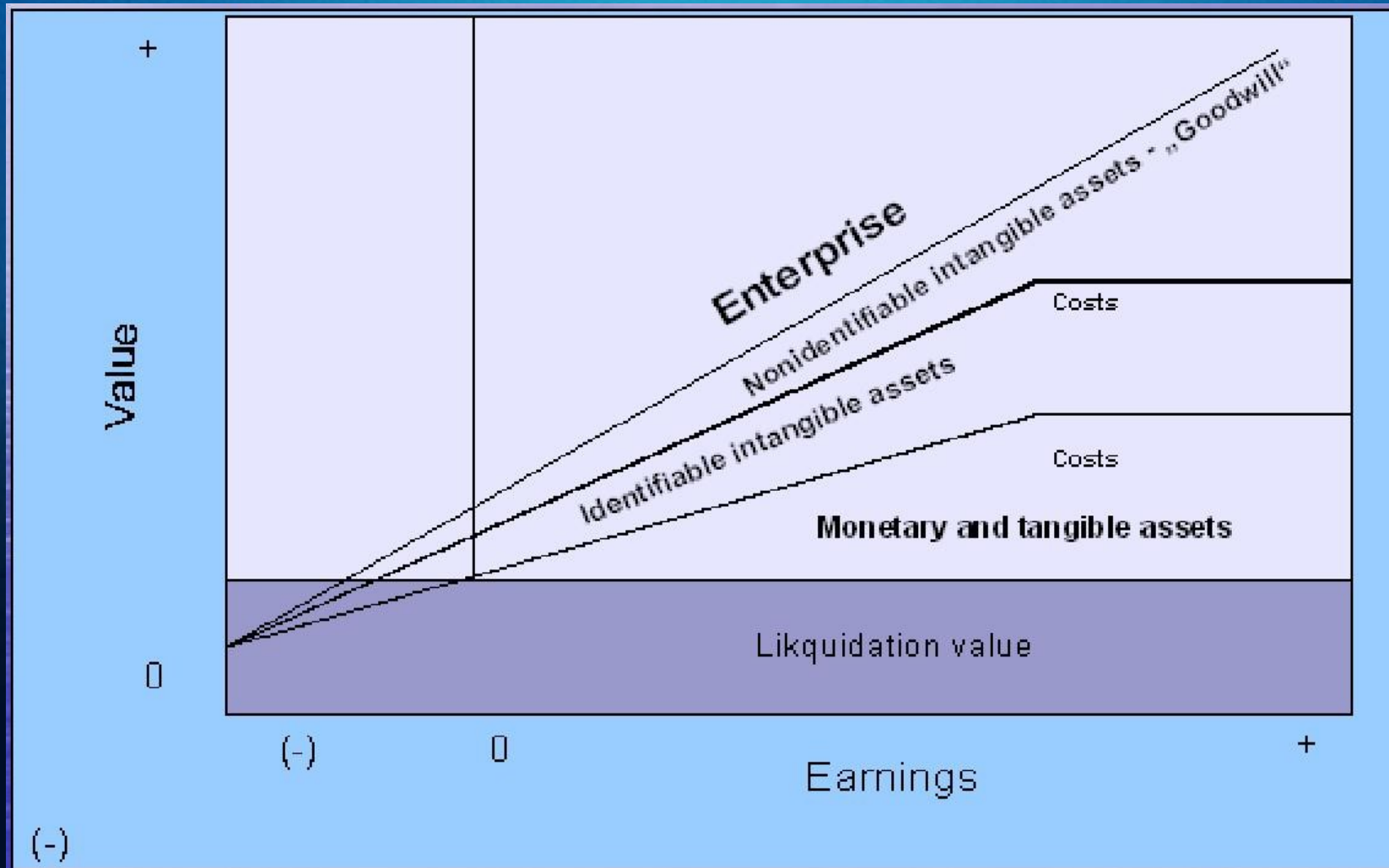
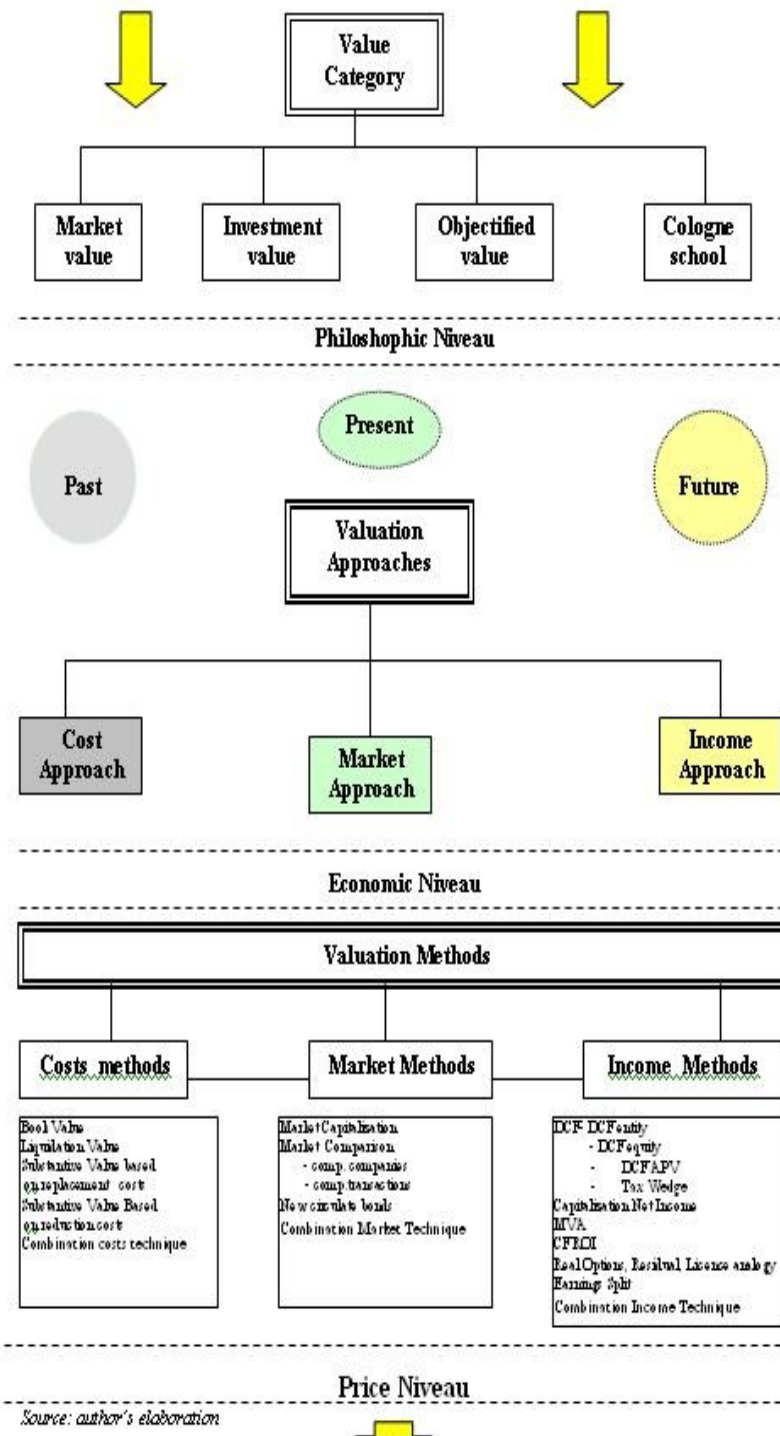


3. Business Valuation

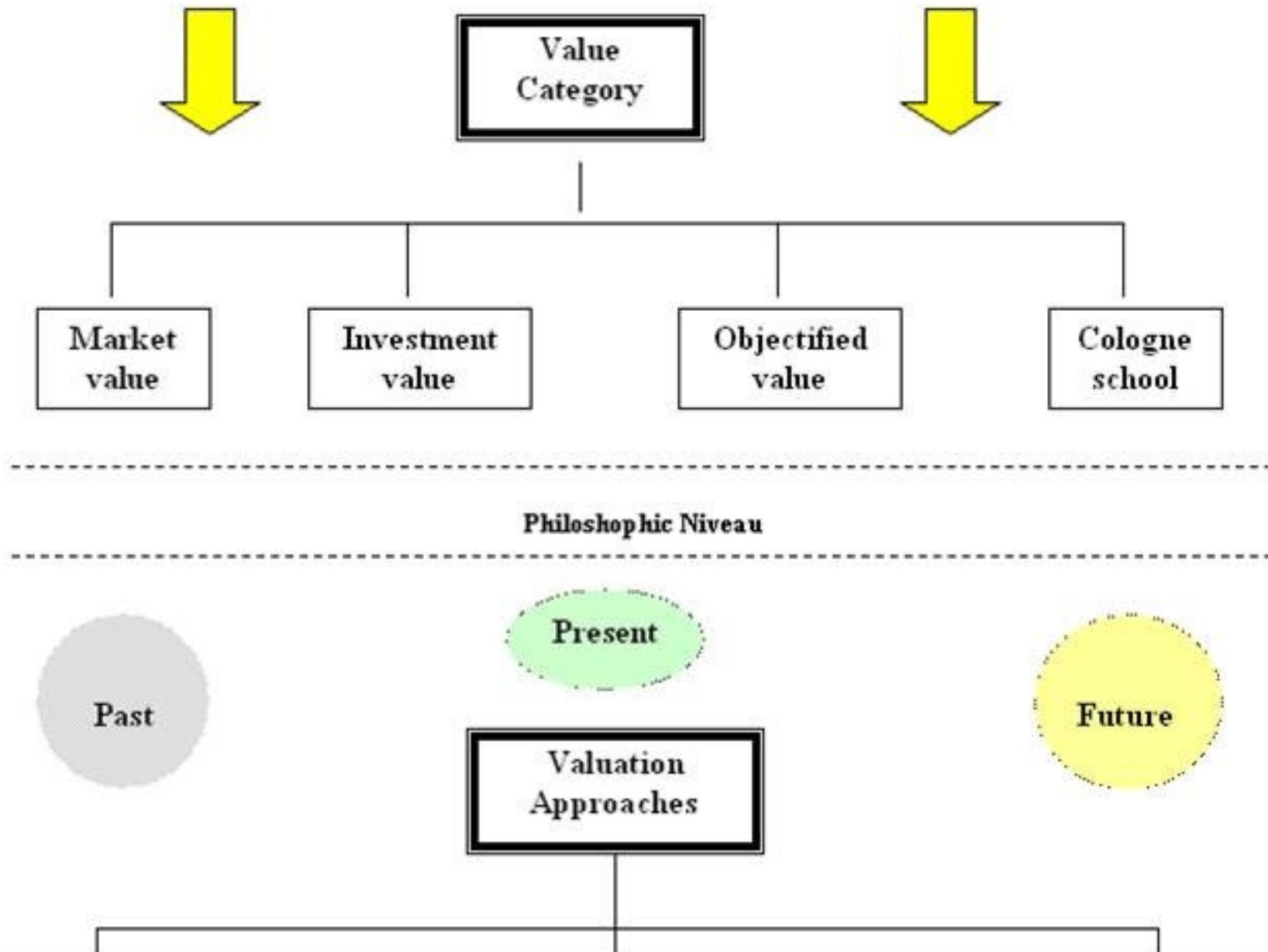
Interaction among value of an enterprise, its earnings, tangible and intangible assets





Source: author's elaboration

Summary of Generally Accepted Valuation Axioms



Most Widely Used Methods for Valuation

- ● **Income valuation (contains several technique),** relates the value of an asset to the present value of expected future cash flows on that asset.
- ● **Market valuation (contains several technique),** estimates the value of an asset by looking at the pricing of 'comparable' assets relative to a common variable like earnings, cash flows, book value or sales.
- ● **Costs valuation (contains several technique),** uses option pricing models to measure sum up assets.

Fast

Future

Valuation Approaches

Cost Approach

Market Approach

Income Approach

Economic Niveau

Valuation Methods

Cost Methods

Market Methods

Income Methods

Economic Niveau

Valuation Methods

Cost Methods

Book Value
Liquidation Value
Substantive Value based
on replacement costs
Substantive Value Based
on reduction costs
Combination Costs
Technique

Market Methods

Market Capitalization
Market Comparison
- comp. companies
- comp. transactions
New circulate bonds
Combination Market
Technique

Income Methods

DCF- DCF entity
- DCF equity
- DCF APV
Capitalization Net Income
EVA
CF ROI
Real Options
Combination Income
Technique

Price Niveau

Basis for all valuation approaches

- The use of valuation models in investment decisions (i.e., in decisions on which assets are under valued and which are over valued) are based upon
 - a perception that markets are inefficient and make mistakes in assessing value
 - an assumption about how and when these inefficiencies will get corrected
- In an efficient market, the market price is the best estimate of value. The purpose of any valuation model is then the justification of this value. (Damodaran)

Income Valuation

- **What is it:** In discounted cash flow valuation, the value of an asset is the present value of the expected cash flows on the asset.
- **Philosophical Basis:** Every asset has an intrinsic value that can be estimated, based upon its characteristics in terms of cash flows, growth and risk.
- **Information Needed:** To use discounted cash flow valuation, you need
 - to estimate the life of the asset
 - to estimate the cash flows during the life of the asset
 - to estimate the discount rate to apply to these cash flows to get present value

- **Market Inefficiency:** Markets are assumed to make mistakes in pricing assets across time, and are assumed to correct themselves over time, as new information comes out about assets.

Advantages of Income Valuation

- ● Since Income valuation, done right, is based upon an asset's fundamentals, it should be less exposed to market moods and perceptions.
- ● If good investors buy businesses, rather than stocks (the Warren Buffet adage), discounted cash flow valuation is the right way to think about what you are getting when you buy an asset.
-

- Income valuation forces you to think about the underlying characteristics of the firm, and understand its business. If nothing else, it brings you face to face with the assumptions you are making when you pay a given price for an asset.(Damodaran)

Disadvantages of Income Valuation

- ● Since it is an attempt to estimate intrinsic value, it requires far more inputs and information than other valuation approaches
- ● These inputs and information are not only noisy (and difficult to estimate), but can be manipulated by the savvy analyst to provide the conclusion he or she wants.
- ● In an intrinsic valuation model, there is no guarantee that anything will emerge as under or over valued. Thus, it is possible in a Income valuation model, to find every stock in a market to be over valued.

- This can be a problem for
 - equity research analysts, whose job it is to follow sectors and make recommendations on the most under and over valued stocks in that sector
 - equity portfolio managers, who have to be fully (or close to fully) invested in equities (Damodaran)

When Income Valuation works best

- This approach is easiest to use for assets (firms) whose
 - cashflows are currently positive and
 - can be estimated with some reliability for future periods, and
 - where a proxy for risk that can be used to obtain discount rates is available.

- It works best for investors who either
 - have a long time horizon, allowing the market time to correct its valuation mistakes and for price to revert to “true” value or
 - are capable of providing the catalyst needed to move price to value, as would be the case if you were an activist investor or a potential acquirer of the whole firm (Damodaran)

Which cash flow should I discount?

- Use Equity Valuation

(a) for firms which have stable leverage, whether high or not, and

(b) if equity (stock) is being valued

- Use Firm Valuation

(a) for firms which have leverage which is too high or too low, and expect to change the leverage over time, because debt payments and issues do not have to be factored in the cash flows and the discount rate (cost of capital) does not change dramatically over time.

(b) for firms for which you have partial information on leverage (eg: interest expenses are missing..)

(c) in all other cases, where you are more interested in valuing the firm than the equity. (Value Consulting?)

Valuing a Firm

- The value of the firm is obtained by discounting expected cash flows to the firm, i.e., the residual cash flows after meeting all operating expenses and taxes, but prior to debt payments, at the weighted average cost of capital, which is the cost of the different components of financing used by the firm, weighted by their market value proportions. (Damodaran)

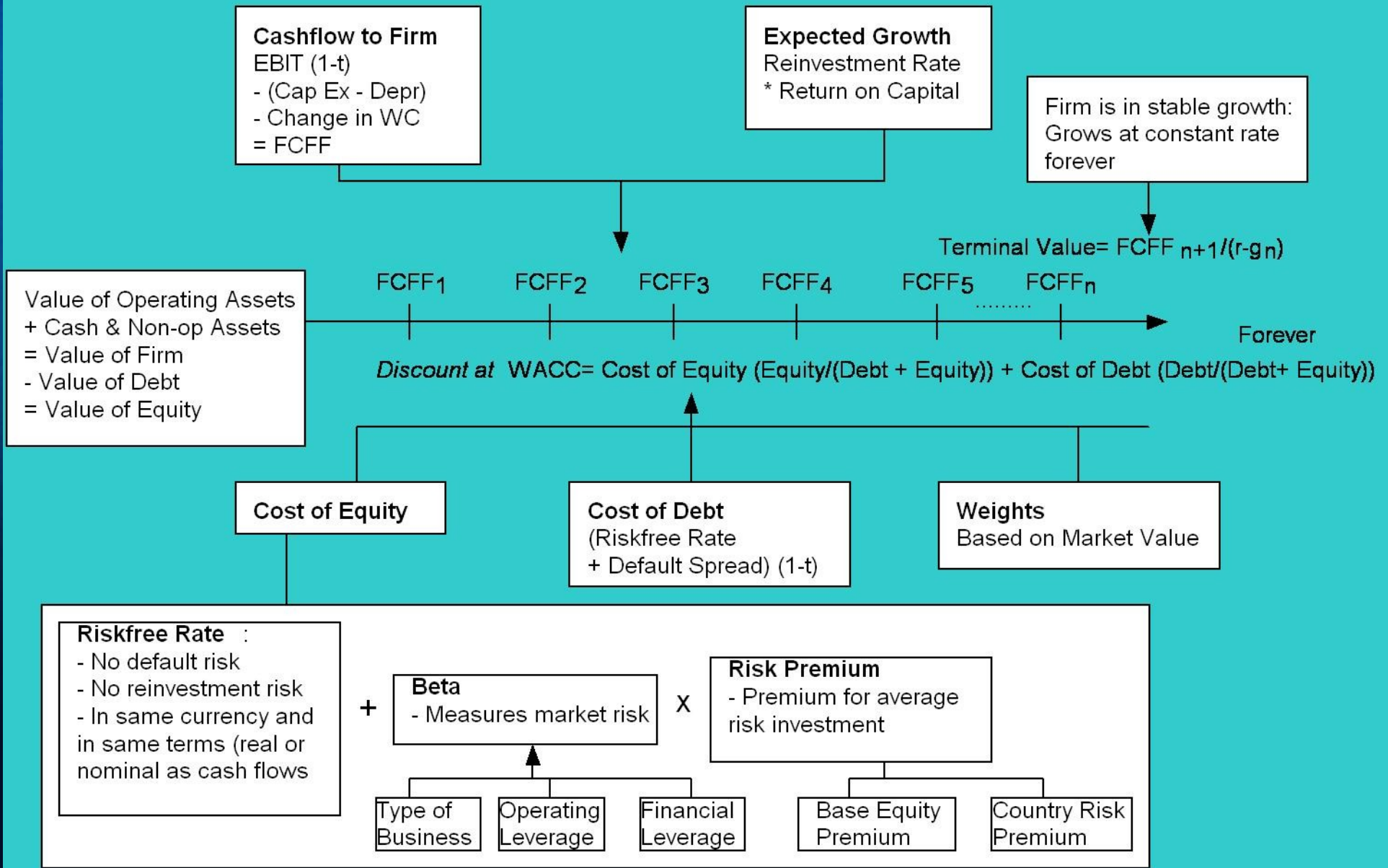
$$\text{Value of Firm} = \sum_{t=1}^{t=n} \frac{\text{CF to Firm}_t}{(1 + \text{WACC})^t}$$

where,

CF to Firm_t = Expected Cash flow to Firm in period t

WACC = Weighted Average Cost of Capital

DISCOUNTED CASHFLOW VALUATION



Task for next lecture

- Try to find how to calculate "Free Cash Flow"
- Try to find how to calculate "EVA"

Conclusion

- „.....people know the price of everything and the value of nothing.....“



Oscar Wilde