Summarizing ‘Business Analysis & Valuation’ … or “Damodaran on Valuation” … ☺

Ram Kumar Kakani
XLRI Jamshedpur

Basic FCF Model

- Value of Firm
  - Use CF of Firm and WACC as discounting rate
- Value of Equity
  - Use CF to Firm's Equity and Cost of Equity as discounting rate
- Modifications for …
- Firms in trouble
  - Estimate cash flow until they turn positive
- Cyclical Firms
  - FCF are usually smoothened out
- Firms with unutilized assets
  - Get the value of these assets externally and add

FCF Model … Complications

- Firms with patents and product options
  - Get the value of these externally and add **[or]** better, real options pricing model
- Firms in the process of restructuring
  - Adjust CF to reflect business restructuring and discount rate to reflect financial restructuring
- Firms involved in acquisitions
  - (a) incorporate in FCF's; and (b) incorporate in risk
- Private firms:
  - Take riskiness of comparable firms that are publicly traded [or] relate the measure of risk to accounting variables

Why Estimates Usually Go Wrong?

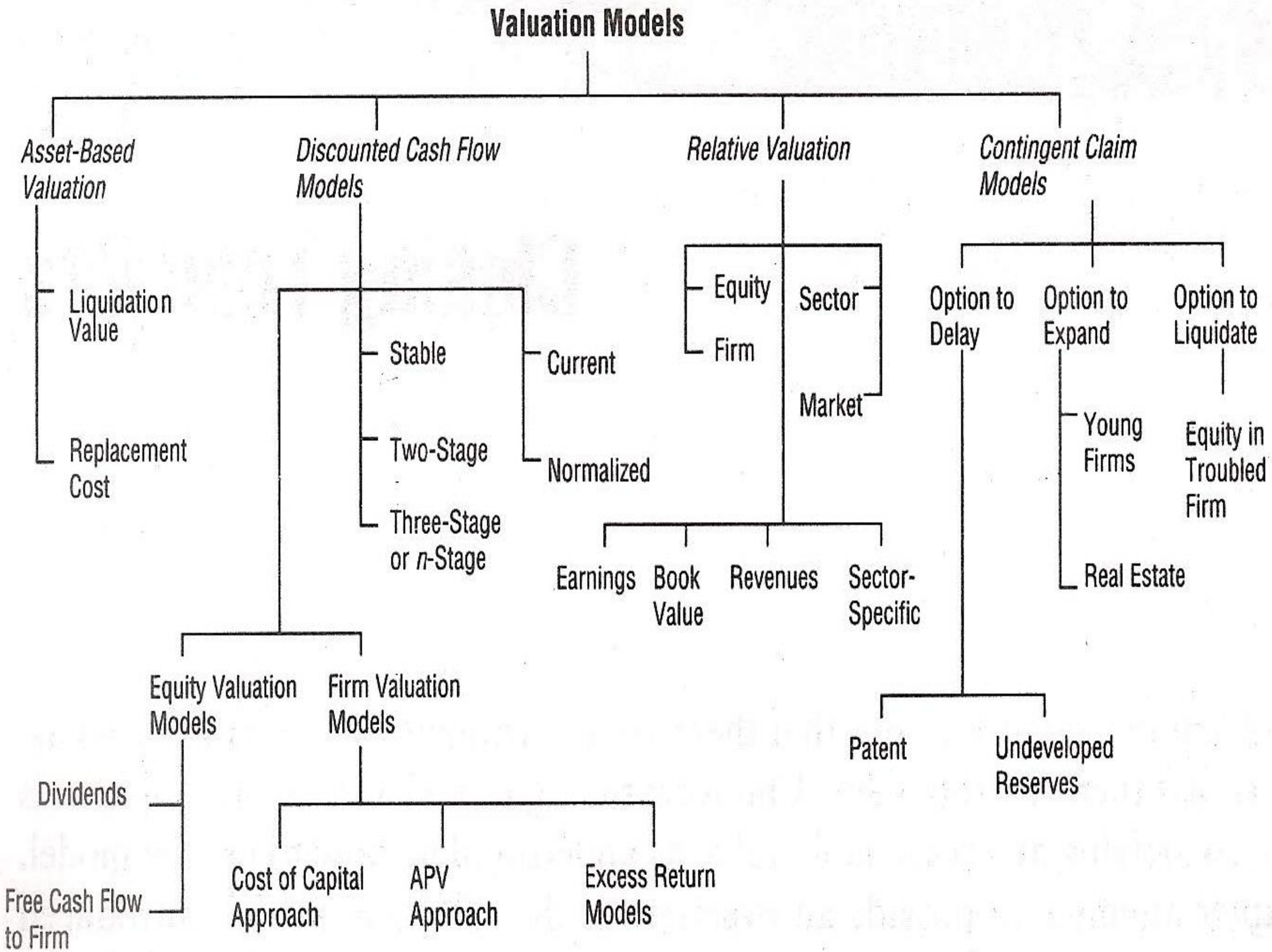
Sources of uncertainty (by Aswath Damodaran)

- Our estimates of value can be wrong for a number of reasons (divided into three groups):
  1. Estimation uncertainty: Errors while converting raw information into inputs and use these inputs in models (common in valuing young technology company)
  2. Firm-specific uncertainty: The path that we envision for the firm can prove to be hopelessly wrong. (common in situations of information asymmetry for us vis-à-vis market participants)
  3. Macroeconomic uncertainty: Macroeconomic environment can change in unpredictable ways (common in mature cyclical or commodity company)

Good Responses to Uncertainty

Healthy responses to uncertainty would include:
- Better valuation models
- Valuation ranges
- Probabilistic statements
- The principle of parsimony helps

Unhealthy responses to uncertainty would include:
- Passing the buck
- Giving up on fundamentals (and going for day dreaming or technical analysis)


Valuation Models
Asset-Based Valuation
Liquidation Value
Replacement Cost
Discounted Cash Flow Models
Stable
Two-Stage
Three-Stage or n-Stage
Current
Normalized
Equity Valuation Models
Dividends
Free Cash Flow to Firm
Firm Valuation Models
Cost of Capital Approach
APV Approach
Excess Return Models
Relative Valuation
Equity
Firm
Sector
Market
Earnings
Book Value
Revenues
Sector-Specific
Contingent Claim Models
Option to Delay
Patent
Undeveloped Reserves
Option to Expand
Young Firms
Real Estate
Option to Liquidate
Equity in Troubled Firm

Mature businesses
Separable and marketable assets

Growth businesses
Linked and nonmarketable assets

Liquidation and replacement cost valuation

Other valuation models

Cash flows currently or expected in near future

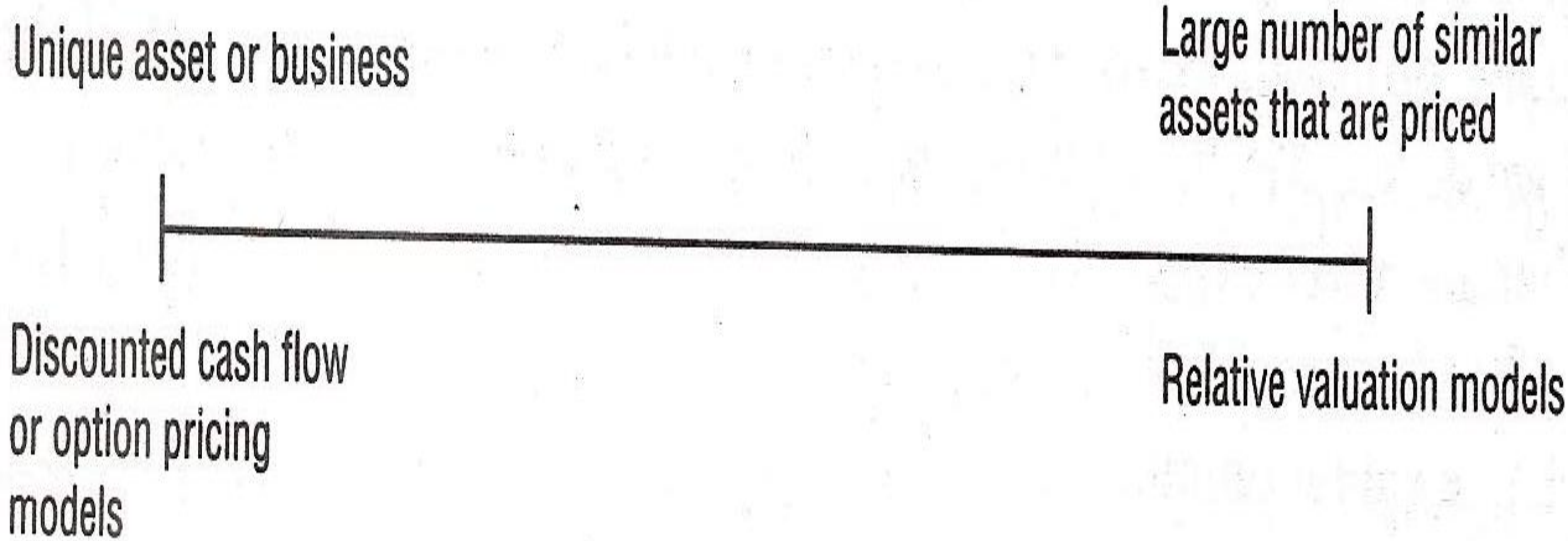
Cash flows if a contingency occurs

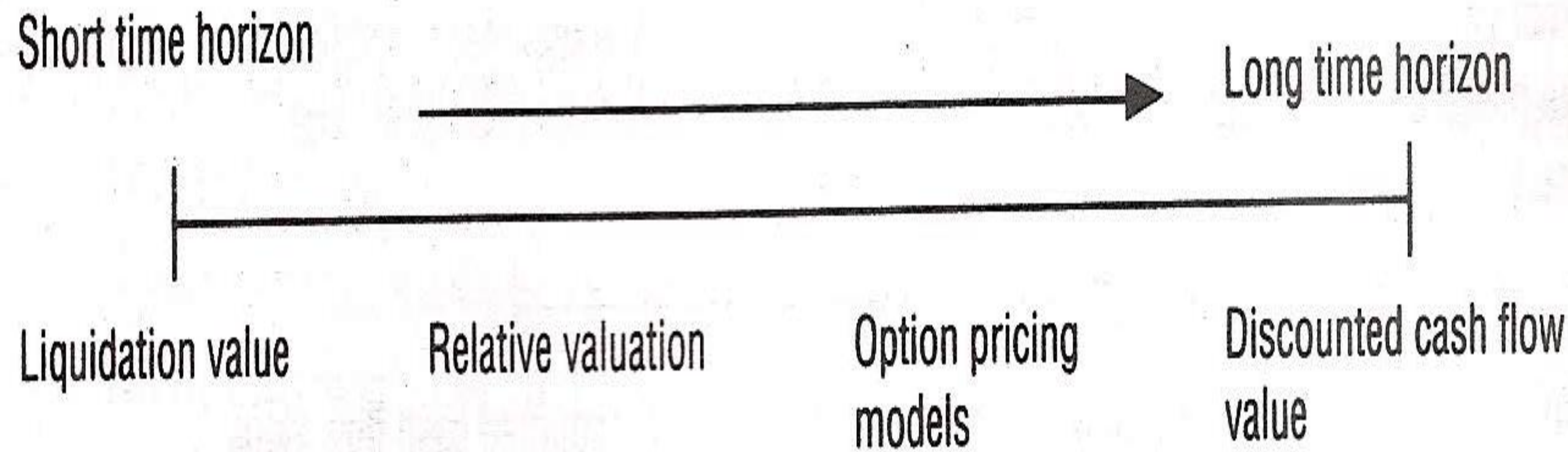
Assets that will never generate cash flows

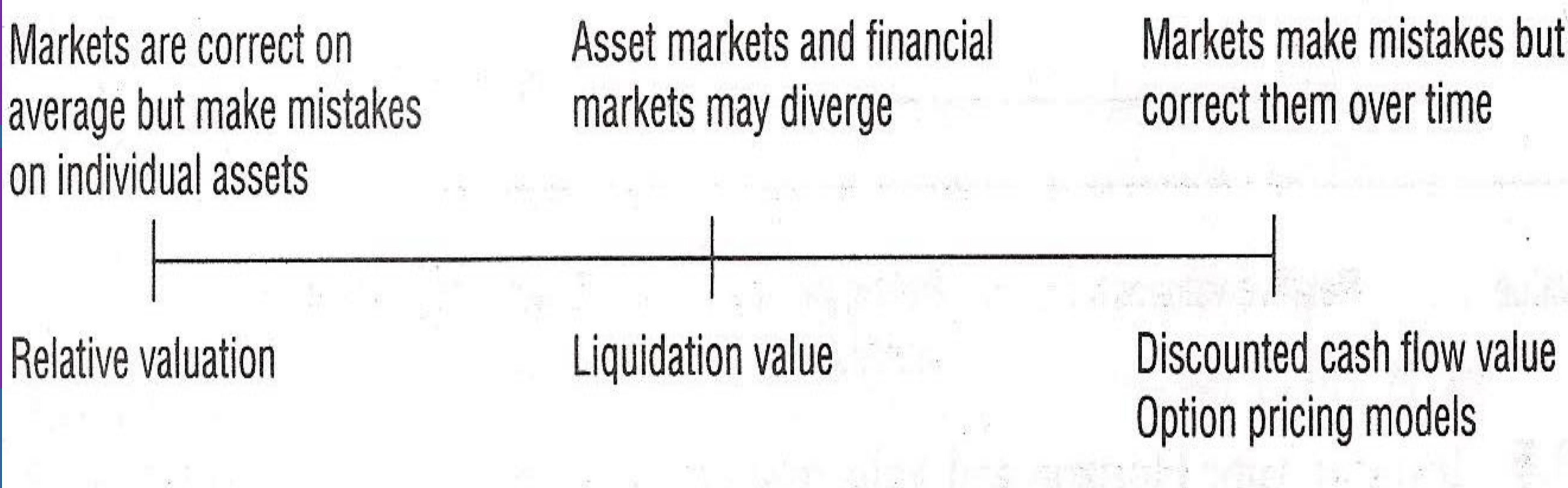
Discounted cash flow or relative valuation models

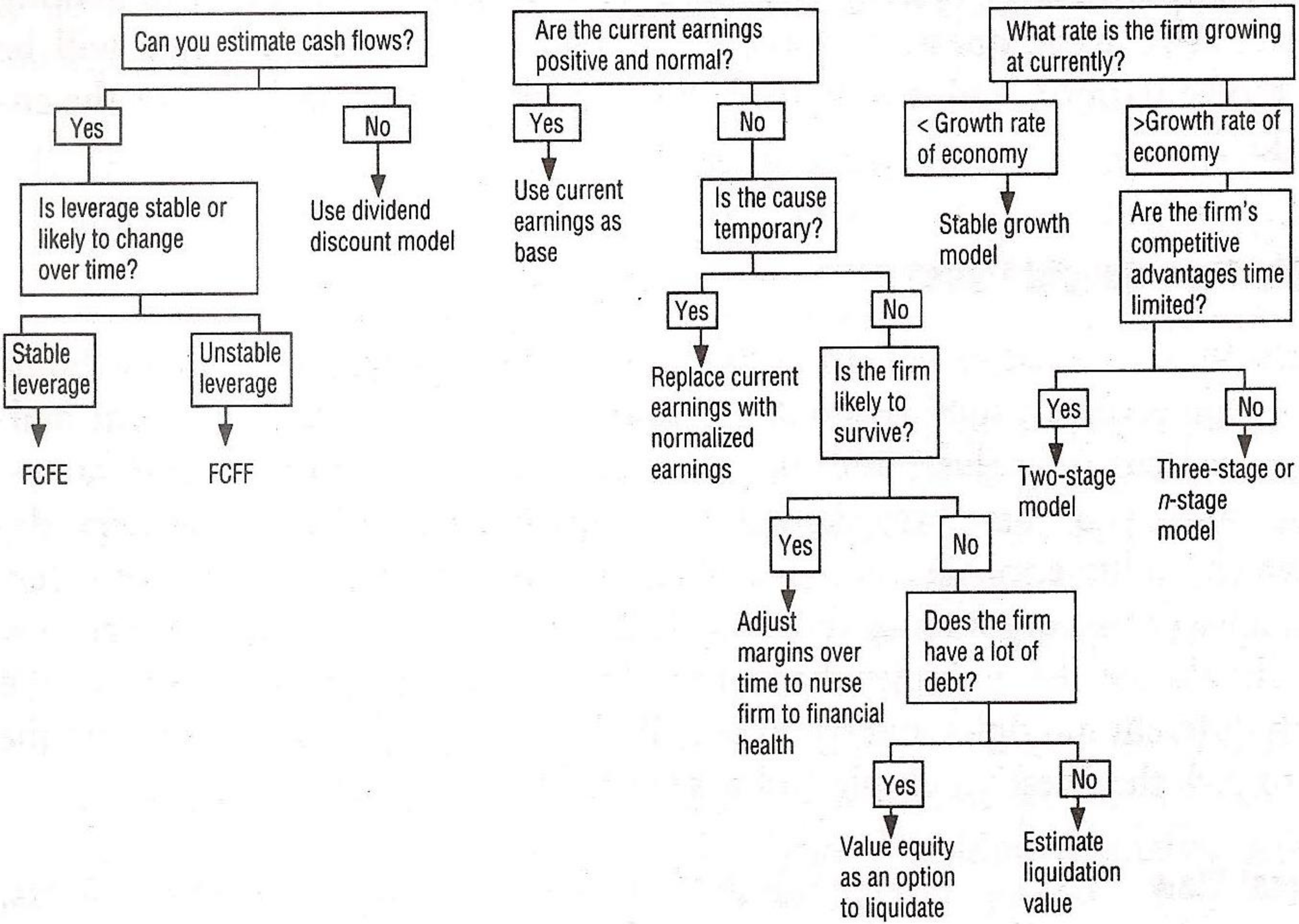
Option pricing models

Relative valuation models


Unique asset or business
Large number of similar assets that are priced
Discounted cash flow or option pricing models
Relative valuation models


Short time horizon
Long time horizon
Liquidation value
Relative valuation
Option pricing models
Discounted cash flow value


Markets are correct on average but make mistakes on individual assets
Asset markets and financial markets may diverge
Markets make mistakes but correct them over time
Relative valuation
Liquidation value
Discounted cash flow value
Option pricing models


Can you estimate cash flows?
Yes
No
Use dividend discount model
Is leverage stable or likely to change over time?
Stable leverage
Unstable leverage
FCFE
FCFF
Are the current earnings positive and normal?
Yes
No
Use current earnings as base
Is the cause temporary?
Yes
No
Replace current earnings with normalized earnings
Is the firm likely to survive?
Yes
No
Adjust margins over time to nurse firm to financial health
Does the firm have a lot of debt?
Yes
No
Value equity as an option to liquidate
Estimate liquidation value
What rate is the firm growing at currently?
< Growth rate of economy
>Growth rate of economy
Stable growth model
Are the firm's competitive advantages time limited?
Yes
No
Two-stage model
Three-stage or n-stage model

Sector	Multiple Used	Rationale/Comments
Cyclical manufacturing	P/E, relative P/E	Often with normalized earnings.
High tech, high growth	P/E to growth (PEG)	Big differences in growth across firms make it difficult to compare P/E ratios.
High growth/negative earnings	Price to sales, enterprise value to sales	Assume future margins will be positive.
Infrastructure	EV/EBITDA	Firms in sector have losses in early years, and reported earnings can vary depending on depreciation method.
Real Estate	Price to cash flow	Restrictions on investment policy and large depreciation charges make cash flows a better measure than equity earnings.
Financial services	Price to book value	Book value often marked to market.
Retailing	Price to sales Enterprise value to sales	If leverage is similar across firms. If leverage is different.

Limitations of Valuation

- Valuing alternate assets
- Valuing control
- While one can always state that … in the long run market always prices assets based on their intrinsic value
- … finally, it is also a question of Demand and Supply
- And hence there can be temporary asset mis-pricing due to liquidity issues
- Also slightly longer time frame mis-pricing is created by a few market participants (using information asymmetry and large complexity) ➔ typically you make things opaque) ➔ RIL
- Finally, Business Valuation is very successful over the long-run

Corporate Valuation

- How much of Corporate Valuation did we cover?
- Our focus was on connecting theoretical knowledge to practical aspects through … Project, Illustrations, Examples, and Mini Cases.
- Many things are left … such as, treating DTL, Infant Inds., etc.
- However, (within time and other constraints) we covered quite a range … in terms of ‘firm size’, ‘industry type’, ‘valuation model’, ‘risk-return’ profiles, …

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