

Investit Decisions

Instruction Manual **Finance Folder** **Creating Mortgages & Loans** **USA Edition 1.0**

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FINANCING FOLDER

Preface

The Finance Folder allows you to enter the financing for capital investments in equipment, real estate etc., if appropriate.

In capital budgeting, financial and engineering economic analysis it is common to ignore financing as this is an organizational decision. The organization rarely borrows money to fund an individual investment in equipment and other assets. Instead, money is raised through retained earnings, the issuance of shares, bonds, debentures and bank loans etc. If this is the case the Finance Folder is not used.

The organization may decide to lease rather than buy the equipment. The Investit Decision's templates "Lease" and "Buy" can be used to decide whether to lease or buy the equipment.

Only use the Finance Folder if there is loan, being borrowed against the specific investment or the investment involves the acquisition of real estate funded by a mortgage.

Features

The Financing Folder is used to create mortgages and loans and offers the following features which allows you to enter any kind of mortgage or loan and explore creative financing options;

1. The number of mortgages or loans are unlimited
2. The mortgage can start and finish any year and month. E.g., Year 2, March 1.
3. Eight mortgage payment options. They are:
 - Standard (Blended Principal and Interest Payment)
 - Interest Only
 - Fixed Payment
 - Variable Payment
 - Fixed Principal Payment plus Interest
 - Variable Principal Payment plus Interest
 - Construction Loan. Interest Only (Also called a "Draw" mortgage"
 - No Payment of Principal or Interest
 - Your own Principal and Interest schedule
4. Additional payments or borrowing can be made in any period
5. Multiple Terms and Amortization Periods
6. Multiple Terms
7. Payment Frequencies. Annually, Semi-annually, Quarterly Semi-monthly and Monthly

Mortgage Payment Types

Note: The term "Periodic" refers to the payment period or frequency. As an example, monthly, yearly etc.

There are eight different mortgage types:

1. Standard Mortgage

A Standard Mortgage consists of a constant blended mortgage payment of principal and interest, as well as full amortization. This means that the borrower pays back the full Principal amount over the life of the mortgage i.e. the outstanding balance of the mortgage at the end of the amortization period is zero.

2. Interest Only Mortgage

With an Interest Only Mortgage, the interest is paid periodically, and the periodic payment consists solely of the interest due for the period. The Principal Remaining, which is equal to the amount owed, is paid off at the end of the Term or Amortization Period.

3. Fixed Payment Mortgage

The periodic payment is fixed for the Term. The payment is first applied to the interest owing, and any remaining amount is applied to reducing the Principal Remaining.

Note: If the periodic payment is less than the Interest Due, the unpaid interest is added to the Principal Remaining.

4. Variable Payment Mortgage

The Variable Payment Mortgage allows you to vary the mortgage payment period by period. The payment is first applied to the interest owing, and any remaining amount is applied to reducing the Principal Remaining.

5. Fixed Principal plus Interest Mortgage

The Periodic Payment consists of:

1. The interest due for the period.
2. A fixed principal payment, which reduces the Principal Remaining. The principal payment is fixed for the entire term.

6. Variable Principal Payment plus Interest Mortgage

The Periodic Payment consists of:

1. The interest due for the period.
2. A variable principal payment which can be varied period by period. The variable principal payment reduces the Principal Remaining.

7. Construction Loan. Interest Only

Allows you to set up a construction draw mortgage and draw the mortgage down in and repay in stages

8. No Payment of Principal or Interest Mortgage

Also called an Interest Accruing Loan.

There are no payments of principal or interest during the life of the mortgage. The unpaid interest is added to the Principal Remaining, which is paid off at the end of the Term.

9. Your own Principal and Interest Schedule

This option allows you to enter the principal and interest schedule period by period, and is used for unique circumstances where the mortgage contract cannot be calculated using the options available in Investit.

As an example, the seller and purchaser agree on the following mortgage payments:

Mortgage Amount: \$ 900,000

Mortgage Schedule:

<u>Period</u>	<u>Principal Payment</u>	<u>Interest Payment</u>
1	\$60,000	\$4,000
2	100,000	25,000
3	0	70,000
4	40,000	87,000
5	700,000	60,000

Clearly, there is no mathematical relationship to the payment structure, and the Mortgage Schedule must be entered period by period.

This option allows you to enter unconventional mortgage arrangements between the borrower and lender.

Entering a Mortgage. Example

The following are the basic steps for entering a mortgage. The steps may vary slightly from those outlined below, depending on the Mortgage Type selected.

In the Financing Folder, Click on the "Add Mortgage" button to create a new mortgage or the "Edit Mortgage" button to make changes to an existing mortgage.

The screenshot shows a software interface with a top navigation bar containing tabs: Project Info., Investor, Investment, Working Capital, Expenses, **Financing**, and Salvage Value. Below the navigation bar is a section titled "Mortgage (Borrowing)". This section contains a table with the following columns: Description, Type, Amount, and Start Date. Below the table, there is a row of four buttons: "Add Mortgage", "Edit Mortgage", "Delete Mortgage", and "Move". Two arrows point from text instructions to the "Add Mortgage" and "Edit Mortgage" buttons. The text for the first arrow is "Click on the 'Add Mortgage button' to create a new mortgage". The text for the second arrow is "Click on the 'Edit Mortgage Button' to change an existing mortgage".

Example

Following are the entries for a standard mortgage or loan.

Mortgage Details

Start Date: 2010 March

Type: Standard Mortgage (Fully amortized loan with constant monthly principle and interest payment)

Amount: \$3,000,000

Description: Financing

Mortgage Settings

Payment Frequency: Monthly

Additional Payments/Borrowing: None

Payments: Rounded to Nearest Cent

Compounding Frequency: Monthly

Term and Amortization Details

No. of Terms: 1

Time Period: 3 years (Mortgage is paid off with a balloon payment at the end of 3 years)

Amortization Period: 7

Interest Rate: 7.000%

After making the entries click on the "Compute" button and then the "Ok" button to complete the mortgage

The screenshot shows a software window titled "Mortgage" with two main sections: "Mortgage Details" and "Terms and Amortization Details".

Mortgage Details:

- Analysis Period: 2010 Mar to 2020 Feb
- Commencing: 2010, Month: March
- Type: Standard Mortgage
- Amount: \$ 3,000,000, Interest Rate: Fixed
- Description: Financing

Mortgage Settings:

- Payment Frequency: Monthly
- Additional Payments/Borrowing:
- Payment Rounded: Up to Nearest Cent
- Compounding Frequency: Monthly

Terms and Amortization Details:

No of (Balloon) Terms: 1

Term No	Time Period		Amortization		Nominal Interest Rate
	Years	Months	Years	Months	
1	3	0	7	0	7.000%

Annotations:

- "Select type of mortgage" points to the "Standard Mortgage" dropdown menu.
- "Select Fixed or Variable Interest Rate" points to the "Fixed" dropdown menu.
- "Allows additional borrowing or payments" points to the "Additional Payments/Borrowing" checkbox.
- "Set to 'Monthly' compounding" points to the "Monthly" dropdown in the "Compounding Frequency" field.
- "After completing the entries, click on the 'Compute' button" points to the "Compute" button.

Buttons: OK, Compute, Fill Down, Cancel, Help, Comments

Terms and Amortization Details

Allows you to set multiple "Terms" with each term having its own "Time Period", "Interest Rate" and "Amortization Period"

Example using a single term

No. of Terms: 1

Time period: 5 years. This means the outstanding principle at the end of 5 years will be paid off in full

Amortization Period: 25 years

Interest Rate: 7.00%

The entries are:

Terms and Amortization Details					
No of (Balloon) Terms <input type="text" value="1"/> ← One Term					
	Time Period		Amortization		
Term No	Years	Months	Years	Months	Nominal Interest Rate
1	→ 5	0	→ 25	0	→ 7.000%

Example using Multiple Terms

No. of Terms: 3

Term 1. Time Period: 3 years. Amortization 25 years Interest Rate: 7.00%

Term 2. Time Period: 3 years. Amortization 22 years Interest Rate: 7.50%

Term 3. Time Period: 3 years. Amortization 19 years Interest Rate: 7.75%

Note: The outstanding principle will be paid off with a balloon payment at the end of 9 years.

The entries are;

Terms and Amortization Details					
No of (Balloon) Terms <input type="text" value="3"/> ← Three Terms					
	Time Period		Amortization		
Term No	Years	Months	Years	Months	Nominal Interest Rate
1	→ 3	0	→ 25	0	→ 7.000%
2	→ 3	0	→ 22	0	→ 7.500%
3	→ 3	0	→ 19	0	→ 7.750%

Additional Payments and Borrowings. Example

Entering Additional Payments or Borrowing:

Steps:

1. Make sure that you have entered all of the mortgage information by completing the:
 - i) Mortgage Details
 - ii) Mortgage Settings
 - iii) Term and Amortization Details
2. Click on the Additional Payments/Borrowing button in the Mortgage Settings Box
3. Click on the "Display Variable Entry Grid" Button.
4. Enter the Additional Payments or Borrowing in the Grid in the appropriate Time Period.

E.g., Additional payment of \$ 20,000 in period Year 1 Jun.

Note: Enter an "Additional Payment" as a positive number. Enter "Additional Borrowing" as a negative number.

Mortgage

Mortgage Details
 Analysis Period: Year 1 Jan to Year 20 Dec
 Commencing: Year 1, Month: January
 Type: Standard Mortgage
 Amount: \$ 3,000,000 Interest Rate: Fixed
 Description: Financing

Mortgage Settings
 Payment Frequency: Monthly
 Additional Payments/Borrowing:
 Payment Rounded: Up to Nearest Cent
 Compounding Frequency: Monthly

Terms and Amortization Details
 No of (Balloon) Terms: 1

Term No	Time Period		Amortization		Nominal Interest Rate
	Years	Months	Years	Months	
1	7	0	7	0	7.000%

After completing 'Mortgage Details' and 'Terms and Amortization Details', click on this button to enter values for:
 - Additional Payments or Borrowings
Check "Additional Payments/Borrowing" then click on

Display Variable Entry Grid

Term	Time Period	Additional Borrowing (-) Payments (+)
1	Year 1 Jan	\$ 0
1	Year 1 Feb	\$ 0
1	Year 1 Mar	\$ 0
1	Year 1 Apr	\$ 0
1	Year 1 May	\$ 0
1	Year 1 Jun	\$ 20,000

Enter "Additional Payment"

Buttons: OK, Compute, Fill Down

Using Fill Down for Repeating Entries

The "Fill Down" button can be used to quickly enter repeating entries for;

1. Variable Interest Rates
2. Variable Principal Payments
3. Additional Payment/Borrowing

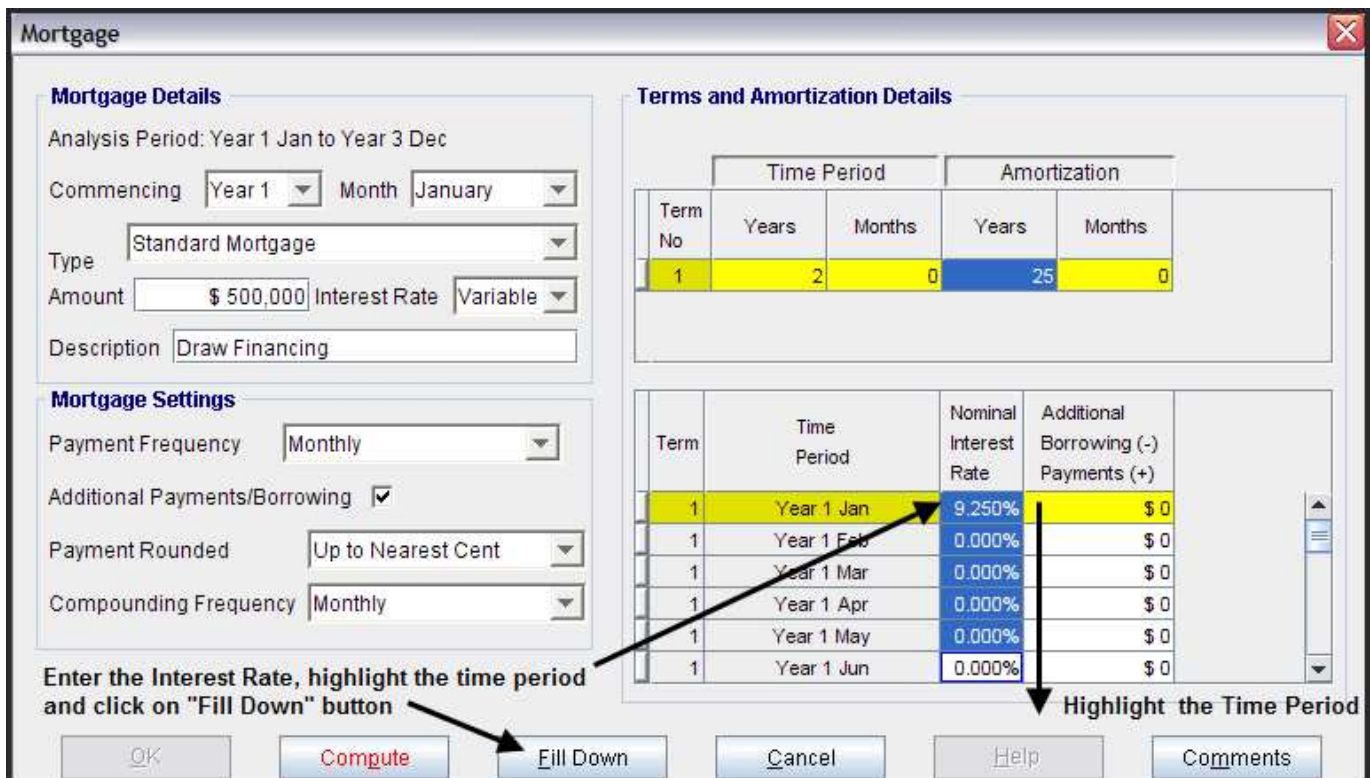
As an example, Nominal Annual Interest Rate for Periods: Year 1 Jan to Dec: 9.25%
Year 2 Jan to Dec: 8.00%
Year 3 Jan to Dec: 7.25%

can be entered quickly using the  Button as follows;

Steps

1. Make the first entry. Example 9.250% in Year 1 Jan
2. Highlight the time Period. Year 1 Jan to Dec
3. Click on the "Fill Down" button

Repeat the process to enter:
Year 2 Jan to Dec: 8.00%
Year 3 Jan to Dec: 7.25%



The screenshot shows the 'Mortgage' software interface. On the left, the 'Mortgage Details' section includes fields for 'Analysis Period: Year 1 Jan to Year 3 Dec', 'Commencing' (Year 1, January), 'Type' (Standard Mortgage), 'Amount' (\$ 500,000), 'Interest Rate' (Variable), and 'Description' (Draw Financing). Below this is the 'Mortgage Settings' section with 'Payment Frequency' (Monthly), 'Additional Payments/Borrowing' (checked), 'Payment Rounded' (Up to Nearest Cent), and 'Compounding Frequency' (Monthly). On the right, the 'Terms and Amortization Details' section contains two tables. The top table shows 'Term No', 'Time Period' (Years, Months), and 'Amortization' (Years, Months). The bottom table shows 'Term', 'Time Period', 'Nominal Interest Rate', and 'Additional Borrowing (-) Payments (+)'. The 'Fill Down' button is highlighted at the bottom, with arrows pointing to it from the text 'Enter the Interest Rate, highlight the time period and click on "Fill Down" button' and 'Highlight the Time Period'.

Term No	Time Period		Amortization	
	Years	Months	Years	Months
1	2	0	25	0

Term	Time Period	Nominal Interest Rate	Additional Borrowing (-) Payments (+)
1	Year 1 Jan	9.250%	\$ 0
1	Year 1 Feb	0.000%	\$ 0
1	Year 1 Mar	0.000%	\$ 0
1	Year 1 Apr	0.000%	\$ 0
1	Year 1 May	0.000%	\$ 0
1	Year 1 Jun	0.000%	\$ 0

Term	Time Period	Nominal Interest Rate
1	Year 1 Jan	9.250%
1	Year 1 Feb	9.250%
1	Year 1 Mar	9.250%
1	Year 1 Apr	9.250%
1	Year 1 May	9.250%
1	Year 1 Jun	9.250%

Entered by highlighting and using "Fill Down"

FINANCING EXAMPLES

The Financing Folder flexible allows you to develop mortgage schedules for a wide variety of mortgage payment types and to explore creative financing options.

This section contains the steps for developing the following mortgages:

1. Variable Payment Mortgage with Variable Interest Rates
2. Draw Mortgages

Variable Payment Mortgage with Variable Interest Rates. Example

The following example illustrates how to enter a mortgage with

- a) Variable Payments
- b) Variable Interest Rates

Mortgage Details

Type: Variable Payment
Interest Rate: Variable
Amount: \$3,000,000
Description: Financing

Term and Amortization Details:

Number of Terms: 1
Time Period: 3 years (The mortgage will be paid off with a balloon payment at the end of three years)

Mortgage Settings:

Payment Frequency: Monthly
Additional Payments/Borrowing: None
Rounding Option: Up to nearest cent
Compounding Frequency: Monthly

The variable payments and interest rates are;

Year 1: \$15,000 per month. Interest Rate: 7.00%

Year 2: \$25,000 per month. Interest Rate: 7.50%

Year 3: \$35,000 per month. Interest Rate: 8.00%

The "Variable Payment" and "Variable Interest Rate" mortgage is entered as follows;

Mortgage Details

Analysis Period: Year 1 Jan to Year 7 Dec

Commencing Year 1 Month January

Type Variable Payment

Amount \$ 3,000,000 Interest Rate Variable

Description Financing

Mortgage Settings

Payment Frequency Monthly

Additional Payments/Borrowing

Payment Rounded Up to Nearest Cent

Compounding Frequency Monthly

Terms and Amortization Details

Time Period		
Term No	Years	Months
1	3	0

After completing 'Mortgage Details' and Terms and Amortization Details', click on this button to enter values for:

- Periodic Payments
- Variable Interest Rate

Select "Variable Interest Rate" and "Variable Payment" and click on Display Variable Entry Grid

Term	Time Period	Nominal Interest Rate	Payment
1	Year 1 Mar	7.000%	\$ 15,000.00
1	Year 1 Apr	7.000%	\$ 15,000.00
1	Year 1 May	7.000%	\$ 15,000.00
1	Year 1 Jun	7.000%	\$ 15,000.00
1	Year 1 Jul	7.000%	\$ 15,000.00
1	Year 1 Aug	7.000%	\$ 15,000.00

Enter the Variable Interest Rate and Payment for each 12 month period

TIP: Highlight 12 months and use 'Fill Down' to repeat the monthly entries for the year

Draw Mortgage Example

A manufacturer has arranged a draw mortgage for \$1,000,000 at a Nominal Interest Rate of 8.75%, compounding monthly, and anticipates drawing down and then repaying the mortgage from sales revenue, as follows

Mortgage Draws and Payment Schedule

Mortgage Draws	Draw
Year 1 Jan	\$200,000
Feb	\$400,000
Mar	\$300,000
Apr	\$100,000
Total	\$1,000,000
Mortgage Repayments	Payment
Year 1 June	\$300,000
July	\$400,000
Aug	\$300,000
Total	\$1,000,000

The Mortgage dialogue should look like this;

Mortgage Details

Analysis Period: Year 1 Jan to Year 7 Dec

Commencing Year 1 Month January

Type **Construction Loan. Interest Only Payment**

Interest Rate Fixed

Description Draw Financing

Terms and Amortization Details

No of (Balloon) Terms 1

Time Period			
Term No	Years	Months	Nominal Interest Rate
1	3	0	8.750%

After completing 'Mortgage Details' and 'Terms and Amortization Details', click on this button to enter values for:

- Additional Payments or Borrowings

Select "Construction Loan. Interest Only Payment" and click on

Display Variable Entry Grid

Reset Variable Mortgage Entries to zero

Term	Time Period	Borrow (Draw)	Payment
1	Year 1 Jan	\$ 200,000	\$ 0
1	Year 1 Feb	\$ 400,000	\$ 0
1	Year 1 Mar	\$ 300,000	\$ 0
1	Year 1 Apr	\$ 100,000	\$ 0
1	Year 1 May	\$ 0	\$ 0
1	Year 1 Jun	\$ 0	\$ 300,000

Enter the "Draws" Enter the "Payments"

Once the entries are complete click on "Compute" and then the "OK" button

Compute

OK
Fill Down
Cancel
Help
Comments