

**BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE, PILANI**

**Hyderabad Campus.**

**Second Semester 2021-22**

**Course Handout Part II**

**January 15<sup>th</sup>, 2022**

In addition to part -I (General Handout for all courses appended to the time table) this portion gives further specific details regarding the course.

**Course No.** ECON F355

**Course Title:** Business Analysis and Valuation

***Instructor-in-charge* : Niranjan Swain** (niranjanswain@hyderabad.bits-pilani.ac.in) **1. Brief Course Description:**

The fundamental goal of an organization is either to maximize shareholder value or stakeholders value depends on their geographical location. The former has been highly emphasized by the top management of corporates in the most powerful capitalistic economy in the world - USA and the latter is weighted by the corporates in continental Europe and Japan with short-sighted, inefficient, simplistic, and even antisocial approach towards shareholders value maximization. But globalization of financial markets has forced corporates financial systems to focus on maximizing shareholder value otherwise they will be starved of capital – Indian corporates cannot be an exception to this.

The recent trend of consolidations, mergers & acquisitions and other forms of strategic alliances for sustainable growth have warranted finance domain experts of investment banks, investment and consulting firms, research wing of corporates both in private and public sectors, government agencies, etc. to analyze entire business constituents as to how to manage present, selectively forget past and create for future. The course has been designed to help the students interested in the area of investment banking, consultancy -mergers & acquisitions and equity research (investment analysis). The broad objective of the course is to sensitize students to the various frameworks of business analysis such as business s

strategy, accounting, financial and prospective, and valuation approaches and which will help to take the right decision at the right time and place.

## **2. Scope and Objectives of the Course:**

This course attempts to examine the role of accounting information and intermediaries in the economy, and how financial analysts can create in well functioning markets. Primarily four key components such as business strategy, accounting, financial and prospective of

effective financial statement analysis will be discussed to have better understanding and evaluation of the business from internal and external stakeholders' perspectives. The

objectives of the course are as under.

- Sensitize students to the various frameworks of business analysis such as business strategy, accounting, financial and prospective.
- Critical Analysis and Application of various valuation approaches and methods.
- Understanding and evaluating various limitations of valuation methods, and provide solutions.

## **3. Teaching Methodology:**

The course is designed as an “Active-Based Learning.” The course will utilize the active learning methods such as assignment based learning, case study and problem-based learning. Students will be given opportunity to apply concepts/methods in real business case – analyzing business performance and doing valuation.

## **4. Text Book:**

1) Palepu, Healy & Bernard, Business Analysis & Valuation - Using Financial

Statements, Text & Cases, Cengage Learning Publisher, 3<sup>rd</sup> Edition.

2) Damodaran A, Damodaran on Valuation, Wiley India Pvt. Ltd.

## **2<sup>nd</sup> Edition. 5. Reference Book:**

Damodaran A, The Dark Side of Valuation: Valuing Young, Distressed and Complex Businesses, 2<sup>nd</sup> Edition, Pearson Education, 2010.

## 6. Course Content:

### **Module-I: Framework for Business Analysis and**

#### **Valuation. Topics:**

Introduction to business analysis and valuation, Role of financial reporting in capital markets; Business activities to financial statements; and Financial statements to business analysis

#### **Learning Outcomes:**

Student should be able to understand the significance of doing business analysis and valuation, and linkage between financial statements and financial decisions.

Financial statements provide the most widely available data on public corporations' economic activities, investors and other stakeholders rely on financial reports to assess the plans and performance of firms and corporate managers.

Accrual accounting data in financial statements are noisy, and unsophisticated investors can assess firm's performance

only imprecisely. Whereas, financial analysts who understand managers' disclosure strategies have an opportunity to create inside information from public data, and play a valuable role in enabling outside parties to evaluate a firm's current and prospective performance. Hence, through this module, student should be able to understand comprehensive framework of doing business analysis with financial statements using the four key steps: business analysis, accounting analysis, financial analysis and prospective analysis.

**Case Study:** The Role of Capital Market Intermediaries in the Dot-Com

Crash of 2000 **Learning outcomes from Case:**

This case should enable students to understand the role of key intermediaries – venture capitalists, investment banks, sell-side and buy-side analysts, and professional money managers, and public accountants in the functioning of capital markets. The case discussion focuses both on the potential value these intermediaries create, and also some of the governance and incentive challenges they face in performing their intended function. By focusing on the dot-com bubble of the late 1990s, and its crash in the 2000, the case attempts to show the incredibly important role of these players play - both constructive and destructive - in the flow of capital between individual investors and entrepreneurs. After this case study, student should be able to understand and appreciate how capital markets work and how information incentives influence their functioning.

**Reference:** Text Book-1, Chapter-1

No. of Sessions: 4

**Reference Article:**

- 1) P. Fulghieri and R. Rovelli, Capital Markets, Financial Intermediaries, and Liquidity Supply, Working Paper, INSEAD, Business School

## **Module-2: Strategy and Competitive**

**Analysis Topics:**

Strategic analytical techniques (Michael E. Porter's Generic Competitive Strategy – Cost Leadership and Differentiation, Michael E. Porter's Five Forces competitive advantages viz. rivalry between existing firms, threat of entry of new

firms, threat of substitute product or services, bargaining power of buyers and bargaining power of suppliers. Boston Consulting Group (BCG) Matrix, Strategic Position and Action Evaluation (SPACE) analysis, Blind Spot Analysis; Competitive and Customer analysis techniques; Environmental analysis techniques; Evolutionary analysis techniques; and Value chain analysis.

**Learning Outcomes:**

The insights gained from strategy analysis can be useful in performing the remainder of the financial statement analysis. Student should be able to examine the importance of company's accounting policies that are in consistent with its stated strategy.

Strategy analysis is also useful in guiding financial analysis. Business strategy analysis also helps in prospective analysis and valuation. Therefore, this module should enable students to assess whether, and for how long, differences between the company's performance and its industry (or industries) performance are likely to persist.

Secondly, strategy analysis will provide an insight into forecasting investment outlays the company has to make to maintain its competitive advantage. Therefore, at the end of this module students should be able to understand how organization's cost of capital is determined by the capital markets, its profit potential is determined by its own strategic choices such as choice of an industry or a set of industries in which the organization operates (industry choice), manner in which organization intends to compete with other organizations of its chosen industry or industries (competitive positioning) and way in which it expects to create and exploit synergies across the range of businesses in which it operates'(corporate strategy). Hence, competitive analysis is the cornerstone of effective strategy formulation and implementation. Therefore, this analysis should enable student understand and predict strategic moves by competitors. It should also enable student to develop, select, and test appropriate strategies.

BCG matrix analysis should enable student to understand as to why some competitors outperform others - What are the "rules" for success (when and how much to investment to keep product or service ahead of competitors.)

Through SPACE analysis, student should be able to understand where an organization's directional vector is located in the aggressive quadrant (upper-right quadrant) of the matrix, when an organization is in an excellent position to

use its internal strengths to (1) take advantage of external opportunities, (2) overcome internal weaknesses, and (3) avoid external threats.

Blind spots analysis should enable to understand what are the reasons for organizations doing mistakes or taking incomplete view of industry and competition which can lead to failure in strategy formulation and implementation. This analysis should enable students to critically analyze, with suitable examples, of six flaws or blind spots such as (1) misjudging industry boundaries; (2) poor identification of the competition; (3) overemphasis on

competitors' visible competence; (4) overemphasis on where, not how, rivals compete; (5) faulty assumptions about the competition; and (6) paralysis by analysis.

**Case Study:** America Online Inc.

**Learning outcomes from Case:** The America Online (AOL) case is a comprehensive financial statement analysis case. It will enable students to do strategic, accounting, financial and prospective analysis in a rich context. Students will get an opportunity to answer the various strategic and operational issue such as prior to 1995, why was AOL so successful in the commercial online industry relative to its competitors CompuServe and Prodigy? During 1995, what were the key changes took place in the commercial online industry and how could they likely affect AOL's future prospects. Students should be able to justify the rationale behind AOL's policy to capitalize subscriber acquisition costs and whether AOL should change its accounting policy or not keeping its impact on its share price.

**Reference:** Text Book-1, Chapter-2 No. of Sessions: 8

**Reference Article:**

- 1) Michael E. Porter, How Competitive Forces Shape Strategy, HBR, March-April, 1979. 2) Gary Hamel and C.K. Prahalad, Strategic Intent, HBR, May-June, 1989.
- 3) C.K. Prahalad and Gary Hamel, The Core Competence of the Corporation, HBR, May June, 1990.
- 4) George Stalk, Philip Evans and Lawrence E. Shulman, Competing on Capabilities: The New Rules of Corporate Strategy, HBR, March – April, 1992.
- 5) David J. Collis and Cynthia A. Montgomery, Competing on Resources: Strategy in the 1990s, HBR, July-August 1995.
- 6) Hugh Courtney, Jane Kirkland and Patrick Viguerie, Strategy Under Uncertainty, HBR, Nov. – Dec. 1997



### **Module-3:        Accounting**

#### **Analysis Topics:**

Institutional framework for financial reporting; Need for accounting rules and conventions, and auditing; Sources of noise and bias in accounting data & information- factors influencing accounting quality; Steps on doing accounting analysis; Accounting analysis pitfalls and Value of accounting data and Accounting analysis.

**Learning Outcomes:**

Accounting analysis is an important step in the process of analyzing corporate financial statements. Through accounting analysis student should be able to evaluate the degree to which a company's accounting captures the underlying business reality i.e. how accounting rules and auditing can reduce the cost and preserve the benefit of delegating financial reporting to corporate managers. The student should be able to identify the key accounting policies and estimates, given the firm's industry and its business strategy. Accounting analysis should enable student to evaluate the degree of flexibility available to managers, given the accounting rules and conventions. And then, to evaluate how managers exercise their accounting flexibility and the likely motivations behind managers accounting strategy. Student should be able to assess the depth and quality of a firm's disclosures and then identify any red flags needing further investigation. The final accounting analysis step is to restate accounting numbers to remove any noise and bias introduced by the accounting rules and management decisions.

At the end of this module students should be able to understand (1) rigidity in accounting rules, (2) random forecast errors, and (3) systematic reporting choices made by corporate managers to achieve specific objectives can be sources of noise and bias in accounting data. Students should be able to learn six key steps of doing accounting analysis viz. (1) identifying key accounting policies to measure critical factors and risks, (2) assessing accounting flexibility, (3) evaluating accounting strategy, (4) evaluating the quality of disclosure, (5) identifying ten potential red flags and understanding impact, (6) undoing accounting distortions using cash flow statement and the financial statement footnotes. Finally understand and appreciate accounting analysis pitfalls.

**Case Study:** Harnischfeger Corporation

**Learning Outcomes from Case:** The purpose of the "Harnischfeger Corporation" case is to expose students to the managerial motives for making major financial reporting policy changes. Generally Accepted Accounting Principles (GAAP)

allow companies wide latitude in the choice of accounting policies. After a firm chooses a set of accounting policies, current accounting rules permit changes from one alternative policy to another at the discretion of the management. Since reported accounting figures are widely used by a number of external parties, managers of firms have incentives to choose accounting policies in order to influence the behavior of these parties. A variety of managerial motives for accounting policy decisions have been identified in the accounting literature.

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Harnischfeger case is designed to encourage students to explore these motives. Harnischfeger Corporation, a large New York Stock Exchange company, faced a financial crisis in 1982. New management was appointed to turn the company around. As part of its restructuring strategy, the new management team made a number of financial reporting policy changes in fiscal 1984. Together, these changes accounted for most of Harnischfeger's reported 1984 profits. More significantly, these changes represented a substantial switch from the company's earlier conservative reporting philosophy to a more aggressive one. The case describes the company's financial crisis, the turnaround strategy of the new management team, and the accounting policy changes that took place in 1984. This is an excellent case wherein student should be able to critically analyze stock market response to accounting policy decisions.

**Reference:** Text Book-1, Chapter-3

No. of Sessions: 4

#### **Module-4: Implementing Accounting**

##### **Analysis Topics:**

Recasting financial statements; Asset distortions - Overstated and Understated assets; Creditors' liability distortions and Equity distortions.

##### **Learning Outcomes:**

In order to implement accounting analysis, recasting the financial statements into a common format is needed so that accounting distortions that exist in the firm's assets, liabilities and equity can be determined. Common distortions that overstate assets include delay in recognizing asset impairments, underestimated reserves, aggressive revenue recognition leading to overstated receivables, and optimistic assumptions on long-term asset depreciation. Assets underestimates can arise if managers overstate asset write-off, use operating leases to keep assets off balance sheet, or make conservative assumptions for asset depreciation. They can also arise because accounting rules require outlays for key assets (e.g. R&D and brands) to be immediately expensed. Therefore, students should be able to understand the factors that overstate and understate the fina

ncial statements and recast data / information accordingly for a meaningful analysis and interpretation.

***Case Study:*** Pre-Paid Legal Services, Inc.

***Learning Outcomes from Case:*** Pre-Paid Legal Services (PPLS) has been a rapidly growing provider of legal insurance services. Its most popular insurance plan provided reimbursement for such services as will and testament preparation, document review and

letter writing, and some of the legal costs associated with employment-related trial defense, traffic violations, and Internal Revenue Service audits. The company has marketed its memberships through a multi-level marketing program that encourages buyers to become salespeople. Members who wanted to become sales associates received training materials and attended training meetings. They then sold legal insurance to their friends and business associates. Prior to 1995, associates those signed-up a new member received a commission of 70% of the first year premium, and a 16% commission for subsequent year renewals. After 1995 PPLS modified its commission formula to a flat 25% commission for both initial year and subsequent renewal memberships. However, to retain and attract sales associates, PPLS advanced the sales associate three years of commission on every new membership sold. If a membership lapsed before the advances had been recovered, PPLS deducted 50% of any unearned advances from future commissions to the relevant associate. The case focuses on PPLS's change in commission structure, and the controversy it faced in the method of accounting for commissions. Through this case, student should be able to evaluate (a) why has the company changed its commission structure? and (b) how should commission costs be matched with revenues generated from the sign-up of a new member? **Case Study:** CUC International Inc.(A)

**Learning Outcomes from Case:** CUC International is a membership-based consumer services company which markets its programs to credit cardholders. The company spends heavily on marketing programs to acquire new members. Returns on these outlays are determined primarily by initial membership yields on the marketing programs and by subsequent renewal rates. To underscore the historically high renewal rates for its members, CUC's management elected to capitalize membership acquisition costs, and to amortize them over three years. While this decision was endorsed by the Security Exchange Commission (SEC) and the company's auditors, it was viewed skeptically by analysts who were concerned whether the high rate of

renewals would persist. This concern was heightened in late 1988 and early 1989, when marketing outlays increased dramatically as the company sought to attract customers to its new products. As a result CUC's stock price fell 50% relative to the market, and short sales of the company's stock increased dramatically. Therefore, the student should be able to analyse and interpret the impact of accounting policies and management communication systems on

company's share price **Reference:**

Text Book-1, Chapter-4 No.

of Sessions:

2

## **Assignment-1: Experiential Learning**

**Topic-1:** Strategic Competitive Advantages Analysis of selected company and Industry. **Learning Outcome:** Learn doing company's and concerned industry's competitive analysis using Porter's Generic Strategic and Five Forces Model (Industry Analysis), Forecast growth in earnings and cash

**Reference:** Text Book-1, Chapter-4,

No. of Sessions: 2

## **Module-5: Financial Analysis**

### **Topics:**

Critical analysis and interpretation of financial health of an organization using financial and other variables – Ratio (Operational & Strategic) and Cash Flow Analysis, Balanced Score Card (BSC), Economic Value Added (EVA), Cash Value Added (CVA),

### **Learning Outcomes:**

This module deals with two key tools of financial analysis: ratio analysis (ratio analysis involves assessing how various line items in a company's financial statements relate to one another.) and cash flow analysis (cash flow analysis allows the analyst to examine the company's liquidity, and how the company is managing its operating, investment and financing cash flows). Both these tools should enable student to examine an organization's performance and its financial condition, given its strategy and goals. Ratio analysis involves assessing the firm's income statement and balance sheet data. The starting point for ratio analysis is the company's ROE. The next step is to evaluate the three drivers of ROE, which are net profit margin, asset turnover, and financial leverage. Net profit margin reflects a company's operating management, asset turnover reflects its investment management, and financial leverage reflects its liability management. Each of these areas can be further probed by examining a number of ratios. Cash flow analysis relies on organization's cash flow statement and it supplements ratio analysis in examining a firm's operating activities, investment management and financial risks. Since there are wide variations across companies in the way cash flow



data are reported, analysts often use a standard format to recast cash flow data. This module will examine one such cash flow model which should enable student to assess whether a firm's operations generate cash flow before investments in operating working capital, and how much cash is being invested in the company's working capital. It should enable students to calculate the firm's free cash flow after making

long-term investments which is an indication of the company's ability to meet its debt and dividend payments.

Will learn how cash flow model can be used to assess a firm's earnings quality. The reconciliation of a firm's net income with its cash flow from operations facilitates this exercise. Following are some of the questions an analyst can probe in this respect:

- ✓□ Are there significant differences between a firm's net income and its operating cash flow? Is it possible to clearly identify the sources of this difference? Which accounting policies contribute to this difference? Are there any one-time events contributing to this difference?
- ✓□ Is the relationship between cash flow and net income changing over time? Why? Is it because of changes in business conditions or because of changes in the firm's accounting policies and estimates?
- ✓□ What is the time lag between the recognition of revenues and expenses and the receipt and disbursement of cash flows? What type of uncertainties need to be resolved in between?
- ✓□ Are the changes in receivable, inventories, and payables normal? If not, is there adequate explanation for the changes?

Student should be able to differentiate between accounting profit and economic income (residual income) after adjusting capital change on investment from net operating profit (EVA); evaluate factors that drive EVA and impact of non-cash expenses on cash flow.; understand limitations of ratio analysis and how BSC can be used to implement business strategy and analyze to measure business performance from financial, customer, internal process and learning & growth perspective.

**Case Study:** The Home Depot, Inc.

**Learning Outcomes from Case:** The Home Depot case is designed to expose students how to do the analysis of growth strategies using financial statement data

ta. The case assumes familiarity with basic financial statements, and the techniques of ratio analysis, cash flow analysis, and the preparation of pro-forma financial statements.

The Home Depot pioneered the do-it-yourself warehouse retailing concept in the home center industry. The company was established in 1978 and grew rapidly by pursuing an innovative retailing strategy. By 1985, the time of the case, the company's ambitious expansion plans led to a

continued increase in sales but a decline in profitability. Students will have an opportunity to analyze the company's growth strategy, and the reasons for the decline in its profitability. Based on this analysis, student will learn to project the company's financial needs for the following year and to suggest modifications to the company's growth strategy and financial policies. Moreover, students will use the case to understand the challenges The Home Depot was facing at that time, and try to identify areas where management needed to focus its attention to assure continued success of the company.

One of the unique features of this case is that it has physical productivity data, in addition to the financial data, on the company's performance. The physical data enable students to identify the levers that influence the company's financial performance and to recommend specific managerial actions for improving the operating performance of the company without sacrificing growth.

**Case Study:** Anacomp, Inc.

**Learning Outcomes from Case:** The Anacomp, Inc. case provides students an opportunity to perform comprehensive financial statement analysis on a software company that relies on research and development (R&D) partnerships for new product development. The R&D partnerships allow the company to defer expense recognition and accelerate revenue recognition, thereby creating a gap between the company's reported profits and its true economic performance. The company's financial statements therefore offer an interesting analytic challenge to the students. The case is based on Anacomp's 1982 financial statements. There are a number of hints in these statements which indicate that the company was heading for trouble as it pursued its new strategy. However, the financial accounting policies of the company masked these hints. Students should be able to assess the current performance of the company and its future potential using the information in financial statements. Analyzing performance requires a reasonable amount of analytical sophistication, and the ability to integrate business and accounting analysis.

**Reference:** Text Book-1, Chapter-5

No. of Sessions: 3

**Module-6: Prospective**

**Analysis Topics:**

**Relation of Forecasting to other Analysis:** Forecasting Techniques, Behavior of Sales and ROE

**Learning Outcomes:**

Forecasting represents the first step of prospective analysis and serves to summarize the forward-looking view that emanates from business strategy analysis, accounting analysis, and financial analysis. Although not every financial statement analysis is accompanied by such an explicit summarization of a view of the future, forecasting is still a key tool for managers, consultants, security analysts, investment bankers, commercial bankers and other credit analysts, and others. The best approach to forecasting future performance is to do it comprehensively- producing not only an earnings forecast but a forecast of cash flows and the balance sheet as well. This module should enable students to examine a comprehensive approach which provides a guard against internal inconsistencies and unrealistic implicit assumptions. The approach described in this module involves line-by-line analysis, so as to recognize that different items on the income statement and balance sheet are influenced by different drivers. Nevertheless, it remains the case that a few key projections-such as sales growth and profit margin - usually drive most of the projected numbers.

The trade-offs between different methods of valuing a company raises several questions for analysts about how to compare methods and to consider which is likely to be most reliable for their analysis:

- ✓ □ What are the key performance parameters that the analyst forecasts? Is more attention given to forecasting accounting variables, such as earnings and book values, or to forecasting cash flow variables?
- ✓ □ Has the analyst linked forecasted income statements and balance sheets? If not, is there any inconsistency between the two statements, or in the implications of the assumptions for future performance? If so, what is the source of this inconsistency and does it affect discounted earnings-based and discounted cash flow methods similarly?
- ✓ □ How well does the firm's accounting capture its underlying assets and obligations? Does it do a good enough job that we rely on book values as the basis for long-term forecasts? Alternatively, does the firm rely heavily on off-balance-sheet

assets, such as R&D, which make book values a poor lower bound on long-term performance?

- ✓□Has the analyst made very different assumptions about long-term performance in the terminal value computations under the different valuation methods? If so, which set of assumptions is more plausible given the firm's industry and its competitive positioning?

**Case Study:** Krispy Kreme Doughnuts

**Learning Outcomes from Case:** Krispy Kreme (KKD) has achieved spectacular growth in the last few years using an area developer model to expand geographically. This case examines the factors that have driven its growth and their sustainability in the coming two years. Students are provided with forecasts made by financial analysts at CIBC. They will be asked to identify and evaluate the assumptions underlying these earnings forecasts. Since the CIBC report does not provide a forecasted balance sheet for KKD, the case can be used to let students learn how to build a forecasted balance sheet. Finally, the case will be used to discuss potential conflicts of interest between analysts and investors that might lead analysts to over-sell a growth firm such as KKD

### **Assignment-2: Experiential Learning**

**Topic-1:** Comprehensive Financial Statement Analysis and Interpretation of Selected Companies.

**Learning Outcomes:**

Analyze and interpret financial performance of companies from stakeholders' perspective using various financial and non-financial ratios through time series, comparative and industry analysis; and learn economic value creation and a comprehensive financial health of selected companies using Balanced Score Card.

**Reference:** Text Book-1, Chapter-6                      No. of Sessions: 3

### **Module-7: Hurdle Rate or Discount Rate – $K_e$ , $K_d$ and**

#### **WACC. Topics:**

Discount Rate: Define & Measure Risk; The Risk Free Rate; Equity Risk Premium (ERP); Country Risk Premium; Regression Beta; Fundamental Beta; Bottom-up Beta; The “Right” Beta; and Debt – Measures and Cost;

#### **Learning Outcomes:**

▪ **Define & Measure Risk-**

**The Students should be able to:** understand rationale behind expected return based on risk (Risks and Rates of Return); and understand concept of risk which is



a central measure in any financial decision.; understand conventional definitions of risk and how financial theories (CAPM, APM, Multi-Factors Models and Proxy Models) measure risk; and set up estimation questions that will come up in next sessions.

- **The Risk Free Rate-**

***The Students should be able to:*** understand concept and significance of Risk Free Rate ( $R_f$ ) which is central input in everything in finance, characteristics that can make an asset (investment) as risk free; validate measurement issues that could be experienced while estimating  $R_f$ ; and know as to how to arrive at an appropriate Risk Free Rate (what to measure).

▪ **Equity Risk Premium (ERP) and Country Risk Premium-**

***The Students should be able to:*** understand concept of ERP (what an investor can demand on an average risk investment relative to the risk free rate ); to measure (survey- reactive way, historical way – looking backward and forward looking / dynamic approaches) to come up to that number; understand relationship between ERP and profile of investor (level of risk aversion) and investment; understand how much of an expected return would an investor demand to shift his/her money from the riskless asset to the risky asset i.e. why there is one wrong figure without having any specific right/correct number?; understand how and why ERP should be dynamic/forward looking (understand how forward looking dynamic way of estimating ERP that reflects what is going on around is more dependable than looking backward); understand Equity Risk Premiums (ERP): Determinants, Estimation and Implications; understand methodology in estimating Implied ERP (IERP) and how country risk premium can be adjusted with ERP using CDS / rating given by various rating agencies / bond yield.

▪ **Regression Beta-**

***The Student should be able to:*** understand conventional way of estimating beta (regression of stock return against market index return) and why that beta might not be the best beta to use either for financial management or business valuation (understanding limitations i.e. noise and bias of regression beta); appreciate the intercept [ $R_f (1-b)$ ] and stock's performance; understand what portion of risk of stock is explained by market and company specific risk – understand where risk is coming from; understand and measure how well or badly stock did perform after adjusting from risk and market performance (Jensen Alpha); understand the significance of dividends on stock's return;

understand how to choose market index and do judgmental analysis of Jensen Alpha; and understand significance of standard error and arriving at range of beta [Recognize limitations of regression beta].

▪ **Fundamental Beta-**

***The Student should be able to:*** learn the better way of estimating beta i.e Fundamental Beta which depends on choices that business make - what kind of business is to pursue (determinants of beta) and how business is run – cost structure (fixed cost), and how much business borrows.

▪ **Bottom-up Beta-**

***The Student should be able to:*** learn pragmatic steps towards estimating beta by bypassing regression beta (top-down beta); and understand how value of business / revenue and debt to equity can determine beta (weighted averages of beta of investments).

▪ **Debt – Measures and Cost;**

***The Student should be able to:*** learn three characteristics (contractual payment, tax deductible expense and loss of control) of debt; calculate cost of debt (with and without secondary debt market by converting book value of debt in to market value); learn why non-interest bearing debt should not be considered as debt.

▪ **Weighted Average Cost of Capital;**

***The Student should be able to:*** calculate forward looking dynamic cost of equity, market based cost of debt, and weighted average cost of capital which will be used to estimate intrinsic value of equity share and an organization.

**Reference:** Text Book-2, Chapter-2                      No. of Sessions: 5

## **Module-8: Business Valuation – Approaches and Methods**

**Topics:**

Introduction to Valuation – Why Value Value? Broad Themes and Misconceptions of Valuation; Valuation Frameworks; Estimation of Growth – Earnings and Cash Flows; Valuation Approaches (Intrinsic, Relative and Contingent Claim), Suitability and Limitations; DDM and Free Cash Flow; The Building Blocks for Intrinsic Value & Risk Free Rates; Risk Free Rates and Equity Risk Premiums;

**Learning Outcomes:**

Understanding of how valuation is Life Vest - something to hold on to when everybody else change their mind and goes in other direction. If an investor really wants to buy something he/she will find way to buy and if he/she really wants to sell you will find way to sell. Valuation slows the process down, gives investor a rational side, a chance to mount an argument. This will lay out the rationale for doing valuation as well as the issues of bias, complexity and uncertainty that bedevil it.

Valuation is the process by which forecasts of performance are converted into estimates of price. A variety of valuation techniques are employed in practice, and there is no single method that clearly dominates others. In fact, since each technique involves different advantages and disadvantages, there are gains to considering several approaches simultaneously. Students should be able to understand and apply valuation methods (Discounted Cash Flow – Intrinsic Value, Price Multiple and Contingent Claim) in different business environment specific to an organization and industry.

While creating building blocks for intrinsic value & risk free rates, students should be able to understand and evaluate inputs that drive value - cash flows, growth and risk. In Risk free rates and equity risk premiums sessions, students should learn why risk free rates vary across currencies and what to do (or not do) when risk free rates are very low or even negative, learn as to how to estimate an appropriate regression beta (market risk), fundamental beta, levered and unlevered beta, bottom-up beta and how best to estimate country risk premiums and assess of how to measure a company's exposure to country risk, estimate an appropriate equity risk premiums (Implied Equity Risk Premium) by looking at the flaws / limitations in historical risk premiums.

**From Earnings to Cash Flows:** For consistency reasons, capital expenditures should be defined broadly to include R&D and acquisitions. It is better to count on growth that comes from these investments and need to count cost as well. To get cash flow to the firm and cash flow to equity require bringing in cash flows to and from debt. While borrowing more can make cash flows to equity higher, they also make equity riskier, raising the cost of equity. The net effect of leverage on the value of equity can be positive, negative or neutral, depending on organization's investment and where it is in its borrowing cycle. Therefore, in this module, student should learn how growth is estimated (arithmetic vs geometric) and over what period which will generate different growth numbers. It is also thrown off when a company's earnings go from negative to positive and generally becomes lower as companies get larger. Student should get to learn how

extraordinary items are easy to deal with and accounting ploys to move expenses into the extraordinary column may require some detective work.

In this module student should be able to learn three valuation approaches viz. intrinsic, relative and contingent claim.

**Intrinsic valuation** which relates the value of an asset to its intrinsic characteristics – its capacity to generate cash flows and the risk in the cash flows. In its most common form,

intrinsic value is computed with a discounted cash flow valuation, with the value of any asset being the present value of expected future cash flows on that asset. Therefore, techniques directly based on this are dividend discount definition of value: discounted dividends, discounted abnormal earnings/ ROEs, and discounted free cash flows. The discounted dividend method attempts to forecast dividends directly. The abnormal earnings approach expresses the value of a firm's equity as book value plus discounted expectations of future abnormal earnings. Finally, the discounted cash flow method represents a firm's stock value by expected future free cash flows discounted at the cost of capital.

**Relative / Multiple valuation** estimates value of an asset by looking at the pricing of comparable assets relative to a common variable like earnings, cash flows, book value or sales. In this approach students learn four basic steps (Definitional Test, Descriptive Tests, Analytical Tests and Application Tests) to using Price Multiples and will estimate ratios of current price to historical or forecasted measures of performance for comparable firms. The benchmarks are then used to value the performance of the firm being analyzed. Relative / Multiples have traditionally been popular, primarily because they do not require to make multiyear forecasts of performance. Students will be learning relative valuation methods (P/E Ratio, Book Value, Revenue, etc.) by looking at how to pick the "right" multiple for a valuation, with the answers ranging from cynically picking one that best fits to the objectives to picking one that reflects relevance in that business.

**Contingent claim valuation** uses option pricing models to measure the value of assets that share option characteristics, Determinants of pricing using option features;

**Case Study:** Home Depot, Inc. in the New Millennium

**Learning Outcomes from Case:** By fiscal year ending January 31, 2001, Home Depot has become a storied stock with a tremendous track record of growth and profitability over the past fifteen years. The case allows students to examine the



drivers of Home Depot's strong track record, and assess whether the company's performance is sustainable at the same level into the future. Students can also assess the assumptions about growth and profitability needed to justify the company's current stock price, and examine whether this performance can be achieved in light of the company's stated growth strategy.

**Case Study:** Arch Communications Systems

**Learning Outcomes from Case:** The Arch Communications Systems case is designed for teaching security analysis and valuation. Arch is a paging company facing consolidation and

technological changes in its industry. As a result of these concerns, investors were pessimistic about the company's future, bidding its stock price down by approximately 50% around the time of the case. Several prominent analysts, however, suggested that the stock was undervalued. The case provides detailed description of Arch' industry, its strategy, recent financial performance, and an industry analyst's discounted cash flow valuation of Arch's stock. Students will be asked to evaluate the analyst's valuation to identify its strengths and weaknesses, and then they will be asked to prepare their own valuation analysis of the company's stock.

### **Assignment-3: Experiential Learning**

**Topic-1:** Doing Valuation - Estimating Intrinsic and Relative Price

**Learning Outcomes:**

Apply various valuation models and analyze investment potential.

**Reference:** Text Book-2, Chapter-6 & 7      **No. of Sessions:** 5

### **Module-9: Loose Ends in Valuation –Dealing with**

**Limitations Topics:**

From Operating Assets to Equity Value - Dealing with cash and marketable securities, Cross holdings in other companies, Other Assets that have not been counted yet and Debt; Acquisition Ornaments: Synergy, control & complexity- Operating Synergy and Financial Synergy; and Distress, Dilution and Illiquidity and Discount Rate Myth

**Learning Outcomes:**

Students should be able to learn when and how to deal with cross holdings in other companies through market value solution and relative value solution, and when other assets such as unutilized assets & overfunded pension plans that have not been counted yet to incorporate into the valuation and how to net out debt.

Student should understand doing valuation of organizations, when they are merged, with and without synergy; and estimate the value of the control premium

that is paid to acquire a block of equity which depends upon two factors viz. Probability that control of firm will change and Value of Gaining Control of the Company. Learn how category / behavior of valuator or analyst incorporate complexity in discounted cash flow. Therefore, students will learn how to value of control and synergy, often used reasons for acquisitions, as well as the consequences of complexity for value.

Learn how to deal with distress and the going concern assumption analyzing effects of illiquidity on value and equity. Therefore, students will learn how best to incorporate the effects of distress, dilution and illiquidity into the value per share for a company.

### **Discount Rate Myth –**

- ✓ ☐ Understand how modern portfolio theory (and the use of betas to get discount rates) are locked at the hip with DCF and that if you don't like one (usually betas), you have to abandon the other. In reality, DCF is agnostic about what model you use to get your discount rate and how to look at alternatives.
- ✓ ☐ Drawing undue attention that both academics and practitioners pay to discount rates in DCF (as opposed to cash flows) and explore why this might be, and also looking at the cross sectional distribution of costs of capital across all companies (in the US and globally) and argue that the range across companies is a tight one.
- ✓ ☐ Understand rationale behind why discount can and should change over the forecast period of a DCF to reflect changes in business, life cycle and profitability that you see in the company that you are valuing.
- ✓ ☐ Understand how analysts and appraisers use the discount rate as a receptacle for all their hopes and fears. Specifically, they try to lower (raise) discount rates for well managed (badly managed) companies and to raise discount rates to capture any risks that they see on the horizon.
- ✓ ☐ Understand how low interest rates have skewed both actual valuations and how we think about DCF. Specifically, holding all else constant and lowering the risk free rate will cause valuations to implode but you cannot hold all else constant. As risk free rates change, so do nominal growth rates, risk premiums and even debt ratios, making the effect on value much more

**Reference:** Text Book-2, Chapter-10, 11 & 12 No. of Sessions:

5.

**Evaluation:**

Component	Duration	Weightage	Date & Time	Nature of the Component
Mid Sem	90 minutes	30%	10/03 11.00am to 12.30pm	Open Book
Quiz (Announced / unannounced)		30%		Closed Book
Group Assignment				
Comprehensive	120 minutes	40%	06/05 AN	Closed Book

**Quiz (Surprise):**

Questions may also be based on the conceptual / empirical research papers, article published in various magazines, daily financial newspaper and case study at the end of each chapter in text book.

**8. Chamber consultation hour:**

With prior intimation through SMS (Mob.9553381682) between 6 to 7 pm on Tuesday and Thursday.

**9. Assignments:**

Case study will be assigned periodically and they must be worked out to understand the subject. Students are expected to refer the books (text and references), research papers and other secondary sources to participate in the group discussions and case study. There will be one group assignment to develop a Case Study on Business Analysis & Valuation. This will enable students to understand and apply various aspects of business analysis and valuation using different tools and techniques discussed in the class. Each group consists of 5 students can select 3 companies in one industry/sector and submit (not through email) students and organizations details (Student's Name, ID Nu

mber, Contact Number, Parents Name and Contact Number, Name of the organizations) to IC on January 30, 2022. Selected companies must be listed and actively traded in stock exchange(s), not protected by any restrictions by Government and must have at least 5 years of financial track records. There will be three assignments viz. business strategy analysis, financial analysis and prospective analysis, and valuation using DDM and Free Cash Flow, and price multiples. After each module discussed in the class, group will apply concepts / tools / techniques discussed in class in selected three companies.

**10. Notices:** Notices will be displayed on Course Management System (CMS) board or Economics notice

**11. Academic Honesty and Integrity Policy:** Academic honesty and integrity are to be maintained by all the students throughout the semester and no type of academic dishonesty is acceptable.

**Niranjan Swain**  
**I/C, ECON F355**