

Average Principal Balance Interest Method

This document will guide you through the process of setting up a Line of Credit loan in LOAN SERVICING SOFT with interest calculated using the Average Principal Balance method.

For additional information and/or questions please feel free to contact our support group at support@loanservicingsoft.com or 1-800-993-1839 x804.

Prerequisites

Required minimum database version: 63.9.0

Required minimum LSS client version: 2.8.606.2817

This method was properly tested only for monthly LOC loans which are due every 1st of the month. If the payment due date falls on different date the interest calculation may not be accurate.

Loan Setup

In order to properly calculate the interest based on the Average Principal Balance a LOC loan must have the terms set in a certain way.

Here are the steps you need to follow:

- Loan Type: Line of Credit Loan
- Interest Method: Actual Days: Average Principal Balance
- Amortized: Interest Only
- Term Period: Monthly
- Payment Period: Monthly
- Negative Amortization: Add To Unpaid Interest
- Calculate daily Rate based on: 365 days in year
- Calculate days in date range based on: Actual Days

The loan has to be funded and the Credit Limit must be set.

Then loan draws can be added by pressing the "LOC / Revolving Details" button.

Once the setup is complete loan status must be set to 'Active' in order to be able to post borrower payments.

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Here is how the terms are set for this calculation method to properly work:

The screenshot shows the 'Terms' configuration window for Loan L10000006. The window is titled 'Loan L10000006 - Principal Average Balance Sample'. The left sidebar contains navigation icons for Borrowers, Lenders, Vendors, Collateral, UDF's, Classification, Docs & Log, and Audit Trail. The main area is divided into two columns of fields. The left column includes: Loan Number (L10000006), Borrower (Principal Average Balance Sample), Loan Type (Line of Credit Loan), Funded Amount (500,000.00), Principal Balance (125,000.00), Credit Limit (500,000.00), Interest Method (Actual Days: Average Principal Balance), Interest Rate (24.000% / yr), Rate adjustability (0 months), Margin Rate (0.000 Plus CMT), Floor (0.000), Ceiling (0.000), Max Increase (0.000), Use Rate Schedule (None), Use Same as Cash (None), Amortized (Interest Only), Charge Interest on Unpaid Interest (unchecked), Interest Charged in Advance (unchecked), Term Period (Monthly), Payment Period (Monthly), Term (24), Term Due (24), Payment (I) (9,516.80), Balloon Amount (0.00), Nick Name, and Memo / Notes. The right column includes: Loan Status (Active), Special Status (-), Signed Date (//), Origination Date (1/1/2017), First Payment Date (2/1/2017), Maturity Date (1/1/2019), Daily Rate (0.0645161291%), Periodic Rate (2.000%), Use Deferred First Payment (None), Negative Amortization (Add To Unpaid Interest), Calculate daily rate based on (365 days in year), Calculate days in date range based on (Actual Days), Use Late Fee (After 15 Days), Late Fee Amount (150.00), Pre Payment Penalty (0.00), Use Default Rate (Rate 0.000%), Servicing Account (Servicing Account - 287960967091), and Assigned To (User: Administrator). At the bottom, there are buttons for Data & Docs, Income, Expense & Credit Scores, Loan Features, All Accounts, a notification bell, Lock, Save, and Exit.

Here are a few draws made for this loan:

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Line of Credit Draws

Credit Limit: 500,000.00 | Funded Amount: 500,000.00 | Total Draw: 0.00
Principal Balance: 125,000.00 | Available To Draw: 375,000.00 | Total Draw (with unapplied): 0.00

LOC Draws

Effective Date	Check Date	Amount	Description	Status
1/1/2017	1/1/2017	-100,000.00		Applied
1/13/2017	1/13/2017	-50,000.00		Applied
1/26/2017	1/26/2017	-30,000.00		Applied

Sample Transactions

1. First regular payment is due on 2/1/2017 and is affected by two of the draws added to the loan on 1/1/2017 with amount of \$100,000 and 1/13/2017 with amount of \$50,000.

Here is how the interest is calculated for this first payment:

Interest Calculation Audit

Term Start	Term End	Period	Terms	Principal Balance	Total Balance	Annual Rate %	Days/Year	Periodic Rate %	Total Interest
1/1/2017	1/31/2017	Daily	31.000000	100,000.00	100,000.00	24.000	365	0.064516129032200	2,000.00
1/13/2017	1/31/2017	Daily	19.000000	50,000.00	50,000.00	24.000	365	0.064516129032200	612.90
1/26/2017	1/31/2017	Daily	6.000000	30,000.00	30,000.00	24.000	365	0.064516129032200	116.13
1/1/2017	1/31/2017	Total	56.000000						2,729.03

What is specific for this type of calculation is the daily rate used to calculate the interest which is different for each month depending on the actual number of days in the period (month).

For this first payment the daily rate is calculate like this:

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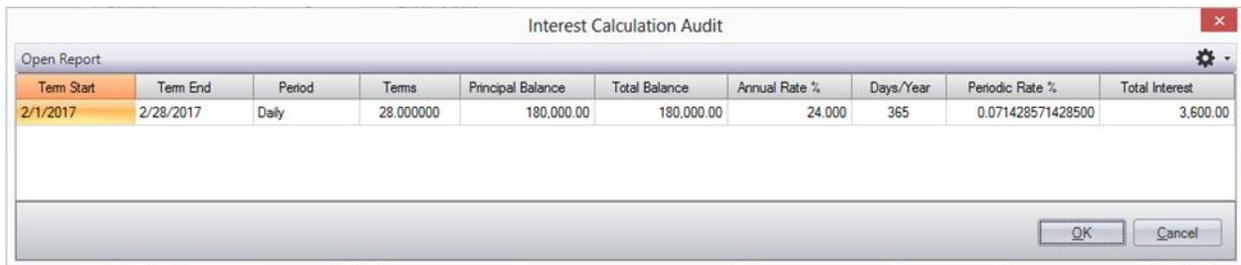
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Daily Rate = [Yearly Interest Rate] / ([Months in year] * [Days in current month])

Daily Rate = 24% / (12 * 31) = 0.064516129032200%

2. Second regular payment is due on 3/1/2017.

Here is how the interest is calculated for this payment:



Term Start	Term End	Period	Terms	Principal Balance	Total Balance	Annual Rate %	Days/Year	Periodic Rate %	Total Interest
2/1/2017	2/28/2017	Daily	28.000000	180,000.00	180,000.00	24.000	365	0.071428571428500	3,600.00

This second payment is not affected by other draws.

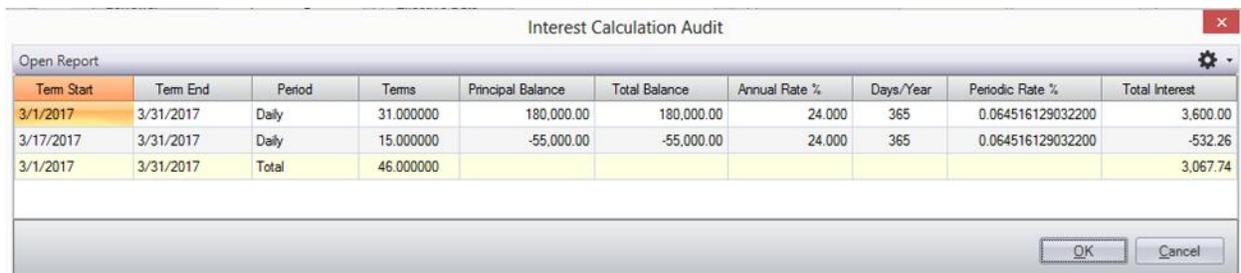
There are only 28 actual days in the month and the daily rate used is calculated using this formula:

Daily Rate = 24% / (12 * 28) = 0.071428571428500%

3. On 03/17/2017 a \$55,000 principal pay-down is made. It is posted as an irregular payment and the entire amount received is distributed to unbilled principal bucket.

4. On 4/1/2017 another regular payment is posted and the interest calculation in this case is affected by the principal pre-payment made on 3/17/2017.

Here is how the interest is calculated for this payment:



Term Start	Term End	Period	Terms	Principal Balance	Total Balance	Annual Rate %	Days/Year	Periodic Rate %	Total Interest
3/1/2017	3/31/2017	Daily	31.000000	180,000.00	180,000.00	24.000	365	0.064516129032200	3,600.00
3/17/2017	3/31/2017	Daily	15.000000	-55,000.00	-55,000.00	24.000	365	0.064516129032200	-532.26
3/1/2017	3/31/2017	Total	46.000000						3,067.74

For this payment the daily rate is calculate like this:

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Daily Rate = $24\% / (12 * 31) = 0.064516129032200\%$

5. Final sample payment is posted on 5/1/2017 and the interest is calculated like this:



Term Start	Term End	Period	Terms	Principal Balance	Total Balance	Annual Rate %	Days/Year	Periodic Rate %	Total Interest
4/1/2017	4/30/2017	Daily	30.000000	125,000.00	125,000.00	24.000	365	0.0666666666666600	2,500.00

For this payment the daily rate is calculate like this:

Daily Rate = $24\% / (12 * 30) = 0.066666666666600\%$