Concepts	Description
	Equity valuation : Concepts and basic tools
Categories of equity valuation	1. DCF models (or PV models) :
models	- <u>Dividend discount models</u> : PV of cash distributed to shareholders
	<ul> <li><u>Free cash flow to equity models</u>: PV of cash available o shareholders after the firm meets its necessary CAPEX and Working Cap.</li> <li>Strukture actual is a structure of the structure of the</li></ul>
	- Compare Enterprise value to EBITDA or revenue (e.g.: EV/EBITDA. EV/Revenue)
	3. Asset-based models : Total FV of assets - (Total FV of liabilities + Total FV of preferred stocks)
DCF models - Dividend discount	Finite holding period - Dividend discount model
model	$V_0 = \frac{D_1}{(D_1 + V_1)^2} + \frac{D_2}{(D_1 + V_1)^2} + \dots + \frac{D_t}{(D_t + V_t)^2} + \frac{P_t}{(D_t + V_t)^2}$
	$(1+\kappa_e)^{\lambda} (1+\kappa_e)^{2} (1+\kappa_e)^{4}$
	In which:
	$V_0 = current stock price$
	$D_t = Dividend at time t$ $P_t = Year end price ar time t$
	$k_e$ = required rate of return on common equity
	Isfinite helding paried. Dividend discourt model
	Infinite folding period - Dividend discount moder
	$V_{\alpha} = \frac{D_1}{2}$
	$k_e - g_c$
	If no arowth (e.a.: preferred stocks):
	$V_{L} = \frac{b_1}{b_1}$
	· · k <sub>e</sub>
DCF models - FCFE models	FCFE = Net income + Depreciation - Increase in Working Cap - Fixed Capital Investment - Debt principal repayment + New debt issues
	FCFE = CFO - Fixed capital investment + Net borrowing
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	$V_0 = \sum_{i=1}^{r} \frac{r c i r s_{tir}}{(\tau + k) t}$
	$t=1$ (1 + $k_e$ )
	In which:
	$k_e = R_f + \beta \times [E(R_m) - R_f]$
DCF models - Estimates of growth	Methods to estimate growth rate:
rate	1. Use instorical growth in dividends for the firm
	2. So means of means of means of means and the second s
	In which : (1 - dividend payout ratio) = retention rate
	from
DCF models - Multistage dividend	Value of a dividend-paying firm with empt an high 5-owth period, follow of y a co start growth period
growth models	$V_{0} = \frac{D_{1}}{D_{1}} + \frac{V_{0}}{D_{1}} + \frac{D_{1}}{D_{1}} + \frac{P_{1}}{D_{1}}$
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🖌	In vy ich.
	$P_{c} = \frac{D_{t+1}}{2}$
	$k_e - g_c$
Price multiples	Include
	1. Price multiple (Price - Earnings ; Price - Sales ; Price - Book value ; Price - Cash flow)
	2. Enterprise value multiple (EV / EBITDA ; EV / Revenue)
	In which : Enterprise value = MV of common stock + MV of preferred stock + MV of debt - cash - ST investments
Drice multiples Multiple here !	lustified D/C estie (leading D/C estie) unsuide D/C estie based on DV of future CC
Fundamentals	pustineu r/c ratio (reading r/c ratio) : provide r/c ratio based on rv of ruture Cr
	$P_0 = \frac{D_1}{E_{1-1}} \to \frac{P_0}{E_0} = \frac{D_1/E_1}{E_1}$
	$\kappa - y  L_1  \kappa - y$
	In which:
	$D_1/E_1 =$ expected dividend payout ratio
	lustified P/F ratio is a benchmark for the price
	Actual P/E ratio > Justified P/E ratio -> overvalue
	Actual P/E ratio < Justified P/E ratio $\rightarrow$ undervalue
Price multiples - Multiple based on	Law of one price : 2 identical assets should sell at the same price $\rightarrow$ 2 comparable assets should have the same multiple
Comparables	Companies may not be comparable if firms have different sizes, are in different industries or grow at different rates
Asset-based models	Equity value = MV of assets - MV of liabilities
	Most reliable when firms have premarily tangible ST assets, assets with ready MV, or when firms cease to operate and are being liquidated
Advantages / Disadvantages of	IAdvantages Disadvantages
	- Based on fundamental concept of discounted PV and are well-grounded in finance theory - Their input must be estimated
	- Widely accepted in the analyst community - Value estimates are very sensitive to input values
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