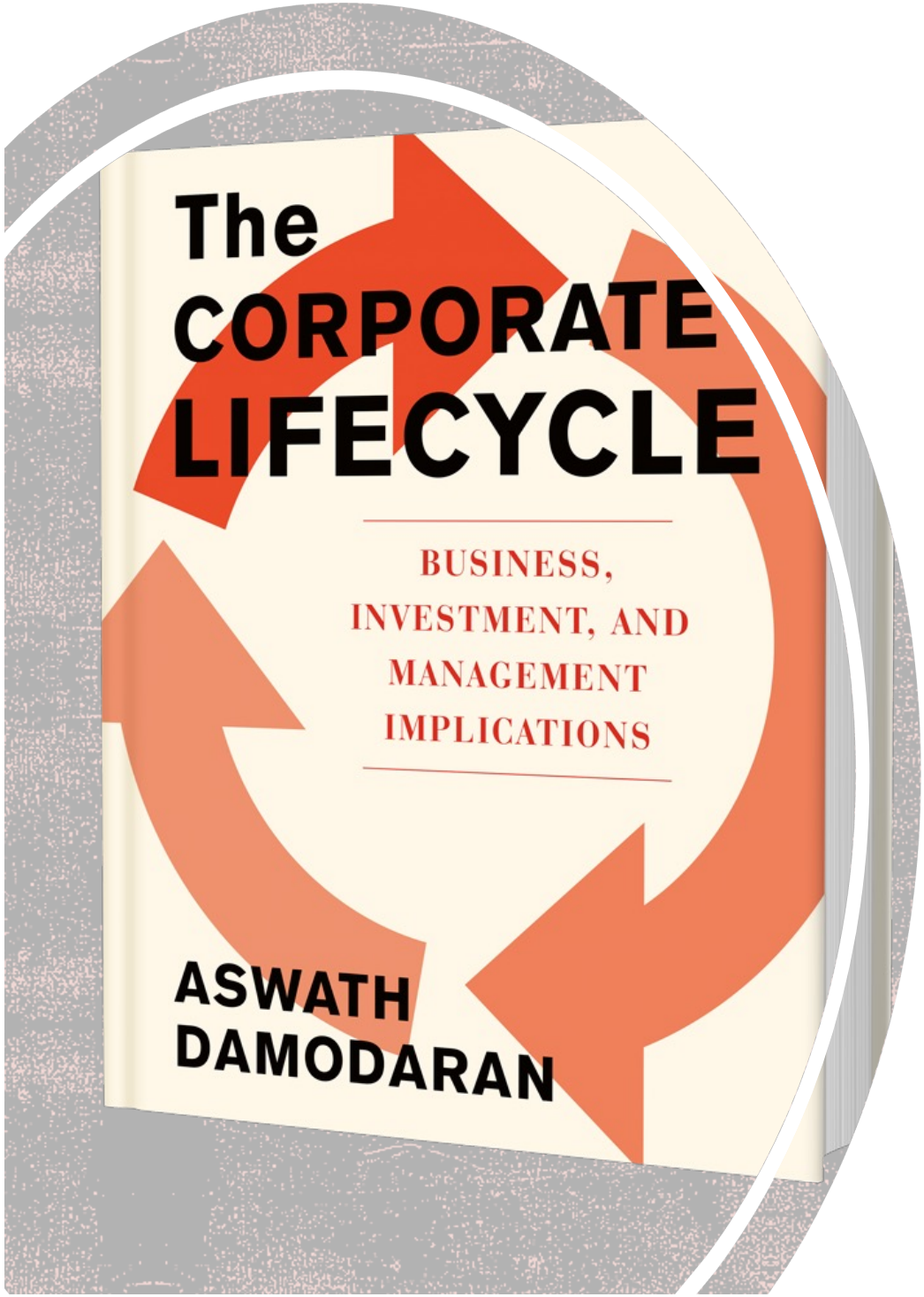


CHAPTER 9: VALUATION AND PRICING 101

INTRINSIC VALUE: THE BASICS

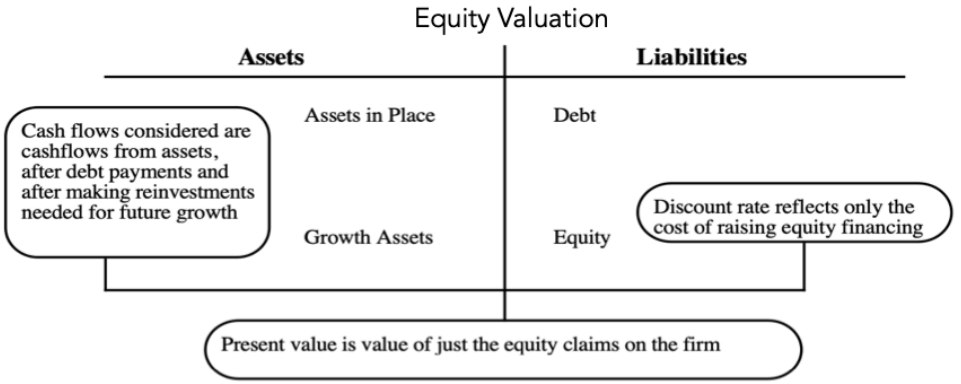
- Putting intrinsic valuation into practice requires grappling not only with how to define cash flows and incorporate risk into value, but also how to factor in the time value of money.

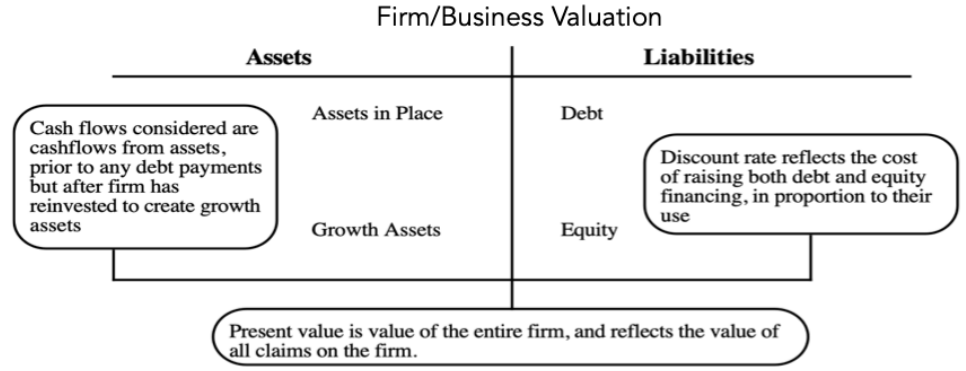
Expected Cashflows in time period

$$Value = \frac{E(CF_1)}{(1+r)^1} + \frac{E(CF_2)}{(1+r)^2} + \cdots + \frac{E(CF_n)}{(1+r)^n}$$

Risk-adjusted Discount Rate

EQUITY VS FIRM VALUATION





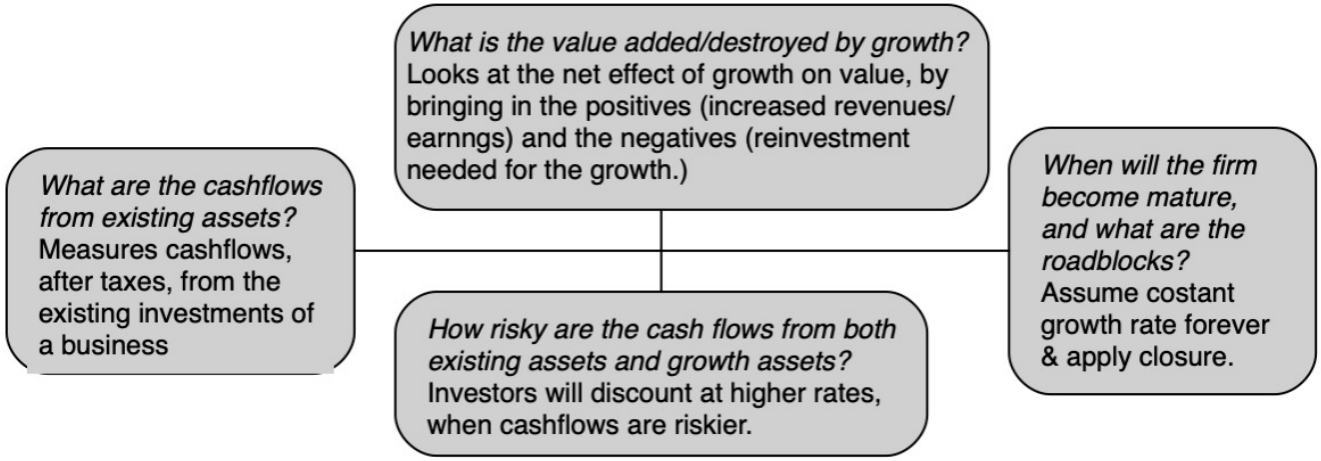
BUSINESS LIFE AND VALUE!

- In theory, a publicly traded company can continue as a going concern for decades or even centuries.
- To impose closure on the exercise, and one practice that valuation analysts use is to assume that cash flows beyond a point in time in the future **will grow at a constant rate forever**.
- That assumption allows us to capture the present value of all cash flows beyond with a "terminal value".

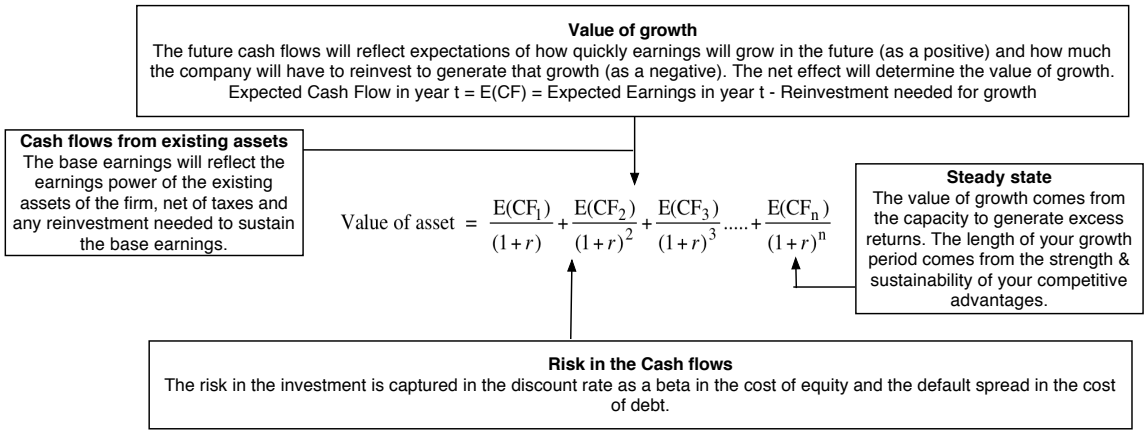
$$Value\ of\ business = \frac{E(Cash\ Flow_1)}{(1+r)^1} + \frac{E(Cash\ Flow_2)}{(1+r)^2} + \cdots + \frac{E(Cash\ Flow_{n+1})}{(r-g_n)(1+r)^n}$$

Value of business today	Present value of expected cash flows in explicit forecast period (n years)	Present value of terminal value, i.e., the value at the end of year n, assuming a constant growth rate forever after year n.

VALUE DRIVERS

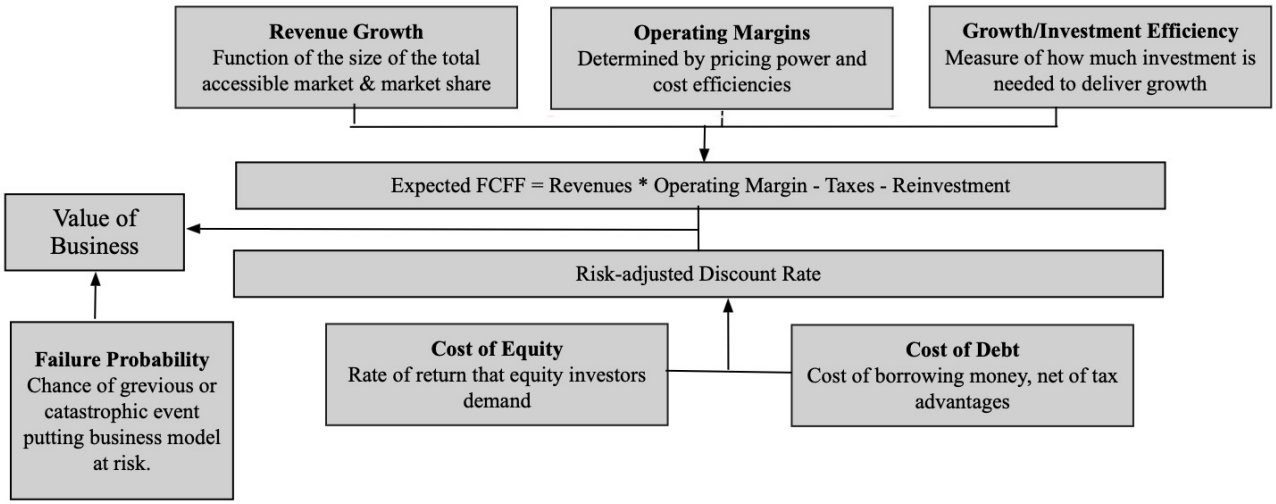


INTRINSIC VALUE: KEY QUESTIONS

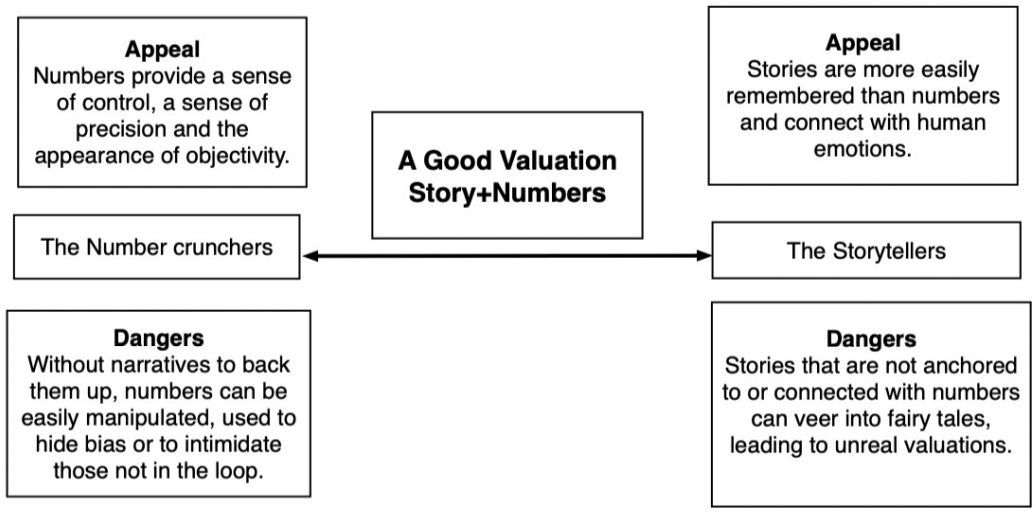


Aswath Damodaran

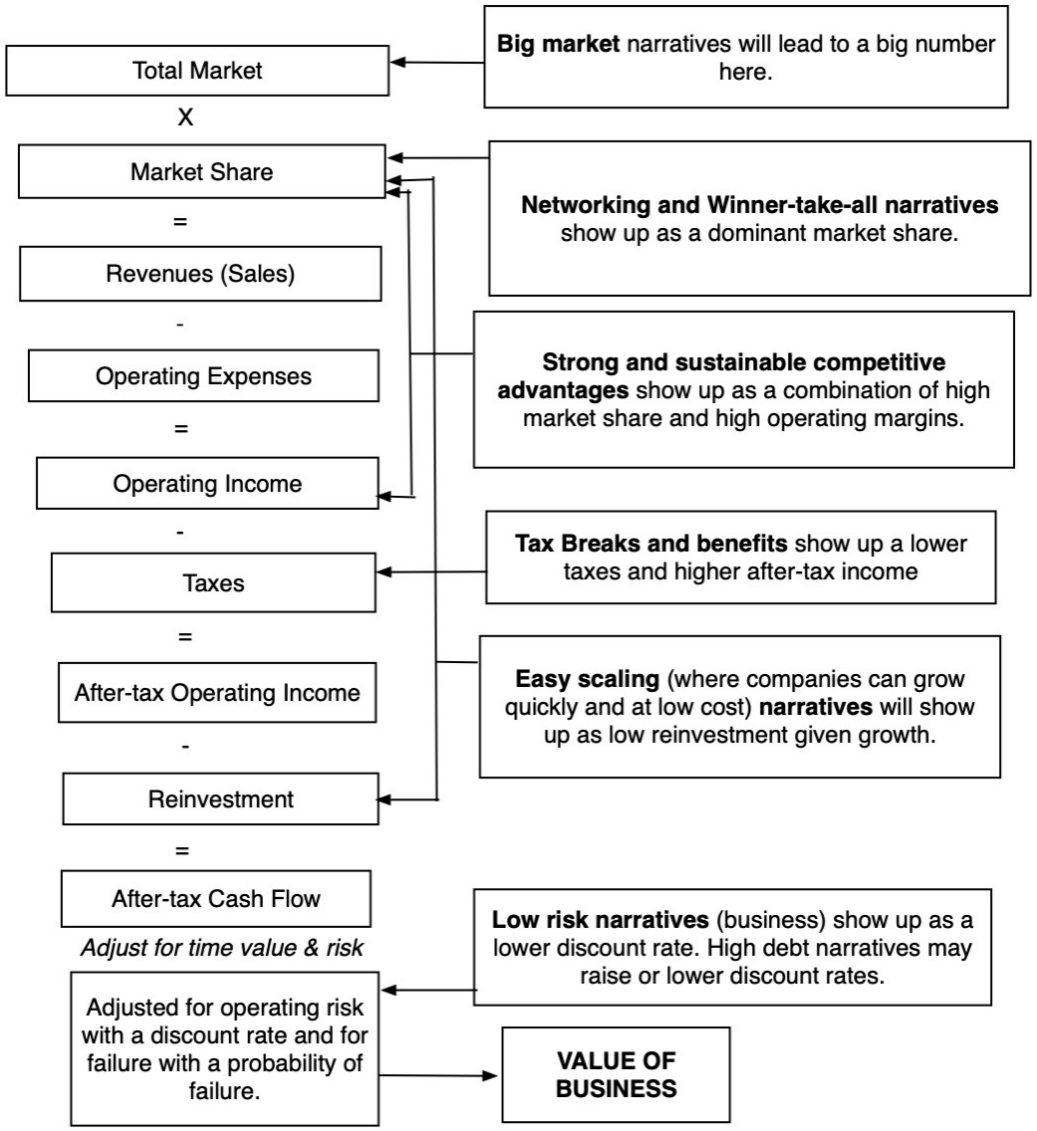
A PARSIMONIOUS VALUATION STRUCTURE



VALUE = STORY + NUMBERS



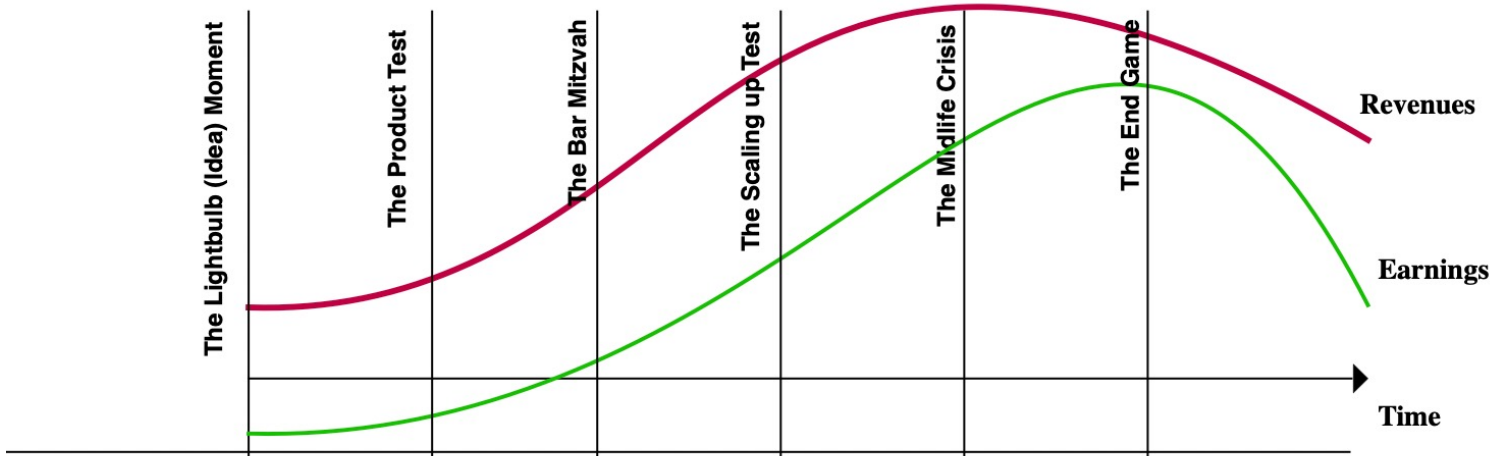
CONNECTING STORY PIECES TO VALUE INPUTS



VALUATION ACROSS THE LIFE CYCLE

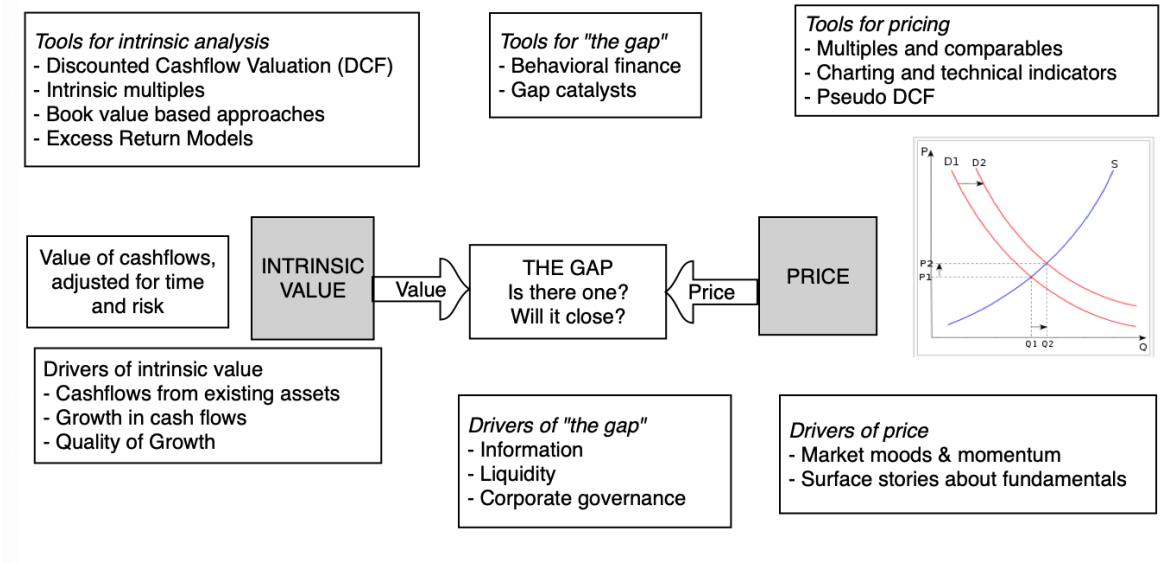
- Intrinsic value is a constant: The notion of the intrinsic value of a business as the present value of the expected cash flows from that business, over time, applies for companies across the life cycle.
- With very different cash flow paths: With young companies, struggling with building business models, the cash flows will be negative in the early years, and turn positive only as they approach high growth, and grow rapidly before settle into stability. With mature companies, you are far more likely to see positive cash flows immediately, but with far less growth in future years. With declining companies, you may see shrinkage in the cash flows over time, as businesses get smaller.
- And a changing dependence on terminal value: Earlier in this chapter, we noted that the value of a business today will be the sum of the present value of its expected cash flows in the forecast period and the present value of the terminal value, capturing cash flows beyond the forecast period. Young companies, with negative cash flows in the early years and positive and growing cash flows later, will get a much large proportion of their values from the cash flows in the later years and the termina value than more mature companies.

NARRATIVE VS NUMBERS: ACROSS THE LIFE CYCLE



Lifecycle stage	Start-up	Young Growth	High Growth	Mature Growth	Mature Stable	Decline
Narrative versus Numbers	All Narrative	Mostly narrative	Narrative + Numbers	Numbers + Narrative	Mostly Numbers	All Numbers
Narrative Drivers	How big is the narrative?	How plausible is narrative?	How profitable is narrative?	How scalable is narrative?	How sustainable is narrative?	How happy is the ending?
Narrative Differences	Unconstrained & Large differences	*Constraints mount as numbers build up* → *Differences across investors narrow, as history deepens*				Constrained & Narrow differences

PRICING



Aswath Damodaran

PRICE DRIVERS

Mood and Momentum
Price is determined in large part by mood and momentum, which, in turn, are driven by behavioral factors (panic, fear, greed).

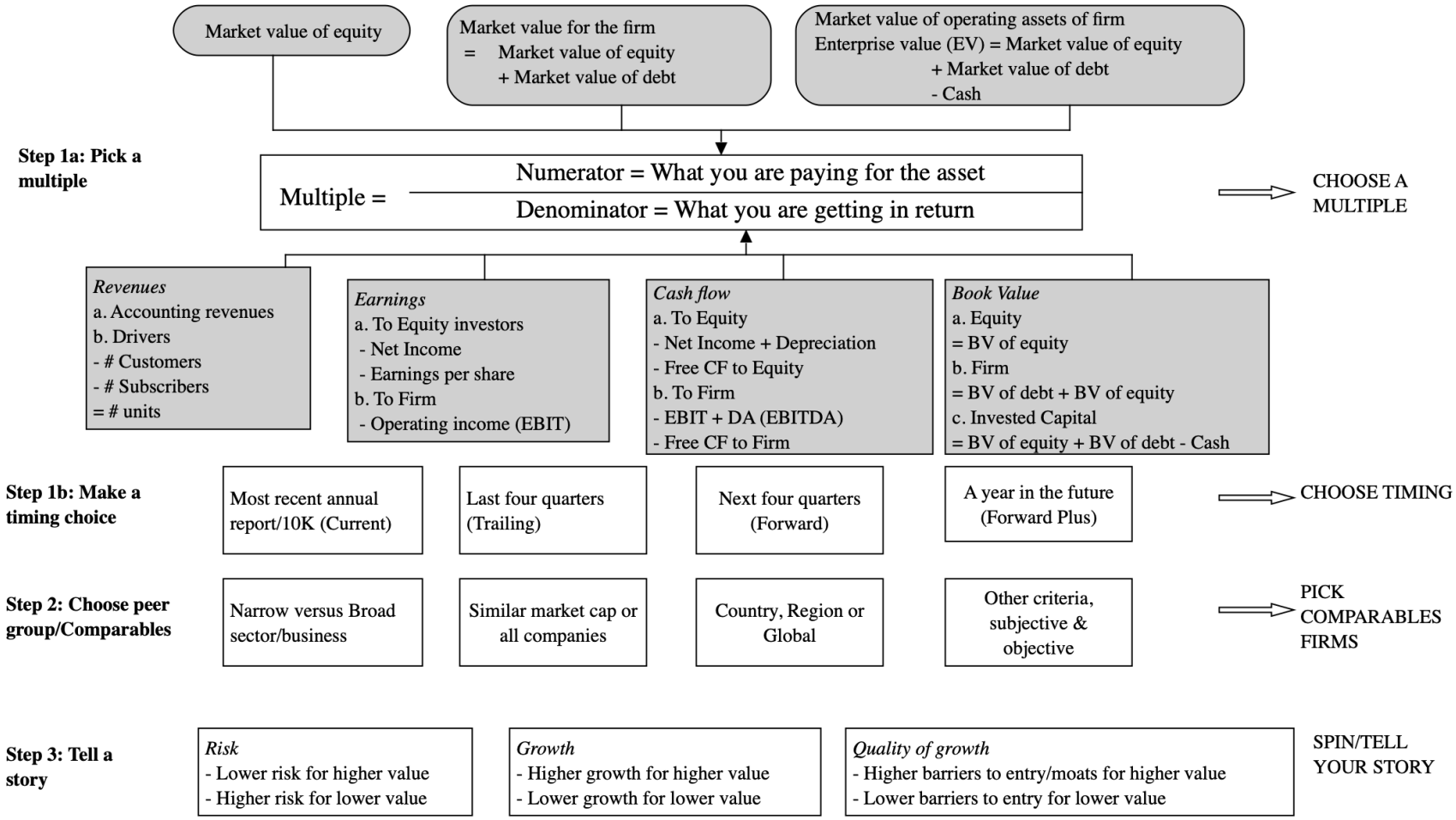
Liquidity & Trading Ease
While the value of an asset may not change much from period to period, liquidity and ease of trading can, and as it does, so will the price.

The Market Price

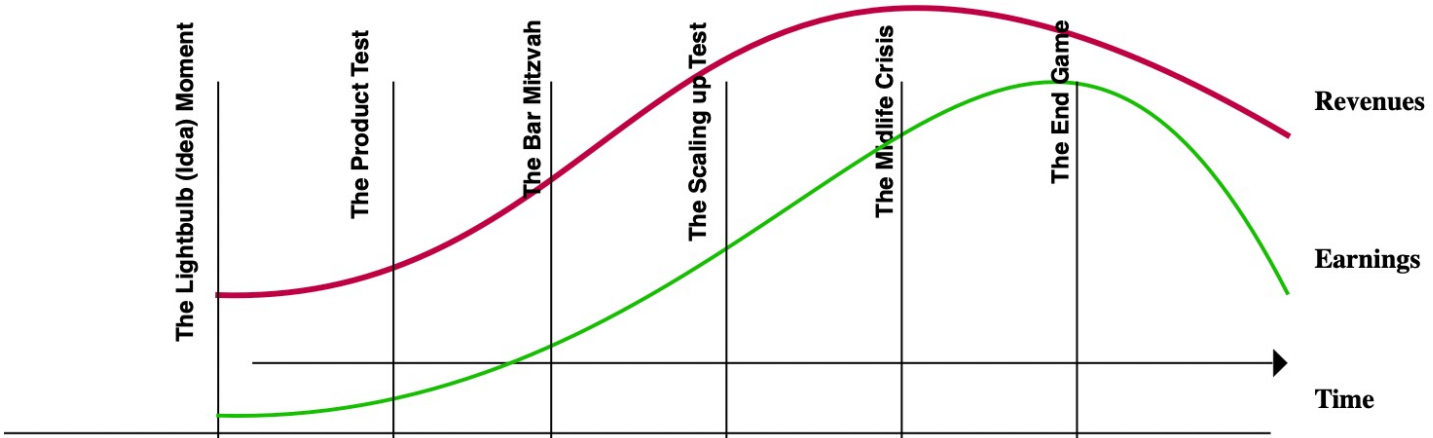
Incremental information
Since you make money on price changes, not price levels, the focus is on incremental information (news stories, rumors, gossip) and how it measures up, relative to expectations

Group Think
To the extent that pricing is about gauging what other investors will do, the price can be determined by the "herd".

PRICING MECHANICS



PRICING ACROSS THE LIFE CYCLE



Lifecycle stage	Start-up	Young Growth	High Growth	Mature Growth	Mature Stable	Decline
Pricing vs Valuing	Mostly Pricing		Mostly value			Pricing
Pricing Measures	Potential Market, Capital Acccess	Revenue growth, Gross margins	Revenue growth, Oper margins	Earnings growth	Earnings stability	Book Value
Pricing Metrics	EV/TAM, EV/ Users, EV/ Subscribers	EV/Forward Sales	EV/Sales	PEG, Forward PE	PE, EV/ EBITDA	PBV, EV/ Liquidation Value
Peer Group	Young companies that have accessed VC funding.	Young companies that have gone public recently	High growth firms, sometimes across sectors.	Growth companies in sector	Other mature companies in sector.	Declining companies in sector.