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This document provides an overview of financial training programs offered by Vish Tumu Associates, a US and India based financial institution consulting firm.

VTA's training programs are focused, hands-on, and intellectually challenging. Participants require a laptop with Excel 2000 or higher. Participants also need to prepare for programs via background reading material supplied by VTA. Where appropriate, case studies and problem solving workbooks are provided.

Without exception, all programs require participants to make intensive use of Excel VBA, which is the solution platform for all programs.

Training programs are conducted either as publicly hosted programs or as in-house training programs.

Course material is supplied 4 weeks in advance and includes, Reading Material, Program Slides, Case Studies, Scenarios, Hands-On Exercises and where relevant, Scenarios.

Most programs are of 4 days duration – where required, programs can extend to five-days to provide additional coverage.

Financial Modeling



“A properly designed model enables a situation to be easily examined and its dimensions intricately manipulated to facilitate optimal decision making.”

The objective of the Financial Modeling Program is to expose participants to modeling technology and tools for building sophisticated and useful models in Finance, Marketing, Accounting, Human Resources, Econometrics, Public Policy, Astronomy, Chemistry, and other areas – functional area is of no consequence since the modeler is responsible for supplying functionality, whether it is Accounting, Option Pricing, Ship Building, or whatever. Thus, regardless of functionality, every situation is comprised of variables and the challenge in building a model is (a) to decompose a situation into constituent variables (b) to establish valid relationships amongst variables, and (c) to map variables (and relationships) to a modeling eco-system on a PC.

A properly designed model enables a situation to be easily examined and its dimensions intricately manipulated to facilitate optimal decision making, whether it is a Merger & Acquisitions Model, an Option Pricing Model, a Budget, a Model to analyze effects of Drugs, a Securitization Model, a Model to forecast operations of an Enterprise, a Tax Collections Model or a Lease Pricing Model.

To build sophisticated and useful models, participants must necessarily learn to work with Excel and its programming counterpart, Visual Basic for Application (VBA). Therefore, this program devotes a substantial amount of time to discussing Excel and Visual Basic and anchors the topics with examples of real-life models so that participants may emulate the process to develop models that address unique requirements. While Model Building is the end-objective, Excel and VBA constitute the tools for model building. Participants are supplied with reading material in Excel, Visual Basic for Applications, Program Slides, Scenarios and Hands-on Problem Solving Exercises. Participants require a laptop to attend the program and need to be proficient in the use of Excel. Participants are encouraged to bring situations from work for discussion in class.

This program is not a “How-To” on Excel – the program assumes participants use Excel in their day-to-day work and thus, discussions on Excel will focus only on advanced features, such as Arrays. Participants interested in Basic Excel and VBA will find the ‘Monster Excel VBA’ Program to be more relevant since that program focuses exclusively on Excel VBA without relating discussions to model building.

DCF & Financial Mathematics



“To acquire skills in employing DCF, participants need to be familiar with a specialized branch of mathematics that is at the heart of DCF: financial mathematics.”

Just as matter is composed of Atoms, every efficient financial transaction, whether in the corporate world, in a financial institution, in a non-profit institute, an educational institute, a municipality or Government, needs to be structured using Discounted Cash Flow concepts (DCF) - only a single yardstick of financial efficiency guides the investment decision: the return from Investment must be higher than the Cost of Capital of the Investment (after adjusting for Risk associated with the transaction). Return, in turn, comes from (a) increase in Revenue or (b) reduction in Cost, or both. Universally, the evaluation of efficiency is accomplished by employing the Discounted Cash Flow Framework.

Project Finance, Bond Pricing, Securitization, Venture Capital and Private Equity Investments, Capital Expenditure Budgets, Financial and Savings Products, Mergers and Acquisitions, Replacement of Machinery, Viability of a New Road, Research and Development, Prospecting for Oil, Establishing new Minefields, Feasibility of a new Sports Facility or a Recovery Facility for Drug Addicts, Build-Operate-Transfer Projects, and so on, are examples of financial transactions where DCF techniques are applied to ensure resources are deployed in line with Return on Investment objectives (ROI) of an enterprise.

The measurement/forecasting of cash flow from an investment, the risk associated with cash flow, the discount rate to translate future flows to the present reflecting an appropriate cost of capital, constitute important components of DCF.

To acquire skills in employing DCF, participants need to be familiar with a specialized branch of mathematics that is at the heart of DCF: financial mathematics. Thus, the first and second days of the program are devoted entirely to discussing theory and financial mathematics. Since Excel is an important tool for implementing DCF, the third day of the program will examine advanced features of Excel. The last day will be devoted to understanding theory in a real-life setting: the use of DCF concepts in Project Finance and Appraisals, Securitizing Cash Flows, Bond and Stock Pricing, Developing Financial and Savings Products, Replacing Machinery, Developing a Housing Finance Product, Developing a Leasing Product, Developing Banking Products, using Excel to carryout Monte Carlo Simulation Exercises, and so on. Participants will receive training in the use of CapInvest and in developing new products using CapInvest.

Real Estate Modeling



“While the specific requirements for a Real Estate Model will vary from institution to institution, the model building architecture remains the same. By mastering Model building concepts, an institution would be empowered to develop models that address unique requirements.”

The ‘Real Estate’ Modeling Program comprises of four distinct components that together, address theory, practice and tools and techniques of developing Real Estate Models. While the specific requirements for a Real Estate Model will vary from institution to institution, the model building architecture remains the same. Thus, this program uses a few ‘illustrative’ models in the area of Real Estate - by mastering Model building concepts, an institution would be empowered to develop models that address unique requirements.

As Excel is the principal instrument for financial modeling in general, the program devotes the first day to discussing ‘Advanced’ aspects of Excel, such as Arrays, Data Tables, Data Validation, Functions, and so on.

While it is conceivable that a sophisticated financial model could be developed without writing a single line of code, such models tend to be limited in utility, if not, complex to operate. To develop models that are powerful and useful, a participant must necessarily learn to work with Excel’s Programming Counterpart, Visual Basic for Applications. Thus, the second day of the program is devoted to a discussion of Excel Programming which would expose participants to tools and techniques to build sophisticated financial models.

As the entire subject of Real Estate is grounded firmly in ‘Discounted Cash Flow’ and financial mathematics, this program devotes the third day to exposing participants to fundamental concepts. Participants receive a specially programmed Worksheet developed by the course director, containing more than 50 problems and solutions, that provide superb training in financial mathematics concepts.

The first three days of the program prepares participants to examine and discuss several ‘Real Estate’ related models on the last day of the program. In discussing these models, the program will utilize the most authoritative text on Real Estate: “Real Estate Finance and Investments” by William B. Brueggeman and Jeffrey D. Fisher, published by McGraw Hill. In addition, the program will discuss specific situations suggested by Participants.

Risk Return Framework for Financial Institutions



“The second approach to dealing with Risk requires a financial institution to integrate Risk into operations via the Pricing Mechanism. At the heart of the framework is the fact that Risk and Return go together.”

Risk is a fact of life for every financial institution, whether a commercial bank, a leasing company or a consumer finance company. There are two ways to deal with Risk: (a) ignore Risk by dealing only in ‘Safe’ Transactions; for example, providing finance only for movable assets that can easily be repossessed in the event of default or movable assets having an active secondary market – this strategy limits the business a financial institution is able to participate in and thereby, its role and influence in the financial system. An unexpected side-effect of this risk-avoidance strategy is that a financial institution unwittingly assumes risk as its portfolio of assets tends to be confined to a ‘safe’ class of assets that do not necessarily represent a diversified portfolio of assets from a conventional viewpoint. A second limitation of this strategy is profitability: spreads and volume of business tends to be thinner.

The second (and preferred) approach to dealing with Risk requires a financial institution to integrate Risk into operations via the Pricing Mechanism: the Risk-Return Framework. At the heart of the framework is the fact that Risk and Return go together. Accordingly, high-risk transactions are priced higher compared to transactions with little or no Risk. This ensures a financial institution earns the expected rate of return, even with defaults, as these are statistically estimated and factored into Pricing. The Risk-Return framework requires a transaction be priced using several components:

- A Risk Free Rate, in turn derived from an Institution’s Cost of Capital;
- A Profit Mark-up, in turn derived from competitive forces in an economy;
- A Risk Premium, derived from the Risk Categorization of a Transaction – the higher the Risk, the higher the Risk Premium.

The Risk-Return Framework is a ‘Portfolio’ approach to dealing with Risk, in much the same manner as Risk is addressed in the Stock Markets or in the Insurance Industry. The Portfolio concept is very powerful, yet simple: the ‘outcome’ of a Portfolio can be measured with greater precision than the outcome of an individual item.

This 5-day Masterclass provides in-depth exposure to the theory and practice underlying the induction of a Risk-Return Framework into a financial institution’s operations. Once the transition is completed, financial institutions can expect a significant transformation of their role and influence in the financial system along with enhanced profitability, as they would have mastered an essential ingredient of operating in a World where Risk is a fact of life.

Monster Excel VBA



This program focuses exclusively on Excel and its programming tool, Visual Basic for Applications. Coverage of Excel is both basic and advanced while Excel programming is covered in the section on Visual Basic for Applications. Time is allocated equally to Excel and Programming topics. Participants will carryout several programming exercises and will have the opportunity to discuss common problems and issues concerning the use and application of Excel in the workplace. Participants will receive background reading material on Excel and Visual Basic for Applications.

Topics in Excel include the following:

Excel Navigation	Dates and Formulas	Excel Naming Conventions
Built-in Functions	User-defined Functions	External Functions: Analysis Tool Pak
Arrays	Formatting Values	Excel Controls
Add-Ins	Data Validation	Lists
Data Filters	D Functions	Pivot Tables
What-If Analysis	One Variable Data Tables	Two Variable Data Tables
Goal Seek	Solver	Scenario Manager

Topics in VBA include the following:

GUI Vs Code	Visual Basic Code	Parts of a VB Procedure
Executing Code	Manipulating Excel with Objects	Properties and methods
Object Hierarchy	Object Collections	Excel Object Model
Macro Recorder	Control Structures	Types of Control Structures
Excel Events	User Forms	VB Controls
VB Functions	Object Browser	Range Object
Worksheet Object, Properties, Methods and Events	Range Properties and Methods	VB Variables and Constants
Arrays	VB Operators	Examples of Code
Hands-On Programming	Importing Data from Internet	Code Walkthroughs

Developing Consumer Finance Products



“The IT enabled world offers a cornucopia of opportunities to Finance professionals and institutions to deliver cutting-edge, innovative solutions and products to customers.”

The IT enabled world offers a cornucopia of opportunities to Finance professionals and institutions to deliver cutting-edge, innovative solutions and products to customers. To do so, entities need to make the transition from rudimentary tools such as financial calculators and homegrown spreadsheets, to sophisticated decision tools and financial models.

As competition heats up in the financial market place, banks, leasing and hire purchase companies, consumer finance, insurance, and housing finance companies, all face the need to develop new products, both financial and savings, to retain existing customers and attract new customers.

To make their presence in the financial market place, a permanent one, rather than transitory, finance professionals need:

- knowledge of fundamental financial concepts underlying the development of financial and savings products;
- dexterity in operating world-class product creation software.

This program (a) provides a 3-day intensive training in financial concepts fundamental to creating savings and financial products; (b) provides hands-on training in the use of ‘CapInvest’, software of Vish Tumu Associates for creating Savings and Financial Products; (c) offers a free time-limited license for use of CapInvest on unlimited PC’s in an organization.

Course Contents

<ul style="list-style-type: none"> ■ Characteristics of Financial and Savings Products ■ Example of Financial and Savings Products ■ Creating a Housing Finance Product ■ Creating a personalized Savings Product for a Bank ■ Creating a Leasing Product ■ DCF Examples from different industries – stock and bond pricing, bank lending, venture capital investments, leasing investments, optimum machine replacements, zero coupon bonds, raw cash flow of a tax-optimized lease 	<ul style="list-style-type: none"> ■ Using the RePricing Portal to Reprice in a floating rate scenario, in an arrears scenario, to add principal to an existing transaction or to deduct principal from an existing transaction ■ Using the Zero Rate Portal to create zero finance or concessional finance products ■ Using the Rate Conversion Portal to handle ticklish rate conversion scenarios in a bank or in other deposit accepting institutions ■ Using the Product Developer Portal to create Advanced Financial and Savings Products ■ Viewing Transactions in the form of underlying equations 	<ul style="list-style-type: none"> ■ Using the Reverse Function to develop flexible repayment transactions wherein a customer develops the repayment schedule ■ Discussion of Operating Lease via Case Study ■ A Lease Vs. Buy Analysis to convince customers of superiority of leasing vis-à-vis borrowing from a bank ■ Leveraging the Taxation system to develop competitive lease products using the Post Tax Module ■ Using the Power Pack Portal 	<ul style="list-style-type: none"> ■ Pricing Variables ■ Cost of Capital ■ Time Value of Money ■ Universal Financial Equation ■ 5 Components of Equation ■ Excel Equivalents ■ Discounted Cash Flow Equations
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Program Differences

The 'Financial Modeling' Program discusses Excel VBA in depth – however, the end objective of the program is Model Building using Excel VBA as a modeling eco-system. Participants are trained to use Excel VBA to build models that address specific requirements. Exposure to Excel in the Financial Modeling Program is only to Advanced Excel Topics and not to Basic Excel.

The 'Monster Excel VBA' Program focuses exclusively on Excel and its programming counterpart, VBA. The coverage of Excel is Basic and Advanced and is followed by an extensive discussion of VBA. Thus, Excel VBA coverage is significantly greater in this program than in the Financial Modeling Program.

Course Director

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., (part of Ernst and Young), a premier management consulting company in India.