EQUITY

Economy
Industry
Company

INTRINSIC VALUE. → valuation of security by someone, who has complete understanding of security.

MIS PRICING
- MKT Price − IV
- Analyst IV − Actual IV.

+ve over | -ve under.

$$IV_{analyst} - Price = (IV_{actual} - Price) + (IV_{analyst} - IV_{actual})$$

$IV_{analyst} - Price$: PERCEIVED MISPRICING
$(IV_{actual} - Price)$: Actual Mispricing
$(IV_{analyst} - IV_{actual})$: ESTIMATION ERROR // VALUATION ERROR

COMPANY GOES ON → Going Concern

$$P/E = \frac{V_0}{E_1} = \frac{\text{Div. Pay. Ratio}}{Re - g} = \frac{1-b}{Re-g}$$

$\frac{D_1}{Re-g}$ → $\frac{1-b}{Re-g}$ → retention Ratio.

E_1 → EPS

IF NOT → LIQUIDATION VALUE.

↳ [Assets sold separately − Liabilities]

Orderly Liquidation Value → assets sold over time to maximise VALUE.

IV > MV → under
IV < MV → over

} Perceived mispricing

FAIR MARKET VALUE → price decided by.

- hypothetically willing, well informed BUYER & SELLER

BV MV IV

Fair Value

Investment Value.

↓

value of a stock to a "specific" Buyer

↓ Synergies | ↓ needs expectations.

∴ Purpose of valuation → Inv. & Acqs.

Inv. → Intrinsic
Acqs → Investment Value

Valuation Models.

- Absolute Valuation Models
  - Disc. CF
    - DDM
      - single
      - multi
        - 1
        - 2
        - 3
        - n
    - FCF
      - FCFF
      - FCFE
  - Asset Based model.
    - A-L
      - FV/MV available
        - Mineral / Natural Resources.
        - Liquid Financial Asset.
- RV.
  - Price Multiple
    - P/E, P/S
  - Enterprise Value
    - EV/EBITDA

- Conglomerate
  - Multiple Unrelated busines.
- ITC
  - Tobacco
  - FMCA
  - HOTEL
  - Individual Value. [SOTP]
- Mkt Value < a+b+c
  - conglomerate discount.
    - Reasons
      - Capital Allocation
      - Endogeneous Factor [hide]
      - Research measurement [incorrect calc]

EIC

- Industry Analysis
  - Porters 5 forces.
    - Threat of new ENTRANTS
    - Barg. of Buyer
    - Barg. of seller
    - Rivalry on existing competition.
- Competitive Analysis.
  - Cost leadership
    - Product differentiation
    - FOCUS

- COMPANY
  - FSA
    - Reports
      - BLS
      - PII
      - CFS
      - MDA
      - } Footnotes
    - Releases

+ Investor Deck, concall, etc.

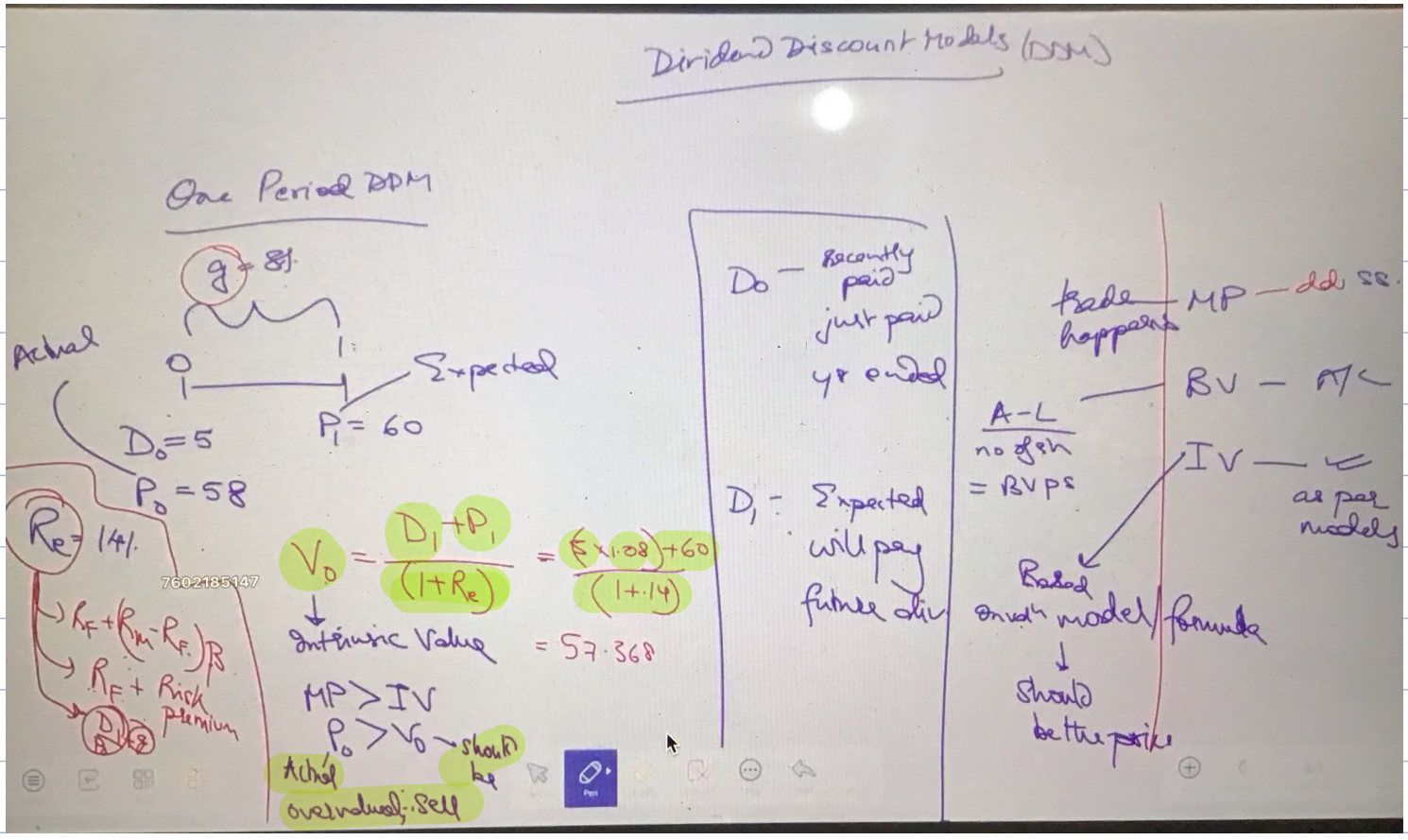
- Quality of Financials
- Quality of Earnings.

Revenue Recog. / Reclassify gain / Expense Recog. – aggr. / Amortization / Depr.

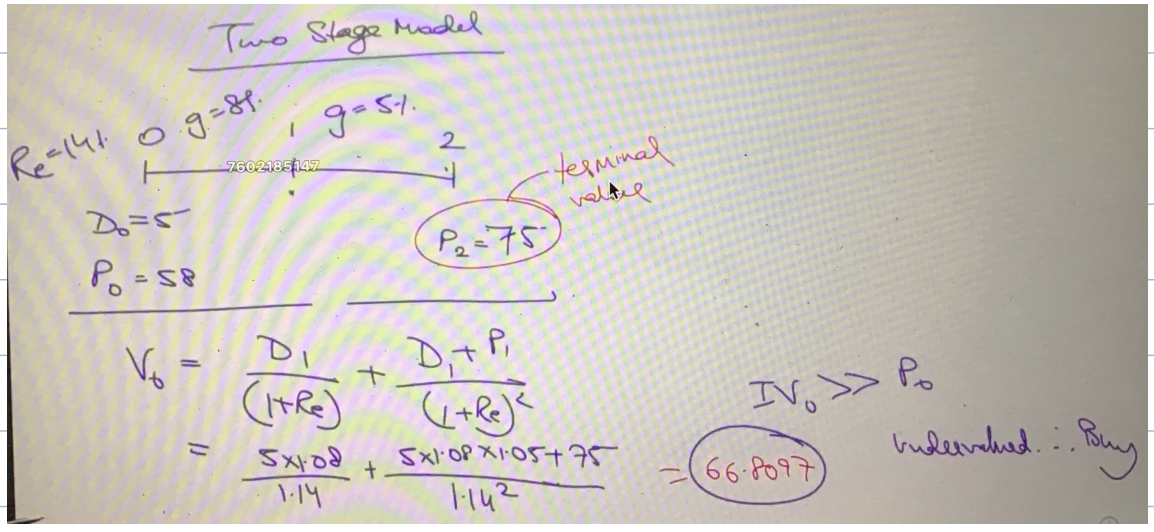
VALUATIONS.

- Models
  - Based on variables
    - Influences Fundamental Value
- Compare ~~&~~ observed Market Value.

1- Period DDM



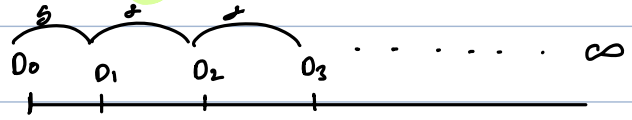
TWO STAGE MODEL



MULTI - STAGE DDM.

Same Concept.

$V_0 = \frac{D_1}{Re - g}$ → sustainable growth rate.



$V_0 = \frac{a}{1-r} = \frac{\frac{D_1}{1+Re}}{1 - \frac{1+g}{1+Re}} = \frac{D_1}{Re - g}$

$\left(1 + \frac{1}{2} + \frac{1}{4} \ldots\ldots \infty\right)$

infinite GP

$IGP = \frac{a}{1-r}$

$g = b \times r$

$g \to \infty$

b = Retention Ratio = 1 − DPR = $1 - \frac{DPS}{EPS}$ ~ Div. Rate × FV

r = ROE = $\frac{NP}{Equity}$ → PAT; Equity → Book Value [Beginning Value]

DIFF (*) → Div. Yield = $\frac{D_1}{P_0}$

		1st Year	2nd Year
Bgn	E_{BU}	100	112
	ROE	20%	
	EPS	20	22.4
	DPS	8	8.96
	Retained Earn.	12	13.44
	E_{BU} closing	112	125.44

12%

DUPONT

$ROE = \frac{NP}{Eq}$ or $\frac{PAT}{E}$

$= \frac{PAT}{Sale} \times \frac{Sale}{Asst} \times \frac{Asst}{Equity} \times b$

Profit Margin (P) × Asst Turnover (A) × Financial leverage (T) × Retention Ratio (R)

PRAT model

EXTENDED DUPONT ⇒ $\frac{EBIT}{Sale} \times \frac{EBT}{EBIT} \times \frac{NI}{EBT}$

= Op. Margin × Int Burden × Tax Burden or

higher ↑

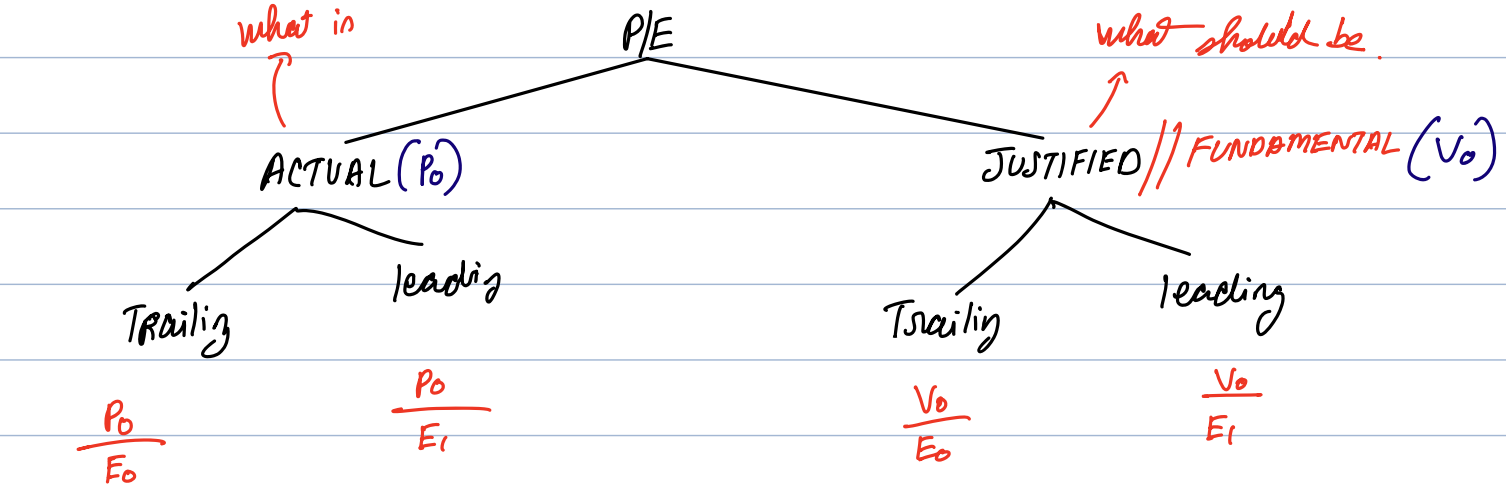
$V_0 = \frac{D_1}{Re - g}$

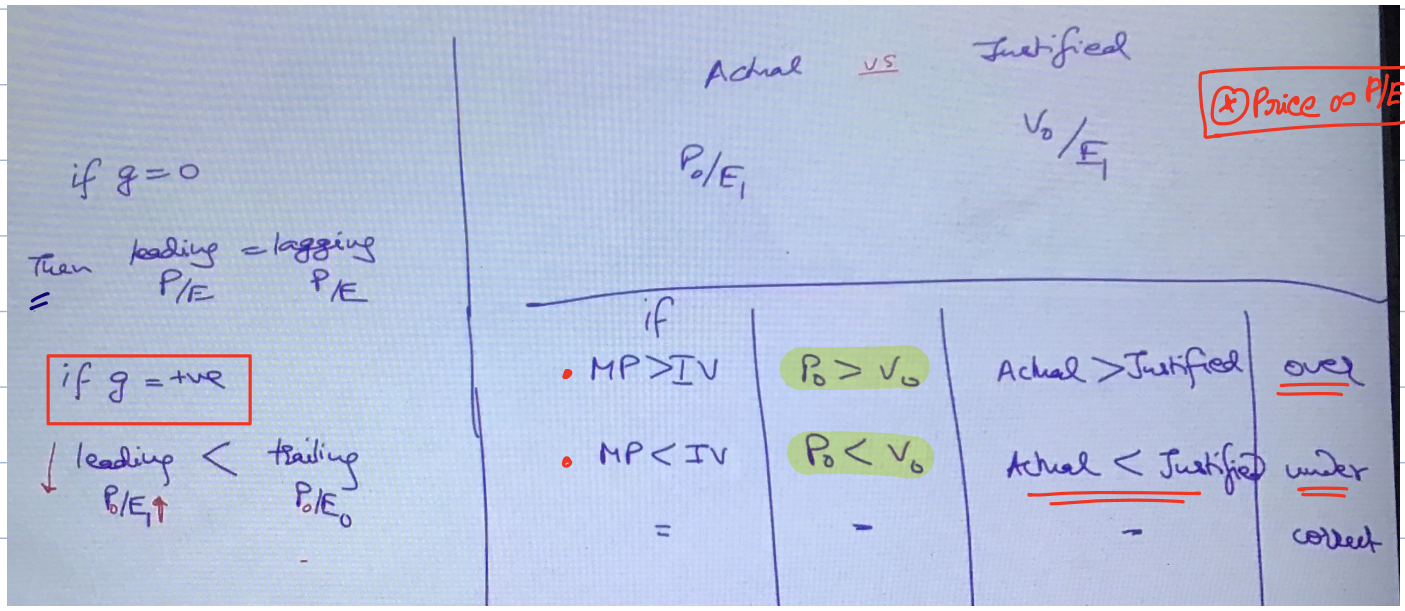
$= \frac{E_1 \times DPR}{Re - g} = \frac{E_1 (1-b)}{Re - br}$ (b = Retention Ratio)

as $g = br$ → whatever Retained ... Return on that.

$b \uparrow \to g \uparrow, D \downarrow$

$V_0 \uparrow \quad V_0 \downarrow$





Justified Trailing P/E

$= \frac{V_0}{E_0}$

$= \frac{\frac{D_1}{r_e - g}}{E_0}$

$= \frac{\frac{E_1 \times DPR}{r_e - g}}{E_0}$

$\frac{E_0(1+g) \times DPR}{(r_e - g)E_0} = \frac{(1+g)(1-b)}{r_e - g}$

IN Justified leading.

$\frac{(1+g)(1-b)}{(r_e - g)(1+g)} = \frac{1-b}{r_e - g}$

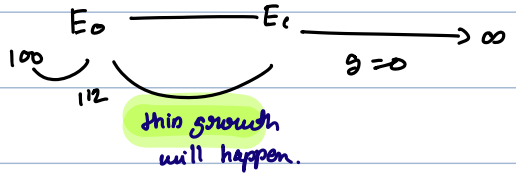
$R_e \uparrow$	$V_0 \uparrow$	$V_0/E \uparrow$
$ROE(r) \uparrow$	$V_0 \uparrow$	$V_0/E \uparrow$
$b \uparrow\downarrow$	$V_0 \uparrow\downarrow$	$V_0/E \uparrow\downarrow$

RELATIONS

PVGO = Present Value of Growth Opportunities

= Stock ⊂ growth − Stock ⊄ growth.

∴ $V_0 - V_{0,g=0}$



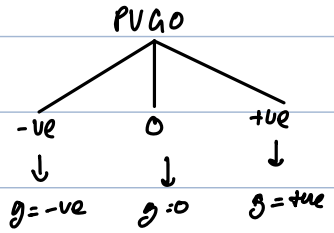
→ What I am paying xtra for growth.

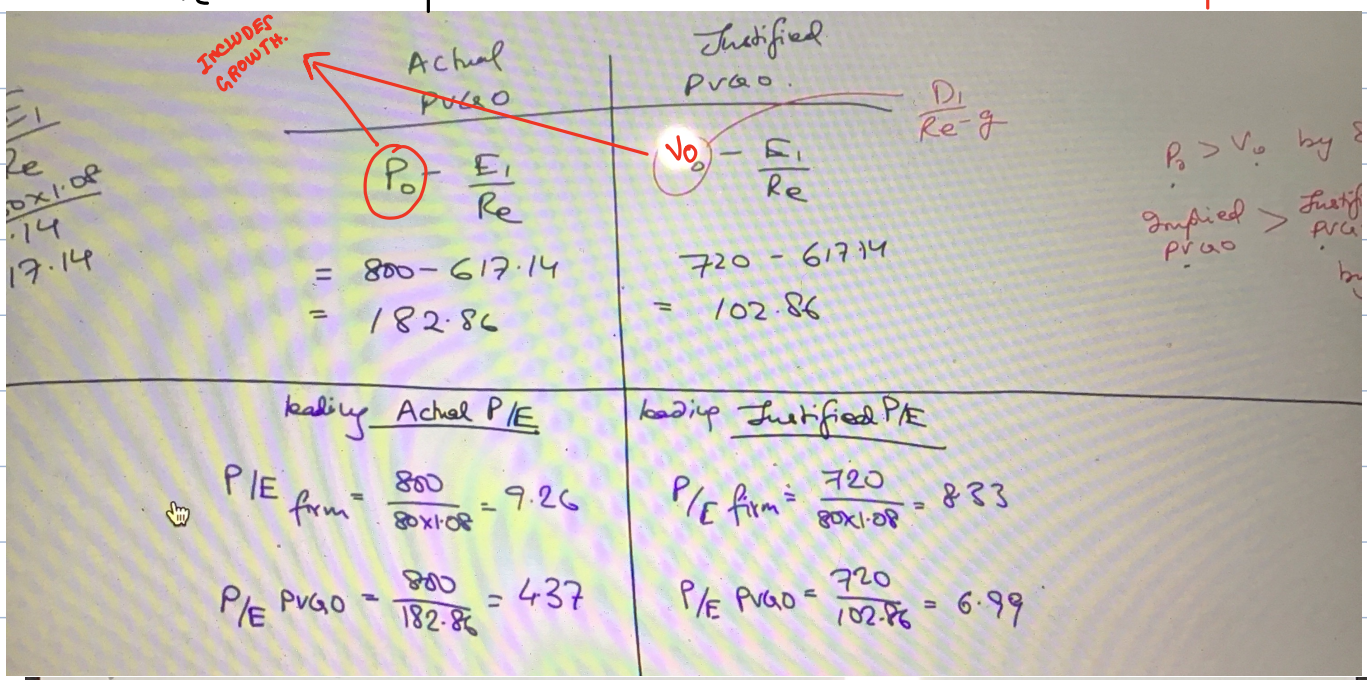
$$\frac{D_1}{Re-g} - \frac{E_1}{Re}$$

$$\Rightarrow \frac{D_1}{Re-g} = \frac{E_1}{Re} + PVGO$$

$$\Rightarrow P_0 = \frac{E_1}{Re} + PVGO$$

Fundamental PVGO	>	Implied PVGO	under.
"	<	"	over
"	=	"	correct





observable BV_0 BV — Book Value — Books of AC. — B/S — A−L = Eq

P_0 MV — Market Value/Price — Actual Buying/Selling — Based on dd & ss.

Based on assump V_0 IV — Intrinsic Value — Based on valuation models — Price that should be

FV — Face Value — used to calculate — fixed — changes for stock split not stock div

Div / Coupon Rate — Rate

[yield → calculated on price]

MV > IV	over	sell
<	under	buy
=	correctly & fairly	hold

$\frac{5}{98}$ yield

$\frac{5}{100}$ = Rate

non callable

perpetual

Preferred Stock

→ fixed dividend.

a)

FV = 100

CMP = 98

Dividend rate = 5%.

$D_p = 5\% \times 100 = 5$ (FV)

Price (pref.) $= \frac{D_p}{R_p}$

or $98 = \frac{5}{R_p}$

or $R_p = \frac{5}{98}$

$= 5.10\%$

b) Similar Preference shares yield 5.40%. Then?

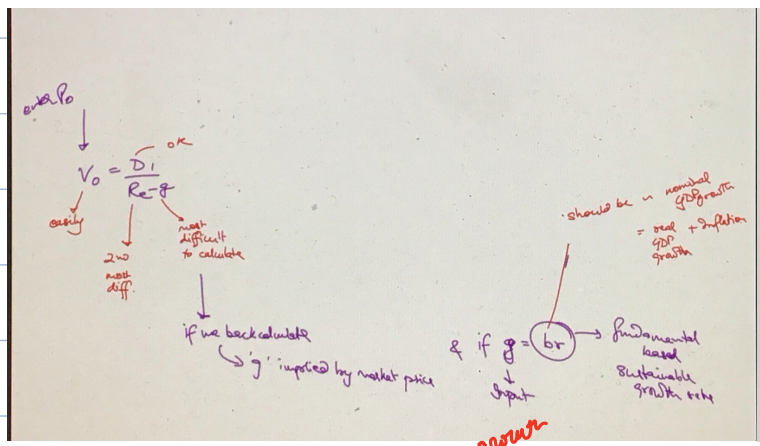
b) $V_p = \frac{D_p}{R_p}$ [pmt / i/y]

$= \frac{5}{.054} = 92.59$

Required yield > Actual yield.

$V_0 < P_0$

overvalued



current EPS = 10^{E_0}

CMP = 50 P_0

R_e = 16%

ROE = 25%. $g = br = .20 \times .20 = .04 = 4\%$

DPR = 80%.

Compute 'g' implied by market.

- long term sustainable 'g' = 4%.
- IV
- Buy / Sell — Buy, undervalued

IV. $\frac{D_1}{Re - g} = \frac{10 \times 80 \times 1.04}{.16 - .04} = \frac{8 \times 1.04}{.12} = 69.33$

Implied g

$P_0 = \frac{D_1}{Re - g}$

or $50 = \frac{8(1+g)}{.16 - g}$

or $50(.16 - g) = 8 + 8g$

or $8 - 50g = 8 + 8g$

$42g = 0$

$g = 0$

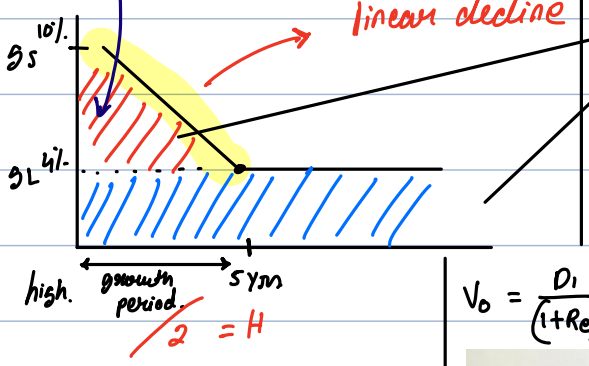
$\frac{1}{2} \times$ base $\times$ height $= (g_s - g_L)h$

g_s = short term growth

g_L = long term growth

H - MODEL

linear decline



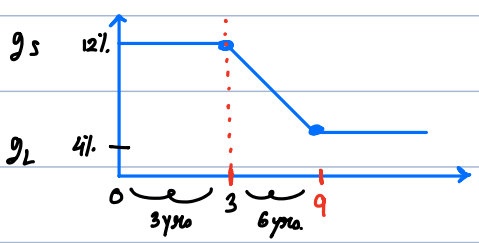
$$V_0 = \frac{D_0(1+g_L)}{Re - g_L} + \frac{D_0(g_s - g_L) \times H}{Re - g_L}$$

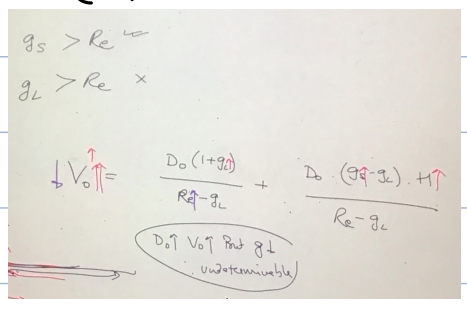
half life $= \frac{5}{2}$.

$$V_0 = \frac{D_1}{(1+Re)} + \frac{D_2}{(1+Re)^2} + \frac{D_3 + V_3}{(1+Re)^3}$$

calculate using this

D_4 onwards is included & D_3 onwards linear decline starts





$Re = \left(\frac{D_1}{P_0}\right) + g$ → Div Yield. + → Cap gain

$$P_0 = \frac{D_0(1+g_L)}{Re - g_L} + \frac{D_0(g_S - g_L)H}{Re - g_L}$$

$$\Rightarrow Re = \frac{D_0\left[(1+g_L) + (g_S - g_L)H\right]}{P_0} + g_L$$

$$\Rightarrow Re = \frac{D_0}{P_0}\left[(1+g_L) + (g_S - g_L)H\right] + g_L$$

$$V_{Firm} = \frac{FCFF_1}{k_c - g}$$

$$\frac{FCFF_1}{1+k_c} + \frac{FCFF_2}{(1+k_c)^2} + \frac{FCFF_3 + V_{Firm_3}}{(1+k_c)^3}$$ (V_{Firm_3}: $\frac{FCFF_4}{k_c - g}$)

$$- V_D$$

$$V_E$$

$$V_{EQUITY} = \frac{FCFE_1}{k_e - g}$$

$$V_{Eq} = \frac{FCFE_1}{1+Re} + \frac{FCFE_2}{(1+Re)^2} + \frac{FCFE_3 + V_{Eq_3}}{(1+Re)^3}$$ (V_{Eq_3}: $\frac{FCFE_4}{ke - g}$)

Forecasting FCFF / FCFE

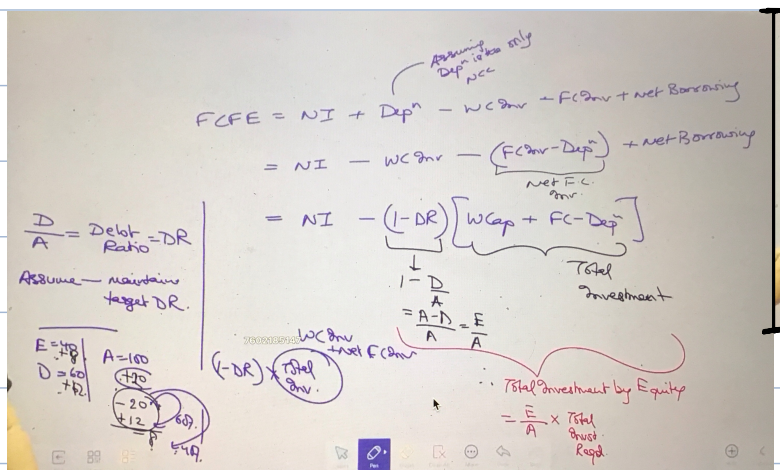
Historical CF + 'g'

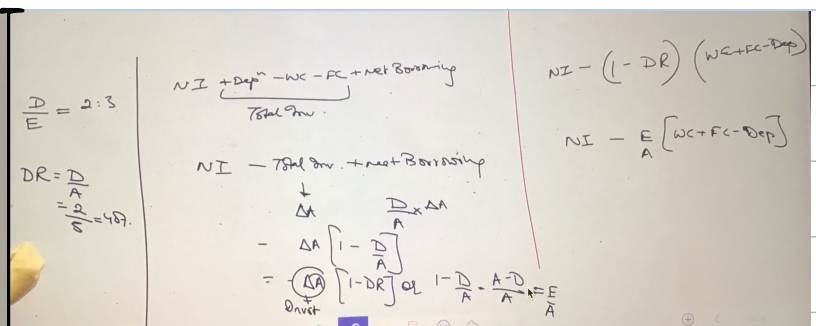
FCFE → appl's g

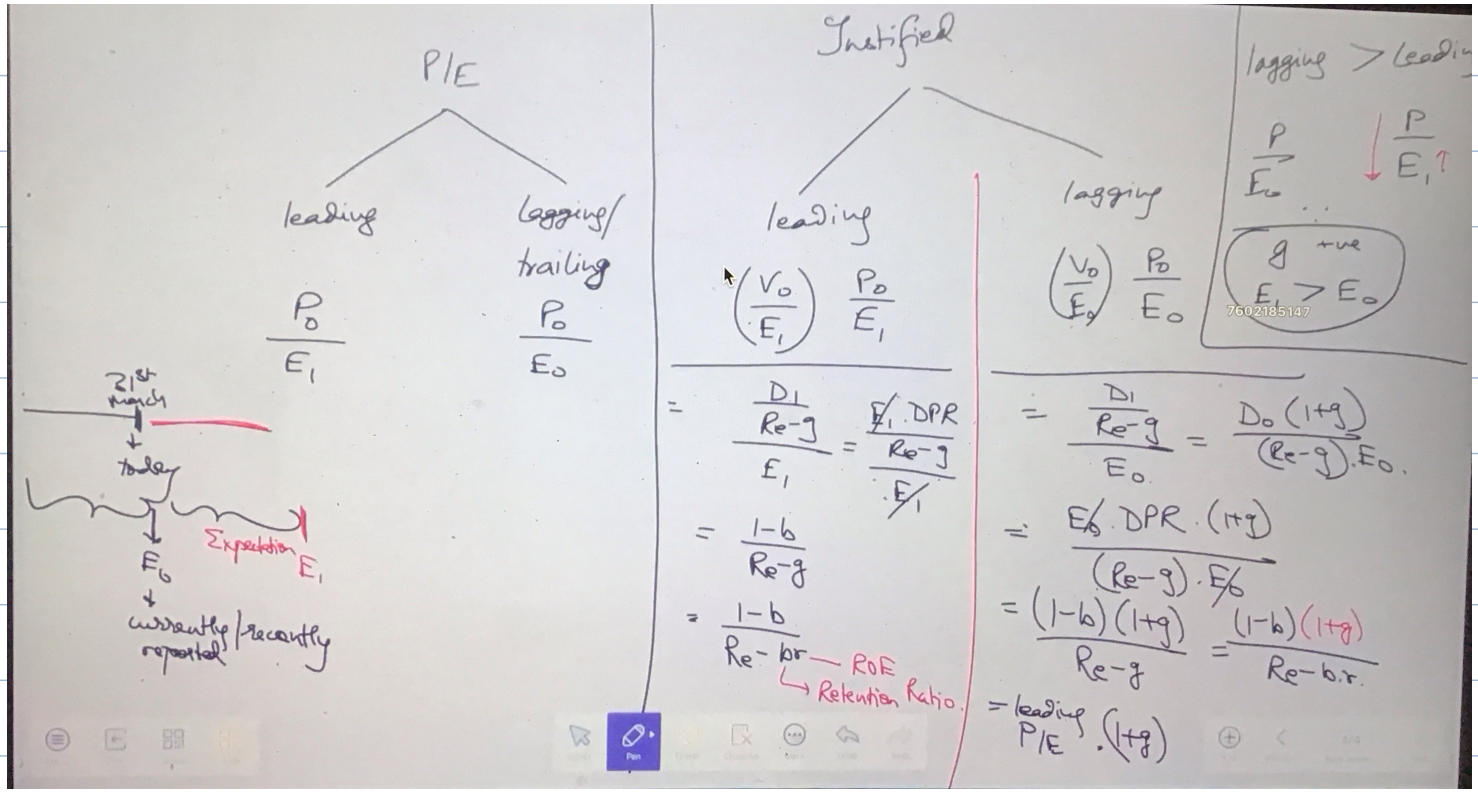
= NI
+ NCC
− WC
− FC
+ Net Borrowing.

→ PROJECTION

Forecast components separately







$$\frac{P}{B} = \frac{P}{BV} = \frac{\text{M.Cap eq.}}{\text{Book Value}_{eq}} = \frac{MV_{eq}/\text{no. of shares.}}{(BV)_{eq}/\text{no. of shares}} = \frac{\text{M.P. per share.}}{BVPS.}$$

$(BV)_{eq} \rightarrow (A-L)$ – Pref. shares.

P/B > 1

Then, $\frac{ROE-g}{Re-g} > 1$

or, $ROE > Re$

P/B ↑ if ROE > Re (more the gap)

∴ if $ROE = Re \Rightarrow P/B = 1$

Justified P/B ratio

$$\left(\frac{V_0}{B_0}\right) \Rightarrow \frac{P_0}{B_0} = \frac{\frac{D_1}{Re-g}}{B_0}$$

$$= \frac{E_1(1-b)}{(Re-g)B_0}$$

$$= \frac{r \cdot B_0(1-b)}{(Re-g)B_0} = \frac{r(1-b)}{(Re-g)} = \frac{r(1-b)}{(Re-br)}$$

$$\frac{r-br}{Re-br} = \frac{r-g}{Re-g}$$

$$P/B = \frac{ROE-g}{Re-g}$$

ROE $= \frac{NP}{BV}$

$\therefore BV \times ROE = \frac{NP}{shares} \times shares$

$\Rightarrow E_0 = B_0 \times ROE.$

$ROE \times BVPS = EPS$

Justified P/S

$$\left(\frac{V_0}{S_0}\right) \quad \frac{P}{S} = \frac{P_0}{S_0} = \frac{\frac{D_1}{Re-g}}{S_0}$$

$$= \frac{E_0(1+g)(1-b)}{(Re-g)S_0}$$

$$\Rightarrow \frac{E_0}{S_0}\frac{(1+g)(1-b)}{Re-g} = \text{Net Profit Margin} \times \frac{(1-b)(1+g)}{Re-g}$$

→ Justified lagging P/E ratio.

$\Rightarrow \frac{P}{S} = NPM \times$ Justified lagging P/E

Justified Div Yield

$\frac{D_1}{P_0} = \frac{D_1}{\frac{D_1}{Re-g}} = Re-g$

$\frac{D_0}{P_0} = \frac{D_0(Re-g)}{D_1} = \frac{D_0(Re-g)}{D_0(1+g)} = \frac{Re-g}{1+g}$

For P/E

DILUTED EPS is more conservative

↳ $\frac{NI - Pref.\ Dividend + Adj\ for\ convertible\ bond.}{Weighted\ Average\ Common\ shares\ o/s. + shares\ from\ dilutive\ securities}$

CYCLICAL

E↑ P/E↓

E↓ P/E↑ ∵ P is based on future earnings which is higher

∴ We use Normalized EPS

↝ Modovsky Effect.

	Y_1	Y_2	Y_3	Y_4
EPS	4	5	7	5.5
BVPS	40	43	45	46.
ROE = EPS/BVPS	10.1.	11.63.1.	15.55.1.	11.96.1.

Average ROE = $\frac{10+11.63+15.55+11.96}{4}$ = 12.29.1.

Method

① Historical Avg EPS (doesn't incorporate SIZE effect.)

$= \frac{4+5+7+5.5}{4} = 5.3$

∴ $P/E = \frac{100}{5.375} = 18.6$

② Method of Average ROE (Better method)

EPS = $B_0 \times$ Avg ROE

= 46 × 12.29.1.

= 5.65

∴ $P/E = 100/5.65 = 17.69$.

Inflation Pass Through Rate. ↑ ∝ P/E↑

↓

How much inflation is passed to customers.

PEG Ratio (observable mkt. price.)

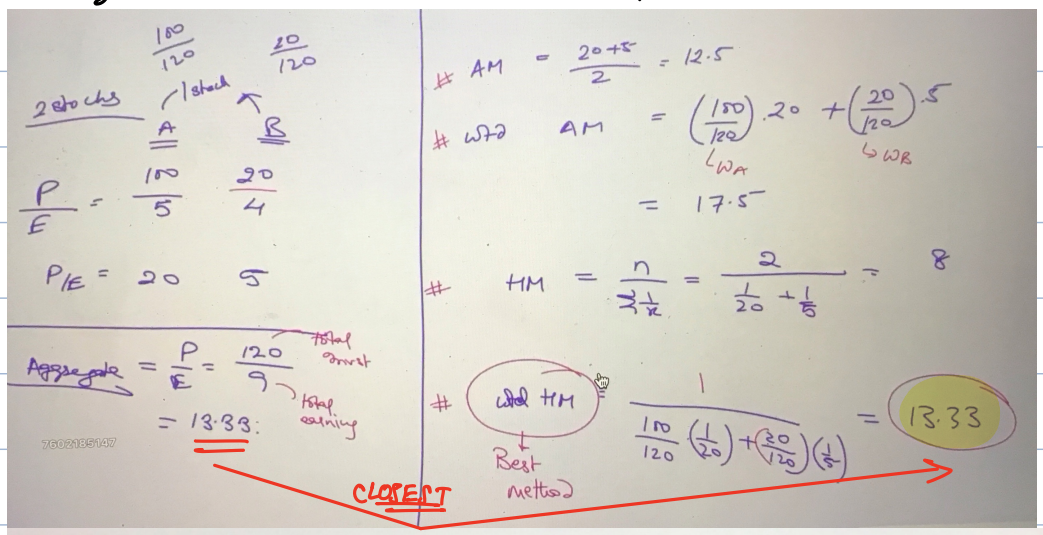
$= (P/E)/growth. = \left(\frac{1-b}{Re-g}\right)/growth.$ → Expected growth rate.

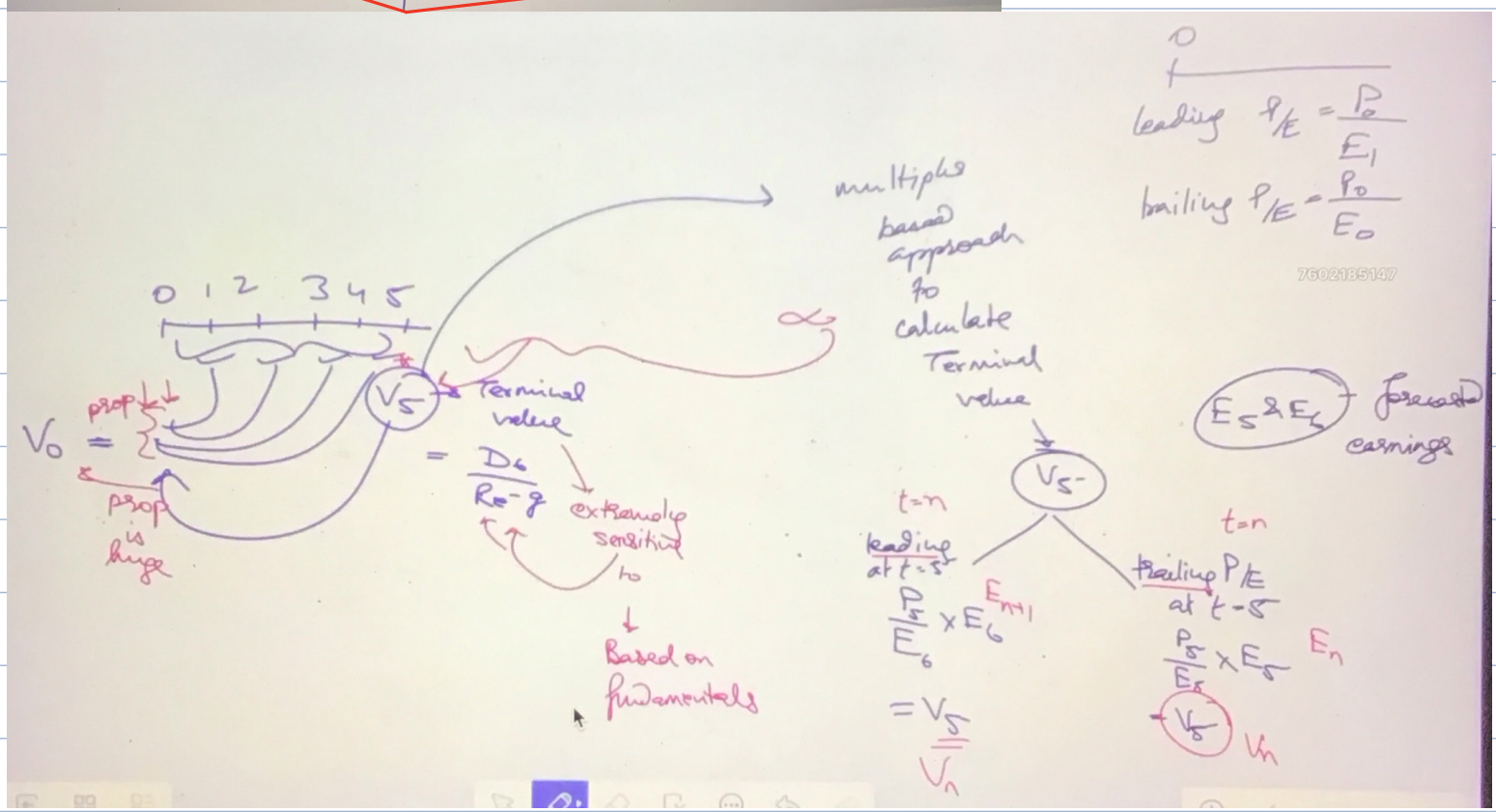
PE ratio of an index.

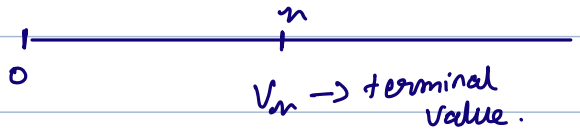
Median → impact of outlier reduced.

Weighted Harmonic Mean.

PEG → lower → better // assuming Risk is similar







P/E ratio at t = n

- leading P/E × E_{n+1}
- lagging P/E × E_n

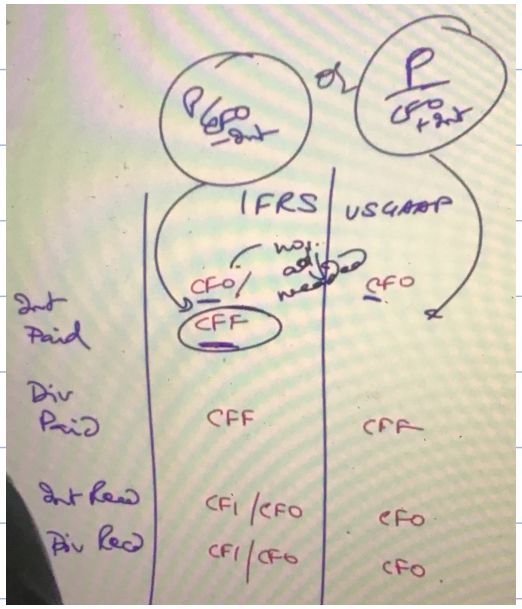
P/E

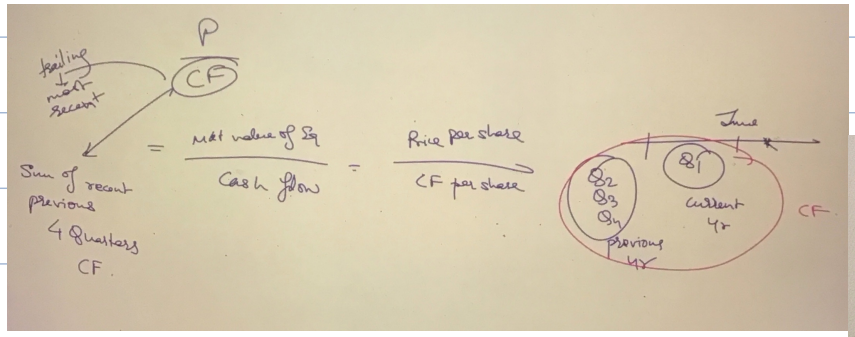
- Justified
- Benchmark.

P/CF

Best:

- CF = NI + NCC
- Adjusted CFO → Recurring CFO
- → FCFE = CFO − FC_{Inv} + Net Borrowings
  - → More volatile
- EBITDA



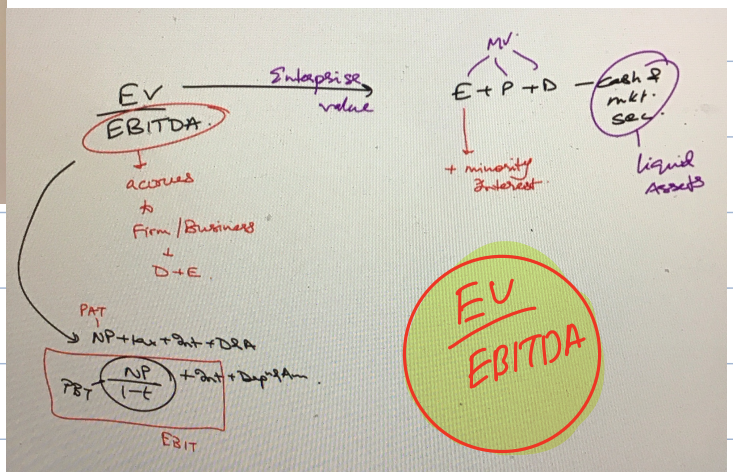


EV → Total Invested Capital + mkt. value of invested Capital.

EV/EBITDA → Variations

- EBIT
- FCFF

→ TIC/EBITDA, TIC/EBIT, TIC/FCFF.

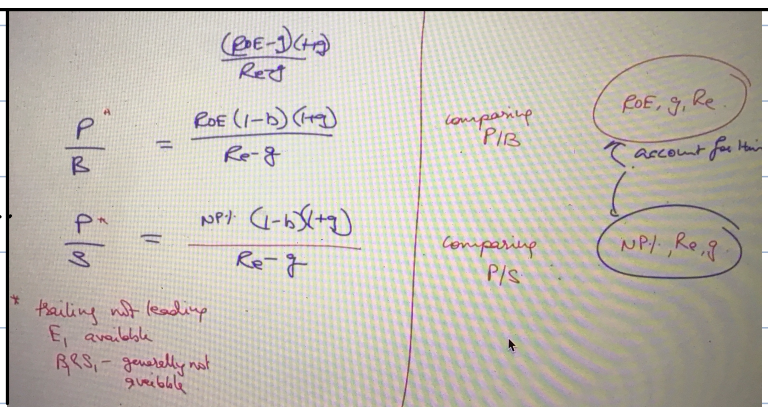


P/E regression

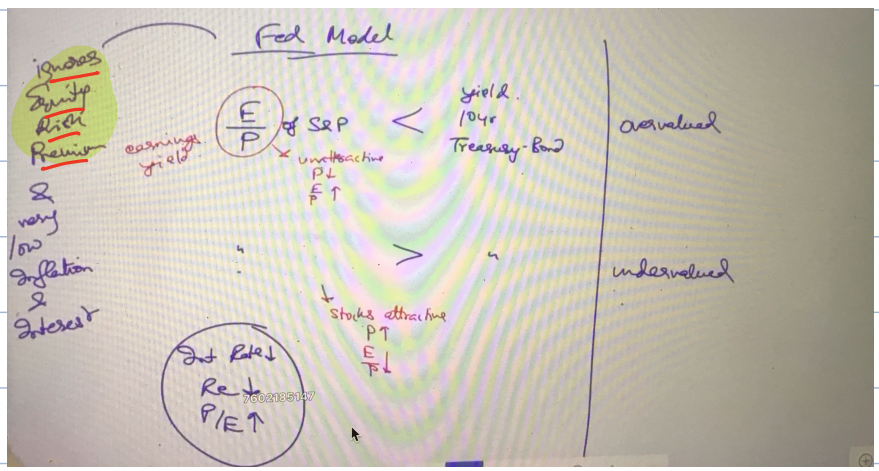
$y = b_0 + b_1x_1 + b_2x_2 \dots$

↓

Predicted P/E



+ Quality of Earnings.



YARDENI MODEL

Current Earning Yield [CEY] = Corp. Bond. Yield (A) [CBY] − bx long term earning growth + Residual Ei

[CEY] → E/P

$\therefore P/E = \frac{1}{CBY - b \times LTEG}$

CBY ↑ → P/E ↓

LTEG ↑ → P/E ↑

Momentum Indicators

Earnings Surprise / Unexpected earnings = Actual earnings − Expected earnings

= Actual EPS − Expected EPS

- +ve: Actual > Exp. → +ve earning surprise is followed by positive earning surprises
- −ve: Actual < Expected

Earnings Surprise → scaling this

SUE = Earning Surprise / σ Earning Surprise

SUE: standardised unexpected earnings

if forecast error is small, then the surprise is more meaningful & then SUE ↑

RESIDUAL INCOME.

EVA – "Economic Value Added" (for one year)

EVA = NOPAT − K_c · Total Capital

- NOPAT (operating) = EBIT (1 − tax) = NI + Int (1 − t)
- K_c = cost of capital = $W_e k_e + W_d k_d (1-t) + W_p k_p$
- Total Capital = Debt + Equity

How much firm is earning ? − How much is the cost

Adjustments

- Capitalize & Amortize R&D → Any write off (+)
- Reverse DTA DTL → cash taxes substracted.
- Convert Op Lease → Fin Lease
- LIFO Reserve → Add to Inventory → Add to Total Capital.
  & ΔLIFO Reserve (+) → NOPAT

P/L
− R&D
NOPAT
+ R&D − R&D amort

INTRINSIC VALUE.

V_{Firm} = Total Capital + Σ PV of EVA

- Total Capital = BV [D + E]
- Σ PV of EVA = Market Value Added. [MVA]

⇒ MVA = M_{Firm} − Total Capital.

- M_{Firm} = $M_{eq} + M_{debt}$
- Total Capital = $BV_D + BV_e$

= Market Value − Book Value

Residual Income$_1$ = $E_1 - Re \cdot BV_{0_E}$ → Book value of equity at time 0. → opn. balance at t.

Residual Income$_t$ = $E_t - Re \cdot BV_{(t-1)\,Eq}$ → $ROE \cdot BV_0 - Re \cdot BV_{0_E}$

$V_{eq} = B_{0_{eq}} + \sum_{n=1}^{\infty}$ PV of Residual Income.

$RI_1 = E_1 - Re \cdot B_0$

$RI_t = E_t - Re \cdot B_{t-1}$

$\rightarrow RI_1 = (ROE \cdot B_0) - Re \cdot B_0$ $\quad \left[ROE = \frac{NP_1}{B_0}\right]$

E_1

$= (ROE - Re) B_0$

$RI_t = (ROE - Re) B_{t-1}$

	RI
$ROE > Re$	+ve
$ROE = Re$	0
$ROE < Re$	-ve.

ROE → $\frac{NP}{BV_{equity}}$ $\quad$ Re → $R_f + (R_m - R_F)\beta$

$V_0 = B_0 + \left[\frac{RI_1}{1+Re} + \frac{RI_2}{(1+Re)^2} \cdots \infty\right]$ $\quad$ Assumptions → to use validation

B_0 → Current BV of Eq $\quad$ $(E_1 - Re \cdot B_0)$

$V_0 = B_0 + \frac{RI_1}{1+Re} + \frac{RI_2}{(1+Re)^2} + \frac{RI_3 + \frac{RI_4}{Re-g}}{(1+Re)^3}$ → not the full price at $t=3$

If earnings & Div. grow at a constant rate, RI also grows at a constant rate.

$\therefore V_0 = B_0 + \frac{RI_1}{Re-g}$

$= B_0 + \frac{(E_1 - Re \cdot B_0)}{Re-g}$ → $B_0 \cdot ROE$, RI_1

$\Rightarrow V_0 = B_0 + \frac{(ROE - Re) B_0}{Re-g}$

↓ Additional value

Single stage Residual Income Valuation.

$ROE > Re$	$IV > BV$
$ROE = Re$	$IV = BV$
$ROE < Re$	$IV < BV$.

$B_0 \uparrow$ $\quad V_0 \uparrow$

ROE ↑

Re ↑↓

Back calculating 'g' → $g = Re - \frac{(ROE - Re) B_0}{V_0 - B_0}$

implied or expected market growth rate $\quad$ Input Market Price

Using Justified P/E, P/B → $\frac{(1+g)(1-b)}{Re-g}$ ← $\frac{Roe - g}{Re-g}$

$P_0 = B_0 \left[1 + \frac{ROE - Re}{Re-g}\right]$

$\Rightarrow \frac{P_0}{B_0} = \frac{ROE - g}{Re-g}$

$ROE > Re$	P/B > 1
$ROE = Re$	P/B = 1
$ROE < Re$	P/B < 1

TOBIN's q $\propto$ RI

→ higher → if assets have better ability

→ Too high → overvalued

$$q = \frac{MV_{eq} + MV_D}{\text{Replacement Cost of Total Assets.}} \rightarrow BV$$

$$V_0 = B_0 + \frac{(ROE - R_e)B_0}{1+R_e} + RI_2 \ldots \infty$$

$$V_0 = B_0 + \frac{(ROE - R_e)B_0}{R_e - g}$$

→ RI grows at a constant rate forever.

→ Practically Unlikely.

....→ eventually ROE ⟶ R_e // ∴ RI = '0' ... long term.

Pattern of RI needs to be forecasted.

→ Competitiveness of firm → strong — RI ↑↑ / weak — fade faster.

→ Sustainability of competetiveness.

→ Industry Structure.

" prospects.

$$V_0 = B_0 + \frac{PV(RI_1 \ldots \infty)}{}$$

$$B_0 + \frac{(ROE - R_e)B_0}{R_e - g} \quad \ldots\ldots +ve - RI \text{ increases over time}$$

$$= B_0 + \frac{RI_1}{R_e - g}$$

higher the better.

$g = (w - 1)$

persistance factor

↓

how much growth, can I hold.

Persists forever → $w = 1$, $g = 0$

$V_0 = B_0 + \frac{RI_1}{R_e}$

↓

I will retain 100% of Residual Income I earn today

declines to '0' immediately → $w = 0$, $g = -100\%$

$V_0 = B_0$

↓

No residual income hence forth.

Declines one time → $0 < w < 1$

$V_0 = \frac{RI_1}{1+R_e} \ldots \frac{RI_3}{(1+R_e)^3} + (PV \text{ of } RI_4 \ldots \infty)$

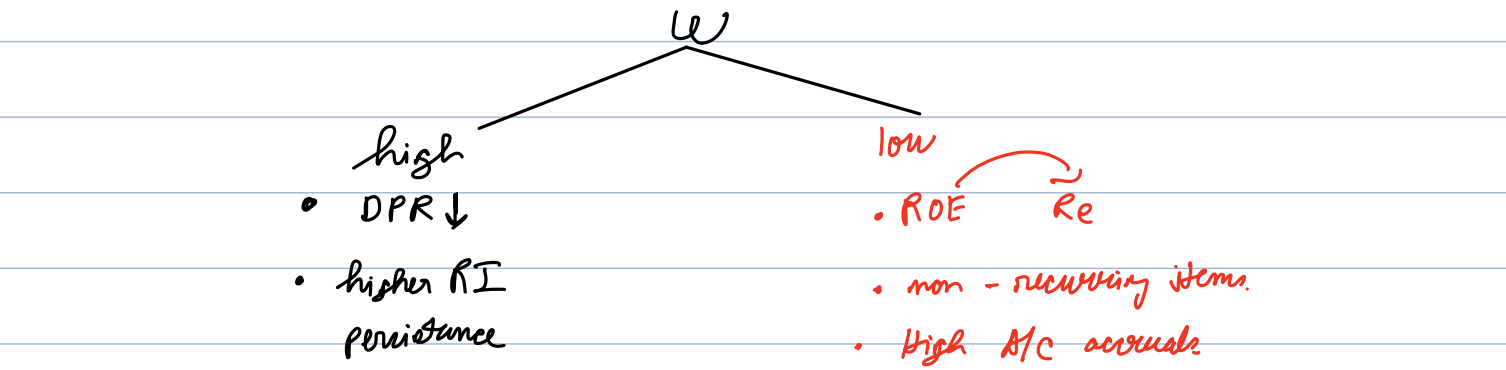
↓

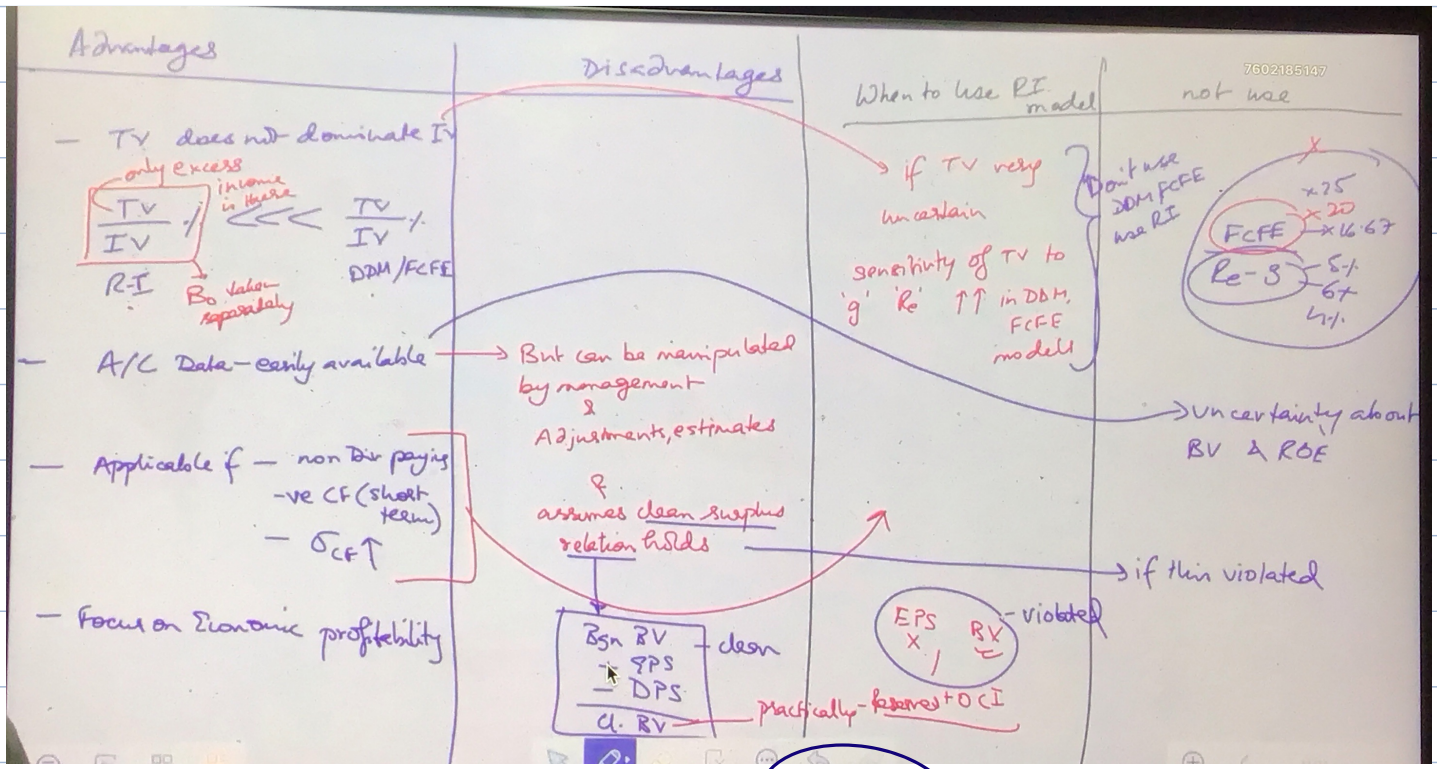
$\frac{RI_4}{R_e - (w-1)}$

Declines to long run industry avg. → ●

∴ if $w = 0.9$, then $g = 90\%$ of g

$$P_t - B_t = \Sigma PV(RI_{t+1} + RI_{t+2} \ldots\ldots \infty)$$



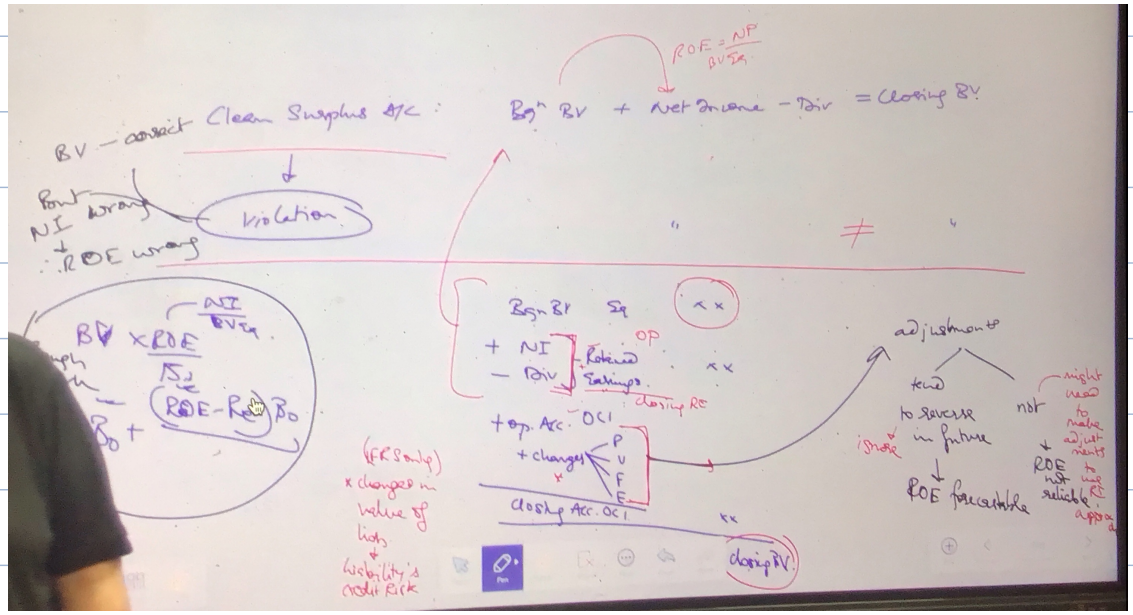


$$ROE = \frac{NP}{BV_{Eq}}$$

Clean Surplus A/C : Bgn BV + Net Income − Div = Closing BV.

↓

Violation



Variation from Fair Value.

BIS — BV / FV — large diff. variation of FV from BV.

- Operating leases.
- SPE — Consolidated. Parent | SPE
- Finance lease — O – Interest → NPP → ROE. / A
- Reserves & Allowances → should be reflective of expected loss.
- Inventory

LIFO ..... lower.
FIFO ---- higher
(adj)

LIFO inv + LIFO Reserve → added to Asset & Equity } Both.

PRIVATE – COMPANY Valuation.

Private Company →
- Prop / Partnership
- Pvt. Ltd Company.
- Public → Private.

Public vs. Pvt

Company Specific factors.
- stage of lifecycle.
- size
- Management Quality
- " / Shareholder overlap
- short-term Investors.
- Quality of financial & other info.
- Taxes.

Stock Specific factors.
- Liquidity
- Restrictions on mark
- Concentration of control

Private Company Discount Rate.

- Size Premium
- Ducilability of Cost of Debt.
- Acquirer vs target.
  - ↑ Bigger → ↓ Discount Rate ↓ → this should be used.
- Projection Risk.
- Life cycle stage.

biased upward

K_c → K_e, K_d

CAPM

$R_f + (R_m - R_f)\beta$

∵ unsyst. risk ↑ in PVT.

CAPM

$R_e = R_F + (R_m - R_f)\beta$

public company — similar business

[Business Risk + Firm Risk] public Co

$\beta_{unlevered} = \frac{\beta_{public}}{1 + \frac{D}{E}(1-t)}$

Business + Fin Risk

Public Data

$\beta_{unlevered}$ → Business Risk

$\therefore \beta_{private} = \beta_{unlevered}\left[1 + \frac{D}{E}(1-t)\right]$

Relevering it with financial risk of private company.

Expanded CAPM

CAPM + size prem + firm specific prem.

Build-Up Approach.

$= R_m$ + Industry Risk Premium. + small size + company specific

R_m → CAPM if $\beta = 1$

$= R_F + R_m - R_F$

$= R_m$.

FCFF vs FCFE

FCFF @ K_c → better if Cap. structure change in expected

D/E ↓↑ → K_e ⇅, K_c ⇅ → better

FCFE @ K_e

Normalized earnings

After acquisition → CF/earnings → Adjustments

- non-recurring items
- discretionary / tax motivated
- owners — Inflated Expenses.

Estimate CF

- Probability weighted CFs.

Buyer → Strategic → Synergies
Buyer → non-strategic → No synergies

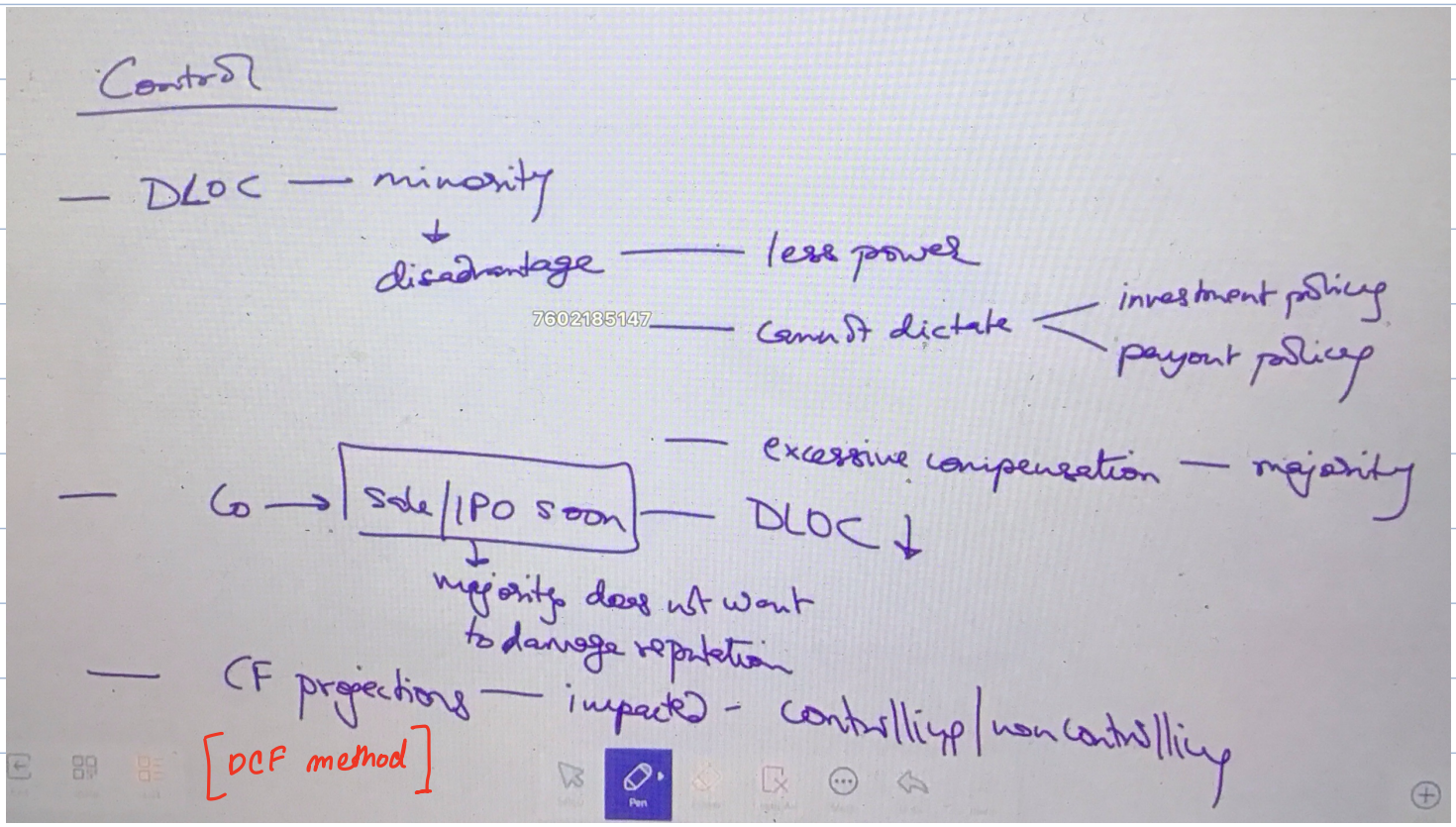
Pvt. Co.
→ Control → Discount for Lack of CONTROL [DLOC]
→ Marketability → Discount for Lack of Marketability [DLOM]

$\not{\bar{c}}$ Control = x

$\bar{c}$ Control = x [1 + control premium]

$$\Rightarrow DLOC = \frac{\bar{c}\ control - \not{\bar{c}}\ control}{\bar{c}\ control}$$

$$\Rightarrow DLOC = \frac{control\ premium}{1 + control\ premium}$$



100 x DLOC x DLOM

INCOME APPROACH.

- Free Cash Flow.
- CCM
  - Capitalized CF method.
- Excess Earnings Method.

$$V_{eq} = \frac{FCFF_1}{Ke - g} - V_{Debt}$$

$$V_{eq} = \frac{FCFE_1}{Ke - g}$$

→ Capitalization Rate

primary for FCFF

$$V_{firm} = \frac{[EBIT(1-tax)(1-b)]}{Ke - g}$$

Reinv. ratio $(b) = \frac{g}{WACC}$ ← reinvested

Excess Earnings:

Earnings − Re (Fcap + Wcap)

PV

= Fcap + Wcap + PV Intangible

PV

FCFF

= NI + Deprn + Int(1-t) − Wcap − FC inv.

= EBIT (1-t) + NCC − Wcap − FC inv.

ignoring.