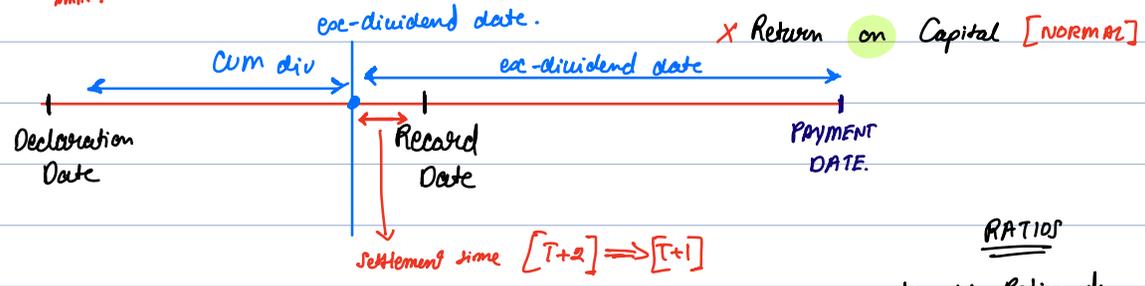


② Irregular/Special Dividend: so as to not extrapolate in projections.

when Div. amt. → R.E. ← ③ Liquidating Dividend → Return of Capital [LIQUIDATION]



RATIOS

- Liquidity Ratios. ↓
- D/E ↑
- ROE ↑
- EPS - same
-

DIV. RATE = $\text{rate} \times \text{FV} = \text{DPS}$

DPR = $\text{DPS} / \text{EPS} = \text{Total Div} / \text{Total Earnings}$

DPS = Dividend Per Share.

DIV. YIELD = $\frac{D_1}{P_0}$

STOCK DIVIDEND

LIAB	Amnt
Eq. Share Cap. <u>FV</u>	$10 \times 50 = 500$
Acquired Premium	$90 \times 50 = 4500 + 50$
Retained Earnings	$1000 - 50$
Total Equity	6000

① 10% Stock Dividend or 1:10 share.

50m → 55m • [R.E. → Share Cap]

• Equity Share Capital remains the name.

BEFORE	AFTER
BVPS: $6000 / 50 = 120$	$\frac{6000}{55} = 109.1$
MP = 750	$\frac{750 \times 50}{55} = 681.8$
SAME.	DIFF
P/E, P/B, D/E ...	EPS, DPS

∴ ownership = NO CHANGE.

STOCK SPLIT (2:1)

- Share Capital, Equity remains same
- No. of shares change. [DOUBLE]
- Price, BVPS → 1/2
- Increase Liquidity
- EPS ↓

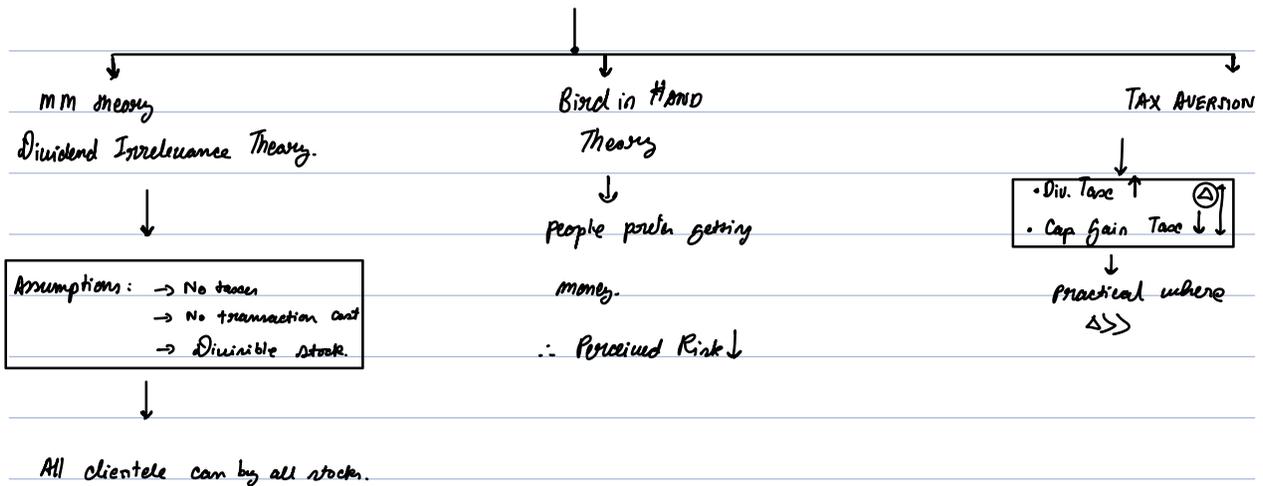
REVERSE STOCK SPLIT

- Same
- OPPOSITE. [HALF]
- 2x
- Same brokerage
- ↑

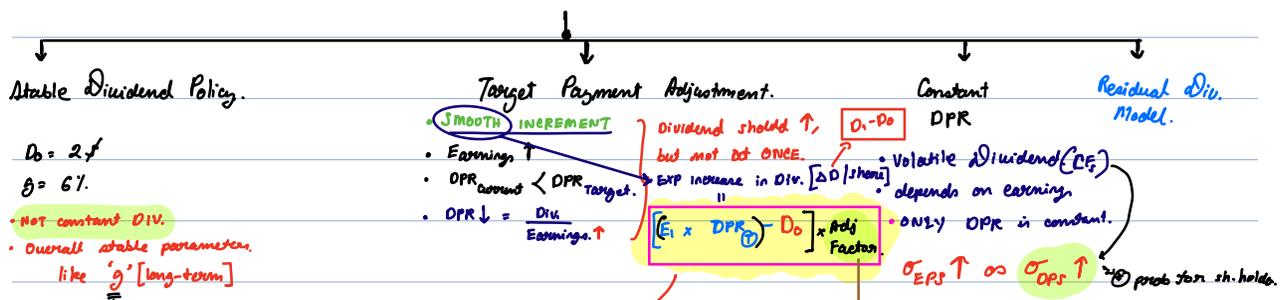
DIVIDEND REINVESTMENT PLAN [DRP]

- Pay taxes
- long-term Inv.
- Buy shares & transaction cost.
- flotation cost.

THEORIES



POLICIES. → Amnt??



↓
long term
earnings
growth.

$$\begin{aligned} E_0 &= 3.5 \\ D_0 &= 0.7 \\ E_1 &= 4.5 \\ DPR_T &= 35\% \\ \text{Adj Years (N)} &= 5 \end{aligned} \quad \Rightarrow \quad (D_1 - D_0) = (E_1 \times DPR_T - D_0) \times \frac{1}{N}$$

$$= [(4.5 \times 0.35) - 0.7] \times 0.2$$

$$\Rightarrow D_1 = 0.875$$

↓
No. of Years → Adjustment Period.

→ N↑ = more smooth
⇒ Adj ↓ → slow.

SHARE - REPURCHASE.

- Open Market
- Fixed Price Tender Offer.
- DUTCH AUCTION
- Repurchase by Direct Negotiation.

Co offers 185,800 sh

Sh. holder	no of sh	Price
A	40k	2450
B	20k	2400
C	20k	2500
D	40k	2410
E	40k	2520
F	35k	2620

all shares will be repurchased at 2520

• Share-Purchase } Cash dividend.

- Tax advantage
- Price support signal.
- Flexibility
- EOP dilution.
- Leverage ↑ → O/E ↓
- ↓
increase without adding DEBT.

No. of Dividends Paying Companies.
Total no. of companies.

- US } EUR
- Developed markets ↓ ↓

∴ ROE = op. profit × no. turnover × $\frac{\text{Div}}{\text{Eq.}}$

FCFE coverage Ratio = $\frac{\text{FCFE}}{\text{Div.} + \text{Share Repurch}}$

F	> 1	→ Sustainable
C	= 1	→ "
E	< 1	→ Unustainable

DIVIDEND SAFETY ↑ = Better. // D.P.R. [Div. / Eam] ∞ Probability

measured by Dividend Coverage Ratio. $[\frac{1}{DPR} = \frac{\text{Eam}}{\text{Div}} = \frac{\text{EPS}}{\text{DPS}}] \propto \frac{1}{\text{prob.}}$

Taxes on Dividend.

DOUBLE TAX	Corporate @ 35%. DPR = 100%. Ind. tax @ 30%.	SPLIT RATE	Corp T @ 35%. IND. @ 30%. OPR = 50%. Div. tax @ 20% (SPLIT)	IMPUTATION TAX
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COST of CAPITAL

$$K_c = W_e K_e + W_p K_p + W_d K_d (1-t)$$

Marginal Tax Rate

$$\frac{W_e E_{ov}}{W_e (E+P+D)}$$

$$= \frac{E}{A}$$

- Mkt Value
- Tangible Capital Structure

- Business/operating Risk. \downarrow

$\sigma_T, R_p \uparrow, K_c \uparrow$

- Utility of Prod.

- Nature of Cashflow.

- Asset maturity & Liquidity

• TANGIBLE
• Non-specialised (fungible)
• More Liquid.
$R_p \uparrow$
$R_p \downarrow$
$\therefore K_c \downarrow$

• Intangible
• Specialised
• Less liquid.
$R_p \downarrow$
$R_p \uparrow$
$K_c \uparrow$

- Financial Strength & Profitability.

- Security Features

→ Cumulative Pref shares vs. Non-Cumulative Pref.-share.

$K_p \downarrow$

$K_p \uparrow$

Factor affecting K_e & K_d .

Top/Down (External/Macro)

Bottom UP (Co-Specific)

• Capital Availability as $\frac{1}{K_c}$

Developed \uparrow

Developing \downarrow

- More liquid
- Currency sink \downarrow
- Inflation protection \uparrow

Corp Bond/Debt market \downarrow

\therefore unregulated/Non-Bank $\rightarrow K_d \uparrow \uparrow$

Market Conditions.

- Inflation \uparrow
- Interest Rate \downarrow
- Economy $\uparrow \uparrow$
- Risk Premium \downarrow
- Monetary Policy
- Currency volatility \downarrow

- Legal/Regulation/Compliance

STRONG \rightarrow Risk $\downarrow \rightarrow R_p \downarrow \rightarrow K_c \downarrow$

LAW

Common LAW \rightarrow Risk $\downarrow \rightarrow K_c \downarrow$

CIVIL LAW \rightarrow Risk $\uparrow \rightarrow K_c \uparrow$

- Tax Jurisdiction.

$K_d(1-t)$
 \rightarrow Interest - tax deductible

Marginal tax rates.

\therefore if $T \uparrow \uparrow \rightarrow K_d(1-t) \downarrow \downarrow$
 $\rightarrow W_d \uparrow \uparrow$

PRIORITY/Pref.

K_d ← Publicly traded vs Minority
Rating done?
Currency.

- Public longest
- Public shorter maturity
- similar to similar rating.
- similar ratios. \rightarrow coverage, leverage, etc.

these used in stratty models.

Rate Implicit in the lease [RIIL]

$$PV(\text{lease payment}) + PV(\text{residual value}) = \overset{\text{Fair Value.}}{FV}(\text{leased asset}) + \text{lessor's initial direct cost.}$$

\rightarrow IRR (back calculate) \rightarrow RIIL

Sup lease
 lease payment = 10k
 Residual value (asset) = 30m
 FV of Asset = 120k
 Cost of initiation = 5m
 Compute RIL

PMT: 0, 10, 10, ...
 FV: 30m
 (120 + 5) = 125
 CF: 1/3
 RIL

Total amt needed to pay to own & use the asset.

If Data ↓↓

⇒ RIL not possible

⇒ use IBR

↳ Incremental Borrowing Rate.

↳ Rate on received loan, same term.

COUNTRY RISK RATING. → USA + COUNTRY RISK PREMIUM

Similar Industry BB rated Bond data

Company	Maturity N	Coupon PMT %	Price FV=100	YTM
S	4	5	99.45	5.16
D	4	6	101.75	5.50
M	7	7	110	5.26
L	7	8	114	5.53

Compute kd for Co B 6yr BB rated Bond

Interpolation diagram:
 4 ——— 6 ——— 7
 5.33 ——— ? ——— 5.39
 5.37%

$$\frac{5.39 - 5.33}{7 - 4} = \frac{x - 5.33}{6 - 4}$$

$$\Rightarrow x = 5.37\%$$

INTERPOLATION

P.O.V.
 Ke → Cost of equity → COMPANY
 " for a stock → Required Return → INVESTOR
 Equity Risk Prem
 $Re = Rf + ERP + IRP$ [INDUSTRY - RISK - PREMIUM]
 (Rm - Rf) β → Stock specific risk premium.
 MRP → market Risk Premium

COMPANY
 IRP
 ERP
 Rf
 0

AM vs GM
 • 1 period vs • Multiperiod.
 • accurate for terminal wealth.
 • lower outlier weightage

Estimating Re
 HISTORICAL MEASURES.
 FORWARD LOOKING.

Treasury
 BILL
 • True Rf
 • SHORT TERM

BOND
 • LONG-TERM
 • Includes reinvestment risk
 • Preferred.

Time weighted CFs.
 Duration is higher. // hence closer.
 Equity = ∞.

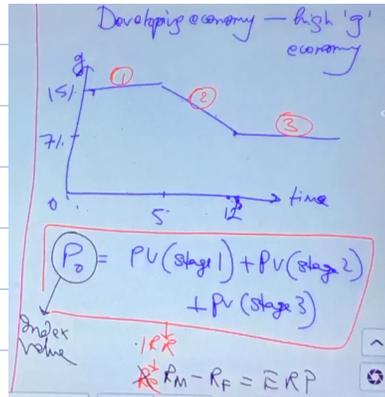


$$R_e = \frac{D_1}{R_e - g}$$

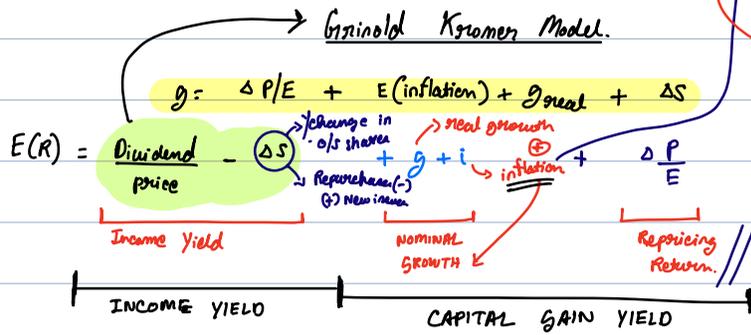
$$= \frac{D_1}{P_0} + g$$

current income capital gain

Developing economy - high 'g' economy.



MACRO-ECONOMIC MODEL.



EXPECTED INFLATION.

$$\Rightarrow (1 + \text{nominal}) = (1 + \text{real})(1 + \text{inflation})$$

T-BOND TIPS yield

$$ERP = E(R) - R_F$$

IY CG

EXPLANATION of ΔS

1) DDM - BUILD UP MODEL.

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

$$\Rightarrow R_e = \frac{D_1}{P_0} + g$$

↓ Div. Yield ↓ Capital gain

Risk Premium is over RF

COMPUTE (RF)

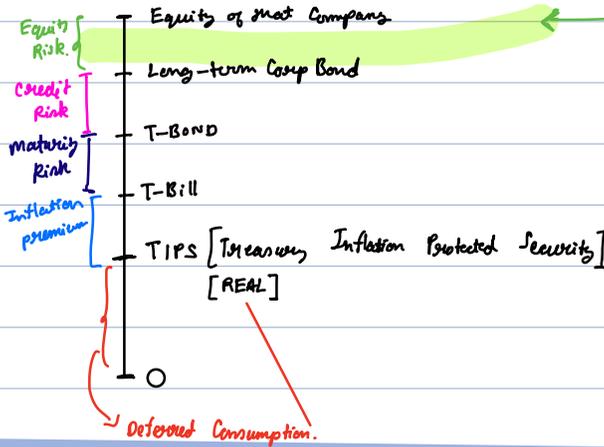
2) BOND YIELD Plus Risk Premium.

$$R_e = YTM + \text{Risk Premium.}$$

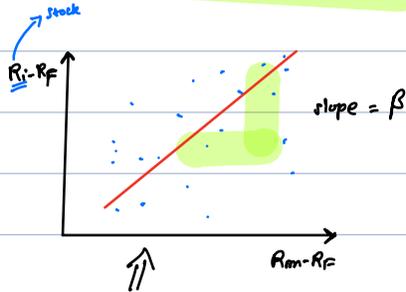
↓ of long-term debt.
↓ not Treasury same Co.
The Co. has to have publicly traded debt.

↓ Avg [Historical Eq. Return - Debt Return]
Similar to ERP.

RISK above Corp. Bond.



RISK - BASED MODELS.



Single-Factor Model

MULTI-FACTOR MODEL

$$R_e = R_f + \beta_1 [R_1 - R_f] + \beta_2 [R_2 - R_f] \dots$$



SIMPLE FAMA - FRENCH MODEL

$$R_e = R_f + \beta_1 (R_m - R_f) + \beta_2 (\text{Small-Big}) + \beta_3 (\text{High-Low})$$

CAPM SIZE prem. VALUE prem. (↑ B/P - ↓ B/P)

$$+ \beta_4 (\text{Robust-Weak}) + \beta_5 (\text{Conservative-Aggressive})$$

profitability premium Investment Premium

5 FACTOR

CAPM

Expanded CAPM

$$R_e = R_f + \beta_{peer} \times ERP + [SP + IP + SCRP]$$

β_{peer} Industry β
size INDUSTRY Co. specific

NO BETA

Build-UP

$$R_e = R_f + ERP + SP + SCRP$$

R_e for Avg. Risk
 Large Cap Public Eq.
 R_e for micro-cap Public
 R_e for micro-cap P.V.T.

uses Mkt Cap Wtd. Index \rightarrow Large Cap dominated.

INTERNATIONAL CAPM

International Consideration

Country Spread Model

Country Risk Rating Model.

EXTENDED CAPM

⊕ Receivable/Payable in foreign currency

Developed GLOBAL CAPM

$$R_e = R_f + (R_m - R_f) \beta \rightarrow \text{LOW}$$

\downarrow global market index

Developed

$$R_e = R_f + \underbrace{(R_m - R_f)}_{ERP} \beta$$

\rightarrow of developed.

INTERNATIONAL CAPM

$$R_e = R_f + (R_m - R_f) \beta + (R_c - R_f) \beta_c$$

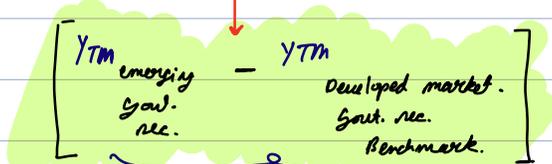
\downarrow global market index
 \downarrow sensitivity to global market index
 \downarrow low β = low integration of company \bar{c} global market.

Wealth wtd. CF sensitive to exch. rates & interest rate changes.
 FOREIGN CURRENCY INDEX

EMERGING.

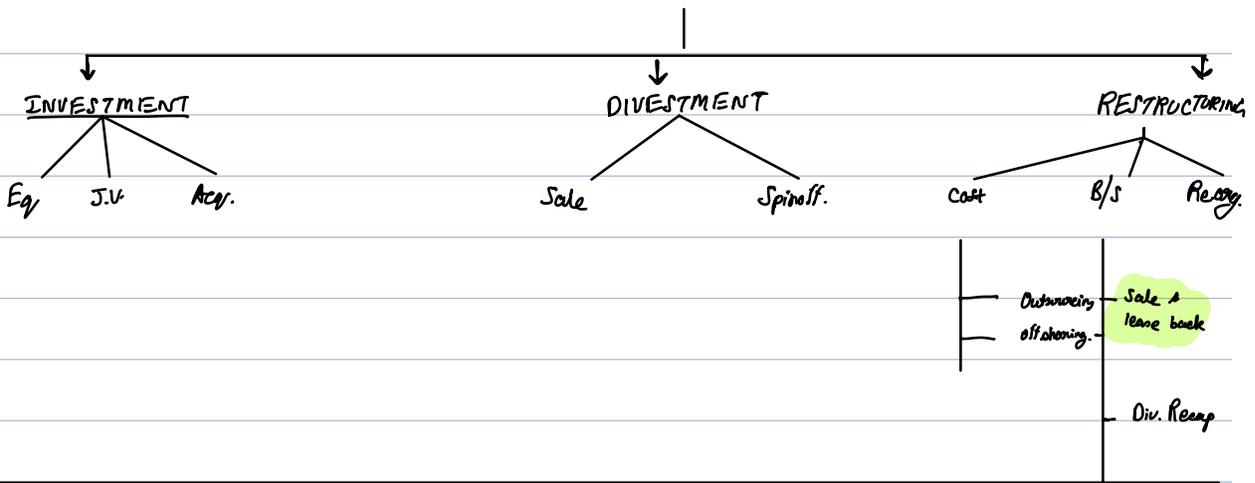
$$R_e = R_f + (R_m - R_f + \lambda CRP) \beta$$

Exposure of company to (total) economy emerging.

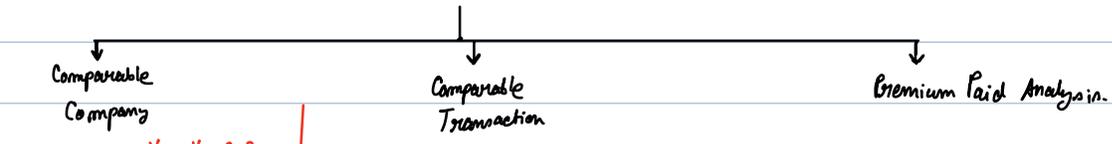


SOVEREIGN YIELD SPREAD.
 \times $\frac{\sigma_{Equity}}{\sigma_{Bond}}$

CORPORATE TRANSACTIONS.

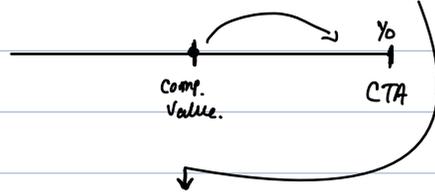


VALUATION



- Comparable Company
 ↓ $V_{Eq} + V_0 - Cash.$
 • P/E, EV/EBITDA.
 • Relevant Multiples of " peer group".
 • SUBJECTIVITY

Comparable Value + Takeover Premium = Takeover Price.



• Incentive for target to accept offer.

• = $\frac{P_1 - P_0}{P_0}$

= $\frac{Deal Price - Unaffected Price}{Unaffected Price}$

↓
 Last Folio VWAP price.