can customize the system for you. Contact us for full details.

### 4.1.3 Exotic Installments

In next tab, you are able to define more "exotic" schedules. By selecting "Use exotic schedule" you can define the loan schedule by how much of the total interest and total principal have to be collected at each installment of the loan.

N°	Principal (%)	Interest (%)
1	20	20
2	54	15
3	10	10
4	10	30
5	6	25
<b>Total:</b>		<b>100 % 100 %</b>

N°	Date	Interest payment	Principal repayment	Installment Total	OLB
1	5/26/2014	100,00	2 000,00	2 100,00	8 000,00
2	6/26/2014	75,00	5 400,00	5 475,00	2 600,00
3	7/27/2014	50,00	1 000,00	1 050,00	1 600,00
4	8/26/2014	150,00	1 000,00	1 150,00	600,00
5	9/26/2014	125,00	600,00	725,00	0,00
		<b>500,00</b>	<b>10 000,00</b>	<b>10 500,00</b>	

In the example above, we select a type of schedule called "Special 5 Installments" which has payments divided up among five (5) installments. The schedule is then generated according to this rule. This type of product can be especially useful for institutions working with agriculture workers or others who work seasonally.

If you select the option "Allow flexible schedule" you will have the ability to perform manual adjustment of the schedule before disbursement similar to how you would manipulate an Excel spreadsheet.

#	Date	Interest	Principal	Total	OLB	Paid interest	Paid principal	Payment date
1	26.05.2014	100,00	2 000,00	2 100,00	10 000,00	0,00	0,00	
2	26.06.2014	75,00	5 400,00	5 475,00	8 000,00	0,00	0,00	
3	27.07.2014	60,00	1 000,00	1 050,00	2 600,00	0,00	0,00	
4	26.08.2014	150,00	1 000,00	1 150,00	1 600,00	0,00	0,00	
5	26.09.2014	125,00	600,00	725,00	600,00	0,00	0,00	
<b>Total</b>		<b>500,00</b>	<b>10 000,00</b>	<b>10 500,00</b>		<b>0,00</b>	<b>0,00</b>	

#### 4.1.4 Line of credit

The line of credit option enables you to disburse money to your clients in several tranches. If you select this option, you will need to define the following three (3) parameters:

- Maximum number of tranches.** The number of times you will be allowed to disburse additional money to your client in addition to the initial disbursement. This would be twice in the example we've provided.
- Total amount of the line of credit.** Define a fixed or range of amounts for your whole line of credit.
- Tranche maturity.** Allowed maturity of the additional tranches disbursed to the loan.

**Edit Loan Product**

Main parameters | Fees | Exotic installments | **Line of credit** | Guarantees | Credit insurance

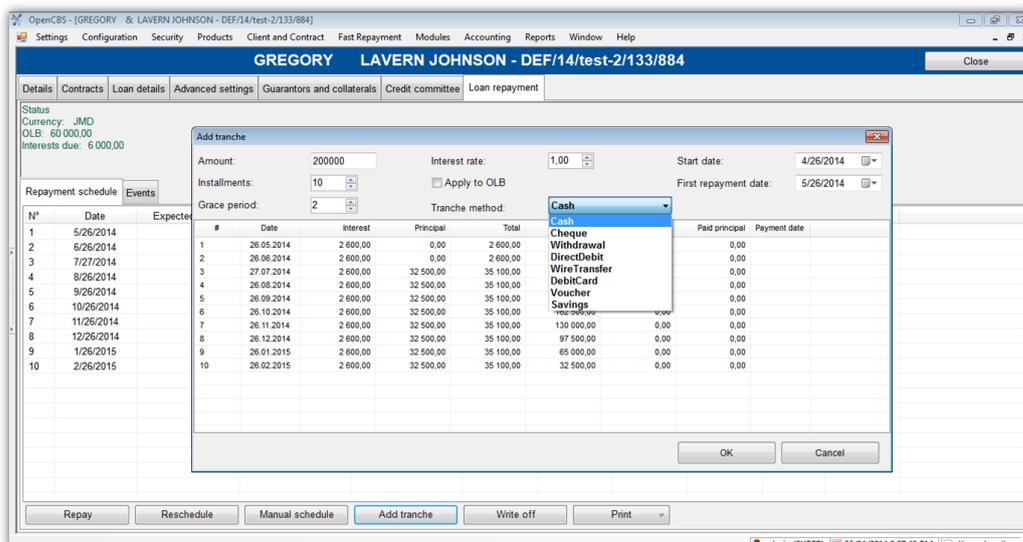
Use line of credit

**Maximum number of tranches**  
 Number of drawings under the LOC:  **1**

**Total amount of the Line of Credit (including disbursed amount)**  
 Min:  JMD  
 Max:  JMD or value:  JMD **2**

**Tranche maturity (number of installments)**  
 Min:   
 Max:  or value:  **3**

When modifying loans, you will have the capacity to add tranches to the loan through the repayment window as you see below.

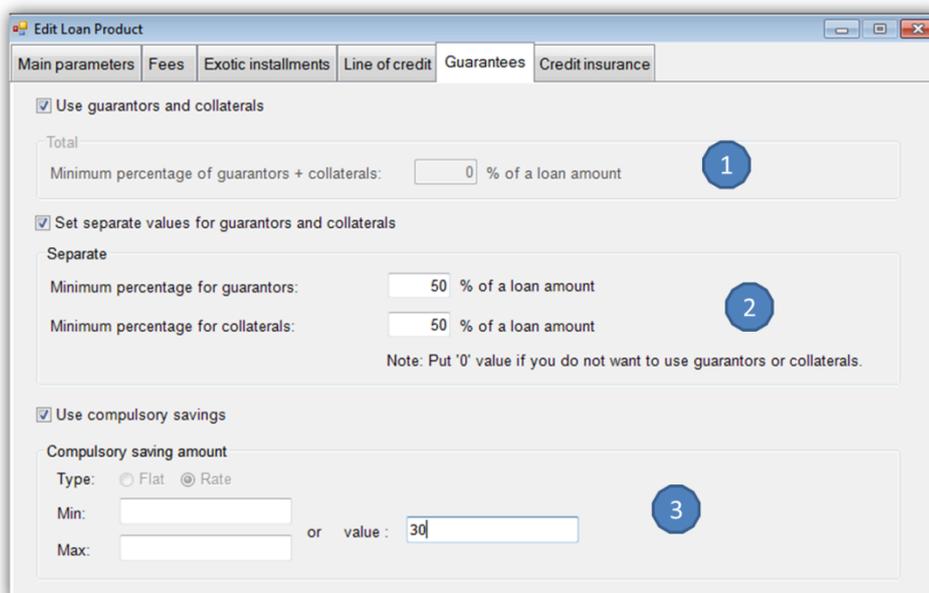


### 4.1.5 Guarantees

Here you can define additional guarantees you will require from clients. There can be three (3) types of guarantees:

- **Guarantor.** An individual registered inside the database who guarantees a certain amount of a client’s loan. In case of non-repayment, this person will help the client repay.
- **Collateral.** A physical object (a car, house, gold, etc.) put up as a guarantee by the client. In case of non-repayment, this asset could be sold to repay the loan.
- **Mandatory savings.** Here, a client must have saved a certain amount of money before being able to receive a loan.

In this window you can define guarantee requirements as follows:

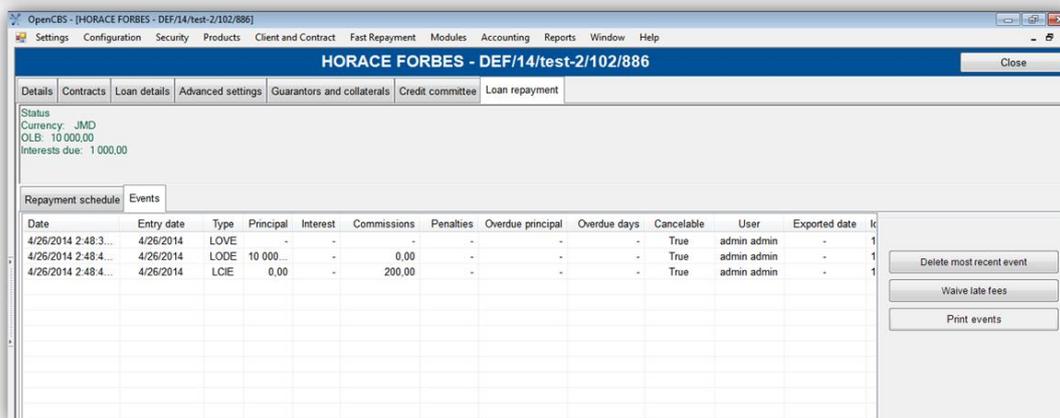
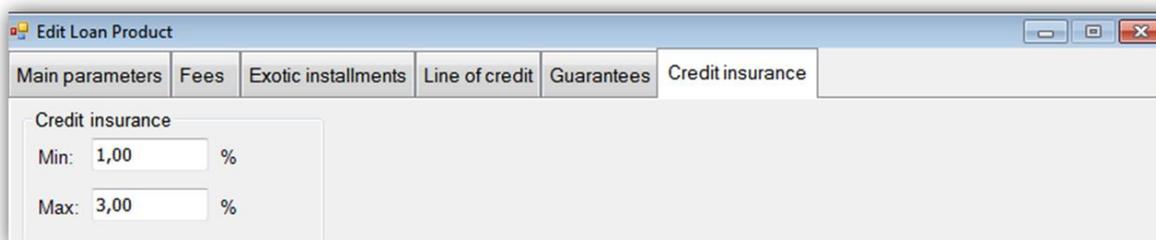


1. A guarantor or collateral should cover a certain percentage of the loan amount disbursed. The client has a choice, but one must be chosen.

2. The client should cover X percent of his loan amount with a guarantor and Y percent with collateral. In our example (50% and 50%), you don't leave choice to the client, he needs both.
3. You require mandatory savings a percentage of the disbursed loan amount or as a fixed value.

### 4.1.6 Credit Insurance

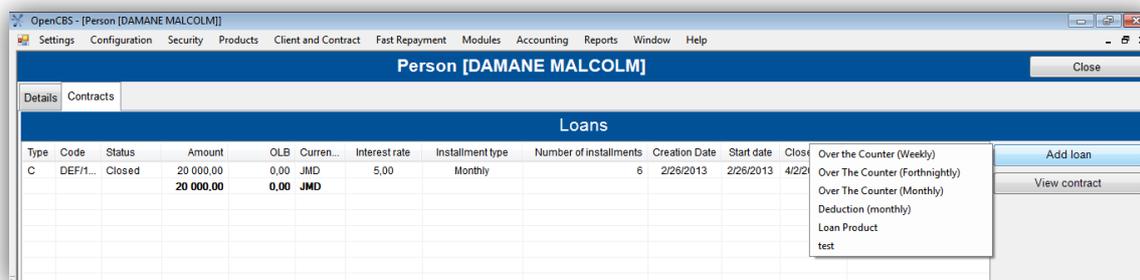
On the final tab, you can define credit insurance to be paid by the client at the time of disbursement. You may define a range of percentages of the possible disbursed loan amounts. If so, this amount will be taken as a commission at the time of disbursement.



## 4.2 Loan Disbursement process

### 4.2.1 Choose client and loan product

Start by opening the profile of the client to whom you want to disburse a loan. Then go to the tab labeled "Contract" and click the "Add loan" button located on the right side of the window. All available loan products will appear. Simply select the one you want to give to your client.



## 4.2.2 Define loan details

Here's where you will define the precise characteristics of the loan you will disburse to your client. These characteristics are conditioned by the loan product parameters that you set earlier.

The screenshot shows the 'Person [DAMANE MALCOLM]' loan details form. The form is divided into several sections: 'Loan details', 'Advanced settings', and 'Guarantors and collaterals'. The 'Loan details' section includes fields for Loan Type (test), Contract code, Amount (10 000,00), Interest rate per period (1,00), Grace period (0), Number of installments (10), Disbursement date (4/26/2014), Preferred first installment date (5/26/2014), Funding line (DEFAULT\_FUNDING\_LINE), Economic activity (Merchandising), and Loan purpose (Buy a car). The 'Advanced settings' section includes Loan officer (Marco Brown). The 'Guarantors and collaterals' section is empty. Below the form is a table of installments with columns for N°, Date, Interest payment, Principal repayment, Installment Total, and OLB. The table contains 10 rows of data, with a total of 10,000.00 for interest and principal, and 11,000.00 for the installment total. The table is as follows:

N°	Date	Interest payment	Principal repayment	Installment Total	OLB
1	5/26/2014	100,00	1 000,00	1 100,00	9 000,00
2	6/26/2014	100,00	1 000,00	1 100,00	8 000,00
3	7/27/2014	100,00	1 000,00	1 100,00	7 000,00
4	8/26/2014	100,00	1 000,00	1 100,00	6 000,00
5	9/26/2014	100,00	1 000,00	1 100,00	5 000,00
6	10/26/2014	100,00	1 000,00	1 100,00	4 000,00
7	11/26/2014	100,00	1 000,00	1 100,00	3 000,00
8	12/26/2014	100,00	1 000,00	1 100,00	2 000,00
9	1/26/2015	100,00	1 000,00	1 100,00	1 000,00
10	2/26/2015	100,00	1 000,00	1 100,00	0,00
		1 000,00	10 000,00	11 000,00	

You should define:

1. Main characteristics: Amount, Interest rate, grace period and number of installments.
2. The loan officer that is in charge of this loan.
3. The disbursement date and preferred first installment date. If it is a loan with a declining schedule, the interest payment will be impacted accordingly.
4. Attribute the loan to a funding line, choose the type of activity this loan is dedicated to and add a comment if required.
5. Click "Preview" to see the schedule appear.
6. Check to make sure the schedule matches your expectations exactly.
7. Be sure that you have filled in all the mandatory custom fields you may have had specially added to other tabs.
8. Click "Save".

**Note:** If you enabled manual adjustment in the loan product options, you can make adjustments to the schedule by clicking "Manual schedule". You may modify Expected Interests as you choose and also Expected Principal provided that the total amount remains equal to the disbursed amount.

#	Date	Interest	Principal	Total	OLB	Paid interest	Paid principal	Payment date
1	26.05.2014	100,00	1 000,00	1 100,00	10 000,00	0,00	0,00	
2	26.06.2014	100,00	1 000,00	1 100,00	9 000,00	0,00	0,00	
3	27.07.2014	100,00	1 000,00	1 100,00	8 000,00	0,00	0,00	
4	26.08.2014	100,00	1 000,00	1 100,00	7 000,00	0,00	0,00	
5	26.09.2014	100,00	1 000,00	1 100,00	6 000,00	0,00	0,00	
6	26.10.2014	100,00	900,00	1 000,00	5 000,00	0,00	0,00	
7	26.11.2014	100,00	1 000,00	1 100,00	4 100,00	0,00	0,00	
8	26.12.2014	100,00	1 000,00	1 100,00	3 100,00	0,00	0,00	
9	26.01.2015	100,00	1 000,00	1 100,00	2 100,00	0,00	0,00	
10	26.02.2015	100,00	1 000,00	1 100,00	1 100,00	0,00	0,00	
<b>Total</b>		<b>1 000,00</b>	<b>9 900,00</b>	<b>10 900,00</b>		<b>0,00</b>	<b>0,00</b>	

### 4.2.3 Advanced settings

If you chose to allow it when you set loan products characteristics, you may also define advanced settings for a loan. If you did, advanced setting cells will appear with white backgrounds; if not, those cells will appear grey.

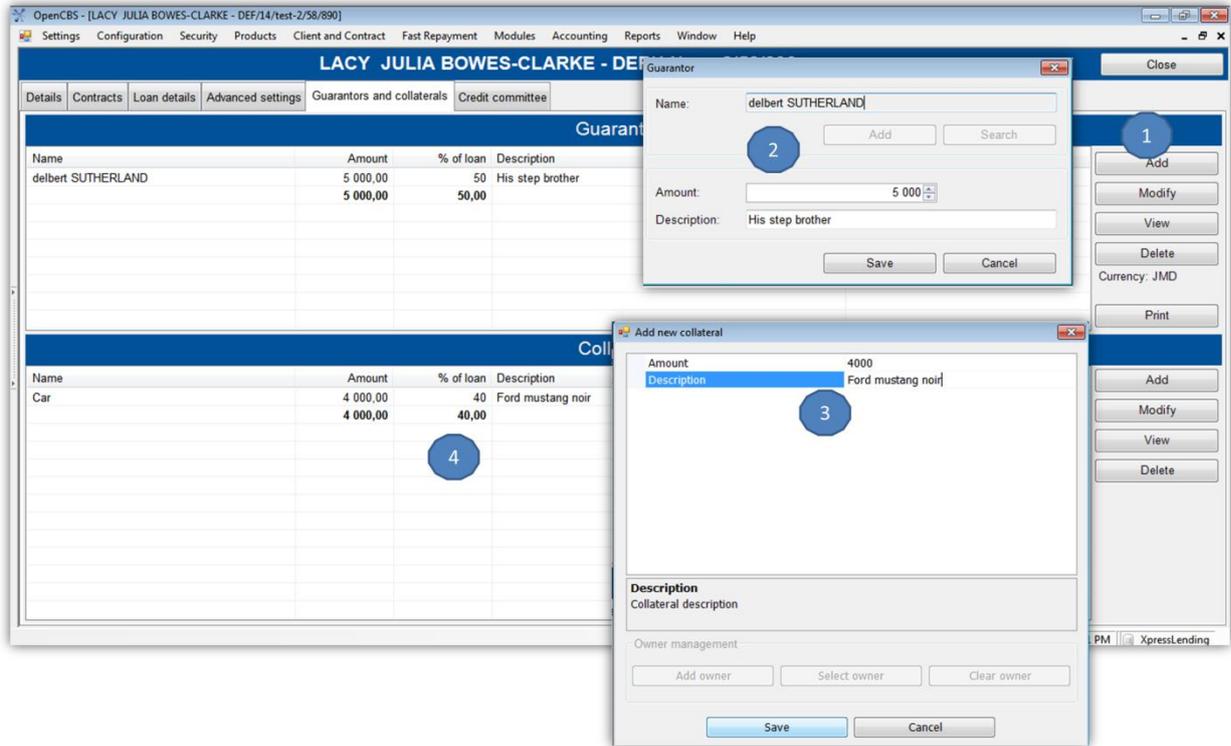
The following settings can be adjusted:

1. The amount of the line of credit (LOC) available to the client and the percentage of credit insurance that will have to be paid by the client at disbursement. In our example, just the credit insurance can be adjusted between 1% and 3%. The LOC amount is fixed at one million.
2. The early and late fees for this loan.
3. The entry fees defined for this loan. Please note that these can be modified.
4. In case compulsory savings are required, the system will ask you to select the savings account belonging to the client that will be attached to this loan.

5. A comment section for the credit agent to add any additional information to be transmitted to the managers in charge of making a final decision on the loan.
6. Click “Save” to move on to the next step.

#### 4.2.4 Add guarantors and collaterals

If the loan product you have chosen requires either a guarantor or collateral, you will have to define what those are:



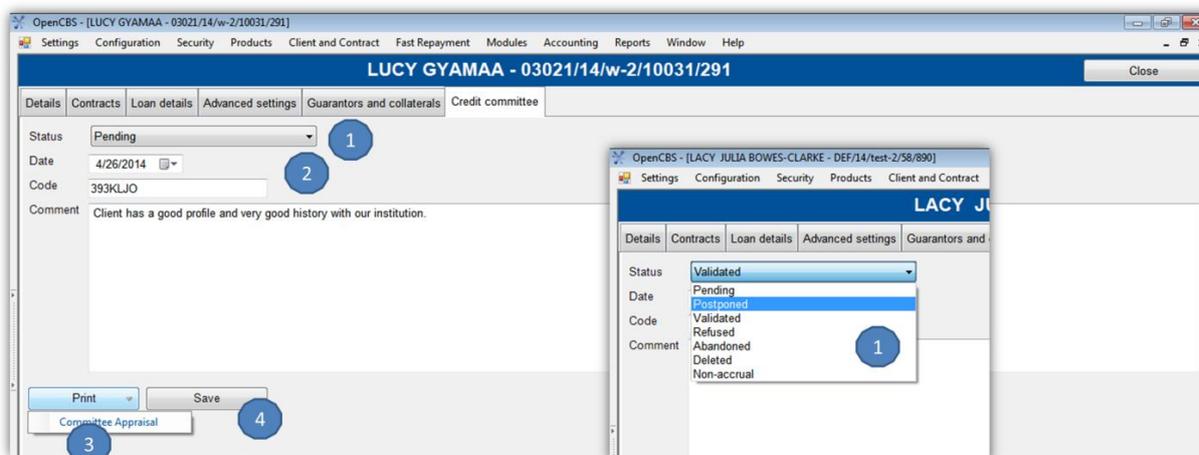
Proceed as follows:

9. Use the right side menu to add, modify, view or delete this item. The “View” option is to be used to see information about the guarantee but don’t have not been designated the ability to modify this information.
10. To attach a guarantor to the loan, you can either select an individual already existing in the database by choosing the “Search” option in the menu or adding a new individual by choosing “Add”. Additionally, you will need to define what amount this individual guarantees. You may also add a description of the relationship the guarantor has to the client.
11. For collaterals, you simply fill the collateral indicators as they were defined in the Collateral product section (see 4.1.5).
12. You will then see the guarantees appear in the table with the percentage of the total loan amount they can cover. You should make sure these percentages are enough to cover the loans as per the requirements defined in the Product settings.

Once this is completed, you can click on the “Credit committee” tab.

### 4.2.5 Credit committee

The loan now has to be validated by the group or individual who act as the loan approval committee (Credit committee).



13. To begin with, the status of a loan is set to “Pending”. After discussion among the credit committee, the loan status will change to one of the following:
  - **Postponed.** Will not be disbursed now, but might be in the future.
  - **Validated.** Loan ready for disbursement. Go back to the “Loan details” tab to confirm.
  - **Refused.** The committee decided not to disburse the loan.
  - **Abandoned.** The loan will not be disbursed for another reason not related to the credit committee’s decision, for example if the client decides he doesn’t need the loan anymore.
  - **Deleted.** For test loans that shouldn’t appear in any report.
14. You must define the date of the loan approval committee’s decision (which cannot be after the date of planned disbursement), the committee’s code and comments that explain the committee’s decision.
15. You can print a committee appraisal document or any custom reports related to the credit committee here.
16. Once completed these steps, you must click “Save” to save the decision of the loan committee.

**Note:** If the committee changes its decision, the loan’s status can be changed again by clicking “Update” which will appear after the decision has been saved once where the “Save” button was previously.

### 4.2.6 Disbursement process

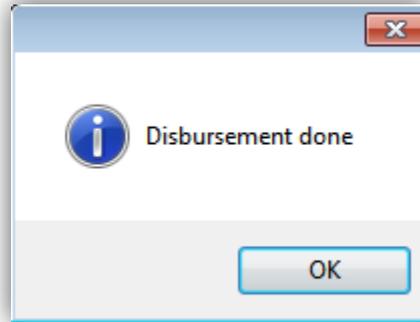
At last, to disburse the loan to the client you should return to the “Loan details” tab.

The screenshot illustrates the disbursement process in OpenCBS. The main window shows loan details for 'LACY JULIA BOWES-CLARKE - DEF/14/test-2/58/890'. A 'Disbursement' dialog box is open, allowing the user to select the disbursement method (Cash), contract code, funding line, amount (10,000.00 JMD), and entry fees (400.00 JMD). The dialog also includes a 'Disable entry fees' checkbox and a 'Comment' field. A 'Disbursement Cash Receipt' window is shown, displaying a table with columns for Client Signature, Amount Received, Client ID, and Client Name. Below the main window, there are two preview windows: 'Individual loan agreement' and 'Contract History: 03021/14/w-2/10031/291'. The 'Individual loan agreement' window shows the contract code and the agreement text. The 'Contract History' window shows client details and a payment schedule table.

#	Date	Principal	Interest	Total	Paid principal	Paid interests	Paid date
1	26 05 2014	1,000.00	100.00	1,100.00	0.00	0.00	
2	23 08 2014	1,000.00	100.00	1,100.00	0.00	0.00	
3	28 07 2014	1,000.00	100.00	1,100.00	0.00	0.00	
4	25 08 2014	1,000.00	100.00	1,100.00	0.00	0.00	
5	22 09 2014	1,000.00	100.00	1,100.00	0.00	0.00	
6	27 10 2014	1,000.00	100.00	1,100.00	0.00	0.00	
7	24 11 2014	1,000.00	100.00	1,100.00	0.00	0.00	
8	22 12 2014	1,000.00	100.00	1,100.00	0.00	0.00	
9	26 01 2015	1,000.00	100.00	1,100.00	0.00	0.00	
10	23 02 2015	1,000.00	100.00	1,100.00	0.00	0.00	

To confirm the disbursement:

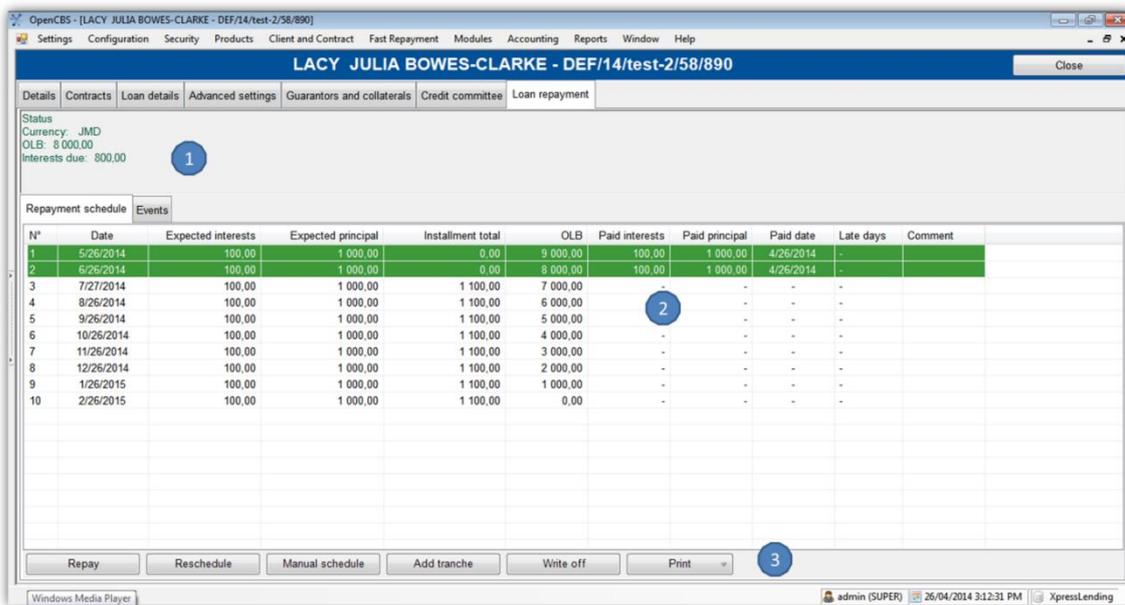
1. Click on “Disbursement” and the Disbursement window will appear.
2. Start by defining the method used to disburse the loan as cash, cheque, direct deposit, wire transfer, debit card, voucher or savings.
3. Below you will see a preview of the Contract code, Funding line, Amount and Early fee to be charged if the loan repayments are made early. Ensure that all these parameters are what you want.
4. If you are authorized to, you can disable the Entry fee for this loan.
5. Add a comment on the disbursement process.
6. Before confirming the disbursal, you can print a disbursement receipt and a standard contract form for the client. These documents can be customized upon request – contact us for a quote.
7. Click “OK” to confirm the disbursement.



### 4.3 Loan cycle management

After disbursement, an additional tab labeled “Loan repayment” will appear. To test loan cycle management by generating a mock schedule in the software, go to “Settings” (upper left menu) and click “Change application date”.

#### 4.3.1 Repayment Schedule



- In this window you will see:
  1. The current status of the loan with its currency, current OLB and remaining interest due.
  2. The loan schedule as it currently stands, with the repaid installment highlighted in green, information on paid interests, paid principal, paid date, late days and comments, all of which you entered when configuring repayments.
  3. Buttons enabling to perform repayments and other special operations

### 4.3.2 Repayments

When you click “Repay”, the following window will appear:

**Repayment**

**Details**  
 Contract Code: DEF/14/test-2/58/890  
 Name of the client: LACY JULIA BOWES-CLARKE  
 Installment number: 4  
 Date: 4/26/2014  
 Payment method: Voucher  
 Amount: 2 000,00  
 Type of repayment:  Keep schedule  Do not keep schedule

**Event**  
 Principal: 2 000,00 JMD  
 Interest: 0,00 JMD  
 Penalties: 0,00 JMD  
 Commissions: 0,00 JMD  
 Comment: Prepay, because will be out next week.

N°	Date	Interest repayment	Principal repayment	Installment total	OLB	Paid interest	Paid principal	Paid date
1	5/26/2014	100,00	1 000,00	0,00	9 000,00	100,00	1 000,00	4/26/2014
2	6/26/2014	100,00	1 000,00	0,00	8 000,00	100,00	1 000,00	4/26/2014
3	7/27/2014	100,00	1 000,00	0,00	7 000,00	100,00	1 000,00	4/26/2014
4	8/26/2014	50,00	714,29	764,29	4 285,71	0,00	0,00	4/26/2014
5	9/26/2014	50,00	714,29	764,29	3 571,42	0,00	0,00	-
6	10/26/2014	50,00	714,29	764,29	2 857,13	0,00	0,00	-
7	11/26/2014	50,00	714,29	764,29	2 142,84	0,00	0,00	-
8	12/26/2014	50,00	714,29	764,29	1 428,55	0,00	0,00	-
9	1/26/2015							
10	2/26/2015							

**Event Dialog**  
 Principal: 900,00 AZN  
 Interest: 100,00 AZN  
 Penalties: 100,00 AZN  
 Commissions: 0,00 AZN  
 Comment: (optional)

**Bottom Table**

N°	Date	Interest repayment	Principal repayment	Installment total	OLB	Paid interest	Paid principal	Paid date
1	5/26/2014	100,00	1 000,00	0,00	9 000,00	100,00	1 000,00	4/26/2014
2	6/26/2014	100,00	1 000,00	0,00	8 000,00	100,00	1 000,00	4/26/2014
3	7/27/2014	100,00	1 000,00	0,00	7 000,00	100,00	1 000,00	4/26/2014
4	8/26/2014	100,00	1 000,00	0,00	6 000,00	100,00	1 000,00	4/26/2014
5	9/26/2014	100,00	1 000,00	1 100,00	5 000,00	0,00	0,00	-
6	10/26/2014	100,00	1 000,00	1 100,00	4 000,00	0,00	0,00	-
7	11/26/2014	100,00	1 000,00	1 100,00	3 000,00	0,00	0,00	-
8	12/26/2014	100,00	1 000,00	1 100,00	2 000,00	0,00	0,00	-
9	1/26/2015	100,00	1 000,00	1 100,00	1 000,00	0,00	0,00	-
10	2/26/2015	100,00	1 000,00	1 100,00	0,00	0,00	0,00	-

To perform a repayment, follow these steps:

1. Make sure that “Contract code”, “Name of client”, “Installment number” and “Date” are correct. Please note that you can fully repay the loan by simply clicking “Total repayment”. Be sure to choose the payment method used by the client.
2. Enter the amount the client is about to repay. A link below the field will enable you to automatically retrieve the amount the client has to pay to return his or her loan to “normal” if it is a case of late repayment.
3. Now you need to decide whether the system should recalculate the interest to be paid on the decreased OLB or if the schedule should remain the same, as in the cases of “flat” schedules or prepayments for loans with declining interests. See the two (2) examples above.
4. Here you see the repayment distributed between principal, interests, penalties and commissions. The system will automatically suggest an amount as per the options you defined in “Products”. If authorized to do so, you may disable this automated calculation and enter the amount manually. In case the way you divide the amount between these categories is not covered by the default version of our software, contact the OPENCBS team and we can customize it for you.

5. Add additional comments if required.
6. A preview will show the schedule as it would appear following disbursement. Once you're sure everything is correct, click "OK" to confirm the repayment.

### 4.3.3 Events

The events tab enables your back office to view a detailed history of operations performed on a loan.

The screenshot displays the 'Events' tab in the OpenCBS interface. The main table lists events with columns: Date, Entry date, Type, Principal, Interest, Commissions, Penalties, Overdue principal, Overdue days, Cancelable, User, and Exported date. A 'Confirmation' dialog box is open, showing a preview of the repayment schedule with columns: N°, Date, Interest repayment, Principal repayment, Paid interest, Paid principal, and Paid date. The dialog also includes a 'Comment' field and 'Confirm' and 'Cancel' buttons.

Date	Entry date	Type	Principal	Interest	Commissions	Penalties	Overdue principal	Overdue days	Cancelable	User	Exported date	ID
4/26/2014 3:06:5...	4/26/2014	LOVE							True	admin admin		1
4/26/2014 3:08:5...	4/26/2014	LODE	10 000		0,00				True	admin admin		1
4/26/2014 3:08:5...	4/26/2014	LEE0			200,00				True	admin admin		1
4/26/2014 3:08:5...	4/26/2014	LEE1			200,00				True	admin admin		1
4/26/2014 3:08:5...	4/26/2014	LOIE	0,00		100,00				True	admin admin		1
4/26/2014 3:11:45...	4/26/2014	LODE	10 000...		0,00				True	admin admin		1
4/26/2014 3:11:45...	4/26/2014	LEE0			200,00				True	admin admin		1
4/26/2014 3:11:45...	4/26/2014	LEE1			200,00				True	admin admin		1
4/26/2014 3:11:45...	4/26/2014	LOIE	0,00						True	admin admin		1
4/26/2014 3:12:2...	4/26/2014	RGLE	1 000,00	100								
4/26/2014 3:12:3...	4/26/2014	RGLE	1 000,00	100								
4/26/2014 3:13:5...	4/26/2014	RGLE	1 000,00	100								

N°	Date	Interest repayment	Principal repayment	Paid interest	Paid principal	Paid date
1	5/26/2014	100,00	1 000,00	100,00	1 000,00	4/26/2014
2	6/26/2014	100,00	1 000,00	100,00	1 000,00	4/26/2014
3	7/27/2014	100,00	1 000,00	-	-	-
4	8/26/2014	100,00	1 000,00	-	-	-
5	9/26/2014	100,00	1 000,00	-	-	-
6	10/26/2014	100,00	1 000,00	-	-	-
7	11/26/2014	100,00	1 000,00	-	-	-
8	12/26/2014	100,00	1 000,00	-	-	-
9	1/26/2015	100,00	1 000,00	-	-	-
10	2/26/2015	100,00	1 000,00	-	-	-

The different features useful to your back office are as follows:

1. All events generated by the software can be seen here: "Date & Time", "Entry Date", "Type", "Principal", "Interest", "Commissions", "Penalties", "Overdue principal", "Overdue days", "Cancelable", "User", "Exported date", "ID", "Installment number", "Comment", "Payment method" and "Deleted". Note that depending on the type of events configured, some fields will remain unfilled.
2. Events can be of several types: LOVE is disbursement, RGLE regular repayment. For a full list of events, go to Accounting -> Accounting rules and choose "All".
3. Deleted loans are highlighted in light green.
4. To delete the last event performed, click on "Delete most recent event". An additional window will appear where you can produce a preview of the schedule as it would appear following deletion of this event. You can then add a comment if you like, and confirm. It is possible to delete several events if an issue occurred in the few most recent repayments. However, for more complex schedule fixing, please contact the OPENCBS Support Desk.

- You can also cancel a penalty here. Select the installment to which the penalty was charged and click “Wave late fees”. It will delete the original installment event to which the penalty was charged and create a new one with the penalty on principal or interest expunged.

## 4.4 Special operations

### 4.4.1 Reschedule

The rescheduling functionality allows you to change the active portion of the repayment schedule according to new requirements.

The active portion of the repayment schedule is the remaining schedule of installments (those that have not yet been paid). Rescheduling allows you to change the number of installments, change the interest rate for those remaining installments, add a grace period or change the dates of installments as necessary.

Details	Contracts	Loan details	Advanced settings	Guarantors and collaterals	Credit committee	Loan repayment		
<b>Status</b> Currency: USD OLB: 7 605,11 Interests due: 467,23								
Repayment schedule		Events						
N°	Date	Expected intere...	Expected principal	Installment total	OLB	Paid intere...	Paid princi...	Paid d
1	7/25/2014	286,03	2 394,89	0,00	7 605,11	286,03	2 394,89	7/25/2
2	8/26/2014	232,53	2 458,25	2 690,78	5 146,86	-	-	-
3	9/26/2014	157,37	2 533,41	2 690,78	2 613,45	-	-	-
4	10/24/2014	77,33	2 613,45	2 690,78	0,00	-	-	-
!!!								
Repay		Reschedule		Manual schedule		Add tranche		Write off
							Print	

Click “Reschedule” to see the “Contract rescheduling” window:

The screenshot shows a window titled "Contract rescheduling" with the following fields and a table:

- Contract code: DEF/14/default-2/1/2
- New installments: 4
- Grace period: 1
- Start date: 25/07/2014
- New interest rate: 40
- Charge interest during grace period
- First repayment date: 25/08/2014

#	Date	Interest	Principal	Total	OLB	Paid interest	Paid principal	Payment date
1	25.07.20...	286.03	4 789.78	0.00	10 000.00	286.03	4 789.78	25.07.20...
2	25.08.20...	258.37	0.00	258.37	7 605.11	0.00	0.00	
3	25.09.20...	258.37	2 448.94	2 707.31	7 605.11	0.00	0.00	
4	24.10.20...	169.52	2 537.79	2 707.31	5 156.17	0.00	0.00	
5	25.11.20...	88.95	2 618.38	2 707.33	2 618.38	0.00	0.00	

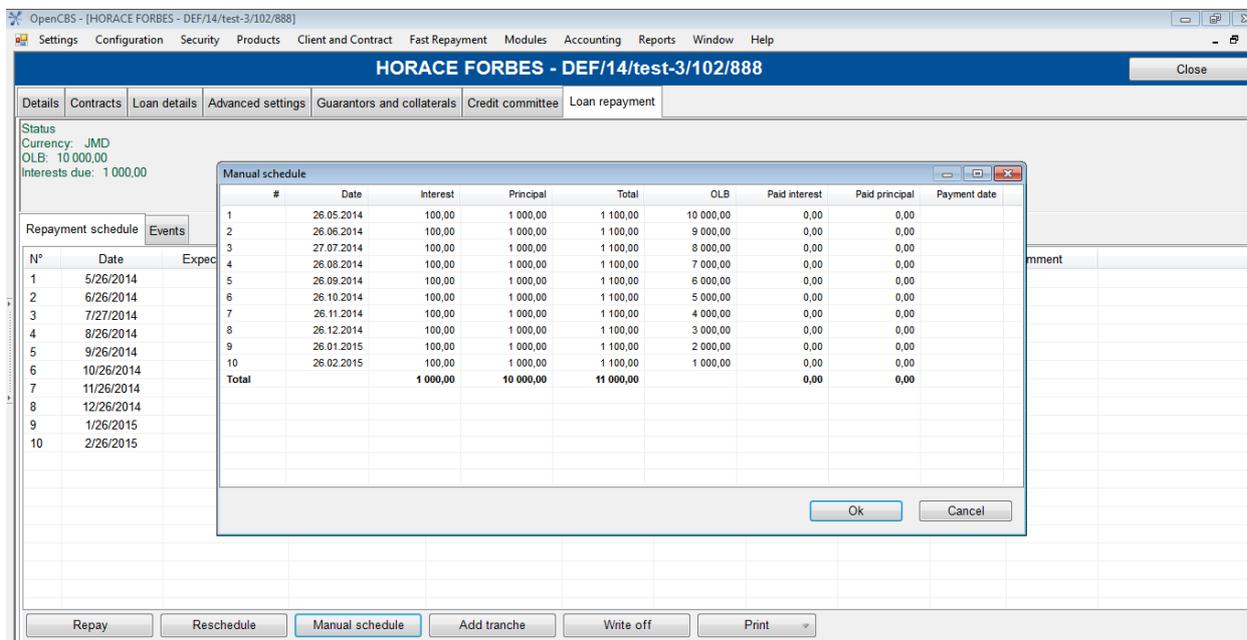
In the default display, you will see the current repayment schedule and the controls to modify it. Those controls are as follows:

- **New installments.** Defines how many installments will be part of the active schedule.
- **New interest rate.** Applies a new interest rate for the active part of schedule.
- **Grace period.** Defines the number of installments with a new grace period.
- **Charge interest during grace period.** Enable/disable the charging of interest during a grace period. This is not applicable if there is no grace period.
- **Start date.** Defines the date when you want to initiate the rescheduling, a date after which interest calculations and the active portion of the schedule will change.
- **First repayment date.** Date when the active portion of the schedule will begin. This option will affect interest calculation for the first active installment; the system will calculate how many days between **Start date** and **First repayment date**.

On the two screenshots above, a loan has been rescheduled from an active portion with three (3) installments at a 36% interest rate to one with four (4) installments at a 40% interest rate that also has a grace period.

### 4.4.2 Manual schedule adjustment

If the “Reschedule” function doesn’t allow you to modify loan repayment schedules in the way you’d like, you can manually change the schedule using “Manual schedule adjustment”.



You can modify the schedule manually the same way you would an Excel sheet. The only constraint is that you must keep the total principal to be repaid equal to the total loan amount.

### 4.4.3 Tranches

This function is only enabled for loan products you have configured for credit lines.

**Add tranche**

Amount: 60000 Interest rate: 1,00 Start date: 4/26/2014

Installments: 10  Apply to OLB First repayment date: 5/26/2014

Grace period: 1 Tranche method: Cash

#	Date	Interest	Principal	Total	OLB	Paid interest	Paid principal	Payment date
1	26.05.2014	700,00	0,00	700,00	70 000,00	0,00	0,00	
2	26.06.2014	700,00	7 777,78	8 477,78	70 000,00	0,00	0,00	
3	27.07.2014	700,00	7 777,78	8 477,78	62 222,22	0,00	0,00	
4	26.08.2014	700,00	7 777,78	8 477,78	54 444,44	0,00	0,00	
5	26.09.2014	700,00	7 777,78	8 477,78	46 666,66	0,00	0,00	
6	26.10.2014	700,00	7 777,78	8 477,78	38 888,88	0,00	0,00	
7	26.11.2014	700,00	7 777,78	8 477,78	31 111,10	0,00	0,00	
8	26.12.2014	700,00	7 777,78	8 477,78	23 333,32	0,00	0,00	
9	26.01.2015	700,00	7 777,78	8 477,78	15 555,54	0,00	0,00	
10	26.02.2015	700,00	7 777,76	8 477,76	7 777,76	0,00	0,00	

OK Cancel

Adding a tranche works in a similar way to disbursing a new loan:

17. First, you define the amount of the tranche to be added to the existing loan. You choose the number of installments and the grace period for the new schedule.
18. Select the interest rate of the tranche to be disbursed. You have the choice to apply this rate to the remaining OLB from previous disbursements or not. If you select this option, the interest will be applied to the whole OLB after adding the tranche. If not, the interests of already disbursed tranches will remain unchanged. You may also define the method of payment for the tranche here.
19. Enter the start date and date of first installment similar to how you did in “Disbursement”.
20. Preview how the schedule would look after adding the tranche.

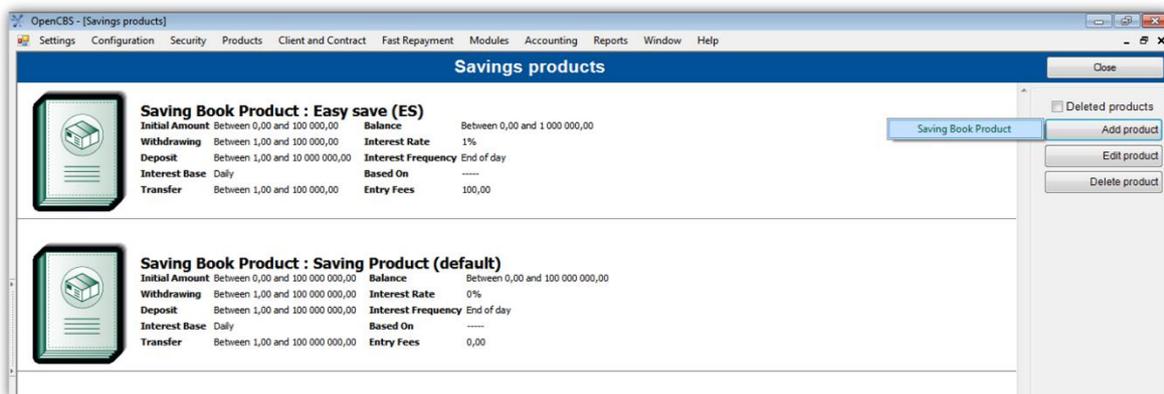
#### 4.4.4 Write-off

Any loan can be written off. By default, the write-off is set to “standard”, however, OPENCBS can configure any specific accounting rules related to write-offs that your organization has.

## 5. Savings Management

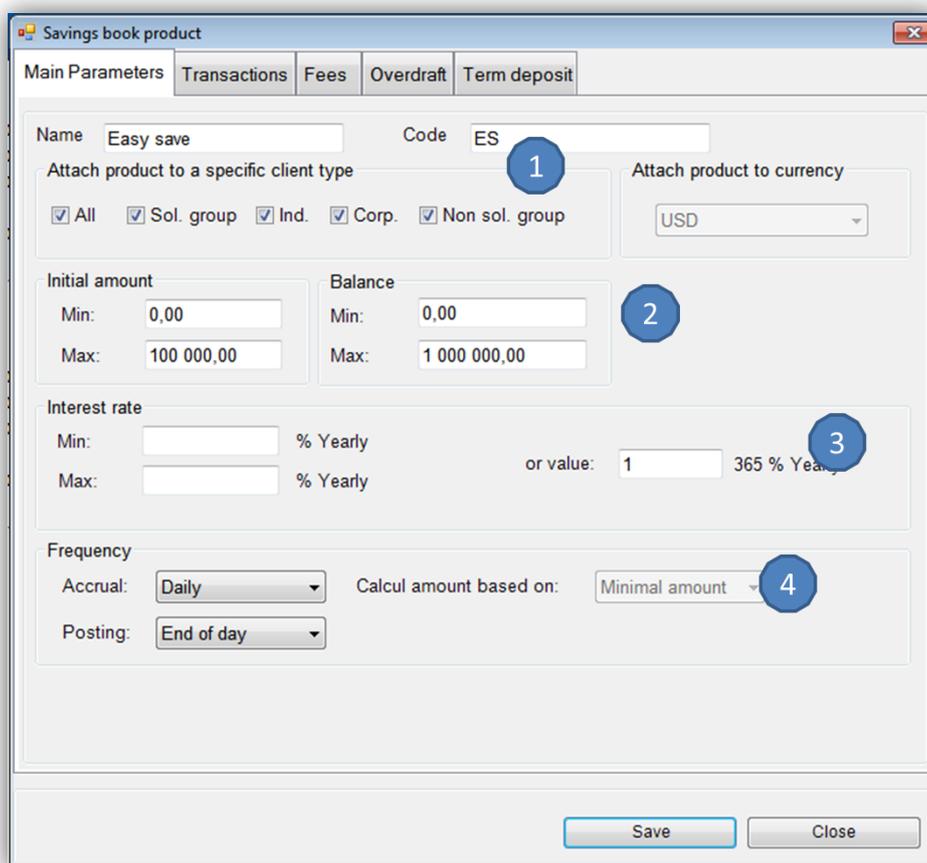
### 5.1 Create/edit Savings products

To create or edit a savings product, go to the top menu tab labeled “Products” and click “Savings products”. You’ll then see a list of existing savings products appear. To edit a product, select it and click “Edit product”; to add a new one click “Add” and then select “Saving Book Product”.



The Savings product creation window has five (5) tabs with descriptions.

#### 5.1.1 Main settings



Through the “Main settings” tab, you can adjust the main settings of a savings product:

1. **Product identity.**
  - The name of the product to appear in reports and contracts;
  - Product code that will appear in “Contract code” fields;
  - Types of client this product can be provided to;
  - Currency of this product.
2. **Savings “size”**
  - Range of the initial amounts possible for the savings account;
  - Range of balances possible for the savings account.
3. **Interest**
  - Percentage of interest to be collected for every frequency period (defined below) and the equivalent in interest rate per year.
4. **Frequency**
  - Frequency of interest accrual, i.e. how often the client earns interest on his or her savings. Accruals can be daily, weekly or monthly.
  - Posting frequency at which the interest collected is posted back into the account. This can be end of day, end of week, end of month or end of year.
  - On what the interest calculation is based.

**Note:** *The posting frequency is applicable only if the term deposit option is not activated, otherwise the “Term deposit” rule will be applied.*

## 5.1.2 Transactions

In second tab, “Transactions”, you can make specifications for the transactions related to this savings product:

### 21. Deposits

- Specify whether the transactions will be in “Cash” or “Cheque”, or both.
- Define the minimum and maximum amounts of cash that can be deposited during a single transaction.
- Determine fee amount to be charged on deposits.

### 22. Withdrawals

- Determine the minimum and maximum amounts allowed to be withdrawn during one transaction.
- Set a fee amount or percentage charge on money withdrawn.

### 23. Transfer

- Set a range of amounts permitted to be transferred to another account in a single transaction.
- Determine a transfer fee amount percentage for both inter-branch and intra-branch transactions.

### 5.1.3 Fees

The screenshot shows a software window titled "Savings book product" with a "Fees" tab selected. The window is divided into four sections for configuring different types of fees:

- Entry fees:** Type:  Flat  Rate. Min: [ ] Max: [ ] or value: 100,00
- Reopen fees:** Type:  Flat  Rate. Min: 0 Max: 100 or value: [ ]
- Close fees:** Type:  Flat  Rate. Min: [ ] Max: [ ] or value: 100,00
- Management fees:** Type:  Flat  Rate. Min: [ ] Max: [ ] or value: 100,00 Monthly (dropdown menu)

At the bottom right of the window are "Save" and "Close" buttons.

The different types of fees that can be charged on a savings product are:

- **Entry fee.** Charged when the first deposit is made into a new savings account.
- **Reopen fee.** If the savings product has been closed and needs to be reopened, this charge will occur at the point of reopening.
- **Close fees.** Fee charged to close the account.
- **Management fee.** Regular payment for the maintenance of the account.

### 5.1.4 Overdraft

On the “Overdraft” tab, you can set the following overdraft fees:

- **Fixed overdraft fees.** Charged to the client when his or her account goes into overdraft, i.e. from a positive to a negative balance.
- **Agio.** The amount charged daily to the client as a percentage of the negative balance of his account.

## 5.1.5 Term deposit

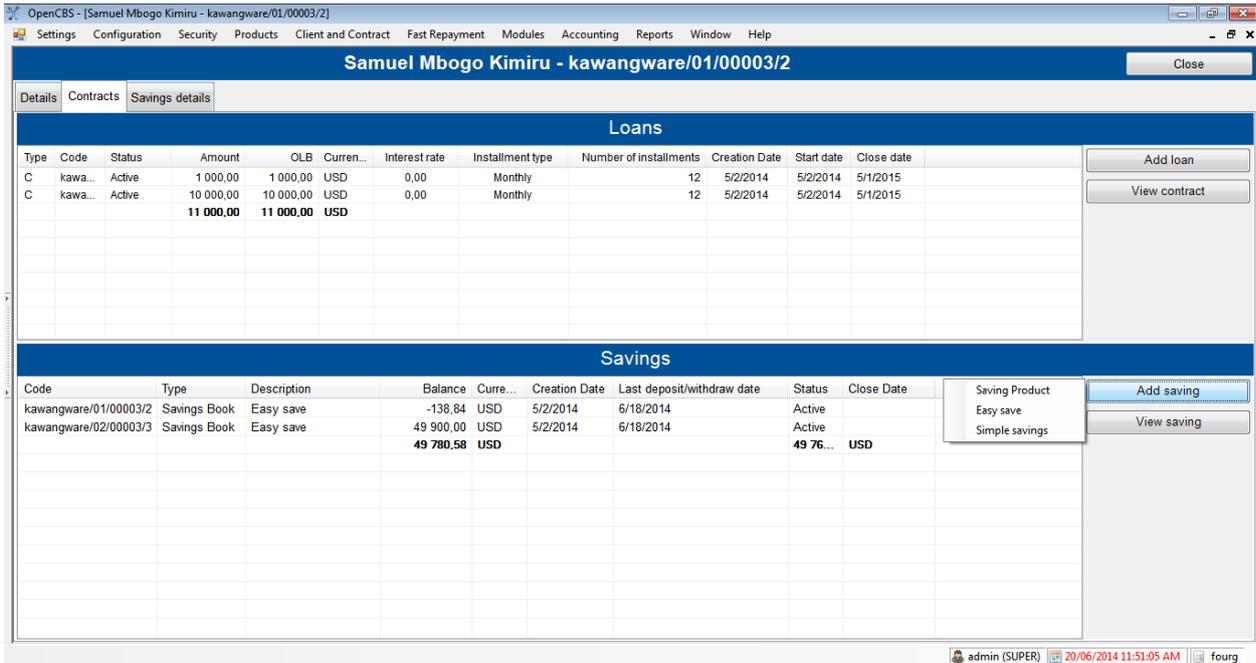
On the final tab, “Term Deposit”, you may decide whether you want to activate the term deposit option for this product. Term deposits mean that funds in the account will not be available until the end of a set term. Here you define the two (2) key term deposit parameters:

- **Number of periods.** After how many periods of interest accrual the term will end. In the screenshot, funds will be available after 30 days because the interest period is daily.
- **Posting frequency.** How often the accrued interest will be posted to the designated account.

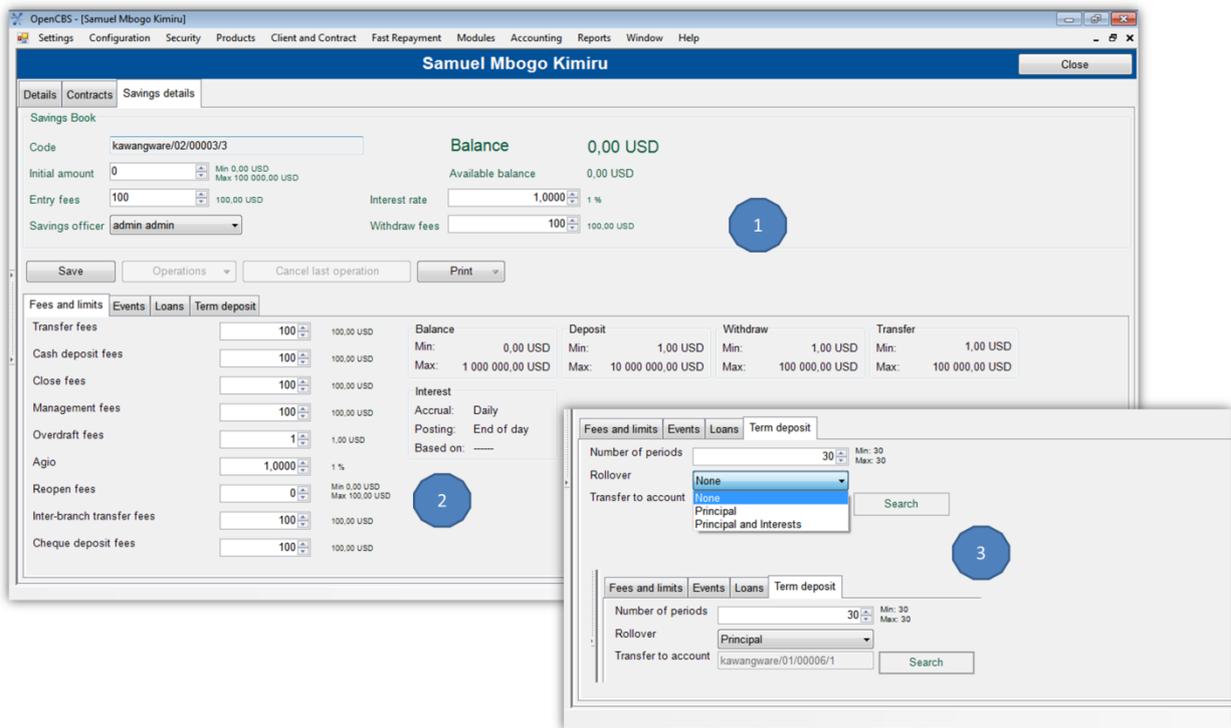
## 5.2 Manage savings contracts

### 5.2.1 Create savings contracts

Savings contracts are created through the “Contracts” section of a client’s profile, the same as it was done for loan contracts.



After you select the type of product you want to provide to the client, the following window will appear:



Here you can choose the characteristics of the specific contract you want to a client.

1. **Main settings.** In addition to what you defined when you created a savings product, you may adjust the following:
  - Savings contract code. Automatically generated
  - Initial amount
  - Entry fees

- Savings officer (the user in charge of the contract)
- Interest rate
- Withdrawal fees

**2. Fees and limits.**

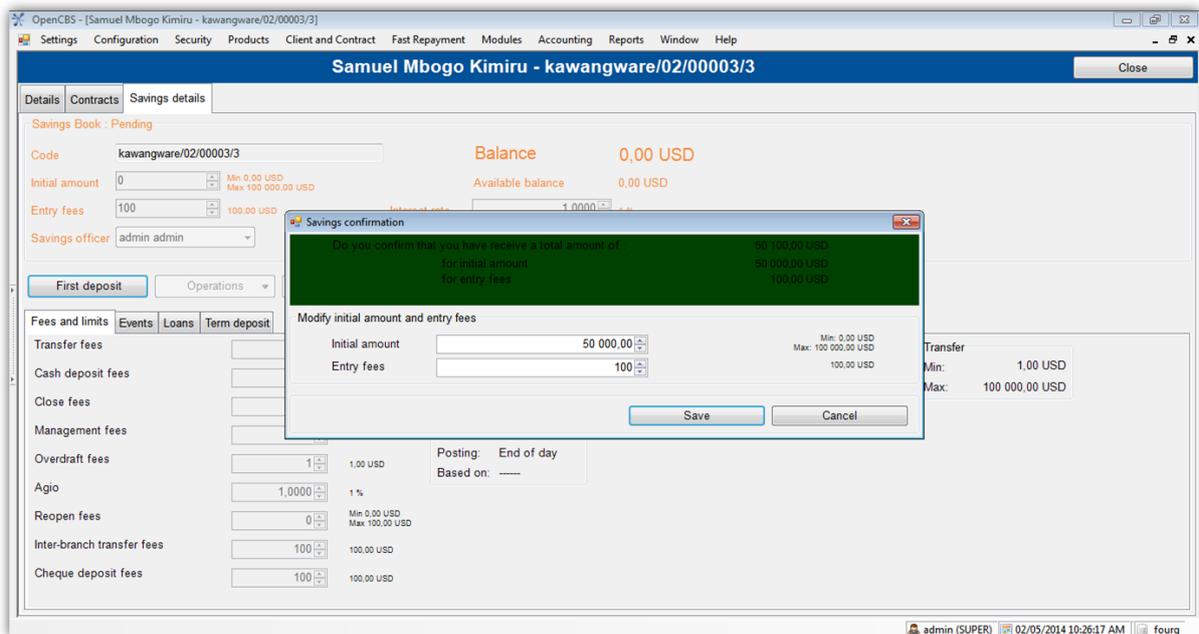
- Transfer fees
- Cash deposit fees
- Close fees
- Management fees
- Overdraft fees
- Agio
- Reopen fees
- Inter-branch transfer fees
- Cheque deposit fees

On the right side of this section, you will find information on the amount ranges allowed for different operations in the system as well as a reminder of the type of interest accrual.

**3. Term deposits (if activated).** You have the ability to define the specific characteristics of this account's term deposit:

- Duration of the term in number of period.
- Type of rollover. Two (2) options are available here:
  - "Principal". At the end of the term, the principal will stay in the balance and keep accruing interest.
  - "Principal and Interest". At the end of the term, the principal and the accrued interest will be reinvested into the account.
- Transfer to account. If you choose "Principal" for the rollover, you will need to select the savings account into which the accrued interest will be transferred at the end of the term.

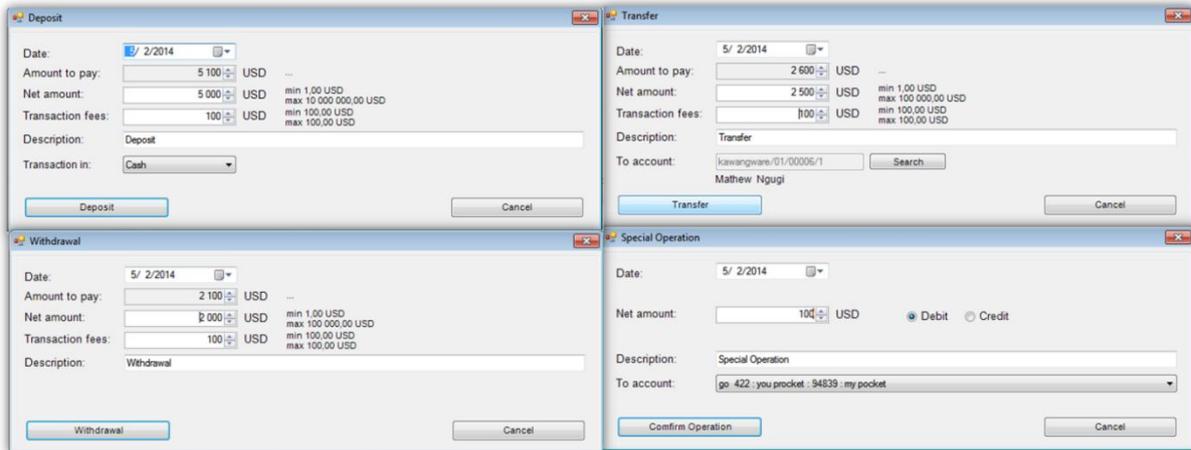
Click "Save" after you have adjusted all settings.



The savings contract will be classified as “pending” until you click “First deposit” and specify the initial amount to be deposited into the account.

It is only after confirming the first deposit that the account will be officially open.

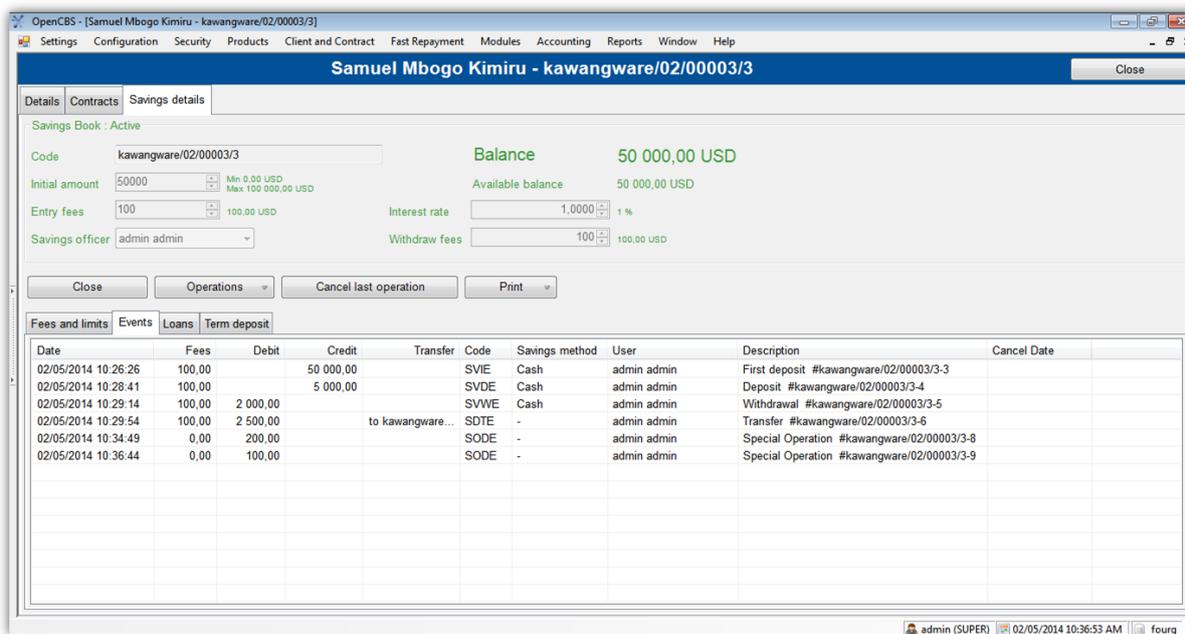
## 5.2.2 Perform operations



Use the buttons on the savings contract front page to perform one of the following operations:

- **Deposit.** When the client adds money to the savings account, you may enter the following information:
  - Date
  - Amount deposited
  - Transaction fees
  - Description
  - Type of transaction. The method used by client to deposit the money (Cash, cheque, withdrawal, direct debit, wire transfer, debit card)
- **Withdrawal.** The client takes out money from the savings account.
  - Same parameters as “Deposit”, except that transaction “Type” is not required because the money is expected to be withdrawn in cash no matter what.
- **Transfer.** The client transfers a certain amount from his savings account to another account.
  - Same parameters as “Withdrawal, but you must choose the savings account(s) to which the money will be transferred.
- **Special operation.** This operation has to be defined in the “Standard booking” section of Accounting before you will have the ability to do this in Savings (please contact OPENCBS for more information about Accounting). It will debit or credit a savings account a certain amount while performing the accounting transaction you defined in “Standard booking”. Here you may enter the following:
  - Date
  - Amount
  - Debit or credit
  - Description
  - “To account”, or the predefined bookings this transaction will perform

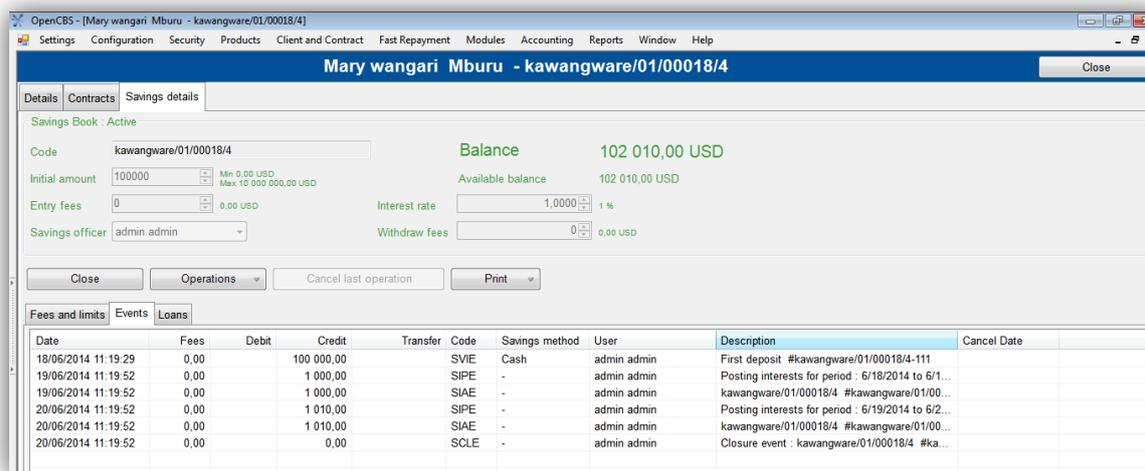
These operations will then be displayed in the “Events” tab of the savings contract.



### 5.2.3 Interest calculation

To generate interest accrual events, as well as overdraft, agios and management fees, you must perform account closures.

If no term deposit is set, the system will accrue interest at the frequency defined before and post it directly back into the same savings account at the posting frequency you decided on when you created in the savings product.



In this example, the savings amount is 100000 with 1% interest accrued daily and posted daily.

In case term deposit is activated, process will be the same except that the interest accrual would be posted back to another account at the end of the term period.

OpenCBS - [Mathew Ngugi - kawangware/01/00006/1]

Settings Configuration Security Products Client and Contract Fast Repayment Modules Accounting Reports Window Help

**Mathew Ngugi - kawangware/01/00006/1** Close

Details Contracts Savings details

Savings Book : Active

Code: kawangware/01/00006/1 Balance: 22 500,00 USD

Initial amount: 5000 Available balance: 20 700,00 USD

Entry fees: 0 Interest rate: 0,0000 0 %

Savings officer: admin admin Withdraw fees: 0 0,00 USD

Close Operations Cancel last operation Print

Date	Fees	Debit	Credit	Transfer	Code	Sa...	User	Description
02/05/2014 07:29:18	0,00		5 000,00		SVIE	Ca...	admin admin	First deposit #kawangware/01/00006/1-1
02/05/2014 00:00:00	0,00		1 800,00		SBCS	-	admin admin	
02/05/2014 10:29:54	0,00		2 500,00	from kaw...	SCTE	-	admin admin	Transfer #kawangware/01/00006/1-7
02/05/2014 10:42:35	0,00		0,00		SCLE	-	admin admin	Closure event : kawangware/01/00006/1 #kawangware/01/00006/1-11
05/05/2014 10:43:48	0,00		0,00		SCLE	-	admin admin	Closure event : kawangware/01/00006/1 #kawangware/01/00006/1-14
01/06/2014 10:46:35	0,00		15 000,00		SIPE	-	admin admin	Posting interests for period : 5/2/2014 to 6/1/2014 : kawangware/02/00003/3 #kawangware/01/00006/1-20
18/06/2014 10:46:35	0,00		0,00		SCLE	-	admin admin	Closure event : kawangware/01/00006/1 #kawangware/01/00006/1-21
20/06/2014 11:19:52	0,00		0,00		SCLE	-	admin admin	Closure event : kawangware/01/00006/1 #kawangware/01/00006/1-112

admin (SUPER) 20/06/2014 12:50:11 PM four

In this example, 15000 was posted to this account on 01/06 as interest accrued on a term deposit account.

### 5.2.4 Overdraft and agios calculation

Overdraft and agio payments are also generated through closure and will appear in the “Events” tab:

OpenCBS - [Samuel Mbogo Kimiru - kawangware/01/00003/2]

Settings Configuration Security Products Client and Contract Fast Repayment Modules Accounting Reports Window Help

**Samuel Mbogo Kimiru - kawangware/01/00003/2** Close

Details Contracts Savings details

Savings Book : Active

Code: kawangware/01/00003/2 Balance: -138,84 USD

Initial amount: 100 Available balance: -138,84 USD

Entry fees: 100 Interest rate: 1,0000 1 %

Savings officer: admin admin Withdraw fees: 100 100,00 USD

Close Operations Cancel last operation Print

Date	Fees	Debit	Credit	Transfer	Code	Savings method	User	Description	Cancel Date
05/05/2014 10:43:48	0,00		0,00		SCLE	-	admin admin	Closure event : kawangware/01/00003/2 #ka...	
02/06/2014 10:43:48	1,00		0,00		SVAE	-	admin admin	Agio of 1 for 01.06.2014 - 02.06.2014 : kawan...	
02/06/2014 10:46:35	1,00		0,00		SOFE	-	admin admin	Overdraft fee event : kawangware/01/00003/2 ...	
02/06/2014 10:46:35	100,00		0,00		SMFE	-	admin admin	Management fee of 100.00 for 02.05.2014 - 0...	
02/06/2014 10:43:48	1,00		0,00		SVAE	-	admin admin	Agio of 1 for 01.06.2014 - 02.06.2014 : kawan...	
02/06/2014 10:46:35	1,00		0,00		SOFE	-	admin admin	Overdraft fee event : kawangware/01/00003/2 ...	
02/06/2014 10:46:35	100,00		0,00		SMFE	-	admin admin	Management fee of 100.00 for 02.05.2014 - 0...	
03/06/2014 10:43:48	1,01		0,00		SVAE	-	admin admin	Agio of 1.01 for 02.06.2014 - 03.06.2014 : ka...	
03/06/2014 10:43:48	1,01		0,00		SVAE	-	admin admin	Agio of 1.01 for 02.06.2014 - 03.06.2014 : ka...	
04/06/2014 10:43:48	1,02		0,00		SVAE	-	admin admin	Agio of 1.0201 for 03.06.2014 - 04.06.2014 : ...	
04/06/2014 10:43:48	1,02		0,00		SVAE	-	admin admin	Agio of 1.0201 for 03.06.2014 - 04.06.2014 : ...	
05/06/2014 10:43:48	1,03		0,00		SVAE	-	admin admin	Agio of 1.0303 for 04.06.2014 - 05.06.2014 : ...	
05/06/2014 10:43:48	1,03		0,00		SVAE	-	admin admin	Agio of 1.0303 for 04.06.2014 - 05.06.2014 : ...	
06/06/2014 10:43:48	1,04		0,00		SVAE	-	admin admin	Agio of 1.0406 for 05.06.2014 - 06.06.2014 : ...	

admin (SUPER) 18/06/2014 10:59:34 AM four

The example above, no deposit was made into the account at the start, and the account went to overdraft when the first management fee of 100 USD had to be paid. The system will charge an initial overdraft fee of 1% and then an agio of 1% of the negative balance everyday thereafter, which is expressed in the series of events displayed here.

### 5.2.5 Mandatory savings

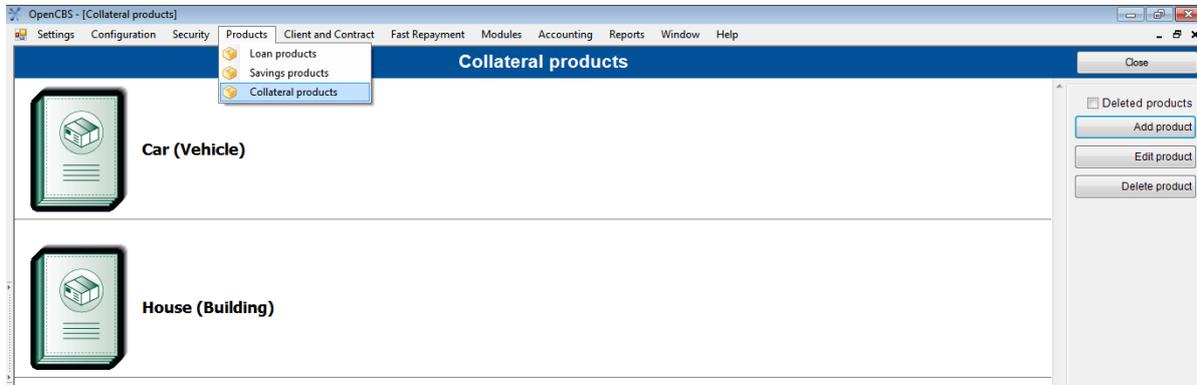
On the “Loan” tab under “Savings details”, you can see all the loans that are guaranteed by this savings account as mandatory savings, if there are any:



If there are loans associated with the account, you will see a note labeled “Available balance” below the main balance of the account. “Available balance” is the amount that can be used by the client considering a portion of the funds in the account is marked for mandatory savings.

## 6. Collateral products

To add a collateral product, select “Products” from the top menu bar and choose “Collateral products”. You will see a list of previously created collaterals. Select a collateral and click “Edit product” on the right to edit an existing product, or click “Add product” to create a new one.



Below is the “Add collateral” product window, which you can use to create a new collateral object.

Amount	Number
Description	String
Production Date	Date
Owner	Owner
Quality status	(Collection)

**Quality status**  
Estimation of the quality of the vehicle in term of how old and how damage it is

**Property details**

Name: Model and color  
Description: Model and color of the vehicle  
Type: String (selected)  
Other options: Number, String, Date, Collection, Owner

**Collection items**

Collection: [Empty field]  
Item name: [Empty field]  
Buttons: Add item, Delete item

Buttons: Save, Cancel

The “Add collateral product” window will allow you to define the characteristics of a collateral object you wish to use as a guarantee for future loans.

You need to determine the:

1. Name of the collateral product and a description providing some explanation of the collateral.
2. Collateral characteristics (in a window that will appear after naming and describing the collateral). Please note that “Amount” and “Description” are mandatory fields that cannot be deleted.
3. There are five (5) types of characteristics you can define for a collateral:
  - Number.
  - String (text).
  - Date.
  - Collection (Multiple choice).
  - Owner or an individual register in the database.

Choose the type characteristic you want, the specific name of the field and a description to assist those who will enter this information into the system later on. Once you have completed this, click “Add property”. You can also delete a property if necessary.

4. This section is where you can add multiple choice items if you choose a collection field. Enter the item name and choose either “Add” or “Delete” to edit the list choices.
5. Click “Save” to confirm the creation of a new type of collateral.

Please note that OPENCBS can add collateral reports upon request that display a full list of collaterals registered within the software.

## 7. Forms & reports

OPENCBS includes standard reports that can be exported through either Microsoft Office or Crystal Reports Reader. Reports exported through Microsoft Office via Word or Excel are simple and easy to edit. Crystal Reports Reader creates ready-to-print reports and is free to use (see 1.2).

### 7.1 Internal Forms

The OPENCBS software can produce basic operational forms such as receipts, ready for print contracts or loan schedules. Customization of these basic forms can be made through Crystal Reports and Microsoft Word but this will require knowledge of SQL. The OPENCBS team can fully customize these forms according to your needs for an attractive price. Contact us for more information.

Internal forms are accessible via the “Print” buttons you will find on the tabs you use to perform everyday operations.

Here are a few examples of basic, non-customized forms from both Crystal Reports and Microsoft Word with descriptions:

**Client personal information**

First name: lydia                      Gender: F  
 Last name: K. BOADI PALMER      ID number: 10403  
 Father's name:                      Date of birth: 4/13/1974

**Personal address:**

District: Ga East Municipal      City: ACCRA  
 Address: From Kaneshie Odorkor high way Dansoman Junction,locate Hansonic Ho  
 Phone: 0004-922-635

**Business address:**

District: Ga Central (New)      City: ACCRA  
 Address: From Kaneshie Odorkor high way, Dansoman junction,locate Hanso  
 Phone: 0004-922-635

Contract code	Status	Amount	OLB	Creation date	Start date	Close date	Group	Late days	ATR
03221/13/002-1/10403C	Closed	1,000.00	0.00	8/2/2013	8/5/2013	2/28/2014	-	1,392	No
03221/13/002-1/10403I	Pending	1,000.00	0.00	8/2/2013	8/2/2013	1/20/2014	-	2,148	No

Savings code	Balance	Product name	Product code	Product type	Creation date	Closed date
01/03221/01/10403294	-950.00	BAYSAVE	100	Savings Book	8/2/2013	

Total Page No.: 1                      Zoom Factor: 100%

**Client Personal information.** Found on the “Client details” tab; displays the client’s profile as well as all contracts open and closed on behalf of this client. (Crystal Reports version)

**Contract History**

Contract Code: 0322/14/15CRPT-      Entry Fees: entry\_fees  
 2/10032/294                              No. of Installments: 15  
 Start Date: 22/06/2014              Interest rate: 20.00  
 Loan: 10000.00  
 Currency: Ghana Cedis  
 Loan Officer: Noa 9  
 Client Name: Joyce DOKUAH  
 Pass. No.: 10032

Event Type	Event Date	Principal	Interest	Fees	Late Days
LCODE	22/06/2014	10000.00	0.00	0.00	0
RGLE	22/07/2014	866.67	14400.00	0.00	0

Number	Capital Payment	Interest Payment	Total	Paid Interest	Paid Capital	Expected Date	Paid Date
1	866.67	14400.00	0.00	14400.00	866.67	22/07/2014	22/07/2014
2	866.67	14400.00	15066.67	0.00	0.00	26/08/2014	
3	866.67	14400.00	15066.67	0.00	0.00	23/09/2014	
4	866.67	14400.00	15066.67	0.00	0.00	28/10/2014	
5	866.67	14400.00	15066.67	0.00	0.00	25/11/2014	
6	866.67	14400.00	15066.67	0.00	0.00	23/12/2014	
7	866.67	14400.00	15066.67	0.00	0.00	21/01/2015	
8	866.67	14400.00	15066.67	0.00	0.00	24/02/2015	
9	866.67	14400.00	15066.67	0.00	0.00	24/03/2015	
10	866.67	14400.00	15066.67	0.00	0.00	28/04/2015	
11	866.67	14400.00	15066.67	0.00	0.00	26/05/2015	

**Contract History.** Found on the “Loan details” tab; displays a contract’s loan schedule and all events attached to the contract. (Microsoft Word version)



**Disbursement cash receipt.** Found in “Loan details”; provides disbursement information to keep track of the disbursement event and/or give to the client. (Microsoft Word version)



**Individual loan agreement.** Also found in “Loan details”; produces a standard contract agreement displaying the contract code, interest rate and all other legal information to be shared with the client. (Crystal Reports version)

Also available:

- **Committee Appraisal.** On the “Committee credit” tab. Allows you to display information related to the credit committee and to track the reasons for its decisions.
- **Repayment receipt.** On the “Loan repayment” tab. Provides detailed repayment information to be signed by both the client and the cashier to be kept as a proof of the payment performed.
- **Repayment schedule.** Also on the “Loan repayment” tab. Displays an updated schedule able to be provided to the client.
- **Loan’s events.** On the “Loan events” tab. Provides a full list of events having occurred with a loan.
- **Savings booking agreement.** In “Savings details”. Produces all the requisite legal information to be shared with client.
- **Cash receipt.** Also in “Saving details”. Displays information on the last transaction performed.
- **Contract status.** Also in “Savings details”. Displays a list of all transactions performed within the savings contract.

## 7.2 Reports

Reports are used to export usable data from the database that the management team can analyze. You can export data through Crystal Reports or Excel. Excel gives you more tools to analyze the data, while Crystal Reports usually exports ready-to-print sheets. The free version of OPENCBS includes nine (9) reports from Crystal Reports and seven (7) from Excel.

Reports are accessible through the top menu item labeled "Reports". Here are some examples:

Loan Product	Contracts	Individu	Group	Corporat	Clients	In group	OLB
(BI -- WEEKLY)	1	1	0	0	1	0	860,45
(MONTHLY)	3	2	1	0	6	4	30843,55
Easy Loan	5	5	0	0	5	0	856000,38
EPA (WEEKLY)	2	2	0	0	2	0	50977,89
Loan Product	2	2	0	0	2	0	1887,99
MPA (MONTHLY)	4	4	0	0	4	0	30133,36
MPA (WEEKLY)	3	3	0	0	3	0	22576,31
test script	7	7	0	0	7	0	66300,33
<b>Total:</b>	<b>27</b>	<b>26</b>	<b>1</b>	<b>0</b>	<b>30</b>	<b>4</b>	<b>1059580,26</b>

ID	First name	Last name	Type	District	Personal phone	Personal phone 2	Activity
10.000	lydia		I	Kumasi Metropolitan	0003 372723	0003 372723	Petty Trader
10.002	Phisca		I	Sunyani Municipal	000	0009057957	Petty Trader
10.003	abena	DOMALE	I	Kumasi Metropolitan	0008 922619	0008 922619	Petty Trader
10.005	Kwame	Yeboah Yaw	I	Ga Central (New)	0004-668-499	0004-668-499	Petty Trader
10.007	joyce	OKVERE	I	Techiman Municipal	0003586233	0003586233	Petty Trader
10.008	Florence	Ofori Fiampong	I	Sunyani West	000	0009035369	Petty Trader
10.009	Adwoa	Maabea	I	Kumasi Metropolitan	0000 815525	0000 815525	Cloths Seller
10.011	Lydia	Korang	I	Kumasi Metropolitan	0003 372723	0003 372723	Petty Trader
10.012	Ellen Konadu	Agemang	I	Ga Central (New)	0008-116-074	0008-116-074	Petty Trader
10.015	Adwoa	Nbisaasa	I	Kumasi Metropolitan	0000 815525	0000 815525	Cloths Seller
10.016	joyce	MANU	I	Ga Central (New)	0003-437-651	0003-437-651	Petty Trader
10.017	florence	OSEI	I	Sunyani West	0009035369	0009035369	Petty Trader
10.018	Juliana	MAABEA	I	Kumasi Metropolitan	0007 408177	0007 408177	Cloths Seller

**Active loans report.** Loans grouped by product, type of business, loan officer, size, etc... (Excel version pictured)

**Client information.** A list of clients with all available information on them. (Crystal Reports version pictured)

Loan officer	Brand	Interest	OLB	Late days	LLP	LLP %	District
Harry 1	3021	997,97	10600,03	0	1	106	Kumasi Metropolitan
Harry 1	3021	468,45	200	0	1	2	Kumasi Metropolitan
thierry 6	3521	216000	10000,05	0	1	100	Sunyani West
thierry 9	3521	110,13	887,99	0	1	9	Sunyani West
Harry 1	3021	216000	10000,05	0	1	100	Kumasi Metropolitan
Noa 9	3522	202400	9333,38	0	1	93	Techiman Municipal
Bill 3	0	187200	8666,71	0	1	87	Kumasi Metropolitan
admin admin	3522	1200	8300,04	0	1	83	Amanise West
JP 7	3221	2800	18666,76	1	10	1867	Ga Central (New)
Harry 1	3021	2800	18666,76	1	10	1867	Kumasi Metropolitan
Harry 1	3021	216000	10000,05	3	10	1000	Kumasi Metropolitan
admin admin	0	241,61	3888,74	4	10	389	Akatsi South
Bill 3	3021	186,38	200	4	10	20	Kumasi Metropolitan
admin admin	0	2770,65	16488,43	6	10	1649	Azawie
thierry 6	3521	9720000	200000,1	6	10	20000	Sunyani Municipal
Harry 1	3021	216000	10000,05	11	10	1000	Kumasi Metropolitan
thierry 6	3521	2700000	600000	11	10	60000	Sunyani Municipal
henry 8	3221	1957,42	15442,59	13	10	1544	Ga Central (New)
Bill 3	3522	2800	18666,76	13	10	1867	Techiman Municipal
henry 8	3221	172,89	860,45	20	10	86	Ga East Municipal
JP 7	3221	80,75	1000	32	25	250	Ga Central (New)
admin admin	3021	2378,57	14155,12	39	25	3539	Akuapim South (New)
JP 7	3221	1655,67	20000	67	50	10000	Ga Central (New)
Harry 1	3021	3,49	576,31	253	100	576	Kumasi Metropolitan
Noa 8	3522	29,52	977,89	284	100	978	Techiman Municipal
Harry 1	3021	65,82	2000	337	100	2000	Kumasi Metropolitan
Noa 9	3522	4501,75	50000	39	25	12500	Techiman North (New)
<b>Total:</b>		<b>1,447,07</b>	<b>1059580,3</b>			<b>121732</b>	

Loan officer	Brand	PAR 30	PAR 60	PAR 90	PAR 120	PAR 150	PAR 180	PAR 210	PAR 240	PAR 270	PAR 300	PAR 330	PAR 360	PAR 390	PAR 420	PAR 450	PAR 480	PAR 510	PAR 540	PAR 570	PAR 600
admin admin	0,00	0,00	36,721,03	0,0%	0,0%	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Harry 1	2,190,00	2,190,00	37,300,00	0,6%	0,6%	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Noa 8	1	1	7	0,0%	0,0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
henry 7	3,000,00	1,000,00	3,000,00	93,8%	21,3%	2,000,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00

**OLB and LLP (Loan Loss Provision).** A list of all loans with their LLP at a certain point in time. (Excel version pictured)

**PAR analysis.** Statistics displaying of the portfolio at risk grouped by loan officer, branch, product, etc... (Crystal Reports version pictured)



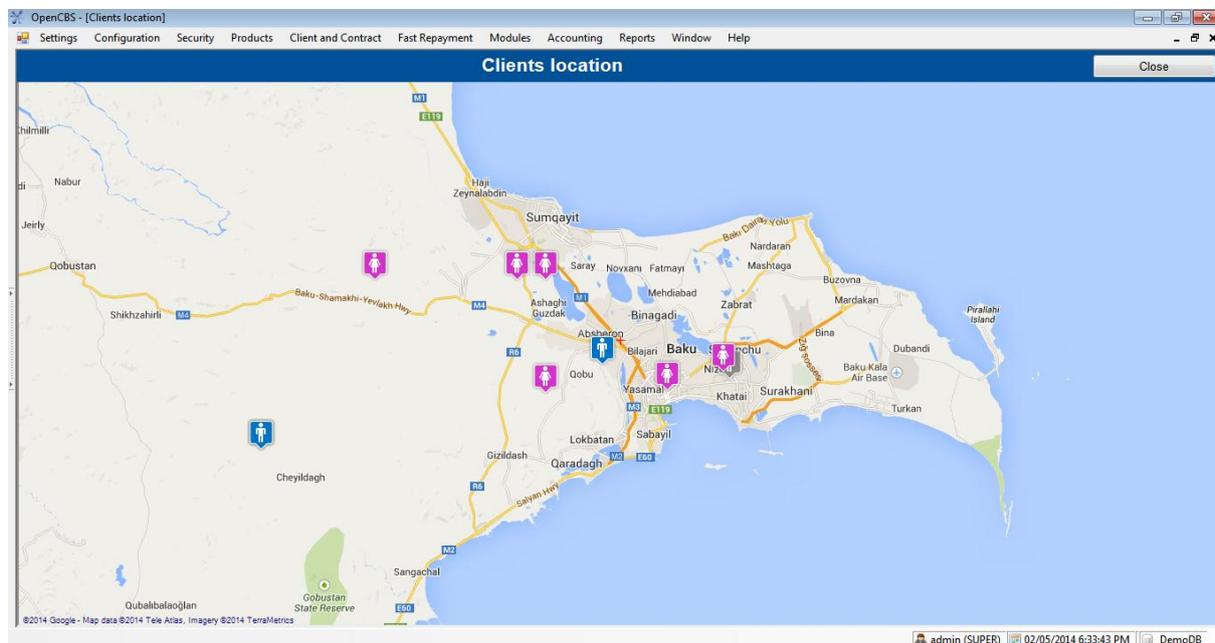
## 8. Extensions

In the Core version, five (5) extensions are available for free for 30 days. They are accessible through the “Extensions” menu item. Extensions include: “Client mapping”, “Custom fields”, “Custom events”, “Task management”, “Delinquency management”, “Fast repayment” (otherwise known as “Batch repayment”), “Operational accounting”, “Accounting integration” and “Document tracking”. The last three require configuration by OPENCBS on a client-by-client basis before using.

Extensions are purchasable on a monthly or yearly basis. You can pay for a specific extension or get access to all extensions by upgrading to our “Professional” or “Business” offers.

### 8.1 Client mapping

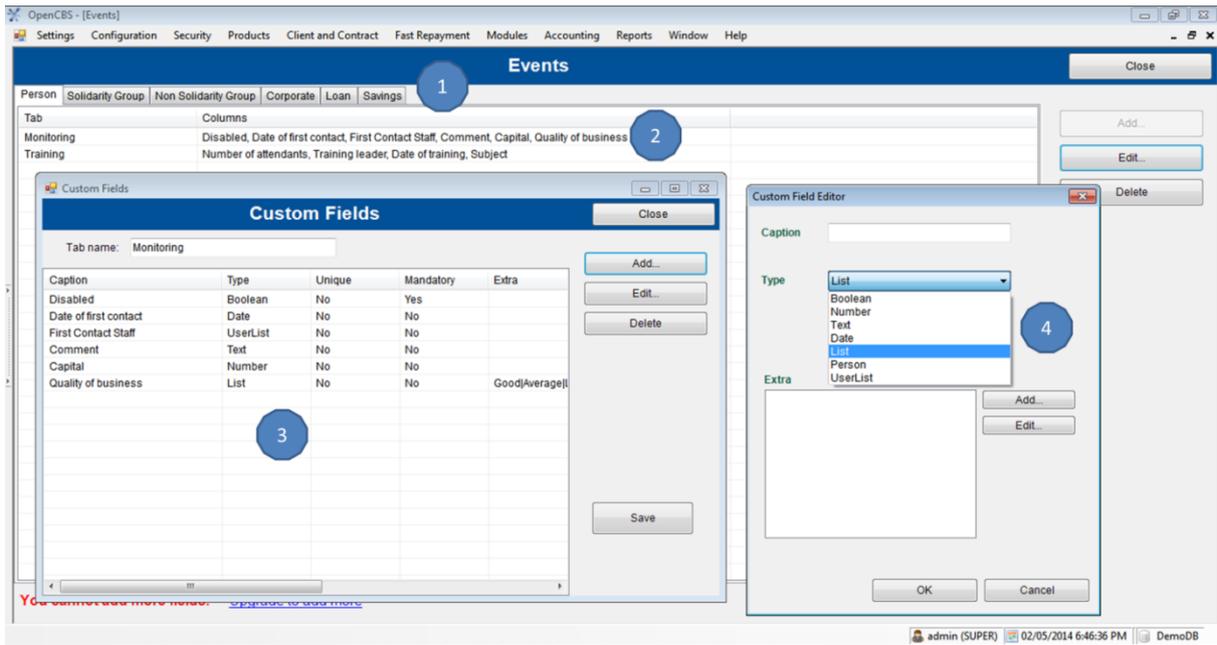
See all your clients’ addresses recorded in the system displayed on a Google Map.



If you want to use more sophisticated maps, for example maps that filter by type of product, activity, facility or delinquent clients, OPENCBS can customize mapping reports to suit your needs.

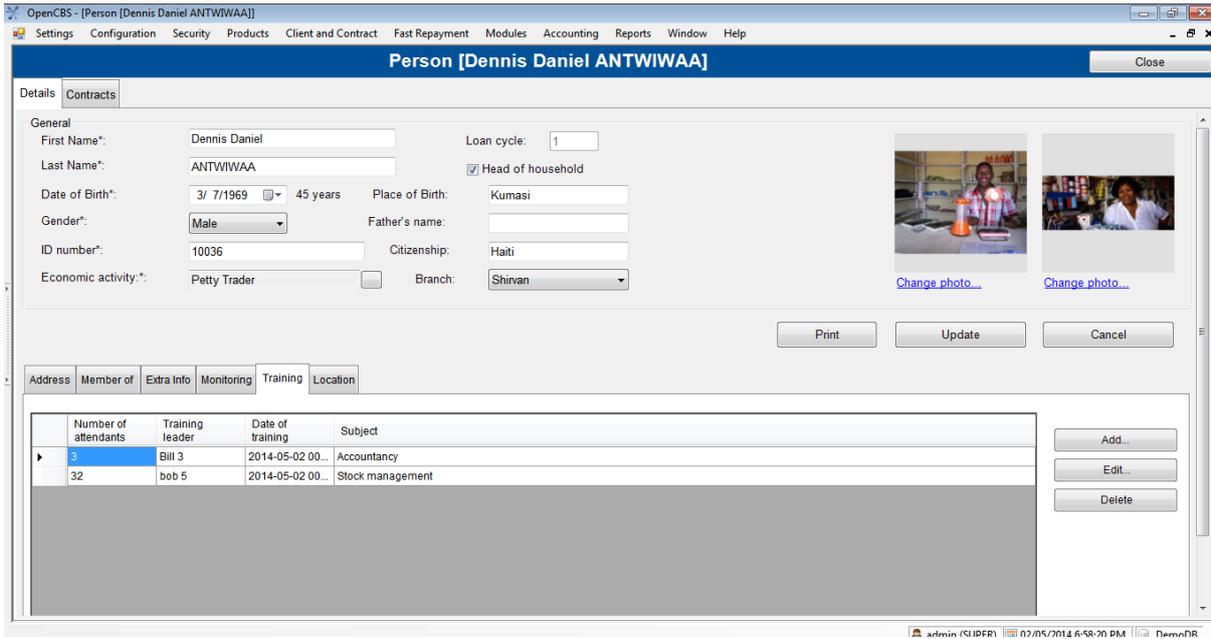
### 8.2 Event fields

In many microfinance institutions, regular monitoring or trainings are performed by operations staff members to ensure to ensure client follow-up, risk control and a high quality portfolio. However, enforcing monitoring or training policies is not always easy. OPENCBS’ “Event fields” allow you to track events that are not directly related to the repayment schedule.



1. Events can be added to any part of the software. Choose where (individual, group, legal entity, loan, savings or somewhere else) and what you want to track with the new event.
2. In the above example, there are listed the different types of events that have been created for the “Monitoring” tab. In the example, we are tracking monitoring and training events in which a client has participated.
3. By selecting the event you want to modify or by adding a new type of event, you reach this window where you see the name and options specific to this event. You can add new options or edit existing ones.
4. It is in this section where you can define the type of data you want to collect for events. The “Custom events” extension works similarly to “Custom fields” which will be dealt with following the next section, “Delinquency management”.

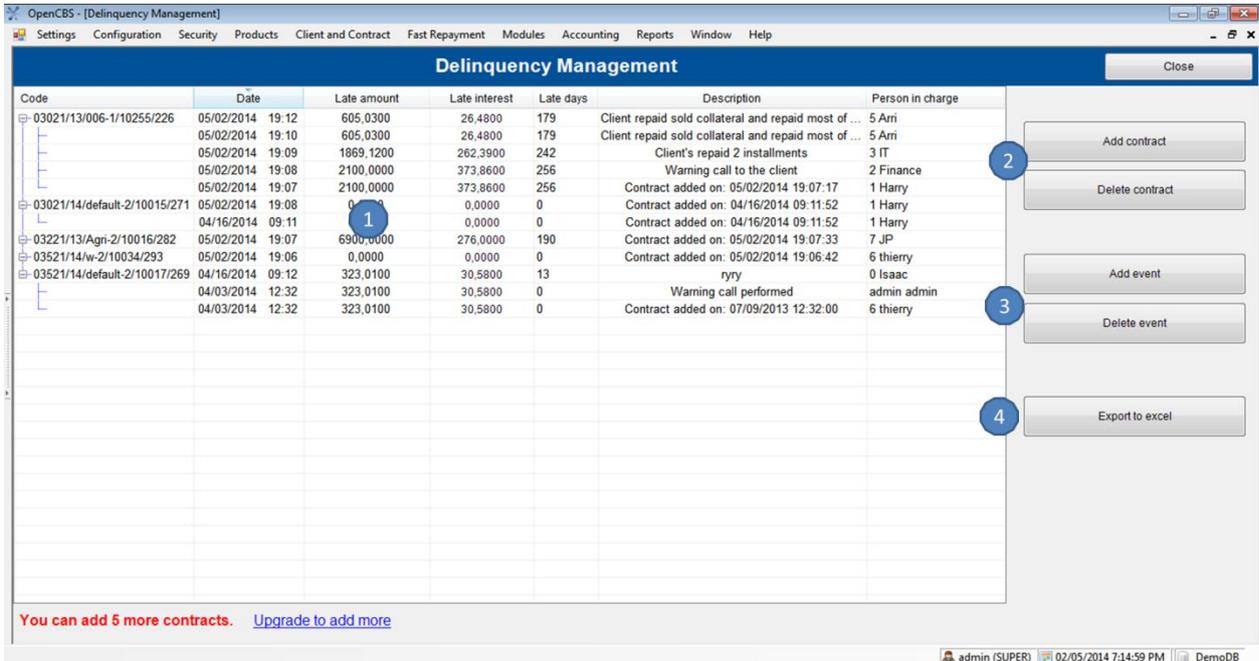
After you create an event or events, an additional tab(s) to record events information will appear in the relevant parts of the software.



In this example, you can see tracking of training events that a client attends.

### 8.3 Delinquency management

Delinquency management is one of the most important tools available to microfinance institutions. Risky loans must be followed closely to maintain the overall quality of the portfolio. The “Delinquency management” extension gives you the ability to track delinquent loans and all the actions that have been performed by your operations team to control delinquency in one convenient location.



- In the main section, you will see all of the contracts the delinquency management extension is tracking and the events associated with each. The contract “Code” appears in the left column, while the other columns display information on the events related to each code. That information includes:
  - Date and time of the event
  - Late amount (at the time of the event)
  - Late interest (at the time of the event)
  - Late days (at the time of the event)
  - Description of the event
  - Person in charge of the delinquency follow-up

The most recent events appear at the top. Thus, you can easily see how delinquency has evolved through the actions performed by the relevant employees. You can hide old events by using the small “-” sign on the top of the window.

- To add or delete a contract:

Code	Client	Type	Loan officer's name	Start date	Close date
03521/14/AGRI-2/10035/2	faustina GYAMAA		6 thiery	24-Apr-2014	24-Apr-2015
03021/14/HB-2/10000/295	lydia		1 Hary	02-May-2014	01-Aug-2014
03521/14/Agri-2/10023/281	augustina Okai		6 thiery	24-Apr-2014	24-Apr-2015
03221/13/002-1/10403/21	lydia K BOADI PALMER		8 heny	02-Aug-2013	20-Jan-2014
03522/14/002-1/10007/275	joyce OKYERE		admin admin	23-Apr-2014	02-Jul-2014
03521/14/default-1/10008/	Florence Ofot Fimpong		admin admin	12-Apr-2014	10-Oct-2014
03522/14/w-2/10043/292	philomena BADU		0 Isaac	26-Apr-2014	23-Feb-2015
03521/14/002-1/10002/276	Risca		admin admin	23-Apr-2014	16-Jul-2014
03221/14/default-2/10022/	Foster Boateng		7 JP	21-Apr-2014	19-Dec-2014
03521/14/w-2/10034/293	naomi MARFOA		6 thiery	26-Apr-2014	23-Feb-2015
03221/14/001-2/10006/287	Kwame Yeboah Yaw		7 JP	24-Apr-2014	24-Sep-2014
03021/14/Agri-1/10009/279	Adwoa Maabea		admin admin	24-Apr-2014	24-Apr-2015
03221/14/default-2/10012/	Elen Konadu Agyemang		7 JP	12-Apr-2014	10-Oct-2014
03221/14/001-2/10040/290	Faustina Baffour Atta		7 JP	25-Apr-2014	24-Oct-2014
03221/13/Agri-2/10016/282	joyce MANU		7 JP	24-Jul-2013	24-Jul-2014
03221/14/001-2/10037/288	Joanna Derchie		8 heny	24-Apr-2014	24-Oct-2014
03021/14/default-2/10015/	Adwoa Ntinwaa		1 Hary	12-Apr-2014	12-Dec-2014
03021/14/w-2/10031/291	LUCY GYAMAA		1 Hary	26-Apr-2014	23-Feb-2015
03221/14/003-2/10019/274	Augustina Broni		8 heny	23-Apr-2014	06-Aug-2014
03522/14/FT-2/10033/294	agnes Ofot Fimpong		0 Isaac	26-Apr-2014	26-Feb-2015
03522/14/AGRI-2/10032/2	Joyce DOKUAH		9 Noa	24-Apr-2014	24-Apr-2015
03522/14/AGRI-2/10028/2	charles Dedaa		0 Isaac	24-Apr-2014	24-Apr-2015
03521/14/default-2/10017/	florence OSEI		6 thiery	03-Mar-2014	03-Jun-2014
03021/13/006-1/10255/226	Regina		1 Hary	05-Aug-2013	11-Oct-2013

This list of contracts will appear. You can put them in alphabetical order by name by clicking on “Client” over the relevant column. Select the contract you want to add to the extension and click “Save”.

- To add an event, select the contract to which you want to add an event to and click “Add event”.

Comment 03021/13/006-1/10255/226

**Comment 03021/13/006-1/10255/226**

Client promised to pay everything in 1 week

Person in charge: 3 IT

Save

Here you can enter a description of the event you want to track and determine the employee in charge of it. Click “Save” to add the event.

- Click “Print” to export the data to Excel.

	A	B	C	D	E	F	G	H
2	Contract code	Date	Late amount	Late interest	Late days	Description		Person in charge
3	03521/14/default-2/10017/269	4/16/2014 9:12	323.01	30.58	13	ryry		0 Isaac
4		4/3/2014 12:32	323.01	30.58	0	Contract added on: 07/09/2013 12:32:00		6 thierry
5		4/3/2014 12:32	323.01	30.58	0	Warning call performed		admin admin
6	03521/14/w-2/10034/293	5/2/2014 19:06	0	0	0	Contract added on: 05/02/2014 19:06:42		6 thierry
7	03221/13/Agri-2/10016/282	5/2/2014 19:07	6900	276	190	Contract added on: 05/02/2014 19:07:33		7 JP
8	03021/14/default-2/10015/271	5/2/2014 19:08	0	0	0	Contract added on: 04/16/2014 09:11:52		1 Harry
9		4/16/2014 9:11	0	0	0	Contract added on: 04/16/2014 09:11:52		1 Harry
10	03021/13/006-1/10255/226	5/2/2014 19:12	605.03	26.48	179	Client repaid sold collateral and repaid most of his loan		5 Arri
11		5/2/2014 19:07	2100	373.86	256	Contract added on: 05/02/2014 19:07:17		1 Harry
12		5/2/2014 19:09	2100	373.86	256	Warning call to the client		2 Finance
13		5/2/2014 19:09	1869.12	262.39	242	Client's repaid 2 installments		3 IT
14		5/2/2014 19:10	605.03	26.48	179	Client repaid sold collateral and repaid most of his loan		5 Arri

### 8.4 Custom fields

The “Custom fields” extension enables the user to supplement any additional data fields to those available in the software by default.

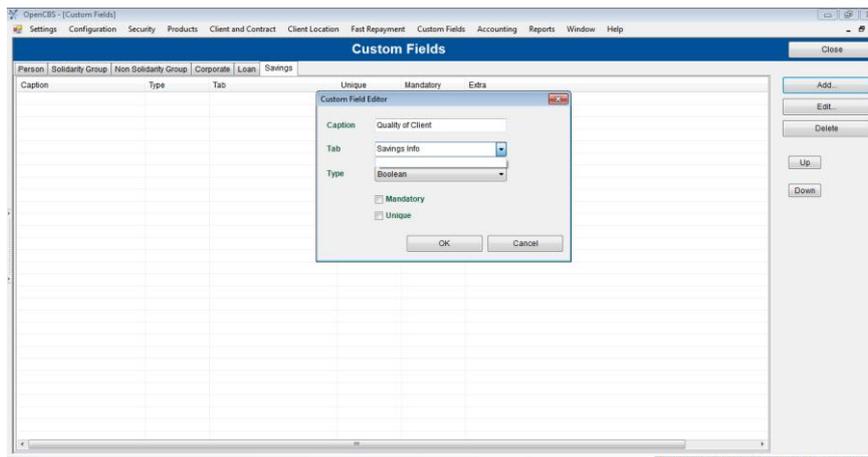
#### Appearance

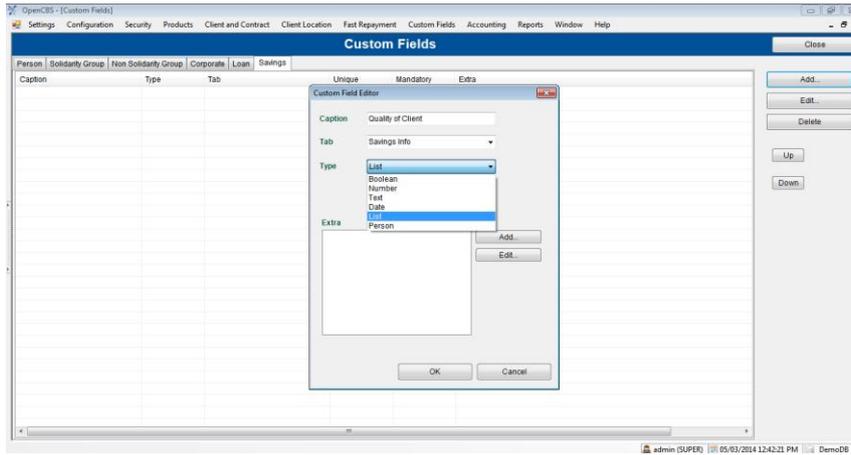
The screenshot shows the 'Custom Fields' configuration window in OpenCBS. It features a table with columns for 'Person', 'Solidarity Group', 'Non Solidarity Group', 'Corporate', 'Loan', and 'Savings'. A 'Custom Field Editor' dialog box is open, showing fields for 'Caption', 'Tab', 'Type', and 'Extra'. Five callouts are present: 1. 'Fields' locations' points to the 'Person' tab; 2. 'Saved fields' points to the list of existing fields; 3. 'Add & Edit' points to the 'Add...' and 'Edit...' buttons; 4. 'Delete, Up, Down' points to the 'Delete', 'Up', and 'Down' buttons; 5. 'Custom Field Editor' points to the dialog box itself.

#### Configuration

- In Section 1, “Fields’ location”, select the tab corresponding to the part of the software where you want your new data field to appear. We want the field to appear in “Person” in the example above.
- You will then see a page with a Section 2, “Saved fields” which contains a list of previously created fields (if you’ve created any).

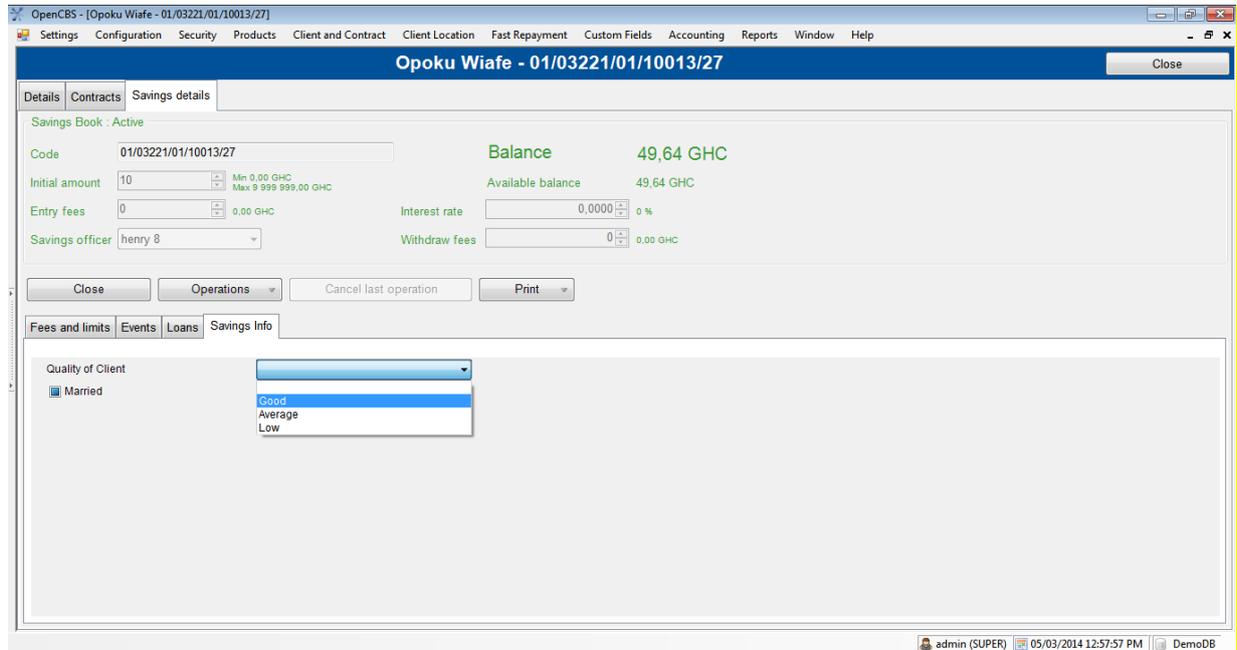
- Click “Add” in the upper right-hand corner of the window to open the “Custom field editor”.
- In the “Custom field editor”, you may:
  - o A. Write the name of the custom field you want to see appear. In our case, “Situation Socio-economique”.
  - o B. Choose the tab in which you want it appear. This will be empty if you’re using the software for the first time. If so, type the name under which you want the tab to appear in the system. In our case, we’ve chosen ‘New custom field’.
  - o C. Choose the type of info you want to track:
    - *Boolean* (Yes or No)
    - *Number*
    - *Text*
    - *Date*
    - *List* (multiple choice)
      - If you choose “List”, an additional section will appear below allowing you to configure the items on the list. Use the “Add” and “Edit” buttons to configure these choices.
    - *Person* (connection to an individual already recorded in the system).
  - o D. You can define the fields as either mandatory or unique:
    - *Mandatory*- The software will prevent you from saving the client, loan product, savings product or whatever else you were creating if this field isn’t completed.
    - *Unique*- The system will prevent you from having two clients, loan products, savings products, etc. with the same information in this field.
    - *Important*: Be cautious before using either of these options as they can be quite restrictive if you want test your database without having to enter a multitude of custom fields.
  - o Click “OK”. The custom field will now appear in the software where you specified.
- Later on, you can delete or move the field up or down in the list by selecting it and using the buttons marked by “Section 4. ‘Delete, up, down’”.





**Use**

When you access Savings you will now see an additional tab called “Savings info” with one multiple choice dropdown button labeled “Quality of client” and one other Boolean field labeled “Married”.



You can save your data related to savings here and then easily extract this information from the database via customized reports.

## 9. Appendix 1: System requirements

### 9.1 Hardware requirements

OPENCBS requires only basic hardware to operate. OPENCBS will run on most Windows systems. However, we advise you to increase your computing capacity progressively depending on how you use the software. OPENCBS suggests three (3) types of configuration:

	Minimum hardware set up	Standard hardware set up	Recommended hardware set up
# clients	< 5000 clients or 500 groups	< 20000 clients or 2000 groups	Any size
Simultaneous connection	<5	5-15	More than 15
Recommended use	Any computer connecting remotely to the database (DB) or for very small DB hosting	Local server hosting database	Central head office server containing all databases of the institution
Requirements	<ul style="list-style-type: none"> <li>•Standard CPU</li> <li>•Operating System: Windows XP / Vista / Windows 2003 Server / Windows 7 / Windows 2008 Server (32bit and 64bit)</li> <li>•At least 1GB of disk space for installation and database</li> <li>•Minimum 1.6 GHz processor (recommended dual core 3 GHz or higher)</li> <li>•RAM: 2GB minimum (3GB recommended)</li> <li>•512kbps minimum network connection</li> </ul>	<ul style="list-style-type: none"> <li>•Standard CPU</li> <li>•Operating System: Windows 2003 Server / Windows 7 / Windows 2008 Server (32bit and 64bit)</li> <li>•At least 5 GB of disk space in 256GB HDD</li> <li>•Intel I3 or I5</li> <li>•RAM: 4 GB</li> <li>•2mbps network connection</li> </ul>	<ul style="list-style-type: none"> <li>•Standard CPU or blades for server setup</li> <li>•Operating System: Windows 7 / Windows 2008 Server (32bit and 64bit)</li> <li>•At least 10 GB of disk space in 256GB SSD</li> <li>•Intel I7</li> <li>•RAM: 8 or 16GB</li> </ul>

OPENCBS recommends your hardware be sufficient for your use of the software:

If you and your staff will connect remotely to the server to enter information into the system, only the minimum hardware set-up is required. However, your internet or internal server connection should be good enough to enable smooth use (512k recommended).

If your institution will host the database itself and perhaps allow a few users to connect remotely, we also recommend your hardware meet the minimum requirements.

For a centralized server to which all your offices will connect, we advise you to have at least the standard hardware set up (middle column) or even the recommended hardware set up (right column).

## 9.2 Software requirements

To get full potential of OPENCBS, you need to be sure to install it on your computer:

### *Database engine*

For use on a single computer, the database will be handled locally inside the software.

If several computers will work with the same database you will need:

- Database one (1) gigabyte or less: [SQLServer Express](#), (2012 or 2008) which is free.
- Database over one (1) gigabyte (more than 100,000 clients): [SQLServer Standard](#), which is premium.

### *Report displayer*

[Crystal Reports Viewer 2012](#)

Microsoft Office Suite. (Word and Excel)

### *More*

.Net Framework 4.0

Windows XP / Vista / Windows 2003 Server / Windows 7 (recommended) / Windows 2008 Server (32bit and 64bit).

[SQLServer Management Studio](#) (required for database management tasks).

The latest version of [OPENCBS](#) should always be used!

## 10. Appendix 2: System Configuration

This section is dedicated to system configuration. It follows the structure of the system explaining the configuration options available in the tabs “Settings”, “Configuration” and “Security”

### 10.1 Settings

#### 10.1.1 General settings

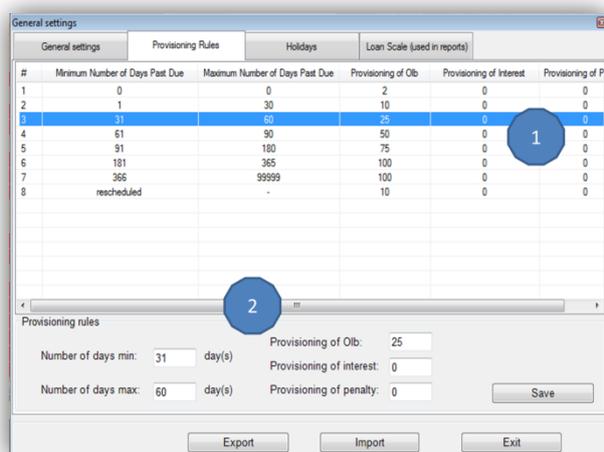
Settings	Choice	Description
Accounting process	Cash/Accrual	<p><b>If Cash:</b> The system doesn't accrue any interest or penalty. A client pays only what is within the repayment schedule.</p> <p><b>If Accrual:</b> You can use the “Closure” section in the “Accounting” menu tab to generate interest and penalty accrual events and also configure the custom accrual accounting system. Generated accrual events can be used in reports.</p>
Allow multiple groups?	Yes/No	<p><b>If “Yes”:</b> An individual can be in several groups at the same time.</p> <p><b>If “No”:</b> An individual can be in one and only one group.</p>
Allow multiple loans?	Yes/No	<p><b>If “Yes”:</b> Individuals, solidarity groups and legal entities can have as many loans as you choose.</p> <p><b>If “No”:</b> Individuals, solidarity groups and legal entities can have one and only one active loan at a time.</p>
Create automatic IDs?	Yes/No	<p><b>If “Yes”:</b> When saving a loan for an individual client, the software will automatically attach a unique ID which is a simple number related to its position in the database to the client.</p> <p><b>If “No”:</b> The ID number must be entered by the operator. It can then be used to record any type of number related to the client, such as passport number.</p>
Mandatory city?	Yes/No	<p><b>If “Yes”:</b> You will have to select from a predefined list of cities when setting locations.</p> <p><b>If “No”:</b> You may manually enter any cities you wish.</p>
Maximum client age	Number	Clients with ages above this number cannot be saved within the software.
Minimum client age	Number	Clients with aged below this number cannot be saved within the software.

Country	Name of country	The country where you operate. This info can be used in reports.
Skip non-working days when scheduling repayments?	Yes/No	<b>If “Yes”:</b> Schedule calculation doesn’t take weekends or holidays into consideration. Installments can occur on weekends or holidays. <b>If “No”:</b> Weekend and holiday installments are pushed to the next working day.
Enforce ID pattern?	Yes/No	<b>If True:</b> The ID pattern option defined below in “ID Pattern” must be followed. <b>If “No”:</b> You can enter any ID type.
Maximum group members	Number	Maximum members in a group.
Minimum group members	Number	Minimum members in a group.
ID pattern	[A-Z]{2}[0-9]{7}	You can define the type of ID information used in the software. This can be used if you want to ensure that all your operations staff members enter ID information according to the standard types of ID numbers in the country where you operate. <b>A-Z}{2}[0-9]{7}</b> means 2 big letters characters followed by 7 figures. <b>[0-1]{3} [A-Z]{2}[0-9]{7}</b> would mean 3 figures which could be 0 or 1 only followed by 2 letters followed by 7 figures.
Push planned events before or after “off” days?	Yes/No	<b>If “Yes”:</b> In case of a day off, the planned event is set <i>after</i> the off day(s). <b>If “No”:</b> In case of a day off, the planned event is set <i>before</i> the off day(s).
Number of interest rate decimal places	Number	The maximum number of decimal places that an interest rate can be taken to.
Maximum number of loans covered by a guarantor	Number	The maximum number of loans a single guarantor can guarantee.
Institution name	Name of your institution	The name of your institution to be displayed in reports.
Maximum members in a NSG	Number	The maximum numbers of members allowed in a non-solidarity group.
Minimum members in a NSG	Number	The minimum number of members allowed in a non-solidarity group.
Decimal punctuation	“,”/”.” or any other symbol	The symbol you want to as decimal points in displayed numbers (for example, 1,0 or 1.0).
“Thousands” punctuation	“,”/”.” or any other symbol	The symbol you want to separate “thousands” (for example, 1,000 or 1.000).
Choose your pending savings mode	Multiple choice	Choose the type of payments that can be set as pending in savings before being confirmed.
Timeout when loading reports	Number	Maximum time in seconds the system can take to open a report before displaying an error.
Savings code template	IC/BC/CS/ID	Format generated automatically for savings codes. Contact the OPENCBS team for customization.
Use Mandatory Savings accounts?	Yes/No	<b>If “Yes”:</b> A savings account is automatically created for every client registered in the system. It allows special customization at

		repayment level, such as automated repayment of loan from savings account or customization of repayment methodology. Consult the OPENCBS team for more details. <b>If “No”:</b> No savings account will be automatically generated.
<b>Skip weekend day 1?</b>	<b>From 0 to 6, 0=Sunday, 6=Saturday</b>	The first weekend day that will be skipped if “Skip Weekends and Holidays When Rescheduling Repayment?” is enabled.
<b>Skip weekend day 2?</b>	<b>From 0 to 6, 0=Sunday, 6=Saturday</b>	The second weekend day that will be skipped if “Skip Weekends and Holidays When Rescheduling Repayment?” is enabled.

### 10.1.2 Other settings

Three other tabs enable configuration in addition to the three dealt with in the previous section.



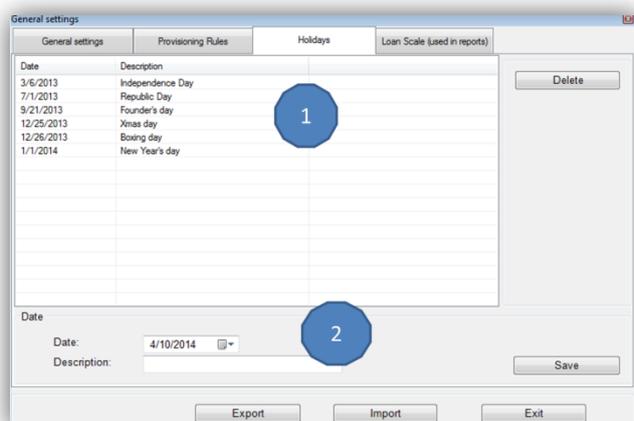
#### Provisioning rules

The window (1) displays the provisioning rules enabled in the system. These are rules taken into consideration when you are opening the standard report called OLB and LLP. These rules can also be used inside any custom report. Some provision rules appear by default in the system. Provisioning rules can be defined on OLB as well as on expected interest and penalties.

To set your own rules, you should first select the lines you want to modify. Then use the fields at the bottom of the window (2) to change settings. When you are finished, click “Save” to update the rules.

**Note:** Be careful when setting ranges to ensure there is no overlapping. For instance, 30-60 and 61-90 are correct ranges; however, if you enter 30-60 and 60-90, loans late by 60 days will appear twice in the OLB and LLP report which will give an incorrect total.

#### Holidays



Section (1) displays public holidays and their dates. These dates will be automatically skipped by the system while generating schedules. In case a holiday is added after contracts are already in the system, the system will

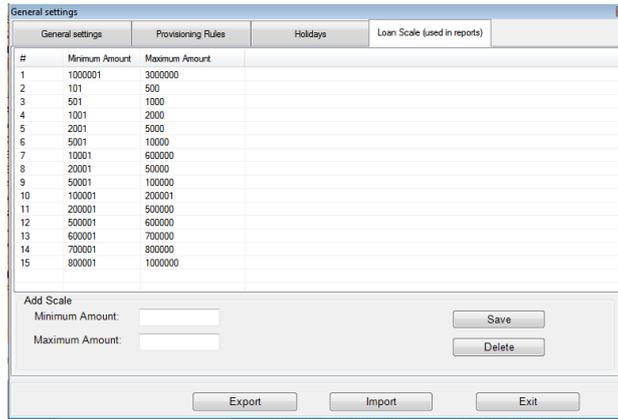
automatically move the installments initially planned for that day earlier or later.

Section (2) enables you to add holidays. Select the date, enter a description and validate by clicking “Save”. In case of a mistake, delete and reenter the holiday.

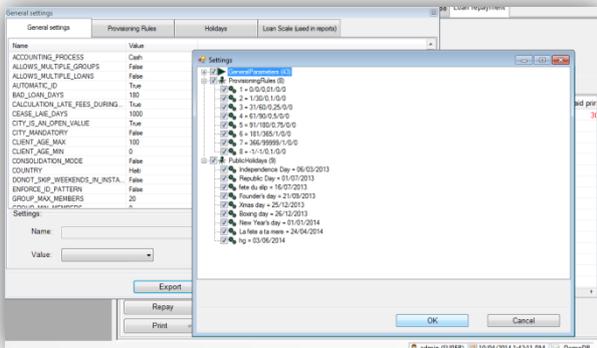
**Note:** For unexpected schedule changes, we advise you to make these entries before you start operating and that you make sure to update them regularly.

### Loan Scale

On the “Loan scale” tab, you can define the ranges of loan amounts you want to see used to display information about your portfolio at reporting level. Among the nine (9) standard reports, these ranges will be displayed in the active loan report only. These ranges can be used in any other report you would like OPENCBS team to create for you.

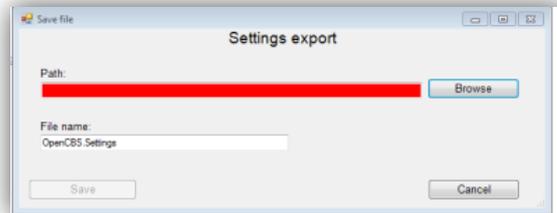


### Import/Export general settings



Please note the “Import” and “Export” buttons at the bottom of the “Loan scale” window. You can export settings to a Visual Studio file and then import it back to another database and thereby save a significant amount of time configuring several databases. You should first select the settings you wish to export (1) and then choose the place to where you want to export this file (2).

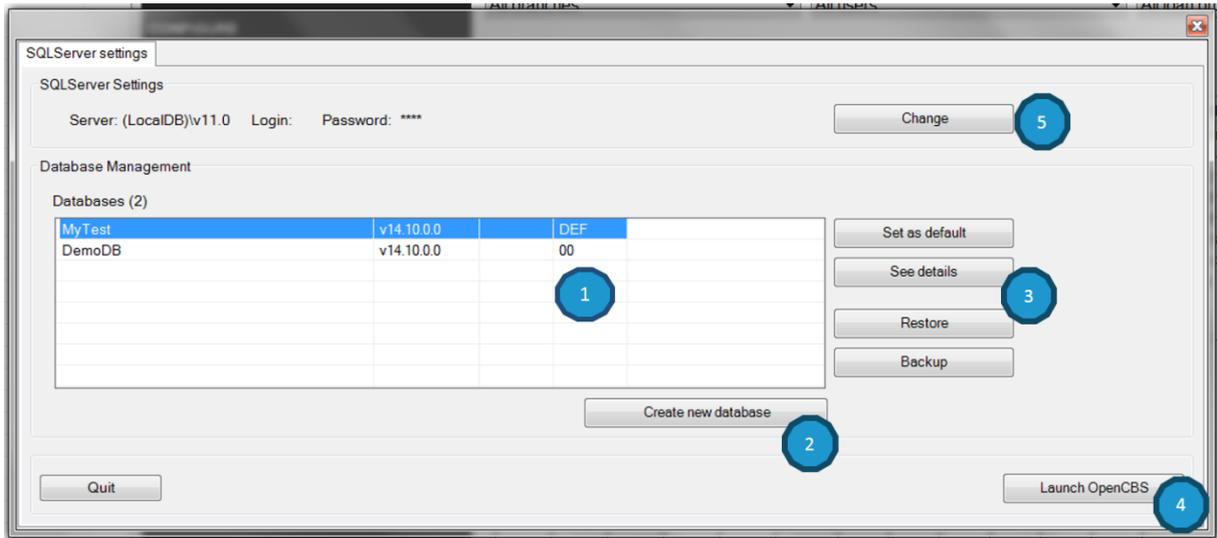
To import, you should select the Visual Studio file saved on your computer



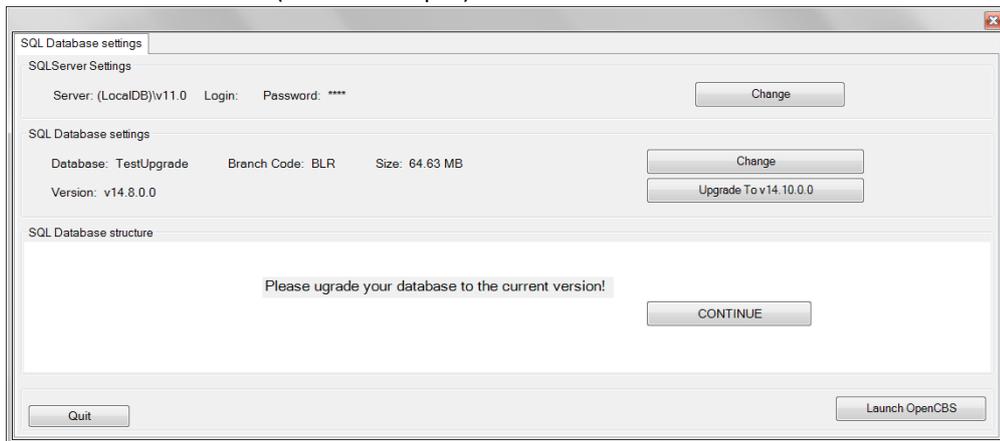
### 10.1.3 Database control panel

This section is used to perform operations related to the database such as restoring, creating or upgrading a new database or connecting to another instance of SQLExpress.

Go to Settings>Database Control Panel to open this window:

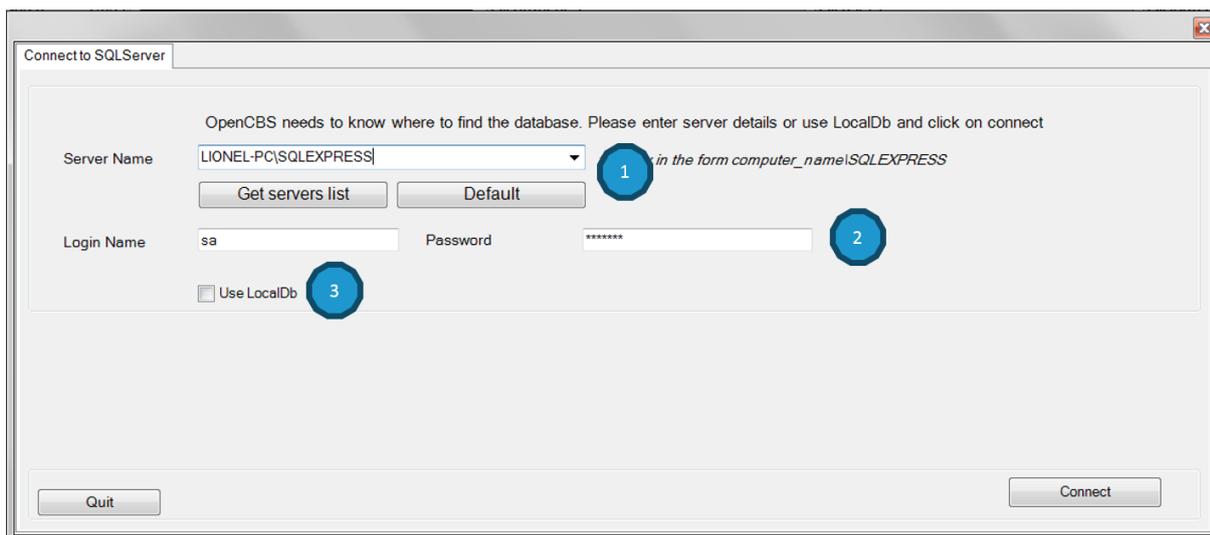


- 1) List of your databases, click to select one.
- 2) Create new database.
- 3) Control buttons:
  1. Set as default. The system will now directly open on the selected database.
  2. See details. Provides more information on the characteristics of a database and allows you to upgrade databases. This is what you will need to do if you just restored a database that was running on a previous version of OPENCBS (or even Octopus):



3. Restore. Fill the selected database with data you have previously backed-up (.zip file).
4. Backup. Exports your current data to a .zip file inside any folder you choose.
- 4) Launch OPENCBS. Launches the software using the selected database.
- 5) Change SQL Server settings. In the top left of the window above you can see the SQL Server. In this instance though, the LocalDB is listed as the server even though it is not a true server.

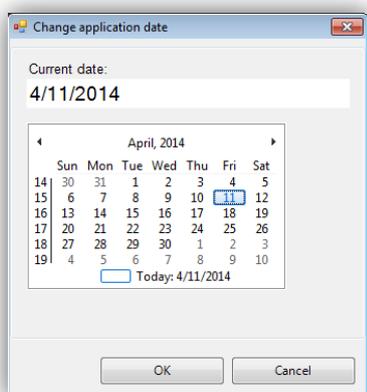
If you click "Change", the following window will appear:



1. This is where you enter your SQL Server instance name if you want to use one. To learn more about SQL Server installation, please see 11. SQL Server.
2. Here you will also find the login and password of your SQL Server instance.
3. If you don't want to connect to a server, you can choose "LocalDB".

The difference between LocalDB and having a SQL Server is that with LocalDB you cannot connect via either a local network or the internet. It's for using the software on a single computer.

### 10.1.4 Change application date

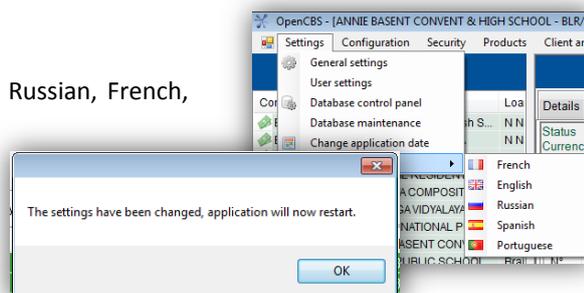


This function enables the user to visualize the data in the system as if the date was different. Select the date and click "OK". Your alerts will be automatically updated, you can refresh the dashboard to see the changes there, and if you open a loan schedule, repayment schedules will be displayed taking into account the events that occurred before the application date you have just set.

**Warning:** *This feature is useful for a manager to go back in time to see the system as it stood at some point in time in the past.*

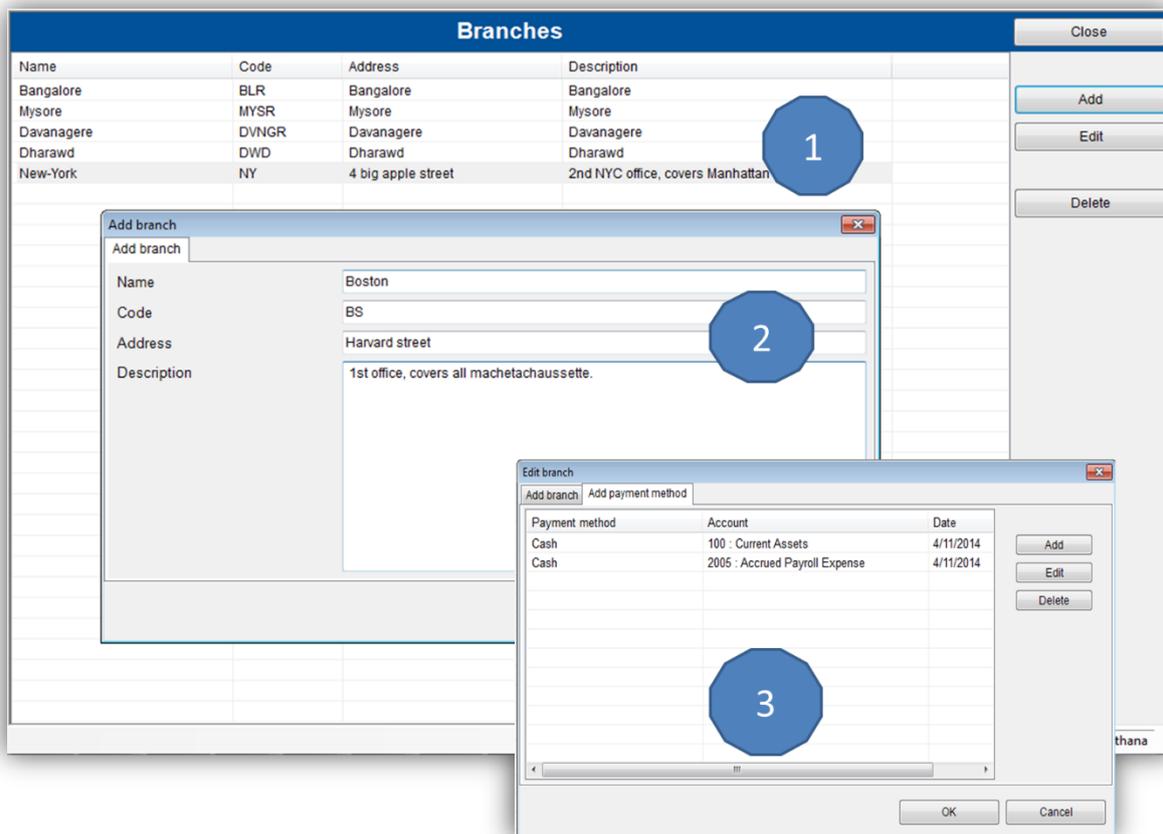
### 10.1.5 Language

OPENCBS is available in five (5) languages: English, Russian, French, Spanish and Portuguese. The user can switch from one language to another by using this menu option. The system will automatically restart and reopen using the new language.



## 10.2 Configurations

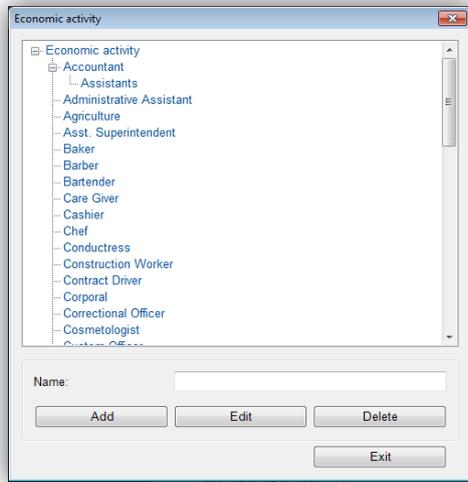
### 10.2.1 Configure branches



Several offices can be managed within the same database. For this, you need to configure branches. You will then have the capacity to move software users to different branches and see specific reports for each office.

1. The "Branch" window displays the branches already entered into the database. It displays the name of the branch and the branch code that appears as part of your contract codes. It will also display branch addresses that can be used on internal documents such as contracts or receipts and a description box where you can enter any additional information you want.
2. Clicking "Add" on the right side of the window, this window will appear allowing you to create a new branch.
3. After creating a branch, you have the ability to preconfigure the accounting rules related to payment methods for each branch. You can then differ cash desk settings for different branches when you edit your "Accounting" settings later.

## 10.2.2 Economic activity



This window allows you to enter the economic activity of your clients. This information will be attached to the client profile and can then be used in reports. You can define categories by clicking “Add” and sub-categories by selecting one existing activity and then clicking “Add”.

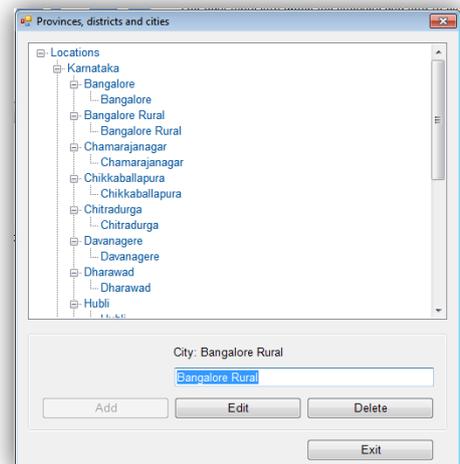
If you are working with a significant number of activities, contact us and we’ll help you import them automatically.

## 10.2.3 Regions, Districts, Cities

In this section, you define the geographic location of your operations. OPENCBS uses three (3) default geographic levels: Regions, districts and cities.

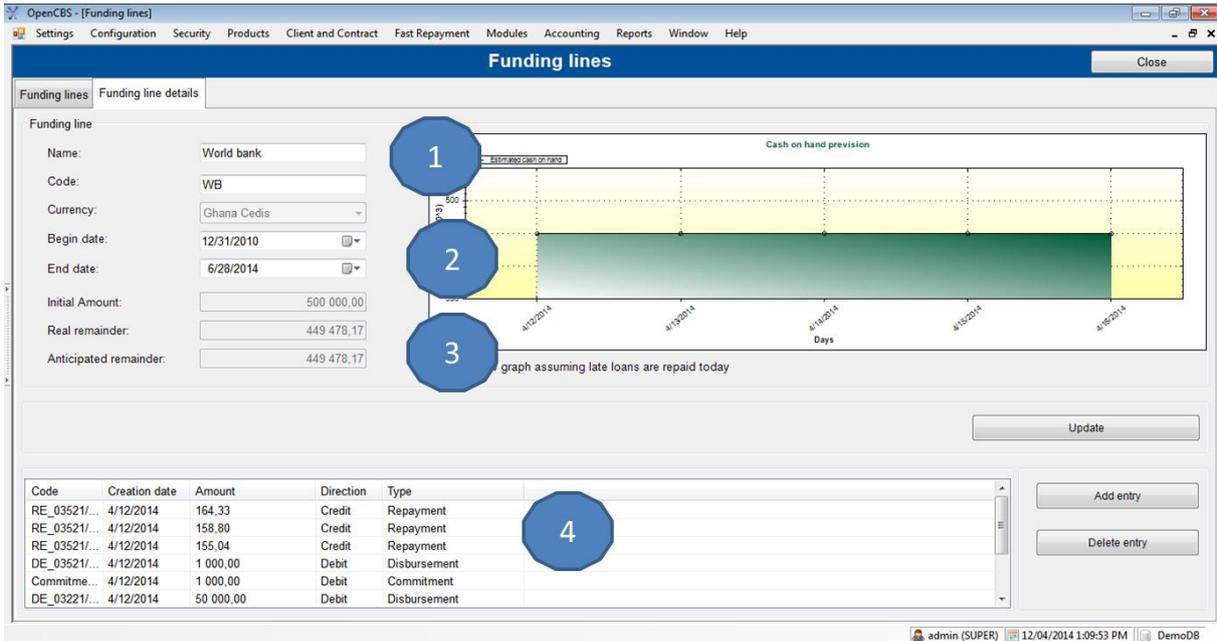
The window displayed here allows you to add, delete and edit the geographic locations of your clients. If your database is empty, the locations you add will first show up as “Regions”. To enter districts, you should first select the province in which you want to add this district. To enter cities, you should select the district in which the city is located.

If you are working with a significant number of locations, contact us and we can help you import your list of regions, districts and cities.



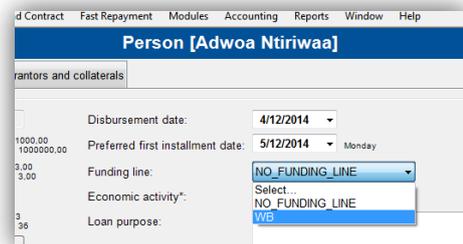
## 10.2.4 Funding lines

The funding lines feature helps you track the origin of the money that finances your loan activity. This is often required by financiers who want to see the type of loans they back financially. This section enables you to define the funding lines, their amounts and periods.



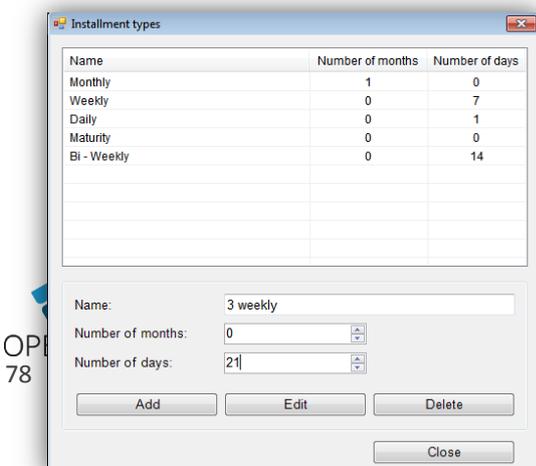
1. Enter the name of your funding line as well as the code of this funding line. The code will appear when you will have to choose a funding line when you disburse funds to a client. Both name and code can be used in reports. You can also apply a currency to your finding line if you are using the software in double currency mode.
2. Define the beginning and ending date of your funding line. This is the period during which loan disbursement will be attached to this funding line.
3. Here you can find the initial amount of the funding line, which is the total "external" amount credited to this funding line. This is only money coming from outside the organization; it doesn't include the amounts repaid and credited back to this funding line.
4. Here you will see all of the credits and debits that have occurred on the funding line. These operations will be one of the following:
  - **Entry:** Initial crediting of the funding line.
  - **Commitment:** Amount promised to one specific loan.
  - **Disbursement:** The amount officially attached to one specific loan.
  - **Repayment:** The principal or the principal + interest repaid on the loan returned to the funding line (configurable through "General settings").

To repeat, the funding line must be chosen at the time of disbursement in the "Funding line" tab. If you don't want to attach a loan to any funding line, simply keep the loan on set to "No funding line".



### 10.2.5 Installment periodicity

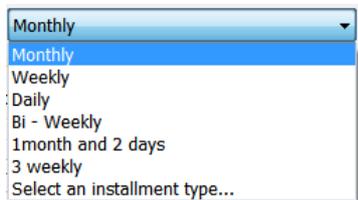
The software includes three (3) default types of periodicity for loan and savings installments: monthly,



weekly and daily. This section enables you to add any other type of periodicity you want.

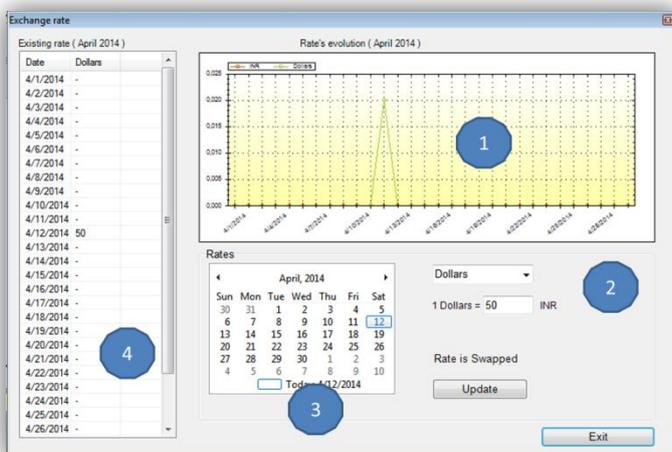
Create the name of your periodicity, choose how many months and days long these installments will be and validate.

These installments will be available when you create a new loan product.



### 10.2.6 Exchange Rate

If you use two currencies, the exchange rate between these currencies must be defined for every day on which you would like to display converted amounts. This can be done in the following way:



1. A graph displaying the evolution of the interest rate during the selected time period.
2. Place where you enter the exchange rate.
3. Place where you enter the date for which you want to define an exchange rate.
4. A list of existing exchange rates by day.

OPENCBS can automate this in such a way that the software finds the exchange rate daily from some defined external source. Contact us

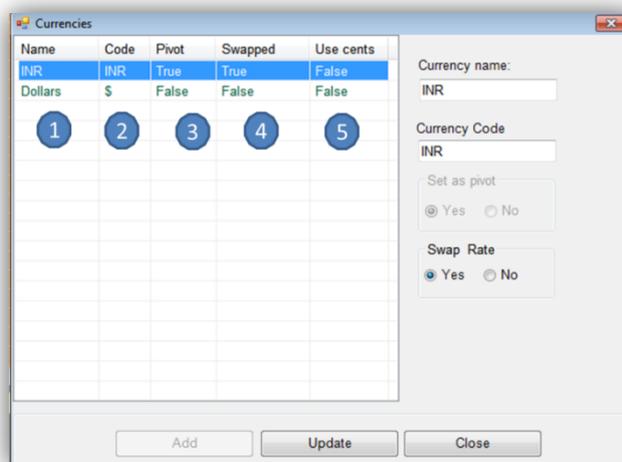
for more details.

You can then choose the currency for which you have established an exchange rate when you create a loan or savings product or when you open a report.

### 10.2.7 Currencies

OPENCBS allows you to configure two (2) currencies. To do this, you need to enter the following:

1. **Name.** Name of the currency.
2. **Code.** Code of the currency which will show up next to currency amounts in the software and in reports.
3. **Pivot.** The pivot currency is the base currency you will use in the software when you enter amounts.
4. **Swap.** This option allows you to choose the direction in which you will



define your exchange rate. If swap is true for currency X and false for Y, the exchange rate will be defined as 1 X= the number of Y. In other words, do you want to say 1 USD= 50 INR or 1 INR=0.02 USD?

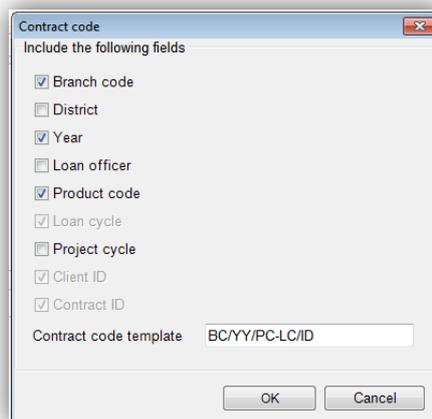
5. **Use cents.** Whether cents will be used for this currency.

Currencies can be edited later on by clicking “Update”.

### 10.2.8 Contract code

The software allows you to customize contract codes by the types of information that show up in the code. By default, the contract code includes “Loan cycle”, “Client ID” and “Contract ID”. You may add:

1. Contract code name
2. Branch code
3. District name
4. Year of disbursement
5. Loan officer name
6. Product code



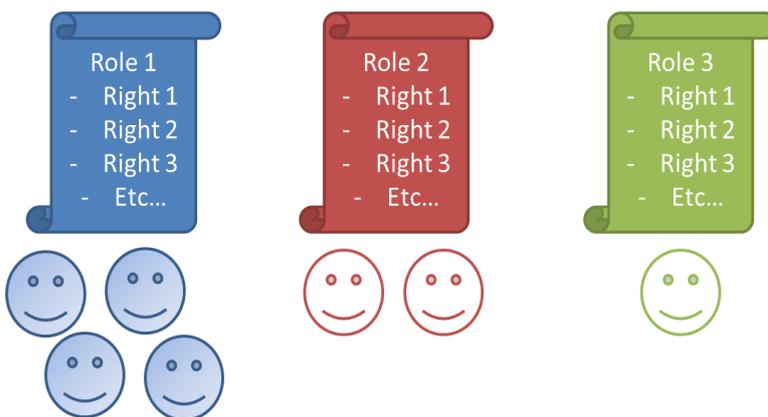
If you would like a contract code that uses some other identifier or that is ordered in a different way, OPENCBS can customize any type of contract code pattern for you. Contact us for more information.

## 10.3 Security Management

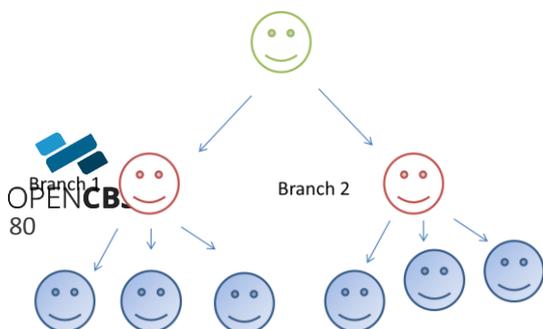
### 10.3.1 Roles, Users and Subordination

Security management in OPENCBS works via a series of roles, users and user definitions.

Each employee in your institution will have a role, and this role will have specific rights inside the software, including rights to access some specific functions and to perform certain tasks. These rights will be defined according to the internal policies of your institution ensuring tight control over the quality of the data in the system.



After creating roles, you need to create user profiles. These will include information on each user, his/her credentials and the role each will have in the system.



Finally, you must define the users’ position in what is called the “Subordination structure”. This is where you determine

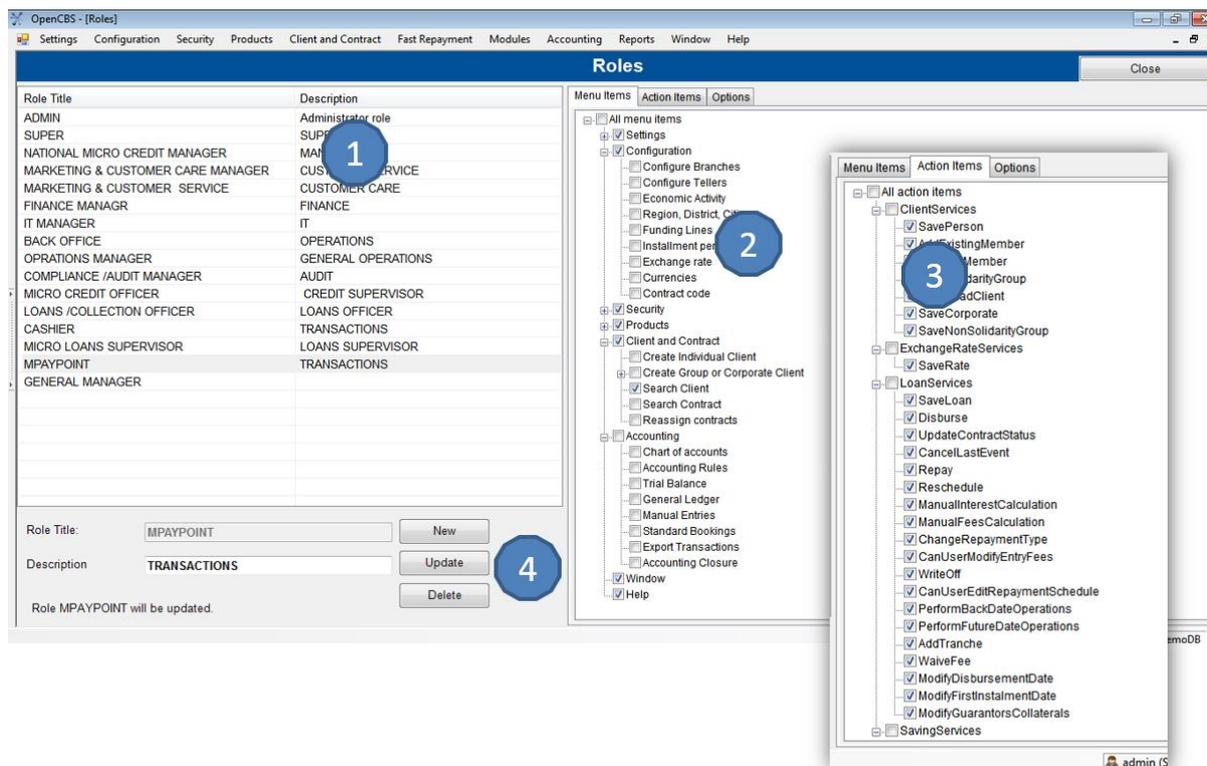
which employees will be this user’s subordinates and from which branch this user will operate. This function ensures that each user only sees and interacts with the portfolio he or she supervises.

Most institutions define roles according to positions in the company: Cashier, Loan Officer, etc...

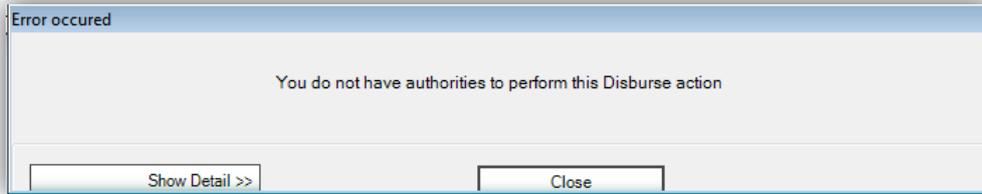
OPENCBS can customize the security system if specific needs are not covered by what’s included in the software.

### 10.3.2 Roles

Roles are defined via the window below:



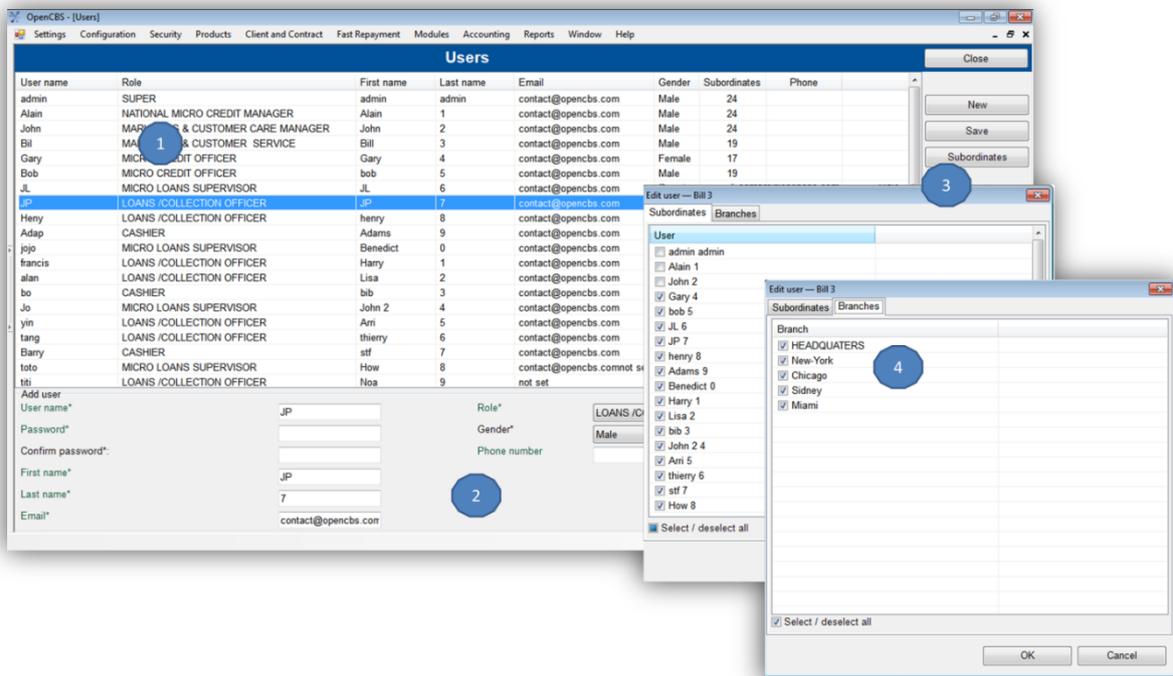
1. This main window displays existing roles and their descriptions. By default, the system includes five (5) roles: “Admin”, “Cashier”, “Loan officer”, “Super administrator” and “Visitor”, each having a different level of authorization. You need to select a role to see its authorizations.
2. Authorizations are organized in two (2) tabs. In the first tab, you define access to different software sections. The items in this menu are exactly like same as the items on the top menu bar of the software. By un-ticking items in this list, you block access to those system functions for this user.
3. In the second tab, you can authorize certain actions for the user with this role. This list includes most of the actions possible within the software. Tick or un-tick the appropriate lines to allow or forbid an action. If an action is forbidden to a user, the related button in the system will be disabled or the system will display the following error message:



- This section below enables you to add or delete existing roles. Be informed that before deleting a role you need to ensure that no user is attached to this role. Here you will enter the title and a description of the role.

### 10.3.3 Users definition

Here you can define who uses the software and for what purpose.



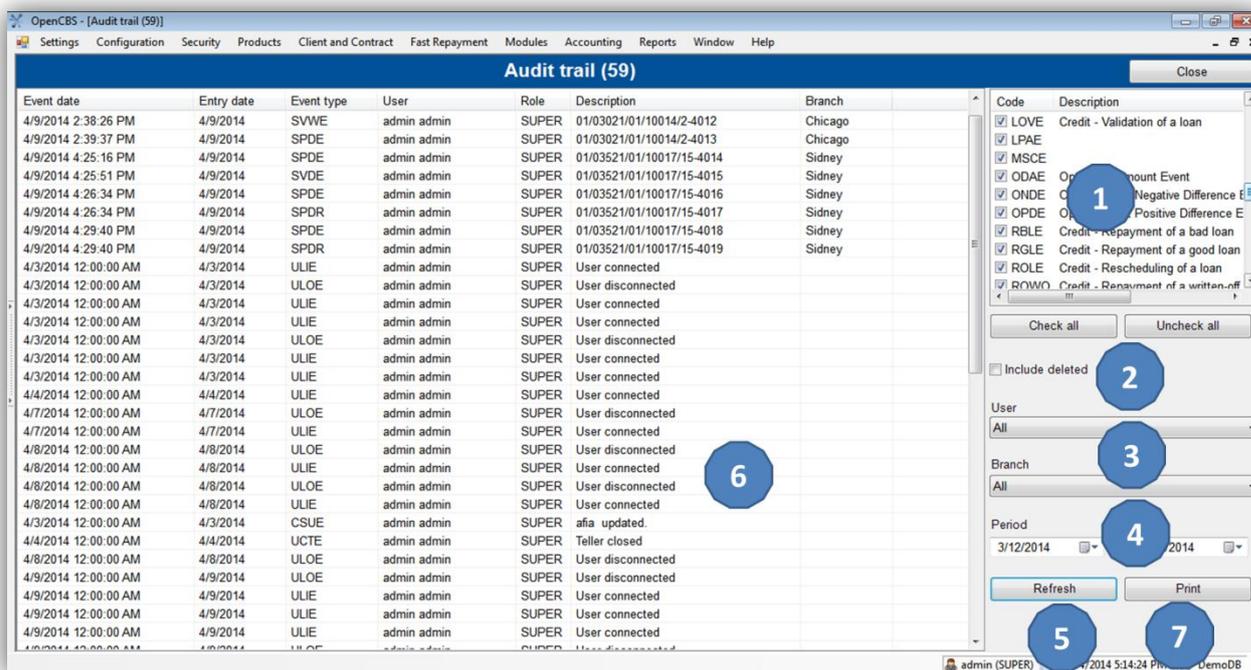
- The main window displays user information:
  - User name
  - Role
  - First Name
  - Last Name
  - Email
  - Gender
  - Number of subordinates
  - Phone
- In this section, the administrator enters user information and a password for the user. This password can then be changed by the user without having to access this section.
- To define the subordinates of each user, you must select the user and click “Subordinates” on the right side of the window.

- You'll see a window with two (2) tabs appear. The tab labeled "Subordinates" is where you can select the subordinated users, and the tab labeled "Branch" is where can choose the branch the user will have under his or her supervision.

**Note:** High level managers should select all staff members as subordinates, not only the next lower level of management. For example, for a chief of operations, selecting only branch managers as subordinates will not be enough to see all loans; he or she should also select all loan officers as subordinates to do so.

### 10.3.4 Audit Trail

This section allows you to see all the actions that have been performed in the software system over a given period of time and also which users have performed them.



- Select the event you want to see. Use the options "Check all" and "Uncheck all" to do so more quickly.
- Include or exclude deleted events.
- Select only events performed by one specific user or see only events which occurred at one specific branch.
- Select the period on which you want to display events.
- Click "Refresh" to display the events related to your selection.
- All events corresponding to your selection will be displayed in the main window with the following information:
  - Event date and time
  - Entry date or when the action has been done in the software
  - Event Type
  - User who performed the action
  - His/her Role
  - Description of the event to track it in the database if required

7. Branch where this event occurred
7. Click "Print" to create an extract of the audit trail.

### 10.3.5 Change Password

The screenshot shows a standard Windows-style dialog box titled "Change password". It features a close button (X) in the top right corner. The dialog contains the following fields and controls:

- User name:** A text input field containing the text "admin".
- Current password:** A password input field containing five asterisks (\*\*\*\*\*).
- New password:** A password input field containing five asterisks (\*\*\*\*\*).
- Confirm new password:** An empty password input field.
- Buttons:** Two buttons at the bottom: "OK" and "Cancel".

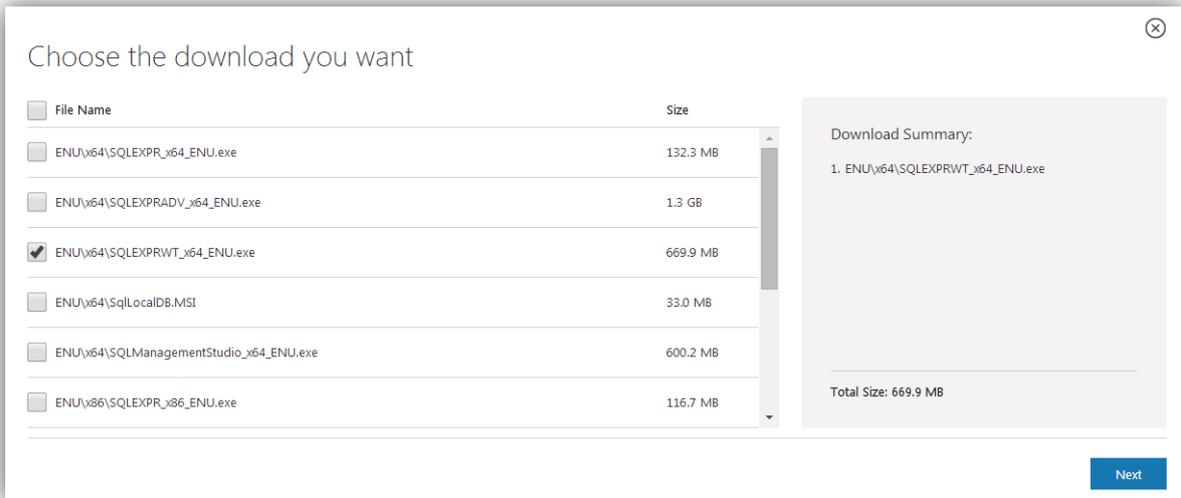
This section allows users who don't have access to "Users definition" to modify their passwords. Just enter your current password and the new password twice to confirm.

## 11. Appendix 3: SQL Server (network)

### 11.1 Download SQL Express

If you don't have any database engine yet, please follow this link [SQLServer Express](#).

There are about 10 different downloads. We recommend you download SQLEXPRT\_x64\_ENU for 64-bit or SQLEXPRT\_x86\_ENU for 32-bit because they will give you immediate access to SQL Server Management Studio. However, the minimum download is SQLEXP simple (the first item in the image below).



### 11.2 Install your SQL Server

Launch the .exe you just downloaded.

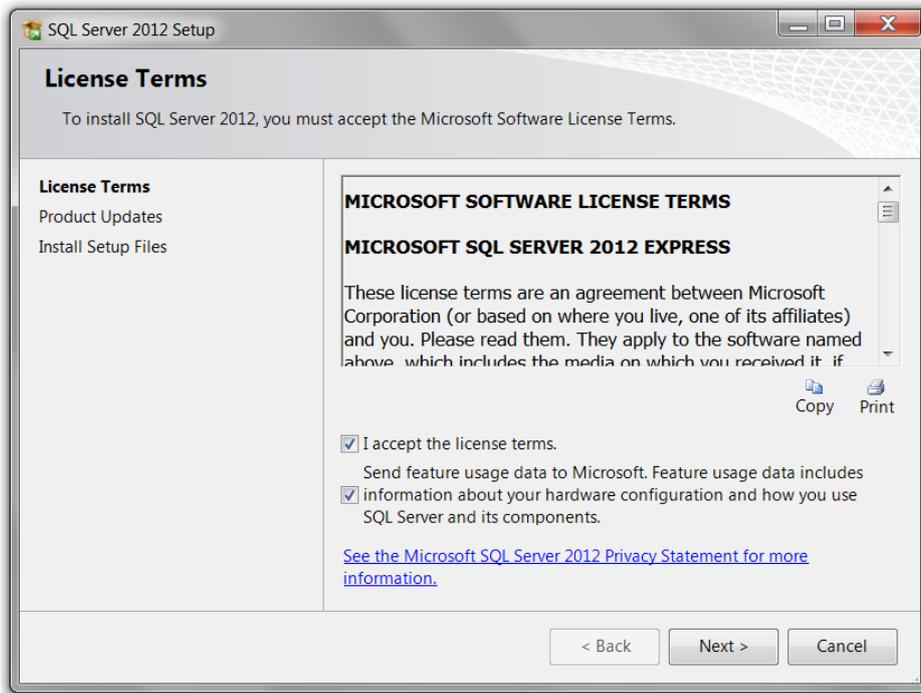
For a classic configuration, follow the installation instructions explained below. Other configurations are also fine. If you need more information, please don't hesitate to contact us. The instructions below are typical but your installation may vary slightly depending on the version you downloaded.



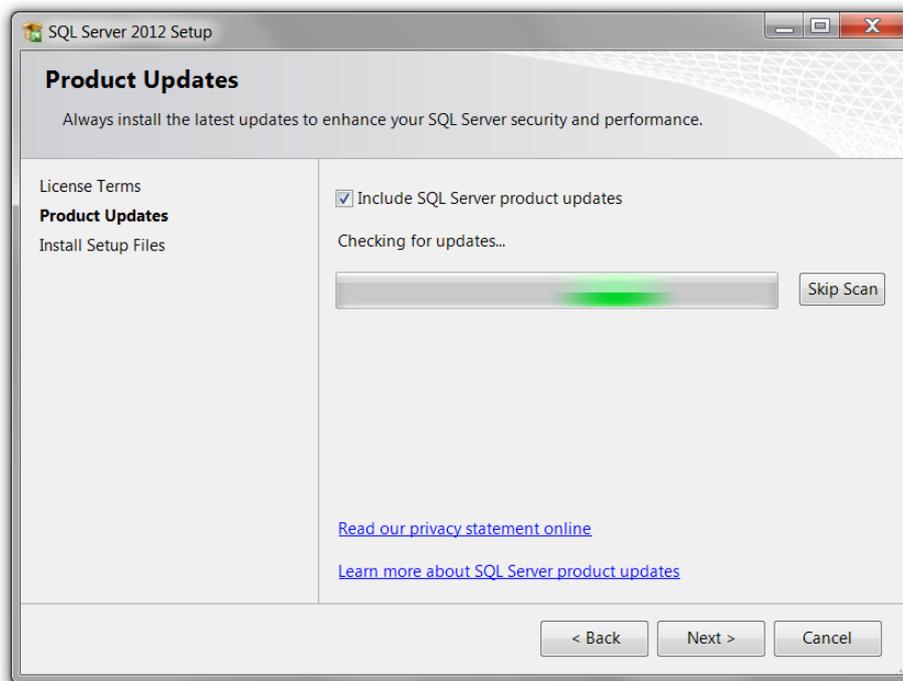
Within “Installation”, click “New SQL Server stand-alone installation or add features to an existing installation”.



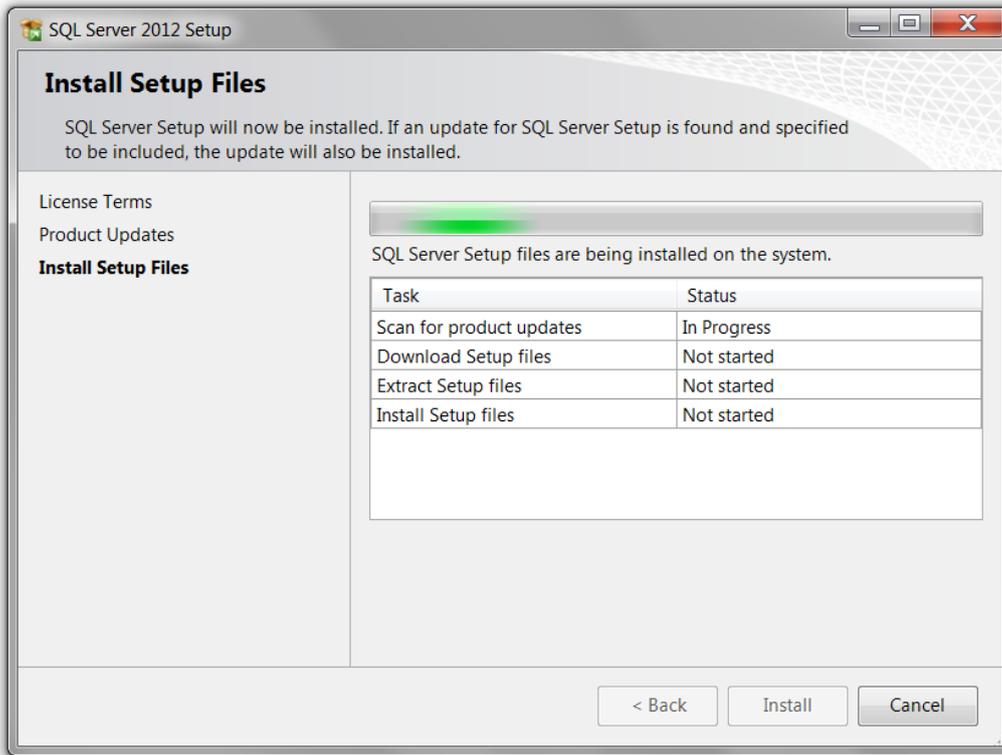
Depending on the version you are using, a “Product Key” step may appear. If you use SQLServer Express, you should only have to click “Next” as it is free.



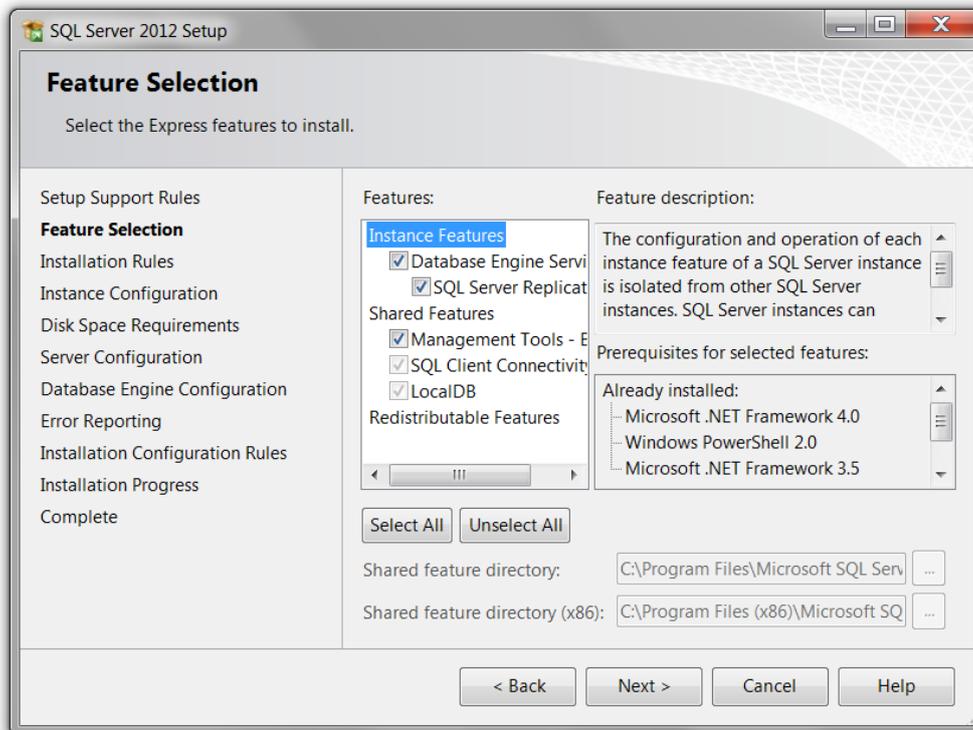
Accept the license terms and click “Next”.



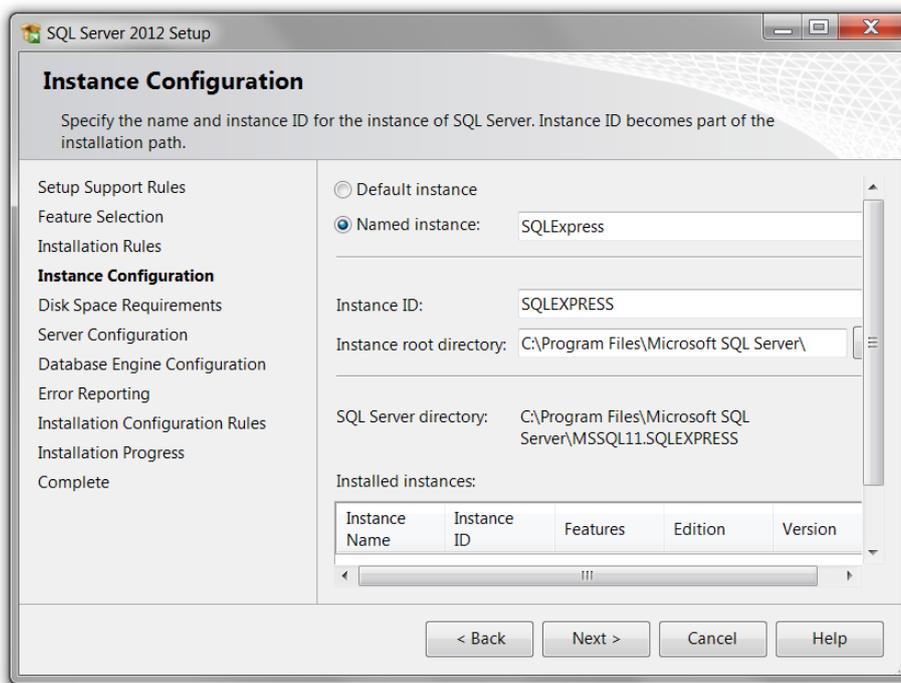
Wait for the check to finish, then click “Next”. If the check takes too long or seems to stop, you can click “Next” anyway.



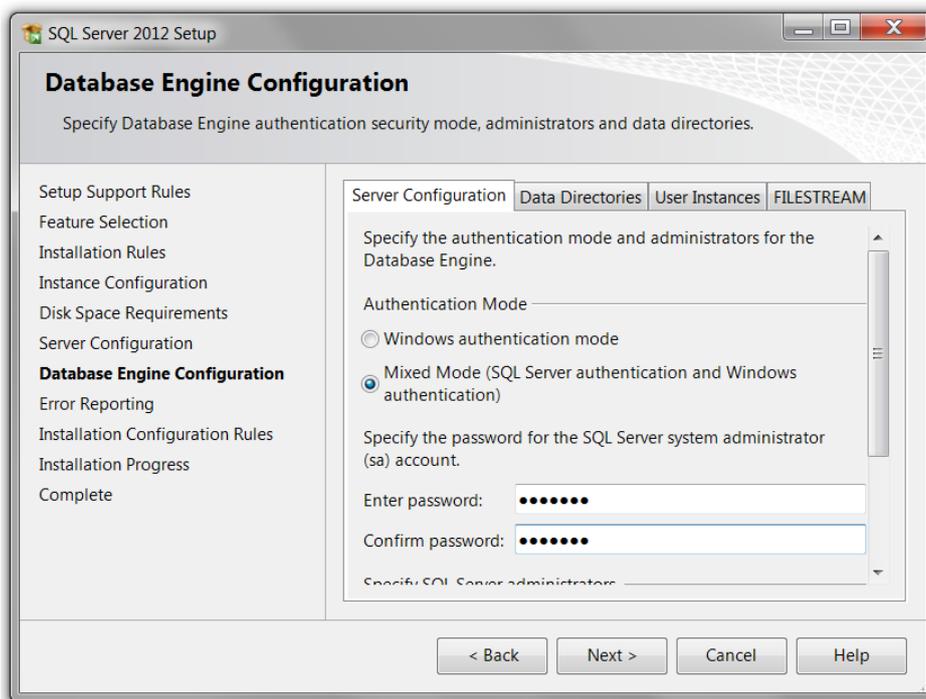
Wait for the tasks to be completed.



At the “Feature Selection” step, don’t forget tick Management Tools if you want to be able to use the Management Studio.



At the “Instance Configuration” step, choose a name you will remember because you will need it to connect OPENCBS to your SQL Database. We advise you to name it “SQLExpress” to make it easy. If you have enough disk space, you should go through Disk Space Requirements step quickly. The default configuration in this step is correct for the majority of users.



At “Database Engine Configuration”, select “Mixed Mode”, choose a password and record it (you will need the password to connect OPENCBS to your database).

At “Error Reporting”, click “Next”.

You should move through the “Installation Configuration Rules” step without issue.

Wait for the installation to finish.

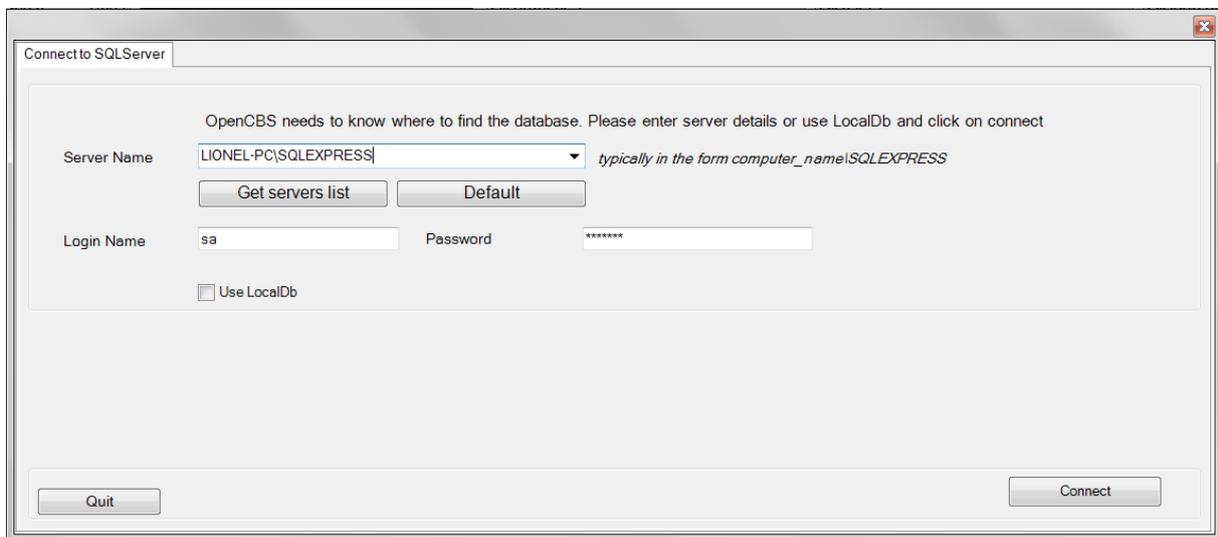
When you reach the “Complete”, click “Close”.

## 11.3 Plug OPENCBS with your SQL Server

Once you have created your SQL server instance, you need to use it inside OPENCBS.

Open OPENCBS, Go to Settings>Database Control Panel>Change.

You will see this window:



Enter the server instance name (configured at the “Instance Configuration” step). If you followed our advice and named the instance “SQLEXPRESS”, it should appear as COMPUTER\_NAME\SQLEXPRESS. If you created a default instance, just put the name of your computer.

---

Then, “sa” is the default login name and the password will be the one you inputted while creating the server (at the “Database Configuration” step).

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## 11.4 Use OPENCBS on a local network

To use OPENCBS on a local network, you need to activate SQL Server Browser. Also, use SQL Server Management Studio to verify that the number of allowed connections is enough for your institution.

If all settings are correct, connections through other computers work the same as in the previous section (see previous screenshot).

## 11.5 Use OPENCBS online

OPENCBS can be used online:

-Host OPENCBS remotely with RDP.

-If you want to host the database remotely, then further configuration on your SQL Server will be required. You must enable the adapted protocols and make sure your router ports are enabled for SQL Server. Only then will you be able to use your SQL Server remotely through the IP address. You can find more information about configuring the SQL Server for online use via the internet or by contacting us.

## 12. Appendix 4: OPENCBS services

This User Guide provides descriptions and explanations of OPENCBS' Core software. The Core software includes the minimum functionality required for an institution to operate. We hope this tool will help users learn the software well enough to want to explore its extensive abilities.

However, to use your software more effectively, OPENCBS offers premium services and features. Visit our website [www.opencbs.com](http://www.opencbs.com) to see our most popular offers.

If you aren't connected to the internet right now, here is a rundown of our services:

### 12.1 Custom developments and configurations

We can modify our software to suit your needs. To start, we can:

- Configure as many additional data fields as you need.
- Configure system to create exactly your unique loan or repayment schedules.
- Integrate your internal interest and penalty accrual policies into the software.
- Configure an infinite variety of schedules, repayments and rescheduling operations.
- Integrate your exact accounting policies into the accounting module of our software.
- Develop external reports to suit your management needs.
- Customize your internal forms.
- Develop any extensions you need.
- Integrate the OPENCBS software into your external accounting software.
- Connect the system to your local credit bureau office.
- And much more! Please contact us at [contact@OPENCBS.com](mailto:contact@OPENCBS.com) for more information.



### 12.2 Training and implementation

We can assist you in the implementation of the system. This service usually includes the following:

- **Preliminary audit mission.** For large organizations, we will make a full, on-site audit of your organizational processes in preparation for the implementation of OPENCBS. From this, we design an implementation plan tailored to your organization.
- **Gap assessment.** We perform a detailed review of your policies, production and validation and create a detailed function specification document (FSD).
- **Training.** We perform trainings with the following sessions:
  - o *Staff Training.* Provide your staff practical training on how to use OPENCBS. The training will be directed at those who will have to perform day-to-day operations using the software.
  - o *Manager Training.* This one-day session gives an introduction to the management team on the system and on everything they need to know to maximize OPENCBS' impact on their operations. It pays special attention to reporting functions.
  - o *MIS Manager Training.* Dedicated to the person(s) who will be in charge of maintaining the software system at the organization. It includes a full training on system configuration, database management, basic troubleshooting, issue reporting/asking for help from the OPENCBS team and an introduction to report and form design.

- **User Acceptance phase.**
  - o Collaboration between you and OPENCBS to develop user acceptance tests.
  - o You try out the software using the user acceptance tests that were developed between you and OPENCBS. The OPENCBS team provides support and performs additional work as issues are identified by the user acceptance test. OPENCBS provisions additional development days.
- **“Go-live” phase.** Your institution begins to use the software for real. At the beginning, OPENCBS will provide support via one staff member on-site, and then via dedicated off-site support for a period of 1-4 weeks.

Share your plans with us via our email [contact@OPENCBS.com](mailto:contact@OPENCBS.com). We can design the perfect implementation plan for your institution!

## 12.3 Technical support

OPENCBS will support your team in its day-to-day activities through:

- Off-site technical support via mail, phone and Skype with a guarantee of **a response within one working day for any issue reported.**
- Upgrades of your database to the **most recent version** of the system anytime you request it.
- A **bug fix** for any issues you might face within three (3) weeks of upgrading the software.
- Consideration of all your requests for additional functions and an adjustment proposal with clear pricing and time frame sent back within 2 weeks.



## 12.4 Software guarantee

We maintain guarantee that all the features you currently use will be available in future software releases. We will test your database before release to ensure a smooth transition.

## 12.5 Standard offer

In order to have clear offers, we decided to create two packages, standard and enterprise. You can ask us for a particular service, but packages are really cost-efficient. Here is the comparison between using freely OPENCBS and subscribing to a package:

	 <b>CORE</b>	 <b>STANDARD</b>	 <b>ENTERPRISE</b>
<b>Yearly fee</b>	<b>Free</b>	<b>0.25% of Loan Portfolio</b>	<b>0.50% of Loan Portfolio</b>
Modules	On demand	3	6
Technical Support	Forum only	Mail & Skype	Mail, Skype & Phone
Software Guarantee	No	On demand	Yes
Software implementation	No	On demand	Yes
Custom developments	No	On demand	On demand

Please note those offers are subject to change. Institutions must fulfill conditions certain conditions to be able to subscribe to some packages.

## 12.6 Contact

Get in touch with OPENCBS in the following ways:

- Try to find answers to many software issues via our **Forum**, which is completely free.
- By mail: [contact@opencbs.com](mailto:contact@opencbs.com).
- By Skype **info.opencbs**.
- Please visit our website for the most up-to-date telephone number.
- Find us on GitHub, Facebook, Twitter and LinkedIn.