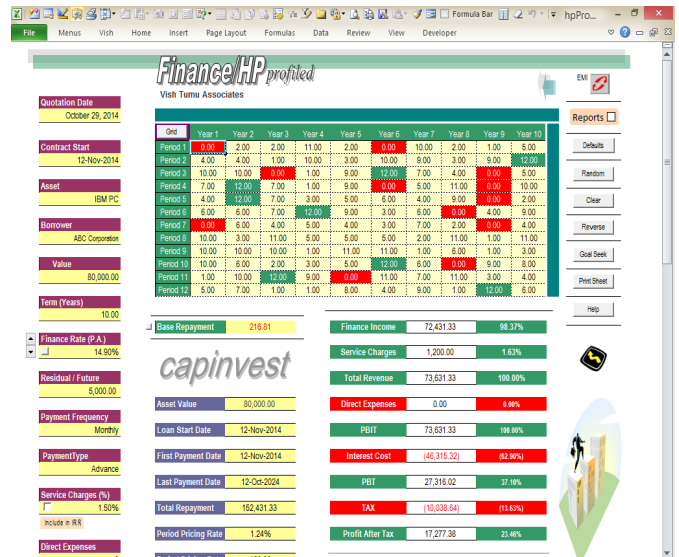


# Designing Consumer Finance Products



The screenshot displays the CapInvest / Savings-Loan Portal interface. The form is titled "Savings Loan" and includes the following fields:

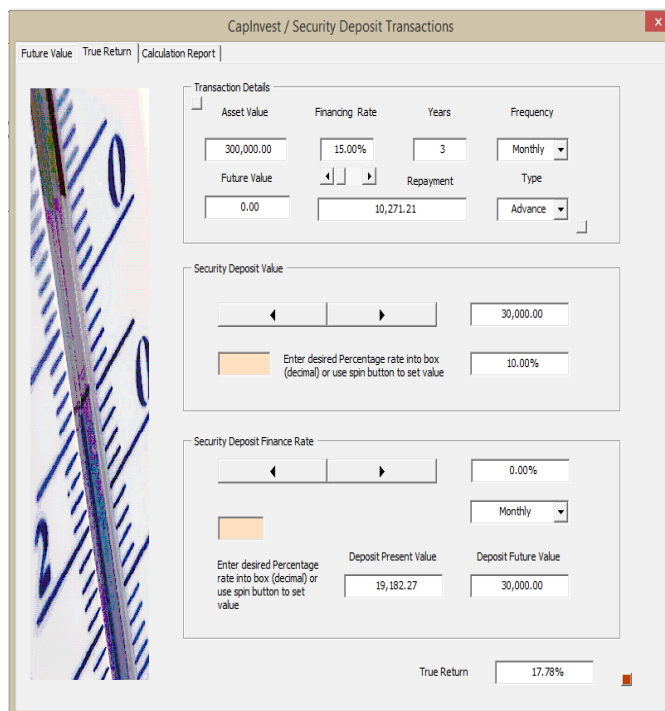
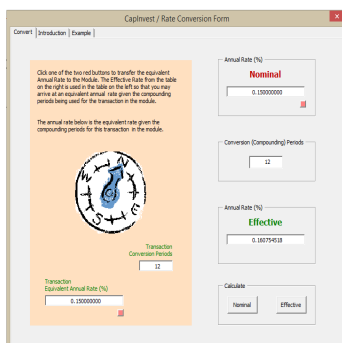
- Transaction Date:** Oct-29-2014
- Contract Start Date:** Nov-12-2014
- Customer Name:** ABC Corporation
- Transaction Number:** 102914

The form also includes a section for "Introduction" and "Product" information, which describes the purpose of the portal and the types of products that can be developed using it.



## 4-day Hands-on Training Program

- For Banks, leasing and hire-purchase companies, finance companies.
- Intense competition in the financial market place requires financial institutions to access cutting-edge analytical tools for developing user-friendly, market-driven, financial and savings products.
- Financial Products represent investment of resources; examples: loans, leases, hire-purchases, personal loans, housing loans, and so on.
- Savings Products attract funds to a financial institution; examples: savings and fixed deposit accounts, annuities, and so on.
- A financial institution needs to remain competitive on both fronts (a) to retain existing customers, and (b) to attract new customers. Designing financial products requires expertise in core 'Discounted Cash Flow' concepts and access to an implementation tool such as Excel or specialized software such as CapInvest.
- Financial Institutions are handicapped in developing innovative products since the backend systems that generate 'bed and butter' transactions leave no room for innovation. This very important program lays the foundation for moving forward aggressively in the financial market place.
- Participants receive a complimentary license for use of CapInvest for 3 months on unlimited PCs and Laptops.



# The Urgent Need

## Non-existing capability

*Financial Institutions offer lackluster products to customers, as these are the only products for which their backend system is designed. Sadly, it is the tail that wags the dog – cases:*

- (a) all consumer / asset finance products are of the 'Equated Monthly Installment' type (EMI) whether it is a car loan, a housing loan or a business loan – should a customer require a repayment that reflects his cash flow requirements (rather than an EMI), he often returns disappointed as a financial institution is unable to offer such a product;
- (b) a customer walks into a bank and seeks advise on meeting his future cash requirements such as son's education, daughter's marriage, retirement pension, and so on, and requires a product that specifies the amount to be deposited each month into a bank account, for X number of years, such that after the cash withdrawals to meet expenses, the account is squared to zero – once again, a bank is likely to offer the bland suggestion that the customer open a fixed deposit – this reflects the inability of a financial institution to design a product that addresses a customer's requirements;

- (c) finally, take the example of a bank offering a housing loan. Say you have a customer who requires not just a housing loan but say amount X after 3 years to add a floor to his home, amount Y each year to pay Municipal Taxes and wants all of these to be bundled into a single transaction with a single monthly repayment – what you have here is a disappointed customer because the bank is not positioned (analytically) to create a product that addresses his requirements.

This 4-day program trains participants in the theory underlying the development of financial and savings products (discounted cash flow); theory is translated into market-place products, using 'CapInvest', software of Vish Tumu Associates, which is designed to assist financial institutions to create a range of simple and sophisticated financial and savings products. This is a hands-on, rigorous program requiring participants to work with several analytical exercises. Prior knowledge of mathematics is not necessary. Participants only require a laptop with Excel 2007 or higher.



## DAY ONE

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- Basics of the mathematical relationship between the Present and the Future
- Exchange Rates
- Transaction Risk
- Universal Financial Equation
- Five components of the Universal Equation
  - PV
  - nPer
  - Rate
  - FV
  - Term
- Excel Equivalents of Universal Equation
- Examples of Calculating components of Universal Equation using Excel functions
- Calculating IRR using DCF
- Calculating xIRR using DCF
- Computing the Post Tax Return
- Custom Functions
- Office as Computing Platform
- Single Vs. Multiple Flows
- Annuity Definition
- Examples of Annuities
- Annuities and Compound Interest
- Classification of Annuities
- Deferred Annuities
- Perpetuities
- Sinking Funds
- Amortization
- Annuity Schema
- Valuation of Annuities
- Solving Annuities with Excel
- Solving Problems with DCF Tools
- Worksheet
- Using the Compounding Rate Conversions
- List of DCF Equations
- Useful Excel Functions
- DCF Exercises (Problems and Answers)

AMORTIZATION SCHEDULE								
SaveAs								Preview
Number	Date	Investment	Service Charges	Op Bal	Interest	Repayment	Principal	CI Bal
1	12-Nov-2014	300,000.00	0.00	300,000.00	0.00	10,271.21	10,271.21	289,728.79
2	12-Dec-2014	289,728.79		289,728.79	3,621.61	10,271.21	6,649.60	283,079.19
3	12-Jan-2015	283,079.19		283,079.19	3,538.49	10,271.21	6,732.72	276,346.47
4	12-Feb-2015	276,346.47		276,346.47	3,454.33	10,271.21	6,816.88	269,529.60
5	12-Mar-2015	269,529.60		269,529.60	3,369.12	10,271.21	6,902.09	262,627.51
Tax Year-End SUB-TOTALS			0.00		13,983.55	51,356.04	37,372.49	
6	12-Apr-2015	262,627.51		262,627.51	3,282.84	10,271.21	6,988.36	255,639.14
7	12-May-2015	255,639.14		255,639.14	3,195.49	10,271.21	7,075.72	248,563.42
8	12-Jun-2015	248,563.42		248,563.42	3,107.04	10,271.21	7,164.17	241,399.26
9	12-Jul-2015	241,399.26		241,399.26	3,017.49	10,271.21	7,253.72	234,145.54
10	12-Aug-2015	234,145.54		234,145.54	2,926.82	10,271.21	7,344.39	226,801.15
11	12-Sep-2015	226,801.15		226,801.15	2,835.01	10,271.21	7,436.19	219,364.96
12	12-Oct-2015	219,364.96		219,364.96	2,742.06	10,271.21	7,529.15	211,835.81
13	12-Nov-2015	211,835.81		211,835.81	2,647.95	10,271.21	7,623.26	204,212.55
14	12-Dec-2015	204,212.55		204,212.55	2,552.66	10,271.21	7,718.55	196,494.00
15	12-Jan-2016	196,494.00		196,494.00	2,456.17	10,271.21	7,815.03	188,678.97
16	12-Feb-2016	188,678.97		188,678.97	2,358.49	10,271.21	7,912.72	180,766.24
17	12-Mar-2016	180,766.24		180,766.24	2,259.58	10,271.21	8,011.63	172,754.61
Tax Year-End SUB-TOTALS			0.00		33,381.61	123,254.50	89,872.89	
18	12-Apr-2016	172,754.61		172,754.61	2,159.43	10,271.21	8,111.78	164,642.84
19	12-May-2016	164,642.84		164,642.84	2,058.04	10,271.21	8,213.17	156,429.67
20	12-Jun-2016	156,429.67		156,429.67	1,955.37	10,271.21	8,315.84	148,113.83
21	12-Jul-2016	148,113.83		148,113.83	1,851.42	10,271.21	8,419.79	139,694.04
22	12-Aug-2016	139,694.04		139,694.04	1,746.18	10,271.21	8,525.03	131,169.01
23	12-Sep-2016	131,169.01		131,169.01	1,639.61	10,271.21	8,631.60	122,537.41
24	12-Oct-2016	122,537.41		122,537.41	1,531.72	10,271.21	8,739.49	113,797.92
25	12-Nov-2016	113,797.92		113,797.92	1,422.47	10,271.21	8,848.73	104,949.19
26	12-Dec-2016	104,949.19		104,949.19	1,311.86	10,271.21	8,959.34	95,989.84
27	12-Jan-2017	95,989.84		95,989.84	1,199.87	10,271.21	9,071.34	86,918.51
28	12-Feb-2017	86,918.51		86,918.51	1,086.18	10,271.21	9,184.72	77,733.78

Caplment / Goal Seek Portal / LOAN HP Module

STOP 1 / Select a "Target" by clicking a Red Button

Payment Frequency: Monthly

Payment Type: Advance

Investment: 300,000.00

Present Discount: 64,763.50

LOAN Income: 5,000.00

Total Investment: 30,763.50

Total Expenses: 0.00

PPST: 30,763.50

Interest Cost: 24,522.10

PST: 42,241.35

TAX: 24,546.54

PST: 26,094.55

STOP 2 / Enter New "Value" for Target

Enter desired Target Value in Cell: 300,000.00

Present Rate: 13.00%

Term: 3.00

Loan / Pay: 300,000.00

Loan Fee: 0.00

HT Frequency: 300,000.00

STOP 3 / Select a Variable to change by clicking a Green Button

Wrap-Up / Goal Seek Choices

Target Variable: 13.00%

Change Variable: 13.00%

STOP 4 / Carry Out Goal Seek

Goal Seek



Caplment / Security Deposit Transactions

Future Value: 174,188.00

Transaction Details

Asset Value: 300,000.00

Present Rate: 13.00%

Term: 3

Payment: 1

Future Value: 174,188.00

Payment: 174,188.00

Security Deposit Value: 30,000.00

From deposit Percentage rate into fee (present) or use gap between to get value: 10.00%

Security Deposit Present Rate: 0.00%

Monthly: 1

Other deposit Percentage rate into fee (present) or use gap between to get value: 10.00%

Deposit Present Value: 26,094.55

Deposit Future Value: 30,000.00

Total Value: 174,188.00



# DAY TWO

## Mastering Financial Mathematics

Day two of the program is devoted entirely to training participants in fundamental financial mathematics concepts.

Participants work with several financial examples that illustrate the FIVE fundamental universal equation components:

1. Present Value
2. Future Value
3. Number of Periods
4. Interest Rate
5. Periodic Payment

Participants learn to master these concepts using a specially programmed Financial Spreadsheet developed by Vish Tumu Associates.



## DAY THREE AND FOUR

## PRODUCT CREATION EXAMPLES

- 
- Overview of CapInvest
  - Installation
  - Overview of Modules and Portals
  - Overview of Reports
  - Overview of Products and Product Creation
  - Two types of Products: Savings and Financial
  - Creating Financial, Savings and Leasing Products
  - Tax Stream and Non-Tax Stream Modules
  - Transaction Shapes: equated and profiled
  - Finance/ HP Equated Module
  - Finance / HP Profiled Module
  - Cost of Capital Module
  - Leasing Equated Module
  - Leasing Profiled Module
  - Post Tax Analysis Module
  - Lease Vs. Buy Module
  - Repricing Portal
  - Zero Rate Portal
  - Product Developer Portal
  - Rate Conversion Portal
  - Savings-Loan Portal
  - PowerPak Portal
  - Flat and True Rate Portal
  - Moratorium Portal
  - Security Deposit Portal
  - Transactions Overview:
  - (a) Equated; (b) Profiled; (c) Flexi; (d) Moratorium; (e) Equal Principal; (f) Flat Rate; (g) Zero Rate; (h) Repricing; (i) Rate Conversions; (j) Down Payment; (k) Advanced Transactions; (l) Post Taxed; (m) Lease Vs. Buy; (n) PowerPak Transactions; (o) VAT Enabled Lease Pricing
- **HANDS-ON**
    - Developing a Housing Finance Transaction
    - Developing a Savings Product
    - Developing a financial planning product
    - Developing a Profiled Transaction
    - Developing an Educational Loan Transaction
    - Developing a Moratorium Transaction
    - Developing a PowerPak Transaction
    - Developing transactions with customer specified repayments.
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# ABOUT YOUR PROGRAM DIRECTOR



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Viswanath is Principal Consultant of Vish Tumu Associates, a U.S. and India based financial institution consulting firm that advises international financial institutions, including, the World Bank, the International Finance Corporation, and the Inter-American Development Bank. He has carried out assignments in more than 24 countries. The firm employs specialist consultants from the United States and developing countries and has been involved in a wide range of assignments on behalf of institutional and private sector clients.

Viswanath holds a Masters degree in International Finance from Columbia University, New York and is a Chartered Accountant from the Institute of Chartered Accountants of India and is also a Company Secretary from the Institute of Company Secretaries of India. He is a co-author of an authoritative text on Leasing "The Principles and Practice of Leasing" published from the U.K. in 1990. The New York Financial Writers Association awarded him the prestigious 'Maurice Feldman' scholarship for financial writers. He has several published articles to his credit and is a regular contributor to the World Leasing Yearbook, published by Euromoney Publications, U.K.

Viswanath is an official Beta tester for Microsoft Office.

Viswanath has more than 14 years of experience in Financial Modeling and Microsoft Excel, has single-handedly developed 'CapInvest' a sophisticated financial model that is used by financial institutions to create a range of financial and savings products. In the past, he worked with the ICICI Bank, the premier development bank in India and AF Ferguson & Co., (now part of Deloitte), a premier management consulting company in India. He has advised and continues to advise, the World Bank, the International Finance Corporation and other institutions, on financial system and financial institution projects.