Government of Pakistan

National Vocational and Technical Training Commission

Prime Minister Youth Skills Development Program

"Skills for All"

Course Contents / Lesson Plan
Course Title: Valuation of Companies: IPOs, Mergers, Acquisition & Corporate Restructuring
Duration: 2 Month

Trainer Name	
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Course Title	**Valuation of Companies: IPOs, Mergers, Acquisitions & Corporate Restructuring**
Objectives	**Objective:** This is a specialized training program designed to provide a holistic view of the valuation process with a special focus on valuation of firms for initial public offering, valuation under merger, acquisition, and corporate restructuring. It covers various methods for valuation under different scenarios such as leverage buyout, equity buyout, hybrid financing. The course covers estimation of beta for different gearing levels, estimation of cost of equity for standalone and merged companies, estimation of terminal value of firm under different assumptions, estimation of WACC for merger or acquisition, valuation under constant and time varying capital structure, accretion/dilution Analysis
Entry-level of trainees	• B.Com, BS Physics, BBA, BS Math, M.Com, MBA, ICMA inter, CA-inter and PIPFA qualified.
Trainer Qualifications	• Master in Finance and Accounts, MBA, M.Com, master in Audit, ICMA, CA, ACCA with relevant certification and 3 years teaching experience.
Learning Outcomes of the course	. **Learning Outcomes:** Upon completing this training, the participants will be able to: 1. Acquire an understanding of mergers and acquisitions and the entire M&A process, from initiation to integration. 2. Apply valuation techniques to assess a company's worth as a standalone using cash-based, earning-based, and asset-based models. 3. Apply techniques for estimating the company's weighted average cost of capital before and after merger, acquisition, or corporate restructuring. 4. Apply techniques for estimation of Terminal value under different growth assumptions.

	5. Apply valuation techniques to assess the worth of a company as a merged company after adjusting synergies, market risk, capital structure, and WACC assumptions. 6. Understand how DCF valuation compares to comparable analysis and precedent transaction analysis and the pros and cons of each valuation technique. Evaluate deals by calculating accretion/dilution of earnings per share and cash flow per share.
Course Execution Plan	The total duration of the course: **2 month (8 Weeks)** Class hours: **4 hours per day** Theory: **20%** Practical: **80%** Weekly hours: **20 hours per week** Total contact hours: **160 hours**
Companies offering jobs in the respective trade	• Securities & Exchange Commission of Pakistan (SECP) • Commercial Banks • Microfinance Bank • Stock Exchange
Job Opportunities	• Financial Analyst • Portfolio Manager • Evaluation Analyst & Expert • Market Research Analyst • Trading Specialist • Risk Assessment Analyst
No of Students	25
Learning Place	Classroom
Instructional Resources	**Online Courses and Tutorials:** 1. **Coursera.org** 2. **execed.business.columbia.edu** 3. **onlinecourses.nptel.ac.in** **Books and References:** 1. **Mergers, Acquisitions & Corporate Restructurings by Patrick A. Gaughan** 2. **Investment Banking: Valuation, LBOs, M&A & IPOs by Joshua Pearl**

MODULES

Scheduled Weeks	Module Title	Days	Hours	Learning Units	Home Assignment
Week 1	**Valuation & Equity assessment Techniques**	**Day 1**	**Hour 1-4**	• Orientation session • Program Brief • Introduction with trainer & participant • Introduction to Valuation of Companies: IPOs, Mergers, Acquisitions & Corporate Restructuring	
		Day 2	**Hour 1-4**	**Valuation** • Explain valuation of a Company • define valuation and intrinsic value and explain sources of perceived mispricing • explain the going concern assumption and contrast a going concern • value to a liquidation • describe definitions of value and justify which definition of value is most relevant to public company valuation • describe applications of equity valuation	

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			Day 3	Hour 1-4	- describe questions that should be addressed in conducting an industry and competitive analysis - contrast absolute and relative valuation models and describe - examples of each type of model - describe sum-of-the-parts valuation and conglomerate discounts - explain broad criteria for choosing an appropriate approach for valuing a given company - Explain methods of Valuation of Companies - compare top-down, bottom-up, and hybrid approaches for - explain how competitive factors affect prices and costs - evaluate the competitive position of a company based on a Porter's five forces analysis	

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				• explain how to forecast industry and company sales and costs when they are subject to price inflation or deflation • evaluate the effects of technological developments on demand, selling prices, costs, and margins • explain considerations in the choice of an explicit forecast horizon • explain an analyst's choices in developing projections beyond the short-term forecast horizon • Apply valuation learnt of the company through relevant industry and its problems.	
		Day 4	Hour 1-4	• compare dividends, free cash flow, and residual income as inputs to • discounted cash flow models and identify investment situations for	

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				- which each measure is suitable - calculate and interpret the value of a common stock using the - dividend discount model (DDM) for single and multiple holding - periods - calculate the value of a common stock using the Gordon growth - model and explain the model's underlying assumptions - calculate the value of non-callable fixed-rate perpetual preferred - stock - describe strengths and limitations of the Gordon growth model and - justify its selection to value a company's common shares - calculate and interpret the implied growth rate of dividends using - the Gordon growth model and current stock price	

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				• calculate and interpret the present value of growth opportunities	
				• (PVGO) and the component of the leading price-to-earnings ratio	
				• (P/E) related to PVGO	
				• calculate and interpret the justified leading and trailing P/Es using	
				• the Gordon growth model	
				• estimate a required return based on any DDM, including the Gordon	
				• growth model and the H-model	
				• evaluate whether a stock is overvalued, fairly valued, or undervalued by the market based on a DDM estimate of value	
		Day 5	**Hour 1-4**	• explain the growth phase, transition phase, and maturity phase of a business	
				• explain the assumptions and	

				justify the selection of the two-stage DDM, the H-model, the three-stage DDM, or spreadsheet modeling • to value a company's common shares • explain top-down and bottom-up factors that impact the cost of capital • Compare methods used to estimate the cost of debt.	
Week 2	**Valuation of Companies**	**Day 1**	**Hour 1-4**	• Explain & apply valuation of Company using EV/Sales Ratio, EV/ EBITDA Ratio, EV/Cash flow Ratio • Explain & apply valuation of Multi-business Company • Explain comparable Company Analysis for valuation of equity • Explain P/E Ratio, P/B Ratio, P/S Ratio, P/C Ratio, P/EBITDA • Explain application to Local IPOs during 2020- 2022 in Pakistan	

		Day 2	Hour 1-4	• Practice Problems and Solution Discussion.	
		Day 3	Hour 1-4	• explain historical and forward-looking approaches to estimating an equity risk premium • compare methods used to estimate the required return on equity • estimate the cost of debt or required return on equity for a public company and a private company • evaluate a company's capital structure and cost of capital relative to peer	
		Day 4	Hour 1-4	• developing inputs to equity valuation models • compare "growth relative to GDP growth" and "market growth market share"	

				• approaches to forecasting revenue
				• evaluate whether economies of scale are present in an industry by analyzing operating margins and sales levels
				• demonstrate methods to forecast cost of goods sold and operating expenses
				• demonstrate methods to forecast non - operating items, financing costs, and income taxes
				• describe approaches to balance sheet modeling
				• demonstrate the development of a sales-based pro forma company model
				• explain how behavioral factors affect analyst forecasts and recommend remedial actions for analyst biases
		Day 5	**Hour 1-4**	• calculate the effect of a share repurchase on book value per share

				• explain the choice between paying cash dividends and repurchasing shares • calculate and interpret dividend coverage ratios based on 1) net income and 2) free cash flow • identify characteristics of companies that may not be able to sustain • their cash dividend • Practice on Excel of the topic learnt.	
Week 3	Valuation using different techniques & approaches	**Day 1**	**Hour 1-4**	• compare the free cash flow to the firm (FCFF) and free cash flow to • equity (FCFE) approaches to valuation • explain the ownership perspective implicit in the FCFE approach • calculate FCFF and FCFE	

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		Day 2	Hour 1-4	• explain the appropriate adjustments to net income, earnings before interest and taxes (EBIT), earnings before interest, taxes, depreciation, and amortization (EBITDA), and cash flow from operations (CFO) to calculate FCFF and FCFE • describe approaches for forecasting FCFF and FCFE • explain how dividends, share repurchases, share issues, and changes • in leverage may affect future FCFF and FCFE • compare the FCFE model and dividend discount models	

			Day 3	Hour 1-2	• evaluate the use of net income and EBITDA as proxies for cash flow in valuation • explain the use of sensitivity analysis in FCFF and FCFE valuations • explain the single-stage (stable-growth), two-stage, and three-stage FCFF and FCFE models and justify the selection of the appropriate model given a company's characteristics	
				Hour 3-4	• estimate a company's value using the appropriate free cash flow model(s) • describe approaches for calculating the terminal value in a multistage valuation model; and • evaluate whether a stock is overvalued, fairly valued, or undervalued based on a free cash flow valuation model • Explain & apply valuation of the	

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				company using a discounted Free Cash Flow Approach	
		Day 4	Hour 1-4	• describe approaches for calculating the terminal value in a multistage valuation model; and • evaluate whether a stock is overvalued, fairly valued, or undervalued based on a free cash flow valuation model • Explain & apply valuation of the company using a discounted Free Cash Flow Approach • Developing Cashflows and reasons for its preference over other Models.	
		Day 5	Hour 1-4	• Practice Question	
Week 4	Valuation using different techniques & approaches	Day 1	Hour 1-4	• Explain & apply valuation using a dividend-based Model. • Explain & apply Constant Growth Model • Explain & apply Phased Growth Model	

				- Explain & apply estimation of Growth using various techniques - Explain & apply valuation using precedent transaction Model	
		Day 2	**Hours 1-4**	- Practice Mini-case 1 Engine Co - Practice Mini-case 2 - Irrigation Co	
		Day 3	**Hours 1-4**	- describe the expected effect of regular cash dividends, extra dividends, liquidating dividends, stock dividends, stock splits, and reverse stock splits on shareholders' wealth and a company's financial ratios - compare theories of dividend policy and explain implications of each for share value given a description of a corporate dividend action - describe types of information (signals) that dividend initiations,	

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				increases, decreases, and omissions may convey • explain how agency costs may affect a company's payout policy	
		Day 4	**Hours 1-4**	• explain factors that affect dividend policy in practice • calculate and interpret the effective tax rate on a given currency unit of corporate earnings under double taxation, dividend imputation, and split-rate tax systems • compare stable dividend with constant dividend payout ratio, and calculate the dividend under each policy • describe broad trends in corporate payout policies • compare share repurchase methods • calculate and compare the effect of a share repurchase on earnings	

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				per share when 1) the repurchase is financed with the company's surplus cash and • 2) the company uses debt to finance the repurchase	
		Day 5	**Hours 1-4**	• Practice Questions	
Week 5	Valuation using different techniques & approaches	**Day 1**	**Hours 1-4**	• Explain & apply Valuation using the Economic value Approach • Explain Value of Combined firm if capital structure is optimal • Explain & apply Valuation using the Residual Income Approach • Explain & apply Adjustment of Cost of financing	
		Day 2	**Hours 1-4**	• Apply HBR Case – Acquisition of Corporates	
		Day 3	**Hours 1-4**	• Explain Valuation of the Combined firm for Leverage Buyout when capital structure is not stable.	

				• Explain & apply Cost of capital using the Miller and Modigliani Method • Explain Application of Adjusted Present Value Method	
		Day 4	**Hours 1-4**	• Discuss Case of KKR's leveraged buyout of RJR Nabisco	
		Day 5	**Hours 1-4**	• Explain Adjustment of Capital Structure • Explain & apply Estimation of new WACC • Explain & apply Estimation of Terminal Value under perpetuity and constant growth	
Week 6	**Environmental, Social, and Governance (ESG) Considerations in Investment Analysis**	**Day 1**	**Hour 1 -4**	• describe global variations in ownership structures and the possible effects of these variations on corporate governance policies and practices • evaluate the effectiveness of a company's corporate governance policies and practices	
		Day 2	**Hour 1 -4**	• describe how ESG-related risk exposures and investment	

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				opportunities may be identified and evaluated • evaluate ESG risk exposures and investment opportunities related to a company	
		Day 3	Hour 1 -4	Practice Question on ESG focused investments vs. non-ESG Investments	
		Day 4		Practice Question on combined Knowledge gained up-till now.	
		Day 5		**Mock Exam** Case-bases Exam – Corporate case on MS Excel	
Week 7	**Mergers and Acquisitions**	Day 1	Hour 1 - 4	• compare public and private company valuation • describe uses of private business valuation and explain applications of greatest concern to financial analysts	
		Day 2	Hour 1 - 4	• explain cash flow estimation issues related to private companies and	

				adjustments required to estimate normalized earnings • explain the income, market, and asset-based approaches to private company valuation and factors relevant to the selection of each approach	
		Day 3	**Hour 1 - 4**	• explain factors that require adjustment when estimating the discount rate for private companies • compare models used to estimate the required rate of return to private company equity (for example, the CAPM, the expanded CAPM, and the build-up approach) • calculate the value of a private company using free cash flow, capitalized cash flow, and/or excess earnings methods • calculate the value of a private company based on market approach	

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				methods and describe advantages and disadvantages of each method • describe the asset-based approach to private company valuation • explain and evaluate the effects on private company valuations of • discounts and premiums based on control and marketability	
		Day 4	**Hour 1 - 4**	• Explain types of corporate restructurings and issuers' motivations for pursuing them • explain the initial evaluation of a corporate restructuring • demonstrate valuation methods for, and interpret valuations of, companies involved in corporate restructurings	
		Day 5	**Hour 1 - 4**	• demonstrate how corporate restructurings affect an issuer's EPS, net debt to EBITDA ratio, and	

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				weighted average cost of capital • evaluate corporate investment actions, including equity investments, joint ventures, and acquisitions • evaluate corporate divestment actions, including sales and spin offs • evaluate cost and balance sheet restructurings	
Week 8	**IPOs**	**Day 1**	**Hour 1-4**	• Explain the factors to be considered for the Valuation of IPOs • Explain swap Ratios and their importance in acquisition transactions • Explain factors to consider when calculating Swap Ratios Explain types of Swap Ratios • Explain & apply Steps to calculate Swap Ratios	
		Day 2	**Hour 1-4**	• Briefly discuss common mistakes to avoid when	

				• Calculating Swap Ratio • Perform dilution and optimal swap Ratios • Explain the role of Valuation in swap ratio estimation.	
				• Explain & apply Capital Structure and Cost of Capital • Explain & apply Cost of Capital for Valuation of Merger and Acquisition • Explain & apply Adjustment for Market Risk (Beta)	
		Day 3	Hour 1-4	• Briefly explain Performance of IPOs in Pakistan and factors • Perform Accretion/ Dilution Analysis • Perform Merger consequences analysis	
		Day 4	Hour 1-4	• Practice Mini cases and Discussion on Solutions	
		Day 5	Hour 1-4	• Mock Exam	

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- Practical Tasks:

	Task	Description	Week
1	**IPO Valuation & Pricing**	1. Create a profile for a hypothetical company planning to go public 2. Develop financial project for the next 5 years 3. Determine the appropriate valuation method C 4. Calculate the IPO price per share Draft an IPO prospectus including valuation, pricing,	Week 1
2	**Valuation Analysis of a Public Company**	1. Select a Publicly traded company 2. Gather financial statements and relevant market data 3. Perform a discounted cash flow analysis (DCA) 4. Conduct a comparable company analysis (CCA) 5. Prepare a valuation report summarizing your findings & justifying your valuations	Week 2
3	**Comprehensive Analysis using WACC, Residual Income Approach & MM Model**	1. Choose a publicly traded company for analysis 2. Gather the company's financial statements 3. Collect market data of the company including the company's stock price, market capitalization & beta. 4. Obtain information on company's debt structure & interest rates 5. WACC Calculation 6. Residual Value Calculation 7. Miller & Modigliani Model Application 8. Prepare a valuation report	Week 3
4	**Valuation of an Entity in Power Sector and checking effect of Equity & Debt Structure**	1. Preparing an Excel Model of a Alternate Energy Financial Model 2. Analyzing Impact of Assumptions 3. Preparing a Dashboard demonstrating the effect of changes 4. Embedding debt structures compared to 100% equity based structures.	Week 4

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5	**Valuation of a Service Provider**	1. Preparing an Excel Model of a YouTube Content Creator Financial Model 2. Attracting an investor to make the Investment Lucrative 3. Preparing a Dashboard demonstrating the effect of changes according to Financers	Week 5
6	**Merger Effect**	1. Analyzing Balance sheet and P&L of Waves and Singer before and after Merger. (a Pakistani biggest merger happened in recent years.)	Week 6
7	**SWAP Ratios**	1. Select a company (for sale) listed on the stock market 2. Determine the purchase price & calculate the total purchase price 3. Calculate the swap ratio using the formula 4. Determine the new number of shares to be issued 5. Analyze the implication 6. Prepare a report summarizing your findings.	Week 7
8	**FINAL EXAM**	FINAL EXAM	Week 8

Workplace/Institute Ethics Guide

Work ethic is a standard of conduct and values for job performance. The modern definition of what constitutes good work ethics often varies. Different businesses have different expectations. Work ethic is a belief that hard work and diligence have a moral benefit and an inherent ability, virtue, or value to strengthen character and individual abilities. It is a set of values-centered on the importance of work and manifested by determination or desire to work hard.

The following ten work ethics are defined as essential for student success:

1. **Attendance:**
   Be at work every day possible, plan your absences don't abuse leave time. Be punctual every day.

2. **Character:**
   Honesty is the single most important factor having a direct bearing on the final success of an

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individual, corporation, or product. Complete assigned tasks correctly and promptly. Look to improve your skills.

3. **Team Work:**

The ability to get along with others including those you don't necessarily like. The ability to carry your weight and help others who are struggling. Recognize when to speak up with an idea and when to compromise by blend ideas together.

4. **Appearance:**

Dress for success set your best foot forward, personal hygiene, good manner, remember that the first impression of who you are can last a lifetime

5. **Attitude:**

Listen to suggestions and be positive, accept responsibility. If you make a mistake, admit it. Values workplace safety rules and precautions for personal and co-worker safety. Avoids unnecessary risks. Willing to learn new processes, systems, and procedures in light of changing responsibilities.

6. **Productivity:**

Do the work correctly, quality and timelines are prized. Get along with fellows, cooperation is the key to productivity. Help out whenever asked, do extra without being asked. Take pride in your work, do things the best you know-how. Eagerly focuses energy on accomplishing tasks, also referred to as demonstrating ownership. Takes pride in work.

7. **Organizational Skills:**

Make an effort to improve, learn ways to better yourself. Time management; utilize time and resources to get the most out of both. Take an appropriate approach to social interactions at work. Maintains focus on work responsibilities.

8. **Communication:**

Written communication, being able to correctly write reports and memos. Verbal communications, being able to communicate one on one or to a group.

9. **Cooperation:**

Follow institute rules and regulations, learn and follow expectations. Get along with fellows, cooperation is the key to productivity. Able to welcome and adapt to changing work situations and the application of new or different skills.

10. **Respect:**

Work hard, work to the best of your ability. Carry out orders, do what's asked the first time. Show respect, accept, and acknowledge an individual's talents and knowledge. Respects diversity in the workplace, including showing due respect for different perspectives, opinions, and suggestions.